Monthly Planning Review 2002

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Monthly Planning Review 2002

1 MONTHLY DEMAND FORECASTS 2002

The monthly forecasts presented in this section include forecast demand including gas cogeneration load but excludes forecast gas power generation. Demand for gas power generation is included with the peak day supply-demand outlook.

1.1 Monthly Demand Forecasts

The annual system forecast load is 198.6 PJ for 2002 based on the revised annual weather standard of 1445 EDD. Forecast monthly system demand varies from about 10 PJ in summer months (Jan-Feb 2002) to 26 PJ in July 2001. Table 1.1 and Figure 1.1 present monthly forecast demand for each region. A number of plant closures will occur over the course of calendar year 2002, indicative closure dates were either announced in the media or obtained from the customers. Firm load expansions have also been allocated to the appropriate months of the year.

Forecast monthly demand reaches a maximum in July due to colder weather, however, monthly load distribution varies depending on the relative contribution of industrial and residential loads in each region. Residential load is highly influenced by coldness of weather whereas industrial load is relatively flat except for seasonal variations in some industries; for instance, dairy and food industries are more active in spring and summer seasons than in winter months. The load profiles have stronger peaks for regions such as Melbourne that have a larger proportion of residential gas heating load.

The forecast methodology is provided in Appendix F.

Table 1.1 Forecast Monthly Demand (TJ)

Month	Forecast EDD	Ballarat	Geelong	Gippsland	Melbourne	Northern	Western	Total System
Jan-2002	2.1	296	1,024	951	6,495	1,126	265	9,892
Feb-2002	1.6	300	1,004	896	6,365	1,309	224	9,875
Mar-2002	13.4	367	1,158	994	7,550	1,467	230	11,535
Apr-2002	72.8	506	1,353	1,098	9,937	1,552	228	14,447
May-2002	174.3	735	1,714	1,244	14,115	1,855	267	19,665
Jun-2002	265.7	890	1,900	1,291	16,920	2,066	327	23,395
Jul-2002	322.1	1,002	2,087	1,434	19,020	2,189	396	26,128
Aug-2002	270.5	886	1,905	1,429	16,984	2,068	410	23,683
Sep-2002	174.5	699	1,613	1,336	13,384	1,764	380	19,176
Oct-2002	100.8	574	1,456	1,266	11,142	1,655	376	16,470
Nov-2002	35.9	443	1,238	1,118	8,701	1,373	342	13,216
Dec-2002	11.4	353	1,085	986	7,239	1,187	316	11,166
Annual Total	1,445	7,052	17,536	14,045	137,853	19,613	3,761	198,646

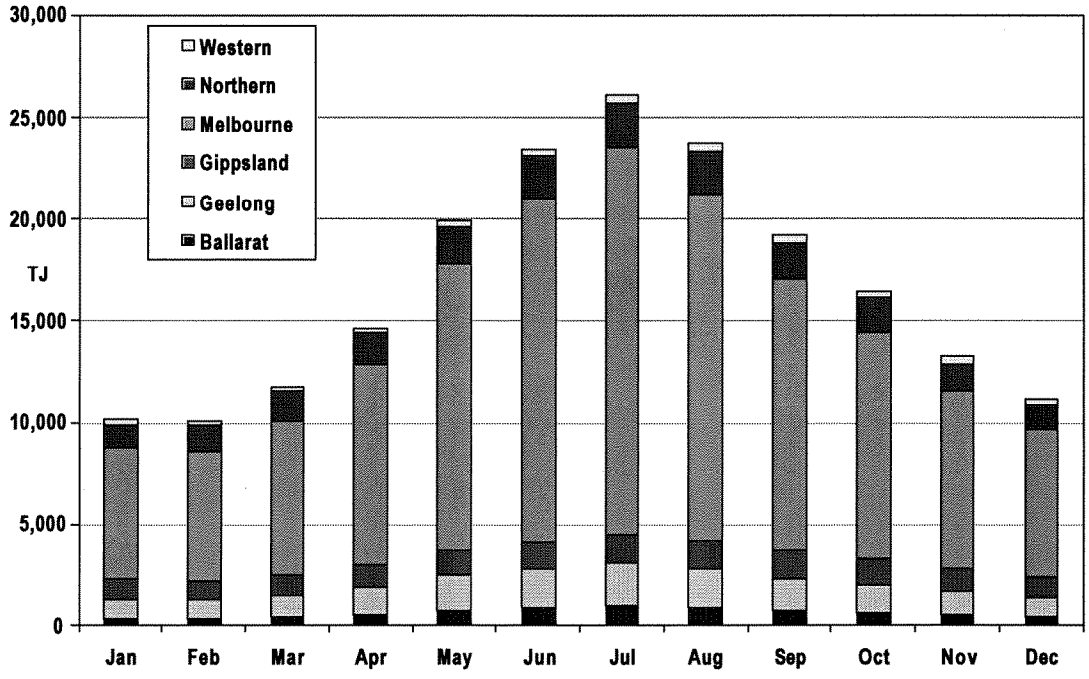

Figure 11 Monthly Demand Forecasts

1.1.1 Gas Power Generation

It is difficult if not impossible to forecast gas consumption for power generation on a monthly basis as the load is highly volatile and no similarity in monthly load pattern can be drawn from historical data. Typically demand is higher in summer months than in winter months.

