



Liquefied Petroleum Gas
Safety Association of
Southern Africa

Briefing to Parliament on LP Gas Safety

Liquefied Petroleum Gas Safety
Association of SA

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“In the Interests of a Safer South Africa”

Overview

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About Us

- *Established in 1987, the Liquefied Petroleum Gas Safety Association of South Africa is non profit organization that represents companies which are involved in distribution, installation, hardware and retailing of LP Gas and gas appliances.*
- *The primary aim of the Association is to To ensure the sustainable growth of the liquefied petroleum gas industry through promoting **safety** and compliance with **best business practices**.*
- *We bring together companies involved in one, several or all activities in the industry, and develop long-term partnerships with local and international organizations and government organizations in order to ensure the safe and efficient use of LPG.*

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To promote the **safe, efficient** use of **LPGas** as a **modern fuel** to enrich the lives of all.



What is LP Gas

- *Liquefied Petroleum Gas is energy in a bottle. It is versatile, fast, clean, powerful, portable and safe.*
- *The name “**liquefied gas**” finds its origin in the possibility to obtain gaseous propane and butane at a normal temperature and atmospheric pressure. Only moderate pressure or refrigeration is required to convert them into a liquid state. LPG occupies 274 times less volume as a liquid than as a gas. As a consequence, LPG is easy to transport and store, making it the most multi-purpose fuel.*
- *LPG is colourless and odourless and a strong “**stenching**” agent is added so that even a very small leak can be easily detected.*

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Why LP Gas

- *LPG is an exceptional energy source due to its origin, benefits, applications and its industry. With an immediate global availability, environmental benefits, its natural by-product origin, transportation flexibility and diverse application, LPG plays a pivotal role in the transition towards a more secure, sustainable and competitive energy model.*
- *LPG is a clean-burning, sustainable and efficient fuel and a vital source of energy for hundreds of millions of people throughout the world today. It is a multi-purpose energy with literally thousands of applications. It is portable, can be transported, stored and used virtually anywhere in the world and there are sufficient reserves to last for many decades.*

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Application & Uses

- *There are more than **1000 applications** of LPG. Hundreds of millions of people currently use LPG and depend on it for applications, in commercial business, industry, transportation, farming, power generation, cooking, heating and for recreational purposes. Only LPG can serve such a wide variety of uses such as:*
 - **Cooking fuel** for a family in South Africa and a community kitchen in India
 - **Refrigeration** for a shop owner in Brazil,
 - **Autogas** for taxis in Tokyo,
 - **Welding** for car manufacturers in Germany,
 - **Heat** for the family home in Canada,
 - LPG even powers the **Olympic torch**. That's why it is referred to as the world's most **multi-purpose energy**.



Benefits

- *LPG is a **clean-burning, sustainable and efficient** fuel and a vital source of energy for hundreds of millions of people throughout the world today. It is a multi-purpose energy with literally thousands of applications. It is **portable**, can be **transported, stored** and used virtually anywhere in the world and there are sufficient reserves to last for many decades. LPG also shows **lower greenhouse gas emissions** than petrol, diesel, and electricity, on an energy-equivalent basis.*

FACTS & FIGURES

In India, LPG emits 60% fewer GHGs than electric coil cooker tops, 50% fewer emissions than some biomass stoves and 19% fewer GHGs than kerosene stoves

www.exceptionalenergy.com



The LPG distribution chain

LP Gas distribution may be in bulk or in cylinders depending on many considerations such as application, scale of usage and consumer preference. The distribution infrastructure will include bulk depots and cylinder filling plants. At all stages of distribution, safety is of paramount importance.



