THE RETAIL PETROL INDUSTRY IN SOUTH AFRICA

A dissertation submitted in fulfillment of the

Degree of M.Com. in Economics

By

JIM MATSHO

(Student No.: 20052459)

Department of Economics

University of Zululand

Supervisor: Prof. B.C Shrestha

Co-Supervisor: Mr. I Kaseeram

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Jim "Matlhoane" Matsho

DECLARATION

I declare that

RETAIL PETROL INDUSTRY IN SOUTH AFRICA

is my own work, that all the sources used or quoted have been indicated and acknowledged by means of complete references, and that this dissertation was not previously submitted by me for a degree at another University.

Jim "Matlhoane" Matsho

EXECUTIVE SUMMARY

Retail petrol industry in South Africa

by

Jim Matsho

Degree: Magister Commercii Department of Economics Supervisors: Prof. Bijoy C Shrestha & Mr. I Kaseeram

The petroleum industry has attracted a lot of attention in recent years. The industry is one of the major contributors to the South African GDP. In recent years, increases in petrol price created a huge challenge for the service station retailers to run sustainable, profitable and viable businesses, as the price increases impacted negatively on sales volumes.

The new entrants in the market and new competition from other retail businesses necessitated changes in the industry. The petroleum industry introduced new business centres at the service stations to generate revenue for the business to ensure profitability and viability. The proliferation of service stations, regulated retailer margins on petrol and volume performance have all created concerns about the survival of individual service stations.

The effects of crude oil price fluctuations on the economy ultimately affect the motorists and retailers. The South African petrol price largely depends on international market conditions. The industry faces change and challenges. The future uncertainty of the supply of exhaustible resources like crude oil impacts on the crude price experienced by the global market. The energy demand thus exerts another pressure on price as the world economy grows rapidly. The uncertainty about whether to deregulate the liquid fuel industry adds a new dimension to the industry's future.

The study focus area highlights findings which can be extrapolated to other similar cities in South Africa. At the end of the day, a retail operator should know the businesses very well as the profit margins are fixed.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	i
DECLARATION	ii
EXECUTIVE SUMMARY	iii
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: AN OVERVIEW OF THE SOUTH AFRICAN ECONOMY	
2.1 SOUTH AFRICAN ECONOMY	7
2.2 NATURE OF THE ECONOMY	9
2.3 CITY OF TSHWANE METROPOLITAN MUNICIPALITY	20
CHAPTER 3: AN OVERVIEW OF THE ENERGY INDUSTRY	
3.1 LITERATURE REVIEW	22
3.1.1 BACKGROUND	26
3.1.2 PETROLEUM STUDIES	28
3.1.3 EXHAUSITIBLE RESOURCES	29
3.2 SOUTH AFRICAN ENERGY SOURCES	31
3.2.1 COAL AS FUEL ENERGY	31

CHAPTER 4: PETROLEUM INDUSTRY IN SOUTH AFRICA

4.1 INTRODUCTION	38
4.2 ORGANISATIONS	41
4.2.1 INTERNATIONAL ORGANISATIONS	41
4.2.2 DOMESTIC ORGANISATIONS	44
4.3 PETROLEUM COMPANIES	55
CHAPTER 5: SASOL AND INDUSTRY LEGISLATION	
5.1 LEGISLATIVE FRAMEWORK	86
CHAPTER 6: ANALYSIS AND INTERPRETATION OF DATA	
6.1 RESEARCH RESULTS	92
6.2 MARKET SHARE	96
6.3 PRICE ANALYSIS	97
6.4 RETAILER / DEALER MARGIN ANALYSIS	102
6.5 PROFIT ANALYSIS	103
6.6 FACTORS AFFECTING PROFITABILITY	108
6.7 SITE VOLUME COMPARISON	115
6.8 RESEARCH FINDINGS	116
6.9 PRICE ELASTICITY	118

6.10 PETROL PRICE COMPOSITION	134
6.11 BARRIERS TO ENTRY	137
CHAPTER 7: CONCLUSION AND SUMMARY	
7.1 INTRODUCTION	139
7.2 CONCLUSION	140
7.3 SUMMARY	140
7.4 RESEARCH FINDINGS	144
7.5 RESEARCH LIMITATIONS	144
CHAPTER 8: RECOMMENDATIONS	
8.1 RECOMMENDATIONS	146
8.2 FUTURE RESEARCH	148

BIBLIOGRAPHY

ABBREVIATIONS

ANNEXURES

- A: Supervisor Letter
- B: Questionnaire
- C: Map (Tshwane)
- D: Energy Source
- E: Petroleum Companies Information
- F: BPSA Shareholding and Total SA Shareholding
- G: Petroleum Charter & Legislation
- H: Urota Standard
- I: Petroleum Companies Refining and Marketing
- J: Service Stations Volume
- K: Petrol Price Model
- L: Statistical analysis
- M: Elasticity Analysis
- N: Petrol Price Composition

LIST OF TABLES AND FIGURES

TABLES

•	Table 1.1: National network – service stations	2
•	Table 1.2: CTMM area service stations	2
•	Table 2.1: SACOB Business Confidence Index	13
•	Table 2.2: S.A economy	14
•	Table 2.3: Percentage income by sector – Tshwane	21
•	Table 3.1: Primary versus secondary oil	27
•	Table 3.2: Domestic sale and export of coal	34
•	Table 6.1: Service station sales volumes	94
•	Table 6.2: Service station sales volumes	95
•	Table 6.3: Petroleum companies' market share	96
•	Table 6.4: History of petrol and diesel price at constant 1985 prices	98
•	Table 6.5: Components of petrol price	100
•	Table 6.6: Petrol price historical analysis	101
•	Table 6.7: Impact of petrol price increase on productivity	104
•	Table 6.8: Price increase impact	109
•	Table 6.9: Monthly price fluctuations	111
•	Table 6.10: Impact of petrol price on stock level	113
•	Table 6.11: Weekly average sales volumes of service station	115
•	Table 6.12: SA petrol price components	135
	Table 6.13: Country petrol pump price	136

FIGURES

•	Figure 2.1: Growth rate of GDP: 1985 – 2008	10
•	Figure 2.2: Real Gross Domestic Product	12
•	Figure 2.3: S.A Primary Sector Demand for Energy	16
•	Figure 2.4: S.A final energy demand	18
•	Figure 2.5: Size of the Gauteng compared South Africa	19
•	Figure 3.1: Oil flow chart	28
•	Figure 3.2: South Africa's primary energy	31
•	Figure 3.3: South Africa coal chain	32
•	Figure 3.4: Fixed price analysis	35
•	Figure 3.5: Road Accident Fund Cost	37
•	Figure 4.1: CEF group structure	46
•	Figure 6.1: Tshwane service station sampling	92
•	Figure 6.2: Average annual sales volume growth of petrol and diesel by province	93
•	Figure 6.3: Petrol and diesel price history (Gauteng)	99
•	Figure 6.4: Retailer margin	102
•	Figure 6.5: Impact of petrol price increase on productivity	105
•	Figure 6.6: Retailer margin periodic increase	106
•	Figure 6.7: Petrol price fluctuations	106
•	Figure 6.8: CPIX and administered prices	107
•	Figure 6.9: Price increase impact	110
•	Figure 6.10: Monthly price fluctuations	112
•	Figure 6.11: Impact of petrol price on stock level	114
•	Figure 6.12: Age profile of retailers	117
•	Figure 6.13: Gender analysis	118
•	Figure 6.14: Net profit histogram	123
•	Figure 6.15: Annual turnover and gross profit	124
•	Figure 6.16: Volume and gross profit scatter-plot	126
•	Figure 6.17: S.A petrol price comparison	134
•	Figure 6.18: Historical crude oil price	137

CHAPTER 1 Introduction

Business competition, legislation and composition in the retail business have changed a lot over recent years. Businesses everywhere are faced with new challenges like changes in patterns of customer demand, technological innovations, customer service level requirements and so on. The petroleum industry is no exception to all these new developments in the retail business.

The threats and challenges facing the oil industry in today's economic climate have an impact on the individual site performance of service stations. Companies in South Africa, unlike in the past, face more competition in the market place and fluctuation in the value of the Rand against the US Dollar and major currencies. The fluctuating crude oil supply by the members of the Organisation of Petroleum Exporting Countries (OPEC) and Non-Opec members have led to volatile crude oil prices, supported also by tremendous increase in demand, particularly from China. Recent years have also seen more foreign companies entering the local market.

In South Africa, the oil industry, particularly in terms of the price of petrol, is still regulated by government legislations, (viz., Petroleum Product Act, No. 120 of 1977, with its amendments). Gross profit margins on petrol are regulated by government. Diesel and illuminating paraffin prices are, however, not regulated.

The focus of this study is on the service stations in the City of Tshwane Metropolitan Municipality area (CTMM) of Gauteng Province in South Africa. Tshwane is one of the biggest metropolitan structures within the country, comprising 14 municipal structures. The national and the metropolitan area dealer network consists of 5,112 and 317 service stations as shown in Tables 1.1 and 1.2 respectively. Table 1.1 shows the number of service stations by province.

Provinces	No. of Sites	Percentage
Gauteng	1,582	30.95
KwaZulu Natal	989	19.35
Western Cape	810	15.85
Eastern Cape	451	8.82
Free State	332	6.49
Mpumalanga	305	5.97
North West	302	5.91
Limpopo	206	4.03
Northern Cape	135	2.64
Republic of South Africa	5,112	100.00

Table 1.1: National Network - Service Stations

Source: Small Business Advisory Bureau – SBAB (2002)

SAPIA (2007)

Gauteng has the largest number of service stations numbering 1,582 sites (31%), followed by KwaZulu Natal with 989 sites (19%) while Northern Cape accounts for the smallest number of only 117 sites (3%).

The CTMM area has 317 operating service stations. Table 1.2 below shows the number of service stations per petroleum company active in the Tshwane area.

Petroleum Companies	No. Of Sites	Percentage
Engen	70	22.08
Caltex	62	19.56
BP	56	17.67
Shell	50	15.77
Total	45	14.20
Exel / Sasol	25	7.89
Zenex	5	1.58
Afric Oil	4	1.26
Терсо	0	0.00
Total	317	100

Table 1.2: CTMM area service static

Source: Sapia – Service Stations (2006)

Engen, Caltex and BP lead all other petroleum companies in terms of operational sites in the study area. Exel, Afric Oil and Zenex have less than 6% each of the total sites. Currently, Exel sites are being rebranded to Sasol. Tepco has no site in the CTMM area. There are significant historical and other factors which have played a part in this imbalance. These are discussed in ensuing chapters.

Accordingly, Chapter 2 deals with the contribution of the energy industry to the country's economy. The South African economy is energy intensive and uses the largest amounts of energy for every Rand of value added because of heavy reliance on primary extraction and processing. South African energy is dominated by coal, which is plentiful and cheap, resulting in one of the lowest energy production costs in the world. Apart from coal, which contributes 70% of primary energy, South Africa gets energy locally from biomass, such as wood and dung, natural gas and oil from coal (Sasol). South Africa has very little oil and 95% of our crude oil is imported. South Africa has fairly small gas fields off the south coast, mainly from Mossgas (ERI, 2001).

Chapter 3 considers the literature review of previous research relating to the current study. Miller (1979) shows how the total market (i.e., retail service stations) is made up of many small sales areas, and that nearly all competition between service stations is within these sales areas rather than between them. His research also concluded that the consumer (particularly the private consumer) is paying substantially above world prices for petroleum products in South Africa. Hidden's study (1989), on the other hand, showed the comparatively insignificant contribution of petrol sales to total gross profit.

Mlonzi's study (1996) showed the significance of improvement in service delivery at petrol service stations in the Black areas. Petrol service stations, it may be noted, form part of the oil companies' operations and, as such, they need to differentiate their service offerings from those of the competitors.

There seems to exist a clear understanding of the need for marketing at service station level despite the franchise system that exists in the industry. Service station managers have generally underestimated the degree of regulation of their marketing activities. Most service station managers did seem to have marketing objectives, but they did not communicate such objectives to their staff (Govender, 1997).

Possible deregulation of the liquid fuel sector in South Africa on the same basis as in Australia may actually make the retail petrol prices more volatile. In view of the high unemployment rate in South Africa, one may conclude that South Africa may not be ready to deal with the consequences of a higher volatility in the retail petrol price (Odendaal, 1998).

The non-renewable resources are both depletable and non-recyclable sources of energy. One interesting characteristic of price ceilings is that they affect behaviour even when they are not binding (when the market price is lower than the price ceiling, for example). Price controls may cause other problems as well in the market place (Tietenberg, 2000).

The development process of any nation is a dynamic and complex one. It is even more complicated for developing countries. Not only have they to choose the desirable path of development in terms of basics achievable in economic, social and community related areas, they also need to distribute resources in such a manner that a balanced and sustainable path of development is achieved (Basu, 2000).

In this connection, it may also be noted that the UK petrol market has experienced, over the last two decades, intense price competition and as such provides a rich source of information on some of the real-world issues in pricing. The petrol retailing market is found to adhere broadly to the Classical theory of price competition but its special characteristics cause interesting deviations (Cohen, 1999).

Projections by the International Energy Agency (IEA), based on the growth of the world economy, especially that of markets in the South, indicate that energy consumption in the next twenty years will increase by 60%. This view, however, is challenged by others who propose an alternative scenario in which demand for oil in the near future will fall dramatically with the development of new or alternative sources of energy capable of taking over the hegemonic role played by oil (Branco, 2000).

Chapter 4 highlights the legislation in South Africa affecting the petroleum industry. This chapter will thus deal with the context of South African petroleum industry perspective, operation, petrol pricing and the retail operation systems of service stations. The Rationalization Plan and the Blue Pump Agreement concluded by oil companies are also discussed.

Chapter 5 will discuss, in the context of South Africa, the petroleum industry legislation and the formation of Sasol. Accordingly, this chapter will also deal with the impact of government "participant" (i.e., regulated markets) and the possible future deregulation. The activities of all major oil companies will be investigated and also the effects of legislation on the industry and the impact thereof on the individual service stations. The impact of Sasol on the retail industry, albeit on a very limited scale, will be analysed and its contribution to the South African economy.

Chapter 6 will analyse the research data collected during the research process. Key factors will be extrapolated and analysed in relation to the impact of the South African liquid petroleum industry on the national economy. The chapter will also provide a detailed description of research methods employed to accomplish the study objectives. It will be necessary to make use of a multi-method approach in research because of the variety of information needed to address the research questions and hypotheses.

The last chapter, Chapter 7, will summarise the survey results and data. The main aims of the study will then be evaluated, along with a full discussion of research findings. The chapter will also provide some recommendations to improve the performance. Conclusions about the future prospects of the industry, and measures for the survival of service stations in the challenging trading environment will be suggested.

CHAPTER 2 An overview of the South African economy

2.1 South African Economy

South Africa is situated at the southern tip of the African continent and covers an area of 1,219,090 square kilometres – which is almost equal in size to Germany, France and Italy combined, and eighth of the size of the United States of America (USA). It shares boundaries with Namibia, Botswana, Zimbabwe, Swaziland and Mozambique, and completely encircles the small mountain kingdom of Lesotho. Its western, southern and eastern boundaries are the Atlantic and Indian Oceans (GEDA, 2005).

Topographically, the country is characterised by a large inland plateau that is separated from the neighbouring lowlands by the Great Escarpment – which varies in altitude from about 1 500m in the southwest to 3 482m above sea level in the Drakensberg mountains of Kwazulu-Natal Province. The topography ranges from lush valleys to semi-desert (GEDA, 2005).

The province of Gauteng is situated in the north-eastern part of South Africa (See Annexure C). Gauteng is a Sotho word meaning "place of gold" – a reference to the area's historical importance as a source of much of the world's gold. It is a small province, with the Free State in the south, North West to the west, Mpumalanga in the east, and the Limpopo Province to the north. Gauteng covers an area of 17,010 square kilometres and makes up only 1.4% of South Africa's total land area. The province is located on the "Highveld" at an average altitude of 1 760m above sea level, and constitutes a natural watershed – feeding the Vaal River system to the south and the Limpopo River to the north.

Gauteng is the gateway to business in South Africa and the continent. Gauteng generates 10% of Gross Domestic Product (GDP) of the African continent, and a third of South Africa's GDP. Gauteng is not only the dominant economic region, its contribution to South Africa's national Gross Domestic Product (GDP) has grown from 32.6% in 1995 to the current level of 33.9%, but its population profile makes it a natural fit. Gauteng has the most highly educated populace in South Africa and among one of the best educated in the developing world, which in turn assists growth, innovation and labour productivity. Gauteng is also one place in South Africa where one encounters all the elements that make up South Africa's diversity. In this capacity, Gauteng reflects all aspects of the country's future prospects as well as those of its socio-economic and political problems. It is the smallest province in the country and yet it has managed to incorporate all the diversity alluded to, and it has the highest population density of 365 persons per square kilometre. It is a province which, in the fullest sense, reflects the dynamics of the South African political economy. In its density, it also produces something akin to a hothouse in which these dynamics are magnified. It is, therefore, a magnifying glass for South Africa as a whole (SAIRR, 2003; GEDA, 2005 and GEDA, 2006).

In the past five years, Gauteng economy grew at an annual rate of 3.7 per cent, increasing to over 5.0 per cent in 2004. The largest contributors were tertiary industries, contributing a total of 60.8 per cent to the province. Primary industries have, however, declined by an annual average of 3.3 per cent between 1995 and 2003, due to the structural changes in the South African economy generally and in Gauteng in particular (Mashatile, 2005).

Gauteng, which was previously known as the Pretoria-Witwatersrand-Vereeniging (PWV) complex of the Transvaal Province, comprises the three urban areas of Pretoria (South Africa's capital city, where the emphasis is on government services), Johannesburg (the provincial capital, and commercial, financial and mining headquarters of South Africa) together with the rest of the Witwatersrand, and the Southern Vereeniging-Vanderbijlpark industrial complex (Kok, 1998). This study focusses on the City of Tshwane Metropolitan Municipality (CTMM).

Pretoria, although possessing a sizeable industrial base stimulated by early iron and steel production, has never had the character of an industrial city and, in a sense, has a character different from all the major cities and towns of Gauteng. Its history, from before the time of the Union of South Africa in 1910, has been shaped by its role as the capital of the old Transvaal Republic and later as the administrative capital of the Union and the Republic of South Africa (Kok, 1998).

It is a city of civil servants, diplomats, educationalists and assorted professionals who cluster near administrative centres. It does also have poorer White areas, but its character has been pre-dominantly shaped by its middle-class state bureaucracy and by the numerous research and tertiary educational institutions within it. The whites in Pretoria are mainly Afrikaans speaking. After Johannesburg, Pretoria has probably experienced a more rapid inflow of people other than whites into its middle-class suburbs than anywhere else in Gauteng. This is not yet visible because many of the new Black civil servants seem to commute to Pretoria from Johannesburg. Among the whites, there is more commuting from Pretoria to Johannesburg because of lower crime rates and a less stressed lifestyle in Pretoria. The African townships of Pretoria, although politicised and far from quiescent, generally tend to be better ordered and "respectable" than the townships in the rest of Gauteng Province (Kok, 1998).

2.2 Nature of the economy

The South African economy has undergone rapid structural change during the past decade. Much of this change resulted from the dramatic change in the South African political environment which brought about the end of political and economic isolation of the early 1990s. This also brought about an automatic increase in the exposure of local producers to the harshly competitive forces in the global economy, a far cry from the highly protected and insulated economy of the 1980s. This exposure is highlighted by the government's steady tariff reductions in line with schedules agreed within the World Trade Organisation (WTO). The nature of the economy is a phrase used to describe the state of development (e.g., emerging markets), the main sectors by size (% of GDP) and, may be, the main export sectors. On these bases, South Africa's economy is of a medium size by world standards, but enormous by African standards. It is by far the best developed economy in Africa as well as the largest. In terms of income per capita, South Africa ranks fifth in Africa behind two OPEC states, Libya and Gabon, and two Indian Ocean islands, Reunion and Seychelles. It has by far the highest income per capita of non-oil producing continental Africa, and outpaces some oil producers such as Nigeria and Angola (du Toit, 2002).

The South African economy was in recession between 1989 and 1992, largely as a result of worldwide economic conditions and the long-term effects of apartheid. From 1984 to 1993, short-term capital outflows were substantial, and the country was a net capital exporter, mainly as a result of sanctions and disinvestment. The unilateral declaration by the South African Reserve Bank (SARB) of a debt moratorium in 1985, in response to a looming external debt crisis, worsened the situation. After the 1994 democratic election, a turnaround in capital flows occurred. This resulted in an upswing in economic activity, and positive economic growth rates, albeit relatively low, were recorded in the subsequent years (Rousseau, Meintjes and Barnard, 2002).



Figure 2.1 : Growth Rate of GDP: 1985 – 2008

Source: Rousseau, Meintjes and Barnard (2002)

SARB Bulletins (2004,2006,2009)

South Africa is the powerhouse of economic activity in the Southern African Development Community (SADC) region, contributing 72% to the Gross Regional Product (GRP). The rate of economic growth in South Africa as well as fluctuations in economic activity have a substantial impact on the rest of the region due to both forward and backward trade linkages. Not only is South Africa the main supplier of manufactured goods and services to the rest of the region but also provides employment opportunities to a large proportion of SADC's labour force. The South African economy is very much in contrast to the rest of the member countries, well diversified with a developed manufacturing sector and, for this reason, much less vulnerable to exogenous factors (Rousseau, *et al.*, 2002).

Exploitation of abundant natural resources was mostly responsible for economic growth in South Africa. More recently, however, growth has been constrained by South Africa's failure to adjust to changes in the world economy which began to favour producers of manufactured products rather than raw materials producers. Economic performance has also been impeded by inadequate investments in education and health, a legacy of organisational and legal impediments imposed by apartheid, and by a long period of comparative economic isolation from the West culminating in the sanctions campaign (Standard Bank, 1995).

More recently, the Free Trade Agreement with the European Union area and the Africa Growth and Opportunity Act (AGOA) of the USA have served to further reduce the artificial trade boundaries between South Africa and both the European Union and the USA, while a free trade agreement with the USA, to name but one, is being negotiated.

The South African economic growth rate accelerated from an annualised rate of 3.5 per cent in the first quarter of 2005 to 5 per cent in the second quarter. This robust growth can be attributed to a strong increase in the real value added by the secondary sector which was accompanied by solid growth in the real output of the tertiary sector (SARB, 2005).

Figure 2.2 : Real Gross Domestic Product

Source: South African Reserve Bank (2009)

It is clear from Figure 2.2 that the South African economy expanded further in the third quarter of 2006 but with somewhat less vigour than in the second quarter. Real gross domestic product increased at an annualised rate of 4,75 per cent in the third quarter, following strong growth of 5,5 per cent posted in the second quarter of 2006. The real gross domestic product in the first three quarters of 2006 was about 4,5 per cent higher than in the corresponding period in 2005, falling short of the growth rate of 5 per cent recorded for the calendar year 2005 (SARB, 2006).

The Business Confidence Index (BCI), monitored by the South African Chamber of Business (SACOB), shows a continuation of the downward trend that started in January 2007. A record level of 103.5 was, however, recorded in December 2006. The BCI average of 100.5 for the first quarter 2007 was lower than the 102.1 of the fourth quarter 2006 and the 101.4 of the first quarter 2006 (SACOB, 2007).

Month	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
January	79.4	83.2	79.5	83.1	96.2	99.0	103.1	101.5	93.8	82.4
February	80.5	87.0	79.4	82.8	95.0	99.8	100.1	100.5	94.0	84.5
March	78.7	84.1	78.1	83.2	95.9	100.3	100.9	99.5	93.9	78.9
April	75.6	80.6	79.7	84.0	97.5	100.1	103.1	101.9	93.4	81.9
May	77.6	81.5	84.2	80.6	97.2	99.9	101.4	100.2	93.0	81.8
June	76.9	85.0	85.0	83.2	96.8	100.8	99.4	99.1	92.6	83.1
July	78.1	85.7	83.8	85.0	96.4	101.5	99.1	99.6	92.8	83.1
August	78.5	85.7	82.4	87.0	100.5	99.2	99.0	98.1	90.5	83.0
September	77.8	82.3	83.6	88.3	103.0	99.0	97.7	98.7	89.9	85.5
October	80.1	81.2	82.2	91.6	99.5	99.1	99.5	96.9	84.2	82.2
November	78.5	84.7	83.0	94.2	98.4	99.5	103.2	95.8	86.7	84.1
December	82.3	79.7	82.0	96.3	97.7	101.8	103.5	94.8	83.8	83.5
Average	78.7	83.4	81.9	86.6	97.8	100.0	100.8	98.9	90.7	82.8

 Table 2.1 : SACOB Business Confidence Index

Source: South African Chamber of Business (2007)

South African Chamber of Commerce and Industry – SACCI (2009)

Table 2.1 indicates that business confidence is experiencing a bumpy ride after it achieved a comfortable level of 100 in the second half of 2004. This current turbulent wave is the fourth one experienced since the beginning of 2005. It is notable that, during the course of the two years, the BCI has not broken through the upper band of 103 for any prolonged period, with the exception of some unsustainable erratic movements that temporarily broke through the 103 level (SACOB, 2007).

The SACCI BCI again retracted by 0.6 index points to 83.5 in December 2009. This followed a claw-back points to a measure 84.1 in November 2009. After the BCI reached its highest level for 2009 of 85.5 in September (from the low of 78.9 in March), it has lost momentum and has since moved laterally. The consequences of the recession still pervade the local economy and the international economic developments have failed to be reassuring (2009).

Table 2.2 puts the overall performance of the South African economy in perspective. The overall analysis will be used in comparison with the economic performance of Gauteng and CTMM areas in order to evaluate the growing and potential areas of Tshwane.

	2001	2001	2001	2001	5 year ave	growth rate	Current
	SA	Gauteng	Nominal	Real	1996-2001	2002-2007	2009
Major Sectors	%	%	Rands (m)	Rands (m)	%	%	%
Agriculture & Forestry	3.1	0.4	1 417.4	1 288.0	0.6	33.0	18.8
Mining and Quarrying	7.5	4.4	15 349.0	7 823.0	0.3	0.6	-11.9
Manufacturing	18.5	20.5	70 769.5	50 542.0	1.5	3.3	-14.1
Electricty, Gas & Water	2.7	1.4	4 922.7	4 130.3	0.9	2.9	-8.6
Construction Total	2.9	2.9	9 906.4	6 871.9	1.8	6.9	13.9
Retail/Wholesale Total	13.0	14.0	48 482.0	33 858.1	1.5	1.4	-1.7
Transport & Communication	9.9	9.4	32 413.5	23 325.9	5.8	6.7	6.2
Finance/Business Services	20.5	24.7	85 240.2	53 828.9	5.3	5.8	-3.2
Community/Social Services	2.9	4.0	13 798.2	8 237.9	1.6	1.1	-1.2
Government	15.9	15.1	52 148.7	29 817.0	0.4	0.2	2.2
Other Producers	3.0	3.2	10 894.0	6 340.4	1.8	2.0	-1.5
Total excl Government	84.1	84.9	293 193.1	196 246.3	2.9	4.1	-3.2

Table 2.2 : S.A. economy

SAIRR (2009) & SARB (2009)

* Calculation based on Sasol (2003) figures

The financial services (24.7%), manufacturing (20.5%) and trade (14%) sectors account for approximately 60 per cent of the value added within Gauteng. These sectors are more dominant in the province than in the country as a whole, accounting for 52 per cent of South Africa's total value added. Community and social services sector contributes 4 per cent to the gross geographic product (GGP) which, compared with 2.9 per cent for South Africa as a whole, exhibits this sector's relative strength within the region. The electricity, gas and water sector contributes only 1.4 per cent of Gauteng's value added, around half of its national contribution of 2.7 per cent, thus exhibiting its relative regional weakness.

Gauteng province outstrips the rest of the country and leads the whole continent in many ways:

- From 1995 to 2002, Gauteng economy grew at an average of 3,3 per cent, compared with a national average of 2,7 per cent;
- Growth in Gauteng is in line with that in other developing countries: India recorded a 3,9 per cent increase over the same period and Brazil's GDP grew at 3,7 per cent;
- Gauteng's contribution to the national GDP grew from 32,6 per cent in 1995 to 33,9 per cent in 2002 (GPG, 2003).

Over the past 5 years, the average growth rate for the province as a whole was 2.4 per cent. Average sectoral growth rates of 1.5 per cent for manufacturing, 1.5 per cent for trade and 5,3 per cent for the financial sector were recorded. The Transport and communication sector, which accounts for just under 10 per cent of Gauteng's value added, recorded the strongest average growth of 5.8 per cent (GPD, 2004).

The South African economy is highly energy intensive; it uses large amounts of energy for every Rand of value added. This is because the economy is still based on primary extraction and processing. South African energy is dominated by coal, which is plentiful and cheap, resulting in one of the lowest energy costs in the world, notably the cost of electricity, although the same cannot be said of the cost borne by final consumers. South Africa has very little oil and 95% of its crude oil is imported. The South African primary sector demand for energy is depicted in figure 2.3.

Figure 2.3 : S.A Primary Sector Demand for Energy



Source: Energy Research Institute (2005)

The South African economy has been performing better than most other countries although, in the global context, it is still regarded as a developing country. The World Bank classifies economies into different income groups according to Gross National Income (GNI) per capita. In terms of 2000 GNI per capita, these income groups are:

- i) Low income (\$755 or less)
- ii) Lower middle income (\$756 \$2 995)
- iii) Upper middle income (\$2 996 \$9 265) and
- iv) Higher income (\$9 266 or more).

Accordingly, South Africa is categorized as an upper middle income economy with a GNI per capita of \$3,020 in 2000. In terms of 2000 GNI, South Africa was the 29th largest economy globally, with GNI of \$129,2 billion. In both Sub-Saharan Africa and SADC, South Africa ranked first in 2000.

Role of the energy sector in the SA economy

As stated earlier, the South African economy is highly energy-intensive, using relatively large amounts of energy for every Rand of value added, and the economy is dominated by primary extraction and processing industries. Apart from coal, which contributes 70% of primary energy, South Africa gets energy locally from biomass, such as wood and dung, natural gas, hydro-power, nuclear power, solar power and wind. South Africa has very little oil, and 95% of crude oil consumption is imported. South Africa has fairly small gas fields off the south coast which supplies Mossgas (ERI, 2001).

Although South Africa ranks 26th highest in the world in GDP terms, its primary energy consumption ranks 16th. The energy sector is critical to the South African economy, contributing about 15% of GDP and employing about 250,000 people. Its energy intensity is above average, with only 10 other countries having higher commercial primary energy intensities. This high energy intensity, as noted earlier, is attributed mainly to the economic structure, with dominance by large-scale, energy-intensive primary minerals beneficiation industries and mining industries.

Industry is the largest energy consumer, accounting for nearly half of total consumption. Households and transport make up most of the other half, while agriculture accounts for only 3% of consumption. The South African transport sector consumed 28% of final energy demand in 1995; of this, 2.7% was electricity, 0.3% coal and 97% petroleum products. The transportation market has been virtually the only growth sector for the oil industry over the past 20 years (ERI, 2001).

Liquid fuels such as petrol and diesel account for 92% of energy used for transport. Rail transport accounts for less than 5% of total national electricity consumption. Petrol sales account for more than half of the total sales of local petroleum products. South Africa consumed some 22,9 billion litres of liquid fuels in 2004 (SAPIA, 2005).

The demand for diesel has remained relatively low since the beginning of the 1980's. This is to be expected as diesel is largely used in the commercial transport sector and by industry and agriculture. The demand in these sectors is less price-elastic than the demand for petrol used primarily by private motorists (DME, 2005).

Globally, the transport sector is the biggest consumer of oil. The Intergovernmental Panel on Climate Change (IPCC) estimated that 58% of all oil products are consumed by this sector. In terms of energy demand, 95% of the transport sector is satisfied by oil, with small quantities of electricity, gas and coal constituting the remainder.

For the purpose of energy demand, the South African economy can be considered to be divided into six sectors: industry, agriculture, commerce, households, transport and other. Figure 2.4 shows the energy demand by sectors for 2000 in South Africa.



Figure 2.4 : S.A. final energy demand

Source: Energy Research Institute (2006)

"Non energy" comprised of materials such as coal, oil, and wood that could be used to produce energy but are actually used to make other materials such as chemicals, plastics and paper. It is evident from the Figure 2.4 that transport is the second largest major consumer of energy demand (27%).

Gauteng provincial economy

Gauteng is the gateway to business in South Africa and the continent. Gauteng generates 10% of the GDP of the African continent and accounts for about 38% of the total output of the South Africa economy (GEDA, 2005). Gauteng is the business heart of South Africa, and has the finest infrastructure in the African continent: a well-maintained and growing road and rail system with links to the entire sub-continent, and the busiest airport in Africa and one of the busiest in the Southern hemisphere. During 2000, this equated to economic activity worth around R302 billion (US\$43,6 billion) - which was larger than the output of all other Southern African states and similar in size to countries such as Hungary, Bangladesh, and the Czech Republic (GEDA, 2005).

Figure 2.5 : Size of the Gauteng economy compared South Africa

2.3 CITY OF TSHWANE METROPOLITAN MUNICIPALITY (CTMM)

The CTMM, classified as a category A urban municipality, was established on the 05th December 2000 when various municipalities and councils that had previously served the greater Pretoria and surrounding areas were integrated. CTMM combines a mayoral executive system with a ward participatory system. The CTMM is now responsible for municipal service delivery to residents who formerly received their services from various local authorities.

The CTMM covers an extensive municipal area of 3,200 square kilometres, stretching for almost 60 km east/west and 70 km north/south, and is inhabited by approximately 2,2 million people (CTMM, 2005). The municipal area includes Pretoria, Centurion, Akasia, Soshanguve, Mabopane, Atteridgeville, Ga-Rankuwa, Winterveld, Hammanskraal, Temba, Pienaarsrivier, Crocodile River and Mamelodi.

Following local authorities were amalgamated to form the new municipality (i.e. CTMM):

- i) The Greater Pretoria Metropolitan Council
- ii) The City Council of Pretoria
- iii) The Town Council of Centurion
- iv) The Northern Pretoria Metropolitan Substructure (Akasia)
- v) The Hammanskraal Local Area Committee
- vi) The Eastern Gauteng Services Council
- vii) The Pienaarsrivier Transitional Representative Council
- viii) The Crocodile River Transitional Council
- ix) The Western Gauteng Services Council
- x) The Winterveld Transitional Representative Council
- xi) The Themba Transitional Representative Council
- xii) The Mabopane Transitional Representative Council
- xiii) The Ga-Rankuwa Transitional Representative Council
- xiv) The Eastern District Council

Distinction between Pretoria and Tshwane:

- Pretoria: Is the central city centre that is managed under "The City Council of Pretoria"
- Tshwane: Includes all new demarcated fourteen (14) municipalities listed above which encloses Pretoria. The City of Tshwane Metropolitan Municipality is bigger than Pretoria

The Tshwane economy

Table 2.3 shows the major contributors to income of Tshwane since 1990, by sector.

Sectors	1990	1996	1999	2000	2004	2006	2008
Agriculture	0.40%	0.60%	0.50%	0.40%	0.50%	0.49%	0.40%
Mining	0.20%	0.20%	0.30%	0.20%	0.20%	0.20%	0.20%
Manufacturing	16.60%	13.20%	11.70%	11.60%	12.50%	12.30%	12.50%
Electricity	1.70%	2.70%	2.50%	2.40%	2.39%	2.41%	2.51%
Construction	2.80%	3.20%	3.00%	2.90%	3.50%	3.20%	5.00%
Trade	11.40%	14.20%	12.80%	12.60%	13.20%	12.80%	12.60%
Transport	11.20%	13.30%	15.10%	16.10%	16.50%	16.00%	16.48%
Finance	15.90%	23.80%	26.20%	27.60%	27.00%	26.50%	28.00%
Communirt Services	39.90%	28.80%	28.00%	26.10%	24.21%	26.10%	22.31%

Table 2.3: Percentage income by sector - Tshwane

Source: Sasol (2002)

The transport sector's contribution to the metropolitan economy has increased from 13.3% in 1996 to the 16.10%. in 2000. The transport and finance sectors were the only sectors showed significant growth over the period, while most of the other sectors experienced relative declines in their contribution to the metropolitan economy.

CHAPTER 3 An overview of the Energy Industry

This chapter will consider the review of previous research relating to the current study. There is limited published literature on the petroleum industry in South Africa or on the issue pertaining to the retail and operation sections of the business.

The South African petroleum industry tends to use mostly overseas sources as a base for decision making, and there is a tendency to refer to newspaper and magazine articles, as well as reports circulating in the industry. The vast majority of information available for the local industry pertains to the whole of South Africa, and so little information is available for the CTMM area *per se*. However, reasonable inferences can be drawn from the national figures that could be extrapolated to apply to the CTMM on the basis of the volume of economic activity that occurs in the area.

3.1 Literature Review

The recent World Petroleum Council (WPC) held in Johannesburg tried to address and evaluate the status of the energy industry in the world today and its future implications. The sustainability of energy resources, economic viability, social implication, discovery of energy resources, etc., were among the key questions the national and international players were trying to answer and to reassure the world that energy resources will be available in years to come.

"We can continue to meet our growth demand for energy. However, developing future energy resources is becoming more challenging and more expensive. That means that stable investment conditions will be needed to secure funding to develop those resources. It also means the energy industry will need to continue to develop and deploy new technology and good project management. In particular, it will need to ensure that it recruits and retains the people with the skills and expertise to meet those demands. The industry will also need to look at sustainability in the broader sense, exploring ways to tackle the carbon problem as well as developing renewable forms of energy. All these present challenges to the energy industry but also provide the opportunity for it to play its part in driving continuing progress in our world" (Van Der Veer, 2005).

Various studies undertaken, in this regard, include those by Miller (1979) who shows how the total market (i.e. retail service station) is made up of many small sales areas, and that nearly all competition between service stations occur within these sales areas rather than between them. His research also concluded that the consumer (particularly the private consumer) is paying substantially above world prices for petroleum products in South Africa. Hidden's study (1989), on the other hand, showed the comparatively insignificant contribution of petrol sales to total gross profit.

In analysing the various factors and theories which influence the spatial location of the retail outlets of petroleum companies, attention is paid to the physical and legal aspects which influence the location of filling stations, after which the aspects of market demarcation and the prediction of potential are considered. Guidelines are formulated to serve as basis of decisions concerning settlement, and a concept investigation framework is set up to facilitate decisions with regard to the location of service stations. It is found that sufficient purchase must be realized on the site to ensure profitability, the site must be accessible, costs must be minimized and relocation must be avoided as far as possible. Costs and income elements as well as investment decision-making play an important role. It is concluded that service stations are distribution channels which must be designed and located to fulfill the needs of consumers (Venter, 1983).

Mlonzi's study (1996) showed the significance of the emphasis on the improvement of service delivery in order to satisfy consumers at petrol service stations in the black areas. Petrol service stations, it may be noted, form part of the oil companies' operations and, as such, they need to differentiate their service offerings from those of the competitors.

Govender (1997) concentrated on the marketing of petrol and diesel in the Durban area of KwaZulu Natal Province. He analysed the sales volume of petroleum companies operating in the Durban area, but the focus of his work was on the marketing side. There seems to exist a clear understanding of the need for marketing at service station level despite the franchise system that exists in the industry. Service station managers have generally underestimated the degree of regulation of their marketing activities. Most service station managers did seem to have marketing objectives, but they lacked in communicating such objectives to their staff (Govender, 1997).

According to Odendaal (1998), the outcome of the possible deregulation of the liquid fuel sector in South Africa, on the same basis as in Australia, may actually make the retail petrol prices more volatile. In view of the high unemployment rate in South Africa, one may as well conclude that South Africa may not be ready to deal with the consequences of a higher volatility in the retail petrol price.

As to the investment opportunity, it can be linked to a collection of real options that interact with each other. The real options considered are the option to delay the initial investment, the option to abandon the investment during construction, the option to contract or expand the scope and the option to abandon for salvage. Analysing a hypothetical oil refinery, Dhlomo (1998) suggests that the investment opportunity is like a call option and that the real option explains more value for investment.

Petroleum storage depots form a vital link in the distribution of petroleum products to the market, and substantial benefits arise from efficient depot location and facilities planning. Computer assisted methods are developed to achieve this. Depot location is optimized on an iterative basis. Mathematical expressions to minimize total depots cost through differential calculus are utilized. An activity relationship chart is used, in addition to micro computer software to optimize flow and perform layout evaluation. This combined approach leads to a layout design that is efficient both as regards flow and service relationships (Wessels, 1987).

Industrialized countries depend on oil and natural gas for most of their energy needs. Both are depletable and nonrecyclable sources of energy. One interesting characteristic of price ceilings is that they affect behaviour even when they are not binding (when the market price is lower than the price ceiling, for example) (Tietenberg, 2000).

In this connection, it may also be noted that the UK petrol market has experienced, over the last two decades, intense price competition and as such provides a rich source of information on some of the real-world issues in pricing. The petrol retailing market is found to adhere broadly to the Classical theory of price competition but its special characteristics cause interesting deviations (Cohen, 1999).

Projections by the International Energy Agency (IEA), based on the growth of the world's economy, especially that of markets in the South, indicate that energy consumption in the next twenty years will increase by 60%. But this view is challenged by others who propose an alternative scenario in which demand for oil in the near future will fall dramatically as a result of the development of new or alternative sources of energy capable of taking over the hegemonic role played by oil (Branco, 2000). Of course, the development of alternatives could be possible only in the long run. In the meantime, it could as well be argued that the consumption of petrol could be reduced by 10 percent or so by mixing it with alcohol. It is, however, a different matter that the diversion of grains to produce alcohol could create its own problem of food shortage.

Odendaal (1998), Meiring (1991) and Gritzman (1999) focus on the deregulation of the liquid fuel industry and the industry prospects, as the petrol price is still regulated by government. Their research analysed the impact of deregulation within the liquid fuel industry in South Africa. The impact of the petrol price fluctuations has not previously been analysed extensively with regard to its effect on profitability, turnover (i.e. volume) and sustainability of retail service stations. These sources and others will be consulted and will be acknowledged by way of references.

Van Der Ham (2001) evaluated the economic (cost) of converting and running vehicles on liquid petroleum gas and compared it with those of petrol and diesel fuels. The government's intension to tax LPG and the structure of the fuel price were also considered in an attempt to foresee what the future holds for LPG use in the motor industry. Recommendations were made as to best utilize LPG in the South African Automotive industry, so as to improve public transport and air quality in some of our cities.

Thailand certainly has moved toward LPG in running vehicles, and the running cost, it is said, is one-third of the running cost of petrol. However, this option will be viable only to the extent that LPG is cheap and that the LPG supply can be guaranteed.

According to a study by Malumo (2003), both advertising and share of distribution have an effect on sales and market share. It was, however, not possible to define the exact nature of the relationships between the factors. His study indicated that advertising in the petrol market works according to the weak theory and that advertising should be aimed at increasing the salience of a petrol brand. The presence of service stations thus seemed to reinforce the salience of a brand (Malumo, 2003).

3.1.1 Background

Oil is the largest traded commodity worldwide, either through crude oil or through refined Product (See Annexure D). As a consequence, it is essential to collect data which are as complete, accurate and timely as possible on all oil flows and products. Although oil supply continues to grow in absolute terms, its share in global total energy supply has been decreasing, from over 45% in 1973 to around 35% in recent years (IEA, 2004).
	Crude oil	
PRIMARY OIL PRODUCT	Natural gas liquids	
	Other hydrocarbons	
SECONDARY PRODUCTS INPUTS TO REFINERY	Additives/blending components	
	Refinery feedstocks	
	Refinery gas	Transport diesel
	Ethane	Heating and other gasoil
	Liquefied petroleum gas	Res. Fuel: low-sulphur content
SECONDARY OIL PRODUCTS	Naphtha	Res. Fuel: high-sulphur content
	Aviation gasoline	White spirit + SBP
	Gasoline type jet fuel	Lubricants
	Unleaded gasoline	Bitumen
	Leaded gasoline	Paraffin waxes
	Kerosene type jet fuel	Petroleum coke
	Other kerosene	Other products

Table 3.1: Primary versus secondary oil

Source: IEA (2004)

The flow of oil from production to final consumption is complex owing to the variety of elements in the chain. Figure 3.1 shows the simplified oil flow, covering supply of inputs to the refinery, supply of finished product to the end-user, and the petrochemical flows which interact in the process



Figure 3.1: Oil flow chart

Source: DRAKO OIL COMPANY (2005)

3.1.2 Petroleum Studies

The worldwide economic upheaval during the past decade has been, wholly or partly, attributed to the famous OPEC price shock. One consequence has been a revival of interest in the macroeconomic analysis of such an exogenous OPEC shock. However, very little attention has been paid to the impact of external price shocks on the OPEC economies themselves.

Darrat and Suliman (2001) examine the impact of export and import price changes on the real side of oil-based developing economies within a general equilibrium theoretical framework, and make contributions to the debate in several aspects.

Darrat and Suliman (2001) study was based on the following models:

- Model 1: the model based on macroeconomic general equilibrium analysis
- Model 2: the model has two traded goods (exports and imports) and a non-traded good
- Model 3: the model directly considers the inherent open and small economy nature of the oil-based economics

The study concludes that the real imports are highly insulated against foreign import price shocks, perhaps due to the insignificance of import-substitution and export-consumption sectors. Moreover, due to the small size of non-traded (non-oil) consumption sectors, and the consequent zero cross-price effects between non-traded goods and exports, non-traded goods sectors are found to be highly immune to price changes of foreign exports. In the polar case of openness (absence of non-traded goods sectors), the substitution effect vanishes and the income effect dominates. In such a case, real changes depend crucially on the export supply response to changes in export prices, and on import demand response to changes in import prices (Darrat and Suliman, 2001).

3.1.3 Exhaustible Resources

The challenge of supplying the expanding energy needs on which rising living standards of billions of people depend while still preserving our environment are increasingly apparent (Brinded, 2005). The clear lack of sufficient oil refining capacity around the world is just one of the uncomfortable truths now facing producers and consumers alike (Smith, 2005).

Petroleum, in common with all other minerals, is a finite resource. That the world will one day run out of petroleum, is therefore, beyond dispute. When that day will come is, however, the subject of a great deal of controversy.

Heinberg (ERM, 2005) provides a well-constructed case that the subject is an immediate and pressing problem deserving serious attention. He contends that the government, business

leaders and economists of the world deny that any problem exists and that they behave as if it is 'business as usual'. Heinburg makes good use of the following quotation:

"In 1959 the human race discovered a huge treasure chest in its basement. This was oil and gas, a fantastically cheap and easily available source of energy. We did, or at least some of us did, what anybody does who discovers a treasure in the basement – live it up, and we have been spending that treasure with great enjoyment"

In 1950, the USA was:

- a) the largest exporter of petroleum products in the world;
- b) the largest lender of finance to foreign countries in the world, and
- c) the world's largest exporter of manufactured goods.