Consideration of gas power generation is covered in the monthly supply-demand analysis section.

1.2 Monthly Peak Day Forecasts

The peak day forecasts presented are forecast demands expected on the monthly system peak days. The forecasts do not include gas power generation.

Monthly peak day demand is strongly influenced by weather conditions and demand by large industrial customers, in particular customers with volatile usage patterns such as the petroleum refineries. These factors have been taken into consideration in modelling and forecasting monthly peak day demands. The forecasting method and the monthly Peak Day EDD weather standards are discussed in Appendix G and Appendix H respectively.

For planning purposes it is assumed that the forecast winter peak day can occur in any month from June to September inclusive and the winter peak day is used as default for these months.

The forecast monthly coincident 1 in 2 peak days and 1 in 20 peak days are shown in Table 1.2, and Figure 1.2 and 1.3. The forecast 1 in 2 and 1 in 20 peak days have a 50% and 5% probability of exceedence, respectively.

Table 1.2 Forecast Peak Day Demand (TJ)

Forecast	Month	Forecast EDD	Ballarat	Geelong	Gippsland	Melbourne	Northern	Western	Total System
1 in 2	Jan-2002	1.2	13	37	36	268	46	9	408
	Feb-2002	1.5	13	37	36	279	50	8	424
	Mar-2002	2.8	18	42	39	330	58	8	495
	Apr-2002	6.8	26	56	45	495	65	9	695
	May-2002	10.3	33	65	46	615	76	10	845
	Jun-2002	15.2	41	79	51	776	91	13	1,051
	Jul-2002	15.2	41	79	51	776	91	13	1,051
	Aug-2002	15.2	41	79	51	776	91	13	1,051
	Sep-2002	15.2	41	79	51	776	91	13	1,051
	Oct-2002	8.7	28	59	47	531	69	14	748
	Nov-2002	6.5	23	52	45	459	61	13	652
	Dec-2002	3.1	16	42	39	335	50	10	493
1 in 20	Jan-2002	2.8	16	41	38	318	50	9	471
	Feb-2002	4.1	17	43	39	357	57	9	523
	Mar-2002	5.3	22	48	42	404	65	8	589
	Apr-2002	9.8	31	63	48	586	73	9	810
	May-2002	12.7	37	71	48	684	83	11	933
	Jun-2002	17.3	44	84	53	839	96	14	1,131
	Jul-2002	17.3	44	84	54	839	96	14	1,131
	Aug-2002	17.3	44	84	53	839	96	14	1,131
	Sep-2002	17.3	44	84	54	839	96	14	1,131
	Oct-2002	11.0	31	65	50	600	75	14	836
	Nov-2002	10.0	29	60	49	562	70	13	782
	Dec-2002	7.1	23	51	44	454	60	11	643

Forecast system 1 in 2 peak day demand varies from 408 TJ in January 2002 to 1,051 TJ in June 2002 whereas forecast system 1 in 20 peak day demand increases from 471 TJ in January 2002 to 1,131 TJ in June 2002. The increased demand on forecast system 1in 20 peak days is directly related to increased gas heating demand due to extreme cold weather. The increased heating demand on 1 in 20 peak days varies between 4% and 8% amongst zones and across months. Melbourne zone contributes the most to the increased heating demand on frigid days.

