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#### 1. General Information

#### 1.1 Purpose of this Document

PowerGas is licensed by the Energy Market Authority ("Authority") to be the Gas Transporter ("Transporter") which owns, operates, and maintains the piped gas network in Singapore.

SP PowerGrid ("SPPG") is licensed by the Authority to be the Gas Transporter Agent to operate and maintain the piped gas network in Singapore on behalf of PowerGas. SPPG's gas business is to plan, design, operate and maintain gas network assets in a manner that supports the delivery of safe, reliable, efficient and quality services to customers.

Under the Gas Transporter License, the Gas Transporter has to develop separate fees and charges for separate gas transportation services such as connection services and transportation services. This document sets out the connection policy and procedure for Town Gas supply.

#### 1.2 Singapore Gas Transportation System

PowerGas owns an extensive gas transmission and distribution network throughout Singapore. The network is generally buried underground and transports natural gas to the western and northern parts of Singapore, and town gas to the whole of Singapore.

The gas assets comprise the transmission network (operating at higher pressures), which forms the main reticulation backbone and the distribution network (operating at lower pressures).

- Town gas is manufactured in Senoko Gasworks and delivered to approximately 900,000 customers in Singapore. The customers are made up of industrial, commercial and residential gas users. Residential customers consist mainly of gas users from HDB, condominiums and landed premises. The town gas transmission network operates at 3 barg whereas the distribution network operates at pressure regimes ranging from 1 kPa to 50 kPa.
- Natural gas is supplied to about 200 customers and is imported from four sources (two submarine pipelines from Indonesia, one submarine pipeline from Malaysia and internationally through the Liquefied Natural Gas Terminal). Under the Gas Network Code, Gas Shippers/Retailers represent the customers that are connected to the natural gas networks. These natural gas customers are typically commercial or industrial and include all power stations. The natural gas transmission network operates mainly at two pressure regimes, 28 barg and 40 barg, and the distribution network operates at pressure regimes ranging from 3 barg to 6 barg.



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#### 1.3 Definitions

The following terms shall have the following meanings when used in this document.

"Authority" means the Energy Market Authority of Singapore established under the Energy Market Authority of Singapore Act (Cap.92B);

"Gas Transporter" or "Transporter" means a representative holding a gas transporter's license;

"Gas Retailer" or "Retailer" means a person who supplies gas to Retail Customers and who holds a Retailer's license;

"Gas Shipper" or "Shipper" means a person holding a gas shipper's license;

"Gas Network Code" refers to the Gas Network Code issued by the Authority, setting out common terms and conditions between the Gas Transporter and Shippers who engage the Gas Transporter to transport natural gas though the gas pipeline network.

"DR" known as designated representative means a professional engineer or a licensed gas service worker appointed by the developer or a responsible person for the premises;

"PE" known as professional engineer means any person who is registered as a professional engineer in the mechanical engineering discipline under the Professional Engineers Act (Cap. 253);

"LGSW" known as licensed gas service worker" means a person who is licensed under section 12 (3) of the Gas Act (Chapter 116A);

"gas service work" means any work carried out on any gas installation or gas appliance, in whole or in part, including any design, construction, installation, commissioning, erection, testing, repair, addition, alteration or maintenance work;

"gas service isolation valve ("GSIV")" means a valve, located at or near the boundary line of any property or the apron of any building, used by a gas transporter to isolate the supply of gas to that property or building;

"gas service pipe" means a pipe or any part thereof, other than a gas main, used for the purpose of conveying gas from a gas main to a gas service isolation valve, and includes any pipe owned by, or under the management or control of, a gas transporter which is used for the purpose of conveying gas from the gas service isolation valve to the meter at a consumer's premises as defined in the Gas Act (Chapter 116A);

"gas fitting" includes any pipe, valve, meter, regulator or other device for the control, measurement and use of gas as defined in the Gas Act (Chapter 116A);



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"Gas installation" means a discrete grouping of gas fittings linking a gas service pipe to a gas appliance as defined in the Gas Act (Chapter 116A);

"Gas Meter Control Valve" means a valve at the inlet of any meter used for the purpose of turning on or off a supply of gas through such meter to any gas installation as defined in the Gas (Supply) Regulations;

"Meter Installation" means any meter and its associated equipment and installation including associated pipework, filter, valve, pressure regulating equipment, seal, housing, mounting, telemetry equipment, gas chromatograph and flow computer

#### 1.4 Codes of Practices and Regulatory Requirements

This connection procedure shall be read in conjunction with the provisions in the Gas Act, Gas (Supply) Regulations, Gas (Metering) Regulations, Gas Supply Code, Gas Metering Code, Singapore Standard, SS608 – Code of Practice for Gas Installation and relevant Retailer's Handbook of Gas Supply, where applicable.

