



STUDY ON BARRIERS TO ENTRY IN LIQUID FUEL DISTRIBUTION IN SOUTH AFRICA

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Abstract

Barriers to entry, by reinforcing the market power of incumbent firms in liquid fuel distribution, have meant that the pace of transformation throughout the fuel value chain in South Africa has been slow. The ability of new firms to enter the sector, develop capabilities, and become effective competitors to the major oil companies is important for achieving transformation and introducing dynamic rivalry in the liquid fuels sector. This paper draws on interviews with market participants and publicly available sources to assess the nature and extent of barriers to entry and expansion of firms in the wholesale of liquid fuels. The analysis categorises barriers to entry along six main themes, namely: the costs of entry, skills and training, access to supply, access to customers, and the reactions of incumbents to entry, and policy and regulatory challenges. However, it is clear that these challenges at the wholesale level form part of a broader set of concerns in the value chain as a whole, relating to access to infrastructure and low levels of competition between the major oil companies themselves. The paper concludes by suggesting a set of short and long-term remedies for increasing access and competition in transportation and storage, wholesaling infrastructure, and in retail.

JEL classification L1, O1

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1 Introduction

This research study has been conducted as part of the barriers to entry core research area of the Centre for Competition, Regulation and Economic Development at the University of Johannesburg. It contributes to understanding the barriers to entry and expansion of firms involved in the wholesale distribution of liquid fuels in South Africa. The study locates itself in the ongoing national debate regarding the transformation of the fuel sector value chain which has historically been controlled by a handful of large multinational oil companies.¹ In this way we hope to add to the discussion in terms of understanding challenges and opportunities in liquid fuel wholesale in the broader context of the liquid fuel value chain from a competition and regulatory policy, and economic development perspective.

Our approach has been to focus on understanding the market structure, main stakeholders and interests, regulatory context, pricing and costs, competitive dynamics, and firm strategies, as part of assessing the experiences of firms in entering and growing their businesses in fuel wholesale. The study involved a review of publicly available resources and studies on the fuel sector in South Africa, as well as conducting face-to-face and telephonic conferences with a number of key stakeholders involved in the sector, including:

- Individual firms involved in fuel wholesaling and industry experts;
- Industry associations including the Liquid Fuel Wholesalers Association (LFWA), the Petroleum Retail Alignment Forum (PRAF), and the South African Petroleum Industry Association (SAPIA); and
- Responsible government departments and agencies including Department of Energy (DoE), National Energy Regulator of South Africa (NERSA), and Transnet Pipelines.²

The petroleum sector is a strategic one in terms of its wider impact on consumers, as a provider of inputs into other productive sectors of the economy, and therefore as an important influence on the trajectory of economic development. The history of the sector in the country is that it benefited from substantial investments and support from the apartheid government for security of supply and national security reasons in light of widespread sanctions in the years prior to the democratic transition in 1994. A favourable policy environment over the years created a sector characterised by a handful of large fuel importing oil companies with refining capacity in strategic port locations, and a national champion in Sasol which grew to produce fuel inland. Importantly, all of the incumbent firms exhibit high levels of vertical integration into activities spanning the entire value chain including importing, refining and production, distribution and retail. Following the democratic transition, greater emphasis began to be placed on transforming the sector to be more inclusive at different levels of this value chain,

¹See, for example, http://www.parliament.gov.za/live/content-mobi.php?C_Item_ID=4777&Item_ID=3536

² A full list of interviewees is provided in section 7.

culminating in the attachment of the Liquid Fuels Charter as an addendum to the Petroleum Products Act.

The entry and growth of new, independent wholesalers as part of this process of transformation is therefore of particular importance, with the aim of developing firm capabilities that allow for dynamic rivalry between firms, and the gradual migration of those firms up the value chain in competition with the incumbent oil companies. This is taken in the context of a growing body of literature on the importance of addressing the market power of large firms and entrenched insiders, and the ongoing work of the competition authorities in this process.³ It also chimes with the increased global emphasis on inclusive growth and increased economic participation which we understand to be, in part, about removing structural and strategic barriers to new entry at different levels of the economy, and the sustainability of those firms.⁴ The National Development Plan and the industrial policy framework also emphasise the importance of creating a dynamic and entrepreneurial economy and addressing high levels of concentration in the economy.⁵

Barriers to entry, by creating and reinforcing the market power of large firms, tend to lead to higher prices, lower levels of innovation and a less competitive economy. Incumbent firms will lobby and employ strategies to protect their position in the market. Concerns arise where firms seek to maintain their position by handicapping rivals and potential rivals, for instance, through anti-competitive behaviour. This is different from a market in which firms compete to introduce better prices or products and services and reduce costs and achieve returns which reward dynamism, innovation and effort. In a country like South Africa where there are significant challenges of unemployment, poverty and inequality, it is critical to understand the nature and extent of barriers to entry in the economy, in order to ensure that regulatory and policy interventions have a meaningful impact on creating inclusive and shared growth.

While over 1000 licences have been issued to potential entrants in fuel wholesaling, less than 10% of these licences are being used effectively by firms that have been able to enter and survive in the industry. Independent wholesale firms currently distribute to between 40% and 70% of commercial customers, including to rural and peri-urban areas (LFWA, 2013). Our findings suggest that outcomes are influenced by a range of endogenous and exogenous considerations, including the modes and costs of entry of firms, restrictive long term supply agreements and relationships with incumbent suppliers, restricted access to customers in some cases, and the regulatory environment. There are also issues related to skills development and the importance of tacit industry knowledge and challenges related to access to finance and working capital. Challenges in the broader petroleum sector which impact on barriers to entry at the wholesale level include mechanisms to ensure security of supply as a national priority, constraints on the introduction of alternative sources of supply and routes to market, and infrastructural limitations such as in refining capacity and storage which constrain

³ See, for example, Makhaya et al (2012); Roberts (2012); North et al (2009); and Acemoglu et al (2012).

⁴ See, for example, Spence (2008); and Ianchovichina et al (2009).

⁵ NPC (2013).

the potential for more dynamic rivalry throughout the value chain. Our focus is on the impact of each of these factors as barriers to entry and expansion in the wholesale distribution of liquid fuels.

The report is structured as follows: in section 2 we provide a background on the structure of the market and main players, the regulatory environment influencing fuel wholesale and important government stakeholders, and we touch on previous competition law cases in this area. Section 3 addresses the barriers to entry and expansion in fuel wholesaling drawing primarily on the interviews conducted. Section 4 assesses the state of competition and transformation in the sector as part of the broader petroleum value chain. We conclude and provide recommendations in section 5.

2 Background to fuel wholesale distribution

2.1 Overview of market structure, value chain and main players

The current study primarily concerns the wholesale distribution of liquid fuels. However, by its nature, the fuel value chain in South Africa is largely dependent on the activities of the fuel producers at the upstream level, who are generally vertically integrated into the downstream levels of the market as well. This level of the value chain involves the refining of inputs to produce liquid fuels such as petrol, diesel, illuminating paraffin, LPG and chemicals which are co-products and bi-products of the refining process (Mondliwa and Roberts, 2014: 6). There are six oil refineries which are owned by the various oil companies including synthetic fuel producers in Sasol (Sasol Synfuels) and Mossgas (PetroSA) (Table 1). The total production capacity is 703 000 barrels per day although actual usage at a given point in time may be lower (SAPIA, 2013).

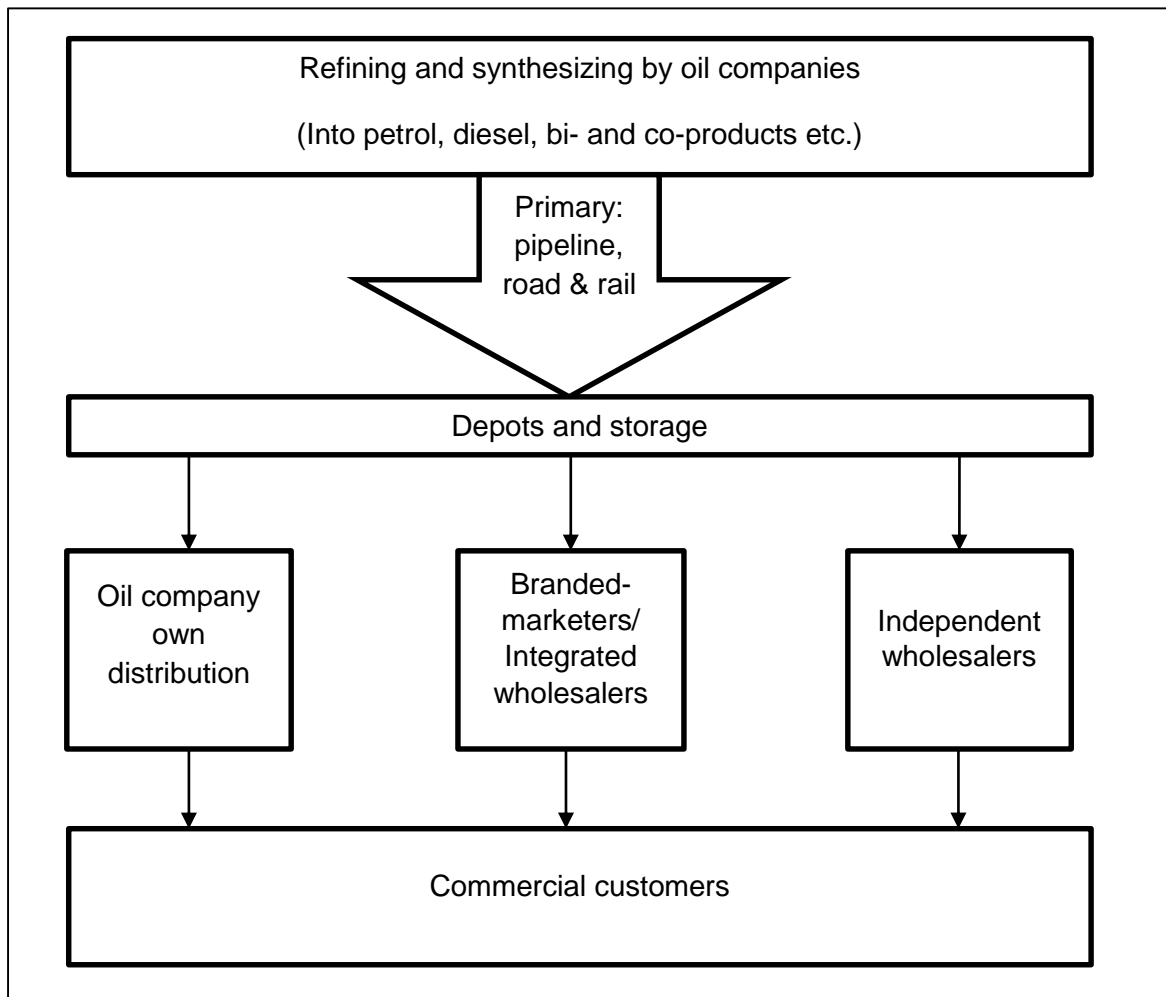
Table 1: Production capacity, ownership and location of fuel refineries in South Africa, 2013

Refineries	Ownership	Capacity (barrels/day)	Location	Share of total capacity (%)
Sapref	BP (50%), Shell (50%)	180 000	Durban	26
Enref	Engen	120 000	Durban	17
Chevref	Caltex	100 000	Cape Town	14
Natref	Sasol Oil (64%), Total SA (36%)	108 000	Sasolburg	15
Sasol (Synfuels)	Sasol Oil	150 000	Secunda	21
PetroSA	State-owned	45 000	Mossel Bay	6

Source: SAPIA Annual Report 2013

Currently, the major oil companies are able to control the supply of fuel to the downstream levels of the South African market, including through using branded wholesalers and retailers to distribute fuel to final consumers. From the refineries liquid fuels are distributed by pipeline, road and rail to storage facilities and/or depots around the country (of which there are approximately 200) (Figure 1). This is commonly referred to as primary distribution. Secondary distribution from the depot network to customers is conducted by road and rail to road and rail depots (Naidoo, 2011).

