SPI PowerNet Pty Ltd

Electricity Transmission Revenue Proposal 2014/15 – 2016/17

Appendix 4B:

AEMO's Victorian Terminal Station Demand Forecasts for 2012-13 to 2022-23

SP AusNet
A member of Singapore Power Group

Submitted: 28 February 2013

VICTORIAN TERMINAL STATION DEMAND FORECASTS

For 2012–13 to 2022–23

2012

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

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Published by

AEMO
Australian Energy Market Operator
ABN 94 072 010 327

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CHAPTER 1 - INTRODUCTION

This Victorian Terminal Station Demand Forecasts (TSDF) report provides demand forecasts for points of connection within the Victorian transmission network, as required by the National Electricity Rules, clause 5.6.2A(b)(1).

The forecasts are compiled by AEMO from forecasts provided by Victorian participants (Distribution Network Service Providers (DNSPs) and direct-connect customers), and reflect participant expectations of future demand.

For each point of connection, this document provides the following:

- Maximum active power demands forecast to occur for summer and winter on average one year in two (50% probability of exceedence (POE)) and one year in ten (10% POE), for each of the financial years from 2012–2013 to 2022–2023.
- Reactive power demands forecast to occur at the same times as the terminal station's maximum active demands (for both 50% POE and 10% POE).
- Representative daily active and reactive demand profiles for days of maximum active power demand.
- Maximum active and coincident reactive actual demands for the summer and winter periods of the preceding year (2011–12 and 2012).

Participants have supplied AEMO with forecast maximum levels of active demand, and the associated reactive demand levels, that they expect to be supplied to their licensed distribution area at the 10% and 50% POE levels, separated according to their points of connection at each terminal station. Forecasts are provided for summer and winter over an eleven year period. AEMO has aggregated these forecasts by terminal station.

These forecast demands are an input to DNSP connection planning reports.

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CHAPTER 2 - DEMAND FORECASTS BY POINT OF CONNECTION

This chapter provides a summary of the total forecast demand for each point of connection.

In most cases, the points of connection reported here correspond directly to physical terminal stations. In other cases, a point of connection may cover only a portion of a terminal station (for example a bus group including a sub-set of the transformers at the terminal station), or portions of multiple terminal stations. Finally, some points of connection relate to direct connect customers, rather than terminal stations.

Points of connection are not mutually exclusive, and the same demand may be reported under more than one point of connection. For example, points of connection which are split into bus groups are also forecast as an entire station; a forecast is provided for KTS, but also for KTS_East and KTS_West. This is to accommodate the requirements of different readers of this report. Due to diversity of demand, the split bus group forecasts may not add up to the forecast for the whole terminal station.

Where a point of connection supplies electricity at different voltage levels, these are treated as separate points of connection and reported separately. Locations are listed in alphabetical order based on abbreviation, which generally includes an abbreviation of the terminal station name, along with the voltage level. Table 2-1 lists the points of connection that are included in this report.

Table 2-1 — Terminal station and bus locations

Abbreviation	Type	Description
APD500	Entire	Portland 500kV bus
ATS_BLTS66	Hybrid	Altona/Brooklyn Terminal Station 66kV bus
ATS_West66	Hybrid	Altona West Terminal Station 66kV bus
ATS66	Entire	Altona Terminal Station 66kV bus
BATS66	Entire	Ballarat Terminal Station 66kV bus
BETS22	Entire	Bendigo Terminal Station 22kV bus
BETS66	Entire	Bendigo Terminal Station 66kV bus
BLTS22	Entire	Brooklyn Terminal Station 22kV bus
BLTS66	Entire	Brooklyn Terminal Station 66kV bus
BLTS-SCI66	Hybrid	Brooklyn-SCI 66kV bus
BTS22	Entire	Brunswick Terminal Station 22kV bus
BTS66	Entire	Brunswick Terminal Station 66kV bus
CBTS66	Entire	Cranbourne Terminal Station 66kV bus
ERTS1266	Split Bus	East Rowville Terminal Station buses 1&2 66kV bus
ERTS3466	Split Bus	East Rowville Terminal Station buses 3&4 66kV bus
ERTS66	Entire	East Rowville Terminal Station 66kV bus
FBTS66	Entire	Fishermans Bend Terminal Station 66kV bus
FVTS220	Entire	Fosterville Terminal Station 220kV bus
GNTS66	Entire	Glenrowan Terminal Station 66kV bus
GTS66	Entire	Geelong Terminal Station 66kV bus
HOTS66	Entire	Horsham Terminal Station 66kV bus
HTS66	Entire	Heatherton Terminal Station 66kV bus
HYTS22	Entire	Heywood Terminal Station 22kV bus
JLA220	Entire	John Lysaght 220kV bus

Abbreviation	Type	Description
KGTS22	Entire	Kerang Terminal Station 22kV bus
KGTS66	Entire	Kerang Terminal Station 66kV bus
KTS_East66	Split Bus	Eastern area served by Keilor Terminal Stn. 66kV bus
KTS_West66	Split Bus	Western area served by Keilor Terminal Stn. 66kV bus
KTS66	Entire	Keilor Terminal Station 66kV bus
LY66	Entire	Loy Yang Substation 66kV bus
MBTS66	Entire	Mount Beauty Terminal Station 66kV bus
MTS22	Entire	Malvern Terminal Station 22kV bus
MTS66	Entire	Malvern Terminal Station 66kV bus
MTS6622	Entire	Malvern Terminal Station – 66 kV and 22 kV loads combined.
MWTS66	Entire	Morwell Terminal Station 66kV bus
PTH220	Entire	Point Henry 220kV bus
RCTS22	Entire	Red Cliffs Terminal Station 22kV bus
RCTS66	Entire	Red Cliffs Terminal Station 66kV bus
RTS22	Entire	Richmond Terminal Station 22kV bus
RTS1266	Split Bus	Richmond Terminal Station buses 1&2 66kV bus (Transformers B1 and B4)
RTS3466	Split Bus	Richmond Terminal Station buses 3&4 66kV bus (Transformers B2 and B3)
RTS66	Entire	Richmond Terminal Station 66kV bus
RWTS22	Entire	Ringwood Terminal Station 22kV bus
RWTS1366	Split Bus	Ringwood Terminal Station 1&3 66kV bus
RWTS2466	Split Bus	Ringwood Terminal Station 2&4 66kV bus
RWTS66	Entire	Ringwood Terminal Station 66kV bus
SHTS66	Entire	Shepparton Terminal Station 66kV bus
SMTS66	Entire	South Morang Terminal Station 66kV bus
SVTS1266	Split Bus	Springvale Terminal Station buses 1&2 66kV bus
SVTS3466	Split Bus	Springvale Terminal Station buses 3&4 66kV bus
SVTS66	Entire	Springvale Terminal Station 66kV bus
TBTS66	Entire	Tyabb Terminal Station 66kV bus
TGTS66	Entire	Terang Terminal Station 66kV bus
TSTS66	Entire	Templestowe Terminal Station 66kV bus
TTS1266	Split Bus	Thomastown Terminal Station 1&2 66kV bus
TTS3466	Split Bus	Thomastown Terminal Station 3&4 66kV bus
TTS66	Entire	Thomastown Terminal Station 66kV bus
WETS66	Entire	Wemen Terminal Station 66kV bus
WMTS22	Entire	West Melbourne Terminal Station 22kV bus
WMTS66	Entire	West Melbourne Terminal Station 66kV bus
WOTS22	Entire	Wodonga Terminal Station 22kV bus
WOTS66	Entire	Wodonga Terminal Station 66kV bus
YPS11	Entire	Yallourn PS Terminal Station 11kV bus

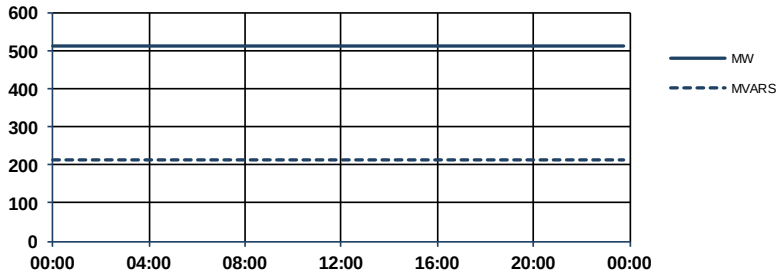
APD500: Portland 500 kV bus

Summer Demand

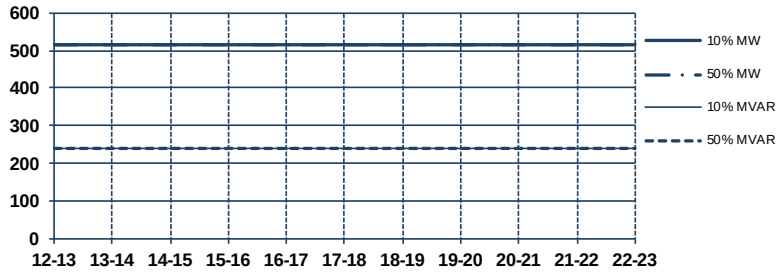
2011-12 MD	MW	MVAR
09 Dec 2011 03:30	512.8	213.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	515.0	240.0	515.0	240.0
13-14	515.0	240.0	515.0	240.0
14-15	515.0	240.0	515.0	240.0
15-16	515.0	240.0	515.0	240.0
16-17	515.0	240.0	515.0	240.0
17-18	515.0	240.0	515.0	240.0
18-19	515.0	240.0	515.0	240.0
19-20	515.0	240.0	515.0	240.0
20-21	515.0	240.0	515.0	240.0
21-22	515.0	240.0	515.0	240.0
22-23	515.0	240.0	515.0	240.0

Load Curve on High Demand Day



Forecast

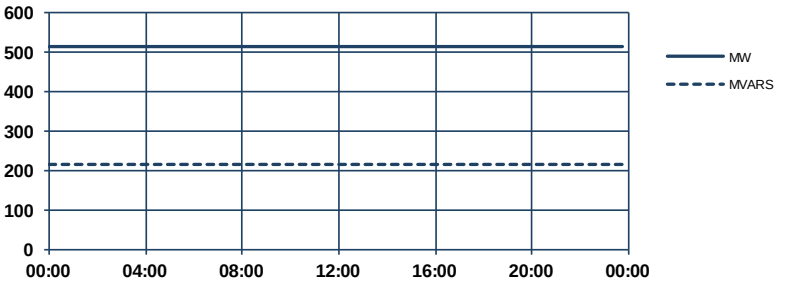


Winter Demand

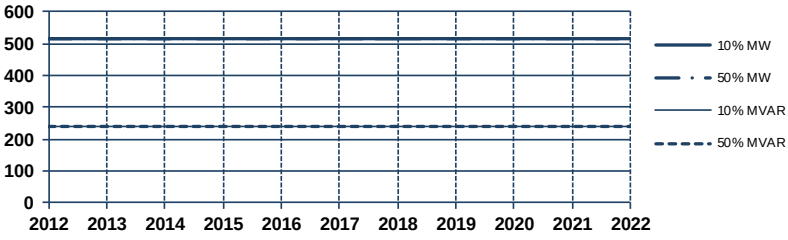
2011 MD	MW	MVAR
02 May 2011 02:30	513.3	215.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	515.0	240.0	515.0	240.0
2013	515.0	240.0	515.0	240.0
2014	515.0	240.0	515.0	240.0
2015	515.0	240.0	515.0	240.0
2016	515.0	240.0	515.0	240.0
2017	515.0	240.0	515.0	240.0
2018	515.0	240.0	515.0	240.0
2019	515.0	240.0	515.0	240.0
2020	515.0	240.0	515.0	240.0
2021	515.0	240.0	515.0	240.0
2022	515.0	240.0	515.0	240.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Portland Aluminium smelter, directly connected to the transmission system.

