LIQUEFIED PETROLEUM GAS (LPG) MARKET INQUIRY

TERMS OF REFERENCE
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1. LEGAL BASIS FOR THE INQUIRY

1.1. The Competition Commission (“the Commission”) will conduct a market inquiry into the supply and distribution of Liquefied Petroleum Gas (“LPG”) in South Africa in terms of Chapter 4A of the Competition Act, No. 89 of 1998 (as amended) (“the Act”) and in keeping with the purpose and functions of the Commission as set out in section 2 and section 21 of the Act respectively. Section 21 of the Act calls on the Commission to, inter alia, “implement measures to increase market transparency” and “advise, and receive advice from, any regulatory authority”. In order to fulfil these functions, and in line with the purpose of the Act, Chapter 4A of the Act enables the Commission to conduct market inquiries in respect of the “general state of competition in a market for particular goods or services, without necessarily referring to the conduct or activities of any particular named firm”. A market inquiry is thus a general investigation into the state, nature and form of competition in a market, rather than a narrow investigation of specific conduct by any particular firm.

1.2. The Commission is initiating an inquiry into the LPG sector because it has reason to believe that there are features of the sector that prevent, distort or restrict competition. The Commission further believes that conducting this inquiry will assist it in understanding how it may promote competition in the LPG sector, in furtherance of the purpose of the Act. One of the prerequisites to commence a market inquiry is that the Commission must develop and publish Terms of Reference (“ToR”) for the market inquiry. These ToR must include, “at a minimum, a statement of the scope of the inquiry and the time within which it is expected to be completed. In accordance with these provisions, this ToR sets out the scope of the market inquiry, as well as the expected timelines for the inquiry.

1.3. Although the ToR delimits the scope of the market inquiry as currently envisaged, additional and related matters not identified herein may arise during the conduct of the inquiry. If the Commission believes that the ToR should be amended in any way, either through the addition of new matters or exclusion of matters currently identified herein, the ToR may be amended in terms of section 43B (5) of the Act.

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1 Chapter 4A of the Act, which introduces the powers to conduct market inquiries came into effect on 01 April 2013.
2 According to section 43B (1)(i) of the Act, the Commission may initiate a market inquiry if it has reason to believe that any feature or combination of features of a market for any goods and services prevents, distorts or restricts competition within the market.
2. PRODUCT OVERVIEW

2.1. LPG is a liquefied and mixed gaseous hydrocarbon.³ Although there are many variations of LPG, it is primarily made up of propane (60%) and butane (40%) which are compressed into liquid form for ease of transport, storage and handling.¹ LPG is produced as part of a chemical process either as a by-product of the refinery process or it can be extracted “from oil or ‘wet’ natural gas streams as they emerge from the ground”.⁵ It can also be produced by blending the two ingredients together. It is stored in tanks, mainly in liquid form and transported by road tanker trucks or in cylinders. LPG is used in many applications, however, the basic product is homogenous in the sense that the physical features and the quality of the product supplied by each supplier is the same.

2.2. LPG is primarily used as a thermal fuel and is consumed by industrial, commercial and household consumers. It burns cleanly, releasing very few sulphur emissions, and posing no ground or water pollution hazards. There are over a thousand applications of LPG particularly in commercial and industrial businesses. In particular, LPG is used in the following industries:

2.2.1. Industrial customers: for heating purposes where a readily controlled temperature is needed, i.e. motor vehicle paint shops or as fuel for fork lift trucks within warehouses etc.

2.2.2. Commercial: This includes, for example, a shopping centre with a number of restaurants which may have one bulk tank with LPG reticulated to individual restaurants/stores.