The demarcation of responsibility from the gas service pipe to the gas installation is provided in Appendix 1 for reference purpose.

#### 1.5 Submission of Application

Please submit all connection enquiries, applications for gas connection and admittance request via the Gas Retailer on SP Group's eBusiness Portal ("Portal"):

https://ebiz.spgroup.com.sg/index.html

For all other matters, please submit your request to:

gasenquiry@spgroup.com.sg



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#### 2. Procedures for Gas Connection and Gas Admittance

Gas user, the applicant for gas supply, are advised to apply through City Energy, the Town Gas Retailer, for connection to the gas main network. The Retailer will liaise with the Transporter on behalf of the applicant for gas connection and admittance. The key steps for gas connection and gas admittance are outlined below. The detailed process flow chart and Town Gas Connection application forms can be found in Appendix 2 and Appendix 3 respectively.



#### 2.1 Apply for Gas Connection

To apply for a town gas connection, the Retailer shall submit the following documents and information through the Portal:

- Endorsed Form GD1 "Application for Gas Distribution Connection"; &
- Location / site plan showing the project site and proposed connection point(s) endorsed by the responsible person or applicant

The Transporter shall notify the Retailer on the outcome of the application within 14 days from the date of receipt of the application. If the application is successful, the connection charge will also be made known to the Retailer.

#### 2.2 Make Payment

The Retailer shall confirm the project by making payment for the connection charge.

The Transporter shall commence work upon receipt of the connection charge payment from the Retailer. The Transporter shall commence permit application, procurement and construction works to extend the gas pipeline up to and including the GSIV. Typically, a lead time of 6 to 8 weeks is required to apply for and obtain services' plans and opening permit from the relevant authorities / agencies before excavation, pipe laying and connection works can commence.



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#### 2.3 Engage DR for Consumer's Gas Installation

The applicant shall engage a PE or a LGSW, as the case may require, as the DR for the project.

The Retailer and the DR shall liaise with the Transporter on the connection point at the property boundary, the work schedule, and other related matters throughout the entire project until commissioning.

The DR is responsible for the design, procurement and construction of the Gas Installation from the GSIV to the appliance/equipment, excluding the Meter Installation, in accordance to the Gas Act and its subsidiary legislations and applicable Code(s).

#### 2.4 Apply for Gas Admittance

The DR shall certify completion and successful testing of the Gas Installation. When the Gas Installation is ready to receive gas, the DR/applicant shall apply, through the Retailer, to the Transporter to connect and admit gas into the Gas Installation up to, but excluding, the Meter Installation by submitting the following forms:

Form GD2 - "Application for Admittance of Gas";

The DR shall conduct the necessary proof test and submit the completed Form GD3 "Certificate of Proof Test" and request for interim admittance of gas immediately prior to the Transporter connecting the Gas Installation to the gas pipeline network and admits gas into the Gas Installation up to, but excluding, the Meter Installation.

Upon successful interim admittance of gas, the Transporter shall issue the "Statement of Interim Admittance of Gas". Thereafter, the DR shall proceed to purge and commission the Gas Installation up to, but excluding, the Meter Installation.

The Transporter shall issue the "Statement of Admittance of Gas" upon certification by the DR of successful purging and commissioning of the Gas Installation up to the Meter Installation.



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#### 2.5 Apply to Retailer for Supply and Gas Turn On

The application for gas supply and turn-on shall be made to the Retailer in the case of Town Gas Connection. The Retailer shall carry out gas turn-on from the Meter Installation up to the appliances/equipment. The applicant is advised to refer to the Retailer's "Handbook for Gas Supply" for the latest procedures. A summary of the procedures is shown below.

#### The DR shall:

- certify completion and successful testing of the Consumer's Internal Pipe;
  and
- o apply to the Retailer for connection and gas turn-on up to the appliances/equipment when the Consumer's Internal Pipe is ready to receive gas.

#### • The Retailer shall:

- ensure appropriate tests, before and after the installation of the meter, are performed on the gas installation from and including the meter to the gas appliance before the as supply is turned on at the relevant Gas Meter Control Valve;
- arrange for the connection of the Consumer's Internal Pipe to the outlet of the Meter Installation thereafter; and
- o issue the "Statement of Turn-on of gas" to the applicant.



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#### 3. Guidelines for Other Applications

#### 3.1 Apply for Replacement, Addition & Alteration Works

Any application for replacement of, addition or alteration to, the gas installation or gas fitting located from the gas service isolation valve to (and including) the meter installation or after the meter installation shall be made by the applicant, through the Retailer to the Transporter's email address stated in Section 1.5.

#### 3.2 Apply for Disconnection

An application to disconnect a gas installation or gas fitting from a gas pipeline network shall be made by the responsible person to the Transporter in the following instances:

- When the gas supply to the premises has been discontinued; or
- When the supply of gas is no longer required; or
- When the premises are undergoing renovation or demolition and gas supply has to be disconnected for safety reasons.