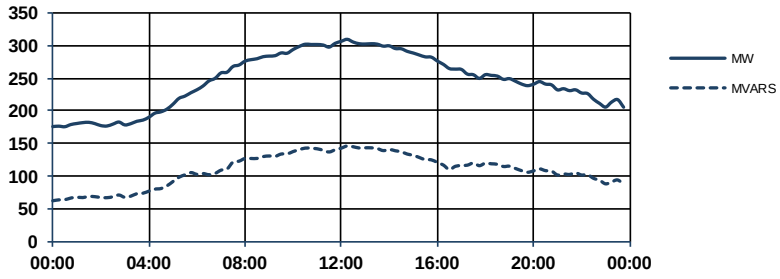
ATS_BLTS66: Altona/Brooklyn Terminal Station 66 kV bus

Summer Demand

2011-12 MD	MW	MVAR
17 Jan 2012 14:30	309.3	145.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	338.3	141.4	320.1	133.9
13-14	345.6	144.5	327.0	136.7
14-15	352.7	147.5	333.8	139.6
15-16	358.2	149.8	338.9	141.8
16-17	364.5	152.5	344.9	144.3
17-18	370.8	155.2	350.9	146.9
18-19	377.3	158.0	357.0	149.6
19-20	384.0	160.9	363.4	152.3
20-21	390.9	163.8	369.9	155.1
21-22	397.9	166.8	376.5	157.9
22-23	405.1	169.9	383.3	160.8

Load Curve on High Demand Day



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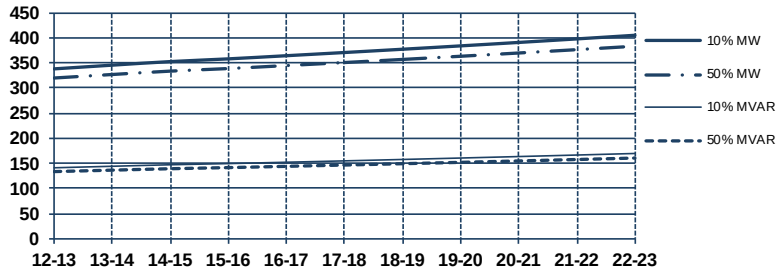
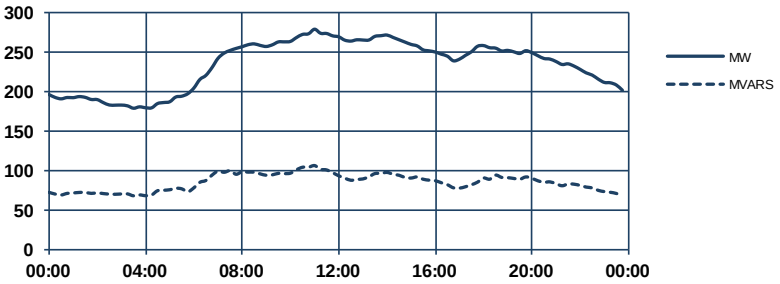


Winter Demand

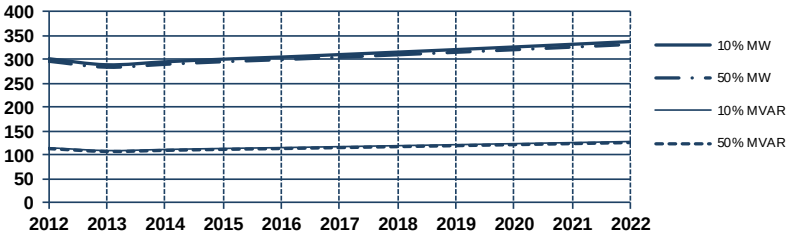
2011 MD	MW	MVAR
07 Jun 2011 11:30	278.6	106.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	301.6	115.6	296.3	113.6
2013	288.9	109.7	283.7	107.8
2014	295.0	111.9	289.8	110.0
2015	300.5	114.0	295.2	112.1
2016	304.9	115.8	299.5	113.8
2017	310.1	117.8	304.6	115.8
2018	315.2	119.9	309.7	117.8
2019	320.6	121.9	314.9	119.8
2020	326.0	124.1	320.2	121.9
2021	331.6	126.3	325.7	124.1
2022	337.3	128.6	331.4	126.3

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

ATS/BLTS comprises demand that is serviced jointly by parts of ATS and BLTS. This is predominantly industrial load, which has been affected by economic conditions in recent years. However some areas are experiencing high growth due to residential development. The forecast has been reduced due to weather correction. Brooklyn Landfill embedded generator in Brooklyn is not included in the forecast. During 2012 summer peak demand and 2011 winter peak demand, the generator was running at 4.1MW and 1.0MW respectively.

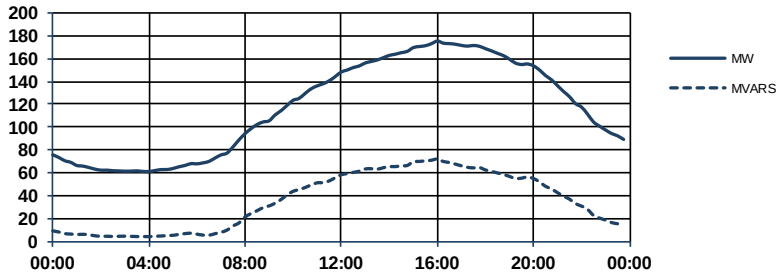
ATS_West66: Altona West Terminal Station 66 kV bus

Summer Demand

2011-12 MD	MW	MVAR
25 Feb 2012 16:00	175.3	71.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	210.1	86.8	199.2	82.5
13-14	215.7	89.0	204.5	84.6
14-15	221.5	91.4	210.0	86.8
15-16	227.6	93.8	215.8	89.1
16-17	234.0	96.3	221.8	91.5
17-18	240.5	99.0	228.0	93.9
18-19	247.4	101.7	234.4	96.5
19-20	254.5	104.5	241.1	99.2
20-21	261.9	107.5	248.1	102.0
21-22	269.5	110.5	255.3	104.9
22-23	277.5	113.7	262.8	107.9

Load Curve on High Demand Day



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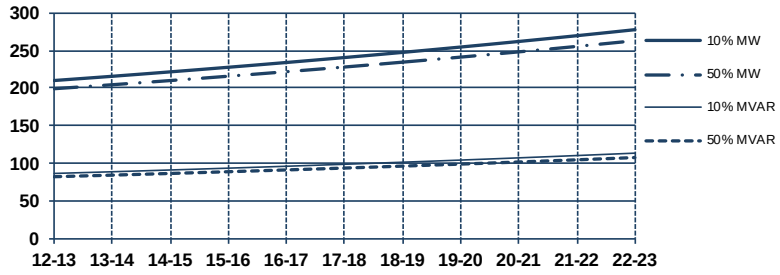
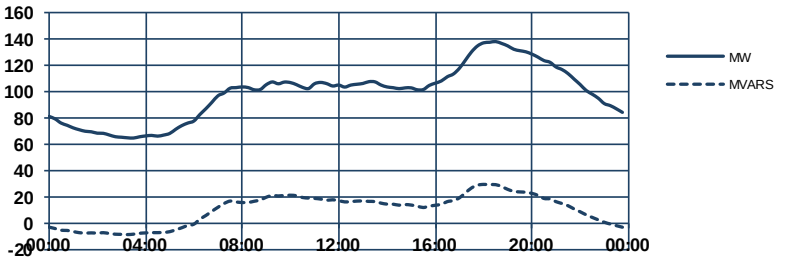


Winter Demand

2011 MD	MW	MVAR
08 Jun 2011 18:30	137.8	29.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	147.8	37.4	147.8	37.4
2013	159.8	40.0	154.7	38.9
2014	164.1	40.9	158.9	39.8
2015	168.6	41.9	163.2	40.7
2016	173.2	42.9	167.7	41.7
2017	178.0	43.9	172.4	42.7
2018	183.0	45.0	177.2	43.8
2019	188.2	46.2	182.2	44.9
2020	193.6	47.3	187.4	46.0
2021	199.2	48.6	192.8	47.2
2022	205.1	49.8	198.5	48.4

Load Curve on High Demand Day



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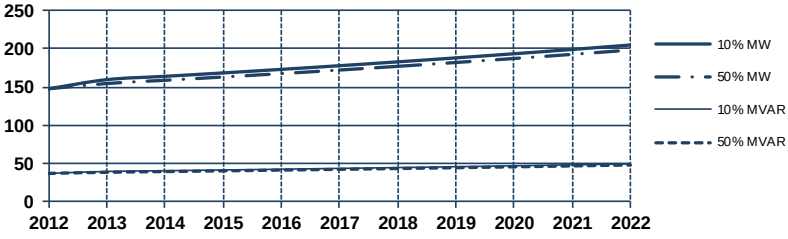


Notes: *For embedded generation details, please see next section of report.*

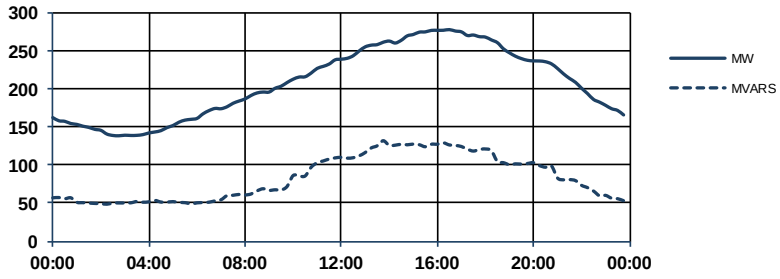
ATS66: Altona Terminal Station 66 kV bus

Summer Demand

2011-12 MD	MW	MVAR
24 Jan 2012 16:30	277.9	131.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	323.2	154.2	306.3	146.2
13-14	331.6	158.1	314.6	150.1
14-15	340.2	162.2	323.0	154.1
15-16	349.1	166.4	331.7	158.2
16-17	358.1	170.6	340.6	162.4
17-18	367.5	175.0	349.8	166.7
18-19	377.0	179.5	359.3	171.2
19-20	386.9	184.2	369.0	175.8
20-21	397.0	188.9	379.0	180.5
21-22	407.4	193.8	389.3	185.3
22-23	418.0	198.9	399.8	190.3

Load Curve on High Demand Day



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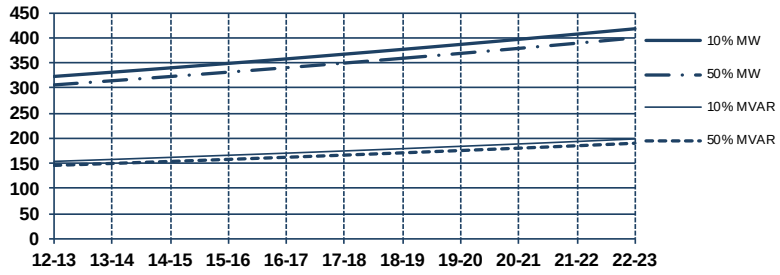
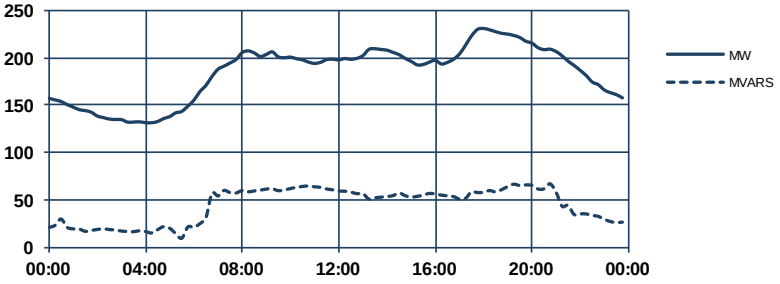


Winter Demand

2011 MD	MW	MVAR
21 Jun 2011 18:30	230.9	67.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	243.3	55.6	243.3	55.6
2013	257.6	58.5	249.4	56.8
2014	260.1	59.1	252.0	57.4
2015	262.7	59.6	254.6	57.9
2016	265.3	60.1	257.3	58.5
2017	267.9	60.6	262.7	59.6
2018	270.5	61.2	265.5	60.2
2019	273.2	61.7	268.3	60.7
2020	275.9	62.3	271.1	61.3
2021	278.6	62.9	273.9	61.9
2022	281.3	63.4	276.8	62.5

Load Curve on High Demand Day



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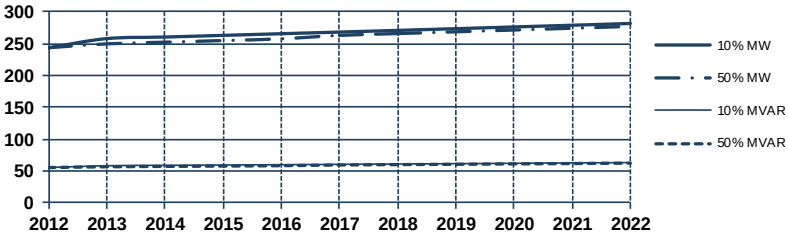


Notes: *For embedded generation details, please see next section of report.*

For planning purposes, ATS66 and BLTS66 are split into ATS_BLTS, ATS_WEST and BLTS_SCI. Please see the notes on those locations.

