

Gas Supply Installations

1. Introduction

1.1 The purpose of this guidance note is:

- (a) to draw the attention of APs and developers to Government's piped gas policy and the need to design a gas supply installation at an early stage of a development;
- (b) to give guidance on the location criteria which must be met in the design of the gas supply installation; and
- (c) to draw the attention of developers to the importance of clearly defining the ownership of gas installations located at the common areas of a premises in order to facilitate future maintenance and repair of the installations. For details of the building maintenance in respect of gas installations, it is suggested the developers to make reference to Building Management Ordinance (Cap. 344) and Code of Practice on Building Management & Maintenance which are administered by Home Affairs Department.

1.2 In some instances, other arrangements may be deemed to be acceptable by the Gas Authority. Each case will be carefully considered on its merits and in the light of any special circumstances to which attention may be drawn.

2. Gas Authority

The Director of Electrical and Mechanical Services (DEMS) is the Gas Authority appointed by the Chief Executive for the purposes of the Gas Safety Ordinance, Cap. 51. The Gas Standards Office, which acts on behalf of the Gas Authority, is responsible for matters relating to gas safety. The address and contact telephone number of the Gas Standards Office are as follows :

Address: 7/F, EMSD Headquarters
3 Kai Shing Street,
Kowloon,
Hong Kong

Telephone: 2808 3655

3. Piped Gas Policy

- 3.1 Government's piped gas policy aims at providing safe gas supply to all domestic buildings as far as possible and discouraging the use of cylinders.
- 3.2 It is important that the choice of fuel gas is decided at an early stage when preparing the design of a development so that sites can be set aside for the equipment associated with a piped gas supply.

4. The Gas Supply Installation

4.1 General

A gas supply installation is considered to be safe and adequate:

- (a) if it has a gas source which can, so far as is reasonably practicable, provide an uninterrupted supply of gas to the consumers; and
- (b) if it is designed and located such that it does not present an undue risk to the health and safety of members of the public residing or working in the vicinity of the installation;

Note: Details of current Government Risk Guidelines are included in the Hong Kong Planning Standards and Guidelines, Chapter 12: Miscellaneous Planning Standards and Guidelines.

4.2 The Gas Source

4.2.1 The gas source may take the form of either :

- (a) a supply of town gas from the reticulated mains network of the Hong Kong and China Gas Company Limited (HKCG); or
- (b) a supply of LPG from a storage installation located on or adjacent to the development concerned.

4.2.2 If town gas is to be used, the developer should liaise with HKCG for the design of the pipe routes to and within the development and make provision for the safe siting of any gas control equipment necessary.

4.2.3 If LPG is to be used:

- (a) the developer should liaise with the prospective LPG supplier at an early stage for the siting of the LPG storage facility and the design of the pipe routes within the development;

- (b) the LPG should normally be stored in containers of the following types –
 - (i) bulk tank (underground or mounded); or
 - (ii) banks of LPG cylinders.

Note : The maximum number of LPG cylinders which may be used for an LPG cylinder bank installation is 20. The maximum size of cylinder is 50 kg (118 litre).

- (c) an LPG storage installation where containers are kept with an aggregated nominal water capacity of more than 130 litres is classified as an Notifiable Gas Installation (NGI) under the Gas Safety Ordinance and application for construction approval to the Gas Authority is required; and
- (d) the storage of LPG should normally have an aggregate capacity of four times the average foreseeable daily demand.

5. Design and Siting Criteria

- 5.1 Installations for the supply of gas from the reticulated mains system of the HKCG shall be designed and installed in accordance with the requirements of the Gas Safety Ordinance. Compliance with the EMSD's and HKCG's approved codes of practice shall normally be deemed to meet these requirements.
- 5.2 Installations for the supply of LPG shall be designed, located and constructed in accordance with the Gas Safety (Gas Supply) Regulations. The attention of AP's and other applicants is drawn particularly to the requirements of Regulation 11 on the ventilation of, access to and fire protection measures for LPG installations. Compliance with the Codes of Practice for Hong Kong LPG Industry, Module 1 - LPG Compounds and Cylinder Stores shall normally be deemed to meet these requirements.
- 5.3 LPG storage installations should normally be located at ground floor level away from any unventilated voids to prevent accumulation of LPG in the event of a gas leak. Locations in basements, open pits, over voids or above ground level (including podium level) will not be permitted.
- 5.4 All LPG storage installations are to have an adequate supply of water for fire protection purposes. Such supply shall meet the requirements of the Director of Fire Services.

- 5.5 For bulk LPG storage installations where replenishment of LPG by road tanker is necessary, careful consideration should be given to the location of the installation. Factors to be considered include the estimated population in the vicinity, the capacity of the storage containers, the arrangements for road tanker access and unloading. A Quantitative Risk Assessment (QRA) report should normally be submitted to the Gas Authority with the application for NGI construction approval, to demonstrate that the installation will not present undue risks to society. It is recommended that the study brief be discussed with the Gas Authority prior to the appointment of consultants.
- 5.6 The following specific requirements for bulk LPG storage installations should be complied with:
- (a) Installations and associated road tanker unloading points should be sited away from places where people would congregate in order to reduce risk. The Gas Authority should be consulted at an early stage where it is proposed to site the installation within 100 metres of schools, hospitals and homes for the elderly or other sensitive users;
 - (b) There should be a paved area surrounding the installation, of 1 metre wide minimum, together with a further area of 2 metres wide to be free of trees and shrubs;
 - (c) The minimum safety distance from buildings and the lot boundary shall meet the requirements of the Code of Practice for Hong Kong LPG Industry, Module 1 - LPG Compounds and Cylinder Stores, e.g. filling point or valve assembly on the manhole of any bulk tank shall be at least 7.6 metres from buildings, property line or any fixed point of ignition.

Note: The acceptability of the location of any bulk LPG storage installation will be determined by reference to the QRA. As a general rule, however, for high-rise residential property, a separation distance of between 35 and 100 metres may be necessary, depending on the quantity of LPG stored and the size of the road tanker used for replenishing stocks of LPG.

- 5.7 The guidelines below give approximate area requirements for LPG storage installations with underground bulk tanks :

<u>LPG Storage Quantity (tonnes)</u>	<u>Approx. Area of Compound for U/G LPG tanks (m x m)</u>
4	13 x 12
6	14 x 12
8	15 x 12
10	16 x 13
15	18 x 15
20	25 x 20
40	25 x 25

6. **Ownership of Gas Supply Installations**

The ownership of gas supply installations, particularly different sections of gas pipes at the common areas of a premises, should be clearly defined at an early stage to facilitate future maintenance and repair of the installations.

Gas Standards Office
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