



## **GUIDELINES FOR RETAIL OF LIQUEFIED PETROLEUM GAS IN CYLINDERS**

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## TABLE OF CONTENTS

|     |                                              |    |
|-----|----------------------------------------------|----|
| 1.  | Introduction .....                           | 1  |
| 2.  | Purpose .....                                | 2  |
| 3.  | Scope .....                                  | 2  |
| 4.  | Licensing Requirements.....                  | 3  |
| 5.  | Siting Requirements.....                     | 3  |
| 6.  | Storage Requirements.....                    | 6  |
| 7.  | Fire Safety and Emergency Preparedness ..... | 7  |
| 8.  | Cylinder Deposits .....                      | 9  |
| 9.  | Operational Requirements.....                | 10 |
| 10. | Transport of LPG in cylinders.....           | 27 |
| 11. | Incident Reporting .....                     | 27 |
| 12. | Register of Licensees.....                   | 27 |
| 13. | Transition .....                             | 28 |
| 14. | Review .....                                 | 28 |
| 15. | Annexes .....                                | 29 |

## DEFINITION OF TERMS

In these Guidelines, unless the context otherwise requires, the following words shall have the meaning as defined:

|                                 |                                                                                                                                                                                                                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aggregate LPG Quantity          | The total mass of LPG contained in filled cylinders stored at a retail outlet at any given time.                                                                                                                                                                                  |
| Cage                            | A secure, ventilated, and durable storage enclosure designed to safely house LPG cylinders.                                                                                                                                                                                       |
| Containerized LPG Retail Outlet | A retail facility operating from a modified shipping container or similarly fabricated container for the storage and sale of LPG cylinders.                                                                                                                                       |
| Consumer                        | An individual who is the end user of the LPG cylinder.                                                                                                                                                                                                                            |
| Customer                        | An individual who purchases an LPG cylinder from a retail outlet.                                                                                                                                                                                                                 |
| Cylinder Serial Number          | The unique identification number permanently stamped or marked on an LPG cylinder for traceability purposes.                                                                                                                                                                      |
| Cylinder Deposit                | An LPG cylinder deposit represents a refundable security paid by a consumer upon acquisition of a branded cylinder for the first time. The deposit is refundable to the consumer in full on return of the empty cylinder if the consumer does not wish to continue with the brand |
| Decanting                       | The unauthorized transfer of LPG from one cylinder to another without approved refilling equipment or licensing.                                                                                                                                                                  |
| Filled Cylinder                 | An LPG cylinder containing LPG and sealed for retail distribution.                                                                                                                                                                                                                |
| Ignition Source                 | Any source capable of initiating combustion, including open flames, electrical sparks, hot surfaces, or static discharge.                                                                                                                                                         |
| Kiosk                           | A small open fronted hut or cubicle from which LPG cylinders are sold.                                                                                                                                                                                                            |
| PASS Technique                  | A universally recognized, four-step acronym used to properly and safely operate a portable fire extinguisher. It stands for Pull, Aim, Squeeze, and Sweep.                                                                                                                        |

|                      |                                                                                                                               |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Relevant Authorities | EPRA, Kenya Police Service and County Fire Department                                                                         |
| Retail Outlet        | A licensed premise authorized to store and sell filled LPG cylinders directly to consumers.                                   |
| Retail Operator      | A person engaged in the LPG retail business.                                                                                  |
| Sensitive Occupancy  | Premises with vulnerable populations or high human density, including schools, hospitals, markets, and residential buildings. |
| Tier Classification  | Risk categorization of LPG retail outlets based on aggregate LPG quantity stored.                                             |
| Weighing Scale       | A calibrated device used to confirm the mass of LPG cylinders at point of sale.                                               |

## LIST OF ACRONYMS

|       |                                                        |
|-------|--------------------------------------------------------|
| DCP   | Dry Chemical Powder                                    |
| DOSHS | Directorate of Occupational Safety and Health Services |
| EPRA  | Energy and Petroleum Regulatory Authority              |
| KEBS  | Kenya Bureau of Standards                              |
| LPG   | Liquefied Petroleum Gas                                |

## **1. Introduction**

Liquefied Petroleum Gas (LPG) is a key component of the national clean energy transition and plays an important role in improving household energy access, environmental sustainability, and economic inclusion.

The rapid growth of LPG retail outlets, including roadside kiosks, market-based sellers, and modified shipping container units, has significantly improved access to clean energy. However, it has also led to increased fire incidents, particularly in residential and mixed-use areas, resulting in injuries, property damage, and public safety concerns. Investigations have identified poor siting, excessive storage, inadequate ventilation, and weak operational controls as common contributing factors.

These Guidelines establish structured safety, operational, and traceability measures intended to:

- Protect life and property;
- Reduce the occurrence and severity of LPG-related fire and explosion incidents;
- Promote safe and responsible retail practices;
- Strengthen consumer protection;
- Enhance supply chain accountability; and
- Support risk-based regulatory oversight and enforcement decisions.

The Guidelines therefore seek to balance energy access objectives with the paramount need to safeguard public safety within increasingly dense urban and peri-urban environments.

## **2. Purpose**

**2.1.** These Guidelines aim to provide a structured safety, operational, and consumer protection framework for the retail of Liquefied Petroleum Gas (LPG) in cylinders.

**2.2.** Specifically, these Guidelines seek to:

2.2.1. Enhance protection of life and property by establishing minimum safety expectations for LPG retail outlets;

2.2.2. Reduce the likelihood and severity of LPG-related fire and explosion incidents;

2.2.3. Standardize siting, storage, ventilation, and fire protection practices across retail outlets;

2.2.4. Introduce a risk-based classification and inspection framework to support proportional and defensible regulatory oversight;

2.2.5. Strengthen consumer protection through mandatory weighing verification, receipt issuance, and cylinder traceability;

2.2.6. Operationalize record-keeping obligations introduced under the Petroleum (Liquefied Petroleum Gas) (No.2) Regulations, 2025 (LN 189/2025);

2.2.7. Promote accountability and transparency within the LPG supply chain; and

2.2.8. Support harmonized enforcement and coordinated oversight with relevant agencies.

**2.3.** These Guidelines are therefore intended to help guide compliance while facilitating the safe and orderly development of the LPG retail sector;

## **3. Scope**

**3.1.** These guidelines apply to all premises engaged in the storage, display and retail of filled LPG cylinders.

**3.2.** These Guidelines do not apply to:

3.2.1. Bulk LPG storage and filling plants;

3.2.2. Bulk LPG consumer installations;

3.2.3. LPG Storage and Wholesale facilities;

3.2.4. LPG transportation operations;

3.2.5. Autogas installations.

#### 4. Licensing Requirements

4.1. A retail operator is required to have the following licences:

- 4.1.1. Licence for Retail of LPG in Cylinders issued by EPRA;
- 4.1.2. Weighing scale calibration certificate from Weights and Measures department;
- 4.1.3. Workplace registration certificate issued by Directorate of Occupational Safety and Health Services (DOSHS);
- 4.1.4. Fire safety compliance certificate from respective County Government;
- 4.1.5. Authorisation to retail LPG brands from respective brand owners;
- 4.1.6. Environmental and public health approvals for Tier III outlets; and
- 4.1.7. Risk assessment report for Tier III outlets.

4.2. The licences shall be subject to compliance with these Guidelines and any other applicable statutory requirements.

#### 5. Siting Requirements

Siting of an LPG retail outlet depends on the risk level as determined by the quantities stocked by the retail operator. Table 1 categorises the main Tiers of LPG retail outlets:

**Table 1 – LPG retail outlets classification**

| Tier     | Floor Area (m <sup>2</sup> ) | Aggregate LPG Quantity (kg) | Risk Level |
|----------|------------------------------|-----------------------------|------------|
| Tier I   | < 7                          | Up to 150                   | Low        |
| Tier II  | 7 – 15                       | Up to 400                   | Medium     |
| Tier III | >15                          | Up to 1,000                 | High       |

##### 5.1 General Location

5.1.1. Retail of LPG in cylinders may be carried out in the following forms:

- a) Cage;
- b) Containerized LPG retail outlet; and
- c) Specially designed standalone kiosk/shop.