Figure 1: Fuel distribution (inland) flow chart



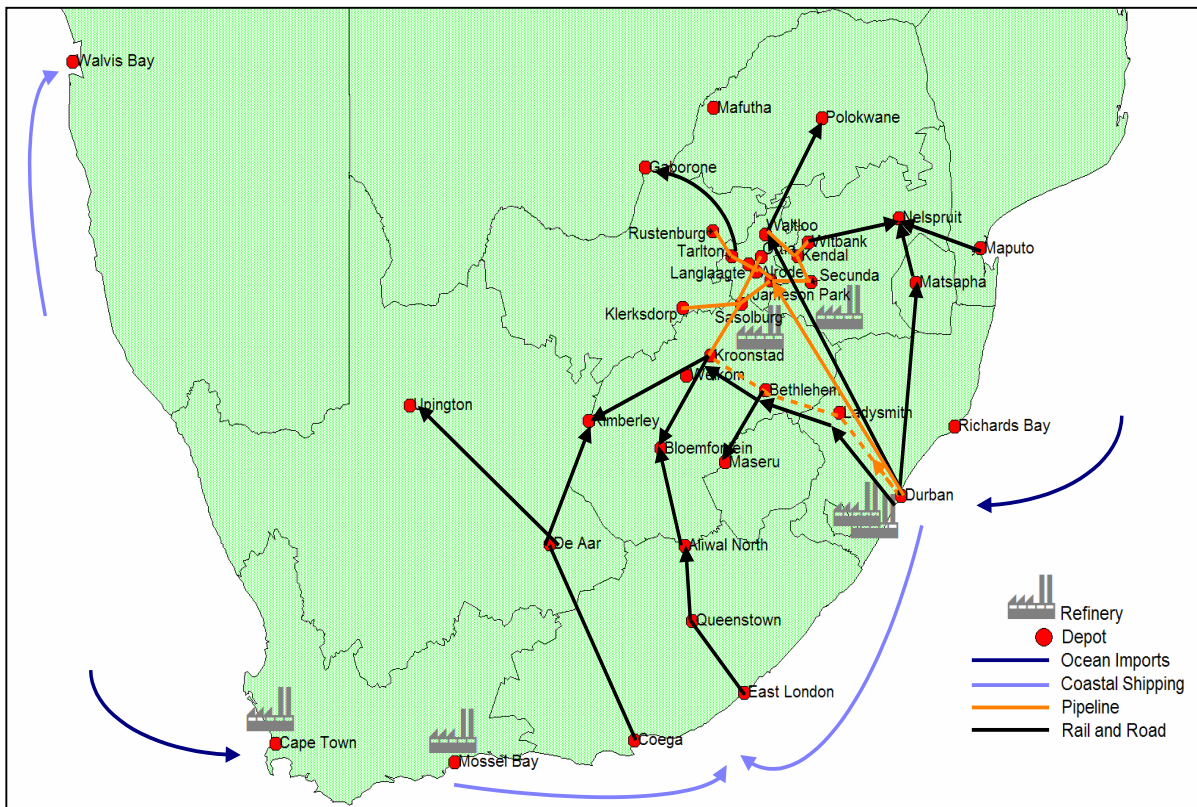
Source: Authors' own interpretation

The main inland depots (Alrode, Langlaagte, Waltloo, Tarlton, Rustenburg and Witbank)⁶ are situated along the main pipelines which are owned and managed by the transport utility, Transnet Pipelines. The pipeline infrastructure is particularly important when considering that 60% of fuel demand in South Africa is in inland regions such as Gauteng, while the remainder is coastal (Naidoo, 2011). The pipeline infrastructure operated by Transnet Pipelines transports approximately 50% of total demand in South Africa, the majority of which is for inland regions. Importantly, demand in the South African market currently outstrips available supply and capacity on the primary pipeline, the Durban-Johannesburg Pipeline (DJP), is constrained. The introduction of the New Multi-Product Pipeline (NMPP) is intended to significantly reduce this constraint once it is fully operational. We return to this supply issue in sections to follow.

⁶ And jet fuels to OR Tambo International Airport.

The Transnet pipeline network distributes bulk petroleum products sourced from the two refineries in Durban, the Natref intake station (Sasolburg), and the intake stations in Secunda (Sasol 2 and 3 synthetic fuels plants). There are no inbound pipelines running from the Chevref refinery in the Western Cape, and through swap agreements Chevron services that region on behalf of the other oil companies that do the same for Chevron in the inland region. From the pipeline depots, the oil companies store the fuel which is then distributed to road or rail (secondary) depots or directly to final depots (Naidoo, 2011) (Figure 2).

Figure 2: Primary logistics overview for fuel distribution in South Africa



Source: Naidoo (2011)

Once fuel is transported to depots and storage facilities around the country, it is distributed to different customers via three channels as follows:

Own distribution by oil companies: The oil companies distribute by road directly from their depots and storage facilities to large wholesale customers such as those in food-processing or mining. This distribution, as we discuss below, is primarily to large, lucrative customers in urban centres. The companies also distribute to their branded service stations in these areas, particularly those that require large volumes.

*Branded-marketers*⁷: These distributors operate as contracted agents of the oil companies and distribute wholesale quantities of fuel to areas that are assigned to them by their supplying oil company. These distributors operate under the brand of their supplier and will typically service areas that are outside of urban centres that the oil companies do not service themselves. The geographic areas where branded-marketers operate are typically those assigned to them by the supplying oil company and contractually they are not allowed to sell fuel outside of this area.⁸ Branded-marketers are privately owned businesses however they are subject to the policies of the oil company they are tied to with regards to branding, health and safety and business procedures.

The contractual agreements between the oil company and the branded-marketers require that the wholesaler buys all of its supply from the oil company with whom it has an agreement. These are often rolling contracts and may be considered indefinite.⁹ A significant proportion of the owners of independent wholesale companies have worked in the industry for a number of years which seems to aid them in starting their own businesses. For instance, due to pre-existing relationships, many of them were able to buy up the assets or become the appointed distributor in areas where some of the oil companies chose to disinvest their operations in rural and peri-urban areas. In addition, because the infrastructure is already in place, the distributor can leverage the established assets to start the business. These independents can also easily contract with the major oil companies for supply of fuel and access to their customer base. As branded-marketers, they have priority over non-branded marketers in terms of supply of fuel and access to customers.

Independent wholesalers: Independent wholesalers also rely on the major oil companies for their supply of fuel, and their fuel is branded in the name of their supplier. These distributors may have a supply agreement with the oil company which speaks only to the volumes of fuel and payment terms, for instance. However, they do not operate their businesses under the brand of the oil companies and are free to service their own set of customers. These distributors largely service rural and peri-urban areas and are free to service customers throughout the country.

In many cases, these independent wholesalers are smaller operators that do not purchase sufficient volumes of fuel to buy directly from the oil company. In this instance, the wholesaler may develop a relationship with another established wholesaler, in most cases a branded-marketer, to source fuel from them (See, for example, the case of Tipublox Petroleum, Text Box 2 below). Due to the high capital requirements, one independent distributor interviewed chose to enter the market and operate as an 'agent' that essentially finds customers and then sources fuel from another wholesaler with no infrastructure of its own. Margins received are

⁷ We understand that the term 'branded-marketers' is specific to Chevron distributors however we use it more widely here to encompass what are termed 'branded distributors' and 'integrated wholesalers' and 'company-owned dealer-operated' wholesalers for convenience.

⁸ Interview with Free State Petroleum Distributors, 23 July 2014.

⁹ Interview with Hammertone Fuels, 27 July 2014.

then shared between the wholesaler, agent and the transporter. An advantage of this mode of entry is that the agent has the flexibility to buy fuel from different companies or change suppliers if dissatisfied with the service provided as they are not bound by a long term supply agreement.¹⁰ However, this also presents a risk in terms of security of supply and reduced profits because of having to share returns with suppliers and transporters.

There are certainly overlaps in terms of the different groups of customers serviced by independent and branded wholesalers. For instance, a large proportion of their customers would be located in areas outside of major urban centres where the oil companies will operate. Commercial customers include fuel retailers that on-sell to consumers at service stations, as well as more industrial customers that buy bulk loads for the purpose of providing their own services downstream such as farmers, mines, processing and manufacturing companies, municipalities and other distribution companies.

It is worth mentioning the characteristics of the retail market insofar as it represents a significant group of customers for wholesalers. The retail 'pump' price for petrol is regulated (Competition Commission, 2012) with the Regulatory Accounting System (RAS) determining the margins which should be allocated to each level of the value chain. The diesel price is not regulated however diesel is a controlled product for which there is a maximum Wholesale List Selling Price (WLSP) which is published by the DoE.

There are approximately 4200 service stations in South Africa which is a significant proportion of the more than 6000 retail licences which have been issued (Lewies, 2013). Approximately 60% of these retail sites are owned by the oil companies and they account for approximately 70% of volumes sold (Lewies, 2013). In retail there is also a broad distinction that can be made between 'company-owned retailer-operated' (CORO) sites, and 'retailer-owned retailer-operated' (RORO) sites. In the latter arrangement, the retailer would typically own the site licence (i.e. confirming that the site/land is certified and fit to be used as a site for a service station including compliance with environmental impact assessment requirements, health and safety standards), as well as the retail licence for that service station. In CORO arrangements, the oil company will typically own the site licence, whereas the dealer will own the retail licence.

Given that the price of petrol at the pump is regulated, competition between different service stations is predominantly based on brands with a growing number of owners also focused on the convenience store aspect of their service stations as this environment is not regulated. We turn to the issue of regulation in the sector in the following section.

2.2. Review of regulation in the sector

There are two main bodies that govern or regulate the liquid fuels industry in South Africa; the DoE and the National Energy Regulator of South Africa (NERSA). The DoE's legislated mandate is "*to ensure secure and sustainable provision of energy for socio-economic*

¹⁰ Ibid.

development’ (Department of Energy, 2014). The main act which informs the duties of the DoE in respect of liquid fuels is the Petroleum Products Act No 20 of 1977 as amended by Act No. 58 of 2003 and Act No. 2 of 2005. The Act deals mainly with the licensing of manufacturers, wholesalers and retailers of petroleum products but has been amended to allow for transformation in the industry, the amendment of outdated provisions, appeals and arbitration, as well as to enable the Minister of Minerals and Energy to develop regulation. The liquid fuels charter works hand in hand with the Petroleum Products Act to promote transformation in the industry, and serves as an addendum to the Act.

The DoE mainly deals with the licensing and pricing in the industry. Entrants into the industry require either wholesale or retail licensing depending on what area of the value chain they wish to operate in. Obtaining licences appears to be relatively simple as an attempt by the DoE to encourage entry into the industry of Historically Disadvantaged South Africans (HDSA).¹¹

Those operators who wish to import or export fuel must additionally acquire a permit. The permit can be obtained from the International Trade Administration Commission (ITAC). Attainment of the permit is subject to a recommendation from the Department of Mineral Resources. Applicants for the import permit must either be licensed manufacturers or historically disadvantaged South African wholesalers. The import and export of fuel is governed by the International Trade Administration Act 71 of 2002 and the Guidelines Governing the Recommendations by the Department of Mineral and Energy to the International Trade Administration Commission in respect of the Importation and Exportation of crude oil, petroleum products and blending components. Importing of fuel however has been mostly restricted to the major oil companies due to a combination of factors including lack of access to transport infrastructure and necessity of large balance sheets to hedge the risk involved as discussed further below.

The DoE also regulates the pricing structure for liquid fuels in the industry. The current structure in place is the Regulatory Accounting Systems (RAS) which replaced the Marketing of Petroleum Activities Return (MPAR) system. RAS was instituted with a view to compensate investment in all activities in the value chain including storage and handling, distribution, wholesaling and retailing but excluding refining (SAPRA, 2013). This resulted in the separation of some activities that had formerly been considered to fall under wholesale. For instance the wholesale margin had formerly included a return on wholesale operations as well as a partial return on retail assets (Mondliwa and Roberts, 2014). With RAS, the returns on different activities in the value chain are allocated according to location in the value chain. Everything related to retail including return on retail assets is therefore categorised under retail. The wholesale margin is calculated using cost accounting wherein the company’s costs at every level of production are factored in, including the costs of products, process and projects. The

¹¹ Interview with DoE, 3 September 2014.

reallocation of the returns on all retail assets to the retail level caused the wholesale margin to reduce substantially.

A benchmark service station of approximately 300 000 litres per month throughput is used to calculate the retail margin. The assets and cost recovery of this benchmark service station are used to determine the return. Costs such as rental, interest, labour and overheads are all included in the cost structure. The storage margin is calculated using four benchmark depots while the secondary distribution margin is based on the number of trucks used to deliver the benchmark retailer volumes. The vehicle maintenance costs are also added to the cost structure of the secondary distribution margin (Mondliwa and Roberts, 2014). A more detailed explanation of both RAS and MPAR is in section 3.6 which discusses the policy and regulatory barriers in the industry.

The second body governing aspects of the fuel industry is the industry regulator; National Energy Regulator of South Africa (NERSA) established in 2005 by the National Energy Regulator Act No 40 of 2004. Section 4 of the Petroleum Pipelines Act No. 60 of 2003 indicates the duties and functions of the regulator which includes setting tariffs for petroleum pipeline operations and approving tariffs for petroleum storage and loading facilities (NERSA, 2007).

The Petroleum Pipelines Act is an important piece of regulation governing the distribution of fuel. The objectives of the Act include: promotion of competition in the construction and operation of petroleum pipelines, loading and storage facilities as well as the effective use and development of the above assets; ensuring safety and environmentally responsible transportation and storage of petroleum; providing security of the pipelines and related infrastructure; enabling equitable access to petroleum pipelines and affordable petroleum products, loading facilities and storage facilities; facilitating investment in the industry; promoting transformation to allow for historically disadvantaged South Africans to enter the industry through licensing; encourage the development of competitive markets for petroleum products and to ensure sufficient supply of petroleum to meet market requirements. These objectives are wide-ranging and may at times be in conflict with one another as will be discussed further below. Section 20 of the Petroleum Pipelines Act allows NERSA to prescribe licensing conditions to regulated entities.