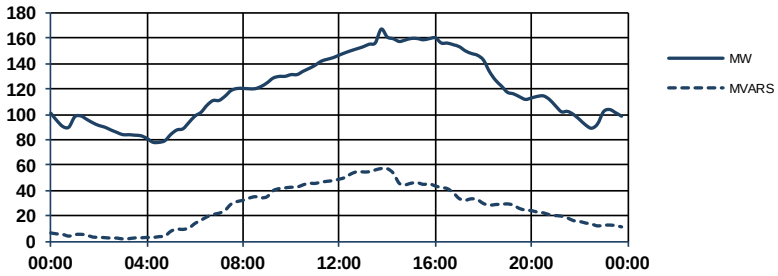
BATS66: Ballarat Terminal Station 66 kV bus

Summer Demand

2011-12 MD	MW	MVAR
24 Jan 2012 14:00	167.2	57.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	177.1	67.3	170.8	64.9
13-14	182.7	69.5	176.2	67.0
14-15	186.0	70.8	179.4	68.2
15-16	189.5	72.1	182.8	69.5
16-17	192.9	73.4	186.0	70.8
17-18	196.9	74.9	189.9	72.2
18-19	199.4	75.9	192.3	73.1
19-20	202.9	77.2	195.7	74.4
20-21	205.5	78.2	198.2	75.4
21-22	209.0	79.5	201.6	76.7
22-23	211.9	80.6	204.3	77.7

Load Curve on High Demand Day



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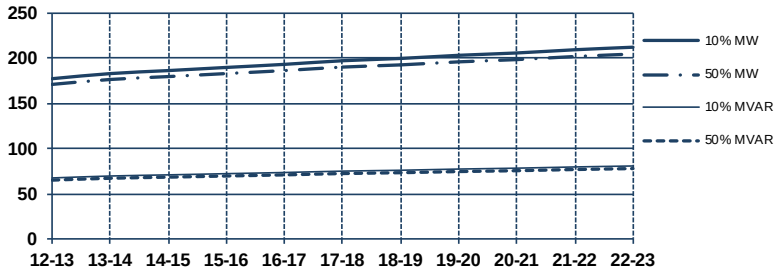
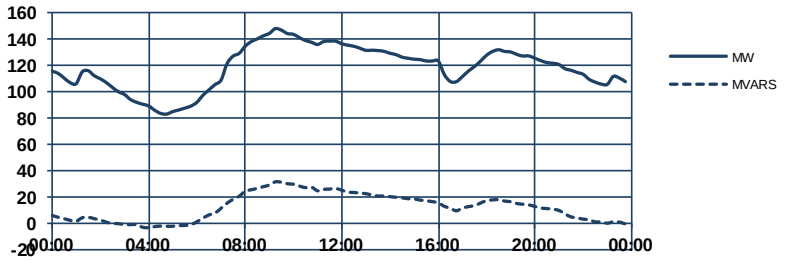


Winter Demand

2011 MD	MW	MVAR
15 Jul 2011 09:30	147.6	31.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	148.2	31.0	148.2	31.0
2013	159.4	33.3	155.8	32.6
2014	164.0	34.3	160.3	33.5
2015	166.9	34.9	163.2	34.1
2016	169.9	35.5	166.2	34.8
2017	172.9	36.2	169.1	35.4
2018	176.4	36.9	172.5	36.1
2019	178.6	37.4	174.7	36.5
2020	181.7	38.0	177.7	37.2
2021	184.0	38.5	179.9	37.6
2022	187.1	39.1	182.9	38.3

Load Curve on High Demand Day



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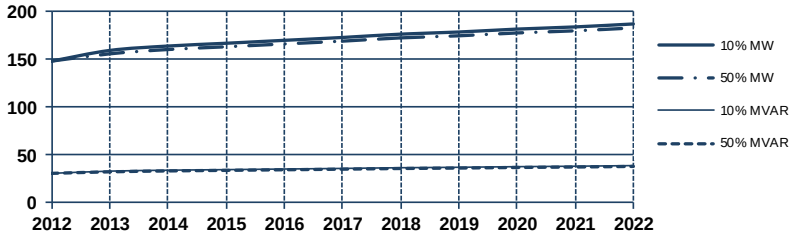


Notes:

For embedded generation details, please see next section of report.

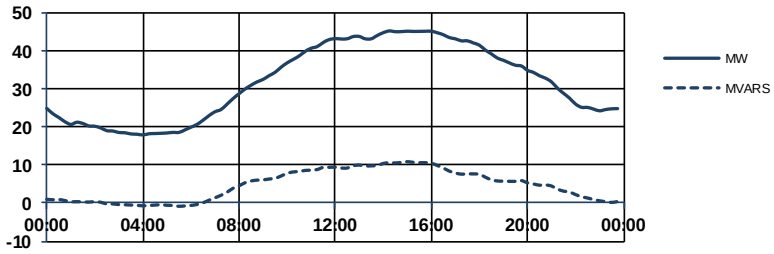
BETS22: Bendigo Terminal Station 22 kV bus

Summer Demand

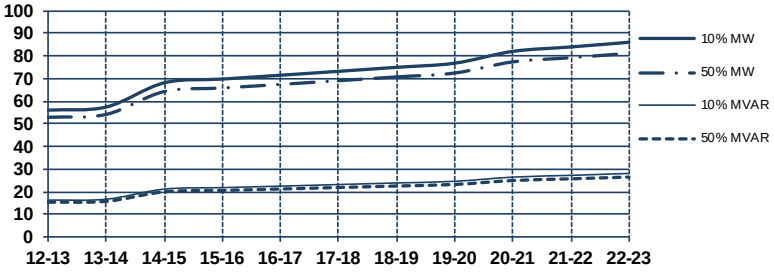
2011-12 MD	MW	MVAR
03 Jan 2012 16:00	45.2	10.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	56.0	16.3	52.9	15.3
13-14	57.4	16.7	54.2	15.7
14-15	68.1	21.1	64.3	19.9
15-16	69.8	21.8	65.8	20.5
16-17	71.5	22.4	67.4	21.2
17-18	73.2	23.1	69.1	21.8
18-19	75.0	23.8	70.7	22.5
19-20	76.8	24.6	72.4	23.2
20-21	82.0	26.4	77.4	24.9
21-22	84.0	27.2	79.2	25.7
22-23	86.0	28.0	81.2	26.5

Load Curve on High Demand Day



Forecast

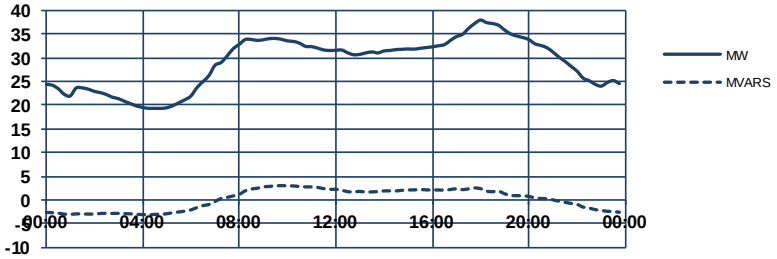


Winter Demand

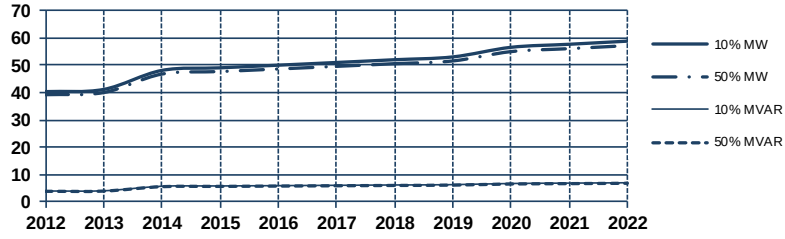
2011 MD	MW	MVAR
08 Jun 2011 18:00	37.9	3.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	40.4	4.0	39.3	3.9
2013	41.2	4.1	40.0	4.0
2014	48.1	5.8	46.8	5.6
2015	49.1	5.9	47.7	5.7
2016	50.0	6.0	48.6	5.8
2017	51.0	6.1	49.6	6.0
2018	52.0	6.2	50.6	6.1
2019	53.1	6.4	51.6	6.2
2020	56.6	6.8	55.0	6.6
2021	57.7	6.9	56.1	6.7
2022	58.8	7.1	57.2	6.9

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

This includes only the 22 kV demand at BETS.

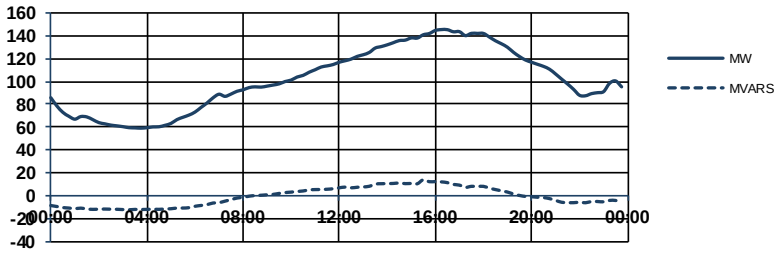
BETS66: Bendigo Terminal Station 66 kV bus

Summer Demand

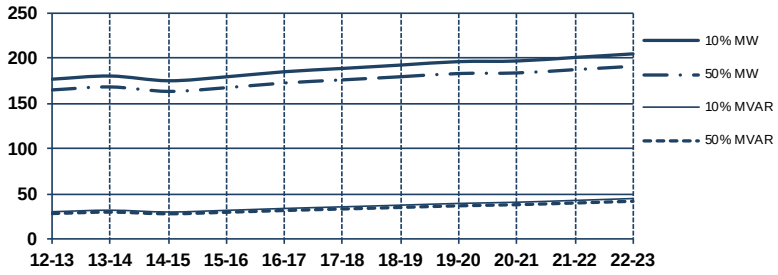
2011-12 MD	MW	MVAR
02 Jan 2012 17:30	145.3	13.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	176.5	30.0	164.7	28.0
13-14	180.0	31.7	167.9	29.6
14-15	174.8	29.7	163.0	27.7
15-16	179.1	31.5	167.1	29.4
16-17	184.8	33.6	172.3	31.4
17-18	188.4	35.4	175.7	33.0
18-19	192.1	37.3	179.2	34.8
19-20	195.9	39.2	182.8	36.6
20-21	196.6	40.5	183.4	37.8
21-22	200.5	42.5	187.1	39.7
22-23	204.5	44.6	190.8	41.6

Load Curve on High Demand Day



Forecast

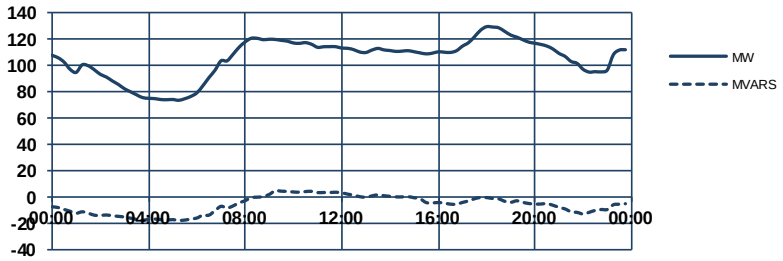


Winter Demand

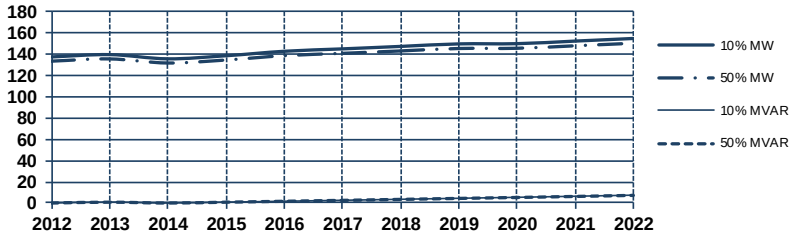
2011 MD	MW	MVAR
08 Jun 2011 18:30	129.1	-1.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	137.3	0.0	133.4	0.0
2013	139.5	0.8	135.5	0.8
2014	135.6	0.0	131.6	0.0
2015	138.5	0.8	134.5	0.8
2016	142.7	1.7	138.5	1.7
2017	144.9	2.6	140.7	2.5
2018	147.2	3.5	143.0	3.4
2019	149.6	4.5	145.3	4.4
2020	149.8	5.4	145.5	5.2
2021	152.2	6.4	147.8	6.2
2022	154.7	7.4	150.2	7.2