5.1.2. Retail outlets should not be located in:

- a) Basements;
- b) Enclosed corridors;
- c) Upper floors and ground floors of multi-storey buildings or poorly ventilated spaces; and



- d) Areas with drains, hollows or depressions, manholes and culverts where vapour might collect.
- 5.1.3. LPG outlets should not be located near ignition sources unless compliant with the mandatory safety distances stipulated in Table 2, based on the designated Tier category.
- 5.1.4. LPG cylinders storage area should be kept clean and free from any accumulation of combustible matter such as paper, grass or weeds.
- 5.1.5. It is recommended that Tier II and Tier III LPG retail outlets should be located at least 30m from the edge of the cage to the boundary of places of sensitive occupancy such as hospitals, schools, stadiums and places of worship compliant with safety distances stipulated in Table 2, based on the designated Tier category.
- 5.1.6. The LPG retail outlet should not obstruct emergency access routes where applicable.

## **5.2 Safety Distances (minimum)**

- 5.2.1. Minimum safety distances should increase proportionately with aggregate LPG quantity stored at a retail outlet.
- 5.2.2. Retail outlets shall be classified according to aggregate LPG quantity stored as defined in Table 1.
- 5.2.3. The distances in Table 2 represent recommended minimum safety clearances under normal conditions and may be increased where site-specific risk factors exist.

**Table 2 - Minimum Safety Distance by Tier Classification**

| Exposure          | Minimum Safety Distance from the nearest LPG cylinder by Tier Classification (m) |         |          |
|-------------------|----------------------------------------------------------------------------------|---------|----------|
|                   | Tier I                                                                           | Tier II | Tier III |
| Property boundary | 3                                                                                | 3       | 5        |

|                                                                                                                                                  |    |    |    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----|
| Public thoroughfare (walkways)                                                                                                                   | 3  | 5  | 10 |
| Buildings with no openings adjacent to the LPG retail outlet                                                                                     | 1  | 5  | 7  |
| Building with openings adjacent to the LPG retail outlet                                                                                         | 1  | 10 | 10 |
| Ignition Source                                                                                                                                  | 5  | 10 | 10 |
| Sensitive occupancy (hospitals, schools, stadiums and places of worship)                                                                         | 15 | 30 | 30 |
| <b>NOTE:</b> Where two (2) adjacent categories of LPG retail outlets of different Tiers exist, the more stringent safety distances should apply. |    |    |    |

**Table 3 - Minimum Safety Distance\* between different Tier Classifications**

|                                                                                                                                                                              | <b>Tier I</b> | <b>Tier II</b> | <b>Tier III</b> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------|-----------------|
| <b>Tier I</b>                                                                                                                                                                | 3m            | 5m             | 10m             |
| <b>Tier II</b>                                                                                                                                                               | 5m            | 10m            | 15m             |
| <b>Tier III</b>                                                                                                                                                              | 10m           | 15m            | **              |
| <b>NOTE:</b> *The distance is measured from edge of container or cage to adjacent container or cage.<br>**This is based on retail station regulations but not less than 50m. |               |                |                 |

5.2.4. Where separation distances cannot be fully achieved, the following risk mitigation measures may be considered subject to EPRA's approval:

- a) Two (2) hour fire-rated masonry barrier walls;
- b) Blast resistant partitions;
- c) Automatic fire extinguishers; and
- d) Any other equivalent approved technology.

5.2.5. Such mitigation shall not reduce separation requirements by more than 50% for fire walls and 30% for any other mitigation.

## **6. Storage Requirements**

### **6.1. Maximum Storage Capacity**

6.1.1. The maximum LPG quantity allowed to be stored shall be determined based on retail outlet floor area/size and risk assessment. The prescribed maximum allowable LPG quantities based on the floor area of the retail outlet are as prescribed below:

**Table 4 – Floor area specifications**

| <b>Floor Area (m<sup>2</sup>)</b> | <b>Maximum LPG Quantity (kg)</b> |
|-----------------------------------|----------------------------------|
| < 7                               | 150                              |
| 7 – 15                            | 400                              |
| >15                               | 1,000                            |

## **6.2. Storage configuration**

- 6.2.1. The storage configuration shall ensure the following are taken into consideration:
- 6.2.2. Cylinders shall be stored upright at all times;
- 6.2.3. Maximum storage is as prescribed Table 4;
- 6.2.4. Minimum 0.8m aisle spacing;
- 6.2.5. Empty and filled cylinders shall be segregated and clearly marked;
- 6.2.6. Damaged or leaking cylinders shall not be stored on site;
- 6.2.7. The room shall not be constructed using combustible materials and paint used shall be water-based paint.
- 6.2.8. Impermeable flooring shall be installed with adequate drainage provision to prevent flooding and/or water stagnation.
- 6.2.9. LPG cylinder stacking should not be undertaken at retail outlets.

## **6.3. Ventilation**

- 6.3.1. The storage area shall be well ventilated. Natural cross-ventilation is preferred
- 6.3.2. No storage shall be permitted in confined spaces.
- 6.3.3. For containerized LPG retail outlets:
- 6.3.4. Adequate open mesh and/or louvres for ventilation on opposing walls shall be installed.
- 6.3.5. Ventilation at both low and high levels to allow dispersion of leaked gas shall be installed.
- 6.3.6. Containers shall not be sealed or air-conditioned.

## **6.4. Security**

- 6.4.1. The outlet should have adequate physical security to prevent tampering, theft and illegal activities.

# **7. Fire Safety and Emergency Preparedness**

## **7.1. Fire Extinguishers**

- 7.1.1. All LPG retail outlets should maintain appropriate and serviceable 9 kg fire extinguishers suitable for Class B (flammable gas) fires. Dry Chemical Powder (DCP) extinguishers are recommended due to their suitability for LPG - related incidents.
- 7.1.2. Extinguishers should:
  - 7.1.2.1. Be positioned in accessible locations;

- 7.1.2.2. Be mounted or secured against tipping;
- 7.1.2.3. Have valid inspection/service tags;
- 7.1.2.4. Be protected from direct weather exposure;
- 7.1.2.5. Fire extinguishers to be numbered in case more than one (1) are installed; and
- 7.1.2.6. Not be obstructed.

7.1.3. The minimum requirements for each Tier are prescribed as follows

**Table 5 - Fire Extinguisher Requirements Provision Matrix**

| <b>Tier</b> | <b>Maximum Quantity (kg) LPG</b> | <b>Minimum Extinguisher Type</b>      | <b>Minimum Extinguisher Quantity</b> | <b>Recommended Placement</b>                      |
|-------------|----------------------------------|---------------------------------------|--------------------------------------|---------------------------------------------------|
| <b>I</b>    | Up to 150                        | Either 9kg DCP or 5kg CO <sub>2</sub> | 1                                    | Near exit                                         |
| <b>II</b>   | Up to 400                        | 9kg DCP and 5kg CO <sub>2</sub>       | 2                                    | 1 near storage, 1 near exit                       |
| <b>III</b>  | Up to 1000                       | 9kg DCP and 5kg CO <sub>2</sub>       | 4                                    | Evenly distributed around storage zone, 1 at exit |

7.1.4. For containerized LPG retail units:

7.1.4.1. At least one extinguisher shall be mounted outside the container near the main access point.

7.1.4.2. For Tier III containerized outlets, at least one extinguisher shall be located at the rear or secondary access point.