2.2.3. Autogas: LPG can also be used to power motor vehicles. Vehicles that use autogas are fitted with two fuel tanks, one for autogas and another for petrol/diesel. The vehicle can therefore switch between autogas and petrol/diesel at any time.⁶

³ Atoms of hydrogen and carbon combine to form a hydrocarbon. This information has been obtained from www.afrox.co.za on 4 February 2013
⁴ See World LP Gas Association (WLPGA) website at: http://www.worldlpgas.com/
⁶ See http://www.autogassa.co.za/
2.2.4. **Households:** LPG is mainly used by households for heating and cooking. Recently, residential estates have also started installing LPG reticulation systems supplying gas into the different properties inside these estates.\(^7\)

2.3. There are various possible substitutes for LPG depending on the intended end use. These include natural gas, electricity, biomass (wood), fossil fuel (coal) and solar equipment.\(^8\) LPG generally differentiates itself from other energy sources on the basis of portability, convenience, low sulphur content, controllability and its clean burning nature. The confines of the market will become clearer during and after the market inquiry however the Competition Tribunal (“Tribunal”) has previously accepted a distinct market for LPG separate from other sources of energy.\(^9\)

3. **THE SOUTH AFRICAN LPG SECTOR**

3.1. Approximately 300 000 tons of LPG is manufactured and sold in South Africa annually generating a turnover of about R1.5 billion. The sector is however still characterised by limited supply with imports supplementing the domestic supply. Most of the LPG produced in South Africa is consumed by industrial users such as manufacturing plants and commercial users such as shopping centres with only marginal quantities consumed by households. Only about 3% of households in South Africa use LPG as their main energy source for cooking.\(^10\) The wholesaling of LPG is relatively capital intensive and requires investment in bulk transporters tankers, bulk storage facilities, cylinder filling plant, cylinders, cylinder delivery vehicles and installation on customer’s premises.\(^11\)

3.2. The LPG sector is highly regulated mainly to ensure the safety of both suppliers and end-users as the gas is hazardous. The Occupational and Health and Safety Act (No. 85 of 1993 as amended), which is enforced by the Department of

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\(^7\) See Waterfall Estate Magazine Issue 5, 2013/01 available at http://waterfall-estate.co.za/about/waterfall-estate-magazine/

\(^8\) This information is detailed in the Tribunal decision for the merger between Engen LTD, Sasol LTD and Petronas International Corporation LTD. Competition Tribunal Case Number: 101/LM/Dec04.

\(^9\) This information is obtained from a final report in the merger between Sasol Oil (Pty) Ltd and Exel Petroleum (Pty) Ltd (Competition Tribunal case number 57/LM/Oct03). Also see the small merger between Afrox and the LPG and Industrial Gas Distribution Business of MR Gas CC (Competition Commission Case Number: 2003Nov710).


\(^11\) This information has been obtained from www.parallaxonline.net on 7 February 2013.
Labour, and other fire safety regulations and municipal by-laws, have made provisions which ensure that the safety component of LPG receives priority. The Department of Energy (“DoE”) also sets strict regulations which ensure that infrastructure used to import and transport imported LPG meets the safety requirements of the country.

3.3. In addition to safety regulation, the price of LPG is also regulated at certain levels of the value chain in terms of the Petroleum Products Act, (No. 120 of 1977, as amended) (“PPA”). The DoE regulates the Maximum Refinery Gate Price of LPG (“MRGP”) which is the price at which refineries sell LPG. The MRGP is also designed to support the importation of LPG.\(^\text{12}\)

3.4. One of the biggest factors affecting the price of LPG is the price of crude oil. The volatility of the crude oil price causes constant fluctuations in the price of LPG.\(^\text{13}\) The LPG industry faces shortages from time to time, mainly in the winter months, largely due to unplanned shutdowns of refineries, late start-up after planned maintenance and limited storage facilities. Notwithstanding the shortages, importing is challenging as import facilities are limited and there are suggestions that imports are uneconomic at the MRGP.

3.5. The storage of LPG (outside of refineries) is licensed and regulated by the National Energy Regulator of South Africa (“\textit{NERSA}”). NERSA regulates LPG marine loading facilities, pipelines and storage facilities when LPG is in liquid form.

