

Management Summary

Guidelines for Good Safety Practices in the LPG Industry

GOOD INDUSTRY PRACTICES

The WLPGA Guidelines for Good Safety Practices in the LPG Industry, is endorsed by the United Nations Environment Programme (UNEP)

These *Guidelines for Good Safety Practices in the LPG Industry* have been developed by the World LPG Association (WLPGA) for non-experts who may have responsibility for, or are otherwise concerned with, good safe practice in relation to LPG storage, handling, distribution and use. They have been endorsed by the UNEP.

As with all forms of energy, LPG can be hazardous if mishandled or misused. Care in the storage, handling, distribution and use of LPG will mitigate any incidents, accidents and their consequences. This is the key message in these guidelines.

These guidelines are intended for policy makers, government officials, LPG industry managers at international, national and local levels, and other stakeholders who are concerned with good safety practice in relation to LPG storage, handling, distribution and use

They follow the LPG distribution chain from primary storage up to and including the point of use. Hazards are identified at each stage of the process and good safety practices are described. More detailed technical guidance references are provided in Appendix Three.

The guidelines stress that the first rule of safety when dealing with LPG is to avoid any uncontrolled leakage of the product. All LPG systems should be designed with this prime objective of containment in mind.

The responsibilities of each of the key stakeholders (opposite) with respect to safety in an LPG business are described.

It is emphasised that all stakeholders should



collaborate to ensure the efficient discharge of their responsibilities.

The *WLPGA Guidelines for Good Safety Practices in the LPG Industry*, discusses the regulatory framework needed for LPG

There is a section in the guidelines on the need for a regulatory framework promoting safety in storage, handling, distribution and use.

It states that the LPG industry has a key role in the preparation of regulations through its national or other representative associations.

The focus is only on the regulatory framework for safety. In countries which have wide-ranging systems of regulation for public, employee and consumer safety, it is normal to find LPG included in schedules of all hazardous substances.

In the absence of these wide-ranging systems, regulations may be introduced specifically for LPG or the LPG industry may be self-regulating.

Self-regulation is usually based on recognised technical standards and codes of practice which are accepted and overseen by an official inspectorate or authority.

The guidelines mention that the most serious events tend to be associated with large quantities of LPG, and when frequent transfers of product in storage or distribution take place. Events like these may be infrequent, but could have consequences beyond their immediate location.

The location of LPG storage and handling facilities should be directly regulated within general hazardous substances regulations or in their absence, by LPG specific regulations.

A threshold level of inventory should be set which will determine whether a facility falls within the scope of the regulations. Progressively more stringent conditions should apply as the assessed risk increases.

Planning regulations should take account of the potential hazard, the hazard consequences and the probability of the occurrence of hazardous events.

Apart from storage, the guidelines discuss other potentially hazardous procedures associated with the distribution mode, e.g. pipeline, water-borne, rail and road.

Many of the incidents involving LPG occur at, or close to, the point of use. They may result from defects in the LPG supply, in the appliance, the equipment or the manner of installation. Some incidents are the result of misuse by the consumer. The need for up to date, regular training on all aspects of the business, across all areas of the business, is an important way to mitigate these incidents.

The *WLPGA Guidelines for Good Safety Practices in the LPG Industry*, stresses that safety comes from understanding the behaviour of LPG

And using that understanding to keep it under control. The WLPGA has produced a short video highlighting some of the properties and characteristics of LPG which impact on the safe storage, handling, distribution and use of the product. Here is the link: (<https://www.youtube.com/watch?v=9X6EG3g8JHU>).

One of these key properties is that LPG vapour is heavier than air and any leaks will spread close to the ground. The guidelines discusses this, and other properties, and the way they impact the design and operation of the system.

There are some basic safety principles when dealing with LPG, and these too are explained. For example large LPG installations should not be constructed close to heavily populated or sensitive areas. There should also be access restrictions imposed at locations that are approved for large LPG installations. Space and separation distances are fundamental to safety at both large and small LPG facilities.

The guidelines stresses that participants in the LPG industry should actively promote a safety culture within their own businesses and at industry level. An LPG Association has a role to play at industry level.

Finally planning for emergencies should be an integral part of a safety management programme and should encompass every stage of the distribution chain as well as LPG in storage and in use.

An emergency at an LPG plant may have an impact beyond its boundary fence and the APELL (Awareness and Preparedness for Emergencies at a Local Level) process should be employed for preparedness at local level. APELL is a programme developed by the UNEP with the purpose of minimising the occurrence and harmful effects of technological accidents and environmental emergencies.

The complete *Guidelines for Good Safety Practices in the LPG Industry*, and other WLPGA publications, can be found here: <https://www.wlpga.org/publications/wlpga-publications/>

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