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

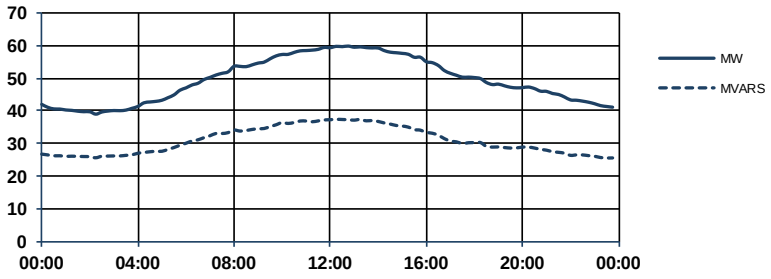
BLTS22: Brooklyn Terminal Station 22 kV bus

Summer Demand

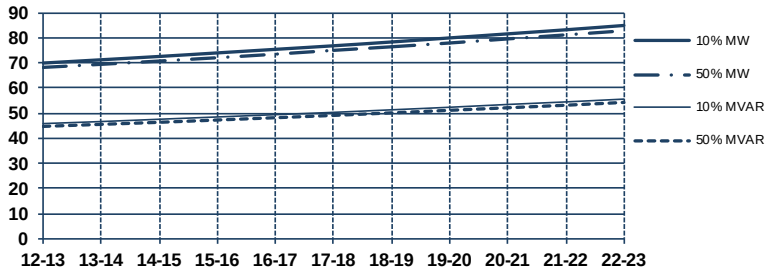
2011-12 MD	MW	MVAR
24 Jan 2012 13:00	59.8	37.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	70.0	45.9	68.2	44.8
13-14	71.3	46.7	69.5	45.6
14-15	72.6	47.6	70.8	46.4
15-16	74.0	48.5	72.1	47.3
16-17	75.4	49.4	73.5	48.2
17-18	76.8	50.3	75.0	49.1
18-19	78.4	51.4	76.4	50.1
19-20	80.0	52.4	78.0	51.2
20-21	81.6	53.5	79.6	52.2
21-22	83.2	54.5	81.2	53.2
22-23	84.9	55.6	82.8	54.3

Load Curve on High Demand Day



Forecast

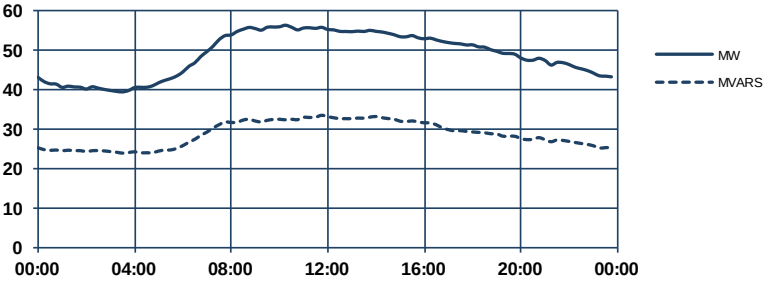


Winter Demand

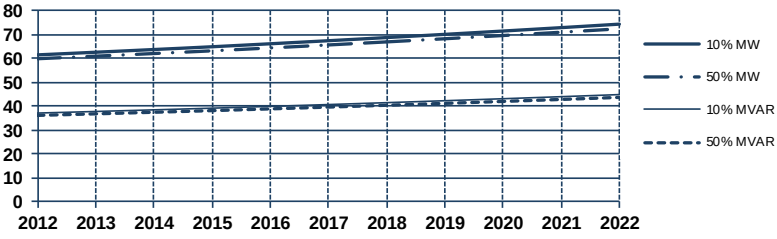
2011 MD	MW	MVAR
19 Jul 2011 10:30	56.2	33.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	61.5	37.2	59.9	36.2
2013	62.6	37.8	60.9	36.9
2014	63.7	38.5	62.0	37.5
2015	64.9	39.2	63.2	38.2
2016	66.1	40.0	64.4	38.9
2017	67.4	40.7	65.6	39.7
2018	68.7	41.5	66.9	40.4
2019	70.1	42.3	68.2	41.2
2020	71.4	43.2	69.6	42.0
2021	72.9	44.0	71.0	42.9
2022	74.3	44.9	72.4	43.7

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

This includes only the 22 kV demand at BLTS.

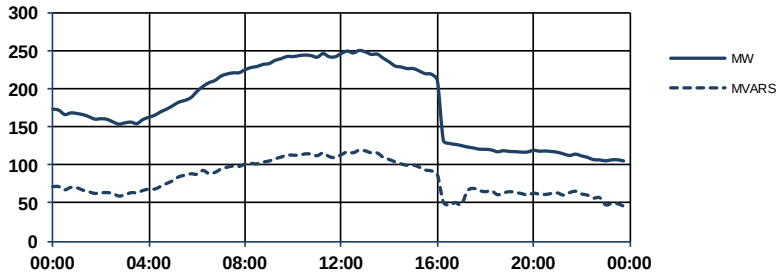
BLTS66: Brooklyn Terminal Station 66 kV bus

Summer Demand

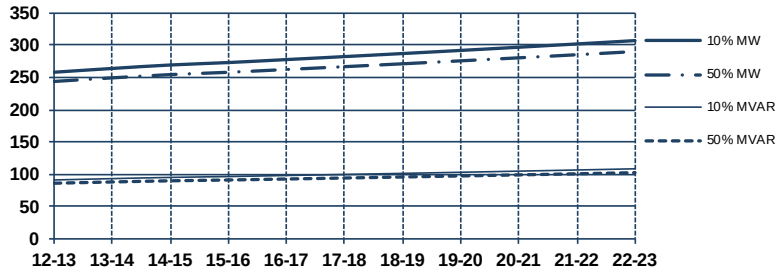
2011-12 MD	MW	MVAR
19 Jan 2012 13:00	250.5	119.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	257.9	91.2	243.6	86.1
13-14	263.7	93.2	249.2	88.1
14-15	269.1	95.1	254.2	89.9
15-16	272.9	96.4	257.8	91.1
16-17	277.5	98.1	262.1	92.6
17-18	282.1	99.7	266.5	94.2
18-19	286.8	101.4	271.0	95.8
19-20	291.6	103.1	275.5	97.4
20-21	296.6	104.8	280.2	99.0
21-22	301.6	106.6	285.0	100.7
22-23	306.8	108.4	289.9	102.4

Load Curve on High Demand Day



Forecast

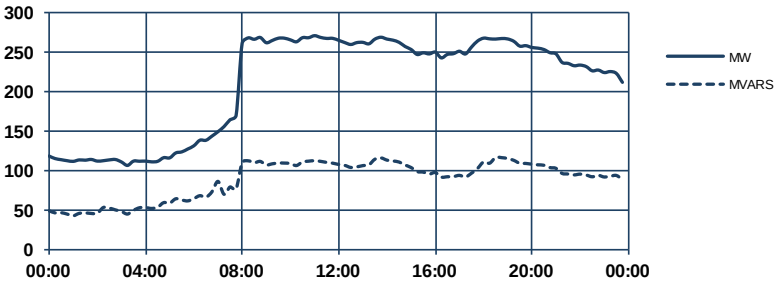


Winter Demand

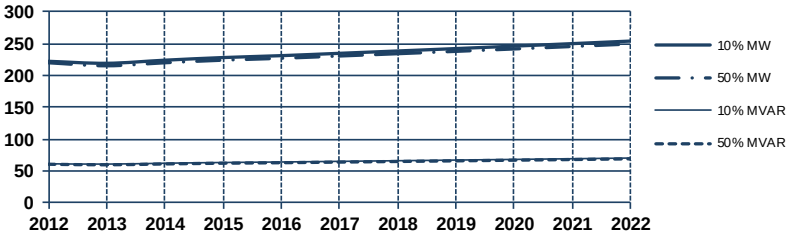
2011 MD	MW	MVAR
15 Jun 2011 09:00	270.4	116.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	222.1	61.5	219.8	60.8
2013	219.0	61.0	215.0	59.9
2014	223.8	62.4	219.8	61.3
2015	227.9	63.5	223.8	62.4
2016	230.9	64.3	226.8	63.2
2017	234.6	65.3	230.4	64.1
2018	238.2	66.3	234.0	65.1
2019	242.0	67.3	237.7	66.1
2020	245.8	68.4	241.4	67.1
2021	249.7	69.4	245.3	68.2
2022	253.8	70.5	249.2	69.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

For planning purposes, ATS66 and BLTS66 are split into ATS_BLTS, ATS_WEST and BLTS_SCI. Please see the notes on those locations.

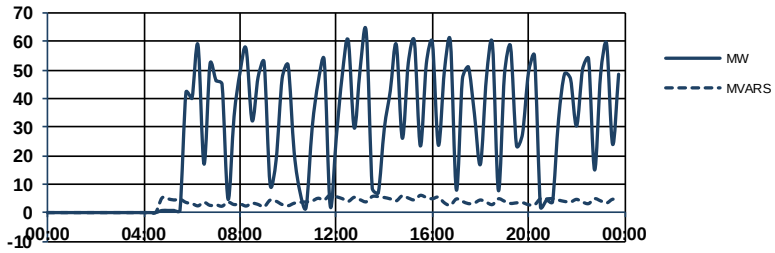
BLTS-SCI66: Brooklyn-SCI 66 kV bus

Summer Demand

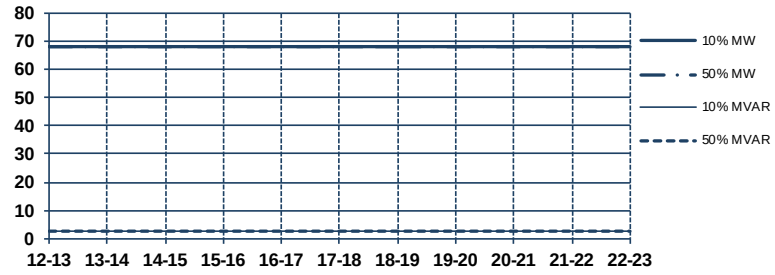
2011-12 MD	MW	MVAR
07 Nov 2011 01:00	63.2	6.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	68.0	2.7	68.0	2.7
13-14	68.0	2.7	68.0	2.7
14-15	68.0	2.7	68.0	2.7
15-16	68.0	2.7	68.0	2.7
16-17	68.0	2.7	68.0	2.7
17-18	68.0	2.7	68.0	2.7
18-19	68.0	2.7	68.0	2.7
19-20	68.0	2.7	68.0	2.7
20-21	68.0	2.7	68.0	2.7
21-22	68.0	2.7	68.0	2.7
22-23	68.0	2.7	68.0	2.7

Load Curve on High Demand Day



Forecast

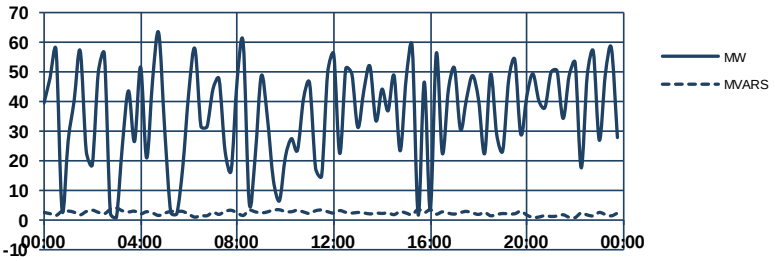


Winter Demand

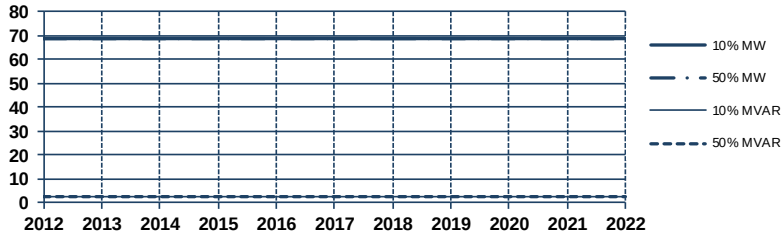
2011 MD	MW	MVAR
28 May 2011 09:30	63.1	4.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	68.7	2.7	68.7	2.7
2013	68.7	2.7	68.7	2.7
2014	68.7	2.7	68.7	2.7
2015	68.7	2.7	68.7	2.7
2016	68.7	2.7	68.7	2.7
2017	68.7	2.7	68.7	2.7
2018	68.7	2.7	68.7	2.7
2019	68.7	2.7	68.7	2.7
2020	68.7	2.7	68.7	2.7
2021	68.7	2.7	68.7	2.7
2022	68.7	2.7	68.7	2.7

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

Industrial demand (steel mill) serviced out of BLTS.

