

APPENDIX I: VENCORP PUBLIC REGISTER OF SPARE CAPACITY



VENCORP Public Register of Spare Capacity on the Gas Transmission System

VENCORP, as the Victorian Gas Market and System Operator, is a *Service Provider* for the Victorian Gas Transmission System and maintains this *Public Register of Spare (Pipeline) Capacity* as required by Section 5.9 of the *Victorian Third Party Access Code for Natural Gas Pipelines*.

The Victorian Gas Market operates under a Market Carriage Model and, accordingly, spare capacity is the quantity of Authorised MDQ available as of the report date.

Spare capacity identified is correct at the published date, however, AMDQ allocations can occur or terminate at any time. Persons seeking AMDQ should contact the identified representative to confirm spare capacity.

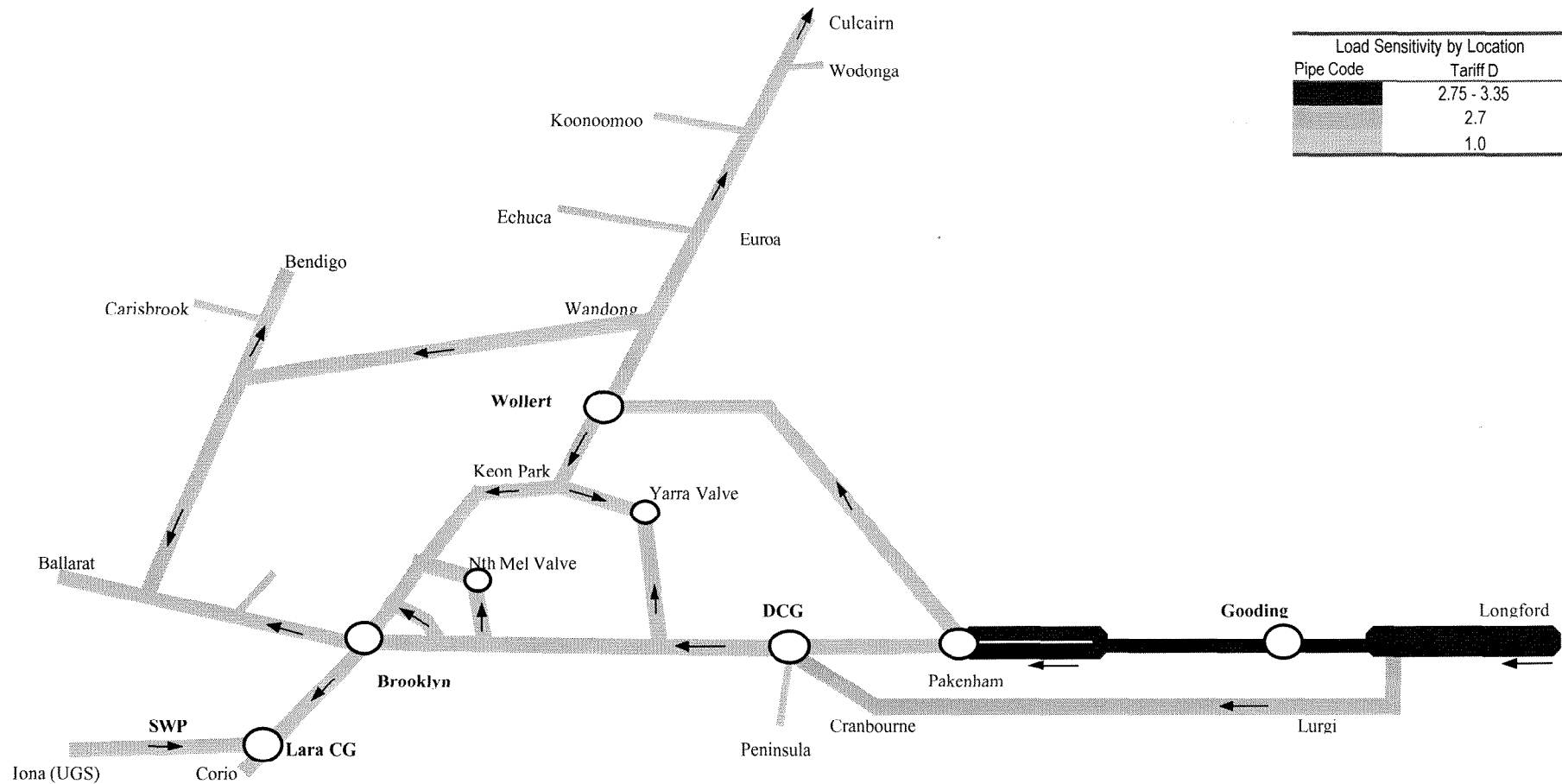
The Public Register of Spare Capacity will be updated quarterly or more frequently in the event of a material change to the level of spare capacity. This Public Register of Spare Capacity should be read in conjunction with the latest VENCORP Gas Planning Review available in the Gas Planning section on the VENCORP website (www.vencorp.com.au)