Safety

- *LP Gas is potentially hazardous from the point of production until it has been safely used and the combustion products have been properly disposed of.*
- *Every uncontrolled release is a hazardous event and should receive urgent attention.*
- *The principal potential hazard with LP Gas is fire and explosion.*
- *LP Gas containers should be readily identifiable as such. Consumers should be given safety information and having been informed should exercise reasonable care in handling and use.*
- *Good appliance and installation standards are essential for safety.*



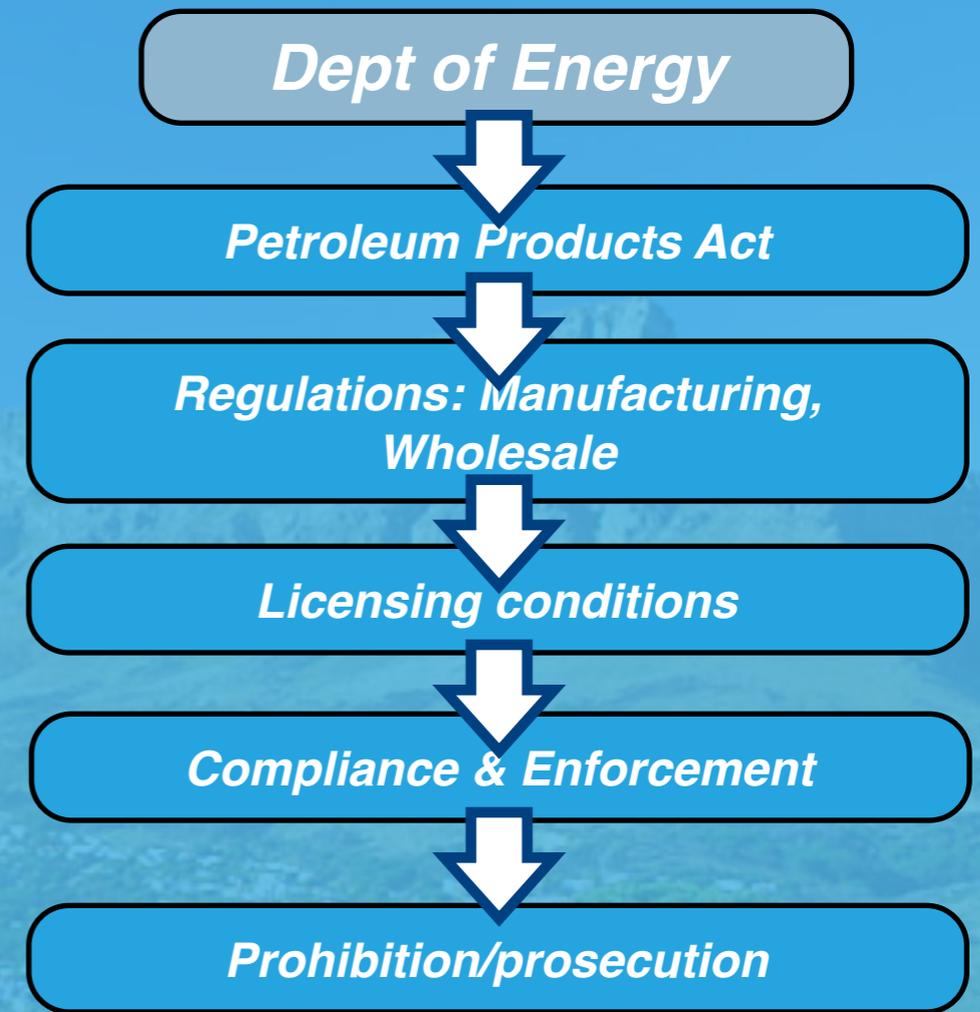
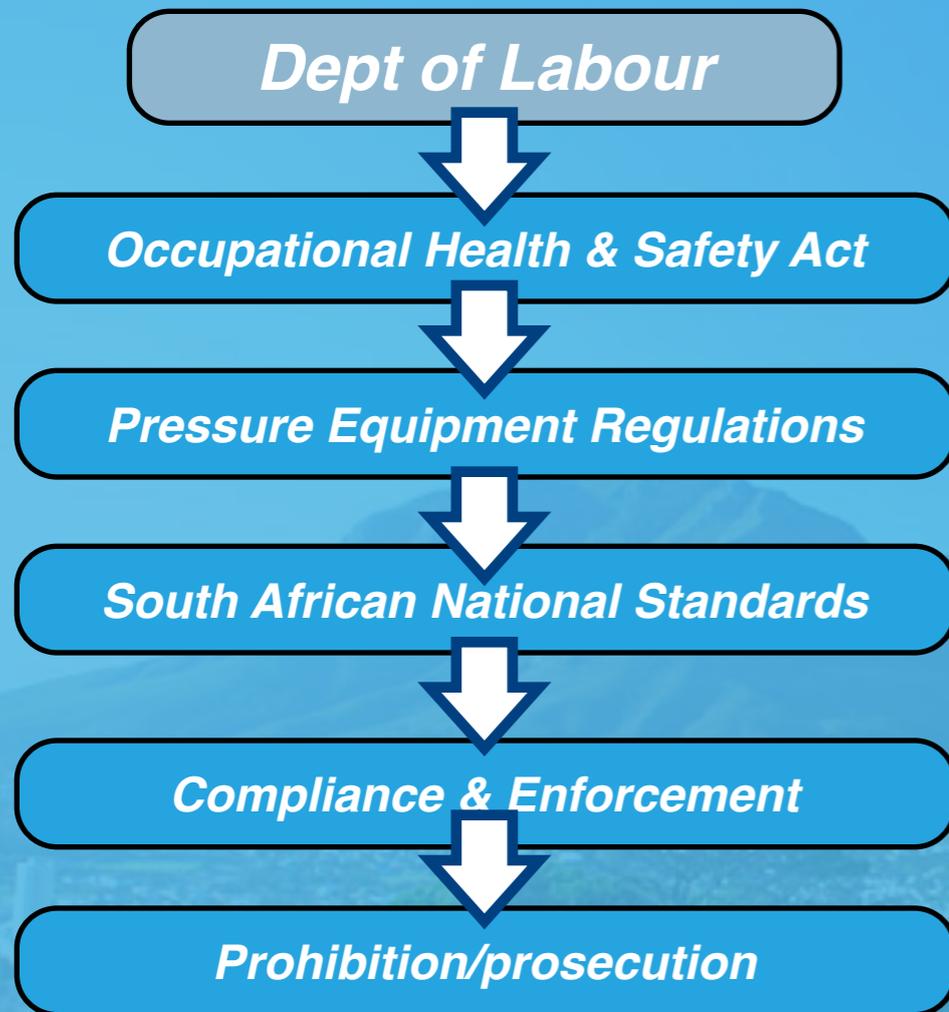
Safety

