ANNEXURE C: WORLD BANK REVIEW OF 20 COUNTRIES

15.16. The correct countries to use to compare LPG regulations and identify best practices were identified from the following criteria to minimise the influence of country-specific favourable conditions that cause better LPG pricing and consumption:

15.16.1. Similar GDP per capita as South Africa.

15.16.2. Countries with a higher per capita LPG consumption than South Africa by a factor of at least two.

15.16.3. Supply of LPG similar to that in South Africa, like inadequate local production with imports.

15.16.4. Climate similar to that of South Africa.

15.16.5. Urban communities can access LPG easily and cheaper than rural communities due to higher concentration of demand, higher income levels and lower distribution effort. The Wold Bank in 2013 defined South Africa as being 64% urbanised with a population density of 43,8/ km^2.

Table 37: Regulatory Framework of World Bank LPG Study

Country/ City	Region	Downstream petroleum law and/or regulations	Special LPG law or regulation	National standards issued	International/ Regional standards adopted	Coverage of LPG issues	Regulatory agency	
							Type	Capabilities/ efficiency
Ghana	AFR	good	good	none	good	good	Autonomous	good
Kenya	AFR	good	good	good	fair	good	Autonomous	fair
Senegal	AFR	good	none	fair	none	poor	Ministry	poor
S. Africa	AFR	good	good	good	none	good	Autonomous	good
Fiji	EAP	none	none	none	none	none	Ministry	poor
Thailand	EAP	fair	none	good	none	fair	Ministry	fair
Vietnam	EAP	none	none	good	fair	fair	Ministry	poor
Albania	ECA	poor	none	none	good	good	Ministry	fair
Moldova	ECA	good	none	none	good	good	Autonomous	fair
Turkey	ECA	good	good	good	good	good	Autonomous	good
Brazil	LAC	fair	good	fair	fair	fair	Autonomous	fair
Dom Rep	LAC	fair	fair	none	poor	good	Ministry	poor
Guatemala	LAC	good	fair	poor	fair	fair	Ministry	poor
Mexico	LAC	good	good	good	few	good	Ministry	fair
Peru	LAC	good	good	fair	fair	good	Autonomous	good
Jordan	MNA	none	none	fair	good	fair	Ministry	poor
Morocco	MNA	fair	good	none	good	good	Ministry	fair
Canada/ Ontario	NAm	fair	good	fair	good	good	Autonomous	good
USA/Texas	NAm	good	good	none	good	good	Autonomous	good
Afghanistan	SAR	none	none	none	none	poor	Ministry	poor
Pakistan	SAR	fair	good	none	good	good	Autonomous	fair
Sri Lanka	SAR	fair	none	none	good	fair	Autonomous	fair

15.17. Both the World Bank and the World LPG Association advise against general subsidies for LPG, as these often benefit the higher-income households and industry (e.g. Autogas) instead of the lower-income households. Once established, subsidies can be challenging to remove, resulting in a large drain on the fiscus. As seen in the country summaries, subsidies have played a crucial role in increasing LPG demand elsewhere in the world.

15.18. All costs shown in the country studies are based on 2010 values. For reference, the cost of South African LPG in cylinders in 2010 was US$2,54/kg.

15.19. ***Vietnam:*** Cost of LPG was US$1,37/kg, which included home delivery within 30 minutes in urban areas. Consumers own their own cylinders, and the country does not have well-developed LPG regulations. LPG prices are not regulated and there are no subsidies. LPG consumption grew from 220 000 tpa in 1999 to 874 000 tpa in 2008, with the majority of use occurring in households. Increased demand for LPG was met by LPG imports – 69% of supply came from imports in 2010. Vietnam has many import terminals, some of which are small, so a "spoke and hub" system allows large cargos to be offloaded cheaply in the few large terminals while small parcels are sent to nearby smaller terminals.

15.20. ***Turkey:*** Has the highest cost of LPG in the World Bank survey of US$3,26/kg, but still has a per capita consumption of LPG three times higher than that of South Africa. The reason for the high cost is due to the following regulations to ensure safety and reliability of supply:

15.20.1. Licensed distributors must hold 20 days of supply in storage.

15.20.2. Cylinders are required to be delivered to houses.

15.20.3. In some cases, qualified installers connect cylinders in houses.

15.20.4. Every cylinder is insured.

15.20.5. High taxes on LPG: Special consumption tax of 32% (for autogas replacement of gasoline, which applies to cylinders to prevent cylinders being used with autogas) and 18% VAT. Thus Autogas, in spite of optimising the supply chain economics, has throttled the cylinder economics because of high taxes.