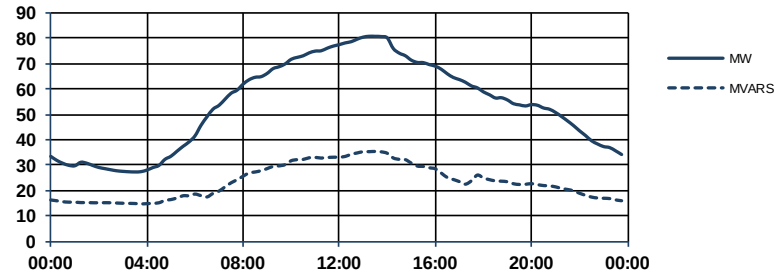
BTS22: Brunswick Terminal Station 22 kV bus

Summer Demand

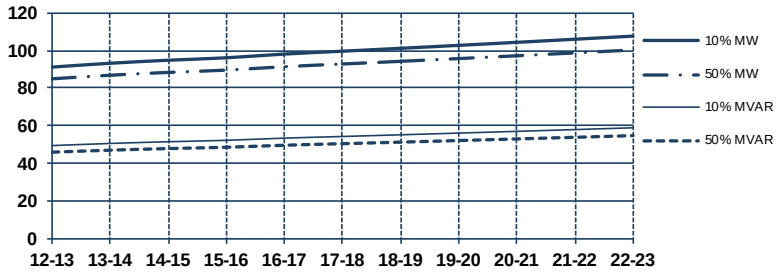
2011-12 MD	MW	MVAR
17 Jan 2012 16:30	80.7	35.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	91.1	49.5	84.9	46.0
13-14	93.2	50.6	86.8	47.1
14-15	94.8	51.5	88.3	47.9
15-16	96.1	52.3	89.5	48.6
16-17	98.1	53.5	91.4	49.7
17-18	99.6	54.3	92.8	50.5
18-19	101.1	55.2	94.2	51.3
19-20	102.7	56.1	95.7	52.2
20-21	104.3	57.1	97.2	53.0
21-22	105.9	58.0	98.7	53.9
22-23	107.6	58.9	100.2	54.8

Load Curve on High Demand Day



Forecast

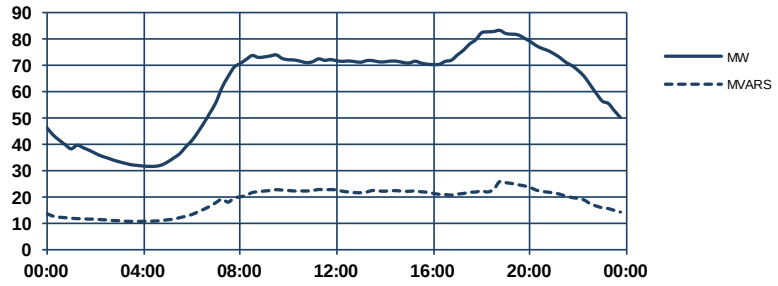


Winter Demand

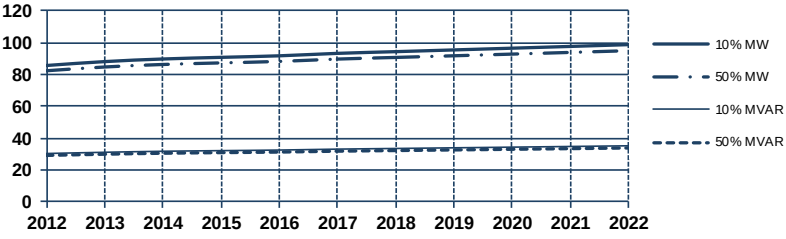
2011 MD	MW	MVAR
07 Jun 2011 18:30	83.2	25.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	85.6	30.4	82.3	29.2
2013	88.0	31.2	84.6	30.0
2014	89.6	31.8	86.2	30.6
2015	90.7	32.2	87.2	31.0
2016	91.6	32.6	88.1	31.3
2017	93.2	33.2	89.6	31.9
2018	94.2	33.6	90.6	32.3
2019	95.3	34.0	91.7	32.7
2020	96.4	34.4	92.7	33.1
2021	97.5	34.8	93.8	33.5
2022	98.6	35.3	94.8	33.9

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at BTS.

For embedded generation details, please see next section of report.

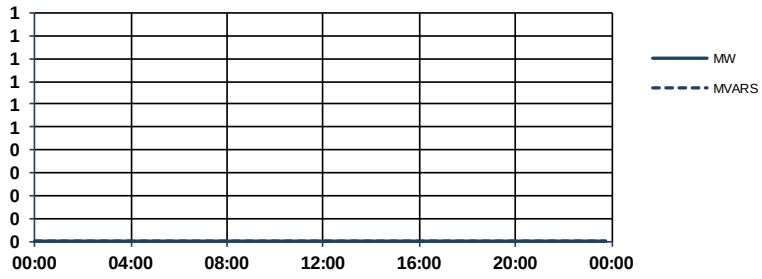
BTS66: Brunswick Terminal Station 66 kV bus

Summer Demand

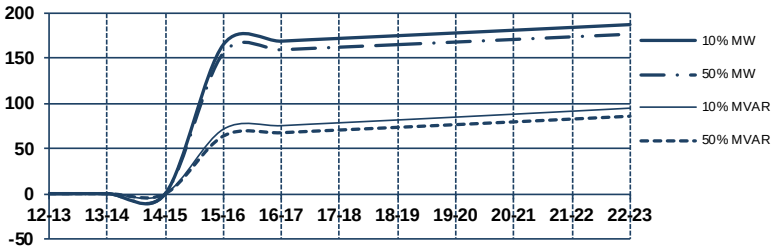
2011-12 MD	MW	MVAR
00 Jan 1900 00:00	0.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	0.0	0.0	0.0	0.0
13-14	0.0	0.0	0.0	0.0
14-15	0.0	0.0	0.0	0.0
15-16	164.8	71.2	155.5	63.7
16-17	168.6	75.1	159.0	67.3
17-18	171.6	78.3	161.9	70.3
18-19	174.6	81.4	164.7	73.3
19-20	177.6	84.6	167.6	76.3
20-21	180.7	87.8	170.4	79.3
21-22	183.7	91.1	173.3	82.4
22-23	186.8	94.5	176.3	85.6

Load Curve on High Demand Day



Forecast

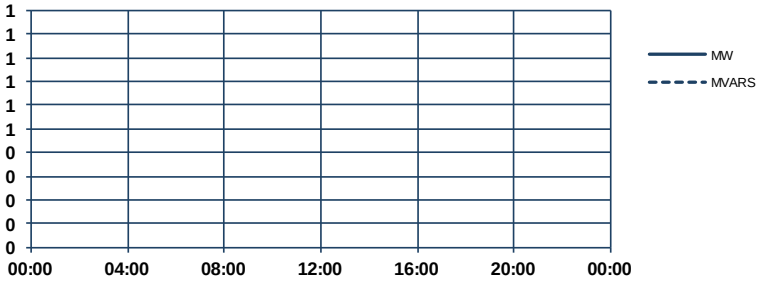


Winter Demand

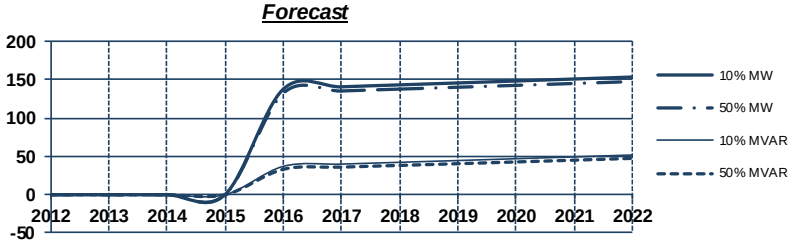
2011 MD	MW	MVAR
00 Jan 1900 00:00	0.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	0.0	0.0	0.0	0.0
2013	0.0	0.0	0.0	0.0
2014	0.0	0.0	0.0	0.0
2015	0.0	0.0	0.0	0.0
2016	137.7	37.0	132.4	33.2
2017	140.9	40.0	135.5	36.0
2018	143.4	42.3	137.9	38.3
2019	146.0	44.7	140.4	40.5
2020	148.5	47.0	142.8	42.8
2021	151.1	49.5	145.3	45.2
2022	153.7	51.9	147.8	47.5

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is an expansion of the existing 22kV terminal station. Demand is forecast to be transferred from WMTS.

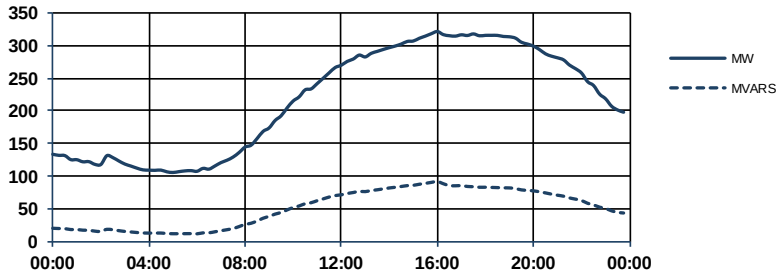
CBTS66: Cranbourne Terminal Station 66 kV bus

Summer Demand

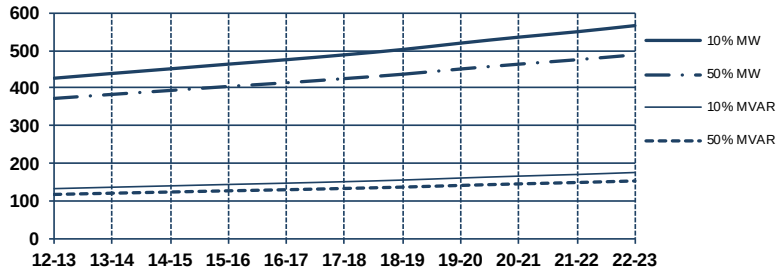
2011-12 MD	MW	MVAR
25 Feb 2012 16:30	321.3	91.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	426.2	133.2	372.6	117.9
13-14	438.9	137.0	383.3	121.2
14-15	451.1	140.6	393.8	124.3
15-16	463.5	144.3	404.4	127.5
16-17	475.4	147.8	414.2	130.4
17-18	488.3	151.7	425.2	133.8
18-19	502.4	156.0	436.8	137.3
19-20	519.3	161.5	450.7	141.8
20-21	535.2	166.5	463.5	145.9
21-22	549.4	170.9	475.3	149.5
22-23	565.8	176.1	488.3	153.7

Load Curve on High Demand Day



Forecast

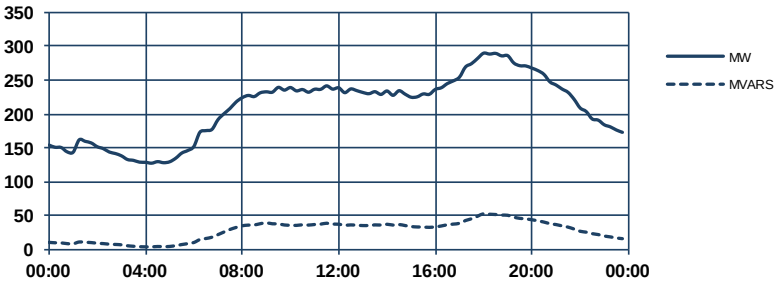


Winter Demand

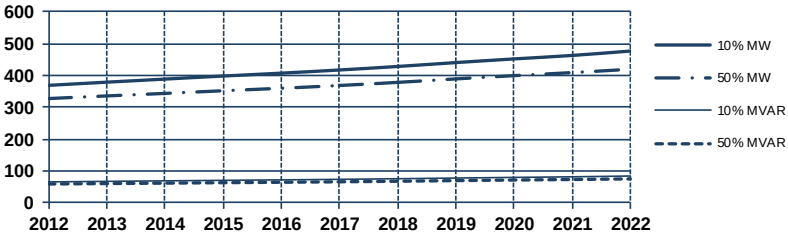
2011 MD	MW	MVAR
07 Jun 2011 18:30	289.7	52.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	368.7	66.3	327.4	59.7
2013	378.7	67.9	335.6	61.1
2014	388.3	69.5	343.5	62.4
2015	397.9	71.1	351.9	63.8
2016	407.0	72.6	359.7	65.1
2017	416.9	74.3	368.3	66.6
2018	427.9	76.2	378.1	68.3
2019	440.1	78.3	388.9	70.3
2020	451.6	80.4	399.2	72.1
2021	462.5	82.2	408.8	73.8
2022	476.3	84.7	419.2	75.7

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

A small transfer is planned from ERTS in summer 2012/13.