7.1.5. Fire Extinguishers Inspection and Maintenance:

7.1.5.1. Extinguishers shall be serviced at least annually by qualified personnel and servicing records retained by the retailer.

7.1.5.2. Visual checks shall be conducted daily by the retailer.

7.1.5.3. Any discharged or defective extinguisher shall be refilled or replaced immediately.

## **7.2. Fire Signage**

7.2.1. "NO SMOKING" and "NO OPEN FLAMES" signage shall be prominently displayed.

7.2.2. "LPG CYLINDERS STORED ON THIS PREMISES" and "FLAMMABLE GAS" signage shall be prominently displayed. This ensures that:

- 7.2.2.1. Members of public are alerted before entry
- 7.2.2.2. Delivery personnel are aware of hazard conditions
- 7.2.2.3. Emergency responders can immediately identify the risk profile
- 7.2.3. The signage shall be on a brilliant white background with lettering in crimson red, and font-size of a minimum of 150 millimetres height.

### **7.3. Electrical Installations**

- 7.3.1. All electrical installations shall comply with approved standards.
- 7.3.2. No exposed, faulty and naked wiring shall be permitted at LPG retail outlets.

### **7.4. Contact Numbers**

- 7.4.1. The following contact numbers shall be prominently displayed:
  - 7.4.1.1. County Fire Brigade
  - 7.4.1.2. Nearest Fire Brigade Station
  - 7.4.1.3. County Disaster Management Unit
  - 7.4.1.4. Ambulance Services
  - 7.4.1.5. National Police Service
  - 7.4.1.6. Nearest Hospital
  - 7.4.1.7. EPRA
  - 7.4.1.8. Kenya Power and Lighting Plc County Offices
  - 7.4.1.9. Outlet Manager Contact
- 7.4.2. Retailers should verify the listed numbers regularly to confirm validity;
- 7.4.3. Replace outdated or illegible emergency contact sheets immediately.

## **8. Cylinder Deposits**

- 8.1. An LPG cylinder deposit represents a refundable security paid by a consumer upon acquisition of a branded cylinder for the first time. The deposit is refundable to the consumer in full on return of the empty cylinder if the consumer does not wish to continue with the brand.

**NOTE:** A deposit represents conditional custody of the cylinder by the consumer. A deposit for LPG cylinder from a consumer should not be considered as a sale.

- 8.2. An LPG operator when starting to retail a brand of LPG cylinders will ensure that the brand owner or his agent has provided documentation for deposit against the number of cylinder float he/she wishes to maintain.
- 8.3. An LPG retail operator when issuing a brand of LPG cylinder to a consumer for the first time shall maintain documentation for the deposit charged indicating amount and consumer details. The deposit charged should not be

- more than that specified by the brand owner and in any case should not exceed the amount set by EPRA.
- 8.4. The LPG retail operator should ensure that the approved deposit amount is clearly displayed. Further the refund policy should be made available to the consumer, and which shall indicate brand owner's contact information for consumer inquiries or complaints.
- 8.5. Below are additional obligations of an LPG retail operator when issuing an LPG cylinder to a consumer for the first time:
- 8.5.1. Clearly disclose the deposit amount separately from the LPG refill price;
  - 8.5.2. Indicate the deposit amount on the issued receipt;
  - 8.5.3. Maintain a record linking the deposit transaction to the cylinder serial number;
  - 8.5.4. Inform the consumer of refund conditions at the time of transaction;
  - 8.5.5. The LPG retail operator should not impose arbitrary deductions;
  - 8.5.6. The LPG retail operator should not refuse acceptance of legitimately branded cylinders in serviceable condition; and
  - 8.5.7. Direct disputes to the responsible brand owner where necessary.
- 8.6. Deposit Refund Requirements: Where a cylinder deposit is refunded, records shall reflect:
- 8.6.1. Date of refund;
  - 8.6.2. Cylinder serial number returned;
  - 8.6.3. Refund amount;
  - 8.6.4. Details of person returning the cylinder; and
  - 8.6.5. Proof of reimbursement of the deposit to the consumer.
- 8.7. Where the retailer wishes to return the float of LPG cylinder(s) to the brand owner, he/she is entitled to the full deposit for each cylinder returned to the brand owner. Where there is a dispute, the matter can be referred to EPRA for resolution.
- 8.8. The LPG retail operator should provide information of the new consumer to the brand owner through the channels provided by the brand owner.

## **9. Operational Requirements**

### **9.1 Handling of LPG cylinders during receipt**

- 9.1.2 LPG cylinders should be handled with care and should not be subjected to shock. Care should be taken to avoid damage to the vessel and the valve;
- 9.1.3 LPG cylinders should not be dropped (for example from lorry tailboards), dragged or rolled on their sides or allowed to skid;

- 9.1.4 LPG cylinder that are too large to be carried should be tilted and rolled on the rims of their foot rings; and
- 9.1.5 Filled LPG cylinders should always be handled, transported and used in a secured, upright position;

## **9.2 LPG Cylinder Inspection**

It is important for a Retail Operator to inspect LPG cylinders prior to receiving for quality and authenticity of the deliveries. The Retail Operator shall check the items listed below:

- 9.2.1 Weight - The retail operator shall ensure commercial weighing scale is verified and stamped once every year by the Department of Weights and Measures and certificate of calibration issued.
- 9.2.2 Revalidation dates - The retail operator shall ensure that cylinders delivered are revalidated and dates are well captured in the neck ring (collar) of the cylinder. revalidation is done every 8 years.
- 9.2.3 It's a requirement for the retailer to verify the wholesaler or filling plant delivering LPG cylinders is licenced by EPRA.
- 9.2.4 The retail operator should ensure cylinders delivered are in good condition and have no visible signs of physical damage for both cylinders and accessories.
- 9.2.5 The retail operator should ensure that the delivered cylinders have their seals intact and are not tampered with.
- 9.2.6 The retail operator should apply water around the cylinder valves/head and monitor closely if bubbles form continuously or not upon delivery to test for gas leakage.
- 9.2.7 Cylinders suspected to be leaking shall be quarantined in a clearly designated, well-ventilated area away from the public and ignition sources and reported to the supplying marketer and/or brand owner.

## **9.3 Records to be retained upon delivery**

The retail operator shall capture cylinder brand, serial number of the cylinder, serial number of the seal, net mass in kilograms of the cylinder and unit and total price of the transaction indicating the cylinder deposit; and

The retail operator shall retain the delivery note, invoice and E-TIMS receipt which shall cover all the details indicated in LPG regulations.



#### **9.4 Retail Operations – Storage**

- 9.4.1 LPG cylinders, whether full or empty must be stored upright in well-ventilated, shaded and dry areas to prevent overheating and hazardous pressure buildup;
- 9.4.2 LPG cylinders in storage areas must be protected against excessive temperature, flammable materials, oxidizers, and ignition sources;
- 9.4.3 LPG cylinders should be secured against falling, with valves protected from damage;
- 9.4.4 The retail operator should ensure that the cylinder valves are always protected from damage as action and reaction forces are likely to make pressurised LPG cylinders move uncontrollably;
- 9.4.5 LPG cylinders should be kept safe from any impact;
- 9.4.6 LPG cylinders should be stored on suitable, robust shelves constructed of a non-combustible material;
- 9.4.7 LPG cylinders should be stored in such a way that they are accessible for inspection at all times and that every LPG cylinder is easily removable;
- 9.4.8 LPG cylinders should always be placed on a hard, level and clean surface to prevent unnecessary damage to the underside;
- 9.4.9 Empty cylinders should be separated from filled cylinders;
- 9.4.10 In retail setting, LPG cylinders must be stored in multilevel shelves in a cage or a suitably designed shipping container;
- 9.4.11 Where possible a continuous metal sheet should be provided on the shelf where 6-kg capacity cylinders rest on to prevent direct heat/flame impingement from lower LPG cylinders;
- 9.4.12 If the retail outlet is in a fuel service station, the storage area must be at least 6m away from fuel dispensers; and
- 9.4.13 The highest level of the shelf should not be more than 2 metres from the floor level.