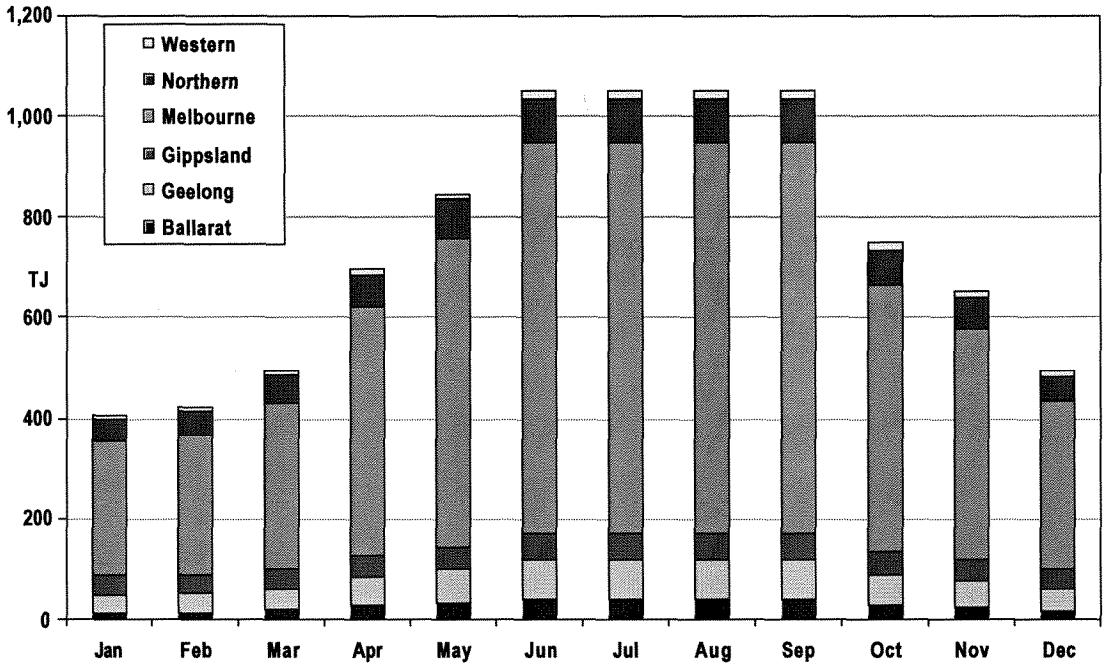

Figure 1.2 Forecast 1n 2 Peak Day Demand

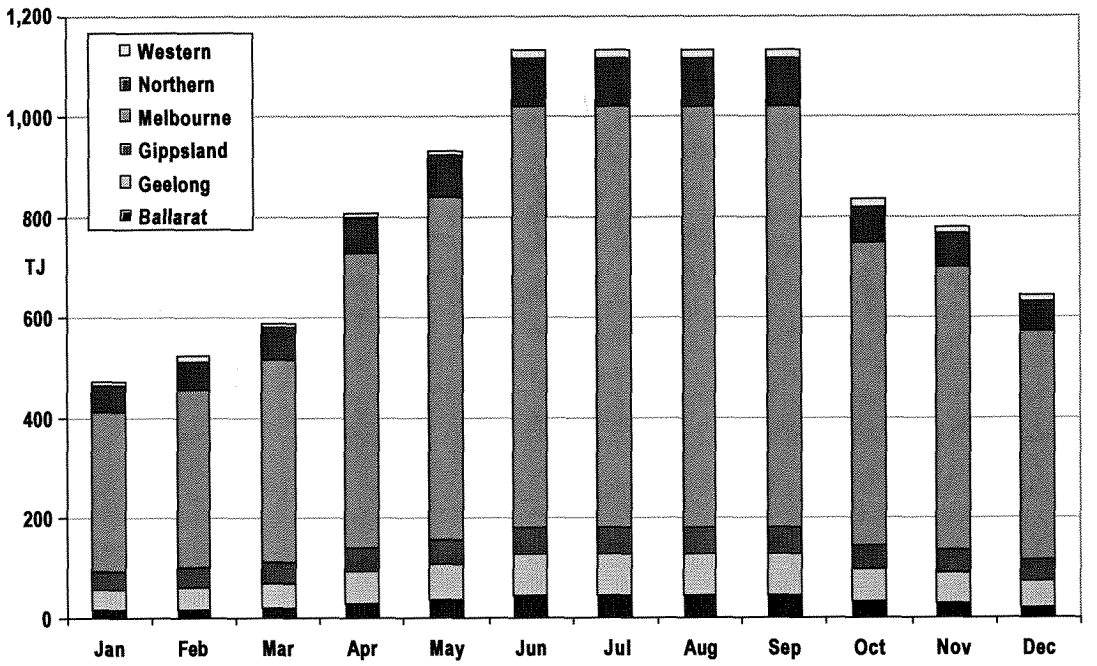

Figure 1.3 Forecast 1in 20 Peak Day Demand

1.3 Reconciliation of Participants' Monthly Demand Forecasts

Figure 1.4 compares VENCorp forecast 1 in 2 peak day demand with the aggregate forecasts from *Distributors*[36]. The forecasts are similar for May through to October but diverge slightly for summer and shoulder months by as much as 60 TJ.

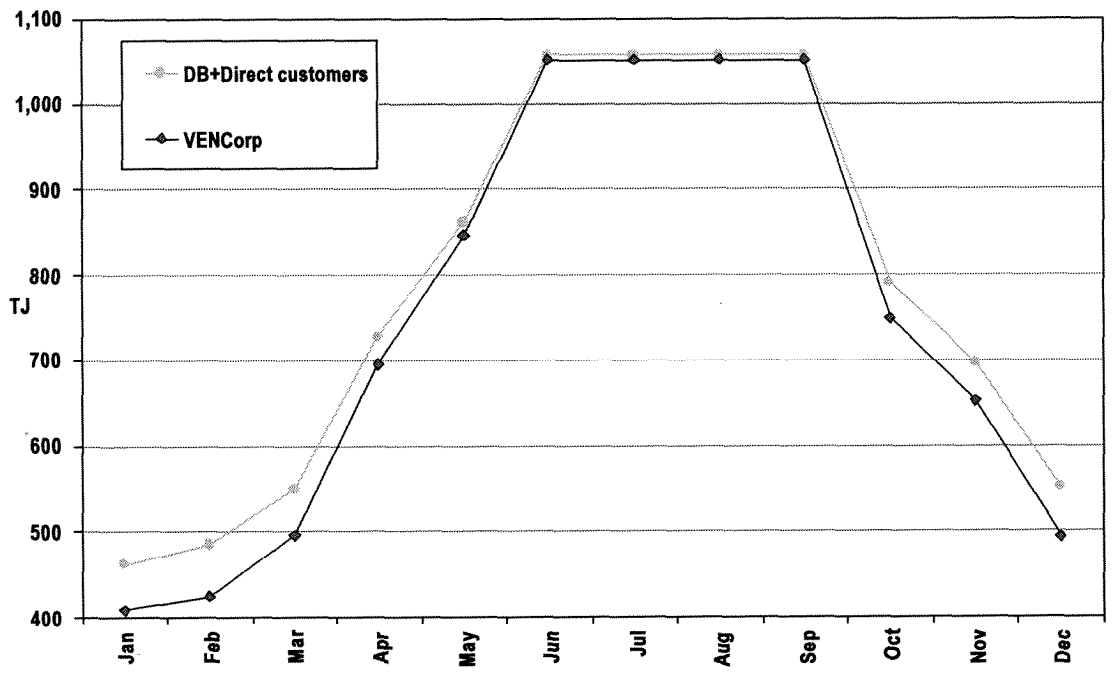

Figure 1.4 Comparison of Forecastin 2 Peak Days

[36] The Distributors' forecasts were adjusted upward using VENCorp forecasts for the direct transmission customers.