Spare Gas Transmission Pipeline Capacity 1 Sep 2001

Item	Pipeline	Approved Authorised MDQ Cap GJ	Spare Authorised MDQ GJ	Comment	Contact
1	Longford to Melbourne/Wollert (including Lurgi pipeline)	990,000	0	The total Longford pipeline capacity was allocated prior to market commencement, however, AMDQ may become available from time to time through closure of large Industrial/Commercial sites or from a review of system capacity in consultation with the Pipeline Owner. A proposal to allow trading of Longford Authorised MDQ is under consideration and may be introduced during 2001	Market Services Manager VENCORP
2	Iona to Melbourne (South West Pipeline)	200,000	100,000	Participants should apply to GPU GasNet for AMDQ credit certificates	Commercial Manager GPU GasNet

3	Melbourne to Iona (South West Pipeline)	*	*	No AMDQ has been allocated for deliveries to Iona for replenishment of under ground storage expected during Summer The capacity is dependent on system demand and (Brooklyn)compressor use and range from 40,000GJ to over 90,000GJ/day. This is discussed in the Annual Gas Planning Review, November 2000.	Commercial Manager GPU GasNet
4	Wimmera (Carisbrook to Horsham)	*	*	Authorised MDQ has been allocated for aggregate withdrawals from the Gas Transmission System at Carisbrook. This AMDQ is a suballocation of the Longford AMDQ (item 1). The Wimmera pipeline is an interconnecting pipeline.	Commercial Manager, TXU
5	Murray Valley	6,400	5,700	A total of 6,400GJ Authorised MDQ has been reserved for future load growth on this lateral pipeline. This AMDQ is a suballocation of Longford AMDQ (item 1)	Market Services Manager VENCORP
6	VIC-NSW Interconnect Exports to NSW	17,000	*	Suballocations of export AMDQ are available from GPU GasNet. This AMDQ is a suballocation of Longford AMDQ (item 1). (Physical capacity can exceed 30,000GJ/day in summer months depending on operating conditions in both Victorian and NSW systems)	Commercial Manager GPU GasNet
7	VIC-NSW Interconnect Imports to Victoria	50,000	24,300	Participants should apply to GPU GasNet for AMDQ credit certificates. Additional capacity of 42,000GJ is conditional on availability of the GPU GasNet compressor at Young, NSW. Capacity is also dependent on the ability of the Moomba to Sydney pipeline to maintain adequate pressures and flows at Culcairn	Commercial Manager GPU GasNet
8	Western Transmission System (Port Campbell to Portland)	*	*	This pipeline is not yet covered under the market carriage arrangements but is supplied from the Principal Transmission system. It is expected that this pipeline will become part of the gas market after integration with the Principal Gas Transmission System by December 2001	Commercial Manager GPU GasNet

APPENDIX J: AMDQ TRADING LOCATIONAL CAPACITY FACTORS



APPENDIX K: SAMPLE ASSUMPTIONS AND CONDITIONS FOR CAPACITY MODELLING

Capacity Model for Gas Transmission System (Sample Only)		
Item	Modelling Assumptions and Conditions	Notes
1	Heating Value 38.7 MJ/sm ³ and Specific Gravity 0.61	Victorian Gas Standard Heating Value
2	Gas Delivery Temperature above 2°C	Gas Quality Regulations Requirement
3	Longford supply at flat hourly profile	Normal Operating Condition
4	Maximum Pressure at Longford 6750 kPag	To conform with pipeline licence requirements & current VENCORP-Esso operating agreement
5	NSW supply at flat hourly profile	Normal Operating Condition
6	Iona supply at flat hourly profile	Normal Operating Condition
7	Iona maximum and minimum pressures	As per pipeline licences and operating agreements
8	Minimum pressure set at Culcairn	VENCORP-APT operating agreement pressure requirement
9	MAOP and Delivery pressures in connection and service envelope agreements not infringed	Service Envelope and Connection Agreement requirements. eg minimum 3100 kPa at Dandenong CG
10	Load Profiles as calculated by VENCORP	Based on calibration data for winter 1998 and 1999 and CTM data 1998 and 1999.
11	Load Distribution as per VENCORP forecasts	Based on historical CTM data
12	Supply to Wimmera pipeline at Carisbrook	New load connected in winter 1998
13	Supply to Murray Valley (Rutherglen-Koonoomoo)	New pipeline commissioned 1998
14	Transmission UAFG determined at Longford	Calculated from calibrated model data
15	NSW gas flow from North to South (import) and from South to North (export)	New pipeline commissioned during winter 1998
16	BOC liquefaction operating, Let down gas operating	Full supply to this customer is normally required
17	Beginning of Day and End of Day linepack are equal	Mining of line pack not allowed
18	GPU GasNet Pipeline, Regulator and Compressor assets and operating conditions as specified in service envelope agreement	Agreement between VENCORP and GPU effective 12 January 1999
19	BOD and EOD pressures similar at key network locations	Required for System Security
20	Regulators, compressors and valves are set to reflect operational guidelines	To mimic actual operations