- *Burning biomass as cooking fuel accounts for more than two million deaths and 41 million serious diseases every year?*
- *In low-income countries, more than half of all lower respiratory infection deaths associated with indoor air pollution occur among children under the age of 5.*
- *Respiratory diseases from **indoor air pollution** contribute to more deaths each year than HIV/AIDs, malaria and tuberculosis combined.*



Safety Regulations & Standards

•The LP Gas industry is regulated in terms of safety and business practices.



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Safety Regulations & Standards

Cylinders and Valves -

- **SANS 10019** - Transportable containers - (Basic design, manufacture, use and maintenance)
- **SANS 199** - Cylinder Shut off Valves for LPG. (Design, specification and testing)

Regulators, Hoses and Appliances -

- **SANS 1237** Single stage Regulators for LP Gas (Basic design, manufacture, use and maintenance)
- **SANS 1156** part 2 - Hose and Tubing for Vapor Phase LP Gas Installations.
- **SANS 1539** - LP Gas Appliances.

LP Gas Installations

- **SANS 10087** part 1,2,3,4,6,7,8,10
- The handling, storage, distribution and maintenance of liquefied petroleum gas in domestic, commercial and industrial installations:
- Covering Domestic, Commercial, Industrial, Filling Sites, Mobile Units, Transportation, Autogas Fork Lift and Mobile filling stations.