By 2005, the USA became:

- a) the world's largest importer of petroleum;
- b) the country with the largest foreign debt in the world;
- c) the world's largest importer of manufactured goods, and
- d) had the largest balance of payment deficit in the world, with debt growing by \$2 billion per day

Heinberg pointed out that, despite the continuing growth of the GDP, it is not possible to sustain such a level of debt indefinitely, and that a major collapse of the US economy will occur. The USA is, of course, not the only country that has built its prosperity during the last 100 years on fossil fuels and debt.

The countries of the Middle East contain by far the majority of the world's declared reserves of petroleum. The reliability of the figures is difficult to verify independently, and the source data are, in some countries, even state secrets. According to Heinburg (2005), future demand growth is likely to be mainly in the developing world, with the lead being taken by China and India where populations are largest. China is now the fastest growing major economy in

the world; it is also the fastest growing energy consumer and the second largest importer of petroleum products, after the USA.

By 2004, the world consumed an equivalent of 8.5 million barrels of oil a day more energy than in 2003, the largest ever global increase. China's expanding economy accounted for over 40% of this growth. This includes nearly 900,000 barrels a day more oil, almost all imported.

Taking China as an example, and as would be expected, energy consumption grows rapidly as industrialization, urbanization and personal mobility take off. It then slows as the initial spurt of development is completed, basic needs are met, and economies become more service oriented.

3.2 South African Energy Sources

3.2.1 Coal as fuel energy

The South African energy economy is heavily reliant on coal where more than 90 percent of the electricity generated comes from coal-fired power stations. Figure 3.2 shows South Africa's primary energy focus.





Source: DME (2005)

Figure 3.3 illustrates the coal chain where the four areas of application are local use (18.0 Mt/yr), export (69.2 Mt/yr), electricity generation (93.0 Mt/yr) and SynFuel (47.9 Mt/yr).





South Africa Coal Chain - 2002

Source: DME (2005)

More coal can be used using the Sasol technology to convert it to petrol, whereby local petrol pump prices might be reduced if the local prices are based on the input cost of coal versus crude oil pricing mechanism. Of course, given the very small market share of SASOL, it is rather dubious than any increase in supply by SASOL will make any difference in price. It is also highly possible that SASOL will probably fix its own price at import-parity level.

Coal Reserves

The uncertainty on the availability of significant amounts of economically extractable coal reserves for future use means that the generally expected dependence on coal well into the foreseeable future is also uncertain. It is, therefore, imperative to re-evaluate the national coal resource/reserve base to assist in formulating an efficient energy policy on future coal energy supply.

South Africa has large coal reserves, estimated to be about 55 367 Mt in 2001 (BP Statistical Review of World Energy), which is 6.5% of total world reserves. Much of the coal is mined in open cast mines and is low in sulphur (less than 1%) and high in ash (up to 40%). In the light of South Africa being a major producer, user and exporter of coal in the world, and therefore largely reliant on coal for its medium to long-term economic development, it is essential that the potential of the remainder of the country's coal resources and reserves be evaluated (DME, 2005).

Export of Coal

South Africa is the sixth largest producer of hard coal in the world, and produced 5.8% of global production in 2003. Over the past five years, however, the country has dropped from being the second largest thermal coal exporter (second only to Australia) to the fourth. Table 3.2 shows the country's production and sales revenue over the period from 1995 to 2004.

Years	Local Sales: Metric Tons	Export Sales: Metric Tons
1995	146,070,874	59,676,058
1996	152,162,430	60,169,257
1997	159,687,715	57,636,824
1998	156,814,216	66,134,449
1999	155,337,620	64,907,395
2000	155,531,884	68,128,690
2001	152,162,430	66,575,573
2002	157,638,524	69,230,939
2003	168,034,533	71,457,743
2004	178,842,194	67,073,974

Table 3.2: Domestic sale and export of coal

Source: Prevost and Msibi (2005)

The South African coal mining industry in 2004 was characterised by the impact of the strength of the rand on prices and logistical infrastructure constraints that restricted exports. Local production of 246.6 Mt in 2004 is 5.3% of the world total. Run of mine coal production grew by 1.7% to 307 Mt in 2004. The country's saleable coal production grew by 3.2% to 246.6 Mt in 2004. Total coal sales of 246.7 Mt were valued at R27.9 billion. Domestic sales rose by 7% from 176 Mt in 2003 to 178.6 Mt in 2004 on the back of growth in demand from the Eskom's electricity generation (Prevost and Msibi , 2005).

Petrol Price Analysis

If it is assumed that the SA petrol price is fixed above market clearing levels, it is possible to analyse the economic effects by means of a fixed minimum price analysis. The effect of a fixed price system on producer and consumer surplus is explained using a demand and supply analysis. Fixed minimum prices produce both welfare effects and efficiency losses (Gritzman, 1999). The analysis reveals the impact of petrol price fixing environment.

Figure 3. 4: Fixed Price Analysis

Source : Gritzman (1999)

The analysis of Figure 3.4, under a market system, when demand equals supply, the price is P₀, and the quantity of fuel traded is Q₀. Consumers enjoy a surplus equal to the triangle above price P₀ and below the demand curve D. Producers similarly benefit from a surplus represented by the triangle below price P₀ and above supply curve S.

If government fixes a minimum price at P2, consumers will demand a lower quantity Q₃, even though producers are prepared to supply a much higher quantity Q₂. Consumers, faced with the higher price and demanding a lower quantity, will lose out on a surplus equal to areas A and B. Producers benefit from higher prices, and the surplus is represented by area A. The fact that less of the good is being traded decreases producers' surplus by area C.

Areas B and C represent the deadweight loss to the economy caused by fixed minimum prices. It is difficult to calculate the exact magnitude of the welfare effects of the current pricing system. However, the size of area A can be estimated at least R2.2 billion. This figure is arrived at by multiplying a conservative estimate of the price increase caused by protection (20 cents/litre) by an estimate of the quantity consumed (11,165 million litres, according to 2005 consumption statistics). This is the extent to which consumers are subsidising the major oil companies (including Sasol).

Petrol being a kind of "demand-inelastic" commodity, price increases and hence the fixing of price at a higher level should not in any way reduce the demand, as is evidenced by SAPIA data on petrol sales.

Areas B and C cannot be estimated without knowing the elasticities of supply and demand. However, one can say without fear of contradiction that the deadweight loss to the economy runs into hundreds of millions, if not billions, of Rands. On the other hand, this analysis may also indicate the potential gain to the economy from de-regulation. Nevertheless, the recent huge increase in the price of petrol in 2008 could as well reduce the demand, with people switching to more fuel-efficient modes of transportation or simply reducing the frequency of travel. It could then be argued that the producer margin will be reduced and that they could end up with over capacity.

A minimum price may encourage producers to expand their capacity. This would result in unsold output or unused capacity. This scenario is likely in South Africa because the wholesaler's margin is aimed at providing a 15% return on capital. One could thus expect an inefficient over-capitalisation in the wholesale market.

The petrol price includes costs like the Road Accident Fund (RAF) as depicted in the figure 3.5 below. Tax levies like RAF add to the final petrol price which impact negatively to the motorist as those costs are fixed. The RAF cost increases on a year-on-year basis are shown in the figure.





Source: DME (2008)

The levies must be capped for a period and also decrease if more cash generated for a particular exercise has been achieved. The levies will be viewed as inefficiencies within the petrol price that cannot change over a period of time.

CHAPTER 4 The Petroleum Industry in South Africa

4.1 Introduction

The fuel industry in South Africa is regulated by government laws and regulations. The price of petrol is controlled and regulated by government as opposed to most Western countries, which operate in a deregulated environment. The petroleum industry is one of the largest contributors to the country's gross domestic product (9% of GDP in 1999) and a key strategic industry for the Department of Mineral and Energy Affairs and the country.

The industry needs to be examined against the historical-political background of South Africa, especially during the sanctions era when exporting countries were barred from supplying crude oil to South Africa. This resulted in many clandestine transactions in the procurement of crude oil supplies as well as a move towards national self-reliance on fuel. Consequently, projects such as SASOL and MOSSGAS were undertaken.

Since the petroleum industry is one of the strategic sectors of the economy, there are high barriers to entry and intense competition among players. Limited academic research has been undertaken and completed in the local industry, compared with studies conducted internationally.

Information is not easily available from the major petroleum companies due to the strategic nature of the petroleum business. Internet sources were therefore frequently used, but they may not provide an accurate picture.

The oil industry rules applying to all oil companies operating in the South African economy are laid down by the government. The formation and the history of this important economic sector are discussed in the sections that follow. The oil industry companies have bodies which negotiate with the government for margin increases for the oil companies. Retailers and dealers also participate in these negotiations. The Petroleum Products Act of

1977 and Central Energy Fund Act of 1977 remain to date as enabling legislation, but may have to be amended to accommodate new retailers.

Pre-1973 oil embargo

Prior to 1954, all fuel used in South Africa was imported in refined form and distributed and marketed primarily by the Shell Oil Company of South Africa (Royal Dutch Company – Shell), Standard Vacuum Oil Company of South Africa (which later became Esso and then split into Exxon and Mobil), British Petroleum (BP), and another American Company (Caltex). Other companies included Texaco, Victory, Arop and Mobil, the last of which eventually changed into Engen and was recently taken over by Petronas (Malaysian Oil Company). Some of the above companies disinvested during the sanctions period. Currently, only Shell, BP, Caltex and Engen (formerly Mobil) still operate in South Africa. Total, a French company, entered the South African market in 1954.

Until 1931, the industry maintained a fair degree of price stability as a result of an agreement enforced on the industry. The oil companies at the time prescribed the price at which retailers had to sell fuel (resale price maintenance), and the retailers who did not adhere to the prescribed price faced the penalty of withdrawal of supplies.

Dissatisfaction amongst service station owners led to the passing of the Unlawful Determination of Prices Act No. 24 of 1931. The effect of the Act was to switch the control in the industry from the oil companies to the government (Govender, 1997). The results of this action were price wars throughout the country and chaos in the fuel industry. As a result, the Unlawful Determination of Prices Act 24 of 1931 was amended in 1937 to exclude petroleum product prices. The pricing of petroleum products was then transferred to the Price Controller in the Department of Trade and Industry.

The Association of Motor Traders (AMT) agreed to standardise prices at service stations and control the number of service stations, as well as the number of pumps at a service station, implying that a particular service station could carry more than one brand of fuel. This led to certain problems such as service stations having a larger number of pumps than was feasible, deterioration in service, administrative problems for dealers and a large number of bankruptcies.

It was finally decided in 1951 to limit service stations to selling the products of only one oil company. As a *quid pro quo*, the service station owners received loans, grants, and other concessions from the oil companies in order to improve efficiency and profitability, resulting in an improvement in service to customers and oil companies reducing transport costs by delivering only to their own service stations.

Post-1973 oil embargo and before 1994

The period from the 1973 oil embargo until 1994 saw a rapid growth of retail service station outlets in major parts of the country. Although international petroleum companies like Mobil disinvested from the country during the sanctions period (1973 - 1994), others remained in the country. This period also saw major investments in refining, logistics and procurement.

In the millennium era, South Africa saw new entrants in the market such as Afric Oil, Exel, Zenex and Tepco (part of TEBA Group). Exel and Tepco are both South African companies. The market changed from a situation when previously a dealer was selling mainly petrol to a retailer offering a vast range of products, such as convenience stores, car washes, video shops, forecourt petrol and the like.

4.2 Organisations

4.2.1 International Organisations

(i) Organisation of Petroleum Exporting Countries (OPEC)

OPEC is a permanent, intergovernmental organisation, created at the Baghdad Conference on September 10-14, 1960. OPEC comprises eleven oil producing developing countries which are heavily reliant on oil revenues as their main source of income. Membership is open to any country which is a substantial net exporter of oil and which shares the ideas of the organisation. The current members are Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates and Venezuela.

Since oil revenues are so vital for the economic development of these nations, the aim of OPEC is to bring stability and harmony to the oil market by adjusting oil output to help ensure a balance between supply and demand. Twice a year, or more frequently if required, the Oil and Energy ministers of the OPEC members meet to decide on the organisation's output level and consider whether any action to adjust output is necessary in the light of current and anticipated developments in the oil market.

OPEC's eleven members collectively supply about 40 per cent of the world's oil output and possess more than three-quarters of the world's total proven crude oil reserves. OPEC had its headquarters in Geneva, Switzerland, in the first five years of its existence, and moved to Vienna, Austria, on September 1, 1965.

OPEC's objective is to co-ordinate and unify petroleum policies among member countries, in order to secure fair and stable prices for petroleum producers, an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry (OPEC, 2005).

(ii) Organisation of Economic Co-operation and Development (OECD)

The forerunner of the OECD was the Organisation for European Economic Co-operation (OEEC), which was formed to administer American and Canadian aid under the Marshall Plan for reconstruction of Europe after World War II. Since it took over from the OEEC in 1961, the OECD vocation has been to build strong economies in its member countries, improve efficiency, market systems, expand free trade and contribute to development in industrialised as well as developing countries.

OECD consisting of major non oil-consuming nations was instituted to counterbalance the role of OPEC, and has a membership of 30 countries, often developed countries, and all committed to market economies and pluralistic democracies. The OECD countries produce two thirds of the world's goods and services. The core of original members is located in Europe and North America but has expanded to include countries from the rest of the world. In its attempt to deal with OPEC's ability to manipulate crude oil prices, the OECD has developed emergency strategies to help its members deal with crises such as energy supply shocks, as is evidenced recently by the European decision to supply the USA with oil products after the devastation caused by the hurricane Katrina.

One of the aims of OECD is to produce internationally agreed instruments, decisions and recommendations to promote rules of the game in areas where multilateral agreements are necessary for individual countries to make progress in a globalised economy. Sharing the benefits of growth is also crucial as shown in its activities such as in emerging economies, sustainable development, territorial economy and aid (OECD, 2005).

(iii) International Energy Agency (IEA)

The International Energy Agency (IEA) is an autonomous body which was established in November 1974 within the framework of the Organisation for Economic Co-operation and Development (OECD) to implement an international energy programme. It carries out a comprehensive programme of energy co-operation among twenty-five* of the OECD's thirty member countries. The basic aims of the IEA are:

- a) To maintain and improve systems for coping with oil supply disruptions;
- b) To promote national energy policies in a global context through co-operative relations within non-member countries, industry and international organizations;
- c) To operate a permanent information system on the international oil market;
- d) To improve the worlds' energy supply and demand structure by developing alternative energy sources and increasing the efficiency of energy use;
- e) To assist in the integration of environmental and energy policies (IEA, 2005).

* IEA member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Luxenbourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. The European Commission also takes part in the work of the IEA.

(iv) World Petroleum Council (WPC)

The World Petroleum Council (WPC) was founded in London in 1933. It provides a strictly non-political forum for discussing the issues facing the oil industry on a worldwide basis. The WPC is dedicated to the application of scientific advances in oil and gas industries, technology transfer and the use of the world's petroleum resources for the benefit of mankind. The WPC's 62 member countries represent over 90% of the world's major oil and gas producing and consuming nations of the world. Each country has a national committee made up of representatives from the oil and gas industry, academia and research institutions, and government departments. Attendance at WPC Congresses is open to all, and over 90 countries are usually represented. The Congresses held regularly have traditionally covered all aspects of the industry, from exploration to downstream activities.

More recently, these have been expanded to include petroleum finance, management and environment issues.

For the first time in its 72-year history, the World Petroleum Council held its tri-annual Congress in the African continent in 2005 in South Africa. The 18th World Petroleum Congress focussed on the theme of "Shaping the Energy Future: Partners in Sustainable Solution". Energy is the lifeblood of economic and social development and, while oil and gas will not last forever, they will be essential for global developments in the following decades. Transition must, therefore, take place towards cleaner forms of energy production and use, and the petroleum industry will be part of this development (WPC, 2005).

4.2.2 Domestic Organisations

(i) Central Energy Fund (CEF)

The Central Energy Fund (Pty) Ltd is the South African government's holding company in the petroleum industry and was incorporated in terms of the Central Energy Fund Act, No. 38 of 1977 (as amended). The CEF's origin dates back to the formation of Strategic Fuel Fund (SFF) to procure and store crude oil and to manage the strategic crude oil stocks of South Africa.

In particular, CEF is involved in the search for appropriate energy solutions to meet the future energy needs of South Africa, SADC and the sub-Saharan African region, including oil, gas, electrical power, solar energy, low-smoke fuels, biomass, wind and renewable energy sources. CEF also manages the operation and development of the oil and gas assets, and the energy operations of the South African government.

The purpose of CEF in terms of the CEF Act, is to give effect to the objectives of the Central Energy Fund which, to quote the Act, are to finance and promote:

- a) "the acquisition of coal, the exploration of coal deposits, the manufacture of liquid fuel, oil and other products from coal, the marketing of the said products and any matter connected with the said acquisition, exploration, manufacture and marketing;
- b) the acquisition, generation, manufacture, marketing or distribution of any other forms of energy and research connected therewith;
- c) any other objects for which the Fund may be applied, and which has been designed or approved by the said Minister with the concurrence of the Minister of Finance."

The one share issued by the Fund is held by the state and is not transferable, and is controlled by the Minister. The Minister appoints the board of directors and acts as the accounting authority in terms of the Public Finance Management Act (PFMA).

CEF, through its integrated oil company subsidiary, PetroSA, is involved in the exploration for oil and gas onshore and offshore South Africa, as well as the rest of Africa, the production of environmentally friendly petroleum fuels and petrochemical products from gas and condensate at its synfuels refinery outside Mossel Bay, and the management of oil storage facilities.

CEF's subsidiary, Oil Pollution Control South Africa (OPCSA), provides oil spillage prevention, control and clean-up services, mainly in South African ports and coastal areas, in terms of South Africa's National Environmental Management Act (NEMA). CEF, through its subsidiary, Petroleum Agency South Africa, manages the promotion and licensing of oil and gas exploration, development and production in South Africa and the coastal areas offshore South Africa as part of creating a viable upstream oil industry in the economy. CEF subsidiary iGas acts as the official agent of the South African Government for the development of the hydrocarbon gas industry, comprising liquified natural gas (LPG), in South Africa.

CEF also renders operational support in the form of treasury services to its subsidiaries, including the raising of funds, both locally and offshore. It is, therefore, responsible for interest rate, credit, liquidity and foreign currency risk management. CEF's main assets are its investments in its subsidiaries. It has a diversified portfolio of activities housed in its subsidiaries (CEF, 2005). Figure 4.1 below shows the CEF group structure.



Figure 4.1: CEF group structure

Source: CEF (2005)

NB:

- Petroleum Agency SA and Petro SA: those are different organisations
- Equilisation Fund
- Norad project

(ii) Strategic Fuel Fund (SFF)

The core functions of the Strategic Fuel Fund (SFF) include the management of crude oil trading and storage. The company is responsible for managing South Africa's strategic crude oil stocks. It also has a high-quality oil pollution control unit which provides services to third parties.

SFF has a significant crude oil storage capacity, situated at Ogies (underground mine containers) and at Saldhana Bay (under-ground concrete tanks). It also owns steel storage tanks in Milnerton and Killarney near Cape Town. The under-ground tanks at Saldhana Bay were recently upgraded, and this is expected to improve the operational and environmental aspects of this facility. The Milnerton tank terminal in Cape Town has also undergone refurbishment. The upgrades at these installations are part of SFF's continuous efforts to improve safety and efficiency, and minimise the risk of oil pollution that could affect the local environment.

On 1st October 2002, in response to a Ministerial Directive, SFF entered into a sub-agency agreement with PetroSA whereby the management of strategic stocks was to be carried out by PetroSA. PetroSA manages the remaining functions of SFF as well, excluding the pollution prevention and control which is managed by Oil Pollution Control of South Africa (OPCSA) (CEF, 2005).

(iii) Petroleum Agency South Africa (PASA)

The Minister of Minerals and Energy established the Petroleum Agency South Africa (PASA) on 1st November 1999 as an independent subsidiary of CEF.

The key functions of the agency are to promote the exploration and exploitation of natural oil, both onshore and offshore, and to undertake the necessary marketing, promotion and monitoring of operations. The agency negotiates leases and agreements on behalf of the state, and recommends to the state the conferral of rights and authorisations for the

prospecting of natural oil. The agency is the custodian of the national exploration database and as such has the responsibility to receive, maintain, store, evaluate, beneficiate, add value, disseminate and deal in all geological and geophysical data relating to natural oil.

The agency may carry out research and reconnaissance surveys with regard to the occurrence of natural oil within South Africa, with the objective of further promoting the industry. The agency is also responsible for the administration of the Upstream Training Trust, specifically established by the industry for the upliftment of South Africans in the fields of science and engineering (CEF, 2005).

(iv) Petroleum Oil and Gas Corporation of South Africa (PetroSA)

The Petroleum Oil and Gas Corporation of South Africa (Pty) (PetroSA) is a wholly owned subsidiary of CEF (Pty) Ltd. It was formed in July 2000 from the merger of the businesses of Mossgas and Soekor in order to effectively develop and exploit crude oil and gaseous hydrocarbon resources of South Africa.

Mossgas and Soekor were established by CEF (Pty) Ltd in terms of the CEF Act No. 38 of 1977. PetroSA contributes to South Africa's development by creating value out of the country's indigenous crude oil and natural gas resources.

PetroSA's vision is to be a leading and competitively integrated provider of oil, gas and petrochemicals in Africa and global markets. Its mission is to commercially explore, produce, refine and market oil, gas and petrochemicals for the benefit of consumers and shareholders through innovation, quality products and empowering.

Over the years, PetroSA has built up a great deal of expertise. The company is well known for its expertise in such fields as petroleum geology, seismic processing and interpretation, and reservoir and drilling engineering (CEF, 2005).

(v) South African Petroleum Industry Association (SAPIA)

The South African Petroleum Industry Association (SAPIA) was formed in July 1994 by six of South Africa's refining and marketing companies:

- 1) BP Southern Africa (Pty) Ltd
- 2) Caltex Oil (SA) (Pty) Ltd, now known as Chevron South Africa (Pty) Ltd
- 3) Engen Petroleum Ltd
- 4) Shell South Africa (Pty) Ltd
- 5) Total South Africa (Pty) Ltd
- 6) Zenex Oil (Pty) Ltd (no longer a member)

The association was formed to represent the common interests of the petroleum refining and marketing industry in South Africa and to promote an understanding among stakeholders of the industry's contribution to economic and social progress.

In 1997, Zenex Oil (Pty) Ltd became a part of Engen Petroleum Ltd and is no longer a member. Sasol Ltd and TEPCO Petroleum (Pty) Ltd joined SAPIA during 2000. Mossgas (Pty) Ltd became a member of SAPIA in 2001, but with the formation of PetroSA (Pty) Ltd in 2002, it was replaced by PetroSA as a member. TEPCO Petroleum (Pty) Ltd became part of Shell South Africa (Pty) Ltd during 2002.

SAPIA operates under a Board of Governors drawn from the member companies. With an office and Director in Cape Town, SAPIA, however, has a limited infrastructure, and conducts most of its activities through a series of teams drawn from the staff of member companies. Each team is tasked with looking after a particular area of common interest. The Director is assisted by a specialist in environmental matters and a secretariat.

The main objectives of SAPIA are:

- a) To do all it can to assist the industry to deliver petroleum products to the South African economy at world competitive prices. It is deeply aware of the need to make South Africa a competitive nation and of the role that liquid fuels availability and cost will play in achieving this target;
- b) To achieve its mission by fostering amongst its members a desire to be a world class industry and by encouraging co-operation between them on matters of common concern without inhibiting competition;
- c) To promote and encourage consultation among members, government and other organisations on matters of mutual and public interest such as health, safety and the protection of the environment;
- d) To represent the petroleum industry in national and international fora and act as a source of information on the industry as a whole (SAPIA, 2009).

(vi) African Mineral and Energy Forum (AMEF)

This organisation consists of three Black oil companies and 450 service station operators belonging to National African Black Fuel Retailers Association (NABFRA). This organisation deals with issues relating to :

- a) Black empowerment within the oil industry;
- b) Black oil companies' market share;
- c) Insisting that the government regulate the industry until Black oil companies obtain 25% market share and ownership, and
- d) Ownership of the upstream sector (i.e., refining).

(vii) South African Fuel Dealers' Association (SAFDA)

SAFDA is one of the largest Constituent Associations of the Retail Motor Industry (RMI) and has serviced a very broad range of specific issues relating to fuel dealers since 1964 under the banner of the Motor Traders Association (MTA) and the Fuel Retailers Association (FRA). The name was changed in November 1999 to South African Fuel Dealers Association (SAFDA).

The association is run by a national executive body of fuel dealers, who are all currently running their own fuel stations. The main services provided by SAFDA include:

- Continually liaising with government to secure a fair profit margin on fuel for dealers;
- ii) Enhancing dealer viability wherever possible;
- iii) Assisting in the sale and change of ownership of service stations;
- iv) Moving forward to secure better agreements between fuel dealers and oil companies;
- v) Improving and expanding the good relationship that RMI and SAFDA enjoy with government at the highest level;
- vi) Improving the security and safety of fuel dealers in a high-risk industry, and helping to fight fraud and shrinkage and other forms of crime impacting on the filling station industry;
- vii) Representing dealer interests in the face of continued pressure to deregulate this industry;
- viii) Improving the relationship between dealers and the fuel-and credit-card issuing banks, and obtaining better cash deposit and banking fees (SAFDA, 2000).

(viii) Retailers Fuel Association (RFA)

The Retailers Fuel Association (RFA) is the association only of the retailer service stations. The RFA is composed of retailers who run service stations from different oil companies. Their executive committee is composed only of retailers who run service stations currently, and so represent the retailer interest (SAFDA, 2000).

(ix) Retailer Council

All operating oil companies have retailer councils which operate at regional and national levels.

a) Regional Retailers Council

Each oil company has a regional council which is composed of an executive committee, whose members are elected annually. Membership is not compulsory but is recommended. They only handle regional issues with their respective retail regional offices.

b) National Retailers Council

This council is made up of all the regional chairpersons. It negotiates national issues with their respective petroleum companies. They normally engage petroleum companies on issues like rebates, franchisee fee, rental, national promotions and new to industry (NTI) / new service stations roll-out in each region.

(x) Retail Motor Industry (RMI)

The Retail Motor Industry (RMI) organisation is the product of a vigorous restructuring and amalgamation of the Motor Industrial Federations, and the South African Motor Industry Employers Association (SAMIEA) was launched in November 1999. It was positioned as the lead organisation for businesses in the South African automotive market in the 21st century.

The new RMI is headed by labour and business chambers covering the interests of employers and entrepreneurs of all twelve (12) sectors of the retail motor industry, which is second only to the mining industry in size and impact on the country's macro-economy. It contributes 5,5% to South Africa's gross domestic product (GDP) (RMI, 2001).

"Motoring customers countrywide are already recognising that, if they need to find a spare part, fix a dent, buy or service a new or used car, fill a fuel tank, look at the latest motorcycle, refurbish brakes, tune a truck engine, build a pantechnicon, fix a tractor, buy retreads or new tyres, go to a specialist workshop or rebuild an engine, there are RMI business members which can fill their needs" (RMI, 2001).

(xi) The Business Practice Committee (BPC)

The Business Practices Committee is a statutory committee set up in terms of the Harmful Business Practices Act and publishes, among other things, two very helpful booklets entitled "Consumer Code For Advertising" and "Consumer Code For Franchising".

The preamble to the code states that a prerequisite for successful franchising is that the franchisor must have in place the following: an existing good name, goodwill, a successful product or service, marketing procedures, expertise, systems and support facilities. Should a franchise lack these prerequisites it is not a true franchise (Du Plessis, 2000).

(xii) Business Unity South Africa (BUSA)

BUSA is a unified and fully representative organisation that contributes to a vibrant, transforming and growing economy in South Africa. It is the voice of organised business at both national and international levels. BUSA is a confederation of Chambers of commerce and industry, professional associations, corporate associations and unisectoral organisations.

BUSA achieves this objective by:

- (a) acting as the principal representative of business in South Africa in its national, subcontinental, continental and international spheres of activity, so as to ensure a primary and consistent representation of the views of the South African business community;
- (b) promoting Broad Based Black Economic Empowerment (BBBEE);
- (c) advancing and promoting initiatives aimed at job creation and the alleviation of poverty;
- (d) acting for and representing the views of its members at national, sub-continental, continental and international levels;
- (e) enabling business to play a meaningful strategic role in South Africa's overall development (BUSA, 2005).

(xiii) Franchise Association of South Africa (FASA)

FASA has been the guiding force of franchising in South Africa for the past 26 years, and the growth and stability of the sector is largely due to the work that FASA has been doing over the years to promote ethical franchising. Those who are members of FASA have voluntarily made a commitment to abide by the ethical standards laid down by FASA and the international franchise community. That in itself can be viewed as an indication of their commitment to operate a sound and ethical business. In line with global trends, the South African government is on the verge of passing legislation on franchising which will give FASA more powers to control the industry in terms of monitoring the business ethics of franchisors and making sure that the prospective franchisees are protected from unscrupulous operators (FASA, 2005).

4.3 Petroleum companies

(a) British Petroleum Southern Africa (Pty) Ltd

BP is one of the major oil companies in South Africa with extensive marketing and refining assets and a product portfolio that comprises a full range of fuels, lubricants, bitumen and solvents. BP's marketing assets include 790 branded service stations, a countrywide network of 26 depots and a fleet of road tankers ensuring that its "New Generation" BP petrol and other fuels are available in every part of Southern Africa (BPSA, 2005). A full historical perspective of BP Southern Africa (Pty) Ltd is given in Annexure E.

A substantial proportion of BP Southern Africa's (BPSA) product requirements is met by the Durban located South Africa Petroleum Refineries (Sapref) at Reunion (16 kilometres south of Durban on the East Coast of South Africa) in which the company has a 50% share, while the other 50% is held by Shell South Africa. The company also draws fuel products from the synthetic fuels plants operated by Sasol and Mossgas in line with the requirement that South African companies draw synfuel products in proportion to their local market share. The majority of BP's Sapref fuel production is sold in the Southern African market comprising South Africa, Botswana, Lesotho, Swaziland and Namibia. The balance is exported mainly to other countries in the region such as Mozambique, Malawi, Tanzania and Zimbabwe.

BP also produces lubricating oils at the South African Lubricants Manufacturing Company (SAMCO) base oil plant which is located at Sapref and is shared with Shell. The company has lubricant blending capabilities through its 50% share of the Blendcor lube oil blending plant at nearby Island View.

In August 2001, the Mineworkers' Investment Company (MIC) and Woman's Development Bank Investment Holdings (Pty) Ltd (WDBIH) accepted an equity stake in BP's South African operations, giving them an immediate three seats on the board of BP Southern Africa (Pty) Limited and 25% shareholder voting rights.

The MIC and WDBIH secured a shareholding in a new BP marketing joint venture, which will exclusively service BP's existing and future commercial and industrial clients.

A series of cross-postings will see MIC and WDBIH staff working for the joint venture and inside BP. The joint venture will eventually be majority owned and operated by empowerment partners. At present, BP shareholding is composed of 75% shareholding by BP, 17.5% by MIC and 7.5% by WDBIH (See Annexure F - BPSA Shareholding) (BPSA, 2005). The BPSA's empowerment shareholders are discussed as follows:

i) Woman's Development Banking Group (WDBG)

The WDBG is a non-profit organisation with the key focus on providing small business loans and business training to rural women. The realisation that the majority of South African women have little or no access to finance or business training resulted in the establishment of the WDBG ten years ago. Their mission and vision were to uplift the economic status of women and empower them to start successful businesses.

To grow their capital base and generate income, the WDBG makes investments in highgrowth businesses. Some of the investments they have made include Avis SA, Caesars Gauteng and Siza Water Company - the first privatised water company on Natal's Dolphin Coast. To date, the organisation has granted more than 20,000 loans with a monetary value of approximately R20 million. They have also trained more than 10,000 women in basic business skills, which resulted in creating the same number of jobs.

ii) Mineworkers Investment Corporation (MIC)

The MIC's conclusion of a Black Economic Empowerment buy-in with BPSA was done with a view to implementing the transformation process of large and multi-national corporations in South Africa. Established in 1995, the MIC Group of companies has paid out R38 million directly and indirectly through the Mineworkers Investment Trust which has, in turn, advanced money to fund its social programmes. The MIC is committed to providing an additional R52 million over the following six years.

The key objective of the MIC is to generate a portfolio of assets that would provide the Trust with a consistent and sustainable cash flow for use in financing social programmes. To achieve this goal, the MIC is taking part in the broader objective of black economic advancement and empowerment through participation in the change of ownership. The MIC is also involved in the process of workplace transformation by facilitating employment equity plans. With this vision, it is understandable that MIC's core focus is to be an active shareholder. It sees itself as a partner to management and other stakeholders in the creation of added value.

iii) Masana Petroleum Solutions (Pty) Limited

BP and its existing broad-based empowerment partners, the MIC and WDBG (Investment Holdings) announced the creation of a Black-owned and operated petroleum business.

BP would sell, as a going concern, its commercial and industrial fuels marketing business for R265 million to a new company. BP would retain a minority interest of 45%, and existing empowerment partners, management and staff would have a majority stake of 55%. The proposed sale is subject to Competition Commission approval. The new venture, named Masana Petroleum Solutions (Pty) Limited, will market and supply BP branded products to the commercial and industrial sectors (BPSA, 2005)

(b) Engen Petroleum Limited

Elements of the Engen Group trace their origin back to 1897. There is a proud history of dynamic growth in upstream refining, marketing and distribution of petroleum products throughout Southern Africa since those early days. Engen, currently the second largest integrated oil company in Southern Africa after Sasol, was created in 1989 when Mobil Corporation sold its Southern African operations (i.e. refining and marketing business) to Gencor. Engen history analyses are summarised in Annexure E.

Engen has a sophisticated refinery in Durban with a distillation capacity of 5,250 ktons per annum (105 tbpd). The refinery was upgraded in 1992 and 1994. Engen is the major oil product marketing company in the region with a product range that includes fuels, lubricants and chemicals. In recent years, the company has sold its bottled LPD business to Afrox and its bitumen subsidiary, Vialit, to Coals, a subsidiary of Murray and Roberts. The re-entry of Mobil into the South African market could impact on Engen's market share significantly, particularly in the high margin, high-tech lubricants area, although Engen does have access to Esso lubes pending the impact of the Exxon-Mobil merger (See Annexure I for more detail).

The company has marketing operations in South Africa, Namibia, Botswana, Lesotho, Swaziland and Kenya, and other countries of Central and West Africa. Products are exported to about 30 countries, mostly in Africa and the Indian Ocean islands, although this number is declining as product surpluses from the Durban refinery diminish as a result of an increase in South African demand.

Engen Limited is owned by Malaysia's Petronas and Worldwide Africa Investment Holdings (WAIH). Petronas owns 80% and WAIH 20% of the shares in Engen (Engen, 2005).

i) Petronas

Petronas was incorporated on 17 August 1974 under the Malaysian Companies Act, 1965. The Petroleum Development Act, 1974, vests in Petronas the entire ownership and control of the petroleum resources in Malaysia. Petronas is an integrated international oil and gas company with business interests in 22 countries. The Group is engaged in a wide range of activities, including exploration and production of oil and gas, oil refining, marketing and distribution of petroleum products, trading, gas processing and liquefaction, gas transmission pipeline network operation, marketing of liquefied natural gas, petrochemical manufacturing and marketing, shipping and property development.

ii) Worldwide Africa Investment Holdings (WAIH)

WAIH is a holding company with a number of investments in the areas of liquid fuels and energy, information technology and telecommunication and advisory services. The company's objectives are to achieve a sustainable capital base for previously disadvantaged entrepreneurs in the South African environment and to facilitate the movement of Black executives into senior management positions in companies where WAIH has a significant influence.

In the Liquid Fuels and Energy area, WAIH holds 20% of the share capital of Engen and 55% of the share capital of Afric Oil (Pty) Ltd through its wholly owned subsidiary Afric Energy Resources (Pty) Ltd. Engen owns the remaining 45% of Afric Oil (Pty) Ltd.

(c) Shell South Africa (Pty) Ltd - SSA

Shell South Africa (Pty) Limited is part of the Royal Dutch Shell Group of Companies. Royal Dutch Shell is divided into four zones: East, West, South and North. Shell South Africa falls within the South zone. This zone is composed of the African countries including the surrounding islands. Shell South Africa (Pty) Ltd is a wholly owned Shell subsidiary company. The South African company also manages the activities of other affiliates in Southern Africa. Shell S.A. is a founder member of the SAPIA. Highlights of the history of Shell S.A. (Pty) Ltd are given in Annexure E.

Shell is one of the largest oil companies in South Africa with extensive marketing and refining assets and a product portfolio that comprises a full range of fuels, lubricants, bitumens, solvents and other chemicals. Shell has a strong position in the Southern African gasoline and automotive diesel sectors, holding a 17.8% share of the market with over 800 retail sites. These are distributed throughout the region, and include sites with convenience stores and several highway site locations. Shell is also active in the marketing of fuel, oil and chemical products, and has a focus on the industrial and marine sectors.

A substantial proportion of Shell South Africa's product requirements are met by the Sapref Refinery in Durban in which the company has a 50% share. Shell is the operator of the Sapref refinery. The company also draws fuel products from the synthetic fuel plants operated by Sasol and Mossgas in the line with their local market share.

The majority of Shell South Africa's fuel production from Sapref is sold in the Southern African market comprising South Africa, Botswana, Lesotho, Swaziland and Namibia. The balance is exported mainly to other countries in the region. Shell also produces lubricating oils from the Samco base oil plant which is located at Sapref and is shared with BP.

i) Thebe Investment Corporation

Thebe Investment Corporation (TIC) holds shareholding in a number of investments including the liquid fuel industry ownership at Shell SA. TIC owns Tepco Petroleum Company as shareholder. In 2005, Tepco Petroleum Company acquired 25% shareholding in Shell SA (Pty) Ltd. This resulted in Tepco owning part of Shell SA (Pty) Ltd downstream marketing business as well (THEBE, 2005).

(d) Total South Africa (Pty) Ltd - TSA

Total South Africa (Pty) Ltd, a subsidiary of the international energy group, TotalFina SA, was founded in 1954. The incorporation of the South African company occurred at a time when the then Total Group was looking for new markets for its refined products east of Suez, in central and southern Africa. The name Total South Africa (Pty) Ltd was adopted on 11 May 1967. Total is a founder member of SAPIA. Total South Africa's historical highlights are included in Annexure E.

Total has a strong presence in South Africa where it holds a sizable market share. In the retail sector, Total has close to 12% of the market, while in the commercial and industrial sector; the company has a 13.4% market share. Total has a strong presence also in the agricultural sector with a market share of 18%. It has a product portfolio which comprises a full range of fuels, lubricants and bitumen. Total's marketing assets include 750 branded service stations, a network of depots and a fleet of road tankers.

The Total head office is located in Johannesburg and, although not listed on the JSE, the company nevertheless has some local ownership. Shareholders include the Total Group with the major shareholding of 57% and several South African companies including the Rembrandt Group (33%) and Old Mutual (9.6%). Total South Africa has a board consisting of seven relevant members and two alternate directors. Total South Africa today represents the largest single French Investment in South Africa. Total's South Africa's shareholding before the involvement of BEE is shown in detail in Annexure F.

The company, together with Sasol, holds a 36% share in the Natref Refinery, which is located at Sasolburg. Total also holds a 17% share in the Safor lubricant base oil refinery, which is managed by Engen petroleum. The company's shareholding has changed since the Black Economic Empowerment (BEE) company Tosaco acquired a stake in early 2003.

With the BEE transaction, Total reduced its equity stake to 50.1%, Remgro agreed to significantly dilute its shareholding to 24.9% and Old Mutual agreed to sell its 8% stake participation back to Total, thus making it possible for Tosaco to make its holding of Total's share capital to the tune of 25% (TOTAL, 2003).

On 30th April 2003, the new BEE company, Tosaco (Pry) Ltd, effectively acquired the 25% shareholding in Total. This transaction was finalised after negotiations lasting more than a year. It is structured to ensure a sustainable transaction, compliant with the Liquid Fuels BEE Charter, with specific emphasis on enhancing the Total value chain and empowering Tosaco all along the value chain, and a strong operational involvement of Tosaco in the South African oil industry.

The creation of Total Commercial Services (TCS) as an aggressively profiled BEE marketer in the South African oil industry is going to be pivotal in Tosaco's operations within Total. This entity's objective is to achieve inroads in certain key segments of the commercial wholesale market. TCS is acquiring Total Renaissance, a joint venture company previously owned by Calulo Investment Holdings (51%) and Total South Africa (49%), and has been operating since mid 2001 (TOTAL, 2003).

(e) Caltex

Caltex Oil South Africa, a leader in the oil industry, has been recognized for the introduction of many "first"; the most notable of which was the establishment of the first service station in Sea Point, Cape Town. Caltex's network of service stations has grown to over 1,000 with representation at 92 depots. Caltex has been one of South Africa's most competitive marketers of petrol since the launch in 1973 of CX3, and it enjoys a major share of the market in all the other sectors of the petroleum business. Caltex petrol, CX3 and Vortex, are officially allowed to carry the line "The AA approved leader in petrol technology" on its advertisements. Caltex's complete history is depicted in Annexure E.
Caltex Corporation's primary business is the manufacture and sale of its petroleum products through established retail outlets and its commercial market customer base. The company operates refinery in Cape Town. The refining and marketing activities of Chevron Texaco Corporation within Asia, Middle East, Africa, Australia and New Zealand are grouped into a reporting unit of ChevronTexaco called AMEA Products. AMEA Products continues to offer products and services to its retail and commercial customers through the Caltex brand, with operations in approximately 60 countries throughout the AMEA region (CALTEX, 2005).

On 2 December 2002, Caltex Oil (Pty) Ltd announced the signing of an agreement with a consortium of BEE partners led by Africa Legend Investment Limited. The agreement became effective as of January 1, 2003. It ultimately provided the Consortium a 25% interest in all aspects of Caltex's operations in South Africa, including supply, refining, distribution, retail and commercial marketing, aviation, lubricants and business support. The equity interest will be paid out of, and was dependent upon, the Consortium's share of dividends declared by Caltex Oil (S.A.) over a targetted period of 10 years.

The empowerment partners are African Legend Investment Limited (15%), Lithemba Investment Limited (5%), South African National Taxi Council (SANTACO) (3%) and the Caltex Employee Participation Plan (2%). Within this effective shareholding structure, Ditikeni Investment Company Limited has a beneficial interest of 1%.

African Legend Investment Limited is a national organisation that was established in 1996 as the National Empowerment Corporation Limited. Lithemba is a Black-owned women's organisation with primary interest and experience in the oil and gas sector. The South African National Taxi Council (SANTACO), with more than 80,000 taxi-owners and 120,000 drivers, is the national representative of the taxi industry in South Africa and a key player in the taxi re-capitalisation programme (CALTEX, 2005).

(f) Sasol Limited

In 1947, 20 years after the publication of a White Paper by Parliament, legislation detailing the establishment of an oil-from-coal industry in South Africa was passed. Sasol Limited (originally known as the South African Coal, Oil and Gas Corporation Limited) was formed in 1950 by the South African government to manufacture fuels and chemicals from indigenous raw materials. It was established as a profit driven company and was funded by the Industrial Development Corporation (IDC).

It was believed internationally that oil reserves would become exhausted after the Second World War. Projections were that reserves would only last for approximately 12 to 15 years (DMEA, 1993).

The original synthetic fuels plant at Sasolburg, about 80 kilometres south of Johannesburg, was based on a combination of technologies – the German fixed-bed Fischer-Tropsch, the American fluidised-bed Kellogg and the German Lurgi coal gasification technologies – for the synthetic production of petrol, diesel, other liquid fuels and chemical feedstock from coal.

Construction work at Sasolburg commenced in 1952. In 1953, the first Sigma Colliery shaft was completed at Sasolburg and, a year later, the first coal was produced (its own mines). During 1954 and most of 1955, the original Sasol One production units were commissioned. As the world's only commercial oil-from-coal project, Sasol supplied its first petrol and diesel to motorists at Sasolburg in November 1955.

Since oil price were low at that time, it would not have been economically viable, and Sasol suggested that the Government should satisfy its strategic objectives by a strategic crude oil storage programme. The strategic crude oil storage programme led to the construction of the Natref Crude Oil Refinery in which Sasol (52,5%), Total (30%) and the National Iranian Oil Company (17,5%) had shareholdings.

During the first three decades (i.e. 1950 - 1980), Sasol's primary drive was to produce high-quality synthetic fuels from coal to maximise South Africa's self-sufficiency. Since the mid-1980s and more notably, during the 1990s, the group's interest has been shifting towards developing higher-value chemicals for a wider spectrum of niche applications in domestic and international markets.

In 1964, Sasol began to distribute pipeline gas to industries in the greater Johannesburg area. National Petroleum Refineries of South Africa (Pty) Limited (Natref) was incorporated in December 1967. The refinery was commissioned in February 1971. In response to the international oil crisis of particularly after the 1973 Arab-Israel war when the price of oil quadrupled from \$3 a barrel to \$12 a barrel (Trollip, 1996). Sasol commenced the development of its most ambitious project, the construction of Sasol Two, the Secunda Colliers and the town of Secunda in 1976. The high oil prices and the uncertainty about security of supply of oil made it economically viable to establish a new synthetic fuel installation in South Africa. In March 1980, Sasol Two produced its first synthetic oil.

During the final construction phase of Sasol Two in 1979, work commenced on the construction of the third synfuels and chemical plant, Sasol Three, alongside Sasol Two. This fast-track project was completed in 1982. The virtually identical operations of Sasol Two and Sasol Three were merged in 1993 to form the operations of Sasol Synthetic Fuels (Pty) Limited (SSF). Chemicals today account for almost 38% of Sasol's turnover. At the time of the Sasol Three construction, strikes in the Iranian Oil Fields during October 1978 led to a substantial drop in exports of Iranian crude oil. Iran was the second largest exporter in the world. World oil prices soared to levels as high as \$48 per barrel at times (DMEA, 1993).

There was a shortage of crude oil world wide. South Africa was more than 90% dependent on Iranian Crude Oil at that time, and a scramble to obtain other sources of supply in a hostile world of sanctions started. Sasol's world-class technological culture provided the impetus to accelerate the drive into the downstream production of higher-value chemicals, among them nitrogenous fertilisers and commercial explosives, solvents, phenolics, waxes and alpha olefins. Endowed with ammonia as a co-product of primary coal gasification, the group entered the fertiliser market in 1983 with the launch of Sasol Fertilizers (now falling under Sasol Agri), which initially marketed ammonium sulphate and liquid ammonium nitrate, and NPK fertilisers. In 1984, Sasol signed a technology licensing agreement with Nitro Nobel of Europe and entered the commercial explosives market with the formation of Sasol SMX.