1.4 Monthly Forecast 1in 2 Peak Hour Demand

Forecast peak hour demands are shown in Table 1.3. These are calculated by applying the peak hour proportion to the monthly peak day forecasts. The proportions were determined from an analysis of 1999 and 2000 peak days.

The peak hour forecasts are non-coincident, some zones having morning peaks rather than evening peaks for some months of the year. Generally, the peak hour is in the evening during the winter months June through September and in the morning in the remaining months. The peak hour in a zone differ from this pattern due to different proportions of industrial and commercial loads or due to seasonal load patterns.

Evening peaks associated with residential gas heating are usually 6:00am to 7:00am. Morning peaks due to heating, hot water and industry start-up are usually 7:00am to 8:00am.

Table 1.3 Forecast Peak Hour Demand (TJ)

Forecast	Month	Ballarat	Geelong	Gippsland	Melbourne	Northern	Western	Total
1 in 2	Jan-2002	0.8	1.9	1.9	14.5	2.4	0.5	21.1
	Feb-2002	0.8	1.8	1.7	15.6	2.6	0.4	22.7
	Mar-2002	1.1	2.1	2.0	20.4	3.2	0.4	29.1
	Apr-2002	1.7	2.9	2.3	33.0	3.7	0.5	43.8
	May-2002	2.1	3.7	2.6	40.3	4.7	0.6	53.9
	Jun-2002	2.8	4.4	3.2	51.0	5.4	0.7	66.5
	Jul-2002	2.8	4.4	3.2	51.0	5.4	0.7	66.5
	Aug-2002	2.8	4.4	3.2	51.0	5.4	0.7	66.5
	Sep-2002	2.8	4.4	3.2	51.0	5.4	0.7	66.5
	Oct-2002	1.8	3.0	2.4	33.0	3.7	0.7	43.8
	Nov-2002	1.5	2.5	2.4	28.1	3.4	0.6	38.1
	Dec-2002	1.0	2.0	1.9	18.6	2.3	0.5	25.9
1 in 20	Jan-2002	0.9	2.1	2.0	17.2	2.7	0.5	24.4
	Feb-2002	1.1	2.1	1.9	19.9	3.0	0.5	28.0
	Mar-2002	1.4	2.4	2.1	25.0	3.5	0.4	34.7
	Apr-2002	2.0	3.3	2.5	39.1	4.1	0.6	51.0
	May-2002	2.3	4.0	2.7	44.9	5.0	0.6	59.6
	Jun-2002	3.0	4.6	3.4	55.2	5.8	0.8	71.6
	Jul-2002	3.0	4.6	3.4	55.2	5.8	0.8	71.6
	Aug-2002	3.0	4.6	3.4	55.2	5.8	0.8	71.6
	Sep-2002	3.0	4.6	3.4	55.2	5.8	0.8	71.6
	Oct-2002	2.0	3.3	2.5	37.3	4.1	0.8	49.0
	Nov-2002	1.9	2.9	2.6	34.4	3.9	0.7	45.7

Dec-2002	1.4	2.4	2.1	25.2	2.8	0.6	33.8

1.5 Additional System Demand in Summer

1.5.1 Gas Power Generation

Gas power generation is forecast to take about 13 PJ in 2002 predominantly over the summer months. Demand in excess of 200 TJ is possible on extremely hot days to meet summer air-conditioning loads or if there are electricity generator or transmission system outages.

(Gas power generation loads in excess of 100 TJ are possible on cold winter days).

1.5.2 Withdrawals into UGS

The UGS facility at Iona will normally operate in withdrawal mode in summer months from November to April. This period may extend to October to May subject to weather, system demand and commercial arrangements.

Deliveries of gas to Iona for withdrawal into the UGS will effectively increase 'demand' by up to 80 TJ/d.

2 MONTHLY SUPPLY AND STORAGE 2002

2.1 Monthly Longford Supplies

Table 2.1 summarises contracted and prospective Longford Maximum Daily Quantity (MDQ) reported by *Participants*.

Contracted supplies are significantly reduced to 841 TJ/d from 1 January 2002. This implies prospective supplies of 149 TJ/d are available to the Market to provide total contracted and prospective supplies of 990 TJ/d.