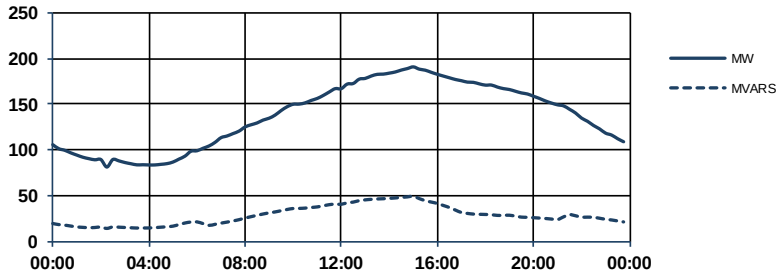
ERTS1266: East Rowville Terminal Station buses 1&2 66 kV bus

Summer Demand

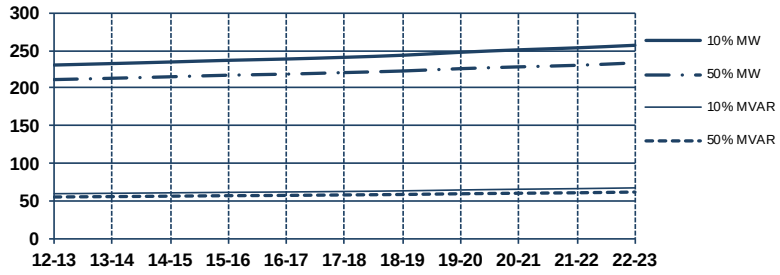
2011-12 MD	MW	MVAR
24 Jan 2012 16:30	190.8	49.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	230.6	59.9	211.3	55.6
13-14	232.5	60.5	213.0	56.1
14-15	234.6	61.1	215.0	56.7
15-16	236.8	61.7	217.1	57.3
16-17	238.6	62.2	218.5	57.7
17-18	240.8	62.9	220.6	58.3
18-19	243.6	63.7	222.7	58.9
19-20	247.5	64.9	225.8	59.8
20-21	250.8	65.9	228.2	60.5
21-22	253.4	66.6	230.2	61.1
22-23	256.8	67.6	233.5	62.1

Load Curve on High Demand Day



Forecast

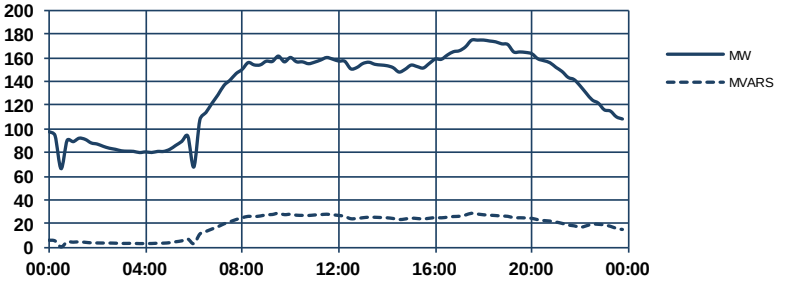


Winter Demand

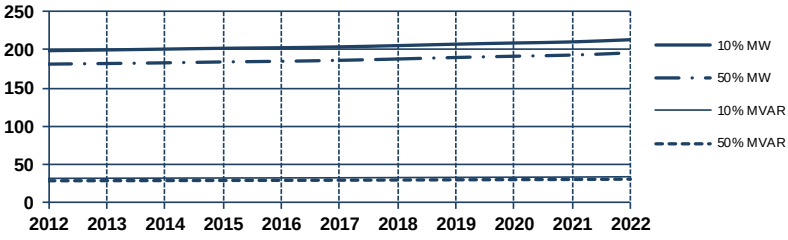
2011 MD	MW	MVAR
07 Jun 2011 18:00	174.9	28.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	198.9	32.2	181.4	29.1
2013	199.9	32.4	182.2	29.2
2014	201.0	32.5	183.0	29.3
2015	202.1	32.7	184.2	29.5
2016	202.8	32.8	185.1	29.6
2017	203.9	33.0	186.3	29.8
2018	205.5	33.2	188.1	30.1
2019	207.4	33.5	190.0	30.3
2020	208.9	33.7	191.7	30.6
2021	210.4	33.9	193.2	30.8
2022	213.2	34.3	196.1	31.2

Load Curve on High Demand Day



Forecast



Notes:

Buses 1 and 2 at ERTS.

For embedded generation details, please see next section of report.

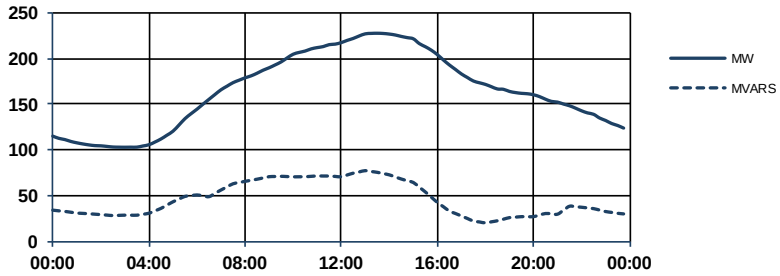
ERTS3466: East Rowville Terminal Station buses 3&4 66 kV bus

Summer Demand

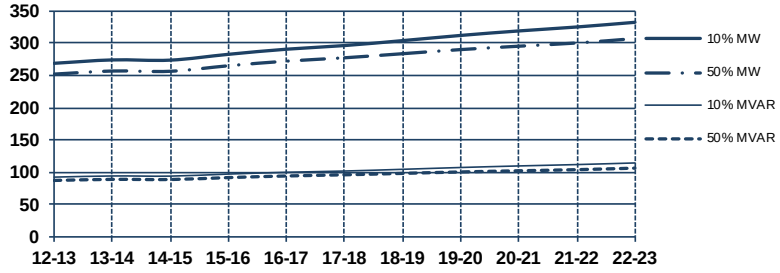
2011-12 MD	MW	MVAR
16 Feb 2012 13:00	227.6	77.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	268.6	92.5	251.9	87.3
13-14	273.8	94.3	256.7	89.0
14-15	273.5	94.0	256.3	88.8
15-16	282.5	97.2	264.8	91.8
16-17	290.4	100.0	271.9	94.3
17-18	296.1	101.9	277.1	96.0
18-19	303.7	104.6	283.5	98.2
19-20	311.7	107.4	289.8	100.5
20-21	318.7	109.8	295.1	102.3
21-22	324.8	111.9	300.1	104.0
22-23	332.0	114.4	306.9	106.4

Load Curve on High Demand Day



Forecast

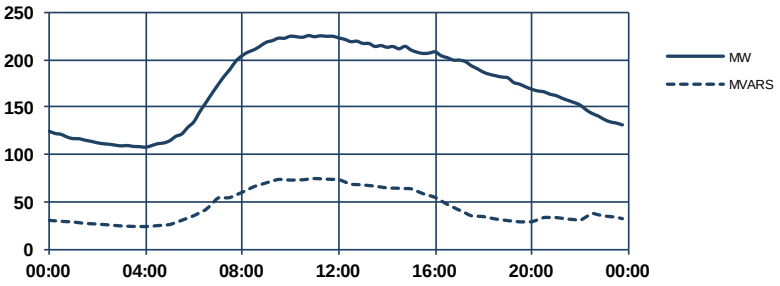


Winter Demand

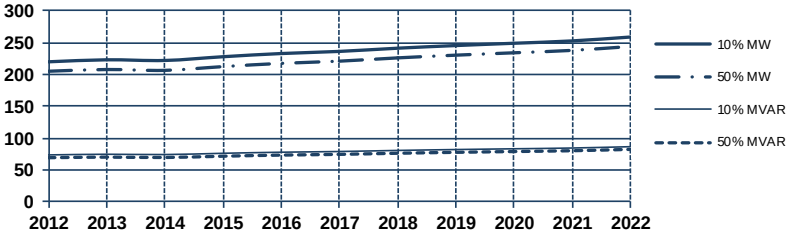
2011 MD	MW	MVAR
12 May 2011 11:30	225.4	74.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	219.7	73.8	204.9	69.5
2013	222.9	74.9	207.6	70.4
2014	221.8	74.4	206.3	69.8
2015	227.7	76.4	212.2	71.8
2016	232.7	78.1	217.3	73.6
2017	236.0	79.2	220.7	74.7
2018	241.0	80.9	225.9	76.5
2019	245.2	82.3	230.1	77.9
2020	248.8	83.4	233.8	79.1
2021	252.5	84.7	237.6	80.4
2022	258.5	86.7	243.7	82.5

Load Curve on High Demand Day



Forecast



Notes:

Buses 3 and 4 at ERTS.

For embedded generation details, please see next section of report.

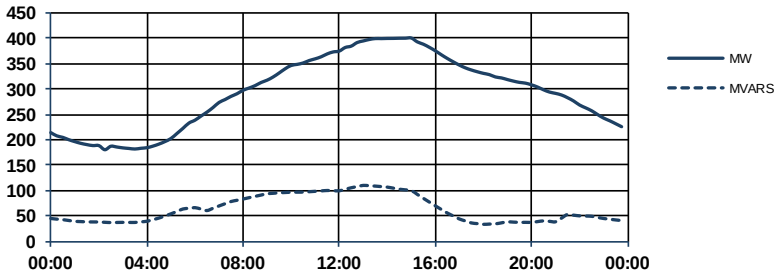
ERTS66: East Rowville Terminal Station 66 kV bus

Summer Demand

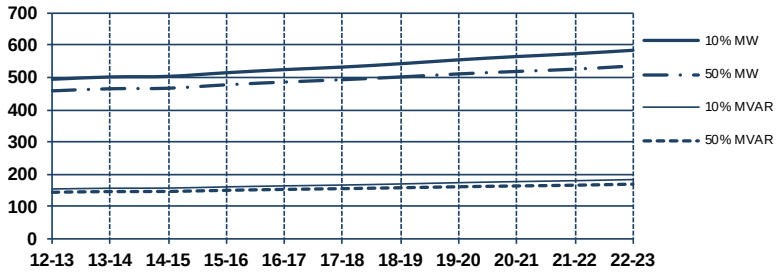
2011-12 MD	MW	MVAR
24 Jan 2012 15:00	400.3	109.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	494.0	154.4	458.1	144.3
13-14	501.2	156.7	464.6	146.4
14-15	503.0	157.2	466.3	146.8
15-16	514.2	160.9	476.9	150.3
16-17	523.9	164.0	485.4	153.1
17-18	531.8	166.6	492.7	155.5
18-19	542.2	170.0	501.1	158.2
19-20	554.1	173.9	510.6	161.3
20-21	564.3	177.2	518.2	163.8
21-22	573.1	180.1	525.3	166.1
22-23	583.7	183.5	535.3	169.4

Load Curve on High Demand Day



Forecast

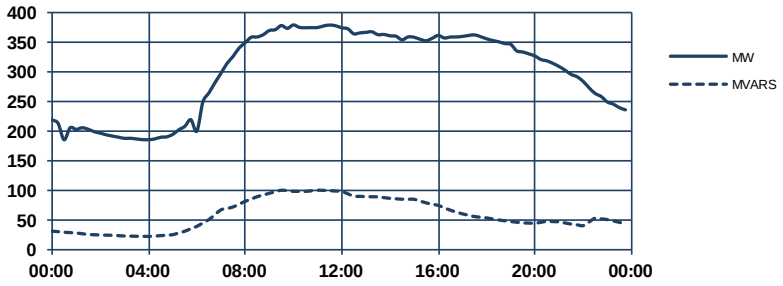


Winter Demand

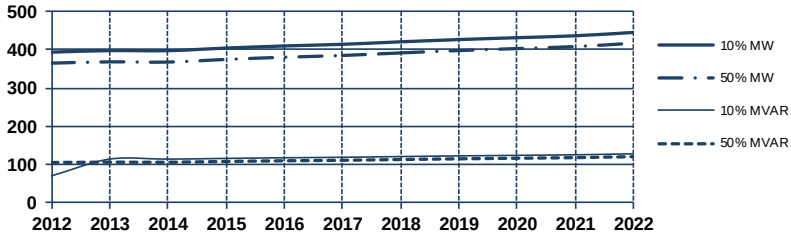
2011 MD	MW	MVAR
08 Jun 2011 10:00	378.7	99.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	394.0	70.7	365.3	105.8
2013	398.0	114.7	368.6	106.8
2014	397.9	114.6	368.1	106.6
2015	404.6	116.6	375.0	108.6
2016	410.2	118.2	380.8	110.3
2017	414.5	119.5	385.3	111.7
2018	420.9	121.4	392.0	113.7
2019	426.8	123.1	398.1	115.5
2020	431.8	124.6	403.3	117.0
2021	436.7	126.0	408.5	118.5
2022	445.5	128.6	417.4	121.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Approximately 6MW demand will be transferred away from ERTS to HTS in 2014/15 when new Keysborough zone substation is commissioned. Please see also the comments for ERTS12 and ERTS34.