3.6. The domestic LPG value chain includes refineries, distributors/resellers, retailers and other stockists. The diagram below shows the different levels of the value chain before they are discussed thereafter:


3.7. The Refineries

3.7.1. There are six refineries in South Africa dispersed across the country. Not all the refineries in South Africa produce LPG. As noted above, LPG is regulated at this level of the value chain by DoE which sets the MRGP. The Commission understands that the refineries allocate a certain proportion of their total LPG supply to wholesalers. The Commission has identified the following refineries producing LPG in South Africa:

3.7.1.2. Sasol Gas Limited Synfuels (CTL\textsuperscript{14}) (Secunda).
3.7.1.3. The Petroleum Oil and Gas Corporation of South Africa (Pty) Ltd (PETROSA) (GLT\textsuperscript{15}) (Mossel Bay).
3.7.1.4. Engen Petroleum Limited (ENREF) (Durban).
3.7.1.5. Chevron South Africa (Pty) Ltd (CHEVREF) (Cape Town).

\textsuperscript{14} Coal-to-Liquid
\textsuperscript{15} Gas-to-Liquid
3.7.2. LPG is also imported into South Africa via three small import facilities located in Richard’s Bay, Port Elizabeth and Durban.\textsuperscript{16}

3.8. Resellers/Distributers

3.8.1. Major Resellers (MR’s), according to the Petroleum Products Act 1977 ("PPA") are firms that play a distribution role for bulk LPG, either distributing it in bulk or repackaging LPG to better suit customer demands. Bulk LPG is purchased by the MR’s, either from the oil refineries or imports. The LPG is then transported either by rail or road to three possible destinations, namely:

3.8.1.1. Directly to industrial and commercial end-user. These customers would generally store the LPG in bulk storage tanks provided by the MR on their premises. The supply to commercial entities often involves the reticulation of LPG to multiple end-users through a system of pipes connected to one or more storage tanks. Generally, the MR would also provide other equipment such as vaporizers, firefighting equipment and gas meters.

3.8.1.2. The MR’s storage facilities and/or cylinder filing plants located in different parts of the country. The primary use of LPG supplied to these facilities would be to fill the cylinders at an adjacent filling plant owned by the MR. The cylinders are then supplied to commercial customers and end-users in LPG cylinders. Alternatively the LPG is supplied by the MR from the storage facility to bulk LPG industrial and commercial end-users such as shopping centres.

3.8.1.3. LPG is stored in equipment supplied by the MR at the premises of the retailer who then fill the LPG into gas cylinders. All equipment, including filling platforms, cylinder filling scales, fire extinguishing equipment and ancillary equipment required to fill the gas cylinders is provided by the MR. LPG cylinders are then sold off to individual end-users and private households.

3.8.2. The Commission also understands that there are firms which trade at this level of the market that are not 'conventional' wholesalers of LPG. These firms, referred to as 'brokers', receive an allocation of LPG from the refineries and on-sell this (the allocation) to the wholesalers. These firms therefore do not participate actively in the wholesaling of LPG but rather play the role of an intermediary between refineries and wholesalers in instances where they have managed to secure allocation. Due to the shortages in LPG supply, the role played by these firms will be explored during the market inquiry in as far as it affects the competitive dynamics at the wholesale level.

3.9. Retailers

3.9.1. LPG is sold at the retail level in cylinders mainly used by household customers. This level of the market is largely fragmented with LPG being sold from a variety of outlets such as filling stations, grocery supermarkets and hardware stores. The Commission has provisionally identified the following dynamics at this level of the value chain:

3.9.1.1. LPG is supplied in branded cylinders by the resellers to retailers who on-sell to end-users.

3.9.1.2. LPG retailers are usually contracted and branded to a particular producer or wholesaler who owns storage and filling equipment. This is particularly the case for filling stations affiliated with the vertically integrated refineries.