Sasol Limited comprises seven main operating companies:

- 1) Sasol Mining (Pty) Ltd
- 2) Sasol Synthetic Fuels (Pty) Ltd
- 3) Sasol Chemical Industries Ltd
- 4) Sasol Oil (Pty) Ltd
- 5) Sasol Technology (Pty) Ltd
- 6) Sasol Petroleum International (Pty) Ltd
- 7) Sasol Synfuels International (Pty) Ltd

The petroleum sales volume is monitored and managed by the Sasol Oil (Pty) Ltd under the retail department. Other divisions are not discussed in this study.

Between 1990 and 1993, Sasol One underwent a R820 million renovation. The name was changed to the Operations Division of Sasol Chemical Industries Limited (SCI), and the production of synfuels was discontinued in favour of the increased production of higher-value chemicals, including solvents, phenolics and waxes. In partnership with the Industrial Development Corporation, Sasol commissioned the Sasol Fibres acrylic fibres plant in Durban in mid-1994. In June 1994, the unique alpha olefins plant at Secunda was commissioned to produce 1-hexene and 1-pentene for the international copolymers market.

Sasol Petroleum International (SPI) was founded in 1995 to undertake oil and gas exploration and production in selected high potential areas in West and Southern Africa with experienced international and national oil and gas companies. SPI is active in the People's Republic of the Congo, Gabon, South Africa and, mostly notably, Mozambique, where extensive gas exploration has occurred with a view to bringing natural gas to Sasol's plants and the South African market.

The Schumann Sasol International wax manufacturing and marketing venture was finalised in 1995 with a merger of Sasol Waxes and the Schumann operations of Vara Holdings of Hamburg, Germany. The company is the world's largest producer of paraffin and Fischer-Tropsch waxes, and has operations throughout the world (Sasol Facts, 2000).

The refineries are based in Sasolburg. The Supply and Blue Pump Agreement prohibited Sasol from operating a retail network of service stations. The other petroleum companies operating inland were obliged to buy from Sasol through the Ratplan agreement: Sasol was allowed to put a pump – referred to as "blue pump" in other petroleum companies' forecourts.

In 2001, Sasol changed its divisional logos to be represented by one molecular brand. Previously, almost all Sasol divisions had their own pectin/symbol. The new brand marketing message is "Reaching New Frontiers" (Sasol, 2000).

Sasol became a public sector company when the holding company, Sasol Limited, was listed on the Johannesburg Stock Exchange in October 1979. Sasol purchased the State's 50% share in Sasol Two in 1983, and a 50% share in Sasol Three was acquired in 1991. The loans on the Sasol Two and Sasol Three plants, inclusive of interest, were settled by January 1996. Currently, the South Africa government still owns shares in Sasol Limited through the Public Investment Corporation (PIC).

i) Government's involvement in the Synthetic Fuels industry with regard to Sasol

Government played an integral part in the establishment of Sasol One, Two and Three, because of the strategic importance of transport fuel and the magnitude of synthetic fuel operations. Government's involvement in Sasol's synthetic fuel operation can be summarised in the following three categories:

Financial assistance

The State provided financial assistance for Sasol by means of share capital and commercial loans.

The Marketing of Synthetic Fuel

Sasol currently produces 31% of South Africa's transport fuel demand from synthetic sources and another 14% from crude oil refining. Sasol thus produces 45% of the country's transport fuels. Under the rule providing for the establishment of single brand service station (where only one brand could be sold at a service station outlet), Sasol was allowed to market its petrol through its own pump on the driveways of other service stations. Sasol has a market share of 9,33% (International Energy Agency, 1996).

Sasol was not allowed to establish its own service station network (Blue Pump Agreement) to ensure the most cost effective way to distribute petrol in the consumer's interest. Sasol was assured that it would be able to rely on Government intervention in future to compel the petroleum marketers to purchase the necessary Sasol production for marketing through their own distribution networks.

Subsequent to the above discussion, Sasol negotiated a Supply Agreement with the rest of the oil industry. This agreement stipulated that the oil companies purchase Sasol's production at a producer price based on the In-Bond-Landed-Cost. Sasol also had to agree not to market a defined range of petroleum products directly to consumers except as allowed for in terms of the Blue Pump Agreement.

Compensation for lost refining margins (also referred to as "synthetic levy"), that were paid to crude oil refiners, and was tied to the synthetic fuel production of Sasol Two and Three, dates back to 1984. The oil industry applied for an increase in marketing margins at that time. In justification, they quoted the decrease in international refining margins as well as the forfeiture of the refining margins on the synthetic fuel volumes they agreed to purchase. An extensive study was done by auditors and subsequently the marketing margins applied for was approved but at a lower level. The "synthetic levy", diminishing with time was also introduced. The synthetic levy was compensation to the oil companies for the loss of market share to Sasol. This synthetic levy was officially terminated in August 1993 (DMEA, 1993).

Tariff protection

The Equalisation Fund levy is raised on imported petroleum products as well as on products manufactured from imported crude oil. Synthetic fuels are exempt or partially exempt from this levy, depending on the international price of crude oil. This levy enables the Synthetic fuel producer to achieve higher netback prices (to the extent of the levy differential) than on imported fuel or producers using imported crude oil.

At first, the protection framework provided for protection to enable the achievement of a netback price equivalent to \$23 per barrel (up to October 1993) for derived crude oil. Protection was automatically reduced when crude oil and product prices rose, and at a derived crude oil prices of \$23 per barrel or higher protection was eliminated. When the

derived crude oil price exceeds a level of \$28,70 per barrel, 25% of the additional income accrues to the state until the full benefit derived from protection since July 1989 has been eliminated. When the derived crude oil price is below \$23 per barrel, protection is achieved by a lower Equalisation Fund Levy being imposed on fuels produced from indigenous feedstocks than on imported fuel or fuel produced from imported feedstocks. The floor price was reduced to \$21,40 during 1993 and in December 1995, the Government decided to reduce it in two stages in 1996, and to phase it down to \$16 per barrel by July 1999 (International Energy Agency, 1996).

The Government does not pay the synthetic fuels industry any subsidies. Protection is effectively achieved in the same manner as other local industries through higher netback prices made possible through the duties or levies that are applied by Government on imported products or feedstocks. The protection that the synthetic fuels industry enjoys will also decline gradually as crude oil and producer prices increase.

The Finance Minister announced during the 2006 budget speech that "he may look at hitting petrochemicals group Sasol with a windfall tax because it is benefiting from high oil prices". The Minister reiterated that "given the price determination, the industry is in a position to reap substantial economic rents when crude prices are high. Such windfall gains should be shared with the public." (Department of Finance, 2006).

However, after receiving a report from appointed task team to investigate the windfall tax, the Department of Finance announced that the government has opted not to implement a tax on windfall profits earned by synfuel producers, "in the interest of a conducive environment for additional investments in domestic fuel security" (Le Roux, 2007).

ii) Exel Petroleum

Exel Petroleum was founded in March 1997 with the intention of enabling the previously disadvantaged business segment of South Africa to become a significant player in the oil industry. In 1997, Sasol signed an umbrella agreement with two Black business groups, Naledi and Powerlib, which facilitated the establishment of Exel Petroleum (Pty) Ltd. The Naledi group consisted of 10 promoters and 34 members of the National Black Fuel Retailers Association. Powerlib group represents 11 empowerment groups.

More than three million South Africans benefit from the existence of Exel in the marketplace. For instance, some of Exel's shareholders are the South African Civics Organisation (SANCO), with an estimated membership base of over 1.8 million and the Nahora Trust, the investment arm of the National Hostel Residents Association representing 180 hostels with a membership of over 2.8 million. Exel has moved quickly to establish itself as a serious player in the industry. Within its first year of existence, Exel landed a large portion of the fuel supply contract of the Department of Public Works and became the major supplier of jet fuel to the South African Airforce. Exel is also active in mining, construction, public transport and road haulage industries.

Sasol oil is involved in capacity building in Exel and plays an advisory role in the audit committee, corporate governance and the remuneration committee. Exel Petroleum is controlled by Historically Disadvantaged South Africans (HDSA) who own 77,5% and Sasol holds the remaining 22,5% equity (Dube, 2001).

Exel opened its 100th service station in July 2002. Their first Exel service station opened on Zambesi Road in Pretoria (Sinoville) in 1997. Exel Petroleum and Sasol Oil applied to the Competition Commission for approval to merge their businesses on 01st October 2003. The approval was granted by the Competition Authority in late 2003 for the proposed merger to proceed. This made Exel Petroleum a subsidiary of Sasol Oil, and it no longer operates as an independent separate company (SASOL, 2003).

iii) Tshwarisano

On 22 September 2005, Sasol announced that Tshwarisano LFB Investment (Pty) Ltd (Tshwarisano), its broad-based Black economic empowerment (BBBEE) partner, would acquire a 12,5% interest in Uhambo Oil Limited (Uhambo Oil) for R1,45 billion. The Uhambo Oil transaction is subject to Competition Tribunal approval.

Sasol is providing considerable facilitation and support for Tshwarisano's financing requirement, which amounts to about R1.1 billion. Sasol has provided guarantees for this debt and has agreed not to recover guarantee fees, all of which will significantly lower Tshwarisano's cost of borrowing. In addition, Sasol is contributing R45 million to two trusts, aimed at empowering the severely underprivileged, as well as Uhambo Oil staff and families.

The Competition Commission approved on 14 May 2005 a joint venture between fuel companies Sasol, Engen and Petronas, despite the possibility of the transaction reducing competition in the petroleum industry. The merger involved a share-for-share exchange agreement in which the companies will form a joint venture named Uhambo Oil Ltd (SABC, 2005). Sasol and Petronas, will held shares of 37,5% each, and Petronas' empowerment partner Afric Energy Resources will have 12,5% in Uhambo Oil. Tshwarisano will become a 25% shareholder in Sasol's liquid fuels business rather than a 12,5% shareholder in Uhambo Oil (SASOL, 2005).

(g) Zenex Oil (Pty) Ltd

Formerly Esso, Zenex was formed when Esso disinvested from South Africa during the years of sanctions. The ownership of Zenex now resides in an offshore trust which is dedicated to the upliftment of the underprivileged (Anon, 1996).

Engen Petroleum Limited owns a 30% share through indirect holding by WAIH (Pty) Ltd. Zenex sites are being re-branded to become Engen sites, following the acquisition of a stake in Engen by WAIH.

(h) Afric Oil (Pty) Ltd

Afric Oil was started after an agreement between Caltex and a BEE group. Currently, the company is owned by Engen Petroleum Limited and WAIH with 45% and 55% shareholding respectively. The company's market share of petrol has declined in recent years from 0.70% in 1997 to 0.04% in 2002/3. More focus is now placed on the commercial side as the petrol retail business has become more capital intensive.

(i) Tepco Petroleum

Tepco Petroleum was a wholly owned subsidiary of Thebe Investment. In 2002, Thebe sold its oil subsidiary Tepco to Shell South Africa, making it a wholly owned subsidiary of Shell South Africa. Tepco retains its brand in the local petroleum market, and runs 18 service stations currently. Thebe Investment acquired a 25% interest in Shell South Africa. This stake in Shell's local downstream marketing business resulted in it being renamed Shell South Africa Marketing. This acquisition resulted in Tepco service station being operated under the Shell South Africa Marketing division. The petrol supply is from Shell retail operation (TEPCO, 2002).

4.4 Legislation affecting the industry in South Africa

The legislative acts affecting the petroleum industry are inserted as an attachment in Annexure G. The following section discusses the main agreements entered by parties in the petroleum industry.

(a) Undue Restraint of Trade Act (UROTA)

In 1947, a National Appeals Board was created to deal with the complaints of the applications for service stations. Undue Restraint of Trade Act (UROTA) was finally instituted in 1949 to safeguard the principle of free competition.

This Act was promulgated mainly on the recommendation of the Board of Trade. The Board found it unacceptable that new petrol selling outlets should be refused on the grounds of the adequacy of existing outlets, and felt that increased competition would be the most effective means of improving service station services.

The Board further recommended that certain minimum qualifying standards be set for garages or service services, and that applicants qualifying should be entitled to receive supplies of petrol and pump equipment. Early in 1950, petrol was declared a controlled item and the Board of Trade's recommendations took effect (Hidden, 1989). (See Annexure H for details on UROTA).

(b) Service Station Rationalisation Plan (RATPLAN)

The Service Station Rationalisation Plan that is commonly referred to as "Ratplan" was introduced in 1960. It was an agreement between government, oil companies and the Motor Industries Federation - now the Retail Motor Industry (RMI). Members have adhered to the terms and conditions of the agreement. The oil companies which signed RATPLAN during its introductory stage were:

- i) BP Southern Africa (Pty) Ltd.
- ii) Caltex Oil (SA) (Pty) Ltd.
- iii) Sasol Oil (Pty) Ltd.
- iv) Shell South Africa (Pty) Ltd.
- v) South African Energy Company Ltd. (Engen)
- vi) Total South Africa (Pty) Ltd.

vii) Trek Petroleum (Pty) Ltd

viii) Zenex South Africa (Pty) Ltd. (Govender, 1997).

Zenex is now part of Engen Petroleum Limited and Trek is part of Total South Africa.

The Ratplan imposed a limit on the number of service stations in each geographical area, thus restricting access to the retail market. It now became impossible for new companies to freely enter the market. Even though Trek and Esso (now Zenex) did enter the market after 1960, they still remained far smaller than the other oil companies, mainly due to Ratplan quotas. New quotas can only be created by the closure of service stations whereby the closure of one service station would create an opportunity to open a new service station. Oil companies were encouraged to close down non-viable service stations and replace them with profitable service stations in more viable sites. This is evident in the City of Tshwane Metropolitan Municipality area where old service stations have been closed in recent years while more service stations have opened in new suburbs around the City of Tshwane Metropolitan Municipality area.

Ratplan also caters for the transfer of a service station from one location to another. No limits have been set with regard to this, but the stipulation is that a service station may not be transferred to a new site which is within a radius of 15 kilometres.

The rationalisation plan prohibits the following:

- i) Vertical integration (i.e., oil companies are not allowed to own service stations);
- ii) Selling fuel on credit is not allowed, as this will narrow retailers' profit margins;
- iii) The installation of self-service facilities is prohibited in order to protect the jobs of service station attendants (SBAB, 2002).

The "Ratplan" objectives are :

- to provide fuel nationally at reasonable prices by maintaining a country-wide network of viable petrol outlets;
- ii) to improve the viability of dealers by promoting increases in average site petrol

sales, thus reducing the need for retail margin increases;

- iii) to ensure that the essential service facilities are available at these petrol outlets for the convenience and benefit of the motoring public;
- iv) to achieve the above by creating overall control parameters which provide for a basic minimum service standard and prevent the proliferation of petrol outlets and unnecessary duplication.

(c) Blue Pump Agreement (BPA)

This agreement was signed between the oil companies and the government. The BPA stipulates the following (Competition Board, 1993):

- a) Oil companies will, in so far as SASOL can meet the demand, purchase all their requirements within the defined Sasol distribution area;
- b) The quantity of petroleum products from SASOL sources that may be provided to the South African market will be restricted to pre-determined levels (the agreed market share was 9,23% but SASOL claims a current share of under 7,5%);
- c) SASOL is restricted to the operation of petrol pumps on the forecourts of permitted oil company sites only (i.e., SASOL may not operate its own service stations, but may have pumps at service stations supplied by any oil company);
- d) SASOL would not market any substitute petroleum product which replaces an existing petroleum product; and
- e) As a quid pro quo, SASOL shall limit its involvement in the retail fuel industry.

(d) Roster or "Untied" Outlets

Whilst the Plan made provision for the allocation of quotas for "tied" sites, i.e., service stations contracted via a financing agreement to an oil company for a relatively long time period, it also made provision for "untied" or roster outlets.

This provision was intended to facilitate participation in the industry by operators of smaller workshops, who wished to supplement their income by retailing petrol. The operator would apply to the Department of Industry for roster pumps, and the outlet would be awarded to a participant on a rotational or roster basis. No formal tie or contract would be applicable, and either party could withdraw at will.

This clause, however, would appear to be an apparent anomaly in the Plan, for whilst "tied" outlets were strictly rationed, any number of "untied" outlets could be established which would tend to defeat the objectives of the Plan – the prevention of proliferation of service stations (Bisset, 1982).

(e) Petroleum Charter

The Energy Policy White Paper (DME, 1998) set the achievements of the following objectives as a milestone, which triggered the substantive re-regulation of the oil petroleum and liquid fuels industry in South Africa in November 2000. A Liquid Fuels and Petroleum Empowerment Summit was held at which key role-players in the South African liquid fuels industry signed a Charter, committing their organisations to broad principles in a joint endeavour to promote the empowerment of historically disadvantaged South African within the sector.

The charter preamble is as follows:

"Mindful of:

the imperatives of redressing historical, social and economic inequalities as stated by the Constitution of the Republic of South Africa, inter alia Section 9 on Equality (and unfair discrimination) in the Bill of Rights, and Section 217.2 on procurement where the "organs of state" may implement a "procurement policy providing for categories of preference in all allocation of contracts and the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination";

- the policy objective stated in the Energy Policy White Paper to achieve "sustainable presence, ownership or control by historically disadvantaged South Africans of a quarter of all facets of the liquid fuels industry, or plans to achieve this";
- the Black Economic Empowerment Commission's definition of empowerment as "an integrated strategy aimed at substantially increasing black participation at all levels of the population";

The partners to the charter are as follows:

- Afric Oil (Pty) Ltd
- African Mineral and Energy Forum (AMEF)
- AMP (Pty) Ltd
- AMEP (Pty) Ltd
- BP SA (Pty) Ltd
- Caltex Oil SA (Pty) Ltd
- Central Energy Fund (Pty) Ltd
- Department of Minerals and Energy (DME)
- Engen SA (Pty) Ltd
- Exel Petroleum
- South African Petroleum Industry Association (SAPIA)
- Sasol (Pty) Ltd
- Shell SA (Pty) Ltd
- Tepco Oil Company
- Total South Africa (Pty) Ltd
- Worldwide Africa Investment Holdings

Annexure G depicts the highlights of the Petroleum Charter (DME, 2000).

CHAPTER 5 Sasol and Industry Legislation

There is a long debated issue of whether to deregulate the petroleum industry in South Africa and to operate it like in European countries. According to The Regulatory Mechanisms of the South African Oil Industry (1992), "the regulatory framework of the South African oil industry had a significant impact on the economy of South Africa. This stability has created a climate conducive to growth and further investment. Should any portion of the current regulations change, the total regulatory framework would have to change".

The history of Sasol began in 1927 when a White Paper was tabled in Parliament to investigate the establishment of a South African oil-from-coal industry. It was realised then that, because South Africa did not have crude oil reserves, the country's balance of payments had to be protected against increasing crude oil imports. After many years of research and international negotiations, the South African Coal Oil and Gas Corporation was formed in 1950.

From its first eight drums of creosote to the acquisition of the German CONDEA Group in 2001, Sasol's success has been founded on innovative thinking. Major milestones include the first automotive fuel (1955), the construction of the National Petroleum Refiners of South Africa (1967) and the establishment in 1990 of the first international marketing company, Sasol Chemicals Europe, which paved the way for South Africa's globalisation programme.

The company has developed world-leading technology for the conversion of low grade coal into value-added synfuels and chemicals. Today Sasol's operational footprint extends to more than 20 countries and it exports to over 100 countries. Sasol is one of the top five publicly listed companies in South Africa and is quoted on the JSE and the New York Stock Exchange (NYSE) (SASOL, 2006)

a) Sasol One

It was widely believed that oil reserves would become exhausted after the Second World War. Projections were that reserves would only last for approximately 12 to 15 years. It is this belief that led to the formation of Sasol, especially when South Africa did not have any oil.

Production at the Sigma coal mine at Sasolburg was completed and commenced in 1955. Sasol concluded an agreement with the rest of the Oil Industry (which later became known as the Blue Pump Agreement) whereby Sasol was allowed only one pump per service station in a limited geographical area to market its fuel production.

Government suggested to the Sasol board a second Sasol Oil from Coal installation during the 1960's. Since oil prices were low at that time, it would not have been economically viable, and Sasol suggested that the Government should satisfy its strategic objectives by a strategic crude oil storage programme. The strategic crude oil storage programme led to the construction of the Natref Crude Oil Refinery in which Sasol (52,5%, Total (30%) and National Iranian Oil Company (17,5%) had shareholdings.

b) Sasol Two

The first international oil crisis in 1973, when the price of oil increased over a year from \$3 to \$12 per barrel (Trollip, 1996), led to the commissioning of Sasol Two. The Arab-Israeli War and the consequent Arab boycott of the United States prompted this crisis. The high oil prices and the uncertainty about security of supply of oil made it economically viable to establish a new synthetic fuel installation in South Africa. The synthetic fuel from Sasol Two was produced in 1980.

c) Sasol Three

Strikes in the Iranian Oil Fields during October 1978 led to a substantial drop in export of Iranian crude oil. Iran was the second largest exporter in the world. World oil prices soared to levels as high as \$48 per barrel at times (Department of Mineral and Energy Affairs, 1993).

There was a shortage of crude oil world wide. South Africa was more than 90% dependent on Iranian Crude Oil at that time, and a scramble to obtain other sources of supply in a hostile world of sanctions started.

In 1979, the Sasol Three project was announced which was essentially a duplication of the Sasol Two fuel-from-coal plant. The first synthetic fuel from Sasol Three was produced in 1982.

d) Government's Involvement in the Synthetic Fuels Industry with regard to Sasol

Government played an integral part in the establishment of Sasol One, Sasol Two and Three, because of the strategic importance of transport fuel and the magnitude of synthetic fuel operation. Government's involvement in Sasol's synthetic fuel operation can be summarized in the following three categories:

(i) Financial assistance

The State provided financial assistance to Sasol by means of share capital and commercial loans.

(ii) The Marketing of Synthetic Fuel

Sasol currently produces 31% of South Africa's transport fuel demand from synthetic sources and another 14% from crude oil refining. Sasol thus produces 45% of the country's transport fuels. Sasol was not allowed to have its own service station but was allowed to market its product through its own pump on the driveways of these service stations. Sasol has a market share of 9,23% (IEA, 1996).

Sasol was directed not to establish its own service station network, with a view to ensuring the most cost effective way of distributing petrol in the consumers' interest. Sasol was also assured that it would be able to rely on Government intervention in future to compel the petrol marketers to purchase the necessary Sasol production for marketing through their own distribution networks.

Subsequent to the above discussion, Sasol negotiated a Supply Agreement with the rest of the oil industry. This agreement stipulated that the oil companies purchase Sasol's production at a producer price based on the In-Bond-Landed Cost. Sasol had to agree not to market a defined range of petroleum products directly to consumers except as allowed for in terms of the Blue Pump Agreement.

Compensation for lost refining margins (also referred to as "synthetic levy"), that were aid to crude oil refiners and was tied to the synthetic fuel production of Sasol Two and Three, dates back to 1984. The oil industry applied for an increase in marketing margins at that time. In justification, they quoted the decrease in international refining margins as well as the forfeiture of the refining margins on the synthetic fuel volumes they agreed to purchase. An extensive study was done by auditors, and subsequently the marketing margins applied for was approved but at a lower level and it was to be reduced with time. The synthetic levy, compensation to the oil companies for the market share loss to Sasol, was officially terminated in August 1993 as Sasol was planning to introduce their own retail service station network (DMEA, 1993).

(iii) Tariff protection

The Equalisation Fund levy is raised on imported petroleum products as well as on products manufactured from imported crude oil. Synthetic fuels are exempt or partially exempt from this levy, depending on the international price of crude oil. This levy enables the Synthetic fuel producer to achieve higher netback prices (to the extent of the levy differential) than importers or producers using imported crude oil.

At first, the protection framework provided for protection to enable the achievement of a netback price equivalent to \$23 per barrel (up to October 1993) derived crude oil. Protection was automatically reduced when crude oil and product prices rose, and at a derived crude oil prices of \$23 per barrel or higher, protection was eliminated. When the derived crude oil price exceeds a level of \$28,70 per barrel, 25% of additional income accrues to the state until the full benefit derived from protection since July 1989 has been eliminated. When the derived crude oil price is below \$23 per barrel, protection is achieved by a lower Equalisation Fund levy being imposed on fuels produced from imported feedstocks. The floor price was reduced to \$21,40 during 1993 and in December 1995 the Government decided to reduce it in two stages in 1996, and to phase it down to \$16 dollar per barrel by July 1999 (IEA, 1996).

It may be noted that Government does not pay the synthetic fuels industry any subsidies. Protection is effectively achieved in the same manner as other local industries through higher prices made possible through the duties or levies that is applied by Government on imported products or feedstocks.

The Government has, however, quietly agreed to end a "dispensation" in which Sasol was to pay back subsidies – worth R6 billion since 1989 – paid to Sasol when oil prices were low. "Sasol is making enormous profits, exceeding all expectations. Some of this profit should be passed back to the consumer," said the Democratic Alliance's energy spokesperson Hendrik Schmidt (Davie, 2005).

It is said, subsidies paid to Sasol between 1989 and March 1995 amounted to R3,72 billion. According to Sasol Managing Director, Ernst Oberholser, R6 billion in total had been received in price support, of which R50 million had been repaid. Based on Sasol's profitability, the Arthur Anderson report recommended that the \$23 support price be scaled back to \$19 a barrel in 1995/96, falling to \$16 in 1999/2000. However, they made no recommendation that Sasol should not pay back the R3,72 billion (Davie, 2005).

In its 1999 budget review, the government announced its intention to phase out protection to the synthetic fuel industry and resolved that protection afforded to Sasol and Mossgas (now PetroSA) be phased down to \$16 a barrel with effect from 1st July 1999 (GOV, 1999). The United States of America's Department of Energy data show that oil prices averaged \$16.56 in 1999, the last year Sasol received the subsidy. Oil prices have been substantially higher since then, averaging \$27,39 in 2000, \$27.69 in 2003 and \$37.66 in 2004. "The taxpayer supported Sasol when oil prices were low. Sasol should be repaying that money now in terms of the original agreement, according to Schmidt (Davies, 2005)." Oil prices averaged \$56.32 in 2005 (Perdikis, 2006) and hovered at over \$105 a barrel by the first quarter of 2008.

"Since November 1996 international crude prices have decreased to levels far below the applicable tariff protection crude oil floor-price. This resulted in significant tariff protection for the synfuels industry and required large transfers from the Equalisation Fund. The review said tariff protection afforded to Sasol amounted to R984 million between April and November 1998 (Davie, 2005)."

Finance Minister Mr Trevor Manuel announced during the 2006 budget speech that "he would review special tax treatment given to SA's synthetic fuels producers, which include the state owned PetroSA as well as Sasol. The tax treatment allowed them to benefit from high oil prices. Here we have a situation where our [synthetic] fuels producers are not affected by the same market dynamics as those who pump oil and yet their benefits and their profits are exactly the same." This announcement sent the share price of Sasol tumbling by over 8% (Klein, 2006)".

Finance Minister Manuel also said that "given the price determination, the industry is in a position to reap substantial economic rents when crude prices are high. Such windfall gains should be shared with the public (Klein, 2006)."

I-Net reports an independent analyst JP Landman saying at a briefing on the budget that "I think the announcement of the task force could be a shot across the bow for Sasol. Either you come to the party in terms of dropping import parity pricing or we tax the profit you make from pursuing that policy. The choice is yours (Klein, 2006)."

According to Sasol, they will cooperate with the proposed task force, and is confident that once all the pertinent facts have been scrutinized, an outcome will result in which the interests of all stakeholders would be addressed. The Minister's statement unfortunately focussed on the domestic fuels industry only. Sasol is the major contributor to this industry and the single biggest industrial investor in South Africa. The company is concerned that its ability to reinvest profits into its operations will be compromised if windfall taxes are imposed. Selecting local companies for possible legislative intervention will be severely detrimental to the ability of South African companies to compete with the much larger oil super-majors (SASOL, 2006).

Regarding the Minister's reference to tariff protection, Sasol responded that it had, in common with other industries such as the motor industry, received tariff protection. In terms of the then prevailing agreements, Sasol had repaid all of its obligations to Government, and was confident that it had fully complied with all of the conditions of the tariff protection dispensation. Similarly, in line with other industries such as steel and telecommunications, Sasol was indeed established by Government. Upon privatization, Government was handsomely rewarded for its investment, and is still a major shareholder (and receipt of dividends) through IDC and Public Investment Company (PIC) (SASOL, 2006).

5.1 LEGISLATIVE FRAMEWORK

The main acts that are applicable on the liquid fuels sector are the following:

Central Energy Fund Act No. 38 of 1997 provides for the payment of certain moneys into the Central Energy Fund and for the utilisation and investment thereof; for the imposition of a levy on fuel and for the utilisation and investment thereof, for the control of the affairs of CEF (Proprietary) Limited by a board of directors; for the keeping of records of all transactions entered into for account of the Central Energy Fund or the Equalisation Fund and of certain other transactions; for the investigation, examination and auditing of the books, accounts and statements kept and prepared in connection with the said transaction; and for the submission to Parliament of a report relating to the said investigation, examination and auditing; and to provide for matters connected therewith (Central Energy Fund Act 38/1977).

Customs and Excise Act of 1964 provides for the levying of customs and excise duties and a surcharge; for a fuel levy, the prohibition and control of the importation, export or manufacture of certain goods, and for matters incidental thereto (Customs and Excise Act 91/1964).

The Petroleum Products Act No. 120 of 1997 provides measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance and control of a price; for control of the furnishing of certain information regarding petroleum standard, in connection with motor vehicles; and to provide for matters incidental thereto (Petroleum Products Act 120/1977).

Mineral and Petroleum Resources Development Act, No 28 of 2002 aims to make provision for equitable access to and sustainable development of the nation's mineral and petroleum resources; and to provide for matter connected therewith. Preambles of the Act are as follows:

- Recognising that minerals and petroleum are non-renewable natural resources;
- Acknowledging that South Africa's mineral and petroleum resources belong to the nation and that the State is the custodian thereof;
- Affirming the State's obligation to protect the environment for the benefit of
 present and future generations, to ensure ecologically sustainable development of
 mineral and petroleum resources and to protect economic and social development;
- Recognising the need to promote local and rural development and the social upliftment of communities affected by mining;
- Reaffirming the State's commitment to reform to bring about equitable access to South Africa's mineral and petroleum resources;
- Being committed to eradicating all forms of discriminatory practices in the mineral and petroleum industries;
- Considering the State's obligation under the Constitution to take legislative and other measures to redress the results of past racial discrimination;
- Reaffirming the State's commitment to guaranteeing security of tenure in respect of prospecting and mining operations; and
- Emphasising the need to create an internationally competitive and efficient administrative and regulatory regime.

Main functions of the Petroleum Products Amendment Act, No 58 of 2003 are as follows:

- To provide for the licensing of persons involved in the manufacturing or sale of petroleum products;
- To promote the transformation of the South African and liquid fuels industry;
- To prohibit certain actions relating to petroleum products;
- To provide for appeals and arbitrations;
- To authorise the Minister of Minerals and Energy to make specific regulations, and
- To provide for matters connected therewith.

Section 2A (1) referring to prohibition of certain activities, a person may not:

- Manufacture petroleum products without a manufacturing licence;
- Wholesale prescribed petroleum products without an applicable wholesale licence;
- Hold or develop a site without there being a site licence for that site; and
- Retail prescribed petroleum products without an applicable retail licence.

Other legislation which affects the petroleum industry are, Petroleum Pipelines Levies Act, No 28 of 2004 and Minerals and Energy Laws Amendments Act, No 11 of 2005.

STAKEHOLDERS' VIEWS ON DEREGULATION

The views of different stakeholders in the liquid fuels industry with respect to possible deregulation are obtained mostly from a study done by Professor LJ Lamprechts during 1996. This study of Professor Lamprechts was commissioned by the Liquid Fuels Industry Task Force (LFITF). The purpose was to facilitate a transparent process of consultation to develop a Draft White Paper on energy policy.

Government views the liquid fuels sector as of strategic importance from an economic viewpoint, but it recommends the reduction of its involvement over the longer term (about five years). After Retail Price Maintenance is lifted eventually, free market principles should reign but with a ban on self-service and vertical integration. Franchising agreements should be equitable, and import and export controls as well as fuel standards should be retained. Government also states that the review of its involvement in the liquid fuels sector should be managed carefully to minimize the impact on employment. Appropriate retrenchment and retraining programmes should be facilitated, and the liquid sector should remain subject to all applicable legislation on the environment, health and safety (Lamprechts, 1996).

Business is in favour of a free market environment where competition determines the retail price of petrol and Government involvement does not exist. It is in favour of total deregulation and believes that from the point where the decision is made in favour of total deregulation government's involvement should be scaled down over two years (Lamprechts, 1996).

South African Petroleum Industry Association believes that there should be a transition period of about three and a half years, where after free price setting should be introduced and the liquid fuels sector should be totally deregulated.

Sasol agrees in general with the business and SAPIA viewpoints, but believes that the transition period should be at least five years. It also submits that vertical integration should be prohibited, and suggests that a minimum or maximum price band be introduced during the transition period until Retail Price Maintenance is lifted. Only after this should the moratorium on self-service be lifted.

Fuel Retailers Task Group (FRTG), although part of business, holds an opposing view and believes that present Government involvement should be retained and even be amended by more regulatory measures. It believes that a reduction in Government involvement would lead to an increase in the oil companies' involvement in the field of retailing and to job losses and that a reduction of Government involvement should be a possibility only over the longer term (Lamprechts, 1996).

Petronet, on the other hand, believes in deregulation and submits that Government should formulate a liquid fuels policy with specific objectives and aims in terms of which transition can take place. It is not in favour of a regulatory body or vertical integration (Lamprechts, 1996).

South African Agricultural Union (SAAU) believes in a free market and submits that the transition to such a market should be based on research and continuous evaluation. The SAAU gives no specific indication of the length of the transitionary period but it states

clearly that competition should be the long-term objectives of the restructuring of the liquid fuels sector. It is also of the opinion that transport costs to rural areas may ultimately have to be subsidized.

Afrikaanse Handelsintituut (AHI) submits that, in the longer term, there should be less Government involvement in the liquid fuels sector of South Africa. It does not support vertical integration.

South African Chamber of Business (SACOB) basically believes in deregulation of the liquid fuels industry. It does not, however, view the liquid fuels industry as a strategic industry and is not in favour of a regulator for the industry. SACOB views self-service and vertical integration as negotiable items over the medium to longer term.

Institute of Policy and Social Research (IPSR) expressed itself against less Government involvement in the liquid fuels industry to avoid job losses as well as against the present levels of protection to Sasol and Mossgas. It is in favour of Retail Price Maintenance as well as a uniform pricing system for the country. The IPSR believes that prohibition on vertical integration and self-service as well as import and export control should remain (Lamprechts, 1996).

Labour believes that some form or another of Government involvement and regulation will always be necessary in view of the strategic nature and cartelization in the liquid fuels sector. It does, however, see competition over the longer term and the lifting of Retail Price Maintenance if the economy is experiencing real growth, if there is significantly lower unemployment and a rapidly expanding Black small business sector. It also states that it may be increasingly difficult to prevent the discounting of petrol sales.

Labour supports margin determination and is against self-service. It agrees with the lifting of import and export controls in the longer term and with controls over the quality of the product. In the longer term, they believe that synfuels should enter the market with the rest. They also believe that the liquid fuels sector requires appropriate labour market

institutions that could deal with the management of job losses, skills recognition, grading, health, safety and affirmative action and the improvement of franchise laws. Labour is basically in favour of the continuation of Government involvement but foresees a relaxation of certain aspects under certain conditions.

The business delegation and almost all of the respondents support the idea of deregulation whereas labour is in favour of the continuation of some Government involvement and the possibility of competition in the future. Government supports the idea of diminishing its involvement over the longer term, but with a properly managed and monitored transition in two phases (Lamprechts, 1996). Having regarded the views expressed by the stakeholders in connection with the various issues, there is a broad consensus on the overall goals for the industry but a difference in the timescale.

CHAPTER 6 Analysis and Interpretation of Data

This chapter summarises the survey results and data, and these are then analysed in detail. As mentioned earlier, the main objective of this study is to arrive at some guidelines and recommendations on the impact of petrol price fluctuations on the retail service stations. Accordingly, the study will aim at fixing some benchmark figures to facilitate a costbenefit analysis of service stations in terms of price and sales volume.

In the light of these developments, the survey also aims to look at the future profitability of retail service stations. The research is intended to identify key problematic issues across the network, and to identify the ways in which individual service stations could survive and sustain their position in a challenging business environment.

6.1 SURVEY RESULTS

Retailers (i.e. retail service station operators) were selected for the sample for research, There ware confined to retail service stations in the City of Tshwane Metropolitan Municipality. Figure 6.1 below shows the shares of various petroleum companies by number of sites.





Source: Research survey

Engen and Shell together accounted for 42.8% of the total service stations sampled and Caltex, BP and Total combined accounted for 45.6% of the total sites. The balance was spread among other petroleum companies. The sampling was done taking into account the number of service stations available on the ground per petroleum company, and was so chosen as to be representative of all petroleum companies who own and operate retail service stations.

The South African petroleum products market is divided into three segments: retail, commercial (industries, mines and firms) and farming (all agricultural farmers and co-operatives). This research concentrated only on the retail service station segment of the market.

VOLUME PERFORMANCES

The South African annual growth between 1994 to 1999 of combined petrol and diesel is shown by province in Figure 6.2 below.



Figure 6.2 : Average annual sales volume growth of petrol and diesel by province (1994 - 1999)

Source : Ligthelm (2000)

The Western Cape and KwaZulu Natal led in terms of the average annual growth in sales. Gauteng Province and Limpopo Province showed the same growth rate as the average for the country as a whole, viz., 3%. The other provinces' averages ranged between 1.5% (North West) to 2% (Eastern Cape).

The retail service stations' volumes ranged from below 100,000 to above 350,000 litres of petrol per month per station sales. Table 6.1 shows sites volume at the City of Tshwane Metropolitan Municipality and Figure 6.3 below showed the classification of the number of sites by sales volume from the responded.

Table 6.1: Service station sales volumes

	Frequency	Percent
100 001 - 250 000	10	19.2
250 001 - 300 000	21	40.4
350 000+	21	40.4
Total	52	100.0



Source: Research survey (2005)

Service station sites pumping between 100,000 and 250,000 litres of petrol per month accounted for 19.2%, while sites pumping between 250, 001 and 300,000 accounted for 40.4%, and only 40.4% of the sites pumped above 350,000 litres per month.

Profitability figures revealed that sites pumping more than 250,000 are viable and are able to compete in this challenging economic and business environment. Table 6.2 shows the volumes sold by one service station of the sample in the last three years at the City of Tshwane Metropolitan Municipality.

	COMBINED MOGAS			GASOIL		
	2005	2006	2007	2005	2006	2007
January	486,452	422,976	444,760	19,876	19,818	18,762
February	377,654	467,923	422,761	16,571	18,718	20,291
March	489,072	433,780	433,890	16,527	20,981	21,721
April	495,438	455,872	438,973	22,970	22,191	23,571
Мау	488,769	478,967	488,737	17,681	20,191	22,918
June	484,657	483,761	507,464	19,871	17,817	19,821
July	492,990	490,767	515,768	17,101	18,791	20,001
August	525,875	477,880	528,764	19,871	19,822	21,022
September	515,769	500,763	527,689	20,292	19,198	19,011
October	543,211	512,862	545,873	23,761	21,922	18,919
November	533,987	535,099	566,983	19,717	26,517	23,800
December	555,751	545,985	589,765	24,792	24,517	25,661
YTD Volume	5,989,625	5,806,635	6,011,427	239,030	250,483	255,498
Ave Volume	499,135	483,886	500,952	19,919	20,874	21,292
Total Year	5,989,625	5,806,635	6,011,427	239,030	250,483	255,498
YTD Growth		-3.05%	3.52%	0	4.79%	5.01%
Ave Full	499,135	483,886	500,952	19,919	20,874	21,292

Table 6.2: Service station sales volumes

Source: Research survey (2005)

The service station given in Table 6.2 is regarded as a viable service station, pumping above 350,000 litres of petrol per month. Both petrol and diesel volumes declined in 2006 while that of petrol increased in 2007. The impact of volume fluctuations on the profitability is critical for the site to be break-even. For the volume performance of other service stations, see Annexure J. The sales volume differed from site to site and was affected by many factors that are mostly locally specific.

6. 2 MARKET SHARE

The individual petroleum company's survival is dependent on its market share in terms of petrol and diesel volumes. Table 6.3 shows the petroleum companies' market share since 1999.

	1999	1999	2000	2000	2001	2001	2002	2002	2003	2003	2004	2004	2005	2005	2006	2006
Company	Petrol	Diesel														
Afric Oil	0.05%	0.55%	0.02%	0.19%	0.04%	0.99%	0.09%	1.46%	0.13%	2.13%	0.20%	2.50%	0.52%	2.91%	0.16%	3.03%
BP	16.13%	15.28%	15.98%	15.38%	16.24%	15.73%	16.37%	14.95%	16.18%	14.23%	16.30%	14.70%	16.02%	13.87%	15.36%	13.68%
Caltex	18.05%	16.50%	17.89%	15.82%	17.43%	16.69%	17.09%	16.69%	16.84%	16.10%	16.90%	15.80%	16.28%	15.54%	16.04%	15.39%
Engen	24.17%	23.33%	26.78%	27.95%	27.02%	27.25%	27.10%	25.95%	27.02%	25.22%	27.50%	24.80%	26.89%	24.34%	26.48%	24.08%
Exel	1.38%	3.81%	1.86%	4.98%	2.23%	4.84%	2.79%	5.84%	3.55%	7.20%						
PetroSA															0.03%	0.06%
Sasol	6.30%	0.48%	6.12%	0.65%	6.06%	0.85%	4.62%	0.37%	4.02%	0.38%	6.20%	8.30%	8.46%	9.96%	10.04%	10.06%
Shell	17.99%	18.99%	17.90%	18.33%	17.53%	17.80%	17.78%	17.89%	17.70%	16.74%	17.90%	16.00%	17.45%	15.18%	17.32%	15.02%
Терсо	0.40%	2.36%	0.38%	2.90%	0.33%	2.22%	0.32%	2.68%	0.21%	2.96%	0.10%	2.30%	0.14%	2.64%	0.14%	3.08%
Total	13.07%	14.07%	13.07%	13.80%	13.12%	13.63%	13.84%	14.17%	14.35%	15.04%	14.90%	15.60%	14.24%	15.56%	14.43%	15.60%
Zenex	2.46%	4.63%														
TOTAL	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Table 6.3: Petroleum companies' market share

Source: SAPIA (2005 and 2006)

Engen has been leading the industry in terms of market share due to the fact that Engen took over the Trek and Sonap service stations. Engen has already converted all Zenex service stations to their brand. Engen had a petrol market share of 24.17% (1999), 27.10% (2002) and compared with 26.48% (2006), a slight decrease but still the leader. Engen still also leads in the diesel market for the same period.

Shell has maintained position number two, but their overall petrol market share has dropped from 17.99% (1999), 17.78% (2004) to 17.32% (2006), while their diesel market share decreased from 18.99% (1999), 17.89% (2002) and 15.06% (2006).

Caltex is next followed by British Petroleum (BP). Caltex's petrol market share has dropped from 18.05% (1999), 17.09% (2002) to 16.05 (2006) and their diesel share also decreased from 16.50% (1999), 16.69% (2002) to 15.36% (20006). BP's petrol market share, on the other hand, increased from 16.13% (1999) to 16.37% (2002) and dropped to 15.36 (2006), but their diesel market share dropped slightly from 15.28% (1999), 14.95 (2002) to 13.68% (2006).

Afric Oil experienced a declining market share in both products between 1999 and 2002 and had an increase to 2006 performance. Total's petrol market share increased and so also their diesel market share. Exel and Tepco experienced good growth in the market share in both products over the years until their mergers with Sasol and Shell respectively. It is evident from the above market share performance that, over the past five years, the major petroleum companies, except for Engen and Total, have lost market share. Exel and Tepco experienced good growth over the years while Afric Oil's share had high fluctuations during the same period for both petrol and diesel.

6.3 PRICE ANALYSIS

Price is one of the key components in the service station business; it affects the sustainability and viability of the retailers. An analysis of the South African liquid fuel petrol and diesel price since 1985 is shown in the Table 6.4.

	93 Octane		Increased /
	Leaded Petrol		Decrease
Year	c/l	Difference	* 1985 = base
1985	90.10		
1986	83.00	-7.1	-7.1
1987	83.00	0.00	-7.1
1988	82.00	-1	8.10
1989	112.00	30.00	21.90
1990	118.00	6.00	27.90
1991	130.00	12.00	39.90
1992	152.00	22.00	61.90
1993	175.00	23.00	84.90
1994	183.00	8.00	92.90
1995	187.00	4.00	96.90
1996	219.00	32.00	128.90
1997	217.00	-2	126.90
1998	232.00	15.00	141.90
1999	268.00	36.00	177.90
2000	331.00	63.00	240.90
2001	401.00	70.00	310.00
2002	419.00	18.00	328.90
2003	361.00	-58	270.90
2004	471.00	110.00	380.90
2005	506.00	35.00	415.90
2006	649.00	143.00	558.90
2007	711.00	62.00	620.90
2008	983.00	272.00	892.90

		Increase /
Diesel		Decrease
c/l	Difference	* 1985 = base
91.70		
84.00	-7.7	-7.7
84.00	0.00	-7.7
76.00	-8	-15.7
109.00	33.00	17.30
111.00	2.00	19.30
131.00	20.00	39.30
146.00	15.00	54.30
162.00	16.00	70.30
166.00	4.00	74.30
172.00	6.00	80.30
202.00	30.00	110.30
207.00	5.00	115.30
203.00	-4	111.30
226.00	23.00	134.30
284.00	58.00	192.30
341.50	57.50	249.80
378.00	36.50	286.30
309.00	-69	217.30
405.00	-96	313.30
488.00	83.00	396.30
610.00	122.00	518.30
625.00	15.00	533.30
1080.00	455.00	988.30

Source: DME (2005 and 2008)

Note: all prices are as at 30th June each year

Between 1985 and 2008, the retail prices of petrol and diesel increased by 892% and 988% respectively. Over the same period, analysis of the petrol and diesel price in Gauteng Province are depicted in Figure 6.3 below.


Figure 6.3: Petrol and diesel price history (Gauteng)

Source : DME (2005 and 2008)

Notes:

- ≥ retail prices in Gauteng Province 30 June each year
- >>> the diesel pump price is not controlled so these diesel prices are indicative only
- the quality of diesel was improved in January 2002 to 0,3% Sulphur compared with the previous 0,55 Sulphur

It is clear from the figure above that in all products, prices have been increasing. It started stabilizing during the early years around mid 1980's, but started increasing since early 1990's. The prices reached high levels after 2000, and prices were even five fold in 2005 and ten fold in 2008 compared with 1985 petrol prices.

