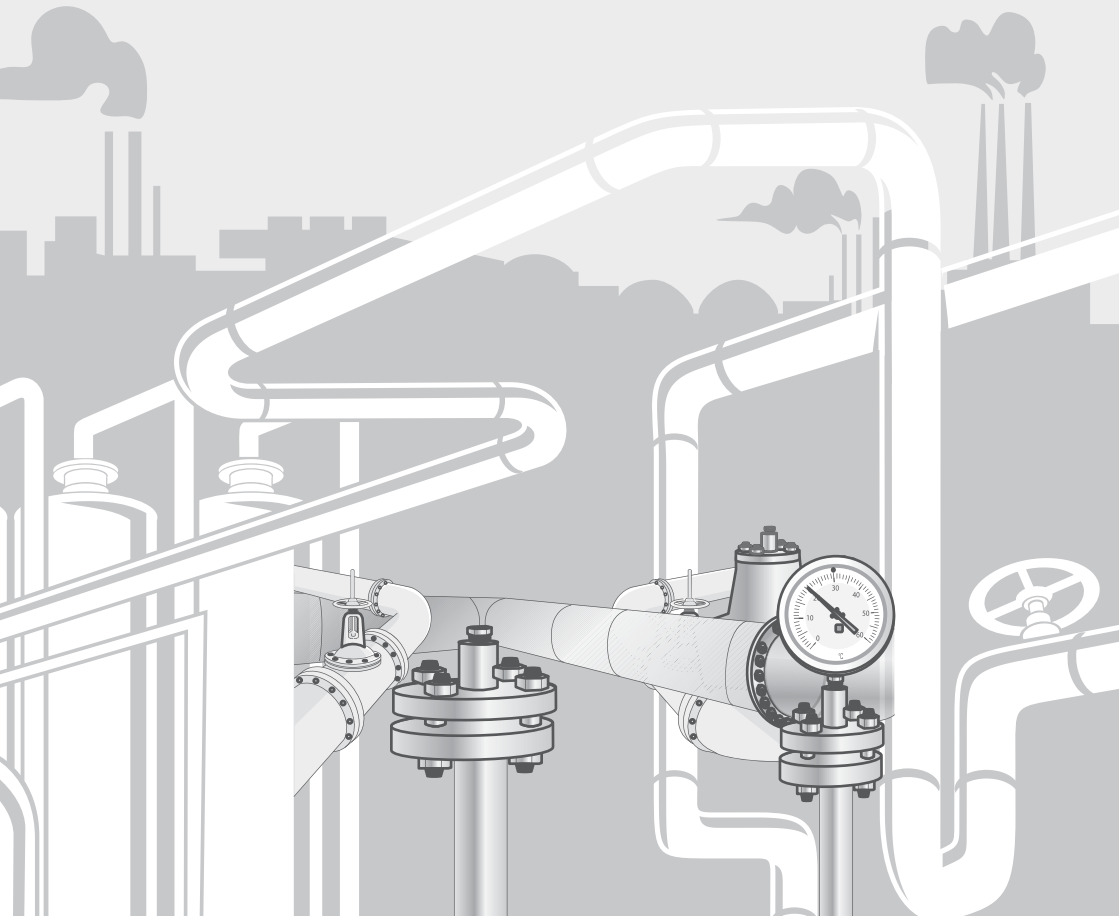


# GUIDE ON GAS PERMIT TO WORK SYSTEM





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# 1.0 Objectives

- 1.1 This guide was developed by the Energy Commission with the following objectives:
  - 1.1.1 To guide gas contractors and competent persons, building owners, tenants, operators of installations, licensees and third-party contractors in managing work activities that have inherently higher risks or unique aspects that could lead to a higher level of risk than routine or daily work activities.
  - 1.1.2 To protect existing distribution pipelines, piping systems, properties in the vicinity of such pipelines and piping systems, workers and most importantly the public from dangers arising during carrying out of works on new and existing installations, or in the vicinity of live distribution pipelines or piping systems.

# 2.0 Scope

- 2.1 This guide applies to any distribution pipelines and piping systems whose owners or operators are issued with licences under the Gas Supply Act 1993.

# 3.0 Terms and Definitions

- 3.1 In this guide, these terms shall bear the following meanings:

**“Cold Work”** means any work or activity which is to be carried out on an existing installation that contains gas and which does not produce sufficient heat to ignite a flammable mixture of air and hydrocarbons or a flammable substance.

**“Confined Space”** means an enclosure with known or potential hazards and restricted means of entrance and exit, which is not normally occupied by people, and is usually not well ventilated.

**“Hot Work”** means any work or activity which is to be carried out on an existing installation which contains gas, for example, grinding, welding, thermal or oxygen cutting or heating, and which can produce a spark or flame or other source of heat or ignition having sufficient energy to cause ignition, where the potential for flammable vapours, gases, or dust exists.