3.9.1.3. LPG usually yields a small portion of the turnover for most of these outlets and has small margins because the price is regulated.

3.9.1.4. Transportation and storage costs in the supply chain result in higher prices to consumers however the small size of the market has not warranted larger-scale infrastructural investment for importation or local optimisation and distribution of bulk LPG.

3.9.2. The demand for LPG in South Africa seems to be growing as more end-users diversify their energy mix in response to, amongst others, the power shortfalls
and increasing electricity price.\textsuperscript{17} LPG has been identified as an alternative energy carrier for the provision of quick and effective solutions to energy requirements.

4. RATIONALE FOR THE MARKET INQUIRY

4.1. Structural features of the market

4.1.1. LPG is manufactured by the refineries as a by-product of the process of producing fuel. The sector is characterised by limited supply with imports supplementing the domestic supply. The limited domestic supply of LPG is a concern for several reasons:

4.1.1.1. The strategic importance of being able to secure LPG can also be seen in the emergence of firms referred to as ‘brokers’ who are firms that trade in LPG refinery allocations.

4.1.1.2. As LPG is currently imported at very limited quantities, this suggests that imports are not providing a competitive constraint to the LPG supplied by the refineries and distributed by the resellers.

4.2. High switching costs

4.2.1. The LPG sector may be characterised by high switching costs. This may be, in part, due to the uncertainty that surrounds the current sourcing practises in the market when customers first make the decision to: a) use LPG as a source of energy and b) choose a particular firm to supply the customer with LPG. LPG supply for commercial and industrial customers is mainly done through the use of a bulk LPG tanks distributing LPG to various points around the facility through a complex reticulation system. In most instances, this reticulation system is provided by the chosen supplier of LPG on the understanding that the supplier will have exclusive rights to supply LPG for the customer.

4.2.2. The difficulty appears to arise at a later stage if a customer seeks to make the decision to switch to another supplier. It appears unclear as to who ownership of the reticulation system should cede to. This is exasperated by the fact that these complex systems are generally built into walls at the customer’s premises. There appears to be uncertainty when consideration is made of the safety aspect of the ownership and operation of reticulation systems. The Commission will consider whether the uncertainty that surrounds reticulation systems when customers seek to switch to alternative suppliers of LPG creates a restriction to competition in the market, by artificially raising switching costs. It may be possible that this creates barriers to entry and expansion for smaller distributors.

4.3. The regulatory environment

4.3.1. There is price regulation at the refinery level of the market (MGRP) and at the retail level (cylinders) however the wholesale price of LPG is not regulated. The impact of lack of regulation at the wholesale level will be explored in the inquiry to assess if this creates any competition distortion. The current regulatory environment does not encourage switching between MRs which may serve to inhibit competition at that level of the value chain. The current safety regulation framework appears to favour the continued ownership of reticulation systems used by customers by MRs. By conflating the safe use of a reticulation system with its ownership, the regulatory framework may serve to increase switching costs between MRs of LPG.

4.4. LPG as a strategic energy source

4.4.1. The government through the National Development Plan and National Growth Path has identified LPG as being of strategic importance in an economy struggling with rising energy prices and an electricity supply under severe pressure.¹⁸

4.4.2. LPG is currently underutilised in South Africa as an energy source; only 3% of households in South Africa use LPG as their main energy source for

cooking.\textsuperscript{19} The limited supply and the relatively high price of LPG may serve to keep its usage low.\textsuperscript{20} In order for South Africa to meet its strategic objectives as far as sustainable energy is concerned, it is important that the LPG sector is functioning effectively with consideration given to how competition principles may shape efficient market outcomes which will benefit the economy in general but also low-income households in particular.