The composition of liquid fuel prices in South Africa is shown in Table 6.5. The price is affected mostly by international crude oil prices and supply/demand effects. The key features in the price composition are the following:

- The final retail petrol pump price of both grades (i.e. unleaded and leaded) are the same in Gauteng Province
- Diesel price is not regulated, and so price differs between service stations
- Custom and excise duties, transport cost and delivery cost remain constant for both products.

Table 6.5: Components of petrol price

2006 (RSA c/litre)

Petrol levies, taxes and margins 95 Octane (Unleaded PETROL)											
2006 (RSA c/litre)	BFP	Fuel tax	Customs & excise	Equal- isation fund levy	Road accident fund	Trans- port cost	Whole- sale margin	Retail margin	Slate levy	Deliv- ery cost	DSML
Jan	269.213	116.00	4.00	0.00	31.500	13.400	39.487	43.600	15.00	7.00	10.00
Feb	283.013	116.00	4.00	0.00	31.500	13.400	39.487	43.600	15.00	7.00	10.00
Mar	272.013	116.00	4.00	0.00	31.500	13.400	39.487	43.600	15.00	7.00	10.00
Apr	297.413	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Мау	336.413	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Jun	372.413	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Jul	397.431	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Aug	428.413	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Sep	392.413	116.00	4.00	0.00	36.500	13.700	39.487	43.900	5.00	7.00	10.00
Oct	328.413	116.00	4.00	0.00	36.500	13.700	39.487	46.900	16.00	7.00	10.00
Nov	318.413	116.00	4.00	0.00	36.500	13.700	39.487	46.900	5.00	7.00	10.00
Dec	311.413	116.00	4.00	0.00	36.500	13.700	39.487	46.900	5.00	7.00	10.00

PETROL LEVIES, TAXES AND MARGINS 95 OCTANE (LEADED)

Source: DME (2006)

Notes:

• BFP – Basic Fuel Price

To compare historical patterns, an analysis of the price composition since 1987 is given in Table 6.6. The ultimate results have an impact on the sales performance of service stations.

	Fuel Tax	Custom &	Equalisatio	RAF	Transport	Wholesale	Retail	Delivery
		Excise	Fund			Margin	Margin	Cost
	c/l	c/l	c/l	c/l	c/l	c/l	c/l	c/l
1 July '87	23.50	4.00	5.70		7.80	3.60	7.20	1.70
1 April '88	22.50	4.00	6.70	2.60	7.80	3.56	7.20	1.90
15 April '89	31.90	4.00	7.00	3.60	9.20	5.60	8.70	2.10
20 Oct '90	31.90	4.00	7.00	3.40	9.20	5.56	12.20	2.40
23 Aug '91	46.90	4.00	7.00	4.00	9.20	7.56	11.50	2.90
1 July '92	54.90	4.00	7.00	6.00	10.20	13.56	15.10	0.30
15 Sep '93	60.90	4.00	7.00	9.00	10.90	14.06	15.60	3.50
18 June '94	60.90	4.00	9.40	9.00	10.20	14.06	15.60	3.50
6 Sep '95	62.90	4.00	9.40	9.00	10.20	14.06	18.10	4.10
7 Aug '96	71.60	4.00	5.40	10.50	10.20	14.06	18.10	5.10
5 Nov '97	76.60	4.00	5.40	12.50	11.00	16.06	20.10	5.10
7 Oct '98	86.60	4.00	8.00	14.50	11.30	16.06	22.70	5.10
7 July '99	90.60	4.00	8.00	14.50	11.30	17.06	24.50	5.10
7 June '00	87.60	4.00	8.00	14.50	11.30	17.56	25.20	5.10
4 Aril '01	94.80	4.00	8.00	16.50	11.40	18.78	28.00	5.10
5 April '02	94.80	4.00	8.00	18.50	11.50	24.30	31.20	5.10
9 May '03	101.00	4.00	0.00	21.50	12.30	28.29	35.00	5.10
7 July '04	111.00	4.00	0.00	26.50	13.00	37.26	36.80	6.70
10 June '05	116.00	4.00	0.00	31.50	13.40	39.26	40.60	7.00

Source: DME (2005)

It can be deduced from the above table that :

- The fuel tax has increased over the years
- The custom and excise duty has remained constant over the years
- There was a slight increase of 2.3 c/l over the years (i.e. 1987 to 2002) on the equalization fund
- An increase of 28.9 c/l on the Road Accident Fund (RAF) levy was experienced
- Transport cost increased by 5.6 c/l for the years (i.e. 1987 to 2005)
- The wholesale margin increased by 35.66 c/l for the same period
- The retailer margin increased by 33.4 c/l during the same period
- Delivery cost increased by 5.3 c/l over the same period.

According to a report released by the South African Petroleum Industry Association (SAPIA) in November last year (reporting on 2006), the demand for petroleum product has grown by more than 15% over the past five years (Editor, 2008)

See Annexure K for an example of the Department of Mineral and Energy petrol price announcement.

6.4 RETAILER / DEALER MARGIN ANALYSIS

The retailer margin is the gross profit the retailer receives when selling petrol. Over the years the industry experiences tough competition from other retail businesses, and the petroleum companies introduced non-fuel retailing (NFR) to generate income. The NFR includes, amongst others, businesses like car washes, convenient shops, etc. The profit generated from the retailer margin and other business centres is used to cover the operational cost. Figure 6.4 below shows the retailer margin increases since 1987.



Figure 6.4: Retailer Margin

Source : DME (2005)

The retailer margins have increased continuously from 7.20 c/l (1987) to 15.60 c/l (1993), 20.10 c/l (1997), 25.20 c/l in (2000), 35.00 c/l (2003) and 40.60 c/l (2005). The rate of

increase in retailer margins, when compared with wholesale margins over the same period, highlight a huge difference until mid 2000's when the rates were almost the same. When the petrol price increase on monthly bases, the retailer pays upfront (i.e. when purchasing petrol) the price differences before the motorist purchases the petrol. Retailers are financing the increases in cost, for every Rand equivalent per litres reduces every month the amount litres that can be purchased next month for the same amount of money.

For example, service station pumping 100 000 litres a month, the retailer margin amounts to R40,600.00 in 2005 scale. A increase of 5 c/l on a 100 000 litres a month site amount to R5,000.00 a retailer must finance when buying petrol immediately as cash payment because petrol is not sold on credit as legislated. The R5,000.00 will be recovered once the motorist buys petrol. There's a lag period to recover the upfront finance. The recover, rate will depend on the stock turnover for individual sites.

6.5 PROFIT ANALYSIS

The profit generated by any business causes the business to be more competitive, sustainable and profitable. The effect of petrol price increases on the service station's profitability is analysed, based on Table 6.7 and Annexure L – statistical analysis.

It is clear from the Table 6.7 that it is very important how the petrol price increases affect service station productivity mostly for sites pumping between 250,001 and 300,000 volume per month and absolutely critical for the retailers that operate sites with 350.000 volume and above.

	_																									
				How important is the impact of petrol increas					е																	
			_		affec	cting yo	ur producti	vity?																		
				Т	otally	Not	really																			
	<u> </u>		_	unin	nportant	Imp	ortant	Of neutral in	npad																	
Site monthly volume	100	001 - 250 00	00		0		0																			
	250	001 - 300 00	00		2		1																			
	350	000+			0		0																			
	Tota	al			2		1																			
			- 1																							
				How	important	is the in	npact of																			
				peti	ol increase	e affectir	ng your																			
			-				-																			
				very important Abs		Absolu	tely critical	lotal																		
Site monthly volume	100	001 - 250 00	00		5		5	10																		
	250	001 - 300 000 000+		50 001 - 300 000 50 000+		50 001 - 300 000 50 000+		001 - 300 000		001 - 300 000		50 001 - 300 000		50 001 - 300 000	250 001 - 300 000	250 001 - 300 000	001 - 300 000		0 001 - 300 000	00		13		4	21	
	350								9		11	21	21													
	Tota	al			27		20	52																		
	Ch	ii-Square Te	sts																							
					Asymp. S	sig. (2-																				
		Value	d	f	sideo	(k																				
Pearson Chi-Square		9.109 ^a		8		.333																				
Likelihood Ratio		10.832		8		.211																				
Linear-by-Linear Assoc	iation	.352		1		.553																				
N of Valid Cases		52																								

Table 6.7: Impact of petrol price increase on productivity

Source: Research (2005)

Figure 6.5 below highlights the above analysis in a bar chart.

Figure 6.5: Impact of petrol price increase on productivity



Bar Chart

Source: Research (2005)

The majority of retailers agree that petrol price increase affects the profitability of the service stations, particularly for those with sites volume of between 250,001 and 300,000 litres per month.

Retail margin fluctuations over 18 years period are shown in Figure 6.6, while petrol price changes over the same period are shown in Figure 6.7.

Figure 6.6: Retailer margin periodic increase



Source: DME (2005)

It can be seen that petrol price increased by 423.00 c/l between 1987 and 2005, while retailer margin increased by only 33.40 c/l over the same period.

Figure 6.7: Petrol price fluctuations



Source: DME (2005)

Following observations can be drawn from Figure 6.6 and Figure 6.7:

- Retailer margin does not increase at the same rate as the petrol price increases (i.e. cents per litre);
- Petrol price is adjusted every month, while the retailer margin often remains constant;
- Retailer margin is fixed and not as a percentage of the total petrol price;
- Retailer margin as a percentage of petrol price fluctuates;
- Gross profit as a percentage of sales volume fluctuates depending on petrol sales.

As shown in Figure 6.8, year-on-year increases in consumer prices fell below the lower limit of the inflation target range during the first six months of 2005; year-on-year CPIX inflation decelerated from approximately 8 per cent in 2003 to around 5,9 per cent in July 2005 (SARB, 2005).

Figure 6.8: CPIX and administered prices

Contrary to the fairly stable year-on-year rates of increase in CPIX in recent months, the quarter-to-quarter annualized rate of increase accelerated from 4,9 per cent in the first quarter of 2005 to 7,1 per cent in the second quarter (SARB, 2005).

Transport services prices, being partly subsidized, have not responded to the rise in energy costs and essentially remained unchanged from the first quarter of 2005 to the second quarter, restraining services price inflation.

Although relatively muted increases in he prices of a wide spectrum of consumer goods and services persist, the rate of inflation in the prices of some administered goods and services remained well in excess of the inflation target range. In July 2005, year-on-year inflation in the prices of administered goods and services excluding petrol amounted to 6,2 per cent, while for petrol it came to no less than 16,2 per cent (SARB, 2005).

6.6 FACTORS AFFECTING PROFITABILITY

The profitability of the retail service station is also affected by other factors, which were identified in the study. These factors are listed in Table 6.8 to 6.10 and Figure 6.9 to 6.11, with the statistical results described below.

 Table 6.8: Price increase impact

	-	Is the impa- imme	Is the impact of at least 10c/l increase felt immediately on the cash flow?				
		Totally unimportant	Of neutral impa	act very important			
Site monthly volume	100 001 - 250 000	0		0 5			
	250 001 - 300 000	2		1 12			
	350 000+	0		2 10			
	Total	2		3 27			
		at least 10c/l increase felt immediately on the cash flow?					
Site monthly volume	- 100 001 - 250 000	Absolutely childai	10 10				
	250 001 - 300 000	6	21				
	350 000+	9	21				
	Total	20	52				
	Chi-Square Tests	F					
		Asymp. S	Sig. (2-				

01	ii oquaic ic	313	
	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	5.257 ^a	6	.511
Likelihood Ratio	6.444	6	.375
Linear-by-Linear Association	.005	1	.944
N of Valid Cases	52		

Source: Research survey (2005)



Bar Chart

Source: Research survey

The majority of retailers believes that the petrol price increase of 10 c/l have an impact immediately on the cash flow of the business, and is very important and critical for their survival.

Monthly cash flow imbalances are shown in Table 6.9 and Figure 6.10

				Is monthly petrol price cha affect cash flow imbaland Very important Impor			chang ances	jes ;?
							oortar	nt
Site monthly volume	100	001 - 250 00	250 000 7				3	
	250	001 - 300 00	0		12			9
	350	000+			9			11
	Tota	ıl			28			23
				-		1	_	1
				Is monthly petrol price changes affect cash flow imbalances?				
				N	eutral	Tota	al	
Site monthly volume	100	001 - 250 00	0		0		10	
	250	001 - 300 00	0	0			21	
	350	000+			1		21	
	Tota	al			1		52	
	Ch	ii-Square Te	sts					
		Value		df	Asymp. S sideo	ig. (2- I)		
Pearson Chi-Square		3.256 ^ª	4			.516		
Likelihood Ratio		3.628		4		.459		
l inear-by-l inear Assoc	iation	2,636		1 104				

52

Table 6.9: Monthly price fluctuations

Source: Research survey (2005)

N of Valid Cases

Figure 6.10: Monthly price fluctuations



Bar Chart

Source: Research survey (2005)

The price fluctuation affects business cash flow as shown in the figure above. The majority of the retailers with sales volume above 250,000 litres per month indicates that the impact of monthly petrol increases have a significant impact on their cash flow imbalances.

F	-			
		Is the petrol char on stock level	nge having eff maintenance	fect ?
		Very important	Importan	t
Site monthly volume	100 001 - 250 000	6		4
	250 001 - 300 000	9		11
	350 000+	8		13
	Total	23		28
		Is the petrol change having effect on stock level maintenance?		
		Neutral	lotal	
Site monthly volume	100 001 - 250 000	0	10	
	250 001 - 300 000	1	21	
	350 000+	0	21	
	Total	1	52	

Table 6.10: Impact of petrol price on stock level

Chi-Square Tests									
	Value	df	Asymp. Sig. (2- sided)						
Pearson Chi-Square	2.844 ^a	4	.584						
Likelihood Ratio	3.157	4	.532						
Linear-by-Linear Association	.853	1	.356						
N of Valid Cases	52								

Source: Research survey (2005)

Figure 6.11: Impact of petrol price on stock level



Bar Chart

The sites with high volume indicate that petrol price changes affect the level of stock site orders during a particular month. The less volume throughput, less impact felt due to petrol price changes.

In order to test validity, one may use a method such as Cronbach's Alpha. The average is called a mean inter-item correlation in Cronbach's Alpha. A detailed statistical report is attached in Annexure L which also highlights other factors considered to affect the service station profitability.

Source: Research survey (2005)

Alpha α = NP / 1 + <u>P</u> (N-1)

N = Number of items

•

 \underline{P} = average / mean inter-item correlations

When one wants to know what alpha would be if average inter-correlation is a 12 item, with a scale of 0.5,

 $\alpha = NP / 1 + P (N-1)$ = 12 x 0.5 / 1 + 0.51 (12 -1) = 6.00 / 1 + 5.61 = 6.00 / 6.61 = 0.90

Alpha is less than 1. This shows that the item is correlated.

6.7 SITE VOLUME COMPARISON

A comparison of the average weekly petrol sales volumes in city, suburb, industry and township are shown in the Table 6.11.

Table 6.11: Weekly average sales volumes of service station

	Suburb	Industry	Township	City
Sunday	8,541	1,254	10,215	7,985
Monday	10,215	7,875	17,845	9,475
Tuesday	10,852	8,451	21,543	9,856
Wednesday	9,858	8,996	15,465	9,898
Thursday	10,010	8,852	18,596	9,311
Friday	11,001	7,845	25,290	9,869
Saturday	9,523	6,727	13,546	9,856
Average weekly volume	70,000	50,000	122,500	66,250

Source: Research survey (2005)

The full service station volumes can be found in Annexure J. The impact of a location is very crucial as is depicted in the Table 6.11. The table shows the sites in the following areas:

- Suburb Moreleta
 - \triangleright 90% supported by residential customers
 - Service station in suburbs volume is low on Sundays as people are not travelling like other segments or markets
- Industry Rosslyn
 - ➢ 95% supported by industrial firms
 - The volume performance is almost constant during the week, but weekends sales drop as most industries are not operating to their maximum capacity (viz., few deliveries to customers)
- Township Soshanguve
 - > 80% supported by taxi where there is a taxi rank within 5km radius
 - Township sites volume increase mostly on Fridays as most passengers visit their families over the weekends
- City Hatfield
 - ➢ 95% supported by city local businesses
 - The volume remains constant throughout the week, declines on Sunday as most people do not visit the city because majority of shops are closed/closed early.

Table 6.11 does not represent all other service stations in the research. These sites were chosen to serve merely as an illustration.

6.8 RESEARCH FINDINGS

A total of 52 questionnaires were received back. Full questionnaire information analysed is found in the following section. Figure 6.12 shows the age distribution of the service station retailers.

Figure 6.12 Age Profile of Retailers



Source: Research Survey (2005)

The majority of the retailers, which account for 53%, are between 41 - 50 years old, 21% are between 31 - 40 years old, 18% are over 50 years old and 9% are below 30 years old. There is a good chances of sustaining the same retailers in the next decade as the 41 - 50 years old group moves to above 50 years. This will help the industry for continuity and skills retention within the petroleum industry.

Males still dominate the industry. Figure 6.13 shows that there were 49 males as compared to 3 females retailers.





Source: Matsho – Research Survey (2005)

The majority of the researched service stations had an average sales volume of 250,001 litres to 300,000 litres per month, which account for 53 per cent of the respondents. Only 12 per cent of the service stations exceeded 300,000 litres per month. The location of the site and the access to the forecourt (i.e. driveway) have a major effect on the volume which ultimately results in profitability impact.

6.9 PRICE ELASTICITY

Price elasticity is defined as the measure of the responsiveness of the quantity demanded or supplied to changes in prices. As per the law of demand, the quantity demanded varies in relation to the price of a commodity, i.e., a positive change in price will be accompanied by a negative change in quantity and thus the coefficient of price elasticity, ηii , always has a negative sign. The price elasticity can either be estimated at a point or between any two points on the demand curve. The point elasticity concept is valid for very small changes in

price and quantity. In contrast, when elasticity is estimated between two points, it is called the *arc* elasticity and is given by:

$$\eta ii = \Delta Q (P2 + P1)/2 = \Delta Q (P2 + P1)(1)$$

$$\Delta P (Q2 + Q1)/2 \quad \Delta P/ (Q2 + Q1)$$

The formula given in Equation (1) yields an average price elasticity over the arc of the demand curve instead of at a point on the demand curve. The arc elasticity concept is good when observed changes in price and quantity are large. The information from one of the site researched is used to analyse the price elasticity calculation using equation (1) above.

P1 = 454.00 (July 2004 price) P2 = 506.00 (June 2005 price) Q1 = 273,757 (July 2004 site volume) Q2 = 259,090 (June 2005 site volume) $\Delta Q = 273,757 - 259,090 = 14,667$ $\Delta P = 454.00 - 506.00 = -52.00$

$$\eta ii = \frac{\Delta Q (P2 + P1)/2}{\Delta P (Q2 + Q1)/2} = \frac{\Delta Q (P2 + P1)}{\Delta P (Q2 + Q1)/2}$$
$$= \frac{14,667 (506 + 454)}{-52.00 (259,090 + 273,757)}$$
$$= -\frac{14,667 (960)}{52.00 (532,847)}$$
$$= -\frac{14,080,320}{27,708,044}$$
$$= -0.50$$

It could be concluded that the increase in petrol price resulted in the drop in sales volume during the period analysed. Volume demand is inelastic to price changes.

Econometric studies of the demand for gasoline for South Africa are few. It is important to estimate the price and income elasticities of gasoline for the possible relevance to the development of an appropriate energy policy for the country. Using the recently developed Autoregressive Distributed Lag (ARDL) bound testing approach to co-integration, suggested by Pesaran et al. (2001), the study concludes that the estimated price and income elasticities of -0.47 and 0.36 imply that gasoline demand in South Africa is price and income inelastic (Akinboade, Ziramba and Kumo, 2008).

The determinants of price elasticity are briefly described as follows:

- a) **Degree of Necessity**: Greater the degree of necessity, lower the elasticity; for example grains demand is inelastic.
- b) **Availability of Substitutes**: More numerous the substitutes, higher will be the elasticity; for example, tea, coffee, cold drinks, etc.
- c) **Proportion of Consumer's Income Spent on the Commodity**: Smaller the proportion of consumer's income spent on the commodity, the lower will be the elasticity. Examples are match boxes, salt, etc.
- d) Alternative Uses of the Commodity: More numerous the uses, higher the elasticity. A fall in prices of such products would result in a substantial increase in their demand, particularly where they were not being used earlier due to high price.
- e) **Postponement and Habit**: If consumption of a commodity is postponeable, it makes its demand more price elastic compared to the one whose consumption is not postponeable. For example, demand for consumption of durable goods such as cars, television sets can be postponed as opposed to perishable necessities such as milk, vegetables; as a result, demand for the former is more elastic than for the latter. Similarly, in general, habit makes the demand more elastic. A very good example is smoking; a person habituated to smoking can seldom quit this habit.

Both static and dynamic relations can be estimated econometrically.

$$Qt = f(Pt, Pst, Yt, Zt, Ut) \dots (2)$$

Where the subscript:

- t denotes the time period of observation
- P is its own price
- *Pst* represent prices of substitutes/complements
- Y_t is income
- Z_t all other factors such as taste and preference, government controls
- U_t stochastic error term which captures all random factors affecting demand and
- f functional form

Some static demand functional forms are given below:

Linear

 $Q_t = b_0 + b_1P_t + b_2P_{st} + b_3Y_t + b_4Z_t + U_t$ (3)

Double-log or log-linear

or

$$In Qt = Inb0 + b1InPt + b2InPst + b3InYt + b4InZt + Ut \dots (5)$$

Semi-log

$$Qt = b0 + b1InP_t + b2InP_{st} + b3InY_t + b4InZ_t + Ut$$
(6)

Inverse semi-log

In
$$Qt = b0 + b1Pt + b2Pst + b3Yt + b4Zt + Ut$$
(7)

The demand functions specified above are based on the instantaneous adjustment between quantities and price and do not distinguish between short and long run adjustments.

For the elasticity analysis equations 1 - 4, see Annexure M. The best results of the analysis are show in equation 5 below.

Equation 5

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 20:58 Sample (adjusted): 1994Q2 2008Q2 Included observations: 57 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
C	5.773429	0.326796	17.66678	0
LP	-0.045964	0.015837	-2.902414	0.0055
LT	0.180929	0.044456	4.069871	0.0002
LY	0.050548	0.016978	2.977177	0.0045
QD(-1)	0.006877	0.001615	4.258092	0.0001
D1	0.016634	0.010803	1.539841	0.13
D2	0.046437	0.011765	3.947133	0.0003
D3	0.0747	0.010158	7.353592	0
R-squared	0.827616	Mean depe	endent var	7.892857
Adjusted R-squared	0.80299	S.D. deper	ident var	0.050487
S.E. of regression	0.022409	Akaike info	criterion	-4.629221
Sum squared resid	0.024606	Schwarz cr	Schwarz criterion	
Log likelihood	139.9328	Hannan-Quinn criter.		-4.517782
F-statistic	33.60701	Durbin-Watson stat		2.050065
Prob(F-statistic)	0			

NB:

Constant (Y Intercept)

- Natural log of Price
- Natural log of tyres and car component sales
- Natural log of household disposable income
- Previous quarter deviations of petrol consumption
- Seasonal dummy quarter 2
- Seasonal dummy quarter 3
- Seasonal dummy quarter 4

The analysis used equation (3) Linear

$$Q_t = b_0 + b_1 P_t + b_2 P_{st} + b_3 Y_t + b_4 Z_t + U_t \dots (3)$$

Following assumptions were used for substitution purpose:

- $C = b_0$
- $LP = b_1$
- $LT = b_2$
- LY = b3
- QD(-1) = b4
- $P_t = 15$ (years)
- $P_{st} = 10,345$ (Annual average petrol sales)
- $Y_t = 671,510$ (Annual average income)
- $Z_t = 132$ (Annual average crude price)
- $U_t = 400$ (Annual average car sales in '000)

$$\begin{aligned} Q_{t} &= b_{0} + b_{1}P_{t} + b_{2}P_{st} + b_{3}Y_{t} + b_{4}Z_{t} + U_{t} \\ &= 5.77 + (-0.04) \ 15 + 0.18(10,345) + 0.05(671,510) + 0.006(132) + 400 \\ &= 5.77 - 0.6 + 1862 + 33,575 + 0.792 + 400 \\ &= 5.17 + 35,837.792 \\ &= 35,842.962 \end{aligned}$$

Figure 6.14 below shows the net profit histogram.



Figure 6.14: Net Profit Histogram

Source: Research Survey (2005)

Variable	Ν	Mean	StdDev	Minimum	Maximum
NP	34	2.76	1.50	1.00	5.00
VOLUME	34	2.65	0.85	1.00	4.00

Descriptive statistics for the above figure are summarised as follows:

- Variable: The name of each variable for which descriptive statistics have been calculated.
- N: The number of cases for each variable.
- Mean: The average value for the variable.
- StdDev: The standard deviation an indication of how closely values are clustered around the mean. Approximately 68% of cases lie between one standard deviation below and one standard deviation above the mean.
- Minimum: The smallest value obtained for a variable.
- Maximum: The largest value obtained for a variable.

Figure 6.15 below highlights the scatter plot between annual turnover and gross profit.



Figure 6.15: Annual Turnover and Gross Profit

Source: Research Survey (2005)

The correlation between annual turnover and gross profit is shown in the section below.

Correlation

Pearson product moment correlation for ANNUALTURN and GP

- r(x,y) = 1.00
- n = 34
- p = 0.000

A **Pearson product-moment correlation** shows the strength of the relationship between two continuous variables. It is suitable for use if it can be assumed that the variables are approximately normally distributed. The r value indicates the strength of the correlation. An r of -1 is a perfect negative correlation, an r of 1 is a perfect positive correlation, and an r of 0 means there is no correlation. The p value indicates if the correlation is statistically significant.

Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size, even a very strong correlation may not be statistically significant.

In this case, the value of r is 1.00 which can be considered a very strong correlation.

The p value is 0.000 which means that the correlation is statistically significant. One could report this as follows:

"ANNUALTURN and GP are statistically significantly correlated at the 1% level (r=1.00; p=0.000)."

Figure 6.16 below depicts the scatter plot between volume and gross profit.



Figure 6.16: Volume and Gross Profit Scatterplot

Source: Research Survey (2005)

The Chi-square test results are highlighted below:

Chi-square = 97.40p = 0.0000df = 12

Caution: 19 cells have expected frequencies smaller than 5. The result of the Chi-square test should therefore be interpreted with caution.

The Chi-square test shows if there is a relationship between two categorical variables. The p value indicates if the relationship is statistically significant.

Here the probability value (p) is smaller than 0.01, which means that there is a 99% or better probability that there is a statistically significant relationship.

Note that each dot is slightly offset from its true position to avoid excessive overlap.

Result summary is follows:

"VOLUME and GP are statistically significantly related at the 1% level (chi-square=97.40; df=12; p=0.000)."

T test for independent groups

Both variables being analysed have more than two possible values. Therefore, all the values in variable VOLUME are assumed to represent group 1 and all the values in variable GP are assumed to represent group 2. This would typically be the case for a pre-post design.

Descriptive statistics for the two groups:

Group	n	Mean	StdDev
1.00	34	2.647	0.849
2.00	34	2.765	1.257

The difference between the means of the two groups is 0.118

Testing for differences (t test for dependent groups):

t = -0.329p = 0.744df = 33.000

The t test for dependent groups shows if there is a significant difference between the means of two dependent groups. Most commonly, the two "groups" are actually the same group that have been tested on two occasions, such as before and after a training course, and the purpose is to see if the mean score after the training is different from the mean score before the training. The t test for dependent groups should also be used when there really are two

groups, but the individuals in the groups are in some way "paired" with each other, e.g. husbands and wives.

Look at the p value to see if the difference between the two means is statistically significant. Here the p value is 0.744, which is larger than 0.05. This suggests that there is no statistically significant difference between the means of the two groups.

Result summary is:

"The means of the two groups are not statistically significantly different (t=-0.33; df=33; p=0.744)."

Pearson product moment correlation for VOLUME and GP

r(x,y) = -0.96 n = 34p = 0.000

A Pearson product-moment correlation shows the strength of the relationship between two continuous variables. It is suitable for use if it can be assumed that the variables are approximately normally distributed. The r value indicates the strength of the correlation. An r of -1 is a perfect negative correlation, an r of 1 is a perfect positive correlation, and an r of 0 means there is no correlation. The p value indicates if the correlation is statistically significant. Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size, even a very strong correlation may not be statistically significant. In this case, the value of r is -0.96 which can be considered a very strong correlation.

The p value is 0.000 which means that the correlation is statistically significant. One could report this as follows:

"VOLUME and GP are statistically significantly correlated at the 1% level (r=-0.96; p=0.000)."

Spearman rank order correlation for VOLUME and GP

rho = -0.96n = 34p = 0.000

A **Spearman rank order correlation** shows the strength of the relationship between two continuous variables. It is suitable for use if it cannot be assumed that the variables are approximately normally distributed. The rho value indicates the strength of the correlation. A rho of -1 is a perfect negative correlation, a rho of 1 is a perfect positive correlation, and a rho of 0 means there is no correlation. The p value indicates if the correlation is statistically significant. Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size, even a very strong correlation may not be statistically significant.

In this case, the value of rho is -0.96 which can be considered a very strong correlation.

The p value is 0.000 which means that the correlation is statistically significant. One could report this as follows:

"VOLUME and GP are statistically significantly correlated at the 1% level (rho=-0.96; p=0.000)."

Descriptive statistics analysis as follows:

Variable	Ν	Mean	StdDev	Minimum	Maximum	n Range
VOLUME	34	2.65	0.85	1.00	4.00	3.00
GP	34	2.76	1.26	1.00	5.00	4.00
Variable	Ν	Median	Mode	Skewness	Kurtosis	95% CI
VOLUME	34	3.00	3.00	-0.49	-0.17	+-0.29
GP	34	2.00	2.00	0.47	-0.96	+-0.44

The correlation between cash flow and sales is highlighted below:

Pearson product moment correlation for cash flow and sales

$$r(x,y) = 0.27$$

$$n = 34$$

$$p = 0.002$$

A **Pearson product-moment correlation** shows the strength of the relationship between two continuous variables. Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size, even a very strong correlation may not be statistically significant. In this case, the value of r is 0.27 which can be considered a moderate correlation.

The p value is 0.002 which means that the correlation is statistically significant. One could report this as follows:

"Cash flow and sales are statistically significantly correlated (r=0.27; p=0.002)."

The correlation between cash flow and stock is highlighted below. Pearson product moment correlation for cash flow and stock is:

- r(x,y) = -0.18
- n = 34
- p = 0.317

A **Pearson product-moment correlation** shows the strength of the relationship between two continuous variables. Given a large enough sample size (n), even a very weak correlation can be statistically significant, and given a small enough sample size, even a very strong correlation may not be statistically significant.

In this case, the value of r is -0.18 which can be considered a relatively weak correlation.

The p value is 0.317 which means that the correlation is not statistically significant. One could report this as follows:

"Cash flow and stock are not statistically significantly correlated (r=-0.18; p=0.317)."

The following section tests the dependent variables

Both variables being analysed have more than two possible values. Therefore, all the values in variable NET are assumed to represent group 1 and all the values in variable NET are assumed to represent group 2. This would typically be the case for a pre-post design.

Descriptive statistics for the two groups:

Group	n	Mean	StdDev
1.00 2.00	34 34	2.971 2.971	1.586 1.586

The difference between the means of the two groups is 0.000 (i.e. net profit and service)

Testing for differences (t test for dependent groups):

t = 0.000p = 1.000df = 33.000

The t test for dependent groups shows if there is a significant difference between the means of two dependent groups. Most commonly the two "groups" are actually the same group that have been tested on two occasions, such as before and after a training course, and the purpose is to see if the mean score after the training is different from the mean score before the training. The t test for dependent groups should also be used when there really are two groups, but the individuals in the groups are in some way "paired" with each other, e.g. husbands and wives.

Here the p value is 1.000, which is larger than 0.05. This suggests that there is no statistically significant difference between the means of the two groups.

"The means of the two groups are not statistically significantly different (t=0.00; df=33; p=1.000)."

Chi-square test reveals the following volume and gross profit.

Chi-square = 97.40

p = 0.0000

df = 12

Caution: 19 cells have expected frequencies smaller than 5. The result of the Chi-square test should, therefore, be interpreted with caution.

The Chi-square test shows if there is a relationship between two categorical variables. Simply look at the p value to see if the relationship is statistically significant.

Here the probability value (p) is smaller than 0.01, which means that there is a 99% or better probability that there is a statistically significant relationship.

The results can be concluded as follows: "Volume and gross profit are statistically significantly related at the 1% level (chi-square=97.40; df=12; p=0.000)."

The retail service stations are affected by the high price increase which ultimately impacts on the profitability of the site. The operating retailer finances the increase difference for a period until the motorists purchase petrol. There's a loss of interest that could have been generate elsewhere in stead of taking the risks that the petrol will be sold.

There is a positive correlation between the price increase and sales volume for the service station more especially when the increase is high. Eventually motorists buy the increase petrol because there is no immediate substitute for petrol.

6.10 PETROL PRICE COMPOSITION

The petrol pump price in South Africa is composed of government taxes, which makes the local price uncompetitive compared to other countries. The annual increases of taxes by the Minister of Finance during the budget speech and the monthly price adjustment affect the motorists spending pattern to consume petrol. This results ultimately in the cash flow implications for the service station retailers. The petrol price components are shown in Figure 6.17 and Table 6.12 below.



Figure 6.17: S.A Petrol Price Components

Source: DME (2005)
	Fuel Tax	Custom &	Equalisation	RAF	Transport	Wholesale	Retail	Delivery
		Excise	Fund			Margin	Margin	Cost
	c/l	c/l	c/l	c/l	c/l	c/l	c/l	c/l
1 July '87	23.50	4.00	5.70		7.80	3.60	7.20	1.70
1 April '88	22.50	4.00	6.70	2.60	7.80	3.56	7.20	1.90
15 April '89	31.90	4.00	7.00	3.60	9.20	5.60	8.70	2.10
20 October '90	31.90	4.00	7.00	3.40	9.20	5.56	12.20	2.40
23 August '91	46.90	4.00	7.00	4.00	9.20	7.56	11.50	2.90
1 July '92	54.90	4.00	7.00	6.00	10.20	13.56	15.10	0.30
15 September '93	60.90	4.00	7.00	9.00	10.90	14.06	15.60	3.50
18 June '94	60.90	4.00	9.40	9.00	10.20	14.06	15.60	3.50
6 September '95	62.90	4.00	9.40	9.00	10.20	14.06	18.10	4.10
7 August '96	71.60	4.00	5.40	10.50	10.20	14.06	18.10	5.10
5 November '97	76.60	4.00	5.40	12.50	11.00	16.06	20.10	5.10
7 October '98	86.60	4.00	8.00	14.50	11.30	16.06	22.70	5.10
7 July '99	90.60	4.00	8.00	14.50	11.30	17.06	24.50	5.10
7 June '00	87.60	4.00	8.00	14.50	11.30	17.56	25.20	5.10
4 Aril '01	94.80	4.00	8.00	16.50	11.40	18.78	28.00	5.10
5 April '02	94.80	4.00	8.00	18.50	11.50	24.30	31.20	5.10
9 May '03	101.00	4.00	0.00	21.50	12.30	28.29	35.00	5.10
7 July '04	111.00	4.00	0.00	26.50	13.00	37.26	36.80	6.70
10 June '05	116.00	4.00	0.00	31.50	13.40	39.26	40.60	7.00

Table 6.12: S.A Petrol Price Components

Source: DME (2005)

It is clear from the above that the following can be deduced over 19 years:

- Fuel tax has increased over the years by more than 393%
- Custom and excise remained the same
- Equalisation fund increased by 40% and ultimately discontinued the levy
- Road Accident Fund (RAF) increased by 1111%
- Transport cost increased by 72%
- Wholesale margin went up by 990%
- Retailer margin increased by 464%
- Delivery cost increased by 311%

The RAF and wholesale margin had tremendous increases, while retailer margin increases are far less than RAF and wholesale margin.

Table 6.13 below highlights a comparison of country pump prices; local taxes and government support must be taken into account in viewing the prices.

Country	Price per litre* (R)
United Kingdom	19.03
Germany	17.60
France	17.02
Australia	10.47
Zimbabwe	10.23
India	9.73
South Africa	8.90
United States	7.15
China	5.97
Nigeria	4.46
Venezuela	1.12

Table 6.13: Country Petrol Pump Prices

Source: CEO (2008)

* All prices originally denominated in United States dollars. At the time of calculation, the exchange rate was R/\$ 8.11.
 The prices reflected are an average. There can be a marked difference in petrol price between inland and coastal regions
 – particularly in countries like Australia and South Africa. In some of the countries listed above you can shop around for better prices which may affect the price you pay by as much as R1.50 per litre.

Consider the following:

- In some parts of China you are allowed to buy four times per day petrol at different locations.
- Only one in forty-five Chinese own a car.
- In Nigeria, you could possibly cut the price you pay per litre by 50% if you buy on the black market.
- You may experience supply problems in Zimbabwe
- In major metropolitan centres across the US and UK, you need to pump your own petrol (CEO, 2008).

As the local prices are set by the government, all major petroleum companies only implement the set policy (i.e. regulated prices). The petrol price is affected by the crude oil price, trading around \$140 / bbl in 2008. Figure 8.7 shows the historical oil prices.

Figure 6.18: Historical Crude Oil Price

Source: FM (2008)

6.11 BARRIERS TO ENTRY

It appears that Historically Disadvantaged South African (HDSA) who is in the industry face major challenges and constraints that serve to impede entry into the downstream petroleum industry. These challenges and constraints include barriers to entry such as the restrictive regulatory and legal framework within which oil companies in the downstream petroleum industry operate. Economic barriers are those in which financial requirements are placed above any other requirements for entry to be possible. The economic barriers to entry include *inter alia* the following:

- (i) Access to finance to fund projects and run businesses effectively.
- (ii) Transport costs incurred in the distribution and marketing of fuel.

- (iii) Extensive advertising is also a barrier because it assists a company to create brand loyalists, and leave new entrants to struggle for customers.
- (iv) The other economic barrier is sunk costs.
- (v) Vertical integration is also a barrier to entry (Mokoena and Lloyd, 2005).

In terms of diesel and petrol demand in Gauteng, data from the oil industry (for the period 1995 – 2005) indicate an increase in demand for diesel of 88.69%, and an increase in the demand for petrol of 13.92%. The comparison with growth in national demand for the same products indicates that diesel growth in Gauteng is exceptionally high. This should be a cause of concern among industry players and government. This increase, while welcome as an indicator of vigorous economic growth, should be particularly worrying to politicians, planners and other interested parties. The longer-term implications for continued and sustainable development are profound (Cooper, 2007).

CHAPTER 7 Conclusions and Summary

7.1 INTRODUCTION

The petroleum industry is a major contributor to the national gross domestic product. The research study started with a broad analysis of the industry and the demarcation of the study. The factors affecting the profitability of service station were analysed. The industry is more affected by international performance of the crude oil price and international economic stability. There are some opportunities presented for ensuring the future survival of the industry service station network. The petroleum industry provides one of the most challenging environments and demands more attention to detail to be competitive and sustainable.

National petrol sales exceed 10 billion litres per annum currently, and the number of service stations has increased in recent years. The sampling survey was done within the City of Tshwane Metropolitan Municipality with a view to collecting area specific primary data. Gauteng Province and the City of Tshwane Metropolitan Municipality constitute an area with high energy demand.

Mainly because of its "strategic" significance, which is a debatable issue, the industry is regulated by various legislation, including the Service Station Rationalisation Plan, the Blue Bump Agreement and the direct involvement of the Government in Sasol. The oil industry in South Africa has also been influenced recently by Black Economic Empowerment legislation which, in a way, has overhauled the entire structure of the industry.

It is, however, noteworthy that only petrol price is regulated (but not diesel) with the result that such changes do affect the profitability of the sites. Consequently, in recent past, the station sites have added to their operation non-fuel operations like car wash, convenience stores, etc. Nevertheless, it is also noteworthy that retailer margins are decided by regulations rather that by sales volumes.

7.2 CONCLUSION

This chapter summarises the research findings. The petroleum retail business environment is changing every year. It is affected by many factors like labour, logistics, international oil supply, rand/dollar exchange rate, etc. Retailers are individual entrepreneurs who may need to be guided, coached and mentored to operate their service stations professionally. There is a huge initial capital investment required to enter the liquid fuel industry, and this acts as a barrier to emerging entrepreneurs.

In conclusion, the industry will never be the same again. Environmental factors affect the industry on a daily basis. This industry is regarded as one of the major contributors to the national economy in terms of output, taxes, capital investment, etc. As we are in the 21st century, the retail environment has changed with more competition coming from new entrants. There are other business opportunities that can be used as good profit centers to make service stations viable, profitable and competitive. "**Retail is detail** – service station owners must understand their business as a whole. This helps to identify key problematic areas well in advance; otherwise the business in most cases will suffer financial losses. The petroleum industry must make sure that all service station owners undergo retail training courses to be on par with the operational excellence (Research survey (2005)".

7.3 SUMMARY

The research highlighted the historical background of Gauteng Province and the economic perspectives with its impact on the national economy. The provincial standing in the SADC region was also discussed. Major economic sectors were highlighted as the engine that drives the province in Chapter 2.

The rapid structural economic changes in Gauteng Province was highlighted, and so also the role of the energy sector in South Africa. It was found that the energy sector supplies energy at a much lower cost than most of the developed world. As energy cost is an important element in the total input cost of every single commodity produced in the country, South Africa might be seen as having a competitive advantage in the area of energy production. This might have important implications for the general competitiveness of South African products in the international markets.

The Business Confidence Index was highlighted in view of the impact related to the liquid fuel industry. The chapter concluded with a discussion on the City of Tshwane Metropolitan Municipality as the area of the research study. The city's economic indicators per sector were discussed to highlight their importance to the Gauteng Province's economic standing.

In Chapter 3, the literature review studies related to the research project was highlighted. The background information about petroleum industry in terms of the primary vs. secondary oil, the oil flow chart and the impact of price shocks were discussed. The sustainable supply of exhaustible resources like crude oil was highlighted. The current and future demand of the resource and its impact on the environment were also discussed. The chapter concluded with the South African energy demand discussion. Coal is one of the major energy sources. The reserve quantities, supply to local and export markets were highlighted.

The petroleum industry background was discussed in Chapter 4 in relation to the historical periods: pre-1973 oil embargo, post-1973 oil embargo and before 1994. In addition, the organizations which influence the petroleum and liquid fuels industry were presented from the global perspective, including among others, Organisation of Petroleum Exporting Countries and the national bodies like South African Petroleum Industry Association.

All the petroleum companies operating in South Africa were discussed in relation to the nature of business, refining and marketing and shareholding structure. This included among others the formation of Sasol and the South African government involvement in the industry. The main Acts of parliament (i.e. legislations) affecting and influencing the petroleum industry were highlighted as an attachment.

The Chapter concluded with the industry agreement entered into by role players, like the Service Station Rationalisation Plan which influenced the development and petrol supply in the country, the Blue Pump Agreement entered into by petroleum companies which allowed Sasol to distribute their petrol without having their own network. The Blue Pump Agreement has expired, which allowed Sasol to establish their own retail network in the early 2000. The Roster Outlet was discussed as this affects all petroleum companies' petrol distribution. The minimum qualifying standards were set for the service station to be approved. The Chapter concluded with the Petroleum Charter which aims to promote the empowerment of previously disadvantaged South Africans within the sector.

In Chapter 5, a full discussion on the formation of Sasol was highlighted. The Sasol plants in the liquid fuels industry during sanction period when the Government wanted to reduce the reliance of the South African crude market on the international suppliers was a strategic move at the time. It went further by highlighting the Government's role in terms of financial assistance and tariff protection accorded to Sasol in order for it to survive and not feel the impact of crude oil price fluctuations.

Sasol was guaranteed a market by "making" other petroleum companies trading in South Africa to purchase their petrol from Sasol through the Rationalization Plan (Ratplan) and through the installation of Sasol pumps at those companies' service station retail outlets.

The main Acts that govern and affect the liquid petroleum industry were highlighted. The main topical and critical issues of whether to deregulate the industry has been highlighted in term of viewpoints expressed by stakeholders like business, Government, labour and

research institute. Their viewpoints differ in relation to Government participation in the industry, introduction of self-service, vertical integration and retail price maintenance.

Chapter 6 analysed the data captured during the research process. The City of Tshwane Metropolitan Municipality service station sample was discussed. The South African petrol price historical performance was analysed. The national petroleum companies' market share was highlighted to show the overall picture per company. The petrol and diesel price analysis over the years was also shown using 1985 constant prices. The price composition, price historical analysis and fixed price analysis were discussed. The retailer margin was analysed compared with the price changes over the period analysed. The service station profitability was discussed based on the petrol sales, sales changes over months, gross profit per litre, retailer margin changes and the margin as a percentage of petrol prices.

The South Africa inflation status was also discussed. The elasticity calculation was analysed to highlight the effect of price change on quantity demanded. Other factors affecting the retail service stations profitability were highlighted based on the statistical results. A comparison of the service stations volume was done in from the point of view of different trading areas: suburb, industry, township and the city. This chapter concluded with the full statistical analysis of the research results.

The survival of the service station is key to the economy as logistics network relies on the services of the industry. The major variables that influence the service stations were discussed which include among others, tax, retailer margin, etc. It was evident that there are too many taxes on the South African petrol compared with other countries. The petrol price increases impacts are huge for the service station retailers; this has a major effect on the individual service station operator.

7.4 RESEARCH FINDINGS

The research highlighted the following findings pertaining to the operations service stations:

- The majority of services' station volume have decreased in recent years
- The increase of monthly petrol prices affect the site and vise versa
- New entrants like Exels' market share and number of service station have increased during the last five years before merger/acquisition with Sasol
- Petrol price increases over the period are higher than the increase in retailer margins
- Tax levies account for 28% of the total retail price
- The retailer margin is fixed and not as a percentage of the total retail petrol price
- Effect of the petrol price increase on the net profit of retailers: in the short-term, the petrol and diesel price increases are financed by the retailers until the motorists purchase the products

7.5 RESEARCH LIMITATIONS

During the research study, certain limitations were encountered. The researcher tried to minimise their impact on the final research findings by applying statistical methods of reducing errors. Here are the limitations encountered:

- Respondents were initially worried that the researcher was an investigator from the government.
- Not all retailers were available during the agreed time of appointments. Some were held up at other sites due to urgent issues, etc.
- Respondents were not all willing to share their financial information with the researcher.
- Not all financial information available was audited.
- Some retailers assigned their supervisors or site managers to help us as they are not running the daily operation.

- Some respondents complained that the questionnaire was too long and that they are busy. This also affected their concentration and response level.
- Personal interviews were at times disrupted, which in some cases needed to be rescheduled.