In addition, it is necessary to apply for an environmental authorisation, which requires an environmental impact assessment be done as well as other related environmental and land use approvals depending on the nature of the facility.

The Act also gives NERSA the mandate to compel operators of pipeline, loading and storage facilities to allow independents access to unused or “uncommitted” capacity. However, NERSA is unable to compel the owners or operators to expand their facilities, a point to which we return in sections to follow.

2.3. Review of competition cases in the sector

There have been a number of competition cases in this sector. Those with relevance to the analysis of barriers to entry and expansion in fuel wholesaling are discussed briefly below.

Sasol/Engen merger¹²

In 2006, the Competition Tribunal prohibited a proposed merger between Sasol and Engen. At the time, Sasol had 82% of the inland wholesale supply and was a part owner in Natref, whereas Engen had refining capacity at the coast. The inland region represented over 60% of national demand and through the Main Supply Agreement, the other oil companies had been required to purchase Sasol's product in the inland region but Sasol was prevented from entering the retail market. At the downstream level therefore, Engen had a much bigger network of retail outlets than Sasol. At the time government was talking about deregulating the retail market and the pipeline capacity from the coast to the inland region was potentially going to be expanded. In this context, Sasol gave 5 year's notice of the termination of the MSA in 1998 and subsequently entered negotiations with Engen.

The Tribunal found that there was a credible threat of foreclosure as a result of the merger and that Sasol would have the incentive and ability to foreclose competing retailers inland. The Tribunal considered that it would be some time still before increased pipeline capacity came on-stream and in the meantime, Sasol could self-supply and exclude downstream competitors in the inland region. The other oil companies would not be able to retaliate at the coast as Sasol had access to Engen's Durban refinery. According to the Tribunal, this was likely to result in other oil companies "suing for peace" and agreeing not to compete with the merged entity. In other words, a coordinated outcome was likely. The Tribunal considered that the characteristics of the petroleum industry lend themselves to a collusive outcome:

"all the conditions for cartel formation and maintenance pertain: the structure of the markets is oligopolistic; the products are homogenous and technologically mature; entry barriers are very high; cost structures of the various oil companies are similar ... the rate of growth in demand is moderate and demand is highly inelastic; there is no countervailing buyer power to speak of; the markets are highly transparent; there is an extensive history of co-operation both at the level of the MSA and also in a range of joint ventures and ubiquitous swap and hospitality arrangements"

The merger proceedings revealed the complex bargaining game that plays out between the major oil companies as the controllers of the fuel supply in South Africa and the predisposition of the industry towards a coordinated rather than a competitive outcome. It also highlighted the dominance of Sasol in the inland market and the importance of the pipeline in terms of weakening this dominant position.

Exemption application by SAPIA¹³

¹² See Tribunal case number 101/LM/Dec04.

¹³ This exemption was granted by the Competition Commission and subsequently appealed by a firm called Gas2Liquids. The Tribunal upheld the Commission's decision. See Tribunal case number: 013607.

Following fuel shortages in late 2005, the Minister of Minerals and Energy appointed a task team to investigate the causes of the shortage and make recommendations on how to avoid similar situations in future. The Task Team suggested that greater coordination by industry participants over issues such as supply lines and shut-downs was needed and recommended that the industry apply for exemptions from the Competition Act in order to enable this. In 2009, the Minister of Trade and Industry granted the industry a designation in terms of the Competition Act for the period until 31 December 2015. SAPIA and its members applied for a short-term exemption in 2010 to coordinate supply for the period of the World Cup. Before the expiry of this exemption, however, SAPIA applied for a further exemption for a set of agreements reportedly intended to ensure the continuity and stability of liquid fuels supply, to cover the rest of the period of designation. The Commission granted this exemption in October 2011.

During its investigation of the exemption application, the Commission had received a submission opposing the granting of the requested exemption. This was from the South African Petroleum and Energy Guild and Others (SAPEG), a non-profit organisation established to represent emerging companies in the energy sector. SAPEG argued that many of the emerging players in the wholesale market are historically disadvantaged South Africans and that they struggle to access the national infrastructure used by the major oil companies at different stages of the supply chain (a concern echoed by the independent wholesalers we interviewed). The Commission's view was that these concerns were not relevant to an assessment of the exemption as per the Competition Act, and that it rather falls within the responsibility of NERSA and the DoE to ensure access for HDSAs and others to the infrastructure.

Gas2Liquids, a member of SAPEG, decided to appeal the granting of the exemption, arguing that the agreements are not required for economic stability of the industry and that stability could be assured by less anti-competitive means. It also argued that the exemption would benefit the major oil companies at the expense of independent wholesalers.

Ultimately, the Tribunal upheld the Commission's decision, finding that none of the grounds for appeal put forward by Gas2Liquids were sufficient to overturn the decision. On the subject of the anti-competitive effects on independent wholesalers, the Tribunal stated firstly that this is not a proper ground of appeal since an anti-competitive effect is the rationale for an exemption to be granted. Secondly, the Tribunal did not agree that the exemption itself contributed to the exclusion of independents or that to the extent that such exclusion would occur, it would necessarily be anti-competitive. The Tribunal concluded that the Commission was correct to provide for a permissive rather than a mandatory regime for access by non-SAPIA firms.

There were conditions attached to the exemption, including one requiring SAPIA to open up its membership to accommodate independents on "fair, reasonable and transparent grounds." SAPIA has done so, however, in terms of board representation the organisation is still stacked in favour of the major oil companies. The major oil companies each have a representative on the board whereas biofuels manufacturers, liquid fuel wholesalers and LPG wholesalers may

only have one representative each. This means that the 12 independent wholesalers who have joined SAPIA between them only have one representative on the board.¹⁴

*Information exchange*¹⁵

In October 2012 the Competition Commission referred a case of price fixing and market division regarding the supply of diesel to the Tribunal for adjudication. The case involves Chevron, Engen, Shell, Total, Sasol, BP and SAPIA. The Commission uncovered extensive sharing of information on sales volumes by the oil companies by magisterial district, customer category and fuel type. According to the Commission, this allowed them to track one another's sales and allocate markets, effectively eliminating competition between the firms.

As discussed in Roberts and Mondliwa (2014), an oligopolistic market structure and a history of cooperation renders the exchange of such information highly problematic, increasing transparency and stifling competition. A player has no incentive to secretly discount to gain market share if it knows that this action is immediately visible to its competitors through the information exchange, prompting them to respond by also discounting (Das Nair et al, 2012). Thus in such markets, even in the absence of a formal agreement not to compete, information exchange may facilitate the maintenance of a tacit understanding with similar effects on competition and on consumers.

The Commission sums this up as follows:

“The disaggregated sales information exchanged between oil companies in the case being referred here removed any element of surprise in strategic decision making and functioned as a reliable substitute to direct cartel interactions insofar as it made monitoring of rivals possible. This, together with the history of coordinated behaviour and other characteristics that exist in the petroleum industry, made achieving cartel outcomes post the exemption period possible.”¹⁶

This market structure and lack of competition between the major oil companies may also explain some of the difficulties cited by the independent fuel wholesalers. Those interviewed noted their lack of ability to effectively play the major oil companies off against one another in order to obtain lower prices for the product. This is largely due to the mechanisms employed by the major oil companies to control the market, particularly the use of branded distributors who distribute product only for one company. The major oil companies assign these wholesalers a portion of their customers based on a geographic area and it seems that they are then not allowed to compete for customers outside these areas. The major oil companies will not deal with a new independent wholesaler directly but will refer them to a branded-

¹⁴ SAPIA Annual Report 2013.

¹⁵ Competition Commission press release, 24 October 2012. Available online: <http://www.compcom.co.za/assets/Uploads/AttachedFiles/MyDocuments/Competition-Commission-refers-a-case-of-collusion-against-oil-companies.pdf>

¹⁶ Ibid.

marketer. Those interviewed reported that it is therefore difficult as a new entrant to negotiate for lower prices, as there are typically few alternatives available. The history of information exchange and its effects on the market may present a further reason that independent wholesalers find it difficult to negotiate for lower prices.

Engen/Zenex merger¹⁷

The challenges of operating as an independent wholesaler in the liquid fuel industry are also discussed by the Tribunal in its decision to approve the merger between Engen and Zenex. Zenex was a regional wholesaler and retailer of fuel that did not have its own refining facilities. As the Tribunal describes:

“Zenex finds itself in the vulnerable situation where it is totally dependent on its competitors for the supply of petrol and diesel and other petroleum products. In a deregulated market Zenex will be unable to subsidize discounts given by its dealers, as it does not possess the upstream profit resources that rival refining companies have. This will cause Zenex’s service stations to become uncompetitive.”

This highlights the barriers to successful entry as an independent wholesaler in this industry stemming from the structure of the market and the control exerted by the major oil companies over the supply of inputs and infrastructure.

Petroline complaint¹⁸

The Competition Commission has also received a complaint with regard to pipeline infrastructure, however, this was from a potential competing infrastructure provider rather than from a user of the infrastructure. In 2011 the Commission received a complaint from Petroline RSA. In 2007, NERSA granted Petroline a licence to build a petroleum pipeline from Maputo to Gauteng, in competition with Transnet’s existing pipeline and another pipeline that was under construction by Transnet, the new multi-product pipeline (or NMPP). Petroline alleged that its project was rendered unviable by policy and regulatory decisions (Robb, 2014). Firstly, Transnet received a subsidy from the National Treasury in the form of a 7.5c/l fuel levy to fund the NMPP. Secondly, NERSA granted tariff increases for Transnet’s pipelines which were too low for Petroline to be able to operate profitably. Transnet’s coast to inland tariff is kept artificially low through cross-subsidisation. Petroline argued in its submission to NERSA on the 2011 tariff determination:

“The regulated cross subsidies presented render it impossible to compete with the state enterprise”.

¹⁷ Tribunal case number: 26/LM/Dec99.

¹⁸ Commission case number: 2011May0059.

The Commission found that it did not have jurisdiction to consider the complaint as it is not empowered to review decisions of National Treasury or NERSA, and it did not refer the complaint.

Despite relating to competition in infrastructure provision rather than at the fuel wholesale level, this case had important implications for the ability of independent fuel wholesalers to compete effectively. The proposed pipeline from Maputo would have offered an alternative source of product to independent wholesalers, reducing their reliance on the major oil companies and hence weakening the control of the major oil companies over the liquid fuel value chain. As discussed in the following section, independent fuel suppliers find it difficult to access port infrastructure in South Africa, as the only facility for landing fuel in Durban is owned and controlled by the major oil companies and available storage capacity is extremely limited. This makes importing fuel from other sources almost impossible. Even if there was some way of shipping fuel to Durban, getting it to the inland regions is challenging given the major oil companies' control of access to the pipeline via their refineries. If independent wholesalers could import fuel through Mozambique, whilst this would be expensive and potentially risky, it would at least provide for an alternative source of fuel and therefore alleviate their dependence on the major oil companies to some extent.

2.4. Conclusion on background of the fuel sector

The background on the value chain, the regulatory environment and competition cases in the sector sets the context for understanding barriers to entry in fuel wholesaling, which is the focus of this study. The nature of regulation and the interdependent relationships between the main oil companies is directly linked to some of the competition issues experienced in the sector. As we discuss in sections to follow, some of these issues have resulted in stifled competition between wholesalers, and the major oil companies themselves, which is aided by the current constraints on infrastructure for pursuing alternative sources of fuel. The sections which follow discuss the findings at the level of wholesale distribution of fuel, although it is quite evident that dynamics at this level are directly influenced by and form part of the bigger set of concerns in the petroleum industry as a whole.

3 What are the barriers to entry and expansion in liquid fuel distribution in South Africa?

This section assesses the barriers to entry and expansion in liquid fuel distribution based largely on information obtained in interviews, and publicly available sources. We categorise the primary barriers into six main themes, namely: the costs of entry, skills and training, access to supply, access to customers, the reactions of incumbents to entry, and policy and regulatory challenges.

3.1 Costs of entry

The liquid fuel industry is one that requires large amounts of capital and a lot of specialised knowledge which can make the costs of entry very high. In the first instance, licences are required for operation. The application costs for the wholesale, retail and site licences are generally not prohibitive as indicated in table 2 below. Application for a wholesale licence costs

R1000 and the annual licence fee is R500. The site and retail licence (excluding the annual information fee) is no more than R2000.¹⁹

Table 2: Cost for licences

	Wholesale licence	Retail licence	Site licence
Application fee	R1000	R500	R1000
Annual licence fee	R500	R500	0
Total	R1500	R1000	R1000

Source: South African Government Services²⁰

The capital requirements however, tend to be high depending on the wholesaler's mode of entry. A wholesaler who chooses to enter the market as an 'agent' does not need any real assets to begin operating. Essentially, the wholesaler finds the customers, negotiates a price and acts as a go-between for the customer and the supplier (which is sometimes another wholesaler). The agreed contract for supplying the customer is between the wholesaler and their supplier and not the customer. The trucks used for delivery typically belong to the supplier. The wholesaler negotiates a price whereby they can pay the supplier for the fuel and trucks and still earn a profit. However, even at this level, customers often expect storage tanks to be provided at their premises at the supplier's cost. The wholesaler provides these services as this is where competitive advantage is acquired given that the ability to compete on price is limited.