**NOTE:** Adequate space should be provided for heat dispersion between individual LPG cylinders on the lower shelf to prevent cascade failure in the event of a fire outbreak in the storage space.

## **9.5 Quantity**

- 9.5.1 A retail operator should ensure that the combined net capacity of the LPG cylinders stored does not exceed those listed in Table 1.
- 9.5.2 Retail outlets are meant to be customer serving points. Consequently, the storage quantities are based on the following factors:
  - 9.5.2.1 The outlets LPG cylinder turnover;
  - 9.5.2.2 Proximity to a local wholesale distribution point;
  - 9.5.2.3 Lead times for re-order of additional stock;
  - 9.5.2.4 The safety distances available at the retail outlet; and
  - 9.5.2.5 Minimum re-order quantity from various brands that the retailer is dealing in.
- 9.5.3 LPG cylinders in storage areas must be protected against excessive temperature, flammable materials, oxidizers, and ignition sources.

**NOTE:** LPG should not be stored in a building which has other use or shared uses. Where a building/kiosk is desired, it should be purposely designed and should have adequate ventilation at lower levels as well as not be constructed using flammable materials such as wood and plastic and painted using oil-based paints.

## **9.6 Housekeeping and nuisance control**

- 9.6.1 LPG cylinders storage area shall be kept free of combustible and flammable material;
- 9.6.2 The storage area shall be kept free of waste and debris, and the waste shall be segregated, collected and disposed appropriately;
- 9.6.3 Damaged valves, seals, regulators, hoses and packaging waste shall be stored in a designated container pending collection by an approved handler and/or return to the marketer/brand owner, as applicable;
- 9.6.4 The storage area should be kept free from any vegetation including grass and tree branches;
- 9.6.5 All cylinders shall be arranged in an orderly manner to prevent trip hazards;
- 9.6.6 The LPG retail operator should ensure that the floor is kept dry and is free from oil or water spillage at all times;
- 9.6.7 The LPG retail operator should have a regime of cleaning the LPG cylinders frequently to minimise dust accumulation;
- 9.6.8 The LPG retail operator shall ensure that the drainage is not blocked and that the area is free from flooding and water stagnation;

- 9.6.9 LPG cylinder handling activities shall be conducted in such a manner that it does not cause nuisance noise, especially in residential and mixed-use areas; and
- 9.6.10 Delivery/offloading of filled LPG cylinders shall be planned to avoid peak pedestrian traffic where practicable.
- 9.7 Continuous leak monitoring**
  - 9.7.1 The LPG retail operator should continuously monitor all the cylinders for leakage. Where possible, the operator may install leak detectors. It is recommended that the operator carries out regular manual valve leak monitoring for all the cylinders.

**NOTE:** Water can degrade the quality of the LPG cylinder by introducing corrosion. It is important that the cylinder valve area is wiped dry after every water test.

## **9.8 Firefighting equipment – inspection and maintenance**

- 9.8.1 The recommended LPG fire-fighting equipment is the carbon-dioxide and Dry Chemical Powder (DCP) extinguisher. At least one approved fire extinguisher of capacity at least 9kg, should be available in case of fire. The LPG retail operator should conduct the following checks on the firefighting equipment regularly:
  - 9.8.2 Ensure it is in its designated place, numbered, visible, and not obstructed;
  - 9.8.3 Check the pointer position of the pressure gauge is in the green/operating range for DCP fire extinguishers;
  - 9.8.4 Check that the pin is in place and the seal is unbroken;
  - 9.8.5 Check for rust, corrosion, dents, or leakage on the vessel;
  - 9.8.6 Check for cracks, obstructions, wear or blockages on nozzles and hoses;
  - 9.8.7 Weigh the fire extinguisher to ensure it is full;
  - 9.8.8 Check that the operating instructions on the label are legible and facing outwards;
  - 9.8.9 Check that the annual maintenance tag is up to date and servicing reports maintained; and
  - 9.8.10 Invert the fire extinguisher (turn upside down) monthly to prevent the DCP from compacting at the bottom.

## **9.9 Ventilation**

- 9.9.1 LPG cylinders must be stored and used in well-ventilated, preferably outdoor areas to prevent the accumulation of gas which is heavier than air and settles at floor level. Proper ventilation includes low-level, permanent openings (e.g. vents) to allow leaked gas to escape. The following are the main requirements for ensuring adequate ventilation:
- 9.9.2 Ensure the room has adequate airflow to prevent the buildup of gas, which can cause asphyxiation, nausea, or fire;
- 9.9.3 Ventilation should be located at least at floor level;
- 9.9.4 LPG cylinders should not be stored in basements, under the stairs, cellars, or confined spaces where gas can accumulate;
- 9.9.5 Cages are normally well ventilated, but they should be located where there is free flow of air;
- 9.9.6 For containerised storage there should be adequate ventilation at least at the lower sections. Refer to the typical drawing in Annex C.

## **9.10 Sources of ignition**

**NOTE:** LPG can ignite when it forms between 2 and 10% of a vapour/air mixture, so the risks associated with poor handling, storage or usage should be obvious. Uncontrolled ignition of LPG can cause serious fires or explosions (i.e. if ignited within a confined space). A fire started some distance from an LPG leak can very quickly travel back to the source of the leak itself. An LPG cylinder involved in a fire may overheat and rupture violently. The power and intensity of an LPG fire or explosion should never be underestimated.

9.10.1 LPG cylinders should be stored relative to ignition sources as per distances specified in Table 2. The LPG retail operator shall ensure fire risk activities involving open flames are not less than 30m from the storage area. These activities include but are not limited to:

9.10.2 Welding and brazing;

9.10.3 Grinding;

9.10.4 Gas cutting; and

9.10.5 Smoking.

9.10.6 Where containerised/stand-alone storage is used, the lighting fixtures and other electrical equipment inside the container shall be intrinsically safe.

## **9.11 Security**

9.11.1 LPG cylinders in storage should be secured by being locked in the cage. The storage area can be further secured by an adequate security fence to prevent trespassing and vandalism.

## **9.12 Retail Operations - Retailing of Cylinders.**

9.12.1 The LPG Retail Operator should ensure that the LPG cylinders being released to the consumers are in good condition prior to completion of the sale transaction confirming condition of cylinder as described in Annex A.