Challenges Affecting Safety

- *There are a number of Practices that affect safety in the LPG industry.*
 - *Illegal cylinder acquisition.*
 - *Cross border migration of exchange/deposit based cylinders*
 - *Leads to lack of maintenance of LPG cylinders.*
 - *Illegal filling of LPG cylinders.*
 - *Under-filling of LPG cylinders (Trade Metrology Regulations)*
 - *Over-filling of LPG cylinders (High Safety Risk)*
 - *Illegal installations.*
 - *Injury & Damage to property.*
 - *Illegal appliances and equipment.*
 - *Injury & Damage to property.*



Challenges cont.

- ***Over-storage of cylinders***

- *Poses a huge danger to people and facilities.*

- ***Proliferation of illegal retailers.***

- *Leads to illegal retailers filling any cylinders without permission.*

- *Leads to lack of maintenance of cylinders*

- *unsafe environment.*

- ***Lack of citizen safety education.***

- *Education on the Safe use of LPG and other sources of energy is lacking.*

- *Fear of using cleaner more efficient products.*

- *Potential misuse of LPG due to lack of understanding.*

Examples

- *Multiple cylinder brands, no maintenance, illegally stacked, illegal filling site, cylinders could be under-filled or over-filled, over-stored.*

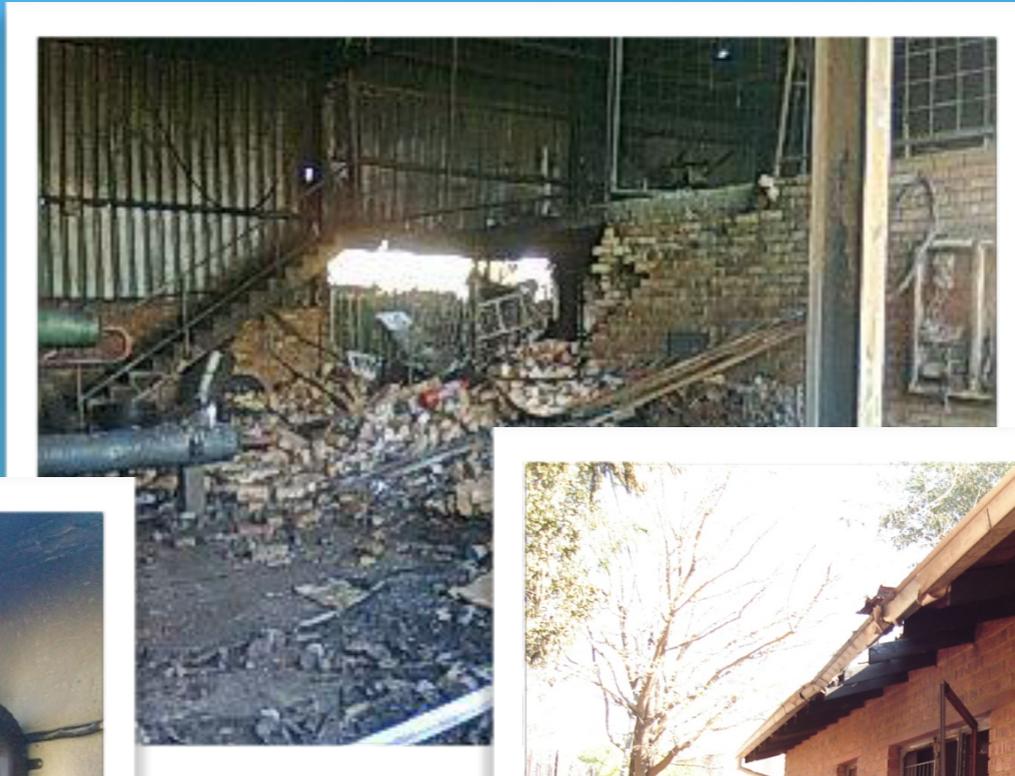
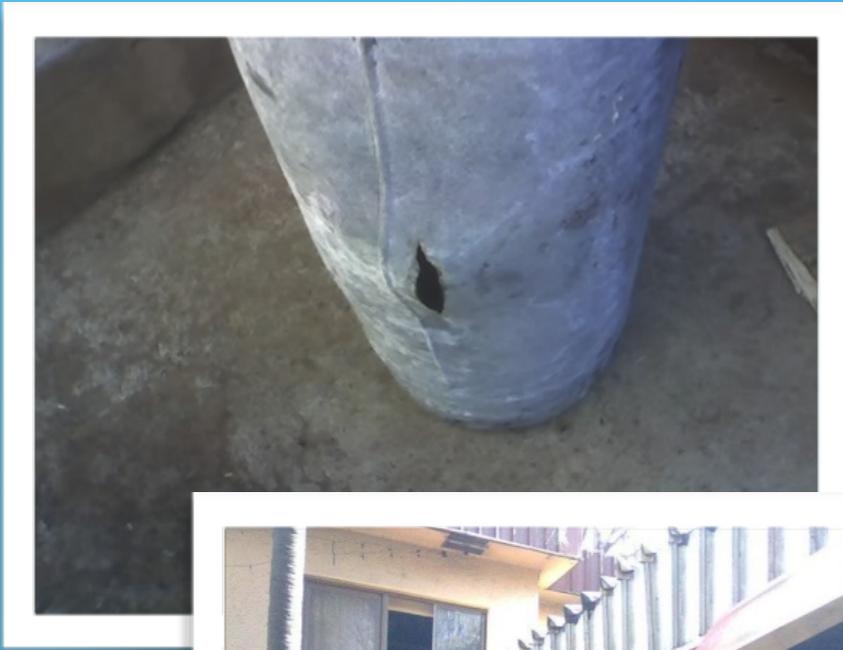