Table 2.1 Contracted and Prospective Longford Supplies (TJ/d)

Month	Contracted	Prospective	Contracted & Prospective
Jan-2002	841	149	990
Feb-2002	841	149	990
Mar-2002	841	149	990
Apr-2002	841	149	990
May-2002	841	149	990
Jun-2002	841	149	990
Jul-2002	841	149	990
Aug-2002	841	149	990
Sep-2002	841	149	990
Oct-2002	841	149	990
Nov-2002	841	149	990
Dec-2002	841	149	990

2.2 Culcairn Interconnect Supply

Reported contracted supplies aggregate to a net import of gas of 14 TJ/d for 2002 although supplies over 50 TJ/d have been offered by *Market Participants* during 2001. At least 28 TJ/d is assumed available in winter months based on 2001.

2.3 Iona UGS and Toll Processing Supplies

UGS storage capacity and planned inventory reported by *Participants* are summarised in Table 2.2. A total of 8.6 PJ storage capacity has been contracted to *Market Participants* leaving 2.1 PJ of prospective storage capacity available.

Although a total of about 4 to 5 PJ of inventory has been reported by *Market Participants* all year round it is difficult to ascertain the total quantity of gas available for next winter as this depends on pre-winter Market conditions and *Market Participants'* strategies adopted at that time.

TXU UGS policy is to fully replenish UGS prior to each winter. Any uncontracted holding capacity is likely to be filled through a non-exclusive commercial arrangement with a *Market Participant* and will be available to the market.

Table 2.2 TXU UGS Capacity (PJ)

Month	Contracted	Prospective	Total Storage Capacity	Inventory
Jan-2002	8.6	2.1	10.7	6.1
Feb-2002	8.6	2.1	10.7	6.7
Mar-2002	8.6	2.1	10.7	7.3
Apr-2002	8.6	2.1	10.7	7.9
May-2002	8.6	2.1	10.7	8.6
Jun-2002	8.6	2.1	10.7	8.2
Jul-2002	8.6	2.1	10.7	7.8
Aug-2002	8.6	2.1	10.7	7.4
Sep-2002	8.6	2.1	10.7	7.0
Oct-2002	8.6	2.1	10.7	6.7
Nov-2002	8.6	2.1	10.7	6.4
Dec-2002	8.6	2.1	10.7	6.1

Table 2.3 presents injection capacity of 265 TJ/d for 2002 including toll processing supply as reported by the Storage Provider. A total of 187 TJ/d of capacity has been contracted for the first 3 months of the year including 15 TJ/d of contracted toll processing capacity which is forecast to fall to 10 TJ/d from April next year. During 2001 TXU UGS supplies of 265 TJ/d had been bid into the Market and this quantity will be assumed for winter 2002

During winter 2002, Iona can operate as an alternative supply or peak shaving supply as required. In the shoulder seasons April/May and September/October UGS may operate in both injection and withdrawal modes on a day to day basis as required. Turn around time is 2 to 4 hours.

Table 2.3 Iona Injection Capacity (TJ/d)

Month	Contracted	Prospective	Total Capacity
Jan-2002	187	78	265
Feb-2002	187	78	265
Mar-2002	187	78	265
Apr-2002	182	83	265
May-2002	182	83	265
Jun-2002	182	83	265
Jul-2002	182	83	265
Aug-2002	182	83	265
Sep-2002	182	83	265
Oct-2002	182	83	265
Nov-2002	182	83	265
Dec-2002	182	83	265

2.4 Aggregate Monthly Supplies

Gas supply for year 2002 will come primarily from Longford. In addition, a relatively small net supply of 28 TJ/d is assumed via the Culcairn Interconnect. For planning purposes UGS is assumed to operate in withdrawal mode (into storage) during summer months (November to April) and injection mode (from storage) during May-October.

Table 2.4 shows that 858 TJ/d of gas is available between November 2002 through to April 2002 and 1121 TJ/d of gas is available for the remainder of the year. In addition up to 150 TJ/d of LNG can be made available to supplement the supply if required.

Table 2.4 Aggregated Contracted Supplies (TJ/d)

Month	Longford	WUGS/Iona	Net Culcairn	Aggregate Supplies
Jan-2002	830	0	28	858
Feb-2002	830	0	28	858
Mar-2002	830	0	28	858
Apr-2002	830	0	28	858
May-2002	830	265	28	1,121
Jun-2002	830	265	28	1,121
Jul-2002	830	265	28	1,121
Aug-2002	830	265	28	1,121
Sep-2002	830	265	28	1,121
Oct-2002	830	265	28	1,121
Nov-2002	830	0	28	858
Dec-2002	830	0	28	858

3 MONTHLY SUPPLY-DEMAND 2002

The peak days for the traditional markets (Residential, Commercial and Industrial) are strongly influenced by cold weather and are most likely to occur on the coldest days of the year or the month. Gas power generation is typically required on hot summer days although recently substantial load also occurred in cold winter months. For the purpose of analysing the supply adequacy on monthly system coincident peak days for 2002 a possible scenario of peak day demand is generated whereby warm weather with 0 EDD (hot weather) is assumed to prevail on the forecast peak days between December and March. The monthly peak day supply-demand outlook is presented in both Table 3.1 and Figure 3.1.