9.12.2 Below are the key areas that the Retail Operator should check prior to handing over an LPG cylinder to the consumer:

- 9.12.2.1 Painting that is more than 25% peeled off (bare metal exposed) or damaged;
- 9.12.2.2 The serial numbers and the next revalidation date should be present and legible;
- 9.12.2.3 Corrosion/pitting;
- 9.12.2.4 Illegible stamping;
- 9.12.2.5 Fire damage;
- 9.12.2.6 Any sign of cutting or gouging;
- 9.12.2.7 Defective fittings;
- 9.12.2.8 Any modifications;
- 9.12.2.9 Any bulging or denting on the shell of the cylinder;
- 9.12.2.10 Appropriate weight indicators (gross and tare-weight) shall be present and legible;
- 9.12.2.11 The required safety instructions shall be indicated on the cylinder and should be legible;
- 9.12.2.12 Tampered and/or counterfeit valve seals; and
- 9.12.2.13 Presence of arc/torch burns
- 9.12.3 The mass shall be recorded on every sale document such as the receipt and delivery note in Kilograms (Kgs).
- 9.12.4 The LPG cylinder details delivered to the retail site shall be confirmed individually by the supplier's agent and the retail operator before being accepted.
- 9.12.5 The LPG retail operator shall capture details required for a retailer as listed below:

- 9.12.5.1 Cylinder brand;
- 9.12.5.2 Serial number or quick response code of the cylinder;
- 9.12.5.3 Serial number or quick response code of the seal;
- 9.12.5.4 Net weight in kilograms of the cylinder;
- 9.12.5.5 Unit and total price of the transaction indicating the cylinder; and
- 9.12.5.6 Deposit where applicable.
- 9.12.5.7 The Retail Operator shall maintain permanent records of all sales for a minimum of 3 years. Further the LPG operator should subscribe and comply with the centralised cylinder tracking system.
- 9.12.5.8 Where EPRA will have established a centralised LPG cylinder tracking system, the retail operator should ensure that he/she accurately records the details of the cylinders as required by LN 189/2025. This includes but not limited to seals and serial numbers for each cylinder sold. The sale should be formalised by issuance of an E-TIMS receipt as required by the Kenya Revenue Authority.
- 9.12.5.9 Where required, the LPG retail operator shall ensure to submit and file monthly sales data in the prescribed format in the EPRA's portal.

#### 9.12.6 Reminder to customers on safe use of LPG

**NOTE:** One advantage of Retail business is the opportunity to have face to face time with the customer. There will be opportunities to explain safety instructions, and what to do in an emergency. While most LPG consumers may have awareness of the use of LPG, the Retail Operator should strive to remind the consumer of basic safety measures. Some key messages to the customer will include:

- 9.12.6.1 If case of a LPG leak, the vapour will spread to the ground;
- 9.12.6.2 If LPG is detected by smell, carefully open the window and doors to allow the gas to escape;
- 9.12.6.3 Do not light a match, switch on electrical switches or create any other ignition source;
- 9.12.6.4 Call the emergency number provided by the supplier; and
- 9.12.6.5 Follow their instructions.
- 9.12.7 Retail Operations - PPE and tools for operations staff. General PPE Requirements:

- 9.12.7.1 The retail operator should provide appropriate Personal Protective Equipment (PPE) to all staff involved in cylinder handling, storage, and retail operations.
- 9.12.7.2 PPE should comply with applicable Kenya Standards and be suitable for LPG related hazards including crush injury, frost burn, impact, and minor fire exposure.
- 9.12.7.3 PPE should be issued free of charge and replaced when worn out, damaged, or expired
- 9.12.7.4 Staff should be trained in proper use of, limitations, inspection and maintenance of PPE. Requirements for specific PPE and tools are listed below:
- 9.12.7.5 Gloves
- 9.12.7.6 LPG-handling staff shall use industrial-grade protective gloves resistant to abrasion and cold exposure.
- 9.12.7.7 Torn or oil-contaminated gloves shall be replaced immediately.
- 9.12.7.8 Safety Shoes
- 9.12.7.9 Staff should wear steel-toe or composite-toe safety shoes compliant with relevant standards.
- 9.12.7.10 Footwear should have anti-slip soles suitable for concrete and metallic surfaces
- 9.12.7.11 Open shoes or sandals are strictly prohibited in LPG retail premises.
- 9.12.7.12 Dust Coats / Protective Clothing.
- 9.12.7.13 Staff should wear protective clothing to minimize exposure and enhance visibility.
- 9.12.7.14 Clothing should not be made of highly static-generating synthetic materials in enclosed retail environments.
- 9.12.7.15 Helmet
- 9.12.7.16 Where storage configuration presents a falling objects hazard, head protection should be used.
- 9.12.7.17 Cleaning Materials
- 9.12.7.18 Non-sparking tools shall be used for cleaning within storage areas.
- 9.12.7.19 Cleaning materials shall not contain flammable solvents.
- 9.12.7.20 Absorbent materials shall be available to manage minor oil/grease contamination.



- 9.12.7.21 Step Ladder.
- 9.12.7.22 Where storage height requires elevation, a stable, non-sparking step ladder shall be provided.
- 9.12.7.23 Improvised climbing on cylinders storage shelves is strictly prohibited.
- 9.12.7.24 Ladder use shall comply with OSHA requirements on working at height.
- 9.12.7.25 Testing
- 9.12.7.26 Approved leak detection solution shall always be available;
- 9.12.7.27 Open flame leak testing is strictly prohibited.; and
- 9.12.7.28 Staff shall be trained on correct application and interpretation of bubble formation.
- 9.12.8 Retail Operations - LPG Accessories.
  - 9.12.8.1 LPG Retail Operators shall only stock, sell, or supply LPG accessories that are certified by the Kenya Bureau of Standards (KEBS), comply with applicable Kenyan Standards and bear valid KEBS Standardization Marks of Quality;
  - 9.12.8.2 LPG Retail Operators shall ensure that certification documents for accessories are available for inspection by regulatory authorities upon request;
  - 9.12.8.3 The sale of counterfeit, substandard, or uncertified LPG accessories is strictly prohibited. Accessories with illegible, tampered, or missing markings shall not be stocked or sold; and
  - 9.12.8.4 LPG accessories must be legibly and indelibly marked in accordance with the relevant standards.
- 9.12.9 Requirements for Installation of LPG accessories:

- 9.12.9.1 Where installation is provided by the retailer, it shall be performed by trained and competent personnel;
- 9.12.9.2 Installation of LPG accessories shall be carried out in accordance with the manufacturer's instructions and KS 09-3 and KS EAS 924 or applicable Kenyan or international standards approved by KEBS;
- 9.12.9.3 LPG Retail Operators installing accessories for their clients shall ensure that hoses, regulators, and other accessories are securely fitted and checked for leaks before handover;
- 9.12.9.4 LPG Retail Operators should provide basic safety guidance to their customers on the correct use and maintenance of installed accessories; and
- 9.12.9.5 Improper or unsafe installations identified during retail operations shall be corrected before LPG is supplied.
- 9.12.10 Return policy for cylinder and accessories:
  - 9.12.10.1 LPG Retail Operators shall establish and communicate a clear return and exchange policy for cylinders and accessories;
  - 9.12.10.2 Defective, damaged, non-validated or non-compliant accessories identified at the point of sale or during initial use shall be accepted for return or replacement in accordance with consumer protection requirements;
  - 9.12.10.3 Cylinders and accessories returned due to safety defects shall be withdrawn from sale and handled in accordance with approved disposal or supplier return procedures;
  - 9.12.10.4 Records of returned cylinders and accessories, including reasons for return, shall be maintained for traceability and regulatory review;
  - 9.12.10.5 Customers shall be informed of conditions under which returns are accepted, including time limits and proof of purchase requirements; and
  - 9.12.10.6 Any LPG cylinder whose revalidation date has expired shall not be offered for sale and must be returned to the brand owner for revalidation.