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Examples

- *Examples of the “result” of an illegally over-filled LPG cylinder.*



Solutions

- ***Solutions to reduce Illegal cylinder acquisition.***
 - *proper recognition of cylinder ownership within the regulations.*
 - *Tight controls at country borders.*
 - *Regular monitoring and inspection throughout distribution chain.*
 - *Cooperating with regulatory authorities.*
- ***Solutions to reduce Illegal filling of LPG cylinders.***
 - *Monitoring and auditing of the distribution chain.*
 - *Regular inspections of calibration of weighing equipment by NRCS.*
 - *Registration of filling personnel in terms of the Pressure Equipment Regulations.*
 - *Licensing of LPG filling sites in terms of the Petroleum Products Act.*
 - *Regular training and skill development on proper filling procedures by the LPG industry.*



Solutions

• *Steps taken to reduce illegal installations.*

- *Requirement for the registration of LP Gas Installers, under **SAQCCGas**.*
- *Requirement for the issuing of a **Certificate of Conformity (CoC)** after completion of a Gas installation.*
- *Regular inspections of Installers.*
- *Installer Code of Good Practice.*
- *Disciplinary action for non-compliance.*

• *Steps taken to reduce illegal appliances & equipment.*

- *Requirement for the verification of LP Gas Equipment & Appliances under the (PER).*
- *LPGSASA Safe Appliance Scheme (Under DoL Mandate).*
- *Inspection and monitoring.*
- *Industry participation.*
- *Enforcement and prohibition. (LPGSASA & DoL)*

Solutions

• *Solutions to manage Over-storage of cylinders*

- *Proper designation of storage areas.*
- *Regular on-site monitoring.*

• *Solutions to manage proliferation of illegal retailers.*

- *Licensing of LPG retail and filling sites.*
- *Business development and start up funding.*
- *Compliance & monitoring.*
- *Enforcement*

• *Solutions to tackle the lack of citizen safety education*

- *Review of School curriculum to add household safety.*
- *Household safety programs.*
- *Participation by all key role players to communicate the safe use of LPG.*
- *Public broadcaster to assist in promoting household safety and use of LPG.*

Key Role Players

- *The principal participants in the LP Gas industry - marketers, equipment manufacturers, transporters and installers - all have responsibilities in the area of safety. They should collaborate to ensure the efficient discharge of their responsibilities; primarily they should comply with the law.*



LPGSASA Commitment to Safety

- *Through a number of committees, the LPGSASA manage several schemes to ensure the safe use of LPG in South Africa.*



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Thank you!



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