Table 3.1 Peak Day Supply - Demand (TJ)

		1 in 2 Peak Day		1 in 20 Peak Day	
Month	Aggregate Supply	Demand	Surplus	Demand	Surplus
Jan-2002	858	363	495	363	495
Feb-2002	858	368	490	368	490
Mar-2002	858	388	470	388	470
Apr-2002	858	695	163	810	48
May-2002	1,123	845	278	933	190
Jun-2002	1,123	1,051	72	1,131	-8
Jul-2002	1,123	1,051	72	1,131	-8
Aug-2002	1,123	1,051	72	1,131	-8
Sep-2002	1,123	1,051	72	1,131	-8
Oct-2002	1,123	748	375	836	287
Nov-2002	858	652	206	782	76
Dec-2002	858	373	485	373	485

The supply-demand scenario analysis can be summarised as follows.

- under the 1 in 2 peak day forecast scenario the available supplies from Longford, TXU UGS and Culcairn are more than adequate to meet the forecast general load for all the months. In addition the supply surplus varying increasing from 70 TJ/d in winter months to 493 TJ/d in January can be made available to meet the additional load from gas power generation as well as withdrawals into the UGS during this period. If necessary LNG up to 150 TJ/d can be vaporised to meet the additional demand
- under the 1 in 20 peak day forecast scenario additional LNG supplies are required to meet a small shortfall of about 10 TJ in winter months. Supply surplus between 46 TJ and 493 TJ aside from LNG is available to meet the additional load from gas power generation and UGS withdrawals outside winter.

- Under a 1 in 20 winter supply-demand scenario where Longford and Culcairn gas is assumed to be always used first, about 2.7 PJ of Iona (UGS) gas is required over about 36 days for winter shaving while a needle peak shaving requirement is met by LNG on one day.

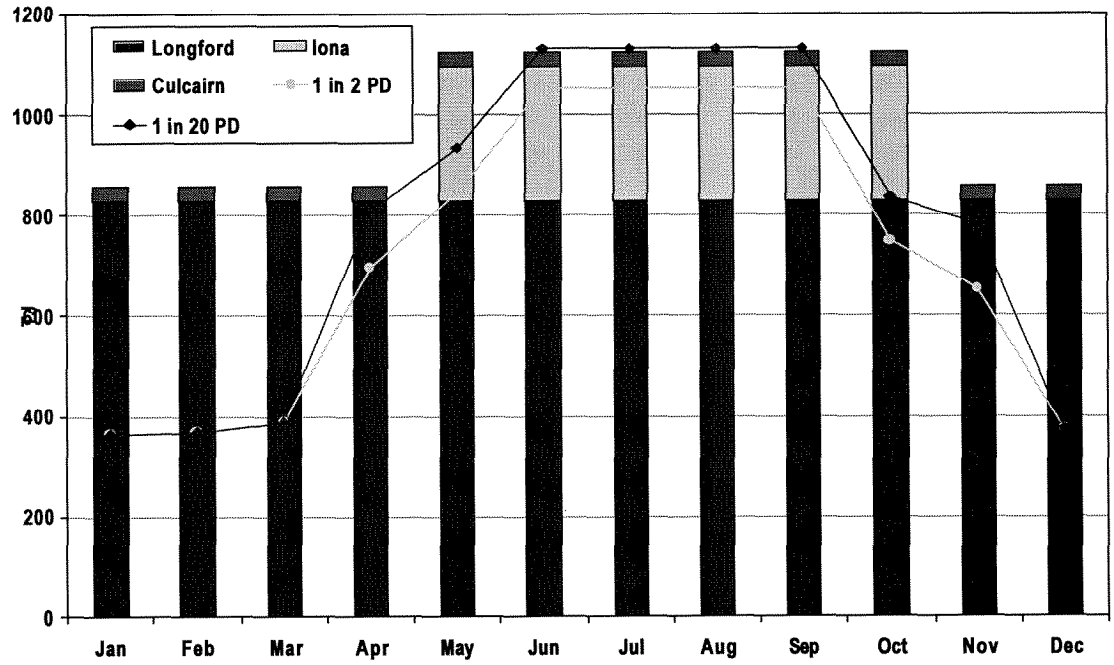

Figure 3.1 Peak Day Supply – Demand

4 MONTHLY SYSTEM MAINTENANCE

4.1 Gas Transmission System

VENCorp has reviewed GasNet's planned maintenance and plant outages for the Gas Transmission System for January to December. The schedules are summarised in Figure 4.1. A more detailed table showing compressor availability appears in Appendix L. Maintenance and works have been scheduled appropriately taking into account plant redundancy so that there is minimal risk to gas transportation throughout the planning period.

Regular maintenance is scheduled so as not to reduce system capacity below the 1 in 20 peak demand in a given month. The same principles apply to planned works such as system augmentations or new connections.

Compressors and stations also undergo short periods of maintenance at other times of the year. Typically, this maintenance is carried out over a few days with an equipment recall period of four hours.

4.1.1 Gooding Compressor Station

Gooding compressor station has four 2800 kW Centaur compressors. For normal winter operation, up to three compressors are operated simultaneously. This leaves one compressor available as a standby in case of a compressor failure.

Each of these compressors in turn will be unavailable for four weeks during the period January and April inclusive. Only two units are required at this time of year leaving one unit redundant. There is no material risk of a transmission constraint.

4.1.2 Brooklyn Compressor Station

Brooklyn compressor station has four 850 kW Saturn compressors (units[37] 6, 7, 8 & 9) and two 2800 kW Centaur compressors (units 10 & 11).