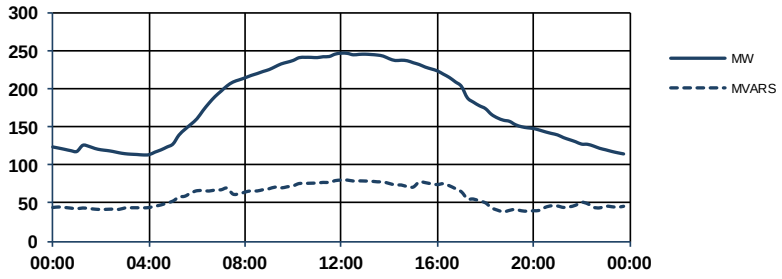
FBTS66: Fishermans Bend Terminal Station 66 kV bus

Summer Demand

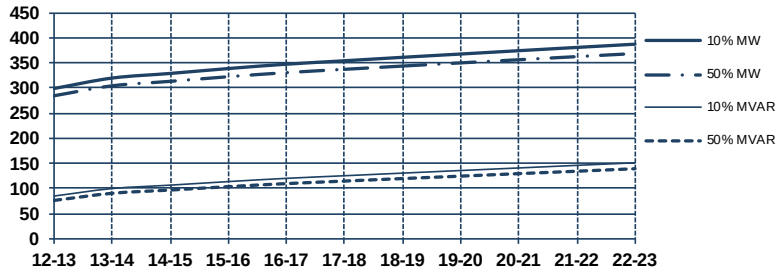
2011-12 MD	MW	MVAR
30 Jan 2012 13:30	246.9	80.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	299.2	85.2	284.8	76.5
13-14	320.0	100.1	304.6	90.7
14-15	329.2	106.9	313.4	97.2
15-16	338.9	114.0	322.6	103.9
16-17	347.6	120.4	330.8	110.0
17-18	354.4	125.6	337.4	115.0
18-19	361.3	130.8	343.9	120.0
19-20	367.8	136.0	350.2	124.8
20-21	374.4	141.1	356.4	129.8
21-22	380.9	146.3	362.6	134.6
22-23	387.4	151.4	368.8	139.6

Load Curve on High Demand Day



Forecast

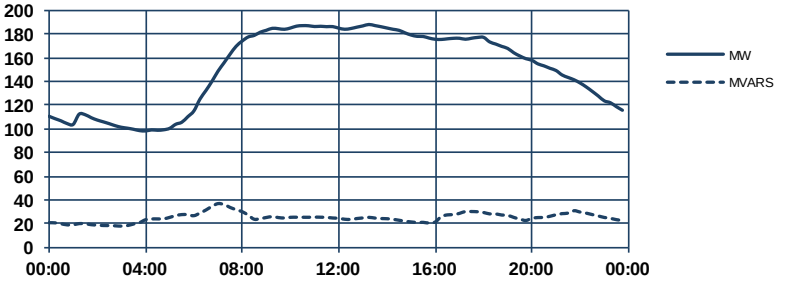


Winter Demand

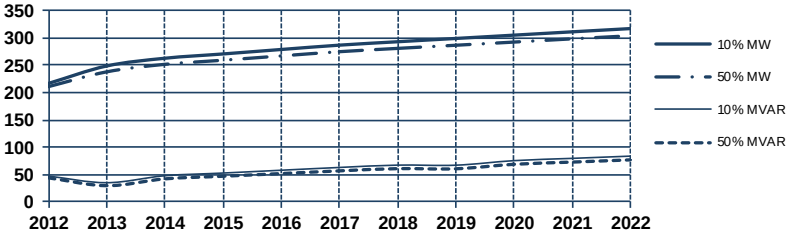
2011 MD	MW	MVAR
08 Jun 2011 10:30	188.0	36.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	216.8	47.5	210.9	44.3
2013	248.6	35.3	237.9	29.9
2014	262.8	48.1	251.7	42.4
2015	270.7	53.0	259.2	47.1
2016	278.8	58.1	267.1	52.1
2017	286.8	63.2	274.8	57.0
2018	293.0	67.5	280.8	61.1
2019	299.0	67.4	286.6	60.8
2020	305.1	75.7	292.4	69.0
2021	311.1	79.8	298.3	73.0
2022	317.0	83.9	304.0	77.1

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

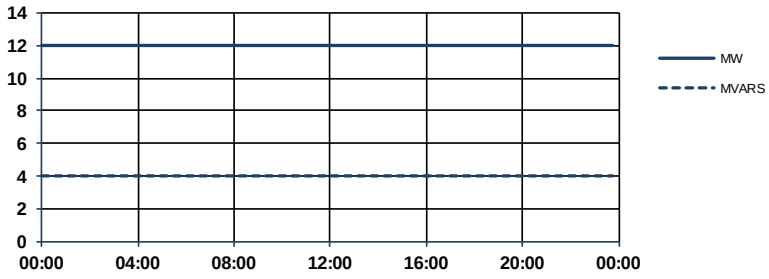
FVTS220: Fosterville Terminal Station 220 kV bus

Summer Demand

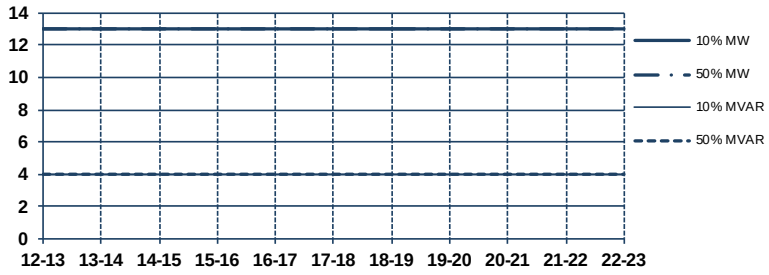
2011-12 MD	MW	MVAR
31 Mar 2012 00:30	12.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	13.0	4.0	13.0	4.0
13-14	13.0	4.0	13.0	4.0
14-15	13.0	4.0	13.0	4.0
15-16	13.0	4.0	13.0	4.0
16-17	13.0	4.0	13.0	4.0
17-18	13.0	4.0	13.0	4.0
18-19	13.0	4.0	13.0	4.0
19-20	13.0	4.0	13.0	4.0
20-21	13.0	4.0	13.0	4.0
21-22	13.0	4.0	13.0	4.0
22-23	13.0	4.0	13.0	4.0

Load Curve on High Demand Day



Forecast

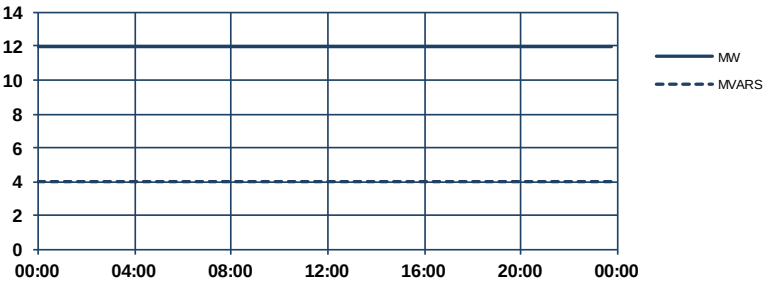


Winter Demand

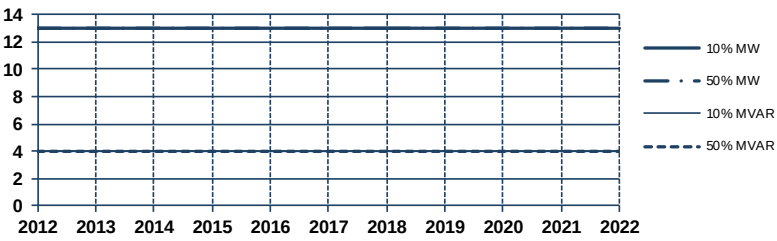
2011 MD	MW	MVAR
08 Jun 2011 03:00	12.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	13.0	4.0	13.0	4.0
2013	13.0	4.0	13.0	4.0
2014	13.0	4.0	13.0	4.0
2015	13.0	4.0	13.0	4.0
2016	13.0	4.0	13.0	4.0
2017	13.0	4.0	13.0	4.0
2018	13.0	4.0	13.0	4.0
2019	13.0	4.0	13.0	4.0
2020	13.0	4.0	13.0	4.0
2021	13.0	4.0	13.0	4.0
2022	13.0	4.0	13.0	4.0

Load Curve on High Demand Day



Forecast



Notes:

Direct connected industrial load (gold mining)

For embedded generation details, please see next section of report.

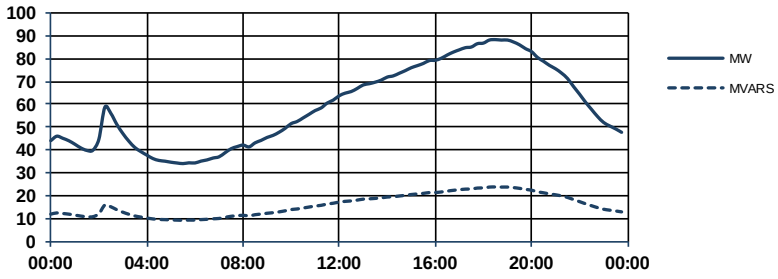
GNTS66: Glenrowan Terminal Station 66 kV bus

Summer Demand

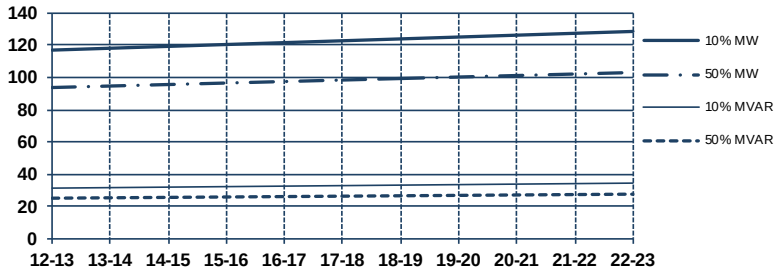
2011-12 MD	MW	MVAR
03 Jan 2012 17:30	88.3	23.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	116.9	31.4	93.7	25.2
13-14	118.0	31.7	94.6	25.4
14-15	119.2	32.0	95.5	25.7
15-16	120.3	32.3	96.5	25.9
16-17	121.5	32.7	97.4	26.2
17-18	122.6	33.0	98.3	26.4
18-19	123.8	33.3	99.3	26.7
19-20	124.9	33.6	100.2	26.9
20-21	126.1	33.9	101.1	27.2
21-22	127.3	34.2	102.0	27.4
22-23	128.4	34.5	103.0	27.7

Load Curve on High Demand Day



Forecast

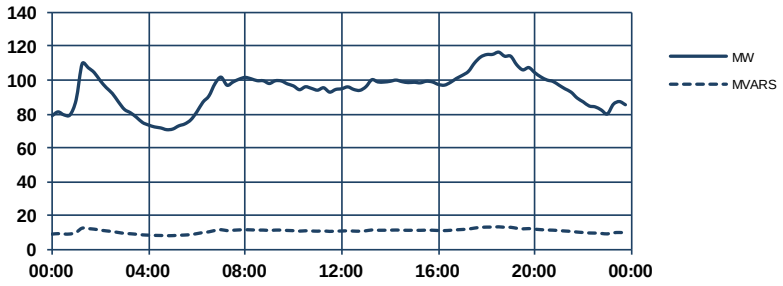


Winter Demand

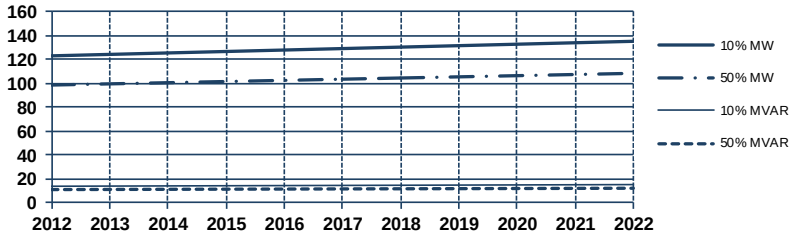
2011 MD	MW	MVAR
11 Jun 2011 01:30	116.5	13.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	123.0	14.0	98.6	11.3
2013	124.2	14.2	99.6	11.4
2014	125.4	14.3	100.6	11.5
2015	126.6	14.5	101.5	11.6
2016	127.9	14.6	102.5	11.7
2017	129.1	14.7	103.5	11.8
2018	130.3	14.9	104.5	11.9
2019	131.5	15.0	105.5	12.0
2020	132.7	15.2	106.4	12.1
2021	133.9	15.3	107.4	12.3
2022	135.1	15.4	108.4	12.4