15.21. Turkey is singled out for having comprehensive LPG laws and regulations requiring:

15.21.1. Only trained and certified people may be employed.

15.21.2. Fees are paid to support the regulator (0,1% of net sales to US$2 million).

15.21.3. Companies may only handle their own cylinders bearing their emblem or trademark unless they have prior agreements with other distributors.

15.22. There is effective enforcement of licensing and follow-up, aided by the Ministry of Interior (Police and Army) and LPG marketing companies (who inform the regulator).

15.23. The LPG Association is responsible for drafting legislation and creating the appropriate infrastructure to increase the use and penetration of LPG. The association shares best practices and contributes to the ethical behaviour of the industry.

15.23.1. Cross-filling is minimised – courts support this.

15.23.2. Pricing is deregulated but the regulator can periodically establish price ceilings for a maximum of two months.

15.23.3. Turkey imports product and brings in large parcel sizes into large terminals.

15.23.4. There is joint procurement of imports.

15.23.5. Hospitality arrangements exist at terminals.

15.23.6. Cylinders are filled in centralised areas and delivered to retail outlets.

15.23.7. LPG companies own their own cylinders. Deposits are 25% to 30% of the cylinder cost.

15.24. ***Indonesia:*** Paraffin was the main domestic fuel until 2007 and was supported with subsidies. The government launched and sponsored a paraffin-to-LPG conversion programme with the objective to switch 42 million domestic and SME users to LPG. As part of the switching initiative, the government provided a conversion package comprising a 3 kg cylinder, stove and free first fill. The conversion programme was initiated in 2007 and by 2010, LPG became the main cooking fuel. Subsequently the paraffin subsidy was reduced in 2011. In 2012, LPG storage had increased to 270 000 m/t from 10 000 mt.

15.25. ***Morocco:*** The cost of LPG is US$0,4/kg due to heavy subsidies from the government. The industry is classified as being well regulated and has large import terminals (one is 110 000 mt).

15.26. ***Senegal:*** The cost of a subsidised 6 kg cylinder is US$1,23/kg. The unsubsidised price of LPG is US$1,45/kg. Senegal's conversion to LPG is characterised by:

15.26.1. The country incorporated UN funds to reduce deforestation.

15.26.2. It outlawed the selling of wood on streets and progressively taxed charcoal and kerosene.

15.26.3. An initial cross-subsidy made smaller cylinders more affordable. Subsidies account for 0,2 to 1,4% of GDP. Subsidies became so expensive in 2009 that crude imports could not be paid for, resulting in a prolonged LPG shortage.

15.26.4. Richer households use the subsidised smaller cylinders instead of the larger cylinders, while poorer households in rural areas cannot afford LPG.

15.26.5. The country relies heavily on imports, with plans to increase its import terminal capacity. Parcel sizes will increase from 4000 to 15 000 mt.

15.26.6. LPG marketing companies own and maintain cylinders.

15.27. ***India:*** The government introduced a cash subsidy (in the form of a direct benefit transfer scheme, or DBTS) for LPG to consumers instead of selling LPG to them below market price. This has reduced the leakage of subsidy funds. Cash subsidies are paid directly into consumers' bank accounts. Previously the subsidy was paid to oil companies who sold LPG at subsidised rates essentially only to households; but product found its way to hotels and restaurants. The DBTS is the world's largest cash transfer programme.

15.28. ***Kenya:*** The country has a small LPG market that has been challenged by an inadequate supply infrastructure and illegal filling which runs to 20%–30% of the cylinder market today. The lack of enforcement of a cross-filling prohibition has seen disinvestment from the LPG sector in Kenya. Regulations have been strengthened with increased inspections.

15.28.1. Key Kenyan LPG regulations were updated to return law and order to the industry and to attract investments.

15.28.2. The country has an LPG regulator devoted to LPG.

15.28.3. The Energy Act of 2008 is to be updated to particularly combat issues of illegal refilling, including penalties and enforcement.

15.28.4. Illegal filling LPG attracts a fine of 0-1M KES; this penalty will be updated with a minimum of 1M KES and a jail term.

15.29. An independent inspectorate, already been mandated by the regulator (and contracted to SGS Kenya Ltd) will be formalised to ensure the regulator has the monitoring and enforcement capacity to warrant adherence to LPG regulations. The inspectorate will have the regulatory power to seize and destroy illegal LPG equipment.