During winter when demand at Geelong is high, one Centaur is required. When there is lower demand at Geelong one to three Saturns are sufficient. On days of extreme demand a Centaur and one or two Saturns are required. Clearly, there is redundancy in both Centaur and Saturn compressors for winter operation, minimising the risk of a transmission constraint at Brooklyn. However, it is now expected that gas will be injected at Iona during winter and if this is in sufficient quantities no compression will be required during winter.

During summer when compressors will be used to transport Longford gas to Iona for withdrawal into UGS, two Centaurs are required. There is no redundancy in this case and a compressor failure will significantly reduce transport capacity to Iona from 70 to 90 TJ/d down to 27 TJ/d to 46 TJ/d depending on system demand.

One Centaur is able to operate in both parallel and series modes, which effectively provides suitable staging for both winter and summer operation. The other can only operate in the series mode more suited to summer compression for injection at Iona and less efficient for winter use.

The 850 kW units (6, 7, 8 and 9) are each to be out of service for general maintenance for a month in turn from January to April. They are not required during this period.

[37] The unit numbering has an historical basis and does not reflect the current number of units available

One of the 2800 kW units (10 or 11) will be out of service for a month in September and the other will be out of service in May at the beginning and end of the UGS withdrawal season. Under high demand conditions in September gas can be injected at Iona rather than withdrawn.

4.1.3 Wollert Compressor Station

Wollert compressor station has three 850 kW Saturn compressors. Up to two units are operated in winter with one on standby, minimising risk of transmission constraints.

Each unit will be out of service for a month at a time during February to April inclusive. At this time Wollert compressors are not required except when exporting to NSW. During January to March 2001 gas was exported to NSW and up to two compressors were operated to achieve this. If a compressor is maintained at a time when two compressors are operating there will be no redundancy.

4.1.4 Iona Compressor Station

GasNet has commissioned two reciprocating compressors at Iona. These units are currently in a testing and debugging period that is expected to be completed by May 2002. These compressors will enable flow of gas from the SWP to the WTS usually in the non-winter period when UGS is being replenished. GasNet has not provided a routine maintenance schedule for these compressors.

4.1.5 Springhurst Compressor Station

The Springhurst compressor station has one 4500 kW Centaur compressor.

This compressor will be out of service for general maintenance during May. This will reduce Interconnect import capacity to 35 TJ/d (or 60 TJ/d if the Young compressor is available). Springhurst is not required for delivery of the level of reported contracted supplies from NSW.

The import capacity of the Interconnect would be reduced to 60 TJ/d or 50 TJ/d respectively if the Springhurst or Young Compressors fail. The risk of coincident failure is minimal.

4.2 LNG Facility

VENCorp has reviewed GasNet's planned maintenance for the Dandenong LNG facility. The schedules are summarised in Figure 4.1. Maintenance and works have been scheduled appropriately taking into account plant redundancy so that there is minimal risk to supply throughout the period.

The LNG facility has a nominal injection capacity of 150 TJ/d requiring availability of three vaporisers, three pumps and one boil-off compressor. Failure of either a vaporiser or a pump can reduce the capacity by 30% to 45%.

The total LNG facility will undergo general maintenance during April and this will mean no LNG can be vaporised. The plant can however be recalled in four hours during this time thus minimising the risk to system security.

Vaporisers A to C are to be each out of service for a month during January to March inclusive reducing vaporisation capacity to 55% (unit C) or 83% (unit A or B)

Boil-off compressor B will be out of service for a month during April and boil-off compressor A will be out of service for six weeks commencing February.

Maintenance is planned so that the LNG facility can vaporise a minimum of 100 tonnes/h.

4.3 Longford Plant

Esso provided the following statement covering 2002:

"Esso has advised that it has not yet scheduled all maintenance to be performed at its Gippsland facilities during 2002. The maintenance has been scheduled until first quarter of 2002 and highlights one week during first quarter of 2002 where it is possible that capacity constraints may be experienced at Longford.

The remainder of maintenance it has scheduled to date is not expected to affect its ability to meet forecast nominations from buyers under existing gas sales agreements.

Esso will continue to keep VENCorp informed when the schedule of maintenance for the remainder of 2002 is developed.

Esso advise that the total capacity for injection into the GTS will be reduced for several days in early January."

The Longford plant will undergo work from the middle of November 2001 that will reduce plant capacity to the extent that there could be an impact on the Market. Participants have been notified of this work and its effect. This work could extend into January 2002 but the probability of the Market being affected in January is small.

It is VENCorp's view, based on the plant's reduced capacity, that available supply from all sources should be sufficient to meet expected system demand to the extent that demand from gas power generation is within limits of its historical usage for this period. Nevertheless, under some higher demand summer scenarios, withdrawals into underground storage or exports to NSW may be constrained. It should be noted that gas power generation is very dependent on weather, electricity market conditions electricity generator outages and electricity transmission outages.

4.4 UGS

TXU Gas Storage has indicated that there are proposed statutory inspections where plant availability will reduced for several days in February, March and November 2002. This work is scheduled at times of the year when reduced plant availability will have minimal effect on the Market. VENCorp and TXU Gas Storage will work jointly to ensure that future maintenance is carried out at times that will minimise any adverse effects on the system.