APPENDIX L: COMPRESSOR REQUIREMENT AND AVAILABILITY

The following table shows the monthly compressor availability and requirements to meet expected system demand in each month of the year. The level of compressor redundancy, the difference between the number of units available and the number required, is shown.

The Brooklyn compressor station is comprised of two 2800 kW Centaur compressors and four 850 kW Saturn compressors. Their requirement and availability are shown separately as the Centaurs alone are used for compressing gas to Iona for withdrawal into UGS. During winter, if compressors are required to compress gas to Geelong and or Ballarat, Centaur and Saturn compressors are used in appropriate combinations.

Maintenance is also shown in the table and can be read in conjunction with the maintenance table Figure 4.1 in the Monthly section.

	January		February		March		April		May		June		July		August		September		October		November		December	
Gooding Compressor Station																								
4 Centaurs @ 2,800 kW																								
Available	3		3		3		3		4		4		4		4		4		4		4		4	
Required	0		0		0		2		2		3		3		3		3		3		2		0	
Redundant	3		3		3		1		2		1		1		1		1		1		2		4	
Maintenance	1		1		1		1		-		-		-		-		-		-		-		-	
Brooklyn compressor station																								
2 Centaurs @ 2,800 kW																								
4 Satums @ 850 kW																								
Available	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S	C	S
Required	0	0	0	1	0	2	0	2	0	2	1	3	1	3	1	3	1	3	0	3	0	2	0	2
Redundant	2	3	2	2	2	1	2	1	1	2	1	1	1	1	1	1	0	1	2	1	2	2	2	2
For TXU UGS withdrawal																								
Available	2		2		2														2		2		2	
Required	2		2		2														2		2		2	
Redundant	0		0		0														0		0		0	
Maintenance	-	1	-	1	-	1	-	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
Wollert compressor station																								
3 Satums @ 850 kW																								
Available	3		2		2		2		3		3		3		3		3		3		3		3	
Required	0		0		0		0		0		2		2		2		2		0		0		0	
Redundant	3		2		2		2		3		1		1		1		1		3		3		1	
Maintenance	-		1		1		1		-		-		-		-		-		-		-		-	
Springhurst compressor station																								
1 Centaur @ 4,500 kW																								
Available	1		1		1		1		0		1		1		1		1		1		1		1	
Required	0		0		0		0		0		0		0		0		0		0		0		0	
Redundant	1		1		1		1		0		1		1		1		1		1		1		1	
Maintenance	-		-		-		-		1		-		-		-		-		-		-		-	
Iona Compressor Station																								
2 Caterpillars @ 300 kW																								
Available	2		2		2		2		2		2		2		2		2		2		2		2	
Required	1		1		1		1		1		1		1		1		1		1		1		1	
Redundant	1		1		1		1		1		1		1		1		1		1		1		1	
Maintenance	-		-		-		-		-		-		-		-		-		-		-		-	