CHAPTER 8

Recommendations

8.1 RECOMMENDATIONS

The research recommendations are as follows :

The impact of the rising petrol price study on the cash flow and profitability of service stations must be addressed as an urgent matter; otherwise it might lead to some service stations being closed in the near future.

It was revealed that there are few bodies representing the service station retailers; it will be advisable in future to form one unity body for service station retailers. This national body which will represent all retailers from all petroleum companies, will give them a platform, and voice and negotiation power on issues like retailer margins. Other matters that can be included for the benefit of all retailers includes among others, negotiate reasonable bank fees, standardised cash intransit security fees (i.e. one rate for a particular area), etc.

In future, all service station retailers may need to undergo similar training programmes irrespective of the background. This should be viewed as entry qualification to operate a service station, which will ultimately result in improved quality and standardised service level.

The retailer margin should be standard percentage of the final price, not a fixed amount which diminishes as the percentage of the pump petrol when price increases. This ultimately results in service station retailers financing the difference until the motorists purchase the petrol. The South African government should examine the taxes on the petrol price to ascertain if some are still relevant today.

The retailer margin has not increased at the same rate compared to Road Accident Fund (RAF) over a period of time. This led to less profit and squeezed profit margins for service station retailers.

The South African government should look into the possibility of introducing deregulation of the petrol price. It can be done in the following matter to protect job losses of petrol attendants:

- Petrol price cap for a particular zone
- Zone price difference to be small for sites in areas between zone boundaries

This will allow minimal competition between the retailers, and customers will have a choice to compare. Issues like service will add value to the customer prepositions before deciding which service station to fill-up. Retailer service station will be able to secure bulk customers in account like fleet vehicles (e.g. Avis, Budget, etc) which will boost their profitability levels in the long run.

Sasol has experienced high profit which leads to high taxes. This is due to the fact that Sasol prices is based on the R/\$ of crude oil price while Sasol uses coal and gas to produce petrol. Coal and gas prices are lower than the crude oil price. Sasol paid R4,5 billion in corporate tax in 2005, R6.8 billion (2006), R8 billion (2007) projected to R25 billion in 2008 and rising to more than R40 billion in 2010 (Donnelly, 2008). Government should look into the possibility of using this tax income to subsidise the petrol price or add to the retailer margins as incentive for the retailers to stay in business.

Lastly, the petroleum industry should recruit women to operate service stations so that empowerment can be executed at all levels while women advancement takes preference in going forward to comply with the objective of the Petroleum Charter.

8.2 FUTURE RESEARCH

This research dissertation mainly concentrated on the City of Tshwane Metropolitan Municipality. The researcher recommends the following as areas for future research:

- The effect of the introduction of deregulation on small retail sites and labour impact on the attendants
- A study on the comparability of the South African petroleum industry to that in other Southern Africa Development Countries (SADC).
- The possibility of other new entrants entering the liquid fuel industry in future.
- A critical analysis of the total petroleum value chain from inception (i.e. crude oil drilling) to the pump price. All the inter-mediaries' profit analysis to be taken into account and their impact on the final petrol price determination.
- Analysis of the price fixing or pricing methods used compared with other countries.

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ABBREVIATION

AER - Afric Energy Resource AGOA - Africa Growth and Opportunity Act AHI - Afrikaanse Handelsinstituut ALIL - African Legend Investment Limited AMT - Association of Motor Traders AMEF - African Mineral and Energy Forum ANOVA - Analysis of variance BBBEE - Broad Based Black Economic Empowerment BCI - Business Confidence Index BEE - Black Economic Empowerment - Basic Fuel Price BFP **BMF** - Black Management Forum BP - British Petroleum BPA - Blue Pump Agreement BPC - Business Practice Committee BPSA - British Petroleum Southern Africa BUSA - Business Unity South Africa CALREF - Caltex Refinery CALTEX - California Texas Oil Company CBM - Coal Bed Methane CEF - Central Energy Fund CPI - Consumer Price Index CPIX - Consumer Price Index excludes bonds repayment CTMM - City of Tshwane Metropolitan Municipality - Democratic Alliance DA - Department of Minerals and Energy Affairs DME DTI - Department of Trade and Industry EDC - Energy Development Corporation ENREF - Engen Refinery

•	FASA	- Franchise Association of South Africa
•	FIFO	- First In First Out
•	FOB	- Free On Board
•	FRTG	- Fuel Retailers Task Group
•	FRA	- Fuel Retailers Association
•	GDP	- Gross Domestic Product
•	GEDA	- Gauteng Economic Development Agency
•	GGP	- Gross Geographical Product
•	GNI	- Gross National Income
•	GTL	- Gas To Liquid
•	GRP	- Growth Regional Product
•	HDSA	- Historically Disadvantaged South Africans
•	IBLC	- In Bond Landed Cost
•	IDC	- Industrial Development Corporation
•	IEA	- International Energy Agency
•	IPCC	- Intergovernmental Panel on Climate Change
•	IPSR	- Institute of Policy and Social Research
•	JSE	- Johannesburg Securities Exchange
•	LFITF	- Liquid Fuels Industry Task Force
•	LIFO	- Last In First Out
•	LNG	- Liquefied Natural Gas
•	LPD	- Liquid Petroleum Division
•	LPG	- Liquid Petroleum Gas
•	MANOVA	- Multivariate Analysis of Covariance
•	MIC	- Mineworkers' Investment Company
•	MIF	- Motor Industries Federation
•	MTA	- Motor Traders Association
•	NABFRA	- National African Black Fuel Retailers Association
•	NAFCOC	- National African Chamber of Commerce
•	NATREF	- National Petroleum Refineries of South Africa
•	NEMA	- National Environmental Management Act

•	NFR	- Non Fuel Retailing
•	NSE	- Namibian Stock Exchange
•	NYSE	- New York Stock Exchange
•	NTI	- New to Industry
•	OECD	- Organisation of Economic Cooperation and Development
•	OEEC	- Organisation for European Economic Co-operation
•	OPCSA	- Oil Pollution Control South Africa
•	OPEC	- Organisations of Petroleum Exporting Countries
•	PASA	- Petroleum Agency South Africa
•	PETROSA	- Petroleum Oil and Gas Corporation of South Africa
•	PETRONAS	- Petroliam Nasional Berhad (Malaysia)
•	PFMA	- Public Finance Management Act
•	PIC	- Public Investment Corporation
•	PwC	- PricewaterhouseCoopers
•	PWV	- Pretoria-Witwatersrand-Vereeniging
•	RATPLAN	- Rationalisation Plan
•	RAF	- Road Accident Fund
•	RFA	- Retailers Fuel Association
•	RMI	- Retail Motor Industry
•	SAAF	- South African Air Force
•	SAAU	- South African Agricultural Union
•	SACCI	- South African Chamber of Commerce and Industry
•	SACOB	- South African Chamber of Business
•	SADC	- Southern African Development Community
•	SAFDA	- South African Fuel Dealers Association
•	SAFDA	- South African Fuel Dealers Association
•	SAFOR	- South African Fuel Oil Refinery
•	SAMCO	- South African Lubricants Manufacturing Company
•	SAMIEA	- South African Motor Industry Employers Association
•	SANCO	- South African Civics Organisation
•	SANTACO	- South African National Taxi Council

•	SAPIA	- South African Petroleum Industry Association
•	SAPREF	- South African Petroleum Refineries
•	SARB	- South African Reserve Bank
•	SBAB	- Small Business Advisory Bureau
•	SCI	- Sasol Chemical Industries
•	SFF	- Strategic Fuel Fund
•	SSA	- Shell South Africa
•	SSF	- Sasol Synthetic Fuels
•	SPI	- Sasol Petroleum International
•	TBPD	- Tons of Barrel Per Day
•	TCS	- Total Commercial Services
•	TESA	- Total Exploration South Africa
•	TIC	- Thebe Investments Corporation
•	TORSA	- Total Refining South Africa
•	TSA	- Total South Africa
•	UROTA	- Undue Restraint of Trade Act
•	USA	- United States of America
•	WAIH	- Worldwide Africa Investment Holdings
•	WDBG	- Women Development Bank Group
•	WDBIH	- Women Development Bank Investment Holdings
•	WEO	- World Economic Outlook
•	WTO	- World Trade Organisations
•	WTI	- West Texas International
•	WPC	- World Petroleum Council
•	WSSD	- World Summit on Sustainable Development

Measurements

- bbls Barrels litres
- bb/d Million barrel per day
- m b/d Million barrel per day
- Mt/yr Million tons per year

ANNEXURE A

University of Zululand

Website: http://www.uzulu.ac.za

Private Bag X1001 KwaDlangezwa 3886

Tel: 035 902 6231 Fax: 035 902 6171 E-mail: <u>shrestha@pan.uzulu.ac.za</u>

Department of Economics

25 August 2005

Dear Sir / Madam

RESEARCH QUESTIONNAIRE

This is to confirm that **Mr Jim Matsho** (Student No. 052459) is currently undertaking research into the retail petrol industry in South Africa, as part of his Master's degree studies in the Department of Economics.

Your service station forms part of the study population. It would be greatly appreciated if you would kindly spare 25 - 30 minutes of your valuable time to complete the attached questionnaire. The findings of the study will be of benefit to you as well, as you may be in a position to implement some of the recommendations of the study to improve the profitability of your business. Please note that only those service stations that respond will receive a copy of the findings.

Please also take note of the following :

- Your responses to the questionnaire are **confidential** and will not be disclosed to any party. You therefore do not have to identify your service station in the questionnaire.
- Overall results will be made available, and not those of specific service stations.
- Please return your questionnaire using the e-mail facility or post.
- If you have any queries, please do not hesitate to contact Mr Matsho on 0823990811 during the day or (035) 580 4518 after hours.

If you have any concerns about his research, please feel free to contact me at (035) 902 6231.

Thanking you for your assistance.

Yours sincerely,

Prof. Bijoy C Shrestha

HOD: Department of Economics

ANNEXURE B

QUESTIONNAIRE

INSTRUCTIONS:

- PLEASE MAKE AN 'X' IN THE APROPRIATE BLOCK (NUMBER)
- PLEASE GIVE CORRECT RESPONSES
- CHOOSE ONE OPTION ONLY WHERE REQUIRED
- FOLLOW INSTRUCTIONS INSERTED IN BRACKETS

Please indicate the area where the business is located :

Pretoria West	
Pretoria North	
Pretoria Central	
Pretoria East	
Pretoria South	

A. PERSONAL DATA OF BUSINESS OWNER:

- 1. Please indicate in which category your business falls under:
- Franchise

Non Franchise

2. What is the age of the business owner?

a. 20 - 30 years b. 31 - 40 years c. 41 - 50 years d. 50+ years

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3. What is the owner's education background?

a. 0 - Std 5	
b. Std 6 - Std 10	
c. Post matric	
d. Diploma / Degree	
e. Post Graduate	

- 4. For how long have you been owning / running this business?
 - a. 0 1 year b. 1 - 5 years c. 5 - 10 years d. 10+ years
- 5. Indicate the time spent in the business hours / day?
 - a. 7am 7pm b. 6am - 1pm c. 2pm - 8pm d. Varies
- 6. Do you own and operate any other business?

Yes	No	
-----	----	--

- 7. Who started the business?
 - a. Own creation
 - b. Family member
 - c. Franchisor
 - d. Other (Specify):

8. Which of the following is your current business format?

- a. Sole Proprietor
- b. Partnership
- c. Close Corporation
- d. Business Trust
- e. Trust

f. Other (Specify):

- 9. Previous working / business experience before running a service station.
 - a. Financial Sector
 - b. Education Sector
 - c. Sales & Marketing Sector
 - d. Managing Business
 - e. Other (Specify): _____

B. BUSINESS OPERATION

Question 10 to 11 must be answered using the following scale method

- A = Totally unimportantB = Not really importantC = Of neutral impactD = Very important
- E = Absolutely critical

10. How important is the impact of petrol increases in affecting your productivity?



11. Is the impact of at least 10 c/l increase felt immediately on the cash flow?



12. Do the customers react to petrol price changes immediately?

Yes No

13. Is the business leased or owned?



14. Where is the site located?

a. Suburb	
b. Township	
c. Industrial	
d. City	

- 15. What is the site total annual turnover?
 - a. R20+ million b. R15 - R20 million c. R11 - R15 million d. R5 - R10 million e. <R5 million
- 16. What is the monthly gross profit?
 - a. R300 000+ b. R240 000 - R300 000 c. R180 000 - R240 000 d. R120 000 - R180 000 e. R100 000
- 17. What is the annual net profit (excluding shop/convenient shops/workshop)?
 - a. R150 000+ b. R120 000 - R150 000 c. R90 000 - R120 000 d. R60 000 - R90 000 e. R30 000 - R60 000 f. <R30 000
- 18. What is the annual net profit (including all profit centres)?



19. How often do you take stock (counting)?

a. Daily	
b. Weekly	
c. Monthly	
d. Other (Specify):	

20. Which method do you use to move stock?

a. FIFO (First In First Out)	
b. LIFO (Last In First Out)	
c. Weighted Average	

21. Site monthly volume.

a. <100 000l	
b. 100 001 - 250 000	
c. 250 001 - 300 000	
d. 350 000+	

22. How much petrol stock do you keep daily in tanks?

a. <5 000l	
b. 5 000 - 10 000l	
c. 10 001 - 15 000l	
d. 15 001 - 20 000l	
e. 20 001+	

23.	How	often	do	vou	get	delive	eries	а	week?
_ J.	110 11	oncon	uv	,00	500	active	1100	u	week.

a. Once	
b. Twice	
c. Thrice	

24. How big is the quantity?

a. Petrol (Unleadd): 23 000l x	
b. Petrol (Leaded): 23 000l x	
c. Diesel: 23 000l x	
d. Diesel: 9 000l x	
e. Any size:	

25. What perc	centage of your sales	are cash	or credit	?
26. Why do y	ou sell / not sell on c	redit?		
Yes		No		
27. Do you gi	ve discount to you cu	istomers?		
Yes		No		
28. What mus	st your monthly sales	(i.e. Rands or	volume) be in order	r to break even?
a. Ra	ands :			
b. Vo	olume :			
29. Do you ke	eep proper financial r	ecords for aud	iting purpose?	
Yes		No		
C: COMPET	TITION			
30. Is there ar	ny competition withir	n 5 km radius ((i.e. service stations))?
Yes		No		
31. How man	y are the main compo	etitors?		
a. One				
b. Two				
c. Three d. Four				
e. Five				
f. > Six				
32. On what i	s your competition b	ased?		
a. One price				
b. On quality	service / products			
5. Gii pionio				

d. Other

33. Does this competition stimulate any form of creativity or how does it affect your turnover?

	Yes		No	
34	4. Is it a healthy competition	on?		
	Yes		No	
D: S'	TAFF COMPLEMENT			
35	5. How many people are en	mployed in the	business?	
	a. <10 b. 11 - 20	Η		
	c. 21 - 30 d. 31+	H		
36	6. What is the hourly rate of	of payment?		
	Answer: a) Attendant			
	b) Supervisors _			
	c) Cashiers			

d) Administrative _____

37. How often do your staff (i.e. forecourt attendant) attend training courses?

a. Once in every six months	
b. Once a year	
c. Once in two years	
d. No training at all	

38. Which of the following payments do you apply?



E: PRICE EFFECT

Question 39 - 45 must be ranked a scale of 1 to 5

- 1: Important
- 3 Neutral
- 5: Not important

2

2

2

39. Do monthly petrol price changes affect cash flow imbalances?

1	2	3	4	5
---	---	---	---	---

40. Is the petrol change having effect on the stock level maintenance?

|--|

4	<u> </u>

4

4

41. Do motorists care about the price changes regularly?

3

1

3

5

42. How the impact of high prices is affecting sales volume?

1

3

5

43. Do you support the deregulation of petrol market?

1	2	3	4	5
---	---	---	---	---

44. Is the service level offered to motorists important?

3



4 5

45. Will the high price affect the survival of the site in the next five years?

1 2 3 4 5

THANK YOU VERY MUCH FOR YOUR TIME, THE INFORMATION SUPPLIED WILL HELP ME A GREAT DEAL IN MY RESEARCH PROJECT.

ANNEXURE C

ANNEXURE D

ENERGY SOURCES

Energy is one of the most critical resources; without it, life would cease. Terminologies used within the industry are as follows:

- Petroleum is defined as a complex mixture of liquid hydrocarbons, chemical compounds containing hydrogen and carbon, occurring naturally in underground reservoirs in sedimentary rock. Coming from the Latin *petra*, meaning rock, and *oleum*, meaning oil, the word "petroleum" is often interchanged with the word "oil". Broadly defined, it includes both primary (unrefined) and secondary (refined) products.
- Crude oil is the most important oil from which petroleum products are manufactured but several other feedstock oils are also used to make oil products.

A wide range of petroleum products are manufactured from crude oil. Many are for specific purposes, for example motor gasoline or lubricants; others are for general heat-raising need, such as gas oil or fuel oil. The names of the petroleum products are those generally used in Western Europe and North America. They are commonly used in international trade but are not always identical to those employed in local markets. In addition to these oils, there are others which are "unfinished" oils and will be processed further in refineries or elsewhere.

ANNEXURE E

BP SOUTHERN AFRICA (PTY) LTD

It all began on 28 May 1901, when William Knox D'Arcy was granted a concession by the Persian Government, valid for six years, "to search for, obtain, exploit, develop, render suitable for trade, carry away and sell natural gas, petroleum, asphalt and ozokerite through the whole extent of the Persian Empire with the exception of the five Northern Provinces"

The BP group forms one of the largest industrial concerns in the world with some 650 subsidiaries and associated companies, and interests in more than seventy countries. As a fully integrated oil company it is involved in every aspect of the oil industry - exploration, production, transportation, refining, marketing, petroleum chemicals and research (BP, 1977).

The BP group's history in South Africa reaches back to the early 1920s. BP Southern Africa (BPSA) has its head office in Cape Town and it is the third largest oil company operating in South Africa. BP Oil South Africa (Pty) Ltd is a wholly owned subsidiary of BP Amaco and plays a major role in the activities of BP Oil Africa. The chief executive of BP Southern Africa is Mr Fred Phaswana. BP is a founder member of South African Petroleum Industry Association (SAPIA, 2005).

BPSA employs some 1,300 people in South Africa, excluding those employed by Sapref, the refinery and the blending plant. Employees come from a wide variety of racial and cultural backgrounds, incorporating over 10 distinct home languages (BP, 1977:535).

ENGEN PETROLEUM LIMITED

History

Engen Limited, incorporated in the Republic of South Africa, is a holding company with investments in oil and related industries. The company is listed on the Johannesburg Stock Exchange (JSE) and the Namibian Stock Exchange (NSE). On the Johannesburg Stock Exchange, the company was listed as Trek Beleggings Beperk in 1968, allowing investors to participate and owning shares in an oil company.

In June 1996, Malaysian National Oil Company, Petronas, made the largest foreign investment in South Africa this decade when it acquired a 30% stake in Engen. In August 1998, Petronas made an offer to purchase the remaining 70% of Engen shares. The company de-listed in December 1998 when it became a wholly owned subsidiary of Petroliam Nasional Berhad (Petronas).

Engen Limited listed its upstream business on the Johannesburg Stock Exchange during March 1996, and holds a 57.5% interest in its oil and gas exploration and production subsidiary, Energy African Limited. Engen is a wholly owned subsidiary of Petronas Limited and is the operating company in South Africa. Engen is the major shareholder in Energy Africa, which is active in West Africa and is listed on the Johannesburg and Luxemburg Stock Exchanges.

Subsequent to the de-listing, and in support of Engen Black Economic Empowerment goals, Petronas sold 20% of its shareholding to Worldwide Africa Investment Holdings (Pty) Ltd in 1999.

Petronas has established independent offices in Cape Town and Johannesburg to pursue regional opportunities which could well include participation in the privatisation of state oil assets mooted by the minister. Petronas is well placed to facilitate the creation of a major

listed South African oil company from the assets of Engen, the state and Zenex as part of a deal involving both black empowerment and privatisation (http://www.engen.co.za/content/about/default2.htm).

SHELL SOUTH AFRICA (PTY) LTD

History

Shell South Africa celebrated its 100th anniversary in 2002. Historical highlights of the company are as follows (Shell catalog - 100 years celebration):

- 1892 Marcus Samuels Junior, and his younger brother Sam, choose "Shell" as the brand name for their kerosene in honour of their father's most popular imported merchandise, oriental seashells. So successful was the kerosene, particularly in the Far East, that in 1897 the Shell Transport and Trading Company was established in the US. Shell, under an agreement, started marketing their products in South Africa in 1902, marking the start of 100 years of prosperity and progress in Southern Africa.
- 1900 The first trademark for Shell was registered on 10th October 1900. It is today unrecognizable as being a Shell symbol; originally, it was not a Pecten or scallop at all, but a mussel shell.
- 1904 The pectin was introduced. Like Shell and its products, it was developed, refined and improved over time to become arguably the most recognised corporate symbol in history. Formerly dominated by kerosene, the industry started shifting in 1907 to a more advanced product, petrol, known as "Motor Spirit".
- 1926 The Shell Company of South Africa was registered in the United Kingdom.
- 1929 The first Shell House was completed-Greenmarket Square in Cape Town.
- 1950 The very first Formula 1 World Championship was won by Guiseppe Farina, driving an Alfa Romeo, fuelled by Shell. Thus Shell started a tradition of excellence in Formula 1 racing.
- 1951 The Retail rationalisation Plan regulating one-branded service stations was created and the Shell retail network was born. Shell Chemicals commenced operations in South Africa.

- 1963 The biggest refinery in Africa came on stream in Durban, removing any future need to import Shell Oil products. At the time, the largest bulk vessel in the Shell Tanker fleet, the STS Philippia, paid a rare visit to Cape Town.
- 1987 The first Ultra City in South Africa opened its doors in Escourt, revolutionizing long distance road travel.
- 1988 The Shell D-Card was launched, the first Diesel card in Southern Africa.
- 1993 The first Shell Select Store in South Africa opened its doors at the Midrand Ultra City. The world's largest re-imaging programme was started, overhauling 38,000 Shell service stations around the world with the new look.
- 1999 Thanks to the unmatched strength of the Shell brand, the word "Shell" was dropped from the logo, the Pecten on its own being instantly recognisable. Shell's global brand strategy was implemented in South Africa, introducing the "Waves of change" slogan.
- 2000 The first differentiated unleaded petrol, Shell V-Power, was launched. The successful partnership between Shell and Ferrari resulted in Michael Schumacher and Ferrari winning the 2000 and 2001 seasons of the Formula One Driver's and Constructers Championships.
- 2002 The 100 year celebration of existence in Southern Africa.

Shell has sold its coal assets in South Africa which included a 50% holding in the T=Randcoal managed Rietspruit colliery and a share of the Richards Bay Coal Terminal which provides it with an export capacity of 6 mt/year through the facility. Shell was evaluating the feasibility of the coal-bed-methane (CBM) potential of the Waterberg coal field (CBM is natural gas trapped in seams of coal). A large coal mine can contain as much methane as a third of the Mossgas reserve.

TOTAL SOUTH AFRICA (PTY) LTD

Total's historic overview (http://www.total.co.za/en.za/file/part1/chap2/sub):

- 1954, 11 December The company, TOTAL Oil Products (Pty) Ltd, was registered as a private company in Pretoria.
- 1954, 14 December Historic inaugural Board meeting held.
- 1955, December Lourenco Marques terminal and first Isando terminal completed; first seven service stations in Johannesburg, three in Pretoria, and one each in Roodepoort and Benoni.
- 1956, March First gallon of TOTAL petrol, from a TOTAL service station, sold.
- 1960, February New Cape Town ocean terminal completed; and a month later the Cape branch office opened.
- 1962 The first service stations to be operated by black service station owners were built by TOTAL at Kulungisa in the Northern Transvaal and at Umlazi in Natal.
- 1964
 - i) Introduction of new oil TOTAL Altigrade.
 - Formation of the Study Team in Head Office, with the task to undertake a comprehensive study of information systems for the purpose of improving the overall efficiency of the company. Mr. C.I Smuts was appointed as the Study manager.
- 1965
 - i) Launch of a very successful advertising campaign, with the theme "Discover your country".
 - ii) Opening of own blending plant at the Durban terminal.

- 1967
 - In terms of an agreement with the government, TOTAL took part in the construction of the first national crude oil refinery at Sasolburg. A new subsidiary was formed for that purpose, with TOTAL Refining South Africa (Pty) Ltd. (TORSA) as a participant in the refinery.
 - ii) In corforming with the group's policy, the company changed the name to TOTAL South Africa (Pty) Ltd.
 - iii) Contract for supply of fuel was awarded to TOTAL for the Orange River Development Project.
 - iv) A concession was granted to the exploration consortium consisting of TOTAL/Shell/BP/Mobil for off-shore oil exploration. TOTAL was represented in the consortium by a newly formed subsidiary, TOTAL Exploration South Africa (Pty) Ltd. (TESA).
 - v) At the year-end, an announcement was made to the effect that this was the first year the company had made a profit.
- 1969 Volkskas Limited obtained an interest of 14,3% in TOTAL South Africa, with the right to increase its participation.
- 1970 TOTAL commenced the marketing of liquefied petroleum gas (LPG)
- 1971 The Natref refinery in which TOTAL has a share interest came on stream.
- 1972
 - TOTAL, in conjunction with Mobil and Caltex, opened a lubricating oil refinery in Durban to manufacture base oils. The company operating the refinery was known as S.A Oil Refinering (Pty) Ltd. (SAFOR).
 - ii) Union Corporation and U.C. Investments obtained an interest of 11,11% in TOTAL, whilst Volkskas increased its shareholding to 18,06%.
- 1973
 - the Old Mutual secured a 5% interest in TOTAL South Africa, bringing South African shareholding in TOTAL to 34,17%.
 - ii) Launch of GTS oil.

- 1976
 - TOTAL's Head Office moved into the new building, Total House, in Braamfontein, Johannesburg.
 - ii) The first petroleum company in the country to introduce electronic pumps on its driveways, at Travelrite Motors.
- 1980 The Rembrandt Group became a shareholder in TOTAL South Africa.
- 1985 Total, The Paris Chamber of Commerce, the Urban Foundation, NAFCOC and the BMF established the Joint Management and Development Programme.
- 1994 Petroport Panorama opened a first for South Africa.
- 1999
 - i) Opening of Total's own grease plant
 - ii) Total relocated to new Rosebank office

In 1999, Total merged with Fina and Elf to form TotalFinaElf. TotalFina, France's largest oil and gas company, has pursued a successful strategy of profitable growth for many years, from the world's 13th largest oil and gas company in 1990 to the 5th largest after the successful merger with Petrofina. TOTAL's largest affiliate in Africa, that in South Africa, has an extensive marketing network as well as refining, lubricant base oil blending assets. Through the South African operation, the company is also active in neighbouring countries.

CALLIFORNIA TEXAS OIL COMPANY - CALTEX

History

Caltex has an historic link with South Africa with its predecessor Texaco starting operations in this country in 1911. The California Texas Oil Company (Caltex) was founded in 1936, a joint venture of the companies, Standard Oil of California (now Chevron) and Texas Oil Company (now Texaco Inc) deriving its name from both California and Texas. It is the oldest and most successful joint venture in the industry, drawing on the technology and expertise of each of its shareholders – two of the largest petroleum companies in the world.

With operations in more than 60 countries, primarily in Africa, the Asian / Pacific region and the Middle East, Caltex sells 1.5 million barrels of crude oil and petroleum products per day. The company has stakes in 13 fuel refineries, 2 lubricant refineries and 17 blending plants, 6 asphant plants, and more than 500 ocean terminals, and it markets products through 8000 retail outlets, including 425 Star Mart convenience stores. In 1999, Caltex moved its headquarters from Dallas, Taxas, to Singapore to be close to its core markets. The move coincided with a change of name from Caltex Petroleum to Caltex Corporation to acknowledge the importance of non-petroleum operations, particularly Star Marts (<u>http://www.caltex.com</u>).

SASOL LIMITED

History

In 1947, 20 years after the publication of a White Paper by Parliament, legislation detailing the establishment of an oil-from-coal industry in South Africa was passed. Sasol Limited (originally known as the South African Coal, Oil and Gas Corporation Limited) was formed in 1950 by the South African government to manufacture fuels and chemicals from indigenous raw material. It was established as a profit driven company and was funded through the Industrial Development Corporation (IDC).

The original synthetic fuel plant at Sasolburg, about 80 kilometres south of Johannesburg, was based on a combination of technologies – the German fixed-bed Fischer-Tropsch, the American fluidised-bed Kellogg and the German Lurgi coal gasification technologies – for the synthetic production of petrol, diesel, other liquid fuels and chemical feedstock from coal.

Construction work at Sasolburg commenced in 1952 with 600 site workers. In 1953, the first Sigma Colliery shaft was completed at Sasolburg and, a year later, the first coal was produced. During 1954 and most of 1955, the original Sasol One production units were commissioned. As the world's only commercial oil-from-coal project, Sasol supplied its first petrol and diesel to motorists at Sasolburg in November 1955.

In 1964, Sasol began to distribute pipeline gas to industries in the greater Johannesburg area. National Petroleum Refineries of South Africa (Pty) Limited (Natref) was incorporated in December 1967 when engineering of the Sasol-Total South Africa (Pty) limited joint venture oil refinery started at Sasolburg. The refinery was commissioned in February 1971. In response to the international oil crisis of the mid-1970s, Sasol commenced the development of its most ambitious project, the construction of Sasol Two, the Secunda Colliers and the town of Secunda in 1976. In March 1980, Sasol Two produced its first synthetic oil.

During the final construction phases of Sasol Two in 1979, work commenced on the construction of the third synfuels and chemical plant, Sasol Three, alongside Sasol Two. This fast-track project was completed in 1982. The virtually identical operations of Sasol Two and Sasol Three were merged in 1993 to form the operations of Sasol Synthetic Fuels (Pty) Limited (SSF). Chemicals today account for almost 38% of Sasol's turnover.

Sasol's world-class technological culture provided the impetus to accelerate the drive into the downstream production of higher-value chemicals, among them nitrogenous fertilisers and commercial explosives, solvents, phenolics, waxes and alpha olefins. Endowed with ammonia as a co-product of primary coal gasification, the group entered the fertiliser market in 1983 with the launch of Sasol Fertilizers (now falling under Sasol Agri), which initially marketed ammonium sulphate and liquid ammonium nitrate, and NPK fertilisers. In 1984 Sasol signed a technology licensing agreement with Nitro Nobel of Europe and entered the commercial explosives market with the formation of Sasol SMX.

Between 1990 and 1993, Sasol One underwent a R820 million renovation. The name was changed to the Operations Division of Sasol Chemical Industries Limited (SCI) and the production of synfuels was discontinued for the increased production of higher-value chemicals, including solvents, phenolics and waxes. In partnership with the Industrial Development Corporation, Sasol commissioned the Sasol Fibres acrylic fibres plant in Durban in mid-1994. In June 1994, the unique alpha olefins plant at Secunda was commissioned to produce 1-hexene and 1-pentene for the international copolymers market.

Sasol Petroleum International (SPI) was founded in 1995 to undertake oil and gas exploration and production in selected high potential areas in West and Southern Africa with experienced international and national oil and gas companies. SPI is active in the People's Republic of the Congo, Gabon, South Africa and, mostly notably, Mozambique, where extensive gas exploration has occurred with the view to bringing natural gas to Sasol's plants and the South African market.

The Schumann Sasol International wax manufacturing and marketing venture was finalised in 1995 as result of a merger of Sasol Waxes and the Schumann operations of Vara Holdings of Hamburg, Germany. The company is the world's largest producer of paraffin and Fischer-Tropsch waxes and has operations throughout the world (Sasol Facts, 2000).

ANNEXURE F

SHAREHOLDING

ANNEXURE G

PETROLEUM / OIL CHARTER

Charter for the South African Petroleum and Liquid Fuels Industry on Empowering Historically Disadvantaged South Africans in the Petroleum and Liquid Fuels Industry

Preamble

Mindful of:

- a) the imperatives of redressing historical, social and economic inequalities as stated by the Constitution of the Republic of South Africa, inter alia Section 9 on Equality (and unfair discrimination) in the Bill of Rights, and section 217.2 on procurement where the "organs of state" may implement a "procurement policy providing for categories of preference in all allocation of contracts and the protection or advancement of persons, or categories of persons, disadvantaged by unfair discrimination";
- b) the policy objective stated in the Energy Policy White Paper to achieve "sustainable presence, ownership or control by historically disadvantaged South Africans of a quarter of all facets of the liquid fuels industry, or plans to achieve this";
- c) the Black Economic Empowerment Commission's definition of empowerment as "an integrated strategy aimed at substantially increasing black participation at all levels of the population";

And noting:

- i) the enactment of the Preferential Procurement Framework Act (No 5 of 2000)
- ii) the Employment Equity Act (No 55 of 1998)
- iii) the Competition Act (No 89 of 1998) (Also ref. To the Amendment Act No 35 of 1999 and subsequent amendments)
- iv) the Skills Development Act (No 97 of 1998)

the signatories have developed this Charter to provide a framework for progressing the empowerment of historical disadvantaged South Africans in the liquid fuels industry.

Scope of Application

This Charter applies to the privately owned parts of the industry and to all parts of the value chain, inter alia:

- a) exploration and production of oil
- b) liquid fuels pipelines, single buoy moorings (SBMs), depots and storage tanks
- c) oil refining and synthetic fuel manufacturing plants, including lubricants
- d) transport, including road haulage and coastal shipping
- e) trading, including import and export
- f) wholesale and retail assets/infrastructure

Interpretation

For the purposes of interpreting the White Paper on Energy Policy, the following terms apply:

- i) The term *historically disadvantaged South Africans (HDSA)* refer to all persons and groups who have been discriminated against on the basis of race, gender and/or disability.
- *ii) HDSA companies* are those companies that are owned or controlled by historically disadvantaged South Africans which operate on a basis to meet all aspects of this Charter. These companies, which operate within and supply the industry, submit affidavits to Government reconfirming their ownership status in December each year. Government publishes this list annually.
- *iii) Ownership* refers to equity participation and the ability to exercise rights and obligations that accrue under such ownership.
- iv) Control of a business entity can be achieved in a number of ways: (a) a majority shareholding position i.e. 50% + 1 share; (b) an effective

controlling shareholding; (c) a majority of a board of directors; and/or (d) a shareholders agreement.

- v) Sustainability refers to:
 - a) medium to long-term viability and adaptability through a presence across all facets of the liquid fuels value chain;
 - b) ventures with prospects of long-term profitability; and
 - c) requisite levels of skills and access to technology.
- vi) A quarter of all facets of the liquid fuels industry, or plans to achieve this The 25% ownership and control of all facets of the industry that the parties to this Charter are seeking to bring about over a ten-year period means HDSAs owning in total, by the end of that period, not less than 25% of the aggregate value of the equity of the various entities that hold the operating assets of the South African oil industry. The parties to the Charter agree that the measurement of the extent of the achievement of this target of 25% of the aggregate value of the entities concerned.

Supportive Culture

The success of this programme depends on the disposition of those who have responsibility for managing the process.

Member companies and Government therefore undertake to appoint to such positions managers who will understand the spirit and background under which these policies were conceived in order to create a supportive and enabling environment for business success. It is noted that the process that gave rise to this Charter has increased the understanding and cooperation between established industry players and HDSA companies.

Companies undertake to foster a supportive culture with regard to all aspects of this Charter when dealing with HDSAs. Companies subscribe to incorporating and driving a process of transformation and a change of culture in their statements of business principles.

Capacity Building

The South African labour market does not produce enough skills required by the petroleum industry, especially the HDSA oil companies. Organized industry and government work together in addressing this skills gap:

- a) In its bilateral relations with relevant countries, Government endeavours to secure training opportunities for HDSA companies' staff, as well as exchange opportunities with oil companies outside of South Africa.
- b) Industry undertakes to build the skills of its employees and report on progress annually in an agreed format.
- c) The industry, through the standing consultative arrangements, interfaces with statutory bodies such as SETA (Sectoral Education and Training Authority) in the development of skills developments strategies.

Employment Equity

Companies publish their employment equity targets and achievements and subscribe to the following:

- a) South African subsidiaries of multinational companies and South African companies focus their overseas placement and/or training programmes on historically disadvantaged South Africans;
- b) Identifying a talent pool and fast-tracking it;
- c) Ensuring inclusiveness of gender;
- d) Implementing mentorship programmes; and
- e) Setting and publishing "stretch" (i.e. demanding) targets and their achievement.

It is noted that the Capacity Building efforts referred to above will assist in this process.

Private Sector Procurement

Participants in the industry subscribe to and adopt supportive procurement policies to facilitate and leverage the growth of HDSA companies. Such policies include criteria that favour HDSA companies, all else being equal.

- a) Scope: the scope of procurement shall include supplies (e.g. crude), products and all other goods and services.
- b) List of suppliers: it is envisaged that information on all HDSA companies wishing to participate in the industry will be collected and published. All participants in the industry will assist in compiling such a list that will inter alia be published by Government on the Internet and updated regularly.
- c) All participants shall continue to deploy every effort to ensure that vessels used in the transportation of suppliers or products shall meet all prescribed health, safety and environmental standards.

Public Sector Procurement

Government will engage with State Tender authorities to draw their attention to the White Paper milestones with respect to economic empowerment of historically disadvantaged South Africans, with the aim of giving effect to supportive procurement policies within this sector.

Access and ownership of Joint Facilities

Access to large infrastructure for the movement and storage of crude oil and petroleum products, such as SBMs, pipelines and depots and storage tanks, is acknowledged as critical weakness in the supply chain of emerging companies. In this regard owners of such facilities provide third parties with non-discriminatory access to uncommitted capacity. HDSA companies are to be given fair opportunity to acquire ownership in such facilities.

Refining Capacity

Access to refining capacity also represents a key weakness in HDSA companies' supply chain. Oil refiners and synthetic fuel manufacturers seriously consider:

- a) selling shares in their facilities to HDSA companies;
- b) making capacity available to HDSA companies (e.g. Through toll refining agreements); and
- c) including HDSA companies as joint venture partners in any expansions or upgrades.

Retailing/Wholesaling

The parties agree to create fair opportunity for entry to the retail network and commercial sectors by HDSA companies.

State Assets

Government undertakes to deal with State assets in a manner that promotes the objectives of the White Paper on Energy Policy and this Charter.

Upstream

The activities of oil and gas exploration and production are acknowledged as a high-risk activity that provides limited opportunities for new entrants. Government continues to make licences subject to the following conditions:

 All licences for exploration and production in the country's offshore area reserve not less than 9% for buy-in. All licensees contribute funds toward the "Upstream Training Trust" to fund skills development at various levels. As discoveries are made, further skills development strategies are devised to empower historically disadvantaged South Africans in this sector.

Financing

Finance is a serious constraint for HDSA companies.

- a) Government assists industry in explaining the milestones in the White Paper on Energy Policy as well as explaining the needs and characteristics of the industry to financing institutions, both private and public.
- b) Companies investigate and implement internal and external financing mechanisms for giving HDSA companies' access to equity ownership within the South African context.
- c) Companies to consider engaging HDSA companies in viable strategic partnership.

Terms of Credit to HDSA Companies

Industry participants acknowledge that terms of credit are important to HDSA companies and agree to take this into account in bilateral activities.

Regulatory Framework and Industry Agreements

Government's regulatory framework and industry agreements strive to facilitate the objectives of this Charter.

Synfuels Supply

Parties to the Synfuels Supply agreements will strive to accommodate HDSA companies, which lack the facilities to comply fully with such agreements in the fairest way possible.

Consultation, Monitoring, Evaluation and Reporting

It is recognized that the achievement of the objectives set out herein entails an ongoing process. The Department of Minerals and Energy (DME) conducts an annual survey of the industry to evaluate progress in achieving the objectives of the White Paper. Companies submit such data as is required at the end of each year, including employment equity data, procurement targets, etc. The aggregated information is published and forms the basis of the annual forum.

Oil companies have taken major initiatives in this regard and have participated in a first survey earlier this year (2000).

Parties hereto participate in an annual forum for the following purposes:

- i) Monitoring progress in the implementation of plans;
- ii) Developing new strategies as needs are identified;
- iii) Ongoing government/industry interaction in respect of these objectives;
- iv) Developing strategies for intervention where hurdles are encountered;
- v) Exchanging experiences, problems and creative solutions;
- vi) Arriving at joint decisions;
- vii) Giving notice of withdrawal.
- viii) Reviewing this Charter if required; and

Source: Petroleum Charter (2000:14-18)

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For the South African Petroleum and Liquid Fuels Industry on Empowering Historically Disadvantaged South Africans in the Petroleum and Liquid Fuels Industry

Signed November 2000 ACJ. DME Charing Culley al ceo show (30) by Lee. Designation SECCETARY - GENELRI ATTEF Designation CEO-EXEL adoše Designation TEPCO Ce0 -Designation LEO - ENGEN . Designation OF (39 4.29G Designation and citymo amen TOTAL SOUTH AGETCA PAY LTD Designation CEO. AFRICEN Worldanit Execution Manager 6 battle Mangip Direter Cables KED ATAP General Whanger Social Desire CLOCEMEN AMER Direcon Singuna Designation CER (Pez) Mont shuh fightion -

ACTS OF PARLIAMENT

The legislation affects the oil industry in terms of the following reasons among others:

- a) Regulating the petrol price
- b) Prohibiting the selling of petrol on credit
- c) Prohibiting promotions that force motorists to buy petrol to qualify for prizes
- d) Prohibiting naming of competitors and their products on advertisements

The section below highlights the main Act which affects or influences the operation of the industry, their objectives and application:

i) Customs and Excise Act, No. 91 of 1964

- (a) The application form and any other form required for the purpose of any customs procedure;
- (b) The documents to be furnished in support of the application form or to be submitted, completed and kept in respect of any activity relating to the operation of the degrouping depot;
- (c) Activity allowed in a degrouping depot;
- (d) Any procedure or obligation or standards of conduct to be observed in the operation of the degrouping depot;
- (e) Any condition and procedure relating to liability for duty;
- (f) All matters that are required or permitted in terms of this section to be prescribed by rule;
- (g) Any other matter which is necessary to prescribe and useful to achieve the efficient administration of the air cargo and a degrouping depot as contemplated in this section; and

ii) National Supplies Procurement Act, No. 89 of 1974

To amend the provisions of the National Supplies Procurement Act, 1970, relating to definitions; so as to further regulate the appointment by the Minister of controllers, officials and inspectors, the constitution by him of bodies, and the powers, duties and functions of such persons; and so as to provide for the granting of exemptions; for the disposal of certain moneys; and for incidental matters.

iii) Petroleum Product Act, No. 120 of 1977

To provide for the establishment of the National Small Business Council and the Ntsika Enterprise Promotion Agency; and to provide guidelines for organs of state in order to promote small business in the Republic; and to provide for matters incidental thereto. Chapter 2 deals with the establishment of the National Small Business Council. The National Small Business Council is hereby established as juristic persons.

Section 3 (1) The functions of the Council are to:

- (a) Represent and promote the interests of small business, with emphasis on those entities contemplated in the National Small Business Support Strategy; and
- (b) Advise the national, provincial and local spheres of government on social and economic policy that promotes the development of small business
- (2) The Council may exercise such powers and must perform such duties as are reasonably necessary for or incidental to the performance of the functions mentioned in subsection (1).
- (3) The Council must perform its function in accordance with this Act and its constitution.
iv) Transport Deregulation Act, No. 80 of 1988

To repeal the Transport (Co-ordination) Act, 1948; and to provide for the continued existence of, and the continuation of certain functions by, the National Transport Commission; for the transfer of certain powers, functions and duties of the National Transport Commission to the South African Roads Board and for the vesting of certain property of that commission in that board; for the deregulation of road transportation; for the entering into agreements with the governments of certain countries or territories in connection with road transportation; and for matters connected therewith.

v) Harmful Business Practices Amendment Act, No. 43 of 1990

To amend the Harmful Business Practice Act, 1988, with regard to the particulars which shall be contained in the notice which shall be published in the *Gazette* of any investigation which the Business Practice Committee proposes to make into a certain business practice or the price of any commodity; and to amend section 10 and 12; and to provide for incidental matters.

vi) Sale and Service Matters Amendment Act, No. 80 of 1995

To amend the Sale and Service Matters Act, 1964, so as to make provision for the assignment of certain functions and powers to a competent authority within the jurisdiction of the government of a province; and to provide for matters connected therewith.

- (a) Promote the sale of goods or encourage the use thereof or draw attention to the nature, properties, advantages or uses of goods or to the manner in, conditions on or prices at which goods may be purchased or otherwise required; or
- (b) Promote or encourage the use of any service or draw attention to the nature, properties, advantage or uses of any service or the manner in, conditions on or prices at which any service is rendered.

vii) Board on Tariffs and Trade Amendments Act, No. 16 of 1997

To amend the Board on Tariffs and Trade Act, 1986, so as to substitute the definition of "disruptive competition"; and to extend the power of the Minister to make regulations; to amend the Customs and Excise Act, 1964, so as to make provision for the institution of provisional safeguard measures; and to provide for matters connected therewith.

Section 1 of the Board on Tariffs and Trade Act, 1986 (herewith referred to as the principal Act) is hereby amended by the substitution for the definition of "disruptive competition" of the following definition:

"disruptive competition' means the export of goods to the Republic or the common customs area of the Southern African Union in such increased quantities, absolute or relative to domestic production in the Republic or the common customs area of the Southern African Union, and under conditions as to cause or threaten to cause serious injury to the domestic industry in the Republic or the common customs area of the Southern African Custom Union which produces like or directly competitive products".

viii) Competition Second Amendment Act, No. 39 of 2000

To amend the Competition Act, 1998, so as to define certain expressions, to amend certain definitions and to delete a definition; to further regulate the prohibition of restrictive horizontal practices; to allow for more frequent determination of the thresholds for the application of the said Act; to further regulate certain exemptions of the Competition Tribunal; to provide expressly that the Commissioner is the accounting authority of the Competition Commission for the purposes of the Public Finance Management Act, 1999; to further regulate investigation and adjudication procedures and enforcement of decisions, judgements and orders of the Competition Commission, Competition Tribunal and Competition Appeal Court; to regulate the relationship between the Competition Commission and other agencies and to provide for concurrent jurisdiction; and to effect certain consequential amendments; and to provide for matters connected therewith.

ix) Trade Practices Amendment Act, No. 26 of 2001

To provide for the control of certain advertisements; to restrict the giving or supply of benefits and to regulate the use of trade coupons in connection with the sale or leasing of goods or the rendering or provision of certain services, to prohibit or control certain trade practices; to repeal the Trade Coupons Act, 1935; and to provide for incidential matters.

x) Mineral and Petroleum Resource Development Act, No 28 of 2002

To make provision for equitable access to and sustainable development of the nation's mineral and petroleum resources; and to provide for matters connected therewith. The objectives of this Act are to:

- (a) Recognise the internationally accepted right of the State to exercise sovereignty over all the mineral and petroleum resources within the Republic;
- (b) Give effect to the principle of the State's custodianship of the nation's mineral and petroleum resources;
- (c) Promote equitable access to the nation's mineral and petroleum resources to all people of South Africa;
- (d) Substantially and meaningfully expand opportunities for historically disadvantages persons, including women, to enter the mineral and petroleum industries and to benefit from the exploitation of the nation's mineral and petroleum resources;
- (e) Promote economic growth and mineral and petroleum resources development in the Republic;
- (f) Promote employment and advance the social and economic welfare of all South Africans;
- (g) Provide for security of tenure in respect of prospecting, exploration, mining and production operations;

- (h) Give effect to section 24 of the Constitution by ensuring that the nation's mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development; and
- (i) Ensure that holders of mining and production rights contribute towards the socio-economic development of the areas in which they are operating

xi) Petroleum Product Amendment Act, No 2 of 2005

To amend the Petroleum Products Act so as to affect certain technical amendments; to delete a condition regarding the purchase and sale of certain petroleum products; to adjust the provision dealing with the system for the allocation of certain licences; to extend the power of the Minister of Minerals and Energy to make regulations; and to provide for matters connected therewith.