**“Job Safety Analysis”** means a procedure which helps integrate accepted safety and health principles and practices into a particular task or job operation.

**“Permit to Work (PTW)”** is a written a permission to carry out specific works and which will specify how such works will be carried out as well as verify them.

**“Repair Work”** means an activity involving physical effort of fixing or mending something to achieve a purpose on an existing installation.

**“Safety Representative”** means a person who is appointed to carry out duties as a safety representative and registered to carry out their duties as a safety representative with the Director General of the Department of Occupational Safety and Health or other equivalent person or body.

- 3.2 Subject to part 3.1 and unless expressly indicated to the contrary or unless the context otherwise requires, terms adopted and used in this guide, shall bear the same meaning as they are defined in the Gas Supply Act 1993 and/or the Gas Supply Regulations 1997, as amended from time to time.

## 4.0 Permit To Work

- 4.1 The purpose of a Permit to Work (PTW) is to ensure that works are carried out in a safe manner and that proper planning and consideration is given to risks and hazards when carrying out the works.
- 4.2 The use of a PTW is required including but not limited to the following work environments:
  - 4.2.1 When the nature of work adversely affects the safety of personnel, environment or installation.
  - 4.2.2 When any work, including repair work, is commenced on an existing installation.
  - 4.2.3 When any work is commenced to construct an underground structure and which involves excavation work near an existing installation.
  - 4.2.4 When any lifting work (for example using mobile cranes) or work in a confined space is commenced near an existing installation.
- 4.3 Issuance of a PTW:
  - 4.3.1 A PTW shall be issued by the owner of an installation, or his agent, authorising specific people to carry out specific work within a specific time.
  - 4.3.2 A person who issues the PTW should:
    - (a) fully understand the nature of the work involved;
    - (b) ensure that all hazards associated with the work are identified; and
    - (c) ensure that all necessary precautions are implemented, including the sections required to be isolated before work begins.



4.3.3 The PTW shall include approved procedures of the overall work to be carried out as well as all related documents as well as the contents mentioned in part 4.4 of this guide.

#### 4.4 Contents of a PTW:

4.4.1 A PTW shall contain details of how work is to be carried out on a distribution pipeline or piping system in a safe manner.

4.4.2 A PTW shall include, but not be limited to, the following information:

- (a) the type of work to be carried out, namely whether it would be hot work or cold work;
- (b) the location where the work is to be carried out;
- (c) a description of the work that is to be done and its limitations;
- (d) the time frame in which the work is to be carried out;
- (e) an identification of all of the hazards that would need to be considered in relation to the work;
- (f) all necessary precautions that would need to be taken by all the parties involved;
- (g) a list of the minimum protective equipment that would need to be used by all personnel when on site;
- (h) the name and address of the Gas Contractor who is given permission to carry out the work;
- (i) the name and registration number of the competent person who is given permission to carry out the work;
- (j) an express authorisation by the owner of the installation or his agent for the work to be carried out;
- (k) an acceptance by the competent person on the understanding of the work to be done, hazards involved and precautions required;

- (l) a declaration from the relevant person(s) that he is satisfied as to the correctness of the information supplied in parts (a) to (f);
- (m) a declaration from the person carrying out the work that the work has been completed and all persons under his supervision, material and equipment have been withdrawn from the site OR that the work has not been completed and that permission to continue is requested; and
- (n) any other requirements which may be imposed.

#### 4.5 Validity of a PTW:

4.5.1 A PTW shall be issued based on a day-to-day basis.

4.5.2 If there is a need to issue a PTW for a duration of more than one (1) day, the validity should not be more than seven (7) days and the verification of the compliance to the requirement of the work should be on a daily basis.

4.5.3 The PTW shall be closed by the person who issued the PTW or the relevant licensee or his agent at the end of each day.

#### 4.6 Records:

4.6.1 A copy of the PTW shall be issued to all contractors involved in the work and shall be displayed at a conspicuous location on site.

4.6.2 All PTWs and other associated records and documents such as drawings, working procedures, minutes of meeting and attendance lists of site safety briefings shall be recorded properly.

4.6.3 The PTW and associated records and documents shall be properly kept by both the party issuing the PTW as well as the party being issued with it for the purposes of monitoring, auditing and reviewing.

#### 4.7 Format of a PTW:

The party issuing a PTW may use the format in part 6.0 as reference for the purposes of issuing the PTW.