An independent distributor prepared to invest in infrastructure, needs to consider leasing or buying a strategic piece of land, equipment such as trucks, and tanks, and taking measures to meet the environmental impact compliance requirements even before purchasing the fuel to sell. A small new truck of 16 000 litres can cost anywhere between R1.8 million and R2 million while a second hand truck of the same size can cost between R600 000 and R800 000.²¹ Installation of storage tanks can also cost between R30 000 and R70 000. If the wholesaler wanted to vertically integrate into retail as well, setting up a retail site would cost between R5-7 million excluding the retail store.²² These assets also need continuous maintenance which raises the operating costs of the business. It should be noted, however, that these costs are not "sunk" in that the wholesaler would be able to sell the assets on exiting the industry. Thus in theory this should not represent a large barrier to entry, as firms should be able to get financing based on the value of the assets being purchased. To the extent that there are capital market imperfections, however, which prevent firms from accessing financing, this may represent a barrier to entry.

Another cost of entry for the wholesalers is the expected payment terms and contracts. Due to the small profit margins wholesalers can only really compete on the basis of terms they are

¹⁹ Permits and Licenses, South Africa Government Services. 2nd September 2014. Available online: http://www.services.gov.za/services/content/Home/OrganisationServices/permitslicencesrights/Petroleumone/en_ZA

²⁰ Ibid.

²¹ Interview with Sitanani Fuel Distributors, 24th July 2014.

²² Interview with Free State Petroleum Distributors, 23rd July 2014.

willing to offer to their customers. To be able to offer credit terms the wholesaler requires large amounts of working capital and good cash flow especially since purchases of fuel from the major oil companies have to be done in cash and upfront. If the credit terms offered are for a month for example, this means that the wholesaler must still purchase fuel, and continue paying other operational costs, having not received any income for that period. This might be one of the reasons for the failure of new entrants. The DoE stated that several applications are received daily for transfer of licences and ownership which is indicative of the challenges of financial viability faced by firms that enter the market.²³ This barrier to entry is not so much about the cost of entry as it is about the business skills and understanding of the industry required in order to be successful. This will be discussed in more detail in the next section.

Furthermore, there are safety and compliance requirements that a distributor needs to adhere to which cost money and can cause costly delays. A wholesaler must comply with environmental regulations in line with the National Environmental Management Act 107 of 1998 (NEMA) as well as local and municipal council requirements. An environmental impact assessment needs to be carried out before construction on a wholesale, retail or storage site. The minimum number of days that an assessment can take is 106 days²⁴ although the assessment may take up to two years. Application for a basic assessment costs R2000 while a full environmental impact assessment costs R10000.²⁵ Once the necessary authorisations are received, it could still take some time before the site is constructed and the owner is able to earn a return. After construction of a retail site for example, it could take a year or two before the owner is able to sell viable volumes. There is thus an opportunity cost in terms of the alternative uses to which the capital invested in the site could be put. These costs are sunk and therefore would affect the decision of investors to enter the industry.

3.2 Skills and training

Lack of skills is a general problem in South Africa and the fuel industry is no exception. There are several aspects to running a business as a fuel distributor and most of the owners succeeding in the industry are those who have already been in the industry in one capacity or the other and have a lot of experience. The knowledge required in the industry can at times be specialised to the industry including local area knowledge. New entrants need to be aware of how to access supply of fuel, purchase and transport it. Local area knowledge is particularly important when entering a new local market and trying to build a customer-base to the extent that some companies will look to actively attract sales people that have experience in that market from other companies.²⁶ Entrants also need to be aware of the regulations pertaining to the distribution, storage and sale of fuel, including health and safety provisions.

²³ Interview with DoE, 3 September 2014.

²⁴ SADC Environmental Legislation Handbook 2012. Available online on: http://www.saiea.com/dbsa_handbook_update2012/dbsaFrameSet.html

²⁵ Ibid.

²⁶ Interview with Hammertone Fuels, 27 July 2014.

The business is largely dependent on relationships, which is often the competitive advantage of those who have already worked in the industry for the major oil companies. It is these same relationships that often influence whether a major will contract with a wholesaler or retailer. Owners who have been in the industry and worked with the major oil companies before are more likely to get supply contracts from them. Being in the industry would have also given them valuable industry experience.

The DoE is encouraging the entrance of HDSAs however the Liquid Fuels Charter audit report of 2011 showed that very few are involved in the management and ownership positions in which they would acquire the relationships and experience necessary to run their own wholesale companies. Moreover, those HDSAs in ownership positions appear to be mostly non-operational²⁷ and only present to raise the BBBEE score for the companies. While oil companies do budget some funds for the training of their staff, capacity building of HDSAs dropped from 71% to 55% between 2006 and 2011 (DoE, 2011). It is also not clear whether the training given includes management skills.

Another area of skills shortage in the industry is cash flow management (DoE, 2011). As mentioned above, one of the major requirements in the fuel wholesale industry is significant working capital. The finances are needed to hedge the risks created by offering credit terms to customers and for the operational costs of the firm. Therefore, to derive efficiencies in distribution a good understanding of the business as well as finance and accounting skills is important. While a firm may decide to enter on the back of having entrepreneurial capital to invest, this does not mean that those owners or the managers they hire have required industry experience.

3.3 Access to supply

As a liquid fuel wholesaler, it is extremely important to have a reliable, high quality supply of fuel. Customers, particularly large customers such as the mines, cannot afford to run dry, and in a market where independent wholesalers are unlikely to get access to cheap sources of product, quality of service and reliability may be the only dimensions on which they can compete. There are several reasons why gaining access to fuel is challenging for independent wholesalers in South Africa.

All of the independent wholesalers interviewed confirmed that the major oil companies control access to liquid fuels supply in South Africa. In general, the major oil companies will not supply a new entrant directly as the volumes required will be too low. Instead new entrants must usually rely on another wholesaler, either a branded or independent wholesaler, to sell fuel to them. This, combined with the fact that a new entrant will be buying relatively small volumes, means that the price at which he can buy fuel is unlikely to be low enough for the entrant to make a significant margin.

²⁷ Interview with DoE, 3 September 2014.

Even those wholesalers who are longer established in the industry describe the stranglehold that the major oil companies have on supply and explain that this means they can essentially dictate terms to wholesalers. Where the wholesaler is a branded-marketer on behalf of one of the oil companies, it must buy from that oil company according to the terms of their agreement. Even those which are not branded state that it is not usually fruitful to play the major oil companies off against one another in order to get fuel at a lower price. All those interviewed cited that the market is generally short of fuel, due to a lack of refining capacity and other infrastructure in the country, as well as the age of the existing refineries which means that shut-downs and supply disruptions are quite frequent. This gives the major oil companies an even stronger bargaining position.

A further problem with being a non-branded wholesaler in this environment is that when there are disruptions to supply, the major oil companies will usually supply fuel to their own retail customers and branded-marketers first, and only after their own customers have been satisfied will they supply to independents. Thus independent wholesalers sit in a precarious position and are more likely to let down customers when fuel supplies are tight.

An alternative to purchasing fuel from the major oil companies would be to import fuel from the world market, effectively bypassing the major oil companies. This, however, is fraught with complications. First of all, importing fuel is an extremely risky endeavour requiring a large balance sheet and well-managed cash flow. Even a small tanker-load of fuel is around 20 million litres, and it takes a minimum of 3 weeks for the ship to reach the port, in which time currency and oil price fluctuations may have changed the economics of the deal. Once the fuel has landed, there can be problems with the quality of fuel which are very difficult for an independent wholesaler to manage. The major oil companies have refineries in the country and therefore can fairly easily rectify any deficiencies in the quality of landed fuel. The independents do not have access to these facilities. Even if several independents club together, importing fuel is therefore still a substantial risk to take on.

The second major difficulty with importing fuel arises once again from the size and entrenched position of the major oil companies. The port facilities for landing fuel in Durban are owned by the major oil companies in a joint venture. Thus, in order to land fuel currently, an independent player would have to negotiate with the major oil companies for access to this. Similarly, the existing storage facilities in Durban are mainly owned by the major oil companies. One commentator noted that there is no commercial imperative for the major oil companies to construct more storage capacity than they expect to use. In addition, even when there is apparently spare capacity in their facilities, it may not be practical to rent it out to independents since the major oil companies need to ensure that there is always sufficient available capacity for the arrival of their next fuel shipment. Demurrage costs are high if the product is left unloaded on the ship for a lengthy period of time.

Independent storage facilities are available through companies like Vopak. However, these facilities are extremely expensive to build and in order to get financing, storage companies are usually required to acquire long-term "use or pay" contracts with customers for at least 80% of the capacity to be built. This generally means engaging the major oil companies who would have substantial volume requirements and the ability to guarantee volumes for five or six years. Smaller companies by contrast take on a substantial risk by signing up for a long use or pay contract. In addition, storage companies sometimes require guarantees to be paid up-

front while the capacity will only come online in 18 months to two years. This is onerous for a small firm.

There is a small amount of independent storage available which can be utilised by smaller firms but in general, even the independent facilities are contractually bound to the major oil companies. The table below shows that only 6% of storage capacity for petrol and diesel at the port in Durban is currently in the hands of independents. The remaining 94% is owned by the major oil companies.

Table 3: Current storage volumes at the port in Durban for petrol and diesel, by company

	Petrol	Diesel	Petrol	Diesel
BP & Shell (Natref)	191 541	132 820	66%	74%
Engen	57221	6711	20%	4%
FFS	0	30	0%	0%
Sasol	22 027	15 153	8%	8%
Total SA	0	14 364	0%	8%
Vopak	17 400	11 515	6%	6%
Total volumes	288 189	180 593		

Source: Data provided by NERSA, 2014

Overall, only 1.7% of storage capacity is used for independents currently.²⁸ NERSA has tried to improve the situation by forcing facility owners to have an explicit allocation mechanism for giving out uncommitted capacity. Each storage owner produced one of these allocation mechanisms and these are on NERSA's website. Some of the mechanisms and requirements are quite complex, however. This is justified to some extent as there are safety and reputational risks to the major oil companies from granting access to their facilities and new entrants often do not understand what is involved. NERSA has only had one formal complaint about storage facilities in nine years which is a surprisingly low number. It may be that independents have not attempted to access storage facilities, or that they are reluctant to antagonise the major oil companies, whom they rely on for the supply of fuel.

If an independent wholesaler does manage to successfully import fuel through the port and find storage facilities, it would then need to move the fuel to the inland region, and to do this, it would need access to the fuel pipeline owned by Transnet. Access to the pipeline is open to all in theory, as Transnet is mandated to ensure that independent firms are able to get their product into the pipeline. However, currently fuel is put into the pipeline directly from the Durban refineries and, therefore, in practice independents would again have to negotiate with

²⁸ Interview with NERSA, 10 September 2014.

the major oil companies for access.²⁹ This problem may be mitigated to some extent once the new NMPP and associated infrastructure is complete as the pipeline will have substantially greater capacity and terminals are to be constructed at both ends through which product will be inserted into the pipeline. This suggests that there may be greater scope for independent access to the pipeline going forward, if fuel can be landed in Durban and available storage capacity can be found.

Finally, at the other end of the pipeline, storage capacity is again an issue. To use the pipeline, companies need access to storage facilities very close to the terminal which are linked by pipeline to the terminal. Once again, independently owned storage capacity of this nature is in short supply.

The Petroleum and Liquid Fuels Charter recognized the importance of access to infrastructure for the success of small and emerging players in the industry and had the following as an explicit objective:

“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 a critical weakness in the supply chain of emerging companies. Owners to provide third parties with non-discriminatory access to uncommitted capacity.” (Petroleum and Liquid Fuels Charter, 2000)

However, an audit of progress in fulfilling the aims of the charter carried out in 2011 found that there had been very little advancement in terms of access (DoE, 2011). The audit found that the major oil companies own and operate most of the petroleum facilities and infrastructure in the country and they claim not to have uncommitted capacity which they could provide to independents. Although they have been closing down storage facilities, these have not been availed to HDSAs. The pipeline is also used almost exclusively by the major oil companies. It was also found that access to facilities at the ports was largely based on “gentlemen’s agreements” with no room to accommodate new participants. The audit found that NERSA had not been sufficiently enforcing the Petroleum Pipelines Act regarding access.

When combined, these various challenges mean that the barriers to importing fuel via the port in Durban are extremely high, as illustrated by the example of Royale Energy which is discussed in Box 1 below. The biggest difficulty is that in order to import, a firm must have a solution to all of these problems simultaneously – it is of no use to have access to the pipeline without available storage capacity in Gauteng for example. There is also significant risk involved and the process requires a substantial cash flow and balance sheet. Altogether this is a daunting prospect for an independent wholesaler. Nonetheless, due to the stranglehold the major oil companies have over supply currently, some are trying to tackle these challenges.