Table L.1 Compressor Requirement and Availability



APPENDIX M: PEAK DAY HOURLY DEMAND PROFILES

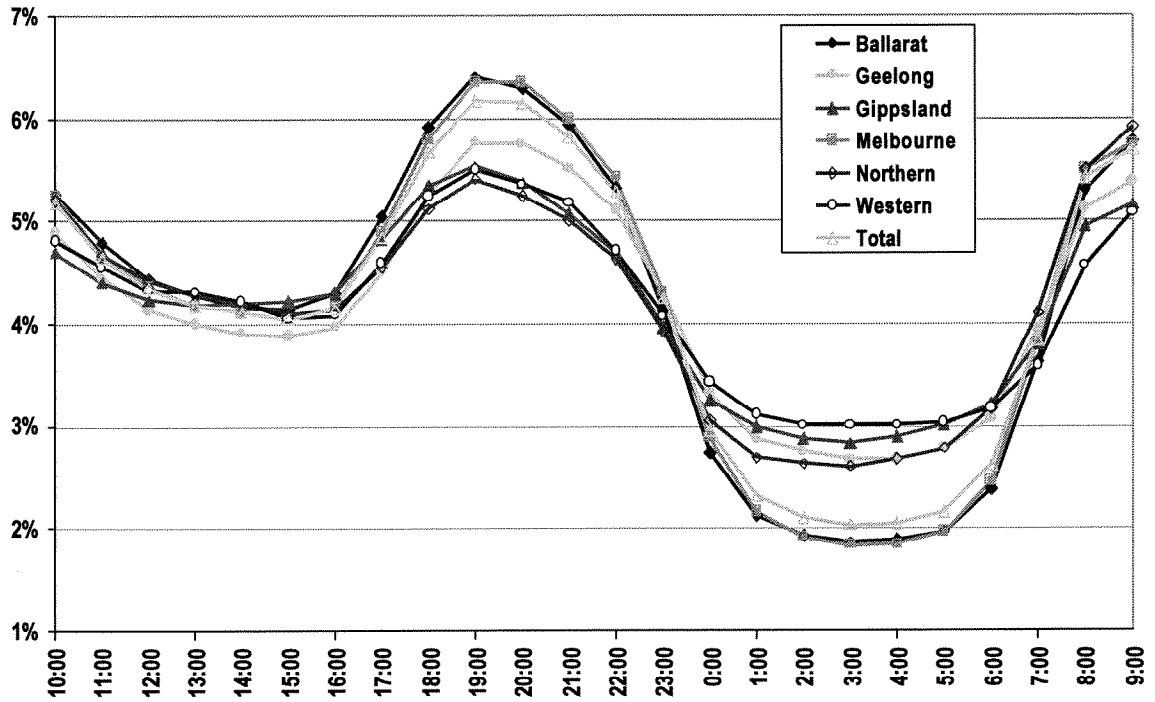


Figure M.1 SWZ 1 in 2 Peak Day Hourly Demand Profiles

Demand for gas heating increases from 17:00 and declines by midnight. Demand picks up in the morning after 06:00 due to residential area heating, water heating and industry start-up.

APPENDIX N: GLOSSARY OF TERMS

1 in 2 Peak Day	Most probable peak day demand forecast which has a 50% probability of exceedence (also known as the 50% peak day).
1 in 20 Peak Day	Peak Day demand forecast for severe weather conditions which has a 5% probability of exceedence and is expected, on average, to be exceeded once in 20 years (also known as the 95% peak day).
Annual Planning Review	The annual planning forecasts of supply, capacity and demand and other planning information to be provided by VENCORP in accordance with clause 5.2.2. of the MSOR.
ASIC	Australian Standard Industry Code
APT	Australian Pipeline Trust (formerly Eastern Australian Pipeline Limited)
Bid stack	Incremental gas quantities by injection point offered by Market Participants stacked in price order
CAGR	Compound Average Growth Rate
Coincident Peak day Demand	Gas used by a given customer or a group of customers on the day of maximum system usage in a given year or month
Connection point	A delivery point, a transfer point or a receipt point.
Culcairn	NSW location of connection between EAPL pipeline and the GTS. The NSW 'Interconnect'
Curtailment	The curtailment or interruption of a Customer's supply of gas at its delivery point which occurs when VENCORP intervenes or issues an emergency direction.
Custody Transfer Meter CTM	A meter installed at connection points to measure gas withdrawn from or injected into a transmission system.
Customer	A person who purchases gas and consumes that gas at particular premises.
Degree Day DD	Heating degree day defined as $Max(18-T,0)$ where T is the average daily temperature from 12 am to 9pm
Delivery point	A point on a pipeline at which gas is withdrawn from the pipeline and delivered to a Customer or injected into a storage facility.

Distributor	A person who operates a distribution pipeline and who is required to submit or has submitted an access arrangement.
DRPS	Depletable (gas) resources pricing scenario used in supply-demand analysis
Effective Degree Day EDD	The Victorian heating degree day standard comprised of temperature, wind chill; insolation; and seasonal components, that is used to model the demand-weather relationship.
EGP	Eastern Gas Pipeline – Duke Energy owned pipeline from Longford to Sydney.
Franchise Customer	A Customer who is not a "non-franchise customer" under the Gas Industry Act.
GRP	Gross Regional Product
GSP	Gross State Product
Interconnect	The pipeline from Barnawartha to Wagga Wagga, connecting the Victorian and NSW transmission systems. The point of connection is at Culcairn.
LNG	Liquefied natural gas. The Melbourne LNG storage facility is located at Dandenong
Market, gas market	A market administered by VENCORP for the injection of gas into, and the withdrawal of gas from, the transmission system and the balancing of gas flows in or through the transmission system.
Market Customer	A Customer who is a <i>Market Participant</i> .
Market Participant	A Participant who is entitled to participate in the Market by submitting nominations and inc/dec offers in accordance with the MSOR.
meter	A device which measures and records volumes and/or quantities of gas.
metering	Recording the volume and quantity of gas.
metering data	The data obtained from a metering installation, including energy data.
metropolitan ringmain	The 450 mm distributor owned pipeline from Dandenong to West Melbourne
MPS	Market pricing scenario using bid stacks
MSOR, M & S O Rules	Market & System Operations Rules
NIEIR	National Institute of Economic and Industry Research