Any application for the disconnection of the gas installation or gas fitting shall be made to the Transporter's email address in Section 1.5.

#### 3.3 Apply for Re-connection

Any application for the re-connection of the gas installation or gas fitting shall be made to the Transporter only when the applicant has rectified the defects on the gas installation/fitting.

The application should be made through the Retailer via the Transporter's Portal. The Transporter shall respond to the Retailer on the outcome of the application within 14 days from the date of receipt of the application. If the application is successful, the connection charge will be provided to the Retailer.

#### 3.4 Other Applications

The applicant is advised to consult with the Transporter for gas connections not covered in the procedures stated in this connection policy. The applicant shall send their request to the Transporter's email address stated in Section 1.5.



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#### Charges

#### 4.1 Connection Policy

The cost to connect a customer's gas installation or gas fitting to the Transporter's gas pipeline network varies from case-to-case, due to the proximity of the customer's location and the cost of the materials and services required for the gas connection. Where possible, the Transporter will envisage to propose the most cost-effective connection to the applicant.

#### 4.2 Connection Charge

The connection charge payable for all gas connection applications is the sum of the connection cost less the deductible cost, subject to a minimum connection charge of zero. The description of each of the cost components are shown below.

#### [1] Connection cost

All costs related to the provision of gas connection from the Transporter's gas pipeline network to the GSIV.

#### (2) Deductible cost

The Transporter's investment value based on the committed gas demand from the applicant for the new gas connection. The investment value is derived based on the net present value of the 5-Year revenue of the average consumption for each consumption category (see Appendix 5).

In addition, a Last Mile Standard Connection Charge ("LMSCC") will be levied to recover the cost of "last mile" connection of the gas installation to the GSIV from the applicant. Details can be found in Appendix 6.

The town gas distribution connection deductible costs, LMSCC, standard connection charge for landed residential property and unit rates shall be reviewed and adjusted when deemed necessary by the Transporter.

The Transporter reserves the right to review the connection charge paid for any new connection and seek reimbursement for the first 5 years under-recovered revenue from the Retailer if the actual gas consumption after 5 years of operation is more than 10% below the projected gas demand declared during application.



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#### 5. Unauthorised Connection and Supply of Gas

In accordance to the Gas Act, any person who:

- lays or causes to be laid gas pipe or fitting to connect to the gas network belonging to or managed by the Transporter without consent of the Transporter;
- fraudulently abstracts, uses or consumes the supply of gas;
- tempers any gas meter

shall be guilty of an offence and shall be liable on conviction to a fine or imprisonment, or both. The Transporter may disconnect the premises of, or the gas retailer may discontinue supply of gas to the premises of, the person.

#### 6. Pressure Regulation for Internal Gas Pipeline

With effect from 1 April 2020, when designing the internal pipe for any premise supplied with TG at low pressure, the DR shall ensure that the pressure supplied to any gas appliance shall not exceed 31 mbarg.

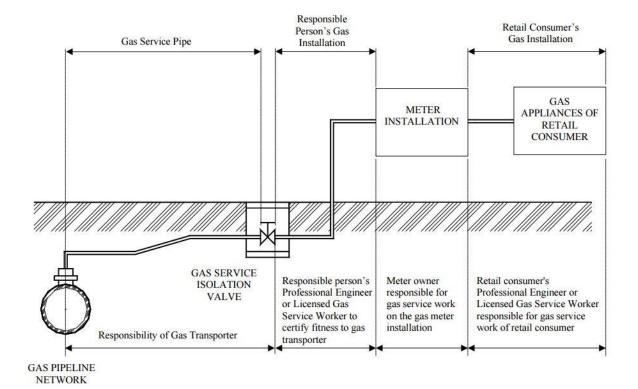
An accessible pressure measurement test point shall also be provided at the top of every gas riser.



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#### 7. Appendices

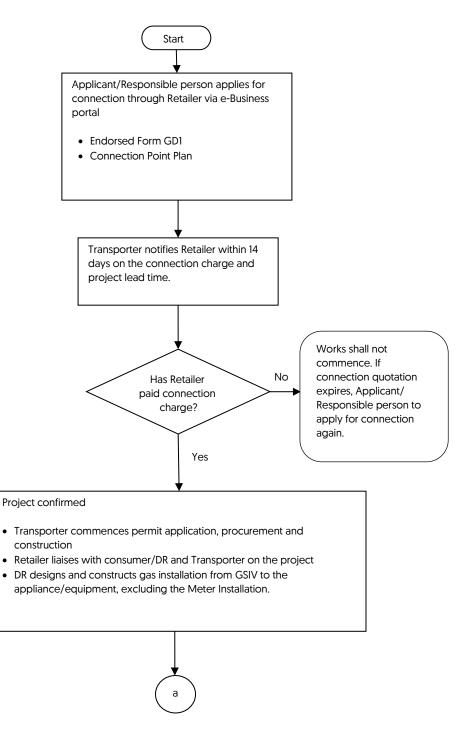
Appendix 1 – Demarcation of Responsibility