- Section 1: " 'wholesale' means the purchase and sale in bulk of petroleum products by a licensed wholesaler to or from another licensed wholesaler, or to or from a licensed manufacturer, or sale to a licensed retailer or to an end-consumer for own consumption and 'wholesaler' shall be interpreted accordingly".
- Section 2E:
 - (a) by the substitution for subsection (1) of the following subsection:

"(1) The Minster must prescribe a system for the allocation of site and their corresponding retail licences [and the supply of prescribed petroleum products to such licensees,] by which the Controller of Petroleum Products shall be bound: Provided that the Controller of Petroleum Products shall only be bound by the provisions of such a system for the period set out in that regulation or any amendment thereto or any substitution thereof which period may not exceed 10 years from the date of commencement of that regulation."; (b) by the substitution in subsection (3) for paragraph (d) of the following paragraph:

"(d) must promote efficient investment in the retail sector and the productive use of retail facilities and may in this regard –

(i) [by limiting] limit the total number of site and corresponding retail licences in any period;

(ii) [by linking] link the total number of site and corresponding retail licences in any period, to the total mass or volume of prescribed petroleum products sold by licensed retailers; and

(iii) [by] use any other appropriate means".

xii) Minerals and Energy Laws Amendment Act, No 11 of 2005

To correct amendments made to the Deeds Registries Act, 1973, by the Mining Titles Registration Amendment Act, 2003, and the Mineral and Petroleum Resource Development Act, 2002, by substituting the Schedule to the Mining Titles Registration Amendment Act, 2003, and by repealing certain expressions in Schedule I to the Mineral and Petroleum Resources Development Act, 2002; and to provide for matters connected therewith.

xiii) Taxation Laws Second Amendments Act, No. 10 of 2005

To amend the Transfer Duty Act, 1949, so as to adjust the rates of duty; and to further regulate the exemptions from duty; to amend the Income Tax Act, 1962, so as to further regulate the rate of interest; to provide for the delegation of certain functions of the Commissioner to the executive officer of the Financial Service Board; to fix the rates of normal tax payable by persons other than companies in and by companies in respect of taxable income for the years of assessment ending 28 February 2005 and by companies in respect of taxable income for the years of assessment ending during the 12 months ending on 31 March 2005; to increase the primary and secondary rebates; to amend the provisions

relating to foreign dividends so as to effect certain consequential amendments; to further regulate the exemption in respect of interest and foreign dividends; to further regulate the losses incurred on alienation, loss or destruction of certain depreciable assets; to regulate the depreciation of assets used for production of bio-diesel or bio-ethanol.

xiv) National Credit Act, No. 34 of 2005

To promote a fair and non-discriminatory marketplace for access to consumer credit and for that purpose to provide for the general regulation of consumer credit and improved standards of consumer information; to promote black economic empowerment and ownership within the consumer credit industry; to prohibit certain unfair credit and creditmarketing practices; to promote responsible credit granting and use and for that purpose to prohibit reckless credit granting; to provide for debt re-organisation in cases of overindebtedness; to regulate credit information; to provide for registration of credit bureaux, credit providers and debt counselling services; to establish national norms and standards relating to consumer credit; to promote a consistent enforcement framework relating to consumer credit; to establish the National Credit Regulator and the National Consumer Tribunal; to repeal the Usury Act, 1968, and the Credit Agreements Act, 1980; and to provide for related incidental matters.

The purposes of this Act are to promote and advance the social and economic welfare of South Africans, promote a fair, transparent, competitive, sustainable, responsible, efficient, effective and accessible credit market and industry, and to protect consumers, by-

> (a) promoting the development of a credit market that is accessible to all South Africans, and in particular to those who have historically been unable to access credit under sustainable market conditions;

> (b) ensuring consistent treatment of different credit products and different credit providers;

(c) promoting responsibility in the credit market by-

(i) encouraging responsible borrowing, avoidance of overindebtedness and fulfilment of financial obligations by consumers; and

(ii) discouraging reckless credit granting by credit providers and contractual default by consumers;

(d) promoting equity in the credit market by balancing the respective rights and responsibilities of credit providers and consumers;

(e) addressing and correcting imbalances in negotiating power between consumers and credit providers by-

(i) providing consumers with education about credit and consumer rights;

(ii) providing consumers with adequate disclosure of standardised information in order to make informed choices; and

(iii) providing consumers with protection from deception, and from unfair or fraudulent conduct by credit providers and credit bureaux;

(f) improving consumer credit information and reporting and regulation of credit bureau;

(g) addressing and preventing over-indebtedness of consumers, and providing mechanisms for resolving over-indebtedness based on the principle of satisfaction by the consumer of all responsible financial obligations;

(h) providing for a consistent and accessible system of consensual resolution of disputes arising from credit agreements; and (i) providing for a consistent and harmonised system of debt restructuring, enforcement and judgment, which places priority on the eventual satisfaction of all responsible consumer obligations under credit agreements.

ANNEXURE H

U.R.O.T.A STANDARD

These Standards were laid down in Government Gazette Notice Number 787 Published in Government Gazette Extraordinary No. 4358, Dated 6th April 1950.

- 1. Any person engaged in the trade or occupation of selling petrol for resale shall, in conjunction with any petrol that he sells, provide, install and maintain in accordance with the custom of the trade, for the use of the person to whom such petrol is sold, pumps, tanks and other contrivances and accessories ordinarily supplied to resellers for use in distribution or resale of petrol, on the terms on which they are ordinarily so supplied.
- 2. No person who is engaged in the trade or occupation aforesaid shall, except when it is otherwise directed by me, be bound to supply petrol for resale to any other person, unless :
 - a) that other person maintains, at the premises where such petrol is to be resold, the facilities laid down in Paragraph (3) for repairs and other services to motor vehicles, under the supervision of a qualified motor mechanic, in a building of brick or concrete with a concrete floor and a floor space including any floor required for office accommodation, of not less than 1 000 square feet; and
 - b) a suitable approach to and exit from the pumps is provided with due regard to the traffic conditions in the vicinity and the safety and convenience of the public, or if the pumps are to be installed inside a building, they must be accessible to the public.

- 3. The facilities specified in Paragraph 2 shall be available at all reasonable times during the day, and shall include the following equipment.
 - a) Oil and Grease Equipment mechanically or hand operated with hoist, ramp or pit.
 - b) Air Compressor Unit or manually operated pump.
 - c) Adequate water supply.
 - d) Puncture repair equipment, including garage jack, tyre lever and wheel spanners.
 - e) Tyre pressure gauge.
 - f) The usual mechanic's hand tools, if not supplied by mechanic himself.
 - g) Equipment for attention to engines, consisting of reface, a set of seat cutters, micrometer and piston ring compressor.
 - h) Battery and electrical equipment, consisting of battery charger, testing equipment, battery filler and battery lifter.
 - i) Soldering equipment.
 - j) Miscellaneous workshop equipment, including work bench, creeper, vice, universal wheel puller, oil seal remover, bench grinder, a set of stocks, and dies, reamer set, trestles or suitable blocks, voltmeter and ammeter.
 - k) Welding outft.
 - l) Fire extinguisher.

It is desirable that the building be in accordance with the locality in which it is situated and that establishments keep an adequate range of spare parts.

4. A person engaged in the trade or occupation of selling petrol for resale shall not be bound to supply any person with further petrol for resale if that person sells petrol so supplied to him at any price other than the cost to him delivered at the place of resale plus the ruling current gross margin allowed by the custom of the trade.

ANNEXURE I

Refining & Marketing: Engen

Engen has bought a R100 million bulk oil terminal in Dar es Salaam, Tanzania, with the pre-emptive right to take over two service station networks and several inland depots. The tank farm was bought from Bulk Oil, a local trader who, in turn, had bought the service station networks and distribution facilities from Esso and Caltex when they disinvested between 1993 and 1995. Additional funding will be required from Engen to purchase and upgrade the pre-empted facilities and to convert them to Engen. It is difficult to see how Engen can derive a real return from this investment, specially since the company does not have experienced staff to run the operation, and there will be no competitive supply advantage since the Engen refinery output is required for the Southern African market. Petronas might be able to supply product from the Aden refinery.

Engen has taken delivery of the first of two product tankers. Coming at a time when South African liquid fuel demand is soaking up all the capacity of the country's refineries, there must be some question marks over whether the usage of these vessels will justify the investments.

Engen has entered the Zimbabwean downstream oil business in a joint venture with subsidiary Ximex Holdings. The company is also active in Zimbabwe and the Shaba Province of the Democratic Republic of Congo (formerly Zaire) (<u>http://www.engen.co.za</u>).

Refining & Marketing: Total

The company manufactures and sells the full range of petroleum products, including lubricants and greases, kerosene, jet fuel and liquid petroleum gas. A substantial proportion of TOTAL South Africa's product requirements are met by the Sasolburg located Natref refinery in which the company has a 36% share. The company also draws fuel products from the synthetic fuels plants operated by Sasol and Mossgas in line with the requirements of South African companies to draw synthetic products in proportion to their local market share. Coastal product demands would be supplemented by products from the Durban based Sapref and Enref refineries and the Cape Town based Calref refinery. Also produced are lubricating base oils from the Durban located South African Fuel Oil Refinery (Safor) in which TOTAL holds a 17% share. In addition, TOTAL blends finished lubricants at its 30,000 ton/annum lube blending plant in Durban.

Sasol and Total have settled out of court their dispute over the transfer of Sasol's ownership of Natref between subsidiary companies. The dispute arose because of Total's concerns that a merger between Sasol's oil interest and Engen would be detrimental to Total's market position in Southern Africa. The settlement allows for Total to increase its stake in Natref to 50% should Sasol enter the market.

ANNEXURE J

SERVICE STATION A

	COMBINED MOGAS			GASOIL		
	2005	2006	2007	2005	2006	2007
January	178,094	218,650	282,803	0	4,976	2,979
February	227,266	242,454	276,675	8,030	5,000	5,000
March	281,856	298,880	300,969	9,022	5,015	9,000
April	249,796	292,506	256,684	8,017	3,000	2,001
Мау	262,727	274,355	237,787	14,485	8,000	13,917
June	215,704	288,765	297,207	9,127	7,001	2,000
July	289,467	293,039	265,093	10,019	5,000	13,000
August	228,337	331,824	254,497	10,034	10,011	9,000
September	238,236	210,503	285,248	10,061	3,001	0
October	277,499	265,313	311,559	10,010	4,985	5,000
November	242,941	264,150	263,213	11,717	8,000	5,000
December	236,791	301,807	312,066	12,912	15,054	12,008
YTD Volume	2,928,714	3,282,246	3,343,801	113,434	79,043	78,905
Ave YTD	244,060	273,521	278,650	9,453	6,587	
Total Year	2,928,714	3,282,246	3,343,801	113,434	79,043	78,905
YTD Growth		11%	2%		43.51%	0.17%
Ave Full	244,060	273,521	278,650	9,453	6,587	0

SERVICE STATION B

	COMBINED MOGAS		GASOIL			
	2005	2006	2007	2005	2006	2007
January	93,977	85,115	67,455	0	9,405	5
February	139,595	102,955	59,000	4,000	5,000	7,429
March	141,558	76,754	102,791	12,300	0	9,702
April	77,278	99,199	39,747	1,605	6,000	0
Мау	151,076	91,733	91,930	0	7,860	9,969
June	113,500	58,613	79,998	8,001	0	0
July	145,751	93,558	74,995	9,000	5,000	10,001
August	116,003	87,498	88,661	4,003	10,219	5,000
September	117,918	85,001	60,003	0	5,020	0
October	106,288	72,924	89,379	9,000	2,000	9,001
November	115,624	114,919	69,826	4,014	4,000	0
December	119,000	174,708	94,481	5,001	14,000	5,000
YTD Volume	1,437,568	1,142,977	918,266	56,924	68,504	61,102
Ave YTD	119,797	95,248	76,522	4,744	5,709	5,092
Total Year	1,437,568	1,142,977	918,266	56,924	68,504	61,102
YTD Growth		25,77%	24,47%		-16.90%	12.11%
Ave full	119,797	95,248	76,522	4,744	5,709	5,092

	COMBINED MOGAS		GASOIL			
	2005	2006	2007	2005	2006	2007
January	194,094	193,610	199,171	25,008	26,700	23,000
February	149,654	193,231	164,905	30,120	33,522	30,000
March	194,803	211,442	190,729	40,050	41,211	35,110
April	195,897	229,404	193,817	32,110	35,900	32,600
Мау	199,010	197,131	186,797	41,128	35,000	33,096
June	204,975	213,000	224,587	33,576	35,000	45,267
July	149,952	191,132	238,950	29,010	38,120	40,569
August	200,038	237,900	195,594	40,148	40,000	33,327
September	199,128	259,580	214,693	38,702	43,800	45,200
October	178,282	182,672	203,031	30,000	34,000	34,991
November	200,275	231842	203,865	31,600	65,800	35,000
December	255,949	245,903	266,082	43,028	40,747	42,050
YTD Volume	2,322,057	2,586,847	2,482,221	414,480	449,800	430,210
Ave YTD	193,505	215,571	206,852	34,540	37,483	35,851
Total Year	2,322,057	2,586,847	2,482,221	441,480	449,800	430,210
YTD Growth		-10.24%	4.22%		-7.85%	4.55%
Ave Full	193,505	215,571	206,852	34,540	37,483	35,851

SERVICE STATION C

SERVICE STATION D

	COMBINE	COMBINED MOGAS		GASOIL		
	2005	2006	2007	2005	2006	2007
January	223,559	161,421	103,000	19,988	9,911	11,998
February	227,642	175,340	86,861	22,502	11,015	5,000
March	261,939	144,536	127,728	13,698	10,015	13,197
April	220,431	223,855	96,292	10,004	20,987	4,993
May	250,585	192,465	103,492	9,984	18,190	3,000
June	236,159	180,805	112,698	25,019	16,410	4,001
July	229,050	202,468	162,976	10,600	9,948	14,958
August	248,012	247,990	157,306	14,618	27,910	13,516
September	191,480	206,861	169,007	16,221	16,945	4,829
October	228,000	228,798	133,701	17,618	13,023	9,887
November	211,925	218,100	149,341	13,517	25,000	14,843
December	275,791	294,797	224,713	18,221	22,943	10,002
YTD Volume	2,804,573	2,477,436	1,627,115	191,990	202,297	110,224
Ave YTD	233,714	206,453	135,593	15,999	16,858	9,185
Total Year	2,804,573	2,477,436	1,627,115	191,990	202,297	110,224
YTD Growth		13.20%	52.26%		-5.09%	83.53%
Ave Full	233,714	206,453	135,593	15,999	16,858	9,185

ANNEXURE K

MEDIA STATEMENT BY THE

Deputy Minister of Minerals and Energy

South African Petroleum Industry Association (SAPIA)

African Minerals and Energy Forum (AMEF)

AMEF

ON THE IMPLIMENTATION OF A NEW BASIC FUEL PRICE DETERMINATION METHOLOGY

14th February 2003 at 12:30

A new Basic fuel price (BFP) determination methodology will be implemented fro the first Wednesday in April 2003. It will replace the In Bond Landed Cost (IBLC) which is the international price element in the petrol price that is reviewed once a month.

This new way of determining the petrol price brings lower pries. However it must always be borne in mind that in a global economy, local prices will reflect international oil prices. And since these prices are set in US dollars the Rand/US\$ exchange rate will always be a factor for us.

This change is methodology is necessary because there have been changes in global market. It has been determined by careful investigation. The Department of Minerals and Energy in the recent past commissioned detailed investigations whom into the continued applicability of the IBL basic price determination methodology. (It was introduced in the 1950's with the establishment of the first refinery in South Africa and last revised in 1995)

A key finding these investigation was that the use of posted (contract) prices rather than daily "spot" prices in the IBLC formula has, due to changes in international petroleum market, become outdated. They recommended that spot prices reported by an independent price agency be used. The Department of Minerals and Energy, South Africa Petroleum Industry Association (SAPIA) and the African Minerals and Energy Forum (AMEF) worked together on the technical; details of replacing the In-Bond–Landed–Cost (IBLC) pricing formula with a new one.

The new formula will be known as the Basic Fuel Price (BFP). The BFP is also an importparity pricing formula conceptually similar to the IBLC but it is based exclusively on the so-called "spot" or cash prices reported daily by international fuel price reporting agencies.

To make the BFP approximate a real world import parity price certain costs that were no previously taken into account in the IBLC formula are accommodated in the BFP and it is calculated on the following basis:

- The basic price of petrol will be based on 50 per cent Platt's (a price reporting agency) spot price assessment in the Mediterranean refining area and on 50 per cent Platt's spot price assessment in Singapore. (The IBLC formula was based on 80 per cent posted price at refineries in Singapore and Bahrain and 20 per cent spot price in Singapore);
- The basic Prices of diesel and illuminating paraffin will be based on 50 per cent Platt's spot price assessment in the Arab Gulf and 50 per cent of Platt's spot price assessment in the Mediterranean refining area. (The IBLC formula was based on 80 per cent posted prices at refineries in Singapore and Bahrain and 20 per cent spot prices of refineries in Singapore);
- Freight costs from refining centers to South African ports;
- Demurrage (loading and discharging waiting time for tankers at ports);

- Insurance and shipping costs
- The allowed value for ocean product loss
- Wharfage
- Coastal storage cover the cost of providing storage and handling facilities;
- Stock financing

A comparison between the IBLC and the BFP over historical period 1996 to September 2002 has shown that the BFP has on average been lower than the IBLC by the following amount :-

Petrol (93 leaded):	4 cent per litre
Diesel:	7 cent per litre
Illuminating paraffin:	10 cent per litre

However, this doe not mean that there will be a sudden reduction in April or that this will always be the case. International prices fluctuate daily and markets shifts. We don't know what the position will be by April 2003. But over the medium term we believe that the general level of pricing yielded by the BFP will be lower than that yielded b IBLC.

The Deputy Minister of Minerals and Energy, Ms Susan Shabangu said "I welcome the collaboration and cooperation my department has enjoyed from the oil Industry in revising this important component of the petrol price. South Africa motorist and the economy at large are going to enjoy the benefits of the change".

The Chairperson of SAPIA, Mr. Hannes Botha, said that the industry welcome the move to the BFP "The BFP is inherently more transparent as the archaic posting system has now been supersede by an excellent market proxy".

The Chairperson of the African Minerals and Energy Forum (AMEF). Mr. Maurice Radebe expressed his satisfaction that the process followed to reach agreement on the BFP was both transparent and inclusive. "We were consulted by the department. AMEF has always called holistic solution that takes into consideration the interest of all stakeholders, namely consumers, black empowerment companies and the fuel refining industry. This agreement has gone a long way to address everybody's concerns".

The Basic Fuel Price model is set in detailed working Rules for the calculations. They can be viewed on the Department's website at <u>www.dme.gov.za</u>

ISSUED BY THE DEPUTY MINISTER OF MINERALS AND ENERGY SAPIA AND AMEF IN CAPE TOWM

1. BASIC PRINCIPLES AND WORKING RLES OUTLINE

The implementation of the original Rules to administer the price of regulated fuel originated from recommendations of Liquid Fuels Industry Task Force (LFITF) and cabinet approval thereof on the 28th September 1994, and is now updated to comprehend changes to the import parity mechanisms for determination of the Basic Fuel Price.

Underlying principles for the basis of determination of the Basic Fuel Price are to represent the realistic, market –related costs of importing a substantial portion of South Africa's liquid fuel requirements, and it is therefore deemed that such supplies are sourced from overseas refining centers capable of meeting South Africa's requirements in terms of both products quality and sustained supply considerations. See Annexure A for a full explanation and guideline.

These working rules makes provisions for the prices of all grades of petrol, diesel and illuminating paraffin to be adjusted on the first Wednesday of each month , in line with the implemented principal objective (a) that amount of price change will at all times be determined and implemented in such manner that over or under recoveries incurred during the previous period caused by Basic Fuel Price('BFP') movement will be cleared during the following period and (b) that Cumulative Slate balances which have built up during preceding calendar months managed maintain such balances within reasonable limits.

The amount of the basic monthly price adjustment determined by these Working Rules are Confined to the following:

- Calculation of average unit over /under recoveries for the period 26th of previous month to the 25th of the month preceding the price adjustment, determined on the basic details below and resultant indicated price change requirement expressed to 3 decimals of cent and rounded in terms of paragrph3
- In addition to these unit over / (under) recoveries, further adjustments will be applied as required and as described in paragraph 3 below i.e. c/l slate adjustment factor and rounding –being the mechanisms employed to assist in maintaining Cumulative Slate balances within acceptable levels.

Determination of all adjustment to be based on actual/current data.

1.1 Basic of the monthly unit over /(under)recovery calculation:

The structure and elements are as follows, comprised of values of individual's elements ruling during the periods preceding the monthly Fuel price change:

<u>Retail pump price for petrol</u> (Mogas 95 Unleaded grade being the benchmark for amounts of basic price change to all petrol grades), <u>and wholesale prices for both</u> 0.03% and 0.05% sulphur diesel grades ,as well as for illuminating paraffin (all at coast, Zone 1A)

Less:

- Service station dealer margin for petrol only
- Oil Company Zone 1A transport differential
- Oil company WHOLESALE MARGIN
- Oil company service differentials
- Oil company IP router differential (IP ONLY)
- Government taxes and levies (Impost)
- Basic price (IBLC)

Equals: cents per litre over or under recovery amounts, expressed to three decimals of a cent

Details of these elements are given in Annexures A and B.

The calculation of the average unit over / (under) recovery for the period is done as above on daily basis from the 26^{th} of the previous month to the 25^{th} of the month preceding the price adjustment, and then averaged for this full period

2. FREQUNCY AND AMOUNT OF ADJUSTMENT

The adjustment will take place monthly at 00h1 on the first Wednesday of every month and will be announced publicly by CEF (Pty) Ltd on the previous Friday or Monday.

It is noted that the total amount of petrol price adjustment (resulting from these Working Rules and other factors) needs comprehend the requirement of the settling for the pump prices to the nearest whole cent (see Annexure B paragraph 10).

3. CALCULATION OF THE MONTHLY PRICE ADJUSTMENT, INCLUDING ROUNDING AND 1.0 c/I SLATE ADJUSTMENT FACTOR

The amounts basic price adjustment determine in terms of these Working Rules will be sum of the amount determined in paragraph 3.1 and 3.2 below

3.1 The average unit over /(under) recovery coursed by daily movement in basic price – as calculated in terms of paragraph 1.1 and Annexure A to three decimals of cent for period from the 26th of the previous month to the 25th of the preceding the price adjustment; and these unit over/(under) recovery adjustment are then rounded as follows:

- If the individual product grouping (i.e. for all petrol grades or for all diesel grades or for illuminating paraffin) Cumulative Slater balance at the beginning of the month preceding the month of the fuel price adjustment, is negative the price adjustment will be rounded upwards to the nearest full cent in the case of price increase and downwards to the nearest full cent in the case of a price decrease. If such Calculative Slate balance at the beginning of the month is positive the price adjustment will be rounded downwards to the nearest full cent in the case of price increase full cent in the case of price adjustment is positive the price adjustment will be rounded downwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase and upwards to the nearest full cent in the case of price increase.
- 3.2 <u>The 1,0 c/I Slate Adjustment Factor</u> (as described in the paragraph 3.2 below) for the period, for each fuel, is determined on the following basic criteria , and will be added to or subtracted from the adjustment per paragraph 3.; viz.: The 1,0 c/I Slate adjustment factor (positive or negative) will be applicable only when the cumulative Slate Adjustment Factor(positive or negative) of the individual product groups (i.e. (a) For all petrol grades ,or (b) all diesel grade, or (c) illuminating paraffin) at the beginning of the month preceding that for which the fuel price adjustment are calculated, exceed R10 million for petrol, R 5 Million for diesel and R 1 million for illuminating paraffin.

The applicability of the 1.0 c/1 Slate Adjustment Factor is determined each month, and is no carried forward from one month to the following month.

3.3 **Implementation of changes to other fuels price elements**: The amount of price change determined in terms of these Working Rules are confined to (a) Over or under recoveries resulting from Basic Price movements and (b) recovery of Cumulative Slate balances via the rounding adjustment and 1.0 c/1 Slate Adjustment mechanisms. Energy (i.e. to dealer and wholesale margins, Service; Illuminating Paraffin Router, and Zone Differentials, as well as to Government imposts) will also be implemented on the first Wednesday of each month, the amounts of which of which will be communicated by the

Department to CEF (Pty) Ltd for inclusion in media statements which will indicate the total amounts of price changes.

It is noted that in the events that changes to such price structure elements are expressed in amounts to one or more decimal of a cent, the procedures and treatment for implementation will be in accordance with the guidelines given in paragraph 10 of Annexure B.

4. AUDIT BY INDEPENDT AUDITORS

CEF (Pty) Ltd will perform the calculations for determination of amounts for the monthly price change in terms of these Working Rules. An independent auditor appointed by the Department of Minerals and Energy will, interns of guidelines issued by the Department of Minerals and Energy, audit the relevant calculations and certify them to be correct.

5. ANOUNCEMENT OF PRICE ADJUSTMENT

CEF (Pty) Ltd will publicize the audited price adjustments on the Friday or Monday before they become effective.

6. DAILY PUBLICATION OF INFORMATON

For each regulated product, CEF will publicize the following information daily:

- Calculated unit over /(under) recovery based on the product prices and exchange rate of the previous day;
- Average over/(under) recovery since the previous price adjustment ; and
- Analysis of changes in the unit over/ (under) recovery since the previous prices changes.

http://www.dme.gov.za/publications/guidelines

D: Elasticity Analysis

Check correct Annexure (vs table of contents)

233

179

240	242	243
243	244	245
246	247	248
249	250	251
252	253	254
255	256	257
258	259	260
261	262	263
264	265	266

ANNEXURE L

Site monthly volume? * Previous working/ business experience before running a service station?

	-	Previous working/ business experience before running a service station?			
		Sales &			
		Financial Sector Education sector Marketing sec			
Site monthly volume	100 001 - 250 000	3	2	3	
	250 001 - 300 000	3	6	7	
	350 000+	4	1	6	
	Total	10	9	16	

	-	Previous work experience be service		
		Managing business	other	Total
Site monthly volume	100 001 - 250 000	0	2	10
	250 001 - 300 000	2	3	21
	350 000+	4	6	21
	Total	6	11	52

Chi-Square Tests					
	Value	df	Asymp. Sig. (2- sided)		
Pearson Chi-Square	7.716 ^a	8	.462		
Likelihood Ratio	9.170	8	.328		
Linear-by-Linear Association	2.259	1	.133		
N of Valid Cases	52				

Bar Chart



Site monthly volume: Do motorists care about regular price changes?

	-	Do motorists care about the regula price changes?		
		Very important	Important	
Site monthly volume	100 001 - 250 000	2	7	
	250 001 - 300 000	9	9	
	350 000+	11	9	
	Total	22		
		Do motorists care about regular prices changes?		
---------------------	-------------------	--	-------	
		Neutral	Total	
Site monthly volume	100 001 - 250 000	1	10	
	250 001 - 300 000	3	21	
	350 000+	1	21	
	Total	5	52	

Chi-Square Tests					
	Value	df	Asymp. Sig. (2- sided)		
son Chi-Square	3.911 ^a	4	.418		

	Value	df	sided)
Pearson Chi-Square	3.911 ^a	4	.418
Likelihood Ratio	4.105	4	.392
Linear-by-Linear Association	2.422	1	.120
N of Valid Cases	52		



Bar Chart

Site monthly volume: * How do high prices affect sales?

	-	How the impact of high prices is affected sales volume?	
		Very important	Important
Site monthly volume	100 001 – 250 000	4	6
	250 001 – 300 000	7	13
	350 000+	8	13
	Total	19	32

		How the impact of high prices is affected sales volume?	
		Neutral	Total
Site monthly volume	100 001 – 250 000	0	10
	250 001 – 300 000	1	21
	350 000+	0	21
	Total	1	52

Chi-Square Tests

	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	1.587 ^a	4	.811
Likelihood Ratio	1.925	4	.750
Linear-by-Linear Association	.005	1	.945
N of Valid Cases	52		



Site monthly volume: * Do you support the deregulation of petrol market?

		Do you support the deregulation of petrol market?			trol market?
		Very important	Important	Neutral	Less important
Site monthly volume	100 001 - 250 000	0	0	1	8
	250 001 - 300 000	0	0	6	8
	350 000+	1	1	2	14
	Total	1	1	9	30

		Do you support the deregulation petrol market?	
		not important	Total
Site monthly volume	100 001 - 250 000	1	10
	250 001 - 300 000	7	21
	350 000+	3	21
	Total	11	52

Chi-Square Tests					
	Value	df	Asymp. Sig. (2- sided)		
Pearson Chi-Square	10.618 ^a	8	.224		
Likelihood Ratio	11.306	8	.185		
Linear-by-Linear Association	.614	1	.433		
N of Valid Cases	52				

Do you support the deregulation petrol market?
O you support the deregulati

Bar Chart

Site monthly volume: * Is the service level offered to motorists important?

	-	Is the service level offered to motorists important? Very important Important	
Site monthly volume	100 001 - 250 000	3	7
	250 001 - 300 000	3	17
	350 000+	5	16
	Total	11	40

		Is the service level offered to motorists important?	
		Neutral	Total
Site monthly volume	100 001 - 250 000	0	10
	250 001 - 300 000	1	21
	350 000+	0	21
	Total	1	52

Chi-Square Tests

			Asymp. Sig. (2-
	Value	df	sided)
Pearson Chi-Square	2.493 ^a	4	.646
Likelihood Ratio	2.846	4	.584
Linear-by-Linear Association	.002	1	.961
N of Valid Cases	52		





Site monthly volume: Will the high price affect the survival of the site in the next five years?

		Will the high p survival of the sit yea	rice affect the te in the next five rs?	
		Very important	Important	Total
Site monthly volume?	100 001 - 250 000	4	6	10
	250 001 - 300 000	4	17	21
	350 000+	7	14	21
	Total	15	37	52

			Wi surviv	ll the high p val of the sit yea	orice aff te in the urs?	ect the e next five	
			Very	important	Im	portant	Total
Site monthly volume? 10	0 001 - 250 00	00		4		6	10
25	0 001 - 300 00	00		4		17	21
35	0 000+			7		14	21
	Value		df	Asymp. S sideo	ig. (2- d)		
Pearson Chi-Square	1.794 ^a		2		.408		
Likelihood Ratio	1.836		2		.399		
Linear-by-Linear Associatior	.005		1		.944		
N of Valid Cases	52						



Bar Chart

ANNEXURE M

Definition of the variables

Psale = petrol sales in millions of litres crudePrice = Brent crude oil price in US Dollars Income = disposable household income in millions of rands at current prices CARSALE = average number of car sales rounded off to the nearest whole number Tyre = Expenditure on car components and tyres by households in millions of rands Ppetrol =Gauteng unleaded petrol price in cents

EQUATION 1

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 18:37 Sample: 1994Q1 2008Q2 Included observations: 58

	Coefficient	Std. Error	t-Statistic	Prob.
С	6.846264	0.264902	25.84447	0
LP	-0.006395	0.020383	-0.313721	0.7549
LY	0.089016	0.027085	3.286493	0.0018
R-squared	0.455254	Mean depe	endent var	7.890486
Adjusted R-squared	0.435445	S.D. deper	ndent var	0.053201
S.E. of regression	0.039973	Akaike info	criterion	-3.550874
Sum squared resid	0.087882	Schwarz cr	riterion	-3.4443
Log likelihood	105.9754	Hannan-Qu	uinn criter.	-3.509361
F-statistic	22.98221	Durbin-Wa	tson stat	0.927133
Prob(F-statistic)	0			

Dependent Variable: LQ

Method: Least Squares Date: 09/18/08 Time: 17:41 Sample: 1994Q1 2008Q2 Included observations: 58

	Coefficient	Std. Error	t-Statistic	Prob.
с	6.26099	0.349133	17.93297	0
LPP	-0.106395	0.052026	-2.045044	0.0456
LY	0.187389	0.053109	3.528413	0.0009
R-squared	0.492843	Mean depe	endent var	7.890486
Adjusted R-so	0.474401	S.D. deper	ndent var	0.053201
S.E. of regres	0.038569	Akaike info	criterion	-3.622374
Sum squared	0.081818	Schwarz cr	riterion	-3.5158
Log likelihood	l 108.0489	Hannan-Qu	uinn criter.	-3.580861
F-statistic	26.72385	Durbin-Wa	tson stat	1.22379
Prob(F-statist	0			

<u>NB</u>

CONSTANT(Y intercept)

Natural log of Price Natural log of household disposable Income

EQUATION 2

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 19:45 Sample: 1994Q1 2008Q2 Included observations: 58

	Coefficient	Std. Error	t-Statistic	Prob.
С	6.836683	0.224337	30.47503	0
LP	-0.005846	0.01724	-0.339086	0.7359
LY	0.088978	0.022955	3.876157	0.0003
D1	-0.016293	0.012355	-1.318719	0.193
D2	0.006614	0.012533	0.527764	0.5999
D3	0.04479	0.012547	3.569847	0.0008
R-squared	0.633657	Mean depe	endent var	7.890486
Adjusted R-squared	0.598432	S.D. deper	ndent var	0.053201
S.E. of regression	0.033713	Akaike info	criterion	-3.844176
Sum squared resid	0.059101	Schwarz cr	riterion	-3.631027
Log likelihood	117.4811	Hannan-Qu	uinn criter.	-3.761151
F-statistic	17.9887	Durbin-Wa	tson stat	0.474826
Prob(F-statistic)	0			

Dependent Variable: LQ Method: Least Squares Date: 09/18/08 Time: 17:39 Sample: 1994Q1 2008Q2 Included observations: 58

	Coefficient	Std. Error	t-Statistic	Prob.
С	5.780506	0.278857	20.72926	0
LPP	-0.181251	0.041843	-4.331661	0.0001
LY	0.263455	0.04279	6.156961	0
D1	-0.032304	0.011233	-2.875749	0.0058
D2	-0.001302	0.010903	-0.119422	0.9054
D3	0.043003	0.01077	3.992798	0.0002
R-squared	0.7302	Mean depe	endent var	7.890486
Adjusted R-so	0.704257	S.D. depen	ndent var	0.053201
S.E. of regres	0.028932	Akaike info	criterion	-4.150064
Sum squared	0.043526	Schwarz cr	riterion	-3.936915
Log likelihood	126.3519	Hannan-Qu	uinn criter.	-4.067038
F-statistic	28.14703	Durbin-Wa	tson stat	0.887023
Prob(F-statist	0			

<u>NB</u>

CONSTANT(Y intercept)

Natural log of Price Natural log of household disposable Income seasonal dummy quarter2 seasonal dummy quarter3 seasonal dummy quarter4

EQUATION 3a

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 18:58 Sample (adjusted): 1994Q2 2008Q2 Included observations: 57 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
С	6.944389	0.177459	39.13232	0
LP	-0.002064	0.013278	-0.155421	0.8771
LY	0.076359	0.018035	4.233976	0.0001
QD(-1)	0.009742	0.001665	5.852223	0
D1	0.024269	0.012182	1.992215	0.0518
D2	0.055025	0.013254	4.151693	0.0001
D3	0.078	0.011595	6.726853	0
R-squared	0.769344	Mean depe	endent var	7.892857
Adjusted R-squared	0.741665	S.D. deper	ident var	0.050487
S.E. of regression	0.025661	Akaike info	criterion	-4.373104
Sum squared resid	0.032924	Schwarz cr	riterion	-4.122203
Log likelihood	131.6335	Hannan-Qu	uinn criter.	-4.275595
F-statistic	27.79545	Durbin-Wa	tson stat	2.081664
Prob(F-statistic)	0			

EQUATION 3b

Dependent Variable: LQ Method: Least Squares Date: 09/18/08 Time: 17:02 Sample (adjusted): 1994Q2 2008Q2 Included observations: 57 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
С	6.606177	0.325089	20.32111	0
LPP	-0.056029	0.048205	-1.162307	0.2506
LY	0.131525	0.05025	2.617399	0.0117
QD(-1)	0.008394	0.00201	4.176911	0.0001
D1	0.014071	0.01489	0.944955	0.3492
D2	0.046234	0.015057	3.070514	0.0035
D3	0.073227	0.012159	6.022482	0
R-squared	0.775303	Mean depe	ndent var	7.892857
Adjusted R-so	0.74834	S.D. depen	dent var	0.050487
S.E. of regres	0.025327	Akaike info	criterion	-4.399282
Sum squared	0.032074	Schwarz cr	iterion	-4.148381
Log likelihood	132.3795	Hannan-Qu	uinn criter.	-4.301773
F-statistic	28.75371	Durbin-Wat	tson stat	2.001327
Prob(F-statist	: 0			

<u>NB</u>

CONSTANT(Y intercept)

Natural log of Price Natural log of household disposable Incom

seasonal dummy quarter2 seasonal dummy quarter3 seasonal dummy quarter4

EQUATION 4

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 20:00 Sample: 1994Q1 2008Q2 Included observations: 58

	Coefficient	Std. Error	t-Statistic	Prob.
С	5.148638	0.366201	14.0596	0
LP	-0.069489	0.018407	-3.775204	0.0004
LY	0.052128	0.019853	2.625685	0.0114
LT	0.258808	0.048739	5.310038	0
D1	-0.008213	0.010127	-0.811063	0.4211
D2	0.016926	0.01034	1.636983	0.1078
D3	0.056086	0.010387	5.399653	0
R-squared	0.764087	Mean depe	endent var	7.890486
Adjusted R-squared	0.736332	S.D. deper	ndent var	0.053201
S.E. of regression	0.027318	Akaike info	criterion	-4.2498
Sum squared resid	0.038059	Schwarz cr	riterion	-4.001126
Log likelihood	130.2442	Hannan-Qu	uinn criter.	-4.152937
F-statistic	27.53022	Durbin-Wa	tson stat	0.756274
Prob(F-statistic)	0			

<u>NB</u>

CONSTANT(Y intercept)

Natural log of Price Natural log of household disposable Income Natural log of tyres and car component sales seasonal dummy quarter2 seasonal dummy quarter3 seasonal dummy quarter4

Equation 5 (THIS IS THE BEST RESULT !!!!!)

Dependent Variable: LQ Method: Least Squares Date: 09/17/08 Time: 20:58 Sample (adjusted): 1994Q2 2008Q2 Included observations: 57 after adjustments

	Coefficient	Std. Error	t-Statistic	Prob.
С	5.773429	0.326796	17.66678	0
LP	-0.045964	0.015837	-2.902414	0.0055
LT	0.180929	0.044456	4.069871	0.0002
LY	0.050548	0.016978	2.977177	0.0045
QD(-1)	0.006877	0.001615	4.258092	0.0001
D1	0.016634	0.010803	1.539841	0.13
D2	0.046437	0.011765	3.947133	0.0003
D3	0.0747	0.010158	7.353592	0
R-squared	0.827616	Mean depe	endent var	7.892857
Adjusted R-squared	0.80299	S.D. deper	ident var	0.050487
S.E. of regression	0.022409	Akaike info	criterion	-4.629221
Sum squared resid	0.024606	Schwarz cr	iterion	-4.342477
Log likelihood	139.9328	Hannan-Qu	uinn criter.	-4.517782
F-statistic	33.60701	Durbin-Wa	tson stat	2.050065
Prob(F-statistic)	0			

Notice all the t statistics are highly significant at the conventional levels of significance

A one percent change (eg a 1% rise) in crude oil price changes (reduces) the quantity of petrol demanded by abo a 1% rise in spending on car components and tyres results in a 0.18% rise in demand for petrol A one percent change (eg a 1% rise) in disposable household income changes (increases) the quantity of petrol c A one percent deviation of petrol sales from its equilibrium level leads to this quartes petrol sales rising by 0.007% D1 suggests that the percentage increase in sales(demand) in the second quarter is about 1.6% higher relative to D2 suggests that the percentage increase in sales(demand) in the second quarter is about 4.8% higher relative to D3 suggests that the percentage increase in sales(demand) in the second quarter is about 7.7% higher relative to

The Durban Watson test suggests that the is no serial correlation hence we can trust the t statistics and the values of the coefficients.