# 5.0 General Safety Requirements

## 5.1 Responsibility for Safety

5.1.1 It is the responsibility of the competent person to ensure general safety requirements are complied with.

5.1.2 The responsibilities of the competent person include but is not limited to ensuring the following:

- (a) The relevant PTW is issued and secured.
- (b) The procedures and job safety analysis for the work is approved and endorsed.
- (c) All equipment is in good condition and safe to be used.
- (d) All personnel are well-briefed on safety matters, their duties and their responsibilities.
- (e) All personnel are wearing appropriate protective clothing, safety shoes, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection.
- (f) All work can only be commenced and carried out under the supervision of a competent person after the validation of PTW is done.

5.2 Only skilled workers who are familiar with the work are allowed to carry out the work with supervision of the competent person, and such workers shall be adequately briefed before commencement of the works.

# 6.0 Example of Permit To Work

## PERMIT TO WORK

Ref No:							
HOT WORK		COLD WORK		Date of Issue		Validity From	To date
				Time of Issue			
				Owner Emergency contact no:			Gas Contractor Emergency contact no:
Location of work and Limitations						Name of Competent Person and Competency Registration No.:	
Work Description							
Date and Time Required		Date:	Work Start:	Time Completion:	Hours		
Gas Contractor		Name:					
		Address:					
		Telephone number:					
Tools, Equipment, and Machinery used		<input type="checkbox"/> Excavator	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Portable gas Detector			
		<input type="checkbox"/> Crane	<input type="checkbox"/> Oxy-acetylene Cutter	<input type="checkbox"/> Flaring Stack			
		<input type="checkbox"/> Welding Set	<input type="checkbox"/> Nitrogen gas	<input type="checkbox"/> Adequate Warning Sign			
		<input type="checkbox"/> HDD Machine	<input type="checkbox"/> Piling Machine	<input type="checkbox"/> _____			
Facility Involved		<input type="checkbox"/> LPG Bulk Tank/Cylinder	<input type="checkbox"/> NG PE Pipeline	<input type="checkbox"/> _____			
		<input type="checkbox"/> NG Piping System	<input type="checkbox"/> Riser	<input type="checkbox"/> _____			
		<input type="checkbox"/> LPG Piping System	<input type="checkbox"/>	<input type="checkbox"/> _____			
		<input type="checkbox"/> NG Steel Pipeline	<input type="checkbox"/>	<input type="checkbox"/> _____			
PPE		<input type="checkbox"/> Safety Helmet	<input type="checkbox"/> Safety Boots	<input type="checkbox"/> _____			
		<input type="checkbox"/> Dust mask	<input type="checkbox"/> Safety Vest	<input type="checkbox"/> _____			
		<input type="checkbox"/> Ears plug	<input type="checkbox"/> Breathing apparatus	<input type="checkbox"/> _____			
		<input type="checkbox"/> Face Shields	<input type="checkbox"/> _____	<input type="checkbox"/> _____			
Identification of Hazards							

<b>Precautions to be Taken</b>				
<b>Supporting Documents</b>	<b>Description</b>	<b>YES</b>	<b>NO</b>	<b>Remarks</b>
	Approved Working Procedure			
	Approved JSA			
	Mitigation of risk			
	Others			
<b>AUTHORISATION AND ACCEPTANCE OF PTW</b>				
Owner Authorisation	I confirm that the information in this PTW is correct insofar as those matters which are within my direct knowledge or control, and hereby authorise the Gas Contractor to carry out the work as specified in this PTW in accordance with its term and conditions.			
	Signed :		Date :	Time :
Contractor Acceptance of PTW	I confirm that the information in this PTW is correct insofar as those matters which are within my direct knowledge or control, and will undertake work in accordance with its term and conditions.			
	Signed :		Date :	Time :
Competent Person Acceptance of PTW	I confirm that the information in this PTW is correct insofar as those matters which are within my direct knowledge or control, and will undertake work in accordance with its term and conditions.			
	Signed :		Date :	Time :
<b>CANCELLATION OR EXTENSION OF PTW</b>				
Gas Contractor	I confirm that: <input type="checkbox"/> 1. The work has been completed <input type="checkbox"/> 2. All persons under my supervision, materials and equipment have been withdrawn from the site; and <input type="checkbox"/> 3. The site is now safe.		<input type="checkbox"/> I confirm that the work has not been completed and permission to continue is requested	
	Signed by Competent Person Gas Contractor: *** Choose one		Date :	Time :
Owner	<input type="checkbox"/> I hereby cancel this PTW with effect from the date and time the Gas Contractor has signed the above confirmation.		<input type="checkbox"/> I hereby authorise the Gas Contractor to continue work in accordance with the terms of this PTW save and except for the time which shall be extended to ...../...../20.... at ..... am/pm, upon which the PTW is automatically cancelled.	
	Signed by Owner or Representative: *** Choose one		Date :	Time :

## 7.0 ENERGY COMMISSION CONTACT INFORMATION

### HEADQUARTERS

#### SURUHANJAYA TENAGA (*ENERGY COMMISSION*)

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