

# GAS METER ROOM DESIGN GUIDELINES

## 1. Introduction

- The main objective of this guideline is to make developers aware of the design requirements which are to be considered when planning to construct a natural gas meter room within a property, or in a separate metering cabinet or building.
- The gas meter and regulators will vent out gas during the course of operation, or under fault conditions.
- Especially where larger meters, or multiple meters, are installed in the one space, to meet compliance requirements consideration needs to be given to:
  - Space to maintain and operate equipment;
  - Access and egress;
  - Ventilation, gas detection, pressure relief;
  - Hazardous electrical equipment;
  - Building Code Australia requirements.



**Gas is highly flammable and explosive and therefore requires a safe distance of separation!**

## 2. Process Flowchart

1. Developer applies for gas connection
2. Developer designs the gas meter room as per TGN standards in order to suit the gas load requirements
3. If any modifications required in the design, it has to be approved by TGN asset management team. Gas engineers at Tas Gas are available for advice and assistance.
4. Construction of the gas meter room as per the approved design
5. A representative from TGN inspects the gas meter room to confirm the works are done as per the approved drawings
6. TGN connects the gas to the property

### 3. Responsibility

- It is the developer who is responsible to construct and maintain the gas meter room including such things as ventilation, signage, security and lighting.
- The gas meter room is a Tas Gas secured facility and it is not available for any other kind of activities such as storage, workshop, stores or other utilities metering without the permission of Tas Gas.
- The surrounding area must be cleared out of any vegetation, rubbish (or bins), debris or storage of dangerous or inflammable items.
- Smoking shall not be permitted near the gas meter room.
- An emergency evacuation plan has to be installed inside the gas meter room.
- The location of the room, as well as the doorways, shall meet the requirements of the BCA code, especially the requirements for fire rating materials/construction and emergency exit routes.

### 4. Choosing a Location for Gas Meter Room

- The surface should be level and of concrete construction, or similar, and not be subject to flooding.
- Meter room has to be accessible 24x7 for maintenance and emergencies.
- Meter room (doors) shall be located on an outside facing elevation for ease of access and ventilation purposes.
- Meter room should be located at least 3m away from other high voltage transformers / equipment and 5m away from flammable storage area or a filling point.
- Meter room has to be located in an area having adequate free ventilation to free space, not under windows, canopies, awnings, etc.
- Meter room has to be placed in a location where it will not be subjected to high temperatures or vibration.
- The metering equipment shall be located in the room and not be at risk of mechanical damage from operating equipment or vehicles.
- The location has to be suitable for gas vent lines to exit the room outside and have a high level and safe exclusion zone around the vent point.

### 5. Meter Room Design

- The meter room shall be designed such that it meets the requirements related to Fire Classification and Electrical Hazardous area in accordance with AS 60079.
- The entrance to meter room should be at least 1.5m away from any road or vehicle access pathway to avoid persons stepping out into traffic.
- Meter room ventilation shall not be shared with any switch room, electric metering room, electrical substation, mess or a rest room.
- Where lighting is required inside a meter room all light fittings, switches, etc shall be hazardous area Zone 1 rated.

- The door of meter room must not open directly on to any fire escape route (BCA requirement).
- The room shall be of sufficient length, width and height to house comfortably all the gas metering equipment.
- All penetrations through the walls/ceiling shall be sealed for their full depth with a fire rated (Min 2hrs) and gas tight seal.
- The rooms construction must have a minimum 2Hr Fire Rating Level (FRL).

## 6. Ventilation

- Ventilation is vital to avoid any accumulation of gas that causes the atmosphere inside the meter room to be explosive and inflammable. Also it allows any escape of gas to be smelt or detected by passers-by.
- Ventilation can be either natural or mechanical ventilation.
- Natural ventilation is the preferred option as it reduces operational and maintenance costs.
- In mechanical ventilation, the fan motors shall be remote from the exhaust duct (indirect drive) or to be rated to operate in a Zone 1 hazardous area (AS/NZS 60079.10.1).
- In case of mechanical ventilation failure, there shall be an interlock which causes gas supply to shut down in case of power outage or equipment failure.
- Louvred or vented doors must have at least high and low level openings, to cause a natural draft.

## 7. Doors

- All gas meter room doors shall open outwards and shall be unobstructed to allow to be fully opened, and secured, unless specified by Tas Gas;
- Doors and frames shall have a FRL class fire rating of 2 hours;
- In case of an emergency event, the door shall be readily operable from inside without the aid of a key;
- At least 3 hinges shall be provided for doors greater than 2.0 m and 2 hinges for doors less than 2.0 m. Hinges shall be designed and constructed of corrosion-resistant metal;
- All doors and frames shall have a manufacturers label attached to it indicating the FRL as well as its certificates to be produced upon request;
- Louvred door vents are considered to have a free ventilation area of 50% of their actual area

- The door shall be fitted with a Tas Gas specified standard lock. If customer access is provided an external lock box with key may be fitted (see photo example).
- For 'walk in' meter rooms or cabinets the doors shall be double outward opening doors

## 8. Hazardous area

- Any hazardous area zone created by the meter installation should not pass over the boundary of the consumers premises onto areas accessible to the general public.
- Installation shall not be located in the immediate vicinity of any hazardous installation like fuel or chemical store unless a suitable risk assessment has been carried out and necessary precautions are taken.
- Electrical equipment in the meter room should be rated at Zone 1 Hazardous Area rating.

## 9. Signs

- A clear signage stating 'Gas Meter Room' , "No Smoking" and gas escape notice shall be attached in a prominent position visible when entering any enclosure or compound containing a meter installation.
- Tas Gas will install additional safety and information signs

## 10. Contact Us

For any further enquires or clarifications, please do not hesitate to contact us:

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