NB

CONSTANT(Y intercept)

Natural log of Price

Natural log of tyres and car component sales

Natural log of household disposable Income

Previous quarter deviations of petrol consumption from it

seasonal dummy quarter2

seasonal dummy quarter3

seasonal dummy quarter4

DATE	Psale	Parafin	CrudePrice	Income	Car Sale	Tyre	Ppetrol (c/l)
1994Q1	2,334	225	13.74	67630	86	6441.85	180
1994Q2	2,344	220	15.92	79030	85	6441.85	180
1994Q3	2,455	235	17.02	75327	86	6441.85	180
1994Q4	2,496	195	16.6	84660	90	6441.85	177
1995Q1	2,468	185	16.74	77671	93	6791.03	177
1995Q2	2,512	228	17.87	89266	94	6791.03	177
1995Q3	2,544	230	16.22	88929	81	6791.03	177
1995Q4	2,629	207	16.8	93317	82	6791.03	190
1996Q1	2,617	206	17.73	88604	88	7357.18	190
1996Q2	2,606	237	18.92	99364	100	7357.18	190
1996Q3	2,614	261	20.71	101070	104	7357.18	190
1996Q4	2,729	261	23.51	104113	106	7357.18	200
1997Q1	2,607	198	21.26	104544	108	7092.79	200
1997Q2	2,660	262	18.56	110869	107	7092.79	200
1997Q3	2,720	270	18.61	112455	108	7092.79	205.61
1997Q4	2,798	243	19.12	114098	110	7092.79	217
1998Q1	2,674	225	14.84	114633	109	7516	217
1998Q2	2,679	267	14.12	120198	108	7516	217
1998Q3	2,678	291	13.07	118931	110	7516	221.95
1998Q4	2,852	269	11.9	123686	114	7516	232
1999Q1	2,674	242	11.49	123955	114	7191	232
1999Q2	2,679	282	15.82	136841	113	7191	232
1999Q3	2,678	290	20.59	129437	113	7191	243.88
1999Q4	2,852	240	23.96	130916	113	7191	268
2000Q1	2,651	214	26.84	139482	108	7631	268
2000Q2	2,587	237	26.68	149057	111	7631	268
2000Q3	2,541	230	30.6	147307	115	7631	288.79
2000Q4	2,617	176	29.72	151878	119	7631	331
2001Q1	2,556	174	25.87	152033	116	7426	331
2001Q2	2,520	204	27.27	163913	110	7426	331
2001Q3	2,555	221	25.33	164866	108	7426	352.45
2001Q4	2,709	187	19.4	164439	116	7426	396
2002Q1	2,544	161	21.05	172847	124	7526	396
2002Q2	2,479	199	25.06	184339	125	7526	396
2002Q3	2,656	220	26.94	184778	118	7526	403.59
2002Q4	2,656	165	26.76	185153	113	7526	419
2003Q1	2,598	168	31.61	191100	113	7773	419
2003Q2	2,586	197	26.08	198328	113	7773	419
2003Q3	2,640	218	28.5	200710	109	7773	399.86
2003Q4	2,843	186	29.35	201832	108	7773	361
2004Q1	2,698	183	31.92	211495	109	8910	361
2004Q2	2,662	210	35.3	224520	109	8910	361
2004Q3	2,769	231	41.13	213784	108	8910	397.3
2004Q4	2,856	174	44.29	224680	105	8910	471
2005Q1	2,763	177	47.45	226341	103	10497	471
2005Q2	2,737	209	51.04	246382	101	10497	471
2005Q3	2,797	200	61.64	240585	99	10497	482.55
2005Q4	2,868	175	56.97	253720	97	10497	506
2006Q1	2,757	179	61.45	253897	99	12354	506
2006Q2	2,779	206	69.44	279978	99	12354	506
2006Q3	2,754	192	69.53	269984	100	12354	557.15
2006Q4	2,989	161	59.55	279829	98	12354	661
2007Q1	2,878	155	57.86	286635	97	12336	661
2007Q2	2,778	187	69.03	314323	94	12336	661
2007Q3	2,908	190	75.84	308953	88	12336	674.86
2007Q4	2,994	165	89.07	317389	82	12336	703
2008Q1	2,851	150	97.71	314494	81	12336	703
2008Q2	2,701	150	121.31	364059	84	12336	703

ANNEXURE N

Source: FM (2008)

ANNEXURE N

Untitled Document

ANNEXURE C

THE CITY OF TSHWANE GAUTENG PROVINCIAL BOUNDARY TSHWANE AREA BOUNDARY TSHWANE AREA BOUNDARY



			ULTRALRP93	ULTRALRP93 /	ULTRALRP93 /	ULTRALRP95 /	ULTRALRP95 /	ULTRALRP95 /							
City/Town	currency	Price Zone	Pump Price	Retail List	Comm List	Pump Price	VPOWER (C) Retail List	VPOWER (C) Com List	VPOWER95 (I) Pump Price	VPOWER95 (I) Retail List	VPOWER95 (I) Comm List	DIESEL Pump Price	DIESEL 0.05% delivered List	DIESEL 0.005% delivered List	IP / KERO delivered List
Cape Town	SA c/l	1A	969.00	904.30	912.31	972.00	07.30	015 21							
Mossel Bay	SA c/l	1A	969.00	904.30	912.31	972.00	02.100	015.21					1066.50	1071.90	876.70
Worcester	SA c/l	5A	977.00	912.30	920.71	980.00	915.30	923.71					1066.30	10/1.90	876.70
Laingsburg	SA c/l	88	986.00	921.30	929.51	989.00	924.30	932.51					1083.80	1089.20	000.000
Riviersonderend	SA c/l	5A	977.00	912.30	920.71	980.00	915.30	923.71					1075.00	1080 40	885.60
Springbok	SA c/l	32J	1000.00	935.30	953.21	1010.00	945.30	956.21					1107.50	1112.90	000.000
Port Elizabeth	SA c/l	1A	969.00	904.30	912.31	972.00	907.30	915.31					1000 10		
East London	SA c/l	1A	969.00	904.30	912.31	972.00	907.30	915.31					106.901	1071.90	876.70
Queenstown	SA c/l	5A	977.00	912.30	920.71	980.00	915.30	923.71					1000-200	06.1701	8/6.70
Umtata	SA c/l	6A	981.00	916.30	924.71	984.00	919.30	927.71					00.0701	1000.40	09.088
Plettenberg Bay	SA c/l	4A	975.00	910.30	918.71	978.00	913.30	921.71					1073.00	1078.40	883.10
Oudtshoorn	SA c/l	4A	975.00	910.30	918.71	978.00	913.30	921.71					1073.00	1078.40	883.10
Colesberg	SA c/l	8A	987.00	922.30	929.81	990.00	925.30	932.81	1000.00	935.30	A CAP		1004 40	1000 50	
Three Sisters	SA c/l	12B	992.00	927.30	935.61	995.00	930.30	938.61					10801	1009-00	834.90
Beaufort West	SA c/l	7B	983.00	918.30	926.61	986.00	921.30	929.61					1080.90	1086.30	80100
De Aar	SA c/l	8A	987.00	922.30	929.81	00.066	925.30	932.81	1000.00	935.30	942.81	1	1084.10	1089.50	894.90
Upington	SA c/l	13A	1000.00	935.30	943.11	1000.00	935.30	946.11	1013.00	948.30	956 11		1007 40	00 0011	00 000
Vryburg (South)	SA c/l	12C	1000.00	935.30	942.81	1000.00	935.30	945.81	1010.00	945.30	955.81		107.1001	1102.80	908.30
Kimberley	SA c/l	11C	994.00	929.30	937.51	00.766	932.30	940.51	1000.00	935.30	950.51		1091.80	1097.201	905.80
Bloemfontein	SA c/l	10C	00.066	925.30	933.71	993.00	928.30	936.71	1000.00	935.30	946.71		1088.00	1093.40	902.80
Kroonstad	SA c/l	ည္ထ	981.00	916.30	924.71	984.00	919.30	927.71	994.00	929.30	937.71		1079.00	1084.40	898.50
Durban	SA c/l	1A	969.00	904.30	912.31	972.00	907.30	915.31					1066.50	1071.90	876.70
Pietermaritzburg	SA c/l	зс	971.00	906.30	914.01	974.00	909.30	917.01					1068.30	1073.70	882.10
Estcourt	SA c/l	50	975.00	910.30	918.71	978.00	913.30	921.71					1073.00	1078.40	887.80
Picharde Davi	SA C/I	29	979.00	914.30	922.01	982.00	917.30	925.01					1076.30	1081.70	892.00
Nutiai us day Newcastle	SA CI	AC C	970.00	912.30	920.71	980.00	915.30	923.71					1075.00	1080.40	885.60
Ladvsmith - K7N	SACI	2 L	9/9.00	914.30	10.226	982.00	917.30	925.01					1076.30	1081.70	892.00
		8	00.010	00.016	910.1	9/8.00	913.30	921.71					1073.00	1078.40	887.80
Jonannesburg	SA c/l	00	983.00	918.30	926.01	986.00	921.30	929.01	996.00	931.30	939.01		1080.30	1085.70	900.60
Pretoria Dustanhura	SA C/I	26	983.00	918.30	926.01	986.00	921.30	929.01	996.00	931.30	939.01		1080.30	1085.70	900.60
Middelhura - Maimlanda	SA CI		00.000	925.30	933.71	993.00	928.30	936.71	1000.00	935.30	946.71		1088.00	1093.40	902.80
Polokwane (Pietersburg)	SA c/l	120	00.000	935 30	933./1	993.00	928.30	936.71	1000.00	935.30	946.71		1088.00	1093.40	902.80
Skukuza (Kruger Park)	SA c/l	10C	00.000	925.30	933.71	00.0001	02.820	940.01	00.0101	945.30	955.81		1097.10	1102.50	908.40
Sishen	SA c/l	13C	1000.00	935.30	944.71	1000.00	935.30	947.71	1010.000	945 30	340./1		1088.00	1093.40	902.80
Thabazimbe	SA c/l	12C	1000.00	935.30	942.81	1000.00	935.30	945.81	1010.00	945.30	955.81	And And And	00.6601	1104.40	912.30
Ellisras	SA c/l	13C	1000.00	935.30	944.71	1000.00	935.30	947.71	1010.00	945.30	957.71		1099.00	1104.40	912.30
Musina (Messina)	SA c/l	14C	1000.00	935.30	948.71	1000.00	935.30	951.71	1010.00	945.30	961.71		1103.00	1108.40	914.20
Walvisbay - Nam	Nam c/l	coast	848.00	802.00	806.51	850.00	804.00	808.51				984.00	941.00		332.00
Windhoek - Nam	Nam c/l	inland	866.00	823.00	827.51	868.00	825.00	829.51				1002.00	959.00		350.30
Grootfontein - Nam	Nam c/l	inland	873.00	830.00	834.51	875.00	832.00	836.51				1009.00	966.00		357.00
Fosha - Nam - ev Tsumeh	Nam c/l	prelui	880.00	837.00	841.51	882.00	839.00	843.51				1016.00	973.00		364.00
Luderity - Nam	Nam c/i		071.00	00.020	10.268	8/3.00	830.00	834.51				1007.00	964.00		- Andrewski -
		COASI	01.5.10	00.000	1.0.460	8/ 9.00	832.00	836.51				1009.00	966.00		357.00
Gaborone - Bots Francistown - Bots	tebe/	inland	698.00	660.60	660.60				-			813.00	775.60		717.60
	ICOCI		00.450	00.000	00.000	The second second second second						809.00	771.60		713.60
Harare - Zimbabwe	Zim c/l	inland	223000.00	204996.90	221500.00					-		208000.00	191401.60		00.0
Maputo - Mocambq	Met/I	coast	27470.00	25479.10	25479.10							23320.00	21329.10		15000.00
Maseru - Lesotho	lis/l	inland	00.000	855.50	855.50				230			1075.00	1030.50		805.00
	1	10 10 10 10 10 10 10 10 10 10 10 10 10 1			0	⁰				-					

Southern Africa C Date of last price change in S	ontroll outh Africa	ed Prod	uct Prices 4-Jun-08												
City/Town	currency	Price Zone	ULTRALRP93 / VPOWER (I) Pump Price	ULTRALRP93 / VPOWER (I) Retail List	ULTRALRP93 / VPOWER (I) Comm List	ULTRALRP95 / VPOWER (C) Pump Price	ULTRALRP95 / VPOWER (C) Retail List	ULTRALRP95 / VPOWER (C) Com List	VPOWER95 (I) Pump Price	VPOWER95 (I) Retail List	VPOWER95 (I) Comm List	DIESEL Pump Price	DIESEL 0.05% delivered List	DIESEL 0.005% delivered List	IP / KERO delivered List
			DCA Illinof		1										
			Id cap nin year	LICES = UILLALKP	CF.										All the second se
average exchange rates			RSA V Power(i	inland) prices = 0	JitraLRP93 prices										
Rand : Pula	1:0.8453		Diesel Pump Pi	rice in RSA is no	ot controlled										
Rand : Zim \$	1:9063.13		Prices in other	countries are as	s shown										
Rand : Moz Metica	1:3950		V Power in Nan	mibia 8.0 c/l more	e than Ultra93 pri	ces									
Rand : Les Maluti	1:1		V Power in Swa	aziland = Ultra95	UL prices										
Rand : Swaz Emalg	1:1		V Power in Bot	swana and Leso	tho = Ultra93UL p	irices									State of the state
Rand : Swaz Emalg	1:1		V Power in Bot	swana and Leso	tho = Ultra93UL p	irices									

													語の語の語言	Set De set de	Setting of the set of the set	Real Property of the	SHELL SA
BULK Die	sel & BULK IP WL	.SP - deliver	ed , COC , R	trc										COM	MERCIAL		BULK Diese
		: dSJW	71.00	coastal	WLSP :	70.00	cnastal	Baeio Cor	*	ROD 970 ED	COC						
Basic Coast	1066.4(ī			1071.80	0	5.40			010.00	74 00			EFFECTIVI	E DATE	<u>4-Jun-08</u>	
·		0.05 % Su	Iphur speci	fication	0.005% su	Iphur speci	fication		d	O VAT	1.00 003	0(GI					Basic Coast
ZONF	ZONE	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL	DIESEL		ZONE	ILLUM	PAR						
1A	0.1 coast	1066.50	1064.60	1062 E0	4074 00	COC 4070 00	RAL 4067 00	ZONE	DIFF	ROD	coc		TPT	recov	diff		ZONE
2A	3.2	1069.60	1067.70	1065.60	1075.00	1073.10	1071.00	2A 2A	3.3	879.80	874.80		DEL	4.00	4.00		14
3A 4.A	4.4	1070.80	1068.90	1066.80	1076.20	1074.30	1072.20	3A	4.3	880.80	878.90		CUC RTC	1.2	1:9:		2A 2.5
50	0.0	10/3.00	01.1701	1069.00	1078.40	1076.50	1074.40	4A	6.6	883.10	881.20		2 AVE	0			3A 4A
64	12.6	1079.00	1077.10	1075.00	1080.40	1078.50	1076.40	5A	9.1	885.60	883.70						5A
7A	14.7	1081.10	1079.20	1077.10	1086.50	1084.60	1082.50	DA 7A	12.9	889.40	887.50	•••••••••••••••••••••••••••••••••••••••					6A
8A	17.7	1084.10	1082.20	1080.10	1089.50	1087.60	1085.50	88	18.4	06.160	893.00						TA
94	20.7	1087.10	1085.20	1083.10	1092.50	1090.60	1088.50	9A	21.3	897.80	895.90		Delivered (old R1	(LIRRT)			8A
110A	23.5	1089.90	1088.00	1085.90	1095.30	1093.40	1091.30	10A	24.0	900.50	898.60	COC	Customer Own Co	ollection			94
134	31.0	1002 40	1090.10	1088.00	1097.40	1095.50	1093.40	11A	26.3	902.80	900.90						110
15A	31.4	1097.80	1095.90	1093.40	1102.80	1100.90	1098.80	13A	31.8	908.30	906.40						13A
17A	32.7	1099.10	1097 20	1095.10	1103.20	1101.00	11099.20	A21	31.8	908.30	906.40	DIESEL 0.05% - Gau	iteng comm del	IP / KERO -	Gauteng bulk del		15A
19A	33.9	1100.30	1098.40	1096.30	1105.70	1103.80	02.0011	10A	32.6	909.10	907.20	wef 4-Jun-0	3	wef	4-Jun-08		17A
57A	14.7	1081.10	1079.20	1077.10	1086.50	1084.60	1082.50	57A	15.0	891.50	889.60	PUT BUTTO A DATA DA DA	And a second				19A
69A	33.9	1100.30	1098.40	1096.30	1105.70	1103.80	1101.70	69A	34.2	910.70	908.80	Basic	829.630				57A
3B	9.6	1076.00	1074 10	00 0401	1004 40	01 010						Govmnt Tax	161.510	Basic	819.52	28	09A
		00.00	01-4-101	00.2101	1001.40	06.8701	10//.40	38	9.6	886.10	884.20	Whsalemrgn	39.260	Whsal mrgn	39.47	72	38
68	11.0	1077.40	1075.50	1073.40	1082 80	1080 90	1078 80	9	0.14	007 100		Servdiff	9.500	Servdiff	17.50	00	
7B	14.5	1080.90	1079.00	1076.90	1086.30	1084.40	1082.30	78	14.5	00.100	09.688		13.900	Zone diff	24.10	00	6B
8	17.4	1083.80	1081.90	1079.80	1089.20	1087.30	1085.20	88	17.4	893.90	892.00	Slate levy	0.000	Eq. Fund Le	vy 0.00	00	7B
98 100	18.5	1084.90	1083.00	1080.90	1090.30	1088.40	1086.30	9B	18.5	895.00	893.10	Pipeline Levy	0.150	Slate lew	0.00		88
128	21.4	1080.00	00.0001	1083.80	1093.20	1091.30	1089.20	10B	21.4	897.90	896.00	Incremental Inl. Trsn	1.500	WLSP	900.60		30 10B
14B	25.2	1091 60	1080 70	1087.60	00.7001	1093.40	1091.30	12B	23.5	00.006	898.10	WLSP	1080.300				12B
					00.1001	01.0001	00.5501	1415	72.77	901.70	899.80			check	900.60	00	14B
3C	1.9	1068 30	1066.40	1064 20	1073 70	4074 00	1000 10		and the second se			check	1080.300		0.0	00	
4C	3.4	1069.80	1067.90	1065.80	1075.20	10/1.60	1009./0	ູ	5.6	882.10	880.20	standard DIESEL	0.000				3C
50	6.6	1073.00	1071.10	1069.00	1078.40	1076.50	1074.40	20	11.3	887.80	885.90	(0.05% st	DIESEL - Gaut	end del comm			4C
4C	9.9	1076.30	1074.40	1072.30	1081.70	1079.80	1077.70	66	15.5	892.00	890.10				IBasic		50
ي د	11.4	1077.80	1075.90	1073.80	1083.20	1081.30	1079.20	7C	16.9	393.40	891.50				I Govmnt Tax		4U
ې د د	13.9 Gartano	10/9.00	1077.10	1075.20	1084.40	1082.50	1080.40	SC	22.0	398.50	896.60				1///he alamican		ູ່
10C	21.6	1088.00	1086.10	1084.00	07.0001	1003.60	0/.1801	о С	24.1	900.60	898.70				2		90
11C	25.4	1091.80	1089.90	1087.80	1097.20	1095.30	1093.20	110	2.02	002.00	900.90		4% 1%1 5682		Servditt		10C
12C	30.7	1097.10	1095.20	1093.10	1102.50	1100.60	1098.50	12C	31.9	08.40	06.50		%		IZone diff		11C
130	32.6	1099.00	1097.10	1095.00	1104.40	1102.50	1100.40	13C	35.8	312.30	910.40				IEq. Fund Levy		12C
150	20.0	1103.00	01.1011	1009.00	1108.40	1106.50	1104.40	14C	37.7	914.20	312.30						110
160	36.6	1103.00	1101.10	00.6601	1108.40	1106.50	1104.40	150	37.7	914.20	912.30	-			I Slate levy		150
17C	37.4	1103.80	1101.90	1099.80	1109.20	1107 30	1104.40	190	37.7	314.20	912.30				Pipeline Levy		16C
57C	11.4	1077.80	1075.90	1073.80	1083.20	1081.30	1079.20	570	16.91	07.010	391 50			A CALL STREET	77%		17C
580	12.6	1079.00	1077.10	1075.00	1084.40	1082.50	1080.40	58C	22.0	398.50	396.60						57C
600	21.6	1088.00	1086.10	1084.00	1093.40	1091.50	1089.40	60C	26.3	902.80	900.90						2200
620	20.7	1091.80	1089.90	1087.80	1097.20	1095.30	1093.20	61C	29.3	05.80	903.90						84C
63C	32.6	1099.00	01.7001	1095.00	09770LL	1100.60	1098.50	62C	31.9	008.40	06.50						62C
64C	36.6	1103.00	1101.10	1099.00	1108.40	1106.50	1104.40	640.	27.75	14.20	10.30		IP/KERO bulk de	el price - Gaute	Bu		63C
67C	37.4	1103.80	1101.90	1099.80	1109.20	1107.30	1105.20	67C	38.7	15.20	13.30				T Basic		64C
																	67C
32.1	51.0	11098.00	11096.10	1094.00	1103.40	1101.50	1099.40	31J	31.6	08.10	06.20	and the information of the analysis	4%2%3%	%	LI Whsal mrgn		31.1
33J	46.1	1112.50	1110.60	1108.50	1117.90	1116.00	1113.90	33,1	41.1	17.60 03.60	15.70		7	(□ Servdiff		32J
34J	46.1	1112.50	1110.60	1108.50	1117.90	1116.00	1113.90	34.1	46.1	00 EU	20.70				Zone diff		33J
35J	46.1 P Nolith	1112.50	1110.60	1108.50	1117.90	1116.00	1113.90	35J	46.1 9	22.60	20.70			A State of the sta			34J
36J	42.0	1108.40	1106.50	1104.40	1113.80	1111.90	1109.80	36J	42.0 9	18.50	16.60			91%			35J
37J	57.7	1124.10	1122.20	1120.10	1129.50	1127.60	1125.50	37J	57.7 9	34.20	32.30	The second s					36J
		PLEASE NO	OTE	And the second							- 232						
											1						
	101.84	Ins%cnn.n	nur biesei l	s currently 5.	t c/l more exp	oensive that	n standard (0.03				i I						

SHELL SA (PT)) LIMITED						-													
BULK Petrol del	vered wisp & I	Pump Prices																	RETAIL	
PUMP	50.00		50.00	45.00 50.00	45.00	45.00	at the coast													
	83 ULF] _	95 ULP	93LRP	95LRP	95 ULP (I)													CECECTIVE DATE	
Basic Coast	904.1(2	907.1(04.10	907.10	917.10														4-Jun-08
zo zo	ne Pump	Special Pump	Vpower i	Vpower i	Vpower i	UltraLRP93	UltraLRP93	UltraLRP93	Vpower c	Vpower c	Vpower c	UltraLRP95	UltraLRP95	UltraLRP95	Inland Levy a Vpower95 (I)	pplies to zones Vpower95 (I)	as listed Vpower95 (I)	Special Purr	00	
1A 1	0.2 0.0	coast	904.30	904.30	PUMP	unround 904 30	WLSP 004 30	PUMP	unround	WLSP	PUMP	unround	WLSP	PUMP	unround	WLSP	PUMP	Rnd M95		
2A	3.2 0.0		907.30	907.30	972.00	907.30	907.30	972.00	910.30	910.30	975.00	910.30	907.30	972.00					WLSP = Wholesale list selling price	4
3A 4A	6.6 (0.2)		910.70	908.30	973.00	908.50	908.30	973.00	911.50	911.30	976.00	911.50	911.30	976.00						
5A	8.6 (0.4)		912.70	912.30	00.276	910.70	010.30	9/5.00	913.70	913.30	978.00	913.70	913.30	978.00						
6A	12.6 (0.4)		916.70	916.30	981.00	916.70	916.30	981.00	919.70	919.30	984.00	915.70 919.70	915.30	980.00						
7A 8A	14.7 0.5		918.80	919.30	984.00	918.80	919.30	984.00	921.80	922.30	987.00	0.000	00.616	304.00	931.80	932.30	00.799		Dealer Margin	
94	20.7 0.5		924.80	922.30	987.00	921.80	922.30	987.00	924.80	925.30	990.00				934.80	935.30	1000.00			
10A	23.5 (0.3)		927.60	927.30	992.00	924.80	925.30	990.00	927.80	928.30	993.00				937.80	938.30	1003.00	-3		
11A	25.6 (0.4)		929.70	929.30	994.00	929.70	929.30	994.00	932.70	932.30	00'566				940.60	940.30	1005.00	-9		
13A	31.0 0.2		935.10	935.30	1000.00	935.10	935.30	1000.00	938.10	935.30	1000.00				948.10	948 30	1007.00	1-		
17A	32.7 0.5	-2.00	935.50	935.30	1000.00	935.50	935.30	1000.00	938.50	935.30	1000.00				, 948.50	948.30	1013.00	-3	GAUTENG ULTRA93 PRICE	
19A	33.9 0.3	-3.00	938.00	935.30	1000.000	930.80	935.30	1000.00	939.80	935,30	1000.00				949.80	950.30	1015.00	-5		
57A	14.7 0.5		918.80	919.30	984.00	918.80	919.30	984.00	921.80	922.30	987 00	021 80	00.000	007.00	951.00	951.30	1016.00	9-	Basic 651.632	
69A	33.9 0.3	-3.00	938.00	935.30	1000.00	938.00	935.30	1000.00	941.00	935.30	1000.00	941.00	935.30	1000.00				9	Whsal mrgn 39.268	
3B	9.6 (0.4)		013 70	013 20	070.00	04.040	00000												Servdiff 9.500	
2	(+-1) 0.0		01.618	913.30	9/8.00	913.70	913.30	978.00	916.70	916.30	981.00	916.70	916.30	981.00					Eq. Fund levy 0.000	
68	11.0 0.2		915.10	915.30	980.00	915.10	915.30	980.00	918.10	918.30	983.00	918.10	018.30	082.00					Zone diff 13.900	
78	14.5 (0.3)		918.60	918.30	983.00	918.60	918.30	983.00	921.60	921.30	986.00	921.60	921.30	986.00					Detroloum Drod Law 0 450	
98	11.4 (0.2) 18.5 (0.3)		921.50	921.30	986.00	921.50	921.30	986.00	924.50	924.30	989.00	924.50	924.30	989.00					Incremental Inl. Trsnp F 1.500	
10B	21.4 (0.2)		925.50	925.30	00.066	925.50	925.30	000.000	925.60	925.30	990.00	925.60	925.30	00.00					Ret mrgn 64.700	
12B	23.5 (0.3)		927.60	927.30	992.00	927.60	927.30	992.00	930.60	930,30	995.00	930,60	930.30	993.00					WLSP 918.300 cl	
14B	25.2 0.0		929.30	929.30	994.00	929.30	929.30	994.00	932.30	932.30	997.00	932.30	932.30	997.00					POMP 883.000	
3C	1.9 0.3		906.00	906.30	971 00	006.00	006 30	074 00	00 000	00000									dheck 918.300	
4C	3.4 (0.2)		907.50	907.30	972.00	907.50	907.30	972.00	910.50	910.30	975.00	909.00	909.30 040.30	974.00 075.00						
50	6.6 (0.4)		910.70	910.30	975.00	910.70	910.30	975.00	913.70	913.30	978.00	913.70	913.30	978.00						
20	9.9 0.3		914.00	914.30	979.00	914.00	914.30	979.00	917.00	917.30	982.00	917.00	917.30	982.00					Guateng Ultra93 Pum	o Price
8C	12.6 (0.4)		916.70	916.30	981.00	916.70	915.30	980.00	918.50	918.30	983.00				928.50	928.30	993.00			
90	13.9 0.3	Gauteng	918.00	918.30	983.00	918.00	918.30	983.00	921.00	921.30	986.00				929.70	929.30	994.00			
10C	21.6 (0.4)		925.70	925.30	990.00	925.70	925.30	990.000	928.70	928.30	993.00				938.70	935.30	1000 00	5		
12C	30.7 0.5		929.50	929.30	994.00	929.50	929.30	994.00	932.50	932.30	997.00				942.50	935.30	1000.00	1-		
13C	32.6 (0.4)	-1.00	936.70	035.30	1000.00	036.70	935.30	1000.00	937.80	935.30	1000.00				947.80	945.30	1010.00	-3	1000	
14C	36.6 (0.4)	-5,00	940.70	935,30	1000.00	940.70	935.30	1000.00	943.70	935.30	1000.00				949.70	945.30	1010.00	4-	200 200	
15C	36.6 (0.4)	-5.00	940.70	935.30	1000.00	940.70	935.30	1000.00	943.70	935.30	1000.00				953.70	945.30	1010.00	9- 8-	01% 00% 07%	1
170	37.4 (0.2)	00.6-	941.50	935.30	1000.00	940.70	935.30	1000.00	943.70	935.30	1000.00				953.70	945.30	1010.00	-8	10%	1
57C	11.4 (0.2)		915.50	915.30	980.00	915.50	915.30	980.00	918.50	918 30	083 00	018 60	04 8 20	00 000	954.50	945.30	1010.00	6-		Contraction of the
58C	12.6 (0.4)		916.70	916.30	981.00	916.70	916.30	981.00	919.70	919.30	984.00	919.70	919.30	984.00					V	1
60C	21.6 (0.4)		925.70	925.30	990.00	925.70	925.30	990.00	928.70	928.30	993.00	928.70	928.30	993.00						and the second se
62C	30.7 0.5		034.80	935 30	1000.00	929.50	929.30	994.00	932.50	932.30	997.00	932.50	932.30	997.00					84%	Control of the second s
63C	32.6 (0.4)	-1.00	936.70	935.30	1000.00	936.70	935.30	1000.00	939.70	935.30	1000.00	937,80	935.30	1000.00				-3		E Basic
64C	36.6 (0.4)	-5.00	940.70	935.30	1000.00	940.70	935,30	1000.00	943.70	935.30	1000.00	943.70	935.30	1000.00				4-		C Whsal mrg
67C	37.4 (0.2)	-6.00	941.50	935.30	1000.00	941.50	935.30	1000.00	944.50	935.30	1000.00	944.50	935.30	1000.00				8- 0-		Coumut T
31J	31.6 (0.4)		035.70	035 30	1000 00	026.70	005.00	00 000 1	01 000											
32J	41.1 0.1	-10.00	945.20	935.30	1000.00	945.20	935.30	1000.00	938.70	935.30	1000.00	938.70 948.20	935.30	1000.00				-3		Servdiff
33.1	46.1 0.1	-5.00	950.20	945.30	1010.00	950.20	945.30	1010.00	953.20	945.30	1010.00	953.20	945.30	1010.00				-3		Eq. Fund
34.)	46.1 0.1	-5.00	950.20	945.30	1010.00	950.20	945.30	1010.00	953.20	945.30	1010.00	953.20	945.30	1010.00				- 8-		Slate levy
36J	12 0 0.2	-1.00	076.10	945.30	1010.00	950.20	945.30	1010.00	953.20	945.30	1010.00	953.20	945.30	1010.00				-8		D Petroleum
37J	57.7 0.5	-7.00	961.80	955.30	1020.00	961.80	955.30	1020.00	964.80	945.30	1010.00	949.10 964.80	945.30	1010.00				P -		Levy
													20,000	1020,00				01-		Tranp Red

Matrix Matrix<					Illum Par	change	71.00 coastal			「日本の「日本の日本の
Total Total <th< th=""><th>DIESEL</th><th>71.00</th><th>70.00 coastal</th><th></th><th>Basic Coast</th><th>876.50</th><th></th><th></th><th></th><th>10-40-010 - 10-00</th></th<>	DIESEL	71.00	70.00 coastal		Basic Coast	876.50				10-40-010 - 10-00
Total Total <th< td=""><td>1066.40</td><td></td><td>1071.80</td><td></td><td></td><td></td><td></td><td></td><td>EFFECTIVE DATE</td><td>4- lun-08</td></th<>	1066.40		1071.80						EFFECTIVE DATE	4- lun-08
	ZONE	0.05 % Sulphur spect	cifica 0.005% sulphur speci	ification		No VAT				
No. No. <td>DIFF</td> <td>ROD</td> <td>ROD</td> <td>ZOME</td> <td>"concellet</td> <td>d d</td> <td></td> <td></td> <td></td> <td></td>	DIFF	ROD	ROD	ZOME	"concellet	d d				
0 000	0.1 coast	1066.50	1071.90	1A	0.2	876 70				
1 000	3.2	1069.60	1075.00	2A	3.3	879.80		RAL Rail (old		
1 0	4.4 6.6	10/0.80	1076.20	3A	4.3	880.80		COC Custom	er Own Collection	
1 1	8.6	1075.00	10/0.40	4A	6.6	883.10				
(1) (0) <td>12.6</td> <td>1079.00</td> <td>1084.40</td> <td>AC 6A</td> <td>12.9</td> <td>885.60</td> <td></td> <td></td> <td></td> <td></td>	12.6	1079.00	1084.40	AC 6A	12.9	885.60				
11 10000 1000 1000	14.7	1081.10	1086.50	TA	15.0	891.50				
1 1	17.7	1084.10	1089.50	8A	18.4	894.90				
1000 1000 <th< td=""><td>20.7</td><td>1087.10</td><td>1092.50</td><td>9A</td><td>21.3</td><td>897.80</td><td></td><td>DIESEL Retail PUMP PRICE</td><td>not controlled by aovernment</td><td></td></th<>	20.7	1087.10	1092.50	9A	21.3	897.80		DIESEL Retail PUMP PRICE	not controlled by aovernment	
1000 1000 <th< td=""><td>25.6</td><td>1089.90</td><td>1095.30</td><td>10A</td><td>24.0</td><td>900.50</td><td></td><td>hence dealers are allowed to</td><td>set their own PUMP PRICES</td><td></td></th<>	25.6	1089.90	1095.30	10A	24.0	900.50		hence dealers are allowed to	set their own PUMP PRICES	
31/2 0000 1000 <th< td=""><td>31.0</td><td>1097.40</td><td>1102.80</td><td>13A</td><td>31.8</td><td>902.80</td><td></td><td>Shell's Pricing Dept therefore</td><td>does not publish any retail</td><td></td></th<>	31.0	1097.40	1102.80	13A	31.8	902.80		Shell's Pricing Dept therefore	does not publish any retail	
8.1 0000	31.4	1097.80	1103.20	15A	31.8	908.30		OF PUTTIP DITCES TOT UTERS AS INTI-	alers are tree to set their own	
	32.7	1099.10	1104.50	17A	32.6	909.10		environment in which they or	nerved by the particular busilitiess	
101 1001 1003	33.9	1100.30	1105.70	19A	34.2	910.70				
10 1000 1	33.9	1100.30	1086.50	57A 69A	15.0	891.50				
10 101 <td></td> <td></td> <td>A1-00-1</td> <td>WCD</td> <td>7.40</td> <td>310.70</td> <td></td> <td></td> <td></td> <td></td>			A1-00-1	WCD	7.40	310.70				
(1) (1) <td>9.6</td> <td>1076.00</td> <td>1081.40</td> <td>3B</td> <td>9.6</td> <td>886.10</td> <td></td> <td></td> <td></td> <td></td>	9.6	1076.00	1081.40	3B	9.6	886.10				
11 100							DIESEL 0.05% - Gaute	ang WLSP	IP / KERO - Gauteng bulk del	
17.2 0000 0000 000 00000 0000 0000 <th< td=""><td>11.0</td><td>1077.40</td><td>1082.80</td><td>68</td><td>11.0</td><td>887.50</td><td>Wef 4-Jun-08</td><td></td><td>Wef 4-Jun-08</td><td></td></th<>	11.0	1077.40	1082.80	68	11.0	887.50	Wef 4-Jun-08		Wef 4-Jun-08	
13 10000 1000 1000	17.4	1083.80	1080.30	18	14.5	891.00	Basic	829.630		
214 00030 00031 00030 0	18.5	1084.90	1090.30	8	18.5	895.00		39.260	Basic 819.528	
23-5 990.0 700.0 100.0 700.0	21.4	1087.80	1093.20	10B	21.4	897.90		13 900	Whsal mrgn 39.472	
2/2 01/10 04/10 0	23.5	1089.90	1095.30	12B	23.5	900.00	Servdiff	9.500	Zonwall 2000 24 100	
14 168.0 17.7 26 32.0 168.0 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 17.7 26 26 17.7 26 26 27.5 26 27.5 26 27.5 26 27.5 26 27.5 26 27.5 26 27.5 26.5 26.5 27.5 26.5 27.5 26.5 27.5 <td>25.2</td> <td>1091.60</td> <td>1097.00</td> <td>14B</td> <td>25.2</td> <td>901.70</td> <td>Eq. Fund Levy</td> <td>0.000</td> <td>Eq. Fund Levy 0.000</td> <td></td>	25.2	1091.60	1097.00	14B	25.2	901.70	Eq. Fund Levy	0.000	Eq. Fund Levy 0.000	
37 10000 1072.00 25 73.00 100	01	VCOJVE					Slate levy	24.85	Slate levy 0.000	
60 6000 600 600 600 6000	3.4	1060.30	10/3.70	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5.6	882.10	Pipeline Levy	0.15	WLSP 900.600	
13 0000 0000 0000 0000 0000 0000 13 0000 0000 0000 0000 0000 0000 0000 13 0000 0000 0000 0000 0000 0000 0000 23 0000 0000 0000 0000 0000 0000 0000 0000 24 0000 0000 0000 0000 0000 0000 0000 0000 0000 24 0000	6.6	1073.00	1078.40	2 ⁴	1.1	884.20	Incremental Inl. Trsnp	1.50		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	9.9	1076.30	1081.70	90	15.5	892.00		00.0001	Cneck 900.600	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	11.4	1077.80	1083.20	7C	16.9	893.40			0.000	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	12.6	1079.00	1084.40	S S	22.0	898.50				
	13.9 Gauteng	1080.30	1085.70	30	24.1	900.60	check	1080.30		
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	25.4	1091.80	1097.20	110	20.3	902.80		0.00		
32.6 1093.00 1104.40 12.0 37.3 912.30 1093.00 1094.40 12.0 37.3 912.30 1093.00 1093.00 1093.00 1093.00 1093.00 1093.00 1093.00 1093.00 1003.00	30.7	1097.10	1102.50	12C	31.9	908.40			IP/Kero bulk del price - Gautene	
36.6 110.300 1108.40 14.2 37.1 94.20 108.40 110.30 1108.40 16.2 37.1 94.20 108.40 110.30 1108.40 16.2 37.1 94.20 108.40 16.2 37.1 94.20 108.40 110.30 1108.40 16.2 37.1 94.20 108.40 16.2 37.1 94.20 108.40 108.20 55.2 94.20 108.40 108.30	32.6	1099.00	1104.40	13C	35.8	912.30				
36. 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 110.000 100.000 1	36.6	1103.00	1108.40	140	37.7	914.20			DBasic	
374 1102.00 1702.00 170.20 95.200 96.200 95.200<	36.6	1103.00	1108.40	160	37.7	914.20	DIESEL - Gauteng Li	ist Price	D Whsal m	l
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	37.4	1103.80	1109.20	17C	38.7	915.20			Carvoliff	-
12.6 1073.00 1094.40 56C 22.0 88.50 1034.40 56C 23.3 905.60 1037.40	11.4	1077.80	1083.20	57C	16.9	893.40		D Whsal mign		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	12.6	1079.00	1084.40	58C	22.0	898.50				
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	25.4	1088.00	1093.40	600	26.3	902.80		Govmnt Tax	Slate lev	_
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46.1 1112.50 1117.90 33.3 46.1 92.560 46.1 112.50 1117.90 34.1 46.1 92.560 46.1 112.50 1117.90 34.1 46.1 92.560 46.1 112.50 34.1 46.1 92.560 46.1 113.80 34.1 46.1 92.560 47.0 1113.80 34.1 92.560 91.6.6 47.0 1124.10 1129.50 37.1 934.20 57.1 1124.10 1129.50 37.1 934.20	41.1	1107.50	1112.90	32J	41.1	917.60		11%		
46.1 1112.50 1117.90 34.1 46.1 922.60 42.0 1117.90 35.0 46.1 922.60 42.0 118.40 1113.50 31.1 42.0 57.7 1124.10 1129.50 37.1 934.20 57.1 1124.10 1129.50 37.1 934.20	46.1	1112.50	1117.90	33J	46.1	922.60			91%	5
46.1 1112.50 1117.90 35.1 46.1 922.60 42.0 1108.40 1113.80 35.1 42.0 918.50 57.7 1124.10 1129.50 37.1 57.7 934.20 66.1 1129.50 37.1 57.7 934.20 70 1124.10 1129.50 37.1 57.7 934.20 37.4 934.20 334.20	46.1	1112.50	1117.90	34	46.1	922.60				
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	57.7	1108.40 1124.10	1113.80 1129.50	36J	42.0 57.7	918.50				: 1
234										
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4-Jun-08

R S A DUTIES , LEVIES & CONTRIBUTIONS

CHANGE No change																Da	ite of last chang
PRODUCT	Duty	EQF Levy	Fuel Tax.	RAF evv (mva)	d Levy	Tracer dye	ROSE	PASASA CONTR	SABITA	LPG Safet (CAA Lev	Slate F	ipeliné li	1crement	TOTAL	14% 14%	
									N N N N N N N N N N N N N N N N N N N			FCV Y		ו אבר רבא	INFOOT	IN	
UltraLRP95 previously Ultra97	4.0	0.0	127.0	46.5								24.85	0.15	1.5	204.00	ou	7-May-08
Choir V Posson - Aliteration	4.0	0.0	127.0	46.5								24.85	0.15	1.5	204.00	ou	7-May-08
	4.0	0.0	127.0	46.5								24.85	0.15	1.5	204.00	ou	7-May-08
Ultrags (I)	4.0		127.0	46.5	10.01		÷					24.85	0.15	1.5	204.00	ou	7-May-08
	2	2	2.14	0.04	0.01							24.85	0.15	1.5	214.00	ou	7-May-08
Diesel (all)	4.0	0.0	111.0	46.5		0.01						24.85	0.15	1.5	188.01	ou	7-May-08
Illuminating Paraffin		0.0													0.00	ou	2-Jul-03
Avtur and Avgas											2.000				2.000	yes	1-Jul-07
PowerParal (withdrawn)		0.0										-			00.0	VPC	
LPC / Propane		0								0.5					0.50	Ves	
c/kg		0								0.9					0.90	Ves	
Lubricants <i>oils</i> <i>greases</i> c/kg	0.2*						0.6								9.00	yes	1-Jan-02
Penetrn & Cutbk Bit - Rand/Tor	ine								10 F						01 01	co.k	linpoits
Mine Loco Eucl Boilor Fuel		0	0 107						2.4						06.21	CD A	
SO Diesel FI MDF I FD	4.0	0.0	121.0	C.04											177.50	ou	2-Apr-08
SAR RD MTR FI , Furnace FI , SAR Loco Fuel and ThermoShell heating Fuel	4.0	0.0	111.0	46.5		0.01									161.51	оц	* 2-Apr-08
																1	
9.0 c/l Rose conti EXCLUDES FOLLOW	libution a	applica	ble on al	ll virgin &	re-refin	ed minera	al & synt	th. lubes	,								
transformer olis, to olis, chainsaw cutt	erbar lut	edicinal	white of	ils, vegetat. es water-t	Ne oils, M	iaxes, grea	ises,petru	olatums,2 tent nhos	P-Strk petr	ol eng							
pest & fungicidal a drawing compoun	igr. spra) ds,rust p	V oils, pr rreventa	ocess oil. atives.mu	's llub con	npounde se oil. wi	d into sol	lid),marit.	he engine	e oils, rollin	ng oils, ion oils							
									in the lace								

 Ievy / taxes = Gov'ment

 RSA confepotripletentxis

tracer dye levy paid to CEF - oilcos claim input costs incurred to mix tracer dye in IP