²⁹ Teleconference with Transnet Pipelines, 26 August 2014.

A further possibility for independent wholesalers is to import through Mozambique where the major oil companies do not have control of all the port facilities. The fuel would then have to be transported to South Africa, either by rail or truck. These methods are both expensive and unreliable, however.³⁰ In the past firms have had bad experiences with fuel acquired through this route in terms of quality and reliability. Given the costs involved and the zone pricing differentials currently in place, those interviewed suggested that it is not viable to supply the inland regions except in Mpumalanga and Limpopo via Mozambique.

³⁰ Interview with LFWA, 15 August 2014.

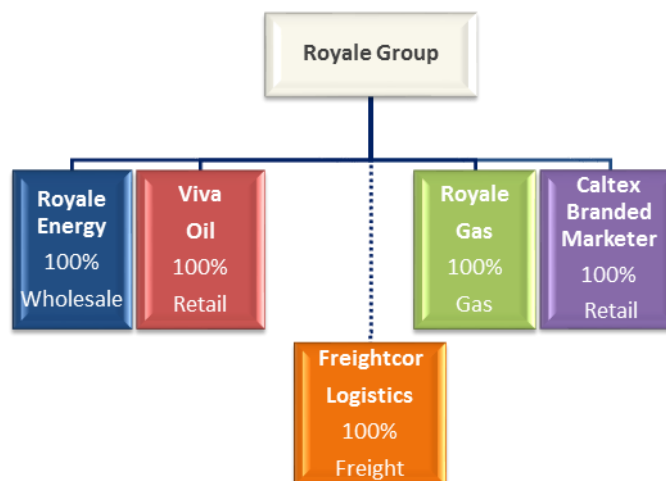
Box 1: Royale Energy – successful entry

Royale Energy is one of the larger independently owned, BBBEE non-integrated wholesaler and marketer of petroleum products. Key products distributed are:

Petrol, Diesel, Illuminating Paraffin Liquefied Petroleum Gas (LPG) and Lubricants.

Key operations involve distribution and wholesaling, multi-brand management of own and third party brands and retail network and packaging and distribution of products. Royale Energy is a (Level 2) 71% BBBEE owned wholesaling and retail fuel company which started in 2003. In 2004, it secured a supply agreement with Sasol and began trading in the inland provinces. Its initial customers were the smaller commercial and industrial businesses. Its milestones are:

- 2003 Royale Energy is founded to trade in Liquid Fuels Industry
- 2004 Secures an evergreen supply contract with Sasol
- 2004 Commences fuel trading in the inland provinces
- 2008 Buys Viva Oil to establish a retail trading business
- 2008 Eyabantu completes a transaction to purchase 30%
- 2008 Secures additional fuel supply from PetroSA
- 2012 Acquires the Mpumalanga South Cluster from Chevron



While Royale's growth has been phenomenal compared to many new entrants, there are barriers to its increased growth. The two main barriers are access to infrastructure (coastal and inland) and finance. Most storage facilities are owned by or reserved for the major oil companies, and storage facilities provided by independent storage owners are also reserved by these companies. Costs charged are more favourable to the majors given the international links and agreements. Attempts to secure their own inland storage facilities were unsuccessful. These facilities were lost to an oil company with headquarters overseas. As is the case with most locally based independent wholesalers, Royale is forced to depend on the majors for access to storage and refineries. This means that in case of shortages or emergencies, Royale is pushed to the back of the queue when needing to uplift its contracted product from the facilities owned and supplied by the majors.

Acquiring finances from institutions (PIC, National Empowerment Fund, DTI etc.) and Banks is far more challenging than meets the eye. Royale has found it much easier to obtain financial support from companies outside of the country.

Certain "high volume" customers also request that Royale (and other independent wholesalers) provide payment terms (30 and 60 days) that are unsustainable and far more challenging for smaller role-players than the major oil companies.

To ensure future sustainability and success of the independent non-integrated oil companies in South Africa like Royale Energy, Royale believes that access to infrastructure at more affordable, realistic tariffs (as determined by NERSA) would be paramount.

3.4 Access to customers

Effective entry into a market entails not only entering the market, but being able to undertake independent business strategies in order to gain a customer base in that market (See Box 2 on the entry of Tipublox Petroleum). In the fuel sector, this is affected by a number of the other factors discussed in this report such as the applicable regulatory environment and the reactions and strategies of incumbents. However, it is also reliant on the ability of entrants, and small players, to contest markets and compete for customers through better pricing, efficiencies or quality of service, for instance.

The contestability of markets and access to customers is an important aspect of fuel distribution, particularly insofar as the major oil companies already dominate key markets, customers and routes to market. For example, while there may be a large number of customers in a market, if the majority of those customers are in fact tied up in long-term exclusive supply agreements then the actual contestable share of the market for an entrant is very limited. In the case of liquid fuel, the distinctions between branded and independent wholesalers, as noted above, also have a bearing on the degree of competition and the contestability of markets due to the ability of the major companies to influence the geographic area and specific customers that a wholesaler can supply on the basis of their contractual agreement.

The wholesalers interviewed held that as a function of the regulated pricing environment from the 1990s, the oil companies over time have tended to remove themselves from servicing customers in rural and peri-urban areas where the regulated pricing model as measured against the significant costs of distributing to those areas, did not yield attractive returns. While this change in the market created opportunities for new and existing wholesalers to distribute fuel to these more distant markets, it also had the effect of limiting the scope of the markets in which these operators could compete as we discuss below.

In terms of the supply of fuel, customers prefer to source fuel which is refined by one of the major oil companies and under their brands which is associated with a certain level of quality. In this context, branded-marketers effectively run distribution operations that service the business of the major oil companies in rural and peri-urban areas. At times branded-marketers will also distribute for oil companies in urban areas however this does not appear to be in competition with the supplier but rather complementing their distribution network.³¹ This brand association is an important asset for branded-marketers in terms of gaining customers who associate brands with particular levels of service and quality and will sometimes forego cheaper prices for a more reliable offering.³²

Due to the fact that branded-marketers operate as extensions of the main companies and tender to operate in a particular area, they are allocated a specific geographic area and are

³¹ See, for example, interview with Hammertone Fuels, 27 July 2014.

³² Interview with Hammertone Fuels, 27 July 2014.

not allowed to compete outside of this area.³³ This relates to the fact that other geographic areas may be allocated to another marketer for the same oil company, or the area may be serviced by the oil company directly. Branded-marketers therefore do not face competition from other marketers falling under the same brand in their allocated geographic area and only compete with independent wholesalers and the branded-marketers of other oil companies. Independent wholesalers are able to sell fuel throughout the country which gives them a greater opportunity to source customers, but also presents additional costs in terms of distributing to those customers.³⁴ In many cases, independent wholesalers are reliant on branded distributors for their supply of fuel.

An important aspect of these vertical arrangements between branded-marketers and their suppliers is that the agreements tend to vary in terms of duration and the terms which are typically linked to the level of investment that the oil company has made in the facilities used by the distributor.³⁵ Independent operators function under simple supply agreements which are likely to be of a shorter term given the limited investment in their facilities that is made by the oil company.

This discussion is important for understanding the contestability of markets and the ability of wholesalers to compete for new customers, and has effects which take on several dimensions:

Product quality and competition - While customers generally value obtaining a good price for fuel, they appear to also consider the reliability of supply and quality of service and product as important determinants of their choice of supplier. In the case of branded-marketers aspects related to the brand association act in their favour. They are also likely to benefit from the fact that if there were significant shortages of fuel, oil companies would be expected to supply their own customers and those of their branded-marketers before supplying other independent operators.³⁶ However, independent wholesalers are also able to leverage the fact that the fuel which they distribute is sourced from the same, reputable refineries. It is only in the case of imports from unknown sources that customers are likely to raise concerns about the quality of the fuel supplied.

Price competition and value-added services - Most wholesalers interviewed noted that if the product is sourced from one of the major oil companies, then the distinction between fuels from different refineries is not significant and differs only on certain additives to the fuel. Coupled with the fact that the price at the pump for petrol is regulated it means that wholesalers are forced to compete with one another on a range of other aspects. Even where the costs incurred by the wholesaler are higher than those accounted for in the regulated price, customers typically do not want to pay any more than the regulated price and may consider another supplier as a result.³⁷ Customers are price-sensitive, especially in the case where the

³³ Interview with Free State Petroleum Distributors, 23 July 2014.

³⁴ Interview with Tipublox Petroleum, 24 July 2014.

³⁵ Interview with LFWA, 15 August 2014.

³⁶ Interview with Sitanani Fuel Distributors, 24 July 2014.

³⁷ Interview with Tipublox Petroleum, 24 July 2014.

fuel expense is a significant portion of their expenditure and/or when their volumes consumed are relatively high.³⁸ The transparency in the industry pricing mechanism seems to 'guarantee' a margin for wholesalers, but it also significantly impedes their ability to negotiate with customers.³⁹ Wholesalers therefore compensate for this by offering certain value-added services, at times in competition with those offered by the oil companies.

Specifically, most wholesalers interviewed noted that their competitive advantage in competing with other distributors and the oil companies was through deriving efficiencies in their distribution processes and offering additional services. These services can include providing infrastructure, fuel management services and building strong professional relationships with customers. This last aspect is important in so far as customers often complained of feeling neglected or being 'just another customer' when doing business with the major oil companies.⁴⁰

Offering to provide and install fuel infrastructure such as above-ground storage tanks at the premises of customers seems to be one important aspect of attracting customers. Some wholesalers indicated that they would offer to provide these services, particularly where it was financially feasible to do so. However, these investments are also linked to the other terms of agreement with that customer. For instance, it becomes more feasible to provide infrastructure at the customer's premises if the customer is likely to consume significant volumes on a regular monthly basis or if there was some compensation in terms of the agreed contract price (or discount).

Other competitive advantages draw from distributing your own fuel and doing your own equipment installations at customers' sites.⁴¹ Smaller wholesale businesses also have lower overhead costs compared to the major oil companies, which can also make them more efficient than other competing wholesalers. They are therefore able to pass these advantages on to customers which influences customer switching.

Favourable payment terms and contracts - Another important aspect of competition is the ability to offer favourable credit terms to customers. Most wholesalers noted that commercial customers required credit terms even where their volumes consumed are low. Some customers will purchase fuel on consignment with a view to only paying for the fuel once it is sold or used. Customers who are government departments such as municipalities tend to also only pay for fuel a month or more from when the fuel is actually delivered to them. Each of these aspects, and the ability of the wholesaler to provide this support, is a critical aspect of attracting and securing customers and as such requires wholesalers to have sufficient working capital to cover their operations until payments come in. It was noted that in some cases getting customers was not necessarily difficult (for instance, if the wholesaler is able to offer

³⁸ Interview with Tipublox Petroleum, 24 July 2014.

³⁹ Importantly, this can obviously be viewed as a pro-competitive outcome that benefits consumers.

⁴⁰ Interview with Tipublox Petroleum, 24 July 2014.

⁴¹ Interview with Free State Petroleum Distributors, 23 July 2014.

these favourable payment terms), however maintaining customers is more difficult due to the need for scale economies, efficient distribution and cost management systems and capital. This is particularly interesting when considering that in most cases the customers that independent wholesalers and branded-marketers compete for are those with smaller volumes located in distant geographic areas which means the costs incurred to distribute to them are higher. Given the narrow regulated margins, wholesalers have argued that their return on investment has declined in recent years and reinvestment into expansion of their operations is extremely challenging.⁴²

Quality of service and reliability - In order to maintain customers, it seems that independent wholesalers (and even branded-marketers) need to be more flexible and efficient in their operations relative to the main oil companies. For example, flexibility and timeliness is a prerequisite to supplying commercial customers especially where those customers run their facilities during ordinary daytime business hours which means there is a relatively small window each day for making fuel deliveries. The ability to deliver on time and in a reliable manner is critical to retaining customers, whilst offering favourable terms of supply such as credit to customers is important in attracting customers in the first instance. Customers in fuel-intensive industries such as mining are especially difficult to attract and maintain due to the large volumes they demand along with favourable payment terms, discounting and service level requirements.⁴³

An overarching theme is that the apparent oversupply of wholesalers in some areas means that customers can play wholesalers off against one another not necessarily on price but on credit terms, provision of facilities etc. This seems to present both a risk as well as an opportunity for wholesalers in so far as they may lose customers on a regular basis to another supplier or major oil company with a better offering in the short-term, but can also poach customers that leave their current supplier and are in the market for another. Customers do not seem to commit to long-term supply agreements with independent wholesalers and branded-marketers (except in the case of CORO retailers), and ongoing supply relationships rely on trust and performance history, but also prevailing market conditions such as the price of fuel or fluctuations in demand in terms of the customers' own businesses. On this aspect, several wholesalers noted that many of the distributors that have remained in the industry for a relatively long period have relied on long-term relationships with the main suppliers of fuel as well as good area-specific knowledge (and staff) and relationships with specific customers.