4.5 APT Pipeline or Compressors

No details have been provided.

4.6 SCADA/Communication Systems

Failure of any of these systems will require manual operation and reduce control effectiveness with consequent effects on operational schedules.

4.7 Pipeline Inspection

The pigging of the Brooklyn to Ballan (200mm) and the Euroa to Kyabram (200mm) pipelines which commenced in November 2001 is expected to be completed in 2001 but there is a chance it might extend into 2002.

The 150 mm pipelines Ballan to Bendigo, Guildford to Maryborough, Derrimut to Sunbury and Ballan Ballarat are scheduled to be pigged early in 2002.

A PIG is a pipeline inspection gauge. For general information, the sequence of events is likely to include:

A cleaning run to ensure that there is no debris in the pipe.

A gauging run to check that the pipe has no significant deformations that would stop the intelligent pig.

The intelligent run where an intelligent pig is used to measure the pipe wall thickness along the length of the pipe.

The pigging is carried out on a live pipeline so that there will be no affect on pipeline capacity, except in the event that the pig becomes stuck in the pipe, and contingency plans will be in place to deal with this eventuality.

4.8 Third Party Issues

Occasionally, bodies such as VicRoads make requests to GasNet to make alterations to their pipelines. Under these circumstances GasNet and VENCorp work jointly to determine the appropriate timing of the work to ensure that peak demand can be met.

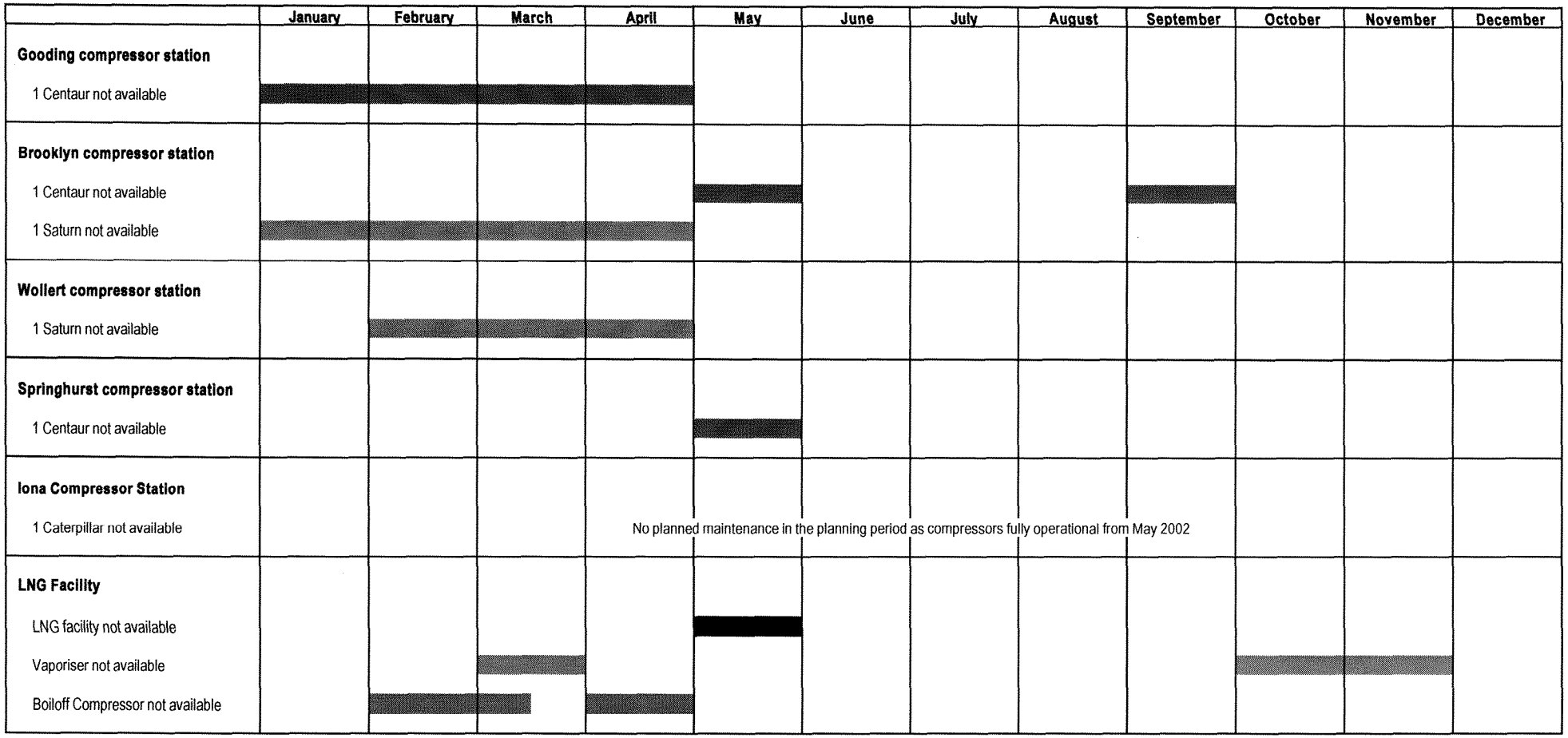

Figure 4.1 GasNet Planned Maintenance and Outages January 2002 – December 2002