### **9.13 Staff competence**

- 9.13.1 The LPG Retail Operators shall ensure that all persons engaged in offloading, receipt checks, handling, storage, and retailing/hand-over of LPG cylinders are trained, competent, supervised as appropriate, and

medically fit to perform assigned duties safely. Competence shall be demonstrated through:

- 9.13.1.1 Initial structured training;
- 9.13.1.2 Supervised practical experience (on-the-job coaching); and
- 9.13.1.3 Documented competence assessment (theory and practical); and
- 9.13.1.4 Periodic refresher training.
- 9.13.2 No person should be assigned LPG cylinder handling duties unless they have completed the minimum competence modules and passed practical assessment.
- 9.13.3 Training should be refreshed at least once every twenty-four (24) months, and sooner where there are operational changes, regulatory updates, near misses, or incidents.
- 9.13.4 The LPG Retail Operator shall appoint a Competent Person/Supervisor responsible for:
  - 9.13.4.1 Ensuring staff compliance with procedures;
  - 9.13.4.2 Verifying offloading/receipt checks and non-conformance actions;
  - 9.13.4.3 Overseeing emergency actions; and
  - 9.13.4.4 Maintaining competence and training records.
- 9.13.5 Staff competence requirements shall apply to permanent staff, casual labourers, loaders, and third-party personnel involved in deliveries/offloading or cylinder handling within the retail premises.
- 9.13.6 The LPG Retail Operators should maintain competence and training records for all staff for a minimum of three (3) years (or longer where required), including:
  - 9.13.6.1 Module content,
  - 9.13.6.2 Attendance,
  - 9.13.6.3 Certificates (where applicable); and
  - 9.13.6.4 Assessment results; and
  - 9.13.6.5 Refresher dates.
- 9.13.7 Records shall be made available for inspection by EPRA and other relevant authorities.
- 9.14 Product Knowledge and LPG Handling;**
  - 9.14.1 Staff shall demonstrate knowledge of LPG properties relevant to cylinder retail operations, including:

- 9.14.1.1 LPG composition (propane/butane mixtures) and odorisation;
- 9.14.1.2 Flammability limits and ignition risk;
- 9.14.1.3 LPG being heavier than air and implications for low-level accumulation;
- 9.14.1.4 Vapour expansion ratio and Frostburn risk;
- 9.14.1.5 Pressure–temperature relationship and implications for storage near heat sources; and
- 9.14.1.6 Limitations of odour detection (e.g., reduced smell sensitivity).
- 9.14.2 Staff shall be able to correctly interpret cylinder markings/identifiers for safety and traceability, including:
  - 9.14.2.1 Cylinder serial number/unique identifier;
  - 9.14.2.2 Tare weight (TW) and net content;
  - 9.14.2.3 Test/revalidation/requalification marking and due date;
  - 9.14.2.4 Manufacturer’s markings, ownership/brand marks;
  - 9.14.2.5 Hazard labels and user markings; and
  - 9.14.2.6 Valve type and compatibility considerations (including regulator interface).
- 9.14.3 Staff shall demonstrate safe cylinder handling competence consistent with KS EAS 924-1 principles and best practice, including:
  - 9.14.3.1 Maintaining cylinders upright at all times;
  - 9.14.3.2 Prohibition of dropping, throwing, dragging, or uncontrolled rolling;
  - 9.14.3.3 Safe use of handling aids (trolleys/hand trucks);
  - 9.14.3.4 Safe storage technique and stability control;
  - 9.14.3.5 Prevention of impact to valves, collars, foot rings and cylinder body; and
  - 9.14.3.6 Keeping cylinders away from heat sources, open flames and direct sunlight where practicable.
- 9.15** Staff should be competent to identify non-conforming/unsafe cylinders and apply quarantine procedures, including recognition of:

- 9.15.1 Severe corrosion, dents, bulges, gouges, arc burns or structural damage;
- 9.15.2 Damaged, leaking, loose, or incompatible valves;
- 9.15.3 Broken/missing tampered seals;
- 9.15.4 Illegible markings/serial numbers;
- 9.15.5 Expired or missing revalidation marks; and
- 9.15.6 Signs of tampering or any modification.

**NOTE:** Defective/suspect cylinders shall be quarantined and returned to the supplier/marketer in accordance with the outlet procedure.

## **9.16 Staff competence**

### **9.16.1 Competence for Offloading and Receipt of Cylinders**

- 9.16.1.1 Staff involved in offloading should be trained in delivery risk control as detailed in Annex A.5.
- 9.16.1.2 Staff should competently perform and document checks before accepting delivery as detailed in Annex A.6.
- 9.16.1.3 Staff should be trained in non-conformance handling as detailed in Annex A.7.

### **9.16.2 Competence for Storage and Routine Retail Operations**

- 9.16.2.1 Staff should be competent in storage controls as detailed in Annex A.8.
- 9.16.3 Staff shall be trained to conduct and record routine checks as detailed in Annex A.9.
- 9.16.4 Staff should be trained on safe handling of suspected leaking cylinders as detailed in Annex A.10.

## **9.17 Retail Selling and Hand-Over Competence (Point of Sale)**

- 9.17.1 Staff shall be trained to conduct pre-sale verification before handing a cylinder to a customer, including:
  - 9.17.1.1 Cylinder integrity check (valve, body, collar/foot ring);
  - 9.17.1.2 Seal intact and not tampered with;
  - 9.17.1.3 Markings/labels legible;
  - 9.17.1.4 Revalidation date valid; and
  - 9.17.1.5 Leak test where risk indicators exist.
- 9.17.2 Staff should be competent in weight verification including:

- 9.17.2.1 Weighing in the presence of the customer;
- 9.17.2.2 Explaining tare and gross mass content;
- 9.17.2.3 Preventing tampering of scale readings; and
- 9.17.2.4 Maintaining calibration/verification discipline.
- 9.17.3 Staff should be competent in transaction documentation and traceability, including issuance of compliant receipts capturing:
  - 9.17.3.1 LPG retail operator identity and licence details;
  - 9.17.3.2 Date and time;
  - 9.17.3.3 Cylinder serial number;
  - 9.17.3.4 Brand/size;
  - 9.17.3.5 Price; and
  - 9.17.3.6 Tracking reference number where a central system applies.
- 9.17.4 Staff should provide a basic safety briefing to the customer during hand-over of the LPG cylinder, including:
  - 9.17.4.1 Requirement to safely transport LPG cylinder in upright position and adequate ventilation;
  - 9.17.4.2 Avoidance of prolonged storage in enclosed vehicle boots;
  - 9.17.4.3 Safe home storage in upright position, ventilated area and away from heat;
  - 9.17.4.4 Regulator connection basics and leak test guidance; and
  - 9.17.4.5 Emergency actions if gas leak is detected.

## **9.18 Basic Firefighting Competence**

- 9.18.1 Staff should understand LPG fire behaviours and how to respond safely.
- 9.18.2 Staff should be trained to secure the area, prevent crowding, and guide orderly evacuation.
- 9.18.3 Staff should be trained in safe use of fire extinguishers and practical drills as detailed in Annex A.14.

## **9.19 First Aid Competence**

- 9.19.1 At least one trained first aider should be present during operating hours.
- 9.19.2 Staff should be trained to recognize and respond to:

- 9.19.2.1 Crush injuries/falling objects;
- 9.19.2.2 Frostburn (do not rub; gradual warming; urgent medical referral);
- 9.19.2.3 Asphyxiation symptoms and immediate evacuation to fresh air;
- 9.19.2.4 Burns and smoke inhalation; and
- 9.19.2.5 Shock management and emergency referral.
- 9.19.3 Staff shall prioritize scene safety and shall not enter confined/poorly ventilated areas suspected to contain gas.

## **9.20 9.14 Emergency Response Competence**

- 9.20.1 Staff should be trained on emergency response plan roles, including:
  - 9.20.1.1 Raising alarm and notifying emergency services;
  - 9.20.1.2 Firefighting and isolating ignition sources where safe;
  - 9.20.1.3 Evacuation and assembly point management;
  - 9.20.1.4 Establishing safety perimeter and crowd control;
  - 9.20.1.5 Incident reporting and preservation of evidence for investigation.
- 9.20.2 Staff should be trained on recognizing and responding to illegal/unsafe activities (tampering, suspected decanting/refilling, stolen cylinders) and reporting to relevant authorities

## **9.21 Customer Service Competence**

- 9.21.1 Staff should be trained to deliver accurate, consistent safety information and shall not provide advice that encourages unsafe installation, storage or use of LPG.
- 9.21.2 Staff should maintain professionalism, including: See Annex A

## **9.22 The LPG retail operator should implement a competence assurance program as detailed in Annex A.12.**

## **9.23 Minimum competence requirements demonstration are detailed in Annex A.13.**

**NOTE:** The LPG retail operator should maintain a readily available competence matrix indicating each staff member's authorised tasks e.g. offloading, receipt checks, storage control, point-of-sale, emergency marshal and first aider.