Non Coincident Peak day Demand	Maximum daily gas demand by a given customer or a group of customers in a given year
Participant	A person who is registered with VENCORP in accordance with MSOR clause 2.1(a), (b) and/or (c) and clause 2.5.
peak flow rate	The highest hourly flow rate of gas passing a system point under normal conditions (as determined by VENCORP) in the immediately preceding twelve month period or, if gas has passed a system point for a period of less than twelve months, the highest hourly
pipeline	A pipe or system of pipes for or incidental to the conveyance of gas and includes a part of such a pipe or system.
planning review	An annual planning review or a quarterly planning review.
pricing zone	A geographical area within which the Market price in any trading interval is the same.
Principal Transmission System PTS	The Principal Transmission system serving Gippsland, Melbourne, Geelong, Central & Northern Victoria, Albury and the Murray Valley region.
Planning winter Peak Day PYPD	Peak day demand derived from the 1 in 20 Peak Day and adjusted upward to include a defined forecast uncertainty
Retailer	A person who holds a retail licence under the Gas Industry Act and is registered under clause 2.1(b).
South West Pipeline	SWP. 500mm pipeline construction connect GTS from Lara (Geelong) to the Underground Gas Storage facility at Iona.
Southern Lateral	The pipeline in NSW from Young to Wagga
Storage facility	A facility for the storage of gas, including the LNG storage facility and underground storage.
System Injection Point	A connection point on the transmission system which is designed to permit gas to flow through a single pipe into the transmission system, which may also be, in the case of a transfer point, a system withdrawal point.

System Withdrawal Point	A connection point on the transmission system which is designed to permit gas to flow through a single pipe out of the transmission system, which may also be, in the case of a transfer point, a system injection point.
System Withdrawal Zone SWZ	Part of the transmission system which contains one or more system withdrawal points and in respect of which VENCORP has determined that a single withdrawal nomination or a single withdrawal inc/dec offer must be made.
Tariff D	transportation <i>Tariff</i> applying to daily metered sites with annual consumption > 10,000GJ pa or MHQ > 10GJ which have daily metering and are assigned as <i>Tariff D</i> .
Tariff D Withdrawal Point	A system withdrawal point to which transmission delivery <i>Tariff D</i> is assigned or a distribution delivery point to which distribution <i>Tariff D</i> is assigned under the <i>Tariff</i> Order.
Tariff Order	The <i>Tariffs</i> and Charges Order made under section 48A of the Gas Industry Act and any <i>Tariffs</i> and charges which are approved under an access arrangement.
Tariff V	Transportation <i>Tariff</i> applying to non- <i>Tariff D</i> load.
Tariff V Withdrawal Point	A system withdrawal point to which transmission delivery <i>Tariff V</i> is assigned or a distribution delivery point to which distribution <i>Tariff V</i> is assigned under the <i>Tariff</i> Order.
Transmission Customer	A Customer who withdraws gas from a transmission delivery point.
Transmission Delivery Point	A point on the transmission system at which gas is withdrawn from the transmission system and delivered to a Transmission Customer or injected into a storage facility.
transmission pipeline	A pipeline that is not a distribution pipeline.
Transmission Pipeline Owner	A person who owns or holds under a lease a transmission pipeline which is or is to be operated by VENCORP.
transmission system	The transmission pipelines or system of transmission pipelines which form part consists of the "gas transmission system" as defined under the Gas Industry Act.
UAFG	Unaccounted for Gas or GUF. The difference between metered injected gas supply and metered and allocated gas at delivery points. Comprised of gas losses, metering errors, timing, heating value error, allocation error, and other factors.

VENCorp The Victorian Energy Networks Corporation	The Gas Transmission System and Gas Market Operator established under the Gas Industry Act.
Western Transmission System WTS	Transmission serving Port Campbell to Portland and Western District currently supplied from the GTS and will be integrated into the market.