In light of the above, it seems likely that there is scope for independent and branded wholesalers to compete against each other for customers particularly in rural and peri-urban geographic areas. However, while there does appear to be scope for independent wholesalers to compete directly with the major oil companies, their ability to do so is limited by their price disadvantage compared to the major companies, their relatively high transport cost-base, and

⁴² See, for example, interviews with Tipublox Petroleum, 24 July 2014, and Hammertone Fuels, 27 July 2014.

⁴³ Interview with Tipublox Petroleum, 24 July 2014.

the presence of branded-marketers in the same areas in which they wish to compete on and whom they may well be reliant for the supply of fuel.

We note that the analysis above suggests a degree of rivalry in the wholesale market. In our view, this speaks to competition in a particular, small, geographic market, largely on service rather than price, and does not address the broader competition concerns throughout the value chain. As we discuss below, the vertical supply agreements described in this section add to the creation of symmetry between the major oil companies and along with the very transparent pricing mechanism create fertile ground for tacit forms of coordination. The less competitive outcomes observed at lower levels of the value chain, for instance the inability of many wholesalers to effectively compete for customers on price or with one another due to the terms of their supply agreements, are likely to be symptoms of a wider concern with respect to competition in the sector.

Box 2: Tipublox Petroleum – Entry against the odds

Tipublox, which was started in 2009, has three staff members that include the two directors and a consultant. The company was able to deliver its first load of lubricants in 2011 and fuel in March 2012. In preparing for entry, the Directors engaged in a lengthy process of building a database of potential clients and developing a knowledge-base on the industry. While one of the Directors had previously worked for Engen for five years, this role was not linked to fuel distribution and as such did not provide the benefit of tacit knowledge and direct experience of the industry. Subsequent to entry, the firm has been able to gradually build a client base although the pace of growth has been slow. The company does not currently have its own infrastructure and transportation network, and have outsourced these activities. Several aspects of the entry of Tipublox are of particular interest:

- Compliance with licensing requirements was made easier by the months of research conducted prior to application. The business was registered within a month of the directors meeting one another, and compliance with licensing requirements including providing a business plan, plan for transportation, and the objections process took a total of 9 months. The firm had to invest some initial funds in this process.
- Upon registration, the Directors began meeting with each of the six oil companies which was a difficult process. Some of the companies cancelled meetings and expressed no interest in the venture, whilst others suggested the firm builds up a client base before returning to contract directly with them. Therefore, the firm started off by buying fuel from other wholesalers and leveraging their existing infrastructure and trucks to distribute to customers, an approach suggested by one of the oil companies. Their initial supply was sourced from Gulfstream Energy, an established wholesale company.
- To gain customers, Tipublox has applied various strategies including speaking directly with mining companies and approaching construction sites, and enlisting on municipal databases. One of the businesses' first customers was a client who had experienced an interruption of supply from their usual source, which Tipublox was able to successfully address.
- Their first client was a public sector client that required lubricants and weapon oils. It is apparently far easier to enter the market as a supplier of lubricants. To this day, 80% of their business is with government clients, and the remainder comprises construction firms, mines, transport companies and the commercial market. They have experienced some turnover in their client-base and currently have five clients. Their business is national and not constrained to any geographic area which has been an advantage – most of their clients have been in KZN, Gauteng, Northern Cape, and North West province.
- Government contracts are difficult to service because Tipublox buys the fuel upfront from their supplier, and government departments will typically only pay in 30 days or more meaning that it is important to have a good cash flow.
- To secure their first load of fuel, the business had to raise over R500 000 to pay upfront for the fuel and be able to deliver it, which they were somehow able to raise in five days. The Directors approached a wide range of potential funders including the Banks, National Youth Development Fund (NYDA), friends and family and personal loans. Only friends and family committed funding which Tipublox paid in full within 6 months.
- It has not been possible to compete with incumbents on price. They compete by offering a wide range of services and a 'turnkey solution' to the client including: installing storage infrastructure (at their own cost in some cases), introducing fuel management systems, offering credit terms where feasible, and through ensuring timely and efficient delivery.
- The aim is to grow the business to sell a million litres. The company is currently trying to establish their own infrastructure, and will be launching a logistics company with another wholesaler in the near future. However, the Directors are conscious not to rush the growth of the business and make sure it remains sustainable. The business sources fuel from different wholesalers and 1 major oil company. As customers are very sensitive to delays, they have had to switch suppliers in some cases to maintain customer satisfaction.

3.5 Incumbents' reactions to entry

Firms' decisions to enter a market are based primarily on an evaluation of the costs of entry versus the likely benefits of entry. As initial outsiders to the market, potential entrants do not always take into account the possible reactions of incumbent firms to their entry. In many cases, incumbents have an incentive to react to entry in strategic ways that counteract the threat that an entrant presents, if it is a significant one. In industries with a small number of firms, it is also important for smaller entrants to look to account for the likely reaction of incumbent players, including any pre-emptive entry deterrence strategies that they may undertake (Cabral, 2000).

In fuel distribution, the incumbent players are large vertically integrated companies as discussed above. Entrants into fuel distribution such as wholesalers mostly compete with incumbents at the level of distribution, and only a handful of companies have expanded their operations to levels where they distribute sufficient volumes to pose some competitive threat to the major oil companies in some areas (e.g. Brent Oil, Khulaco, Gulf Stream and Royale Energy). These firms have typically had the capital to be able to make investments at the retail and wholesale levels of the value chain. This distinction is important. Most other wholesalers are smaller operators existing as agents or small-scale independent distributors supplied by the larger incumbent oil companies. This suggests that these firms are less likely to pose a competitive threat to the major oil companies, including through diversification up the value chain.

Incumbent firms face a strategic choice as to whether to accommodate new entry or to deter it. This decision relates largely to the competitive threat posed by rival firms, and the costs of entry faced by those firms. For example, if the threat is significant, the incumbent firm may respond by expanding their capacity in the market, thus signalling to rivals that they have the capability to flood the market in response to greater competition (especially where the cost of expansion is smaller). Similarly, if the costs of entry faced by a potential rival are large, as is the case in the fuel value chain, then incumbents do not need to respond to the entry of rivals in downstream markets. This is particularly the case in the current market where entry costs are high, and there is transparency in the pricing model such that incumbents have a good sense of the costs faced by downstream rivals. This means that incumbents have insight into the capacity to grow and expand of downstream rivals, and because they also have an influence on the rivals' access to key inputs, they can 'manage' the extent of growth of rivals. In such an environment, incumbent firms may accommodate entry, as they are not concerned about the competitive threat posed by entrants.

Information from interviews suggests that in this case incumbent oil companies have indeed accommodated new entry rather than sought to deter it, especially in the current period wherein the oil companies have taken less of an interest in distribution to certain areas of the country. In one case, an oil company even gave advice to a potential entrant on how to go about entering the market and building up their business including through linking the potential

entrant to another established wholesaler who could supply them.⁴⁴ In most cases, the oil companies seem to have an incentive to accommodate entry in the downstream markets in that wholesalers who enter the market and are able to identify new customers which increases the volume of fuel that the incumbent firm sells. This also has the advantage of allowing the incumbent firm to benefit from selling additional volumes of fuel to new customers, without the additional investment and distribution costs of having to service those customers themselves, particularly in rural and peri-urban areas where the cost base is typically higher than in urban areas.

The control of supply is an important competitive advantage for the major oil companies. Another important tool that incumbent firms are able to use to affect the entry and expansion of rival wholesalers is through tying customers to medium- to long-term supply agreements as discussed above. Together these advantages, as well as high entry costs, allow the incumbent firms to accommodate entry without the threat that entrants will grow and achieve sufficient scale to sponsor entry upstream (at the refining level), import fuel in competition with the incumbent or compete directly with the major companies for some of their larger customers. This is symptomatic of the pricing system, the control over infrastructure, and high entry costs. If a situation arose where the major oil companies' control over supply at the upstream level was challenged, however, threatening to undermine their ability to extract maximum possible rents from the value chain, a different reaction would be likely.

3.6 Policy and regulatory barriers

Acquiring licences, particularly for distributors appears to be relatively easy and as such is not a real barrier to entry as discussed above. The main requirement for a licence appears to be the provision of a business plan that is very easily outsourced. The DoE's policy on the provision of licences also appears to be accommodating, allowing for the approval of most applications. The stance seems to be to allow many entrants into the market and then have them compete to stay in the market.⁴⁵

Policy and regulation does, however, act as a barrier to entry in certain ways, in particular through environmental regulation, municipal regulations, pricing regulation and the inadequate support offered to new entrants.

Firstly, environmental legislation is particularly important in the liquid fuel industry where the potential for environmental pollution is significant. However, adherence to environmental regulations can form a barrier to entry as they often take a long time and in some cases a lot of money to fully comply with. For instance, Vopak, an independent storage provider, had to postpone investment in Germiston, when an environmental impact assessment found that construction of a storage facility would result in the displacement of the blue spotted frog.⁴⁶

⁴⁴ Interview with Tipublox Petroleum, 24 July 2014.

⁴⁵ Interview with DoE, 3 September 2014.

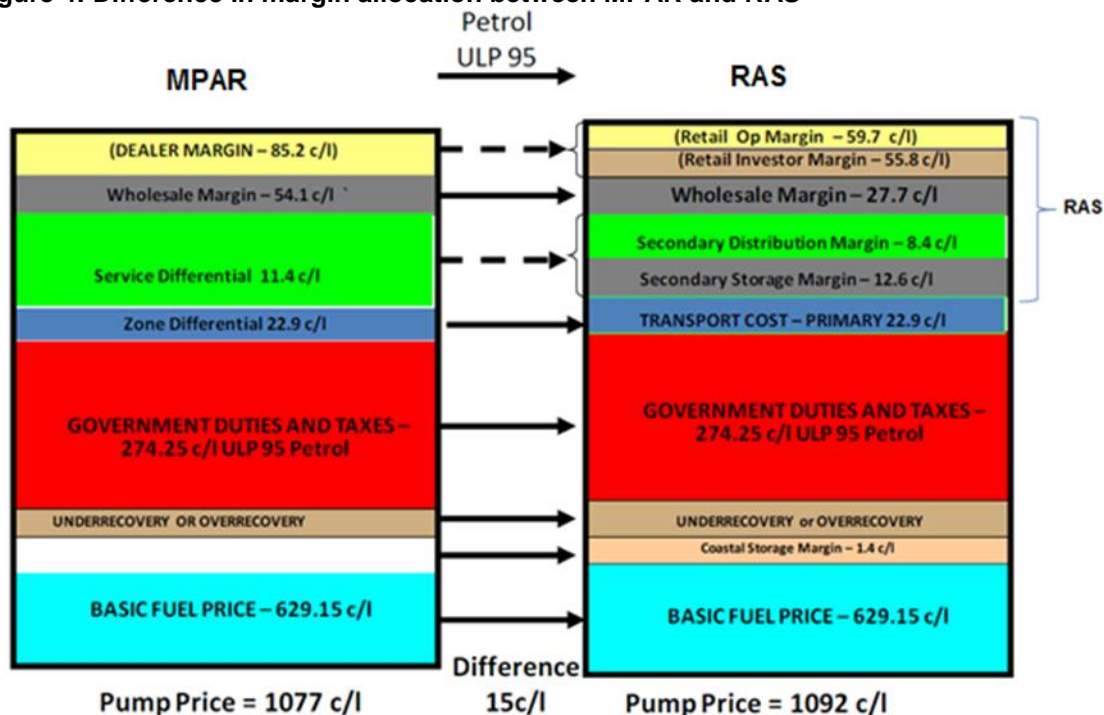
⁴⁶ Interview with NERSA, 10 September 2014

The solution to this is to buy an offset area for the frog which adds considerable cost to the project, not to mention delaying the process.

Similarly, municipal and national authorisations can also require time and money especially in cases where the different authorities give contradicting permissions. This ties in with zoning requirements. Before a wholesale or retail site can be acquired, potential distributors must ensure that they fit the zonal requirements or that they can get the permission necessary for rezoning a particular area.

The above regulatory barriers mostly apply to new entrants during the application stage and initial entry into the market. Once an independent distributor has entered into the market, there are barriers to growth as well such as the pricing regulation. The implementation of RAS and MPAR before it have had an impact on independents' ability to enter and grow in the market. MPAR aimed to allow benchmark returns on marketing and guaranteed wholesalers a margin of 15% on marketing assets (see Figure 4 for a comparison of MPAR and RAS). Under this system, the aggregate oil marketing profit expected was within 10-20% of assets. If there were increases or decreases outside the range, a margin increase or decrease would be indicated (SAPIA, 2002). This system resulted in an oversaturated retail market as oil companies over invested in retail sites in order to take advantage of the downstream profits allowed through using MPAR (Tait, 2009). While the major oil companies and wholesalers benefitted from this regulation, the retailers were greatly disadvantaged.

Figure 4: Difference in margin allocation between MPAR and RAS



Source: McGregor (2012)

The greater proportion of the profit margin was allocated to the higher levels of the value chain. The other problems with MPAR had to do with delays in calculating the industry margin (the process could take 6-12 months) with no means to correct for over/under recovery; and where there were more expensive assets than necessary, the higher return would simply be passed

on to the consumer since there was a guaranteed return of 10-20% regardless of efficiency of the refineries' distribution (Mondliwa and Roberts, 2014).