## **10. Transport of LPG in cylinders**

### **10.1 Receipt of LPG in cylinders**

10.1.1 LPG retail operators should ensure cylinders are delivered to their premises by licensed transporters.

### **10.2 LPG cylinder distribution to consumer:**

10.2.1 Consumers and last mile delivery of LPG cylinders by retail operators is allowed for a maximum of three (3) cylinders whether filled or empty. More than this number will require a valid license from EPRA.

10.2.2 All the cylinders shall be transported in an upright position and be properly secured during transit.

### **10.3 Receipt of LPG in cylinders**

10.3.1 LPG retail operators should ensure cylinders are delivered to their premises by licensed transporters.

## **11. Incident Reporting**

11.1 Retail outlets shall within forty-eight (48) hours notify the Authority in writing of any accident causing-

11.1.1 Loss of life or personal injury;

11.1.2 Damage to property or the environment; or

11.1.3 An explosion, gas leak or fire

11.2 The information to be submitted to the Authority shall include the following-

11.2.1 Name of the owner and retail premises involved;

11.2.2 Date and time of the incident or accident;

11.2.3 Location and geographical spread of the incident or accident;

11.2.4 Number of injuries and/or fatalities if any;

11.2.5 Scale of environmental damage if any;

11.2.6 Personal property and third-party property damage if any; and

11.2.7 Description of the events leading to and the most probable cause of the incident or accident.

## **12. Register of Licensees**

LPG retail operators can verify validity of licensees (Wholesalers and Transporters) by visiting EPRA's website where a register of approved licensees is available.



**13. Transition**

A person engaged in retail of LPG in cylinders before publication of these Guidelines shall be required to comply within six (6) months of publication.

**14. Review**

These guidelines shall be reviewed every three years from the date of publication or on need basis.

## 15. Annexes

### Annex A Retail Outlets Classification and Operations Requirements

#### A.1 LPG Retail Outlet Classification (Risk Based Tiers)

| Tier     | Floor Area (m <sup>2</sup> ) | Aggregate LPG Quantity (kg) | Risk Level |
|----------|------------------------------|-----------------------------|------------|
| Tier I   | < 7                          | ≤ 150                       | Low        |
| Tier II  | 7 – 15                       | 151 – 400                   | Medium     |
| Tier III | >15                          | 401 – 1,000                 | High       |

#### A.2 Knowledge of LPG properties relevant to cylinder retail operations

|    |                                                                                       |
|----|---------------------------------------------------------------------------------------|
| 1. | LPG composition (propane/butane mixtures) and odorization;                            |
| 2. | Flammability limits and ignition risk;                                                |
| 3. | LPG being heavier than air and implications for low-level accumulation;               |
| 4. | Vapour expansion ratio and Frostburn risk;                                            |
| 5. | Pressure–temperature relationship and implications for storage near heat sources; and |
| 6. | Limitations of odour detection (e.g., reduced smell sensitivity).                     |

#### A.3 Interpret cylinder markings/identifiers for safety and traceability

|    |                                                                              |
|----|------------------------------------------------------------------------------|
| 1. | Cylinder serial number/unique identifier;                                    |
| 2. | Tare weight (TW) and net content;                                            |
| 3. | Test/revalidation/requalification marking and due date;                      |
| 4. | Manufacturer's markings, ownership/brand marks;                              |
| 5. | Hazard labels and user markings; and                                         |
| 6. | Valve type and compatibility considerations (including regulator interface). |

#### A.4 Safe cylinder handling competence consistent with KS EAS 924-1 principles and best practice, including:

|    |                                                                       |
|----|-----------------------------------------------------------------------|
| 1. | Always maintaining cylinders upright;                                 |
| 2. | Prohibition of dropping, throwing, dragging, or uncontrolled rolling; |
| 3. | Safe use of handling aids (trolleys/hand trucks);                     |

|    |                                                                                              |
|----|----------------------------------------------------------------------------------------------|
| 4. | Safe storage technique and stability control;                                                |
| 5. | Prevention of impact to valves, collars, foot rings and cylinder body; and                   |
| 6. | Keeping cylinders away from heat sources, open flames and direct sunlight where practicable. |

**A.5 Competent to identify non-conforming/unsafe cylinders and apply quarantine procedures, including recognition of:**

|    |                                                                          |
|----|--------------------------------------------------------------------------|
| 1. | Severe corrosion, dents, bulges, gouges, arc burns or structural damage; |
| 2. | Damaged, leaking, loose, or incompatible valves;                         |
| 3. | Broken/missing tampered seals;                                           |
| 4. | Illegible markings/serial numbers;                                       |
| 5. | Expired or missing revalidation marks; and                               |
| 6. | Signs of tampering or any modification.                                  |

**A.6 Competently perform and document checks before accepting delivery, including:**

|    |                                                                                       |
|----|---------------------------------------------------------------------------------------|
| 1. | Supplier authenticity verification (licensed wholesaler/filling plant documentation); |
| 2. | Visual inspection of LPG cylinders (integrity, corrosion, damage, markings);          |
| 3. | Seal verification;                                                                    |
| 4. | Revalidation date verification;                                                       |
| 5. | Random/targeted weight verification using calibrated scales;                          |
| 6. | Leak checks; and                                                                      |
| 7. | Recording of serial numbers/identifiers, quantities received and any discrepancies.   |

**A.7 Staff should be trained in non-conformance handling, including:**

|    |                                                                  |
|----|------------------------------------------------------------------|
| 1. | Rejection or quarantine of defective cylinders;                  |
| 2. | Documenting discrepancies on delivery notes/stock records;       |
| 3. | Escalation to supplier and management; and                       |
| 4. | Maintaining traceability records for rejected/quarantined stock. |

**A.8 Competence in storage controls, including**

|    |                                                            |
|----|------------------------------------------------------------|
| 1. | Upright storage, stability and safe storage height limits; |
|----|------------------------------------------------------------|

|    |                                                                            |
|----|----------------------------------------------------------------------------|
| 2. | Use of racks or shelves;                                                   |
| 3. | Maintaining clear aisles and emergency access;                             |
| 4. | Segregation of full/empty/defective cylinders;                             |
| 5. | Housekeeping to prevent combustible waste accumulation;                    |
| 6. | Ventilation principles and avoidance of enclosed poorly ventilated spaces; |
| 7. | Ignition source control and basic electrical hazard awareness; and         |
| 8. | Security controls to prevent tampering, theft and illegal activities.      |

#### **A.9 Conducting routine checks**

|    |                                                                     |
|----|---------------------------------------------------------------------|
| 1. | Daily visual inspection of storage area and cylinders;              |
| 2. | Verifying fire extinguishers are present, accessible, and serviced; |
| 3. | Ensuring signage is visible and legible;                            |
| 4. | Checking weighing scale condition and cleanliness; and              |

#### **A.10 Safe handling of suspected leaking cylinders, including:**

|    |                                                                                |
|----|--------------------------------------------------------------------------------|
| 1. | Stopping operations;                                                           |
| 2. | Isolating the area and keeping the public away;                                |
| 3. | Ventilating naturally;                                                         |
| 4. | Avoiding introduction of ignition sources where gas accumulation is suspected; |
| 5. | Notifying emergency services/management as required; and                       |
| 6. | Quarantining and returning to supplier/marketer as per procedure.              |