7/20/2008

Abs. 10 Abs. 10 Change Visp Remarks 64.m01 7.10 9200 9200 9200 744900 115.00 77.00 9200 9200 64.m01 7.00 9200 9200 9200 64.m02 2.00 9300 9200 9200 64.m03 3.00 664.20 2.00 9300 9200 2.489.05 3.00 664.20 2.00 9300 9200 9200 2.489.05 3.00 664.20 2.00 9200	ins intor	mation is (reated for th	<u>e use of Sh</u>	ell staff .			
Anne DeckAll-Nucleichost Schlanger (hinder kanne) Remarks Annelos Virage Virage Name N	Data							
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7.499-80 55.90 95.70 95.20 93200 6.494-80 110.00 77.40 - - 6.494-81 4.00 556.20 2.00 956.10 - 6.494-82 4.00 556.20 4.00 578.10 - 5.494-7 5.00 553.20 4.00 578.10 - 5.494-7 1.00 4.62.20 1.00 508.10 - 5.494-7 1.00 4.42.20 0.00 568.10 - 5.494-77 1.00 4.42.20 0.00 568.10 - 5.494-77 1.00 4.42.20 0.00 568.10 - 5.494-77 1.00 4.42.20 0.00 4.42.10 - 7.494-77 1.00 4.42.10 - - - 7.494-77 1.00 4.42.10 - - - 7.494-77 1.00 4.42.10 - - - 7.494-77 1.00 4.42.10 <td>4-Jun-08</td> <td>71.00</td> <td>876.70</td> <td>71.00</td> <td>900.60</td> <td></td> <td></td> <td></td>	4-Jun-08	71.00	876.70	71.00	900.60			
2.4963 118.00 774.10 774.10 6.476.10 2.00 656.20 2.00 656.10 6.476.10 2.00 656.20 2.00 656.10 6.476.10 6.00 655.20 2.00 656.10 6.476.10 6.00 655.20 2.00 656.10 6.476.10 6.00 655.20 2.00 656.10 5.476.10 6.00 655.20 2.00 656.10 5.476.10 6.482.20 1.00 656.10 1.00 5.486.77 1.00 447.20 7.00 666.10 1.00 5.446.77 1.00 448.20 7.00 666.10 1.00 5.446.77 1.00 448.20 7.00 451.20 1.00 7.446.77 1.00 448.20 1.00 447.20 1.00 7.446.77 1.00 448.20 1.00 447.20 1.00 7.446.77 1.00 448.20 1.00 447.20 1.00	7-May-08	55.50	805.70	55.50	829.60			
Suber 0. F000 F02.20 F02.00 F02.00 F02.00 Suber 0. -0.00 654.20 -0.00 678.10 Suber 0. -0.00 654.20 -0.00 678.10 Suber 0. -0.00 654.20 -0.00 678.10 Suber 0. -0.00 452.20 0.00 568.10 State 0. -0.00 442.20 0.00 568.10 State 0. -0.00 442.20 0.00 568.10 State 0. -0.00 442.20 0.00 458.10 State 0. -0.00 468.20 0.00 451.10 Zabyord 10.00 458.20 10.00 451.20 Zabyord -0.00 458.20 10.00 452.10 Zabyord -0.00 458.20 10.00 452.10 Zabyord -0.00 458.20 20.00 452.20 Zabyord -0.00 458.20 20.00 452.20 Zabyord -0.00 458.20	2-Apr-08	118.00	750.20	118.00	774 10			
Sineson 200 SS 20 200 SS 20 200 SS 20 SS 20 <ths 20<="" th=""> <thss 20<="" th=""> <ths 20<="" t<="" td=""><td>5-Mar-08</td><td>76.00</td><td>632.20</td><td>76.00</td><td>656 10</td><td></td><td></td><td></td></ths></thss></ths>	5-Mar-08	76.00	632.20	76.00	656 10			
2.4.00.0 55.02.0 50.00	6-Feb-08	2.00	556 20	2.00	580.10			
Address Box Add Box Add <t< td=""><td>2 Jap 09</td><td>-9.00</td><td>556.20</td><td>2.00</td><td>580.10</td><td></td><td></td><td></td></t<>	2 Jap 09	-9.00	556.20	2.00	580.10			
SetSev 10.00 630.20 830.00 837.10	2-Jan-08	58.00	554.20	-9.00	578.10			
CARCAD Disco Disco Disco Disco Disco SARDARD 13.00 13.00 Sign 10 Image: Si	5-Dec-07	10.00	563.20	58.00	587.10			
3-026/07 10.00 4462.00 13.00 676.10 1-Mag.07 17.00 442.20 77.00 566.10 1-Mag.07 17.00 442.20 77.00 566.10 1-Mag.07 17.00 442.20 77.00 566.10 1-Mag.07 10.00 442.20 17.00 566.10 1-Mag.07 10.00 442.20 17.00 442.10 1-Mag.07 10.00 442.00 1 1 1-Mag.07 46.00 38.60 421.20 1 1 1-May.06 14.00 442.00 1 1 1 1-May.06 14.00 440.00 1 1 1 1-May.06 14.00 450.00 442.00 1 1 1-May.06 14.00 450.00 442.00 1 1 1 1-May.06 10.00 462.00 1 1 1 1 1-May.06 10.00 462.00 1 1 1	7-Nov-07	10.00	505.20	10.00	529.10			
5-88-07 10.00 442.20 0.00 506.10 A.J.ArgoT 17.00 475.20 17.00 492.10 A.J.ArgoT 10.00 448.20 10.00 498.10 A.J.ArgoT 10.00 448.20 10.00 498.20 A.Martor 10.00 448.20 10.00 431.20 A.Martor 10.00 408.20 10.00 431.20 A.Martor 10.00 448.20 10.00 431.20 Sater/Or 10.00 448.20 10.00 442.20 A.Martor 10.00 446.20 10.00 442.20 A.Martor 10.00 446.20 10.00 442.20 A.Martor 10.00 446.20 10.00 442.20 A.Martor 440.20 10.00 442.20 10.00 A.Martor 10.00 442.20 10.00 442.20 A.Martor 20.00 442.20 10.00 442.20 A.Martor 30.00 43.20 10.0	3-Oct-07	13.00	495.20	13.00	519.10			
Hage 70 Hage 70 Hage 70 Hage 70 Hage 70 G-Aur 71 200 448.20 2.00 442.10	5-Sep-07	0.00	482.20	0.00	506.10			
4.4.4.07 17.00 475.20 17.00 499.10 2.4.9.07 18.00 445.20 18.00 492.10 2.4.9.07 18.00 445.20 18.00 492.10 7.4.9.07 18.00 445.20 18.00 492.10 7.4.9.07 18.00 445.20 1 1 7.4.9.07 3.00 424.20 3.00 447.20 3.4.9.07 3.00 442.20 1 1 3.4.9.07 3.00 445.20 1 1 5.4.9.06 41.20 - 3.00 447.20 1 5.4.9.06 41.00 448.20 1 1 1 5.4.9.06 3.6.00 448.20 1 1 1 5.4.9.06 3.6.00 448.20 1 1 1 5.4.9.06 3.0.00 493.20 1 1 1 5.4.9.06 1.0.00 493.20 1 1 1 5.4.9.00 3.9.20	1-Aug-07	7.00	482.20	7.00	506.10			
6.June 70 10.00 445.20 2.00 442.10 A.Ager 77 10.00 445.20 18.00 462.10 A.Ager 77 10.00 443.20 10.00 443.20 A.Ager 77 26.00 430.20 10.00 443.20 A.Mar 70 40.00 40.20 10.00 441.20 A.Mar 70 40.00 442.20 2.50 441.20 A.Mar 70 40.00 442.20 2.50 442.20 A.Oue 60 420.00 452.20 452.00 452.20 A.Mar 70 40.00 466.20 2.00 452.20 452.20 A.Mar 70 40.00 466.20 2.00 452.20 450.00 A.Mar 70 40.00 462.20 450.00 452.20 450.00 A.Mar 70 40.00 462.20 450.00 452.20 450.00 452.20 450.00 452.20 450.00 452.20 450.00 450.20 450.00 452.20 450.00 450.00 450.00	4-Jul-07	17.00	475.20	17.00	499.10			
2.489/07 18.00 465.20 18.00 462.10 7.489/07 2000 435.20 10.00 431.20 7.489/07 30.00 432.20 10.00 431.20 3.489/07 30.00 442.20 10.00 431.20 3.489/07 30.00 442.20 10.00 442.20 4.49/07 30.00 442.20 10.00 442.20 1.400/06 422.20 442.20 10.00 442.20 1.400/06 443.20 10.00 442.20 10.00 442.20 5.400/06 445.20 10.00 445.20 10.00 465.20 5.400/06 38.00 422.20 10.00 452.20 10.00 452.20 1.400/06 400.20 20.00 422.20 10.00 10.00 10.00 452.20 10.00 452.20 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.00 10.	6-Jun-07	2.00	458.20	2.00	482.10			
4.4cr.07 90.00 463.20 90.00 462.10 A.16ar.07 10.00 463.20 10.00 463.20 A.16ar.07 268.00 398.20 -26.00 421.20 A.16ar.07 436.00 427.20 -26.00 447.20 B.16ar.08 427.20 -26.00 447.20 - B.16ar.08 447.20 - - - B.16ar.08 446.20 -13.00 462.20 - B.26ar.08 -466.20 -13.00 462.20 - A.16ar.08 -466.20 -21.00 502.20 - A.16ar.08 466.20 -20.00 452.20 - A.16ar.08 -20.00 452.20 - - A.16ar.08 -20.00 452.20 - - A.16ar.08 -40.00 304.20 - - - A.16ar.08 -40.00 304.20 - - - A.16ar.08 -40.00 304.20 - <td>2-May-07</td> <td>18.00</td> <td>456.20</td> <td>18.00</td> <td>480.10</td> <td></td> <td></td> <td></td>	2-May-07	18.00	456.20	18.00	480.10			
T.Mac 70 10.00 498.20 40.00 431.20 S-Man 70 3.00 424.20 3.00 421.20 S-Man 70 3.00 424.20 3.00 424.20 S-Man 70 3.00 424.20 444.20 444.20 I-Mov 66 432.00 446.20 444.20 446.20 S-May 60 436.00 446.20 442.20 442.20 S-Say 60 500 462.20 442.20 442.20 S-May 60 360.00 462.20 442.20 442.20 S-May 60 360.00 462.20 442.20 442.20 S-May 60 360.00 460.20 462.20 442.20 S-May 60 360.00 462.20 462.20 442.20 S-May 60 360.00 462.20 462.20 442.20 S-May 60 360.00 462.20 462.20 462.20 S-May 60 360.00 462.20 462.20 462.20 S-May 60 360.00 360.00	4-Apr-07	30.00	438.20	30.90	462.10			
7-Beb 70 26.00 938.20 26.00 421.20 6-Dep 60 455.00 447.20 447.20 447.20 6-Dep 60 455.00 447.20 452.00 447.20 6-Dep 60 455.00 447.20 452.00 452.20 6-Dep 60 455.00 456.20 22.00 452.20 2-Aug 60 20.00 455.20 20.00 452.20 2-Aug 60 20.00 452.20 20.00 452.20 2-Aug 60 300.00 452.20 20.00 452.20 3-May 60 300.00 452.20 20.00 452.20 3-May 60 300.00 400.60 20.00 452.20 3-May 60 300.00 400.20 20.00 452.20 1-Mar 60 300.00 400.20 20.00 452.20 1-Mar 60 300.00 400.20 20.00 452.20 1-Mar 60 300.00 400.60 20.00 452.00 2-Mar 60 300.00 343.60	7-Mar-07	10.00	408.20	10.00	431.20	-		
3-mm/0 3.00 494.20 3.00 497.20 1-Mov.66 -25.00 445.20 -45.00 445.20 4.004.06 -25.00 445.20 -45.00 -45.00 4.004.06 -25.00 445.20 -45.00 -45.00 2.409.07 45.20 -45.00 504.20 - 2.409.06 456.20 21.00 502.20 - - 2.409.07 452.20 - - - - 4.402.00 462.20 - - - - 4.402.01 306.02 400.01 402.20 - - 5.407.05 5.00 386.20 - - - - 5.407.05 30.00 437.20 - 400.00 - - 5.407.05 30.00 437.80 - - - - 5.407.05 30.00 437.80 - - - - 5.408.00 387.20 10.00	7-Feb-07	-26.00	398.20	-26.00	421 20			
2 Bene 00 2 - 2 - 0 00 4 - 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 5 - 0 00 4 - 0 00 4 - 0 00 5 - 0 00 4 - 0 00 5 - 0 00 5 - 0 00 4 - 0 00 5 - 0 00 4 - 0 00 5 - 0 00 - 0 - 0 00 5 - 0 00 4 - 0 00 5 - 0 00 4 - 0 00 4 - 0 00 - 0 - 0 00 5 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 4 - 0 00 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 - 0	3-Jan-07	3.00	424.20	3.00	447.20			
Horse 13.00 448.20 13.00 448.20 A.Odd 66 20.00 460.20 22.00 462.20 A.Odd 66 20.00 460.20 24.00 660.20 A.Augd 60 460.20 24.00 660.20 A.Mue 60 80.00 448.20 A.Mue 60 400.00 432.20 A.Mue 60 300.00 442.20 432.20 A.Mue 60 300.00 432.20 A.Mue 60 300.00 338.20 5.60 412.20 A.Mue 60 400.00 338.20 4.00 402.60 A.Mue 60 400.00 377.20 -30.00 403.60 A.Mue 60 400.00 402.60 403.60 A.Mue 60 400.00 377.20 30.00 413.60	6-Dec-06	-25.00	421.20	-25.00	441.20			
Line: x Table Table Table Table 6549:00 5500 48120 -500 64220 - 6549:00 1000 46220 - - - 7.440:60 22.00 482.00 - - - 5.440:60 360.00 462.20 20.00 452.20 - - 5.449:60 20.00 462.20 20.00 452.20 - - 5.449:60 400.0 382.20 4.00 462.60 - - 5.449:60 400.0 382.20 4.00 402.60 - - 5.449:60 30.00 378.20 -2.00 386.0 - - 5.449:60 30.00 478.60 - - - - 5.59:65 10.00 409.20 3.00 431.60 - - 5.59:65 10.00 362.20 15.00 436.60 - - 5.40:00 377.20	1-Nov-06	-13.00	446.00	42.00	444.20			-
TACADO TACADO 42.00 482.20 CAM2060 24.00 485.20 21.00 500.20 CAM2060 240.20 20.00 482.20 1 SAUA06 350.00 462.20 20.00 432.20 SAUA06 350.00 462.20 20.00 432.20 SAUA06 350.00 462.20 20.00 432.20 SAUA06 350.00 462.20 20.00 432.20 1 SAUA06 330.20 4.00 432.60 1 1 SAUA06 330.20 4.00 406.60 1 1 SAUA005 1.00 432.60 1 1 1 SAUA005 1.00 432.60 1 1 1 SAUA005 15.00 408.20 1 <td< td=""><td>1-00+00</td><td>-22.00</td><td>440.20</td><td>-13.00</td><td>469.20</td><td></td><td></td><td></td></td<>	1-00+00	-22.00	440.20	-13.00	469.20			
Segue 0 Secue 0 Secue 0 Secue 0 Secue 0 Sclub 60 360.00 468.20 26.00 602.20 20.00 482.20 Image: 0 Secue 0 <td>4-UCI-U6</td> <td>-5.00</td> <td>459.20</td> <td>-22.00</td> <td>482.20</td> <td></td> <td></td> <td></td>	4-UCI-U6	-5.00	459.20	-22.00	482.20			
CAUGU 0 10.00 486.20 10.00 488.20 TAUR-06 20.00 429.20 20.00 452.20 SAM0-06 20.00 429.20 20.00 452.20 SAM0-06 20.00 429.20 20.00 432.20 SAM0-06 308.20 5.60 412.20 1 SAM0-06 308.20 4.00 406.60 1 SAM0-06 4.00 398.20 4.00 402.80 1 SAM0-06 2.00 396.20 4.00 406.60 1 SAM0-06 3.00 408.20 1.00 428.60 1 SAM0-05 3.00 408.20 1.00 428.60 1 SAM0-05 3.00 381.20 13.00 403.60 1 SAM0-05 3.00 381.20 13.00 403.60 1 SAM0-05 3.00 381.20 484.00 383.60 1 SAM0-05 3.00 383.20 4.00 2.60 3	0-Sep-06	-5.00	481.20	-5.00	504.20			
5-14-00 36.00 465.20 36.00 485.20 3May-06 20.00 409.20 20.00 432.20 SMay-06 20.00 322.00 432.20 20.00 May-06 20.00 322.00 400.20 20.00 Mar-06 4.00 394.20 4.00 402.20 Mar-06 -2.00 378.20 -2.00 398.60	2-Aug-06	21.00	486.20	21.00	509.20			
7.4m.66 20.00 423.20 20.00 432.20 5.4m.702 5.00 339.20 5.60 412.20 5.4m.705 5.00 339.20 5.60 412.20 1.4m.705 4.00 339.20 4.00 406.60 1.4m.705 4.00 339.20 4.00 402.60 1.4m.705 4.00 337.62 -2.00 308.60 2.4m.705 1.00 406.20 1.00 428.60 2.4m.705 10.00 406.20 1.0.0 428.60 2.4m.705 15.00 366.20 15.00 418.60 2.4m.705 35.00 343.20 -19.00 337.00 1.4m.705 15.00 362.20 15.00 386.60 1.4m.705 348.00 341.20 35.00 348.20 1.4m.705 45.00 287.20 35.00 348.20 2.4m.70 363.20 -77.70 328.20 - 2.4m.70 363.00 287.90 - <td< td=""><td>5-Jul-06</td><td>36.00</td><td>465.20</td><td>36.00</td><td>488.20</td><td></td><td></td><td></td></td<>	5-Jul-06	36.00	465.20	36.00	488.20			
3.May.00 20.00 406.20 20.00 402.20 1.Mar-06 4.00 384.20 4.00 406.60 1.Mar-06 4.00 384.20 4.00 406.60 1.Mar-06 2.00 376.20 -2.00 336.60 7.Dec.85 -30.00 406.20 1.00 403.60 7.Dec.85 -30.00 403.20 1.00 403.60 5.Oct.05 3.00 409.20 1.00 431.60 5.Oct.05 3.00 408.20 15.00 438.20 5.Aug.05 15.00 386.20 15.00 386.80 5.Aug.05 3.00 341.20 49.40 383.80 5.Aug.05 4.00 287.20 4.00 279.20 5.Aug.05 4.00 287.20 4.00 279.20 5.Aug.05 4.00 287.20	7-Jun-06	20.00	429.20	20.00	452.20			
5-Apr-06 5.00 339.20 5.00 412.20 14reb.96 4.00 339.20 4.00 406.00 14reb.96 4.00 339.20 4.00 402.60 14reb.96 4.00 337.62 -2.00 336.60 24.00 376.20 -3.00 402.72 30.00 402.70 24.00 406.20 -1.00 406.20 -1.00 406.70 24.00 406.20 10.00 422.60	3-May-06	20.00	409.20	20.00	432.20			
LHar-06 4.00 384.20 4.00 4.06.60 4.4m-06 2.00 382.02 4.00 402.60	5-Apr-06	5.00	389.20	5.60	412.20	**************************************		
LFeb-08 4.00 330 20 4.00 402:00 4_Jan-06 2.00 376 20 30.00 400:06 7.00c-05 3.00 400:06	1-Mar-06	4.00	384.20	4.00	406.60			
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Abse-36 -0.00 378.20 -30.00 400.00 Abse-36 -1.00 400.60 - - Abse-36 -1.00 400.60 - - Abse-36 10.00 406.20 -1.00 430.60 - Sep-36 10.00 405.20 10.00 428.60 - Sep-36 10.00 428.60 - - Shup-36 15.00 388.20 15.00 418.60 - Shup-36 13.00 341.20 33.00 403.80 - - Shup-36 13.00 341.20 49.40 333.60 - - Shup-36 45.00 367.20 2.60 388.60 - - Shup-36 45.00 267.20 4.00 279.20 - - Shup-36 45.00 283.90 35.90 - - - Shup-46 267.00 283.90 35.90 - - -	4-Jan-06	-2.00	376.20	-2.00	202.00			
Abayeas Abayeas Abayeas Abayeas Abayeas 5-02t-05 3.00 408.20 1.00 430.60	7-Dec-05	-30.00	378 20	-20.00	400.60			
Autor Autor Autor 75ep-05 10.00 406.20 10.00 428.60 75ep-05 10.00 406.20 10.00 428.60 Autor 51.500 386.20 15.00 438.60 Fabre 418.00 33.00 403.60	2-Nov-05	-1.00	409.20	-30.00	400.60			
Debugge Hou Hou Hou Hou SAug-05 15.00 438.20 15.00 418.60	5 Oct 05	3.00	408.20	-1.00	430.60			
C-Sep-00 6.00 400.20 10.00 428.60 6-Jub-05 33.00 361.20 33.00 438.60	7 0 05	10.00	409.20	3.00	431.60			
SAUG90 ISAU 388 20 15.00 418.60 SAUG95 S3.00 338 20 33.00 433.60 SAUG95 S6.00 367 20 26.00 339.60 AMay-05 S6.00 367 20 26.00 339.60 SAUG950 S6.00 341 20 49.40 333.60 SAMay-05 S6.00 252 20 35.00 214 20 SAUG950 -4.00 257 20 -4.00 279.20 SAUG-04 251 20 -45.00 283.20 SAUG-04 26.00 309.90 26.00 331.90 SAUG-04 26.00 309.90 26.00 305.90 SAUG-04 26.00 233.90 -5.00 289.90 SAUG-04 30.00 271.90 30.00 289.90 <	7-Sep-05	15.00	406.20	10.00	428.60			
6-Lub 05 3.3.00 33.00 403.60 4.May-05 26.00 367.20 26.00 389.60 4.May-05 48.00 341.20 49.40 383.60 2.Mar-05 48.00 341.20 49.40 383.60 2.Feb-05 45.00 267.20 4.00 279.20 3.Fabre 05 45.00 267.20 4.00 279.20 4.Dec-04 -27.70 306.20 -27.70 328.20 4.Dec-04 -27.70 306.20 -27.70 328.20 3.Mov-04 24.00 335.90 -0.0 284.20 4.Dec-04 -27.70 306.20 331.90 -0.0 1.Sep-04 36.00 283.90 36.00 305.90 1.Aug-04 -5.00 284.90 -0.0 284.90 2.Jun-04 -5.00 283.90 -0.0 284.90 2.Jun-04 -5.00 239.90 -2.00 283.90 2.Jun-04 -6.00 239.90 -2.00 284	3-Aug-05	15.00	396.20	15.00	418.60			
1-Jun-05 -19.00 348.20 -19.00 370.60 6-Apr-05 48.00 341.20 48.40 383.60 6-Apr-05 48.00 341.20 49.40 383.60 2-Mar-05 56.00 292.20 35.00 314.20 2-Mar-05 45.00 2257.20 -40.00 2257.20 3-bor-06 -45.00 2257.20 -45.00 283.20 1-Dec-04 -27.70 308.20 -27.70 328.20 1-Dec-04 22.00 309.90 26.00 331.90 1-Sep-04 360.00 289.90 36.00 305.90 1-Sep-04 360.00 279.90 289.90 - 1-Sep-04 360.00 289.90 - - 1-Sep-04 360.00 279.90 289.90 - - 3-Jun-04 30.00 279.90 269.90 - - 3-Aug-04 17.00 241.90 17.00 269.90 - - 3-Aug-04	6-Jul-05	33.00	381.20	33.00	403.60			
AtAg-05 Zé00 367.20 Zé00 389.60	1-Jun-05	-19.00	348.20	-19.00	370.60			
6-Apr-05 49.00 241.20 49.40 383.60	4-May-05	26.00	367.20	26.00	389.60			
2-Mar-05 35.00 292.20 35.00 314.20 2-Feb-05 -4.00 257.20 -4.00 279.20 2-Feb-05 -4.00 257.20 -4.5.00 257.20 1-Dec-04 -27.70 306.20 -27.70 328.20 3Nov-04 24.00 333.90 26.00 331.90 1-Dec-04 -27.70 306.20 -27.70 328.20 3Nov-04 24.00 333.90 26.00 331.90 1-Sep-04 36.00 283.90 36.00 269.90 1-Sep-04 30.00 271.90 30.00 283.90 2-Jun-04 -6.00 233.90 -5.00 255.90 2-Jun-04 -6.00 233.90 -2.00 269.90 1-Feb-04 17.00 241.90 17.00 269.90 1-Feb-04 17.00 241.90 7.00 269.90 1-Feb-04 17.00 245.90 20.90	6-Apr-05	49.00	341.20	49.40	363.60			
2-Feb-05 -4.00 257.20 -4.00 279.20 5-Jan-05 46.00 261.20 -45.00 283.20	2-Mar-05	35.00	292.20	35.00	314.20			
5-Jan-05 -45.00 281.20 -283.20 1-Dec-04 -27.70 306.20 -27.70 328.20 6-Oct-04 26.00 303.90 26.00 355.90 6-Oct-04 26.00 309.90 26.00 331.90 1-Sep-04 36.00 283.90 36.00 305.90 1-Aug-04 -15.00 247.90 -15.00 269.90 2-Jun-04 -9.00 26.20 -9.00 263.90 2-Jun-04 30.00 271.90 30.00 283.90 3-May-04 -6.00 233.90 -5.00 255.90 3-May-04 -6.00 239.90 -2.00 260.90 3-May-04 -2.00 224.90 2.00 214.90 3-May-04 -2.00 224.90 2.00 217.30 3-May-04 -2.00 224.90 2.00 217.30 3-May-04 -2.00 224.90 2.00 217.30 3-May-03 9.60 239.90 2.00 2.00<	2-Feb-05	-4.00	257.20	-4.00	279.20			
1-Dec-04 -27.70 306.20 -27.70 328.20 3-Nov-04 24.00 333.90 24.00 365.90	5-Jan-05	-45.00	261.20	-45.00	283.20			
3-Nov-04 24.00 335.90 24.00 355.90	1-Dec-04	-27.70	306.20	-27.70	328.20			
B-Oct-04 26.00 339.90 26.00 331.90	3-Nov-04	24.00	333.90	24.00	355.90			
Issep-04 36.00 233.90 36.00 305.90 I-Aug-04 -15.00 247.90 -15.00 269.90	6-Oct-04	26.00	309.90	26.00	331.90			
Lag_04 Lag_04 Jobs 30 Jobs 30 7.Jul-04 -9.00 262.90 -9.00 284.90	1-Sep-04	36.00	283.90	36.00	305.90			
Hos Ho	1-Aug-04	-15.00	247.90	15.00	260.00			
Juncov 1000 2010 <	7-101-04	-9.00	262.00	-15.00	203.30			
Calified Solution 241,90 Solution 293,90 Constraints May-04 6.00 231,90 -5.00 255,90 Constraints	2 lun 04	-5.00	202.90	-9.00	284.90			
Juncy c.00 241.90 s.00 253.90 7-Apr-04 -6.00 233.90 -5.00 255.90	5-May 04	30.00	2/1.90	30.00	293.90			
C-PQI-04 233.90 233.90 25.00 265.90 3Mar-04 -2.00 239.90 -2.00 260.90	7 Apr 01	8.00	241.90	8.00	263.90			
I-role 239.90 -2.00 260.90 LFeb-04 17.00 224.90 -2.00 245.90 -Nor-03 9.60 224.90 -2.00 245.90 -Nor-03 9.60 228.90 9.60 239.90 LOct-03 -8.00 209.30 -8.00 239.90 LOct-03 -8.00 209.30 -8.00 230.30 Sep-03 2.00 217.30 2.00 238.30 -Aug-03 10.00 215.30 10.00 236.30 2-Jul-03 17.00 205.30 17.00 228.30 -May-03 -53.00 220.30 -53.00 209.30 -May-03 8.00 273.30 10.20 294.30 -Mar-03 18.00 266.10	-Apr-04	.2.00	233.90	-5.00	255.90			
I-Feb-04 I.00 241.90 I.00 262.90 P-Jen-04 -2.00 226.90 8.00 247.90 I-Dec-03 8.00 226.90 8.00 247.90 I-Dec-03 9.60 218.90 9.60 239.90 I-Oct-03 -8.00 209.30 -8.00 239.90 I-Oct-03 -8.00 209.30 -8.00 236.30 I-Sep-03 2.00 217.30 2.00 238.30 I-Aug-03 10.00 215.30 10.00 226.30 I-Jun-03 -32.00 188.30 -32.00 299.30 I-Jun-03 -53.00 220.30 -53.00 241.30 I-May-03 18.00 273.30 10.20 294.30 I-Mar-03 18.00 266.30 18.00 284.10 I-Feb-03 Zero 247.30 Zero 266.10 I-Jun-03 -22.00 246.10 Interve Interve I-Mar-03 18.90 266.30 18.90 288.10 Interve I-Dec-02 16.90 268.30	o-Mar-04	-2.00	239.90	-2.00	260.90			
-Jan-04 -2.00 224.90 -2.00 245.90 LDec-03 8.00 226.90 8.00 247.90	-l-eb-04	17.00	241.90	17.00	262.90			-
-Dec-03 8.00 226.90 8.00 247.90 -Nov-03 9.60 218.90 9.60 239.90	'-Jan-04	-2.00	224.90	-2.00	245.90			
-Nov-03 9.60 218.90 9.60 239.90 I-Oct-03 -8.00 209.30 -8.00 230.30 -Sep-03 2.00 217.30 2.00 238.30 -Aug-03 10.00 215.30 10.00 236.30 2-Jul-03 17.00 205.30 17.00 226.30 2-Jul-03 -32.00 188.30 -32.00 209.30 -May-03 -53.00 220.30 -53.00 241.30 -Apr-03 8.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 -Jan-03 -22.00 246.10 - - -Dec-02 16.90 289.30 16.90 288.10 - -Nov-02 18.90 286.20 18.90 365.00 - -Oct-02 22.00 267.30	-Dec-03	8.00	226.90	8.00	247.90			
-Oct-03 -8.00 209.30 -8.00 230.30 -Sep-03 2.00 217.30 2.00 238.30 -Aug-03 10.00 215.30 10.00 236.30 2-Jul-03 17.00 205.30 17.00 226.30 -Jun-03 -32.00 188.30 -32.00 209.30 -May-03 -53.00 220.30 -53.00 241.30 -May-03 -53.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jon-02 18.90 266.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 -Sep-02 13.00 245.30 13.00	-Nov-03	9.60	218.90	9.60	239.90			
Sep-03 2.00 217.30 2.00 238.30 -Aug-03 10.00 215.30 10.00 236.30 2-Jul-03 17.00 205.30 17.00 226.30 -Jun-03 -32.00 188.30 -32.00 209.30 -May-03 -53.00 220.30 -53.00 241.30 -May-03 -53.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jon-03 -22.00 247.30 Zero 266.10 -Dec-02 16.90 288.10	-Oct-03	-8.00	209.30	-8.00	230.30	1		
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2-Jul-03 17.00 205.30 17.00 226.30 -Jun-03 -32.00 188.30 -32.00 226.30 -May-03 -53.00 220.30 -53.00 241.30 -Apr-03 8.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 246.20 288.10	-Aug-03	10.00	215.30	10.00	236.30			
-Jun-03 -32.00 188.30 -32.00 209.30 -May-03 -53.00 220.30 -53.00 241.30 -Apr-03 8.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 -Joe-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 266.10	2-Jul-03	17.00	205.30	17.00	226.30		*****	
-May-03 -53.00 220.30 -53.00 241.30 -Apr-03 8.00 273.30 10.20 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 -Joe-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 -Sep-02 13.00 245.30 13.00 264.10 -Jul-02 -2.00 265.30 13.00 264.10 -Jul-02 -8.00 245.30 -8.00 264.10	-Jun-03	-32.00	188 30	-32.00	200.00			
Apr-03 8.00 273.30 10.20 294.30 •Mar-03 18.00 265.30 18.00 284.10 •Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 Jun-02 -8.00 253.10	May-03	-53.00	220.20	-53.00	205.00			
-Mar-03 18.00 265.30 18.00 294.30 -Mar-03 18.00 265.30 18.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 -Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 -Jul-02 -11.00 234.30 -11.00 253.10 -Jun-02 -8.00 245.30 -8.00 264.10	-Apr 02	8.00	220.30	10.20	241.30			
-mar-0.3 Zero 265.30 16.00 284.10 -Feb-03 Zero 247.30 Zero 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 -Jul-02 -11.00 234.30 -11.00 253.10 Jun-02 -8.00 264.10	Mer 00	18.00	273.30	10.20	294.30			-
-Feb-03 247.30 247.30 266.10 -Jan-03 -22.00 247.30 -22.00 266.10 Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 -Sep-02 13.00 245.30 13.00 264.10 -Jun-02 -20.0 232.30 -2.00 251.10 -Jun-02 -8.00 245.30 -40.00 253.10	-iviar-03	7	265.30	18.00	284.10			
-Jan-03 -24.00 247.30 -22.00 266.10 Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 -Jul-02 -11.00 234.30 -11.00 253.10 Jun-02 -8.00 264.10 -11.00 253.10	-⊢eb-03	Zero	247.30	Zero	266.10			
Dec-02 16.90 269.30 16.90 288.10 Nov-02 18.90 286.20 18.90 305.00 -Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 -Jul-02 -11.00 234.30 -11.00 253.10 Jun-02 -8.00 264.10 -11.00	-Jan-03	-22.00	247.30	-22.00	266.10			
Nov-02 18.90 286.20 18.90 305.00 Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 Aug-02 -2.00 232.30 -2.00 251.10 Jul-02 -11.00 234.30 -11.00 253.10	Dec-02	16.90	269.30	16.90	288.10			
Oct-02 22.00 267.30 22.00 286.10 Sep-02 13.00 245.30 13.00 264.10 Aug-02 -2.00 232.30 -2.00 251.10 -Jul-02 -11.00 245.30 -11.00 253.10 Jun-02 -8.00 245.30 -8.00 264.10	Nov-02	18.90	286.20	18.90	305.00	[
Sep-02 13.00 245.30 13.00 264.10 Aug-02 -2.00 232.30 -2.00 251.10 -Jul-02 -11.00 234.30 -11.00 253.10 Jun-02 -8.00 245.30 -8.00 264.10	-Oct-02	22.00	267.30	22.00	286.10			
Aug-02 -2.00 232.30 -2.00 251.10 -Jul-02 -11.00 234.30 -11.00 253.10 -Jun-02 -8.00 245.30 -8.00 264.10	Sep-02	13.00	245.30	13.00	264 10			
Jul O2 -11.00 234.30 -11.00 253.10 Jul O2 -8.00 245.30 -8.00 264.10	Aug-02	-2.00	222.20	-2.00	204.10			
Jun 02 -8.00 245.30 -8.00 264.10	- lul. 02	-11.00	202.00	-11 00	251.10			
<u>Jun-02</u> 245.30 -0.00 264.10	-Jun 02	.2.00	, 234.30	-11.00	253.10			
	-Jun-02	14.40	245.30	-0.00	264.10			

7/20/20085:06 PM

[1	1			
2 405 02	-6.00	244.00	6.00		
3-Apr-02	-0.00	241.90	-6.00	260.70	Railage incr in zones & MD changes for B zones.
6-Mar-02	-5.00	247.90	-5.00	265.90	
6-Feb-02	16.00	252.90	16.00	270.90	
2-Jan-02	9.97	236.90	9.97	254.90	
5-Dec-01	-10.00	226.93	-10.00	244.93	
7-Nov-01	9.00	236.93	9.00	254.93	Railage incr in C zones 5:6:7:8:10 to 17.
3-Oct-01	10.00	227.93	10.00	245.93	
5-Sep-01	0.00	217.93	0.00	235.93	
1-Aug-01	-10.00	217.93	-10.00	235.93	
4-Jul-01	-4.00	227.93	-4.00	245.93	
6-Jun-01	-4.00	231.93	-4.00	249.93	
2-May-01	6.60	235.93	6.60	253.93	
4-Apr-01	8.00	229.33	9.60	247 33	Pailage incroveent zones A 1:2:4:5:9 8 all Jacob
7-Mar-01	-5.00	221.33	-5.00	237 73	
7-Feb-01	-25.00	226.33	-25.00	242 73	
3-Jan-01	-22.00	251.33	-22.00	267 73	
6-Dec-00	-0.80	273 33	-0.80	207.73	
1-Nov-00	24.00	274.13	24.00	209.73	
4-Oct-00	35.00	250 13	35.00	290.55	
6-Sep-00	14.00	215 13	14.00	200.55	
2-Aug-00	13.00	201 12	13.00	231.53	
5- Jul-00	4.00	100 12	4.00	217.53	
7- lun-00	-4.00	100.13	-4.00	204.53	
3-May-00	-3.00	104.13	-4.00	200.53	
5 Apr 00	14.00	100.13	-3.00	204.53	
1-Mar 00	14.00	191.13	14.00	207.53	Rallage Incr. A,B,J zones Gauteng no change.
2-Feb 00	6.00	111.13	6.00	191.73	
5- lan 00	6.00	103.13	6.00	1//.73	
1-Dec 00	2.00	157.13	2.00	1/1.73	
3-Nev 00	2.00	151.13	2.00	165.73	
6-Oct 00	7.00	149.13	3.00	163.73	
1-Son 00	14.00	145.63	14.00	160.23	
4-Aug 00	4.00	138.63	14.00	153.23	
7. Jul 00	-1.00	124.63	4.00	139.23	
2- Jun 99	7.00	120.63	-1.00	135.23	
2-Jun-99	10.00	121.63	7.00	136.23	
5-May-99	-1.00	114.63	10.00	129.23	
7-Apr-99	-1.00	104.63	-1.00	119.23	Railage incr. Gauteng 0.7 c/l
3-Mar-99	2.00	105.63	6.00	119.53	
3-Feb-99	5.00	99.63	3.00	113.53	
0-Jan-99	-5.00	96.63	-5.00	110.53	
2-Dec-98	-6.00	101.63	-6.00	115.53	
4-INOV-98	0.00	107.63	0.00	121.53	
7-000-98	0.00	107.63	0.00	121.53	No change
2-Sep-98	3.00	107.63	3.00	121.53	
5-Aug-98	8.00	104.63	8.00	118.53	
1-JUI-98	-3.00	96.63	-3.00	110.53	
3-JUN-98	6.00	99.63	6.00	113.53	
6-May-98	4.00	93.63	4.00	107.53	
1-Apr-98	-3.00	89.63	-3.00	103.53	Railage incr. Gauteng 0.8 c/l
4-Mar-98	-7.00	92.63	-7.00	105.73	
4-FeD-98	-11.00	99.63	-11.00	112.73	
7-Jan-98	-7.00	110.63	-7.00	123.73	
5-Dec-97	9.00	117.63	9.00	130.73	
1 Oct 07	4.00	108.63	4.00	121.73	
1-Oct-97	-1.00	104.63	-1.00	117.73	
3-Sep-97	-1.00	105.63	-1.00	118.73	
6-Aug-97	0.00	106.63	0.00	119.73	
2-JUI-9/	-1.00	106.63	-1.00	119.73	
4-Jun-9/	-4.00	107.63	-4.00	120.73	Railage incr. Gauteng 1.2 c/l
7-iviay-97	-4.00	111.63	-4.00	123.53	
2-Apr-97	-9.00	115.63	-9.00	127.53	
5-Ech 07	1.00	124.63	-13.00	136.53	
1- lon 07	8.00	137.03	0.00	149.53	
4-Doc.06	3.00	130.03	2.00	148.53	
4-Dec-96	2.00	128.63	3.00	140.53	
2.004.00	12.00	125.63	2.00	137.53	
2-UCI-96	7.00	123.63	12.00	135.53	
4-Sep-96	1.00	111.63	7.00	123.53	
1-Aug-96	-4.00	104.63	-4.00	116.53	
3-JUI-96	-6.00	108.63	-6.00	120.53	
5-JUN-96	4.00	114.63	4.00	126.53	
1-May-96	1.00	110.63	1.00	122.53	
3-Apr-96	1.00	109.63	1.00	121.53	
6-Mar-96	-3.00	108.63	-3.00	120.53	
/-⊢eb-96	6.00	111.63	6.00	123.53	
3-Jan-96	9.00	105.63	9.00	117.53	
6-Dec-95	5.00	96.63	5.00	108.53	
1-Nov-95	3.00	91.63	3.00	103.53	
4-Oct-95	0.00	88.63	0.00	100.53	
6-Sep-95	-1.00	88.63	-1.00	100.53	
2-Aug-95	-3.00	89.63	-3.00	101.53	
5-Jul-95	0.00	92.63	0.00	104.53	
7-Jun-95	2.00	92.63	2.00	104.53	
3-May-95	-1.00	90.63	-1.00	102.53	
5-Apr-95	0.00	91.63	0.00	103.53	
1-Mar-95	1.00	91.63	1.00	103.53	
1-Feb-95	-4.00	90.63	-4.00	102.53	
4-Jan-95	0.00	94.63	0.00	106.53	
7-Dec-94	5.00	94.63	5.00	106.53	

7/20/20085:06 PM

2-Nov-94	4.00	89.63	4.00	101.53		
30-Oct-93	-2.00	85.63	-2.00	97.53		
15-Sep-93	5.50	87.63	5.50	99.53		
2-Apr-93	7.00	82.13	7.00	94.03		Railage incr. Gauteng 0.8 c/l
10-Oct-92	3.00	75.13	3.00	86.23		
21-Mar-92	0.00	72.13	0.00	83.23		Railage incr. Gauteng 0.9 c/l
6-May-91	-10.00	72.13	-10.00	82.33		
8-Apr-91	0.00	82.13	0.00	92.33		
	ONE PRI	CE FOR DOM	IESTIC & IN	DUSTRIAL		
	Industrial	Domestic		Domestic	Industrial	
8-Apr-91	82.13	82.13	0	92.33	92.33	Domestic & Industrial one price
1-Apr-91	92.83	82.13	0	92.33	103.03	
25-Mar-91	92.83	82.13	-12.0	92.33	103.03	Dom - (12c/l); Ind -(9.9) c/l
12-Nov-90	114.73	94.13	-3.0	104.33	124.93	Dom -(3c/l); Ind no change
20-Oct-90	114.73	97.13	25.0	107.33	124.93	Dom + 25c/l; Ind + 24c/l
4-Sep-90	90.73	72.13	15.0	82.33	100.93	Railage incr. Gauteng 1.2 c/l
4-Sep-90						S/Diff incr 1.1c/l included in 15c
15-Apr-89	75.73	57.13	5.3	66.13	84.73	Railage incr. Gauteng 0.7 c/l
15-Apr-89					1	Dom + 5.3c/l; Ind + 7 c/l
16-Jan-89	63.43	51.83		60.13	71.73	Railage incr. Gauteng 0.6 c/l
1-Jan-89	63.43	51.83		59.53	71.13	
1-Sep-88	63.43	51.83		59.53	71.13	

.

CONTROLLED PRODUCT PRICE CHANGE HISTORY All prices are RETAIL wholesale list prices in RSA cents per litre , in GAUTENG

contprod price history



239

-162.00

900.60

1080.30

918.30

Jun-08

	st / Vpinl	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3:00	3.00	0.00	00.00	0.00	0.00	3.00	00 0	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	0.00	3.00	3.00	3.00	0.00	00.0		0.00	0.00	00.0	00.0	00.00
s	3 / VPin VPc	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	000	0.00	0.00	00.0	00.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
r C diferentia	3 / VPcsUIrp9	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	0.00	0.00	00.00	00.0	-3.00	000	-3.00	-3.00	3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	-3.00	00.0	0.00	0.00	0.00	-3.00	-3.00	00.0	0.00	0.00		-10.00	00.00	0.00	0.00	000
verl, V-Powe	Power (I) Jirps	904.30	908.30	910.30	912.30	916.30 010 30	922.30	925.30	927.30	929.30	935.30	935.30	935.30 010 30	935.30	913.30	015 30	918.30	921.30	922.30	927.30	929.30	906.30	907.30	914.30	915.30	916.30	925.30	929.30	935.30	935.30	935.30	935.30	916.30	925.30	935.30	935.30	935.30 935.30		935.30	945.30	945.30	945.30	0000
Itra93 , V-Pow	-Power (C) V-	907.30	911.30	913.30	915.30	919.30 922.30	925.30	928.30	930.30	932.30 035 30	935.30	935.30	935.30	935.30	916.30	018 30	921.30	924.30	928.30	930.30	932.30	909.30	910.30	917.30	918.30	919.30	928.30	932.30	935.30	935.30 035.30	935.30	935.30 918.30	919.30	928.30	935.30	935.30	935.30 935.30		945.30	945.30	945.30	945.30	
	UltraLRP93 V	904.30	908.30	910.30	912.30	916.30	922.30	925.30	927.30	929.30	935.30	935.30	935.30	935.30	913.30	015 3U	918.30	921.30	925.30	927.30	929.30	906.30	907.30	914.30	915.30	916.30	925.30	929.30	935.30	935.30 035.30	935.30	935.30	916.30	925.30	935.30	935.30	935.30 935.30	001.00	935.30	945.30	945.30	945.30	
	93 / 95	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	3.00	00.00	3.00	3 00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	0.00	0.00	0.00	3.00	3.00	3.00	0.00	0.00	00.0	000	10.00	0.00	0.00	0.00	- 11/1/ ·
)	FPUMP diff	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	47 00	47.00	45.00	44.00 50.00	44.00	50.00	50.00	50.00	50.00	50.00	50.00	00.06	50.00	50.00	50.00	50.00	50.00	50.00	50.00	46.00	42.00	42.00	41.00 50.00	50.00	50.00	47.00	46.00	42.00	00 11	47.00	42.00	42.00	46.00	111 111
	ff WLSP dif	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	42.00	42.00	40.00	39.00	39.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	41.00	37.00	37.00	36.00 45.00	45.00	45.00	42.00	41.00	36.00	00.64	42.00	37.00	37.00	41.00	
	Jew pump	972.00 075.00	976.00	978.00	980.00	987.00	00.066	993.00	995.00	00.0001	1000.00	1000.00	987.00	1000.00	981.00	983.00	986.00	989.00	993.00	995.00	00.788	974.00	975.00	982.00	983.00	984.00	993.00	00.700	1000.00	1000.00	1000.00	1000.00 983.00	984.00	993.00 00.769	1000.00	1000.00	1000.00	00000	1010.00	1010.00	1010.00	1010.00	
	ew wisp	907.30	911.30	913.30	915.30	922.30	925.30	928.30	930.30	935.30	935.30	935.30	935.30	935.30	916.30	918.30	921.30	924.30	928.30	930.30	932.30	909.30	910.30	917.30	918.30	919.30	928.30	932.30	935.30	935.30	935.30	935.30 918.30	919.30	928.30 932.30	935.30	935.30	935.30	036 30	945.30	945.30	945.30	945.30	
	dund pl	922.00	926.00	928.00	930.00	937.00	940.00	943.00	945.00	953.00	953.00	955.00	937.00	956.00	931.00	933.00	936.00	939.00	943.00	945.00	941.00	924.00	925.00	932.00	933.00	934.00 936.00	943.00	947.00	954.00	958.00 958.00	958.00	959.00 933.00	934.00	943.00 947.00	953.00	954.00	959.00	062.00	963.00	968.00	968.00	964.00	
UltraLRP95 Vpower C	old wisp 0	862.30 865 30	866.30	868.30	874 30	877.30	880.30	883.30	885.30	893.30	893.30	895.30	877.30	896.30	871.30	873.30	876.30	880.30	883.30	885.30	00.100	864.30	865.30	872.30	873.30	876.30	883.30	887.30	894.30	898.30 898.30	898.30	873.30	874.30	883.30 887.30	893.30	894.30	899.30	803 30	903.30	908.30	908.30	904.30	
	ZONE	1A 2A	34	4A	5A 64	A7	8A	A9	104	13A	15A	174	57A	69A	38	6B	78	88	10B	12B	40	3C	5C	23	20	200	10C	110	13C	14C 15C	16C	570	58C	60C 61C	62C	63C	67C	31.1	32J	33J	35J	36J	
	- INUL I	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	48.00	50.00	47.00	50.00	50.00	50.00	50.00	50.00	50.00	00.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	49.00	45.00	45.00	50.00	50.00	20.00 50.00	50.00	49.00	44.00	50.00	40.00	45.00	45.00	49.00	
		45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	45.00	43.00	45.00	42.00	45.00	45.00	45.00	45.00	45.00	45.00	00.04	45.00	45.00	45.00	45.00	45.00	45.00	45.00	44.00	40.00	40.00	45.00	45.00	45.00	45.00	44.00	39.00	45.00	35.00	40.00	40.00	44.00	
	dilind wai	969.00	973.00	975.00	971.00	984.00	987.00	00.069	00766	1000.00	1000.00	1000.00	984.00	1000.00	978.00	980.00	983.00	986.00	00.066	992.00	00.460	971.00	975.00	00.676	980.00	981.00	990.00	994.00	1000.00	1000.00	1000.00	980.00	981.00	994.00	1000.00	1000.00	1000.00	100000	1000.00	1010.00	1010.00	1010.00	
aw wich	dew wish	904.30	- 908.30	910.30	916.30	919.30	922.30	925.30	929.30	935.30	935.30	935.30	919.30	935.30	913.30	915.30	918.30	921.30	925.30	927.30	00.030	906.30	910.30	914.30	915.30	918.30	925.30	929.30	935.30	935.30 935.30	935.30	915.30	916.30	929.30	935.30	935.30	935.30	935.30	935.30	945.30	945.30	945.30	
3 Mid numo In	duind no	919.00	923.00	925.00	931.00	934.00	937.00	940.00	944.00	950.00	950.00	952.00	934.00	953.00	928.00	930.00	933.00	936.00	940.00	942.00	20-1-0	921.00	925.00	929.00	930.00	933.00	940.00	944.00	951.00	955.00	955.00	930.00	931.00	944.00	950.00	955.00	956.00	950.00	960.00	965.00	965.00	961.00	
UltraLRP9. Vpower I	deim pio	859.30 862.30	863.30	865.30	871.30	874.30	877.30	880.30	884.30	890.30	890.30	893.30	874.30	893.30	868.30	870.30	873.30	877.30	880.30	882.30	2	861.30	865.30	869.30	870.30	873.30	880.30	884.30	891.30	05.30 895.30	895.30	870.30	871.30	884.30	890.30	891.30	896.30	890.30	900.30	905.30	905.30	901.30	
	ZONE	1A 2A	3A	4A 50	PC PC	TA	84	94	114	13A	15A	A11	57A	69A	3B	68	78	88	10B	12B 14B	2	30	50	90	20	າ ເ	100	11C 12C	130	150	16C	570	58C	61C	62C	63C 64C	67C	31.1	32J	33J	35J	36J	210

ANNEXURE L

Site monthly volume? * Previous working/ business experience before running a service station?

		Previous work	king/ business expo ning a service stati	erience before on?
		Financial Sector	Education sector	Sales & Marketing sector
Site monthly volume	100 001 - 250 000	3	2	3
	250 001 - 300 000	3	6	7
	350 000+	4	1	6
	Total	10	9	16

		Previous work experience be service	king/ business fore running a station?	
		Managing business	other	Total
Site monthly volume	100 001 - 250 000	0	2	10
	250 001 - 300 000	2	3	21
	350 000+	4	6	21
	Total	6	11	52

Ch	i-Square Te	sts	
	Value	df	Asymp. Sig. (2- sided)
Pearson Chi-Square	7.716 ^a	8	.462
Likelihood Ratio	9.170	8	.328
Linear-by-Linear Association	2.259	1	.133
N of Valid Cases	52		



Site monthly volume: Do motorists care about regular price changes?

		Do motorists care about the regula price changes? Very important Important	
Site monthly volume	100 001 - 250 000	2	7
	250 001 - 300 000	9	9
	350 000+	11	9
	Total	22	25

		Do motorists care about regular prices changes?	
		Neutral	Total
Site monthly volume	100 001 - 250 000	1	10
	250 001 - 300 000	3	21
	350 000+	1	21
	Total	5	52

Chi-Square Tests					
	Value	df	Asymp. Sig. (2- sided)		
Pearson Chi-Square	3.911 ^ª	4	.418		
Likelihood Ratio	4.105	4	.392		
Linear-by-Linear Association	2.422	1	.120		
N of Valid Cases	52				



		How the impact of high prices is affected sales volume? Very important Important	
Site monthly volume	100 001 – 250 000	4	6
	250 001 – 300 000	7	13
	350 000+	8	13
	Total	19	32

Site monthly volume: * How do high prices affect sales?

		How the impact of high prices is affected sales volume?	
		Neutral	Total
Site monthly volume	100 001 – 250 000	0	10
	250 001 – 300 000	1	21
	350 000+	0	21
	Total	1	52

Chi-Square Tests

			Asymp. Sig. (2-
	Value	df	sided)
Pearson Chi-Square	1.58 7 ª	4	.811
Likelihood Ratio	1.925	4	.750
Linear-by-Linear Association	.005	1	.945
N of Valid Cases	52		



Site monthly volume: * Do you support the deregulation of petrol market?

		Do you support the deregulation of petrol market?			rol market?
		Very important	Important	Neutral	Less important
Site monthly volume	100 001 - 250 000	0	0	1	8
	250 001 - 300 000	0	0	6	8
	350 000+	1	1	2	14
	Total	1	1	9	30

		Do you support the deregulation petrol market?	
		not important	Total
Site monthly volume	100 001 - 250 000	1	10
	250 001 - 300 000	7	21
	350 000+	3	21
-	Total	11	52

Chi-Square Tests					
	Value	df	Asymp. Sig. (2- sided)		
Pearson Chi-Square	10.618ª	8	.224		
Likelihood Ratio	11.306	8	.185		
Linear-by-Linear Association	.614	1	.433		
N of Valid Cases	52				



Site monthly volume: * Is the service level offered to motorists important?

		Is the service level offered to motorists important?	
		Very important	Important
Site monthly volume	100 001 - 250 000	3	7
	250 001 - 300 000	3	17
	350 000+	5	16
	Total	11	40

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		Is the service level offered to motorists important?	
		Neutral	Total
Site monthly volume	100 001 - 250 000	0	10
	250 001 - 300 000	1	21
	350 000+	0	21
	Total	1	52

Chi-Square Tests

			Asymp. Sig. (2-
	Value	df	sided)
Pearson Chi-Square	2.493ª	4	.646
Likelihood Ratio	2.846	4	.584
Linear-by-Linear Association	.002	1	.961
N of Valid Cases	52		



Site monthly volume: Will the high price affect the survival of the site in the next five years?

		Will the high p survival of the sit yea		
		Very important	Important	Total
Site monthly volume?	100 001 - 250 000	4	6	10
	250 001 - 300 000	4	17	21
	350 000+	7	14	21
	Total	15	37	52

			Will the high price affect the survival of the site in the next five years?				
			Very important		Important		Total
Site monthly volume? 10	0 001 - 250 00	00		4		6	10
250 001 - 300 000			4		17	21	
350 000+				7		14	21
				Asymp. S	ig. (2-		
	Value		df	sided)			
Pearson Chi-Square	1.794 ^a		2	.408			
ikelihood Ratio 1.836		2	.399				
Linear-by-Linear Association	.005			.944			
N of Valid Cases	52						


ANNEXURE N



Source: FM (2008)