RAS was intended to regulate the price in such a way that the retailers got a fairer profit margin by dictating the consumer price and to increase transparency in the process. Despite the positive benefits expected from implementation of the system, a number of complaints have arisen from different stakeholders. The wholesalers for instance believe that they are not as well protected as the retailers (LFWA, 2013). They argue that the wholesale margin and service differential is not calculated based on all the costs experienced in servicing the market such as the distance to independent wholesalers' depots in distant rural areas and delivery to small customers requiring small volumes.⁴⁷

In order to determine this consumer price, RAS assumes a benchmark service station which it acquires by averaging the costs of 50 depots. As a result, service stations located farther from the benchmark station bear higher transport costs which reduces the margin they can receive in petrol where the retail price is regulated. Distributors that are closer to the benchmark station receive higher profit margins than those farther away. The major oil companies' response to RAS was to sell off the sites that were in the rural areas and far from the benchmark station leaving them to the independents. The major oil companies therefore retain the sites with the highest profit margins. While the retailers are better off than they were before, the independent wholesalers have a reduced margin. Some of the independent wholesalers interviewed mentioned that they receive a margin of between 5-10 cents per litre of fuel which is far below the 15 cents per litre specified by RAS.

Moreover, despite RAS having the intention of raising the retailers' margin, it largely depends on the goodwill of the major oil companies. Most of the retailers are tied into contracts with the major oil companies in which there is an already prescribed margin. In some cases the major oil companies will stick to the margin agreed in the supply contract with the distributor, rather than giving the retailers the full margin advocated by RAS. For instance where the regulated margin for the retailer is R1.40 per litre, some of the major oil companies choose to provide a lesser amount in the region of only R1.00.⁴⁸ While the intention and spirit of RAS is acknowledged and appreciated in the market, there appears to be a failure in terms of ensuring its proper implementation. This means that independent distributors may have the ability to enter, and to a lesser extent, compete in the industry but the returns received through the pricing mechanism do not allow for expansion.

Prior to its implementation, a RAS committee was created to allow stakeholders to engage with the DoE on some of the issues surrounding RAS. According to independent wholesalers, however, this was not an effective forum for engagement, and there appears to be a

⁴⁷ It is worth noting that the liquid fuel wholesalers have not been able to produce estimates which show the significance of these cost differences which weakens their bargaining position with both suppliers and regulators.

⁴⁸ Interview with Petroleum Retail Alignment Forum, 26 August 2014.

perception amongst independent wholesalers that private lobbying by the major oil companies was conducted alongside the formal engagement, to the detriment of the process.

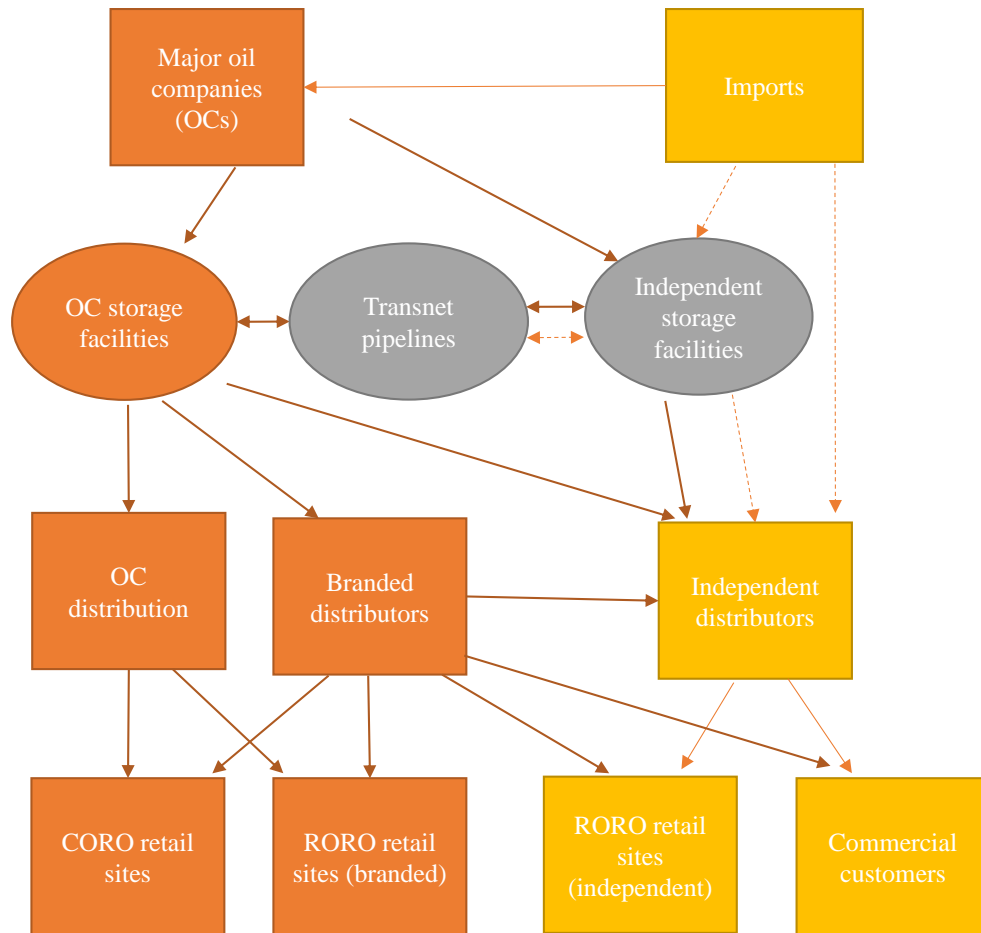
Another point to note with regards to regulatory barriers is that while recent regulation makes it easy for new entrants to get into the market, particularly if the firm has good BBBEE credentials, the available regulation does not seem to provide sufficient support for the new entrants. However, it may be that the new entrants are not aware of or underestimate the high levels of knowledge, skill, cash flow and infrastructure required in this market. This speaks to provisions of the relevant legislation and efforts to train and support entrants.

4 State of transformation and competition in liquid fuel distribution

The combined effect of all of the barriers to entry noted above is that whilst DoE has licensed a large number of BEE wholesalers, very few are actually operating in the industry and still fewer are operating successfully. Even if a new entrant does manage to secure both a fuel supply and customers for the product, the environment remains challenging and most struggle to grow beyond a small scale of activity.

Competition appears to be relatively muted in the industry due to a combination of factors including the vertical agreements between the major oil companies and their branded-marketers and retailers, the fact that the upstream market is concentrated and there are few sources of supply and the nature of economic regulation in the sector. The state of competition at the different levels of the value chain is illustrated in the diagram below.

Figure 3: Illustration of competition in the liquid fuel value chain



Source: Authors' own interpretation

Note: Dotted line indicates not currently feasible

Level of the value chain

State of competition

Refining/importing

6 major OCs with refineries around the country
Imports only by OCs
Fuel “swaps” to service different parts of the country
Competition Act exemption in terms of coordinating fuel supply for security of supply
Information exchange case referred by Competition Commission - alleged to have dampened competition

Transport and storage

Storage capacity extremely limited, esp. in Durban
Access to uncommitted capacity mandated in theory but not going to independents in practice
Independent storage capacity mainly committed to OCs
Pipeline access mandated but not usable without storage at each end
Independents cannot import due to lack of storage

Distribution

Branded distributors locked into OC value chain with exclusive contracts
Independents cannot compete hard with OCs/branded distributors - dependent on them for supply
Independents accommodated in a niche if they can provide new customers – e.g. due to BEE status
Competition usually on service, does not seem to be vigorous price competition

Customers

Price regulation at wholesale (diesel) and retail (petrol) level.
Formula determines indicative margins at each level of value chain based on “average” service station/depot
Provides focal point around which firms can coordinate

At the refinery level, the six major oil companies each own refineries or part-shares in refineries in different parts of South Africa and also import some fuel. They then organise the supply of fuel across the country by means of swap agreements as well as by transporting fuel from Durban to the inland region via the Transnet pipeline (and to a lesser degree by road and rail). The coordination of the supply of fuel around the country is allowed in terms of an exemption from the Competition Act as discussed above. Although in theory it is possible for an independent player to import fuel, in practice there are a series of constraints which make this very difficult, if not impossible. These constraints mainly relate to the availability of storage infrastructure which has been discussed at length above.

This results in a situation where new entrants at the distribution level are usually accommodated into the industry by existing players, rather than entering independently and challenging the status quo. For example, a well-established wholesaler may agree to supply fuel to a new entrant if the entrant can deliver a new customer that the established player would not otherwise have served, but would be unlikely to do so if the new entrant plans to compete for existing customers. Similarly, the more established wholesalers do not typically compete with the major oil companies for customers as they are usually tied in to a branded-marketer agreement which dictates the area in which they may trade. Even where this is not the case, it is difficult for wholesalers to compete with the major oil companies for customers when they are dependent on them for the supply of fuel. These dynamics would not matter if there was strong competition between the major oil companies themselves and therefore between the different vertical chains present in the market. However, this does not seem to be the case. According to market participants, such competition as does take place is typically based on service levels and there is not vigorous price competition in the market.

The reason for this may be attributable in part to the economic regulation of the industry. The fact that prices are regulated serves as a further disincentive for competition in the industry. Even though prices are directly regulated at only one level of the value chain, the price formula includes wholesale and retail margin components, which means that the “fair” compensation level for the average wholesaler is common knowledge throughout the industry. Similarly the return that the average retailer should make is published as part of the formula. According to those interviewed, the fact that the retail price of petrol is regulated means that the total rents available are determined by the regulator. The control that the major oil companies have over supply means that they can dictate what proportion of this total margin goes to wholesalers and retailers, and they generally do not allow them more than these average amounts, no matter whether the wholesaler or retailer in question is located in a high cost or low cost area to service.

The price regulation system may also explain why wholesalers report that they are generally unable to play the major oil companies off against one another, as it provides a focal point around which the major oil companies can easily tacitly coordinate. Coordinated outcomes in oligopolistic markets are the result of repeated games where the market conditions mean that competitors find it more profitable to adhere to the collusive agreement (whether tacit or explicit) than to compete strongly with one another. For this to be the case, firms must have a means of reaching agreement and a mechanism for detecting and punishing deviations from that agreement. This suggests a set of conditions in which coordination is more likely. These include high levels of concentration, symmetry between firms, transparency in the market, and product homogeneity (Motta, 2003).

As discussed by the Tribunal and highlighted above, all of these conditions are met in the petroleum industry. Transparency in particular is very high in this market as a result of the swap agreements between the major oil companies, the pricing formula used by the regulator, and the need to coordinate supply in the interests of security of supply. Market transparency enhances the ability of firms to monitor the behaviour of competitors and detect any deviation from the coordinated outcome. The information sharing arrangement which the major oil companies were party to until recently would have further enhanced their understanding of one another's businesses and ability to maintain tacit coordination and avoid head-on competition. Even now, there seems to be no incentive for the major oil companies to disrupt the profitable status quo by diverging from this behaviour. As noted above, the transparent pricing formula published by the regulator provides an easy means for firms to reach a tacit understanding on price.

In this context, the long-term exclusive contracts which the major oil companies sign with their branded distributors could also be interpreted as a means of committing to maintain the agreement, as the agreements effectively prevent the firms from undercutting one another to customers and allow them to maintain high margins upstream. This may also partially explain the major oil companies' decision to disinvest from the wholesale level. Independent wholesalers on the other hand are prevented from competing effectively by the control which the major oil companies hold over supply. They have neither the ability nor the incentive to compete strongly on price as the major oil companies control the price at which they receive the product, and the independent wholesalers are effectively reliant on them for their existence. Unless the independent wholesalers are able to access an alternative source of supply, the major oil companies' control of the market and ability to extract the majority of the available rents is likely to continue.

As discussed above, it is important to note that the liquid fuels industry is one where there are a number of competing imperatives. In addition to stimulating transformation in the industry, DoE is also concerned with ensuring security of supply and preventing costly shortages of fuel in the country. Still in addition to this, is the need to ensure that fuel is affordable to consumers in all provinces, a goal which may be thwarted if consumers in outlying areas had to face the full costs of distributing fuel to these areas, and which therefore necessitates some cross-subsidisation. In this environment, competition concerns may be relatively low down on the list of priorities. However, the analysis above has shown that to a large degree the problems with competition and transformation in the industry are interlinked. True transformation and true competition will not flourish under the current market conditions.

5 Conclusion and recommendations

The report sets out to use publicly available data and information from interviews with industry stakeholders to assess the extent of barriers to entry and expansion in wholesale fuel distribution. As noted in the report, the constraints in wholesaling are in fact directly linked to the broader market structure, regulatory environment and resulting constraints to greater competition in the industry as a whole. Our view, as established in the analysis, is that while there is some competition between wholesalers in local markets through (limited) discounting

and efficiency and service-related value add, the vertical integration of the major oil companies and the regulatory environment create distortions in the competitive process. This is exacerbated by the structural barriers imposed by the lack of alternative fuel sources due to the cost and ownership of essential infrastructure and limited coordination between government and private enterprises in terms of relieving this constraint. The role of government is important insofar as it has an interest in increasing the pace of transformation in the sector as a whole, without somehow compromising security of supply.