#### **A.11 Customer service skills should include:**

|    |                                                                                                                                                          |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | Honest representation of quantity/mass;                                                                                                                  |
| 2. | Transparent pricing and compliant receipts;                                                                                                              |
| 3. | Respectful engagement and de-escalation skills; and                                                                                                      |
| 4. | Safe handling of complaints, returns and exchanges.                                                                                                      |
| 5. | Staff shall know how to refuse service where public safety is threatened e.g. customer smoking near cylinders, unsafe transport and attempted tampering. |

#### **A.12 Competence assurance program that includes.**

|    |                                                  |
|----|--------------------------------------------------|
| 1. | Induction training for new staff;                |
| 2. | Supervised mentorship before independent duties; |

|    |                                                                         |
|----|-------------------------------------------------------------------------|
| 3. | Two years reassessment that includes practical and theory; and          |
| 4. | Refresher training after incidents, near misses, or regulatory updates. |

**A.13 Minimum competency requirements demonstration should include.**

|    |                                                                   |
|----|-------------------------------------------------------------------|
| 1. | Offloading and receipt checks including non-conformance handling; |
| 2. | Safe storage controls;                                            |
| 3. | Leak test;                                                        |
| 4. | Emergency response drill participation;                           |
| 5. | Fire extinguishers use simulation; and                            |
| 6. | Customer safety briefing during delivery.                         |

**A.14 Safe use of fire extinguishers and practical drills**

|    |                                        |
|----|----------------------------------------|
| 1. | PASS technique;                        |
| 2. | Safe approach angle and distance;      |
| 3. | When NOT to fight a fire; and          |
| 4. | Immediate escalation to fire services. |

## Annex B: Retail Site Inspection Checklist

### 1. Site Details

|                             |                                                                                                                                                                                                            |         |           |  |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-----------|--|
| Date & Time of Inspection   |                                                                                                                                                                                                            |         |           |  |
| Site Name                   |                                                                                                                                                                                                            |         |           |  |
| Proponent                   |                                                                                                                                                                                                            |         |           |  |
| EPRA Ref. No                |                                                                                                                                                                                                            |         |           |  |
| Type of Retail              | <input type="checkbox"/> Cage<br><input type="checkbox"/> Containerized LPG Retail Outlet<br><input type="checkbox"/> Specially designed standalone kiosk/shop<br><input type="checkbox"/> Other (specify) |         |           |  |
| Proponent's Representatives | Name                                                                                                                                                                                                       | Contact | Signature |  |
|                             | 1                                                                                                                                                                                                          |         |           |  |
|                             | 2                                                                                                                                                                                                          |         |           |  |
|                             | 3                                                                                                                                                                                                          |         |           |  |
| Inspection Team             | 1                                                                                                                                                                                                          |         |           |  |
|                             | 2                                                                                                                                                                                                          |         |           |  |
|                             | 3                                                                                                                                                                                                          |         |           |  |

### 2. Location

|                  |  |
|------------------|--|
| Physical Address |  |
| Region           |  |
| County           |  |
| Sub County       |  |
| GPS Coordinates  |  |

### 3. Contact Details

|      |  |
|------|--|
| Name |  |
|------|--|

|                |  |
|----------------|--|
| Postal Address |  |
| Tel. No        |  |
| E-mail         |  |

#### 4. Immediate Neighbors activities

| Immediate Neighbours | Observation | Comments |
|----------------------|-------------|----------|
| Right                |             |          |
| Left                 |             |          |
| Front                |             |          |
| Rear                 |             |          |
| Others               |             |          |
|                      |             |          |
|                      |             |          |

#### 5. General site observations

| Aspect                                       | Observation | Comments |
|----------------------------------------------|-------------|----------|
| Location of outlet                           |             |          |
| Housekeeping of storage area                 |             |          |
| Ventilation                                  |             |          |
| Security of storage outlet                   |             |          |
| Fire Signage                                 |             |          |
| Electrical Installations                     |             |          |
| Emergency Contacts, Available, and displayed |             |          |
| Retail Operations – Storage-                 |             |          |

## 6. Staff Competence

| Aspect                             | Observation | Comments |
|------------------------------------|-------------|----------|
| Product Knowledge and LPG Handling |             |          |
| First Aid Competence               |             |          |
| Emergency Response Competence      |             |          |
| Customer Service Competence        |             |          |
| Transport of LPG in cylinders      |             |          |



## 7. Safety Distances

| Compliance to Retail of LPG Guidelines                                           |                                 |          |          |            |                   |                          |
|----------------------------------------------------------------------------------|---------------------------------|----------|----------|------------|-------------------|--------------------------|
| Retail of LPG                                                                    |                                 |          |          |            |                   |                          |
| No                                                                               | Aspects                         | Tier I   | Tier II  | Tier III   | Site Observations | Remarks, as a Tier ..... |
| Classification of Retail site                                                    |                                 |          |          |            |                   |                          |
| 1.                                                                               | Aggregate LPG Quantity (Kg)     | Upto 150 | Upto 400 | Upto 1,000 |                   |                          |
| 2.                                                                               | Risk Level                      | Low      | Medium   | High       |                   |                          |
| 3.                                                                               | Floor Area (m2))                | <7       | 7 – 15   | >15        |                   |                          |
| Minimum Safety Distance from the nearest LPG cylinder by Tier Classification (m) |                                 |          |          |            |                   |                          |
| 4.                                                                               | Property boundary               | 3        | 3        | 5          |                   |                          |
| 5.                                                                               | Public thorough fare (walkways) | 3        | 5        | 10         |                   |                          |

| Compliance to Retail of LPG Guidelines |                                                                          |          |         |          |                    |                          |
|----------------------------------------|--------------------------------------------------------------------------|----------|---------|----------|--------------------|--------------------------|
| Retail of LPG                          |                                                                          |          |         |          |                    |                          |
| No                                     | Aspects                                                                  | Tier I   | Tier II | Tier III | Site Observations  | Remarks, as a Tier ..... |
| 6.                                     | Buildings with no openings adjacent to the LPG retail outlet             | 1        | 5       | 7        |                    |                          |
| 7.                                     | Building with openings adjacent to the LPG retail outlet                 | 1        | 10      | 10       |                    |                          |
| 8.                                     | Ignition Source                                                          | 5        | 10      | 10       |                    |                          |
| 9.                                     | Sensitive occupancy (hospitals, schools, stadiums and places of worship) | 15       | 30      | 30       |                    |                          |
| 10.                                    | Adjacent LPG retail outlet                                               | Tier I   | 3m      | 5m       | 10m                |                          |
|                                        |                                                                          | Tier II  | 5m      | 10m      | 15m                |                          |
|                                        |                                                                          | Tier III | 10m     | 15m      | **This is based on |                          |

| Compliance to Retail of LPG Guidelines                  |                                                                  |  |           |                             |                                                   |                   |
|---------------------------------------------------------|------------------------------------------------------------------|--|-----------|-----------------------------|---------------------------------------------------|-------------------|
| Retail of LPG                                           |                                                                  |  |           |                             |                                                   |                   |
| No                                                      | Aspects                                                          |  | Tier I    | Tier II                     | Tier III                                          | Site Observations |
|                                                         |                                                                  |  |           |                             | retail station regulations but not less than 50m. |                   |
| Fire Safety & Emergency Preparedness-Fire Extinguishers |                                                                  |  |           |                             |                                                   |                   |
| 11.                                                     | Fire Extinguishers<br>9kg DCP or 5kg CO <sub>2</sub><br>(Number) |  | 1         | 2                           | 4                                                 |                   |
| 12.                                                     | Recommended Placement                                            |  | Near exit | 1 near storage, 1 near exit | Evenly distributed + 1 at exit                    |                   |

## 8. Comments

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## 9. Recommendations

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## Annex C: Sample Retail LPG Containers and Cage Designs