5. PURPOSE AND OBJECTIVES OF THE MARKET INQUIRY

5.1. The purpose of the market inquiry is:

5.1.1. To examine whether there are features of the market which lessen, prevent or distort competition.

5.1.2. To establish a factual basis for making recommendations to the relevant stakeholders on the state of competition in the sector.

5.2. The main objectives of the market inquiry are to:

5.2.1. To examine whether the supply bottlenecks in the LPG sector may serve to create circumstances or incentives that serve to distort, prevent or lessen competition.

5.2.2. To analyse the current price regulatory framework and its impact on competition in the sector.

5.2.3. To examine whether the current features of the market increase switching costs to a prohibitive level.

5.2.4. To assess the competition dynamics at various levels of the value chain.

5.2.5. To make recommendations (if any) that may serve to improve the state of competition.

\textsuperscript{19} Ibid
6. THE PROPOSED MARKET INQUIRY PROCESS AND TIMELINES

6.1. Market inquiry process

6.1.1. The Commission will evaluate the subject matter of the inquiry through a review of secondary material obtained via information requests, consultations and summons, as required. For the purposes of the inquiry, the methods that may be used for gathering information may include the following:

6.1.1.1. Questionnaires and surveys to identified participants or to the general public.
6.1.1.2. Information requests to particular market participants.
6.1.1.3. Calls for submissions on issues relevant to the market inquiry.
6.1.1.4. Targeted meetings with key industry stakeholders.

6.1.2. The inquiry will be carried out by a team of the Commission’s staff.

6.1.3. The participants in the market inquiry process will include: business enterprises along the LPG value chain (including manufacturers, wholesalers/distributers and retailers), other related business enterprises, end-users, government departments, public entities, regulatory authorities, industry associations, and any other stakeholder that may be able to provide information relevant to the market inquiry. Members of the public will be invited to participate in the inquiry during the information gathering phase. Members of the public are encouraged to participate fully in the inquiry process.

6.1.4. The Commission is committed to the principles of fairness, transparency, and integrity and will conduct the inquiry in accordance with these principles. The Commission will allow stakeholders fair and reasonable opportunity to provide input into the inquiry process and its outcomes. Therefore, the Commission will take reasonable steps to ensure that interested parties understand the Commission’s thinking on the market inquiry as it develops. For this reason and its commitment to transparency, the Commission may release interim reports throughout the market inquiry for public consideration and comment.

6.1.5. The Commission will release a report at the conclusion of the market inquiry.
6.1.6. The market inquiry will be carried out in three phases.\textsuperscript{21} These are detailed below:\textsuperscript{22}

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<th>PHASE 1</th>
<th>Evidence Gathering/Investigation</th>
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<tr>
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<td>Gather relevant information, data and evidence</td>
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<td>Research the industry background</td>
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<td></td>
<td>Review the regulatory framework</td>
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<td></td>
<td>Review supply agreements along the value chain</td>
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<td>Hold consultations with customers, competitors, government departments, sector regulators and other relevant stakeholders</td>
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<th>PHASE 2</th>
<th>Competition assessment</th>
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<td>Define markets (product and geographic markets)</td>
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<td>Assess the competition dynamics in the defined markets</td>
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<td>Assess whether there are features of the market which lesson, prevent or distort competition</td>
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<td>Draw conclusions on the state of competition</td>
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<th>PHASE 3</th>
<th>Reporting</th>
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<td></td>
<td>Publish report on the state of competition in the LPG sector</td>
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<td>Engage with stakeholders on the recommendations made in the report</td>
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6.2. Timelines

6.2.1. The market inquiry is expected to commence on \textbf{15 September 2014} and is likely to be completed by \textbf{March 2016}.

\textsuperscript{21} Note that, in terms of section 43B(5) of the Competition Act, the Commission may amend aspects of the subject matter of the inquiry and the time within which the market inquiry is expected to be completed by further notice in the Government Gazette.

\textsuperscript{22} Several of the steps highlighted below may overlap which could expedite the process.