Within this context, we have sought to understand the challenges which are specific to wholesaling by categorising the inputs from the interviews conducted into the main themes, which are: the costs of entry, access to supply, the ability to attract customers, policy and regulation and the lack of skills and training. We review the main findings below.

- **Costs of entry:** Obtaining a licence and the requisite licensing fees are generally not prohibitive barriers, although there may be some delays in this process in some cases. However, the costs of entry in terms of the capital requirements are a constraint, particularly when entering the market as a wholesaler with infrastructure and a depot, and trucks. There are also additional considerations in terms of the working capital or cash flow requirements due to the fact that suppliers of fuel require upfront payment for product, whereas customers will generally ask for deliveries on consignment or with favourable payment terms. The extent of financial constraints to entry and expansion tend to vary with the mode of entry chosen by the wholesaler.
- **Access to supply:** The major oil companies control the supply of liquid fuels and will typically not deal directly with new entrants in wholesale distribution because they do not sell sufficient volumes. This seems to apply more to independent entrants who often source from other established wholesalers whereas those that enter the market as branded-marketers have more direct access to the oil companies. The widespread use of supply agreements, and their duration, does provide some security of supply for wholesalers, although the sentiment in the industry is that branded-distributors would have preference over independent wholesalers in terms of getting supply of fuel in the event of a shortage.

An alternative to relying on the major oil companies is to import fuel from the international market although this is currently nearly impossible given difficulties around landing fuel of the right quality and at the right time, exposure to fluctuations in the exchange rate and world market prices (due to how long it takes to land the fuel), the lack of alternative refining capacity once the fuel is landed to correct any quality deficiencies, and the lack of alternative independent storage capacity. Where there is independent storage capacity, use or pay requirements mean that those providers such as Vopak still need to contract with the major oil companies to guarantee usage and sustainability of the facility. Whilst NERSA has made efforts to ensure that uncommitted capacity is made available to independents, through requiring owners of storage facilities to produce written storage allocation mechanisms, this does not seem to have had much effect on the ability of entrants to access storage facilities in practice. Accessing the pipeline, particularly the NMPP once it becomes operational, is less of

a constraint. However, independent importers of fuel may still have to negotiate with the incumbent oil companies for access to their facilities for off-loading fuel at the port.

- Access to customers: Customers value purchasing fuel from the major oil companies which is associated with quality and reliability. This restricts customer switching and weakens the potential for sourcing imported fuel. The regulated price environment (and constraints on discounting) means that wholesalers compete for customers on the basis of value added services such as reliability and timeliness, efficiency, offering favourable payment terms, and assisting customers with infrastructure and fuel management systems, often at the wholesalers' expense. The widespread use of supply agreements and the vertical arrangements entered into by branded-distributors mean that while there is some competition between wholesalers in specific local markets or niches, this is not an optimal level of competition. Competition would be greater at the wholesale level if there was greater competition between the oil companies themselves at all levels of the value chain.
- Policy and regulation: While the DoE rightfully, in our view, allows entry of many new players and encourages them to find ways to compete effectively, this stance can also restrict *meaningful* entry by creating a system which doesn't provide the required support mechanisms for entrants. This speaks to training and capacitation, the implementation of a fair pricing system, and ensuring a regulatory compliance system that is easy and financially feasible for entrants to comply with (e.g. on environmental and municipal authorisations). Furthermore, challenges in terms of the correct implementation of the RAS pricing mechanism seem to have resulted in wholesalers being undercompensated in terms of the stipulated margins relative to their costs of doing business. Finally, independent wholesalers are of the view that the mechanisms which have in the past been provided by DoE for engaging around proposed changes to regulation and other issues affecting the sector have not been very effective. There is a perception that important decisions are taken outside these forums and are subject to lobbying behind closed doors by the major oil companies.
- Skills and training: Knowledge of the workings of the industry including regulation and tacit local market knowledge acquired through industry experience are essential for new entrants. Those entrants who have a history of working for or with the major oil companies have benefited from having this knowledge and the relationships built over time with suppliers and other market participants. This knowledge is also critical to attracting new customers. The DoE has recognised the importance of capacitating entrants with the 'coded' knowledge in terms of regulation and minimum standards, although the progress of training and development seems to be muted, contributing to the exit of many new entrants.

Collectively these factors serve as barriers to entry and importantly expansion, for wholesalers although their impact varies depending on whether the entrant is an independent or branded-marketer. It is clear, as discussed above and in previous sections, that issues in the sector are not only specific to wholesalers but grounded in the overall market structure, the role of

the vertically integrated oil companies and muted competition between them, and some aspects of the regulatory environment. Therefore, we consider that any recommendations that can be drawn from this study should make a distinction between the short- and long-term remedies and suggestions, and should tackle distortions at all levels of the value chain. The recommendations which we present in Table 5 below are not prescriptive and seek to stimulate a discussion of the possible avenues that could be explored in addressing barriers in this market.

Table 5: Summary of recommendations on barriers to entry and expansion

Upstream	<i>Short term</i>	Reconsider competition exemption - due to expire in 2015 Competition authorities should investigate a less anti-competitive means of achieving the objective
	<i>Long term</i>	Ensure independent imports can be brought into the country (see recommendations on transport and storage)
Transport and storage	<i>Short term</i>	Further efforts by NERSA to ensure access to existing uncommitted capacity
	<i>Long term</i>	Ensure sufficient capacity is built to meet independent wholesalers' needs. Possible options for achieving this: <ul style="list-style-type: none"> • Government-facilitated investment in new storage capacity. This could be through providing guarantees and/or encouraging/facilitating collective action by independent wholesalers • Additional licence conditions mandating setting aside of storage capacity in existing and new facilities for independents – look at what has been done in coal in terms of access to RBCT
Wholesale	<i>Short term</i>	DoE review of implementation of RAS DoE provide more constructive engagement opportunities and leadership Independent wholesalers engage with regulators, particularly around costs and provide input into the review process DoE increase access to and provision of capacity building and assistance for new entrants
	<i>Long term</i>	Address exclusive territories and pricing in long term supply agreements perhaps linking duration to investments made Deregulate the market once a sufficient level of competition is achieved upstream
Retail	<i>Long term</i>	Deregulate the market once a sufficient level of competition is achieved upstream

Source: Authors' views

First of all, at the upstream level, the degree of transparency in the market could be reduced through finding different ways of achieving security of supply objectives. The Competition Act exemption currently enjoyed by SAPIA and the major oil companies is due to expire in 2015, and we suggest therefore that if an application is brought for its renewal, the competition authorities should consider whether the same objectives can be met through less anti-competitive means. For example, it may be possible for an independent third party such as a government agency or auditor to coordinate supply rather than the companies themselves.

Secondly, it is clear that developing alternative sources of supply would undermine returns to the incumbent oil companies who would be expected to adjust their competitive strategies in response to this. Significant benefits would accrue to downstream operators and consumers if distributors could play oil companies off against one another to get better prices and terms. Furthermore, oil companies would most likely have to compete with one another more aggressively, which it appears is not currently happening in the market. In order for this to be possible, however, interventions are required at the transport and storage level.

In this regard, facilitating access for independent wholesalers to storage infrastructure is absolutely critical to enabling alternative sources of supply into the market, and hence to allow for greater levels of competition in the value chain. In the short term, NERSA should continue to make efforts to enable independents to gain access to existing uncommitted capacity. In the longer term, it is necessary to ensure that there is sufficient uncommitted capacity in the market for independents to use. DoE and NERSA could do this by leveraging storage facility licence conditions to mandate that players set aside a certain proportion of capacity for independents to use. Alternatively DoE could facilitate investment in new independent storage capacity, either through providing guarantees or through encouraging collective action by independent wholesalers to make such an investment.

At the wholesale level, there are a number of interventions which could be made in the relatively short term to assist independent wholesalers to be effective competitors. Firstly, from the information obtained from the market participants, it does seem that a review of the implementation of RAS would be beneficial and could include consideration of situations where wholesalers are not receiving the margins recommended in the RAS pricing mechanism. To the extent that there are problems in the current implementation of RAS this could quite quickly lead to independent wholesalers leaving the market and therefore it would be useful to establish, even at this early stage, whether the pricing mechanism is really allocating a fair margin to all parties, both in theory and in practice. We note that for this review to be effective, input from independent wholesalers regarding their costs of doing business and their experiences in the market will be crucial. As noted above, to-date independent wholesalers have not found forums for engagement with the regulator to be particularly effective and there is a perception that the DoE is too strongly influenced by the major oil companies, to the detriment of other industry participants. A review of regulation in the sector would require leadership and commitment from the regulator, but also depends on the constructive engagement and participation of the independent wholesalers in order to be effective.

Also at the wholesale level, increased efforts in terms of capacity building and assistance for new entrants could help to address the skills deficiency in the industry. This could include providing information and advice to new licensees as well as assistance with making relevant industry contacts. It should be noted, however, that increased access to training and advice is unlikely to substantially change the experience of new entrants unless some of the other barriers to entry are addressed as discussed above.

A long term intervention could be to address the exclusive and long term nature of the agreements between the major oil companies and their branded distributors. The agreements between wholesale distributors and the major oil companies serve to restrain competition by specifying geographic territories (in the case of branded-distributors) and in some cases the customers which a wholesale firm is required to service. In the case of independent wholesalers, the supply relationships with the oil companies would probably not exist if the oil company thought that those wholesalers threatened to compete with them directly. If supply contracts were known to be for a shorter period of time, then it is more likely that oil companies would have to compete to retain those wholesalers as distributors for them in specific area and especially those that they would rather not service themselves. However, this would potentially be constrained by the fact that oil companies would most likely remove their infrastructure from a wholesaler's site if they could no longer supply that wholesaler, for competitive and environmental reasons.

Finally, we note that in the long term, the deregulation of the industry at the wholesale and retail levels could be an effective means of encouraging competition. However, there are two significant caveats which must be attached to such a recommendation. Firstly, deregulation should not be considered until such time as there is competition at the upstream level of the value chain, most likely through the channels for independent imports of fuel into the country being opened up. If the industry was deregulated in the current environment, the likely result would be large numbers of independent wholesalers and retailers going out of business and/or substantial increases in the price of fuel in outlying areas.

Secondly, a key factor to keep in mind when considering the regulation or deregulation of the industry is the issue of geographic cross-subsidisation. If it is true (which certainly seems plausible) that the cost of supplying fuel to outlying areas of the country is higher than the cost of delivering it to urban areas, then a choice needs to be made around whether it is desirable for customers in outlying areas to face the full cost of supplying fuel to those areas. To the extent that this is not considered desirable, then some means of cross-subsidisation is required. This is at least partly the root of the current problems being faced by independent wholesalers – they generally supply into the most high cost parts of the country but are constrained by regulation in terms of what they can charge customers, while the major oil companies have held on to the lower cost parts of the country to service themselves. This is an issue which would need to be resolved before any decision to deregulate could be taken.

It is of course important to keep in mind the issue of security of supply in considering interventions that impact the sector. However, with well-designed policies, the objectives of competition, transformation and security of supply should be able to be met simultaneously. It

may be that for some time transformation of the sector will only be reflected in increased shareholding of HDSAs, however as mentioned above this often results in participation and experience gained at the board level and not in the intricacies of operating and competing in the different levels of the market. Unfortunately, this scenario has been shown to perpetuate the status quo in the market in terms of achieving the goals of transformation, as recognised by the DoE.

6 List of references

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7 List of interviewees

Contact	Company	Designation	Date	Sector
Dixen Sunderlall	Hammertone Fuels	Owner	23 July 2014	Wholesale
Jean Snyman	Free State Petroleum Distributors (Pty) Ltd	Owner	14 August 2014	Wholesale
Greg Moldenhauer	Sitanani Fuel Distributors	Owner	24 July 2014	Wholesale
Phenyo Ntshabele	Tipublox Petroleum	Owner	24 July 2014	Wholesale
Peter Morgan	Liquid Fuel Wholesalers Association (LFWA)		15 August 2014	Wholesale
Leslie Naidoo	Transnet Pipelines	Commercial Manager Operations	26 August 2014	Transport
MC Lamprecht	Petroleum Retail Alignment Forum	Chairperson	26 August 2014	Retail
Grove Steyn	Ports Regulator of South Africa	Part time member	27 August 2014	Transport
Gosetseone Leketi	Department of Energy (DoE)	Director: Licence Analysis	3 September 2014	Regulation
Rod Crompton	National Energy Regulator of South Africa (NERSA)	Full time member: Petroleum	10 September 2014	Regulation
Peter Noke	Royale Energy	Owner	11 September 2014	Wholesale and Retail
Avhaphani Tshifularo	South African Petroleum Industry Association (SAPIA)	Executive Director	30 September 2014	Wholesale and Retail