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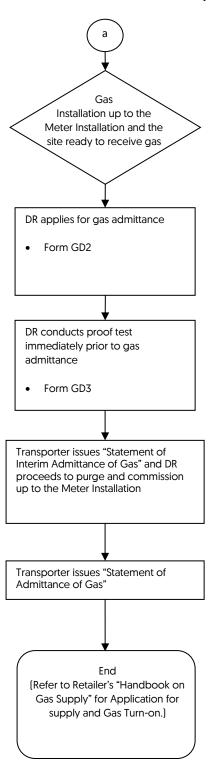
Appendix 2 – Town Gas Distribution Connection Flow Chart





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Appendix 2 – Town Gas Distribution Connection Flow Chart (Con't)





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Appendix 3 – Town Gas Connection Application Forms

S/No.	Form No.	Description
1	GD1	Application for Gas Distribution Connection
2	GD2	Application for Admittance of Gas
3	GD3	Certificate of Proof Test
4	GD4	Authorisation to Turn on Gas Meter Control Valve



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#### Appendix 4 – Reference Rates

This sets out a non-exhaustive list of the main cost drivers and the corresponding unit rates used in the estimation of the capital investment for a new distribution pipeline. For the avoidance of doubt, the information set out here is provided solely for reference only and will be subject to changes in actual contract rates.

S/No.	Description	Size (mm)	Unit Rate (\$) excl. GST	Unit Rate (\$) incl. 9% GST
1	Supply and Laying of PE pipes and fittings (\$/m)	315	750	818
2	Connection to existing pipes (\$/job)	315	12,900	14,061
3	Installation of Valve (\$/job)	300	7,800	8,502
4	Installation of regulator (\$/pc)		42,500	46,325
5	Reinstatement of rigid pavement / concrete panel (\$/m²)		480	524
6	Milling and Patching of road (min 250m²) (\$/m²)		31	34

Note: The amount of LTA road opening charges may vary due to the scope of the distribution project. For better clarity, please refer to LTA's website for the charging methodology for LTA road opening charges.



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Appendix 5 – Deductible Component for Town Gas Distribution Connection

(wef 1 Apr 24)

#### 1) For General, Bulk A and Bulk B Consumers

c = Consumption per Annum (kWh)	General Tariff (\$)	Bulk A Tariff (\$)	Bulk B Tariff (\$)
c ≤ 50,000	-	-	-
50,000 < c ≤ 75,000	20,000	20,000	-
75,000 < c ≤ 100,000	25,000	25,000	-
100,000 < c ≤ 125,000	35,000	30,000	-
125,000 < c ≤ 150,000	45,000	40,000	-
150,000 < c ≤ 175,000	50,000	45,000	-
175,000 < c ≤ 200,000	60,000	55,000	-
200,000 < c ≤ 250,000	70,000	65,000	-
250,000 < c ≤ 300,000	85,000	80,000	-
300,000 < c ≤ 350,000	100,000	90,000	-
350,000 < c ≤ 400,000	120,000	105,000	-
400,000 < c ≤ 450,000	135,000	120,000	-
450,000 < c ≤ 500,000	150,000	135,000	-
500,000 < c ≤ 600,000	170,000	155,000	-
600,000 < c ≤ 700,000	205,000	-	175,000
700,000 < c ≤ 1,000,000	265,000	-	225,000
1,000,000 < c ≤ 1,500,000	390,000	-	335,000
1,500,000 < c ≤ 2,000,000	550,000	-	465,000
Beyond 2,000,000	625,000	-	530,000



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#### 2) For Bulk E consumers

c = Consumption per Annum (kWh)	Bulk E Tariff (\$)
$c \ge 6,000,000$	960,000



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#### Appendix 6 – Last Mile Standard Connection Charge

	Pipe diameter (d)	LMSCC [\$] Excl. GST	LMSCC (\$) incl. 9% GST
1	d < 100mm	500	545
<u>2</u>	200mm > d ≥ 100mm	800	872
<u>3</u>	300mm > d ≥ 200mm	2,000	2,180
4	d ≥ 300mm	3,200	3,488

#### Note:

- Standard connection charge of \$3,500 (\$3,815 incl. 9% GST) is only applicable for connection in front of a private landed residential property where the gas main is in LTA road reserve in front of the house. Connection to landed property shall be from the front of the house only.
- Figures may not reflect the full GST effect due to rounding.