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

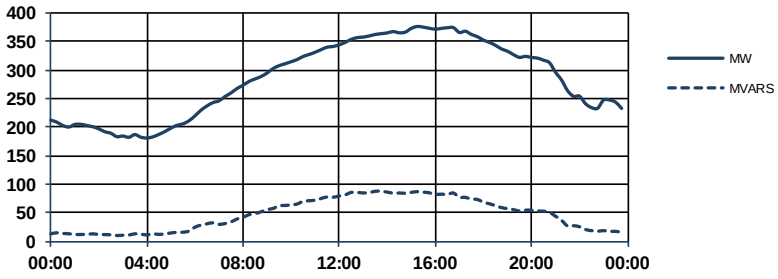
GTS66: Geelong Terminal Station 66 kV bus

Summer Demand

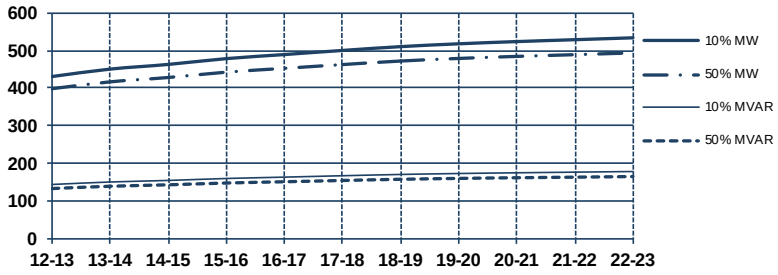
2011-12 MD	MW	MVAR
17 Jan 2012 15:30	376.0	87.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	430.7	144.3	398.4	133.5
13-14	450.4	150.9	416.6	139.6
14-15	462.8	155.0	428.1	143.4
15-16	478.2	160.2	442.3	148.2
16-17	489.0	163.8	452.4	151.5
17-18	499.9	167.5	462.4	154.9
18-19	510.0	170.9	471.8	158.1
19-20	517.5	173.4	478.7	160.4
20-21	523.4	175.3	484.1	162.2
21-22	528.4	177.0	488.7	163.7
22-23	533.4	178.7	493.4	165.3

Load Curve on High Demand Day



Forecast

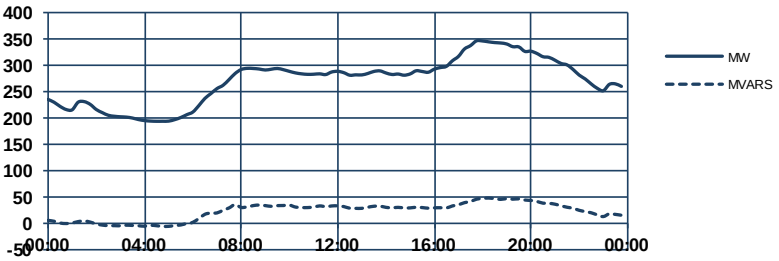


Winter Demand

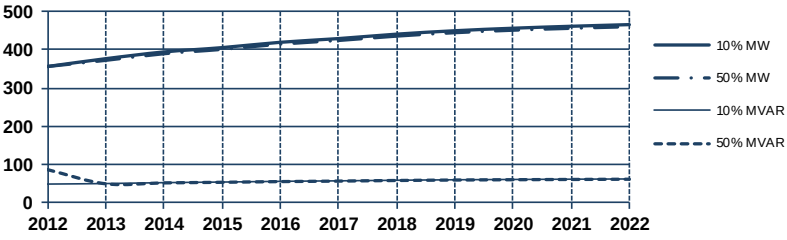
2011 MD	MW	MVAR
21 Jun 2011 18:00	345.9	47.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	356.5	49.6	356.5	87.4
2013	376.9	50.9	372.6	50.3
2014	394.5	53.3	389.9	52.6
2015	405.8	54.8	401.2	54.2
2016	419.7	56.7	414.9	56.0
2017	429.4	58.0	424.5	57.3
2018	441.0	59.5	435.9	58.9
2019	449.9	60.8	444.8	60.1
2020	456.5	61.6	451.3	60.9
2021	461.6	62.3	456.3	61.6
2022	465.9	62.9	460.5	62.2

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

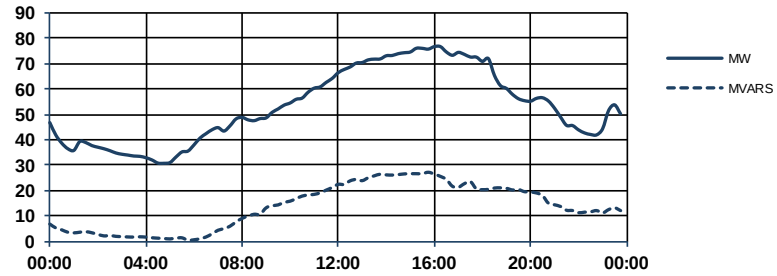
HOTS66: Horsham Terminal Station 66 kV bus

Summer Demand

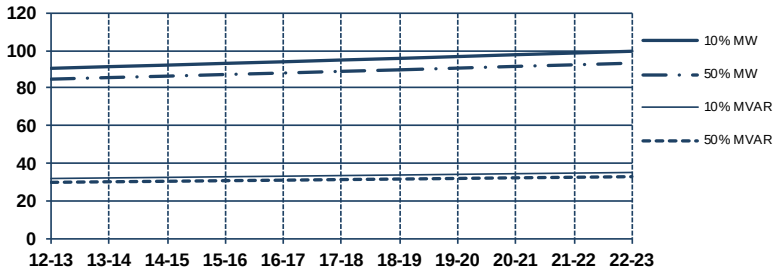
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	76.7	27.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	90.5	32.0	84.8	30.0
13-14	91.4	32.3	85.6	30.3
14-15	92.2	32.6	86.3	30.6
15-16	93.1	33.0	87.2	30.9
16-17	94.0	33.3	88.0	31.1
17-18	94.9	33.6	88.9	31.5
18-19	95.8	33.9	89.7	31.7
19-20	96.7	34.2	90.6	32.1
20-21	97.7	34.6	91.5	32.4
21-22	98.6	34.9	92.4	32.7
22-23	99.6	35.2	93.2	33.0

Load Curve on High Demand Day



Forecast

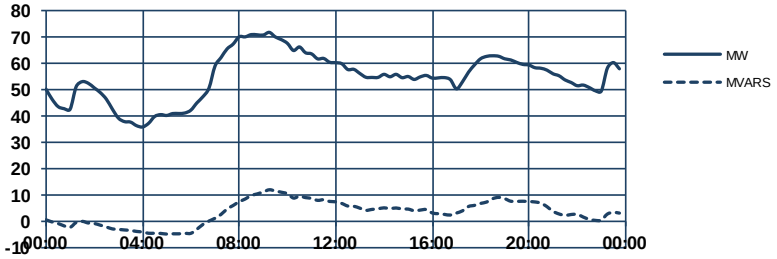


Winter Demand

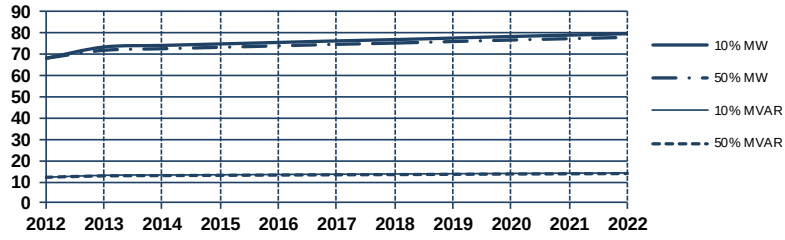
2011 MD	MW	MVAR
31 May 2011 09:30	71.6	11.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	68.0	12.1	68.0	12.1
2013	73.3	13.0	71.8	12.8
2014	74.1	13.2	72.5	12.9
2015	74.8	13.3	73.2	13.0
2016	75.5	13.4	73.9	13.1
2017	76.2	13.6	74.6	13.3
2018	76.8	13.7	75.2	13.4
2019	77.5	13.8	75.9	13.5
2020	78.3	13.9	76.6	13.6
2021	78.9	14.0	77.2	13.7
2022	79.6	14.2	77.9	13.9

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

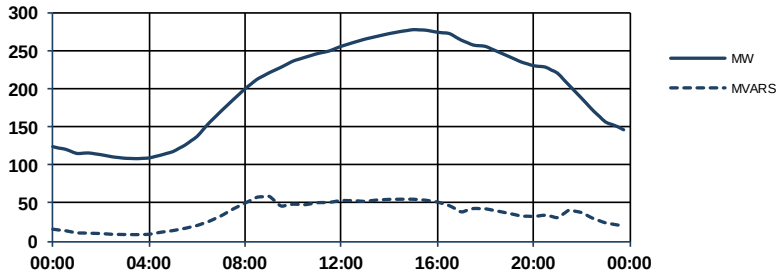
HTS66: Heatherton Terminal Station 66 kV bus

Summer Demand

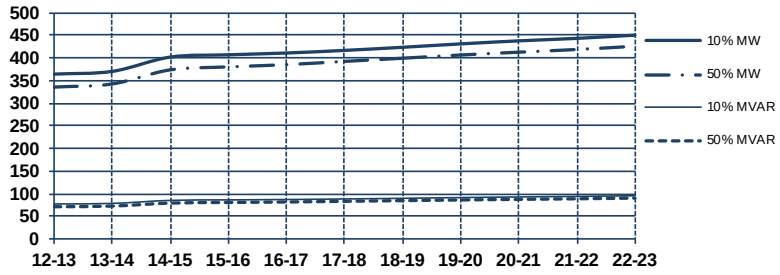
2011-12 MD	MW	MVAR
17 Jan 2012 15:00	277.8	58.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	364.3	77.1	335.6	71.0
13-14	370.3	78.4	342.5	72.5
14-15	401.9	85.1	373.7	79.1
15-16	406.9	86.1	380.2	80.5
16-17	410.9	87.0	385.2	81.5
17-18	416.7	88.2	392.4	83.1
18-19	423.6	89.7	399.4	84.6
19-20	431.1	91.3	406.5	86.1
20-21	437.8	92.7	412.7	87.4
21-22	443.3	93.8	418.7	88.6
22-23	450.3	95.3	425.8	90.1

Load Curve on High Demand Day



Forecast

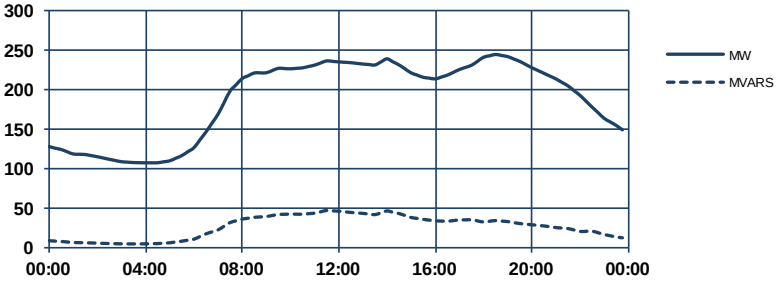


Winter Demand

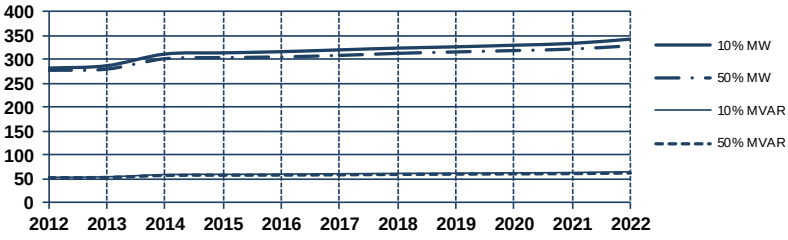
2011 MD	MW	MVAR
07 Jun 2011 18:30	244.2	46.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	281.9	53.9	277.3	53.0
2013	286.8	54.8	279.7	53.5
2014	311.2	59.5	301.5	57.6
2015	313.7	60.0	303.7	58.1
2016	316.2	60.4	305.3	58.4
2017	320.0	61.2	308.4	58.9
2018	323.7	61.9	312.7	59.8
2019	326.3	62.4	315.6	60.3
2020	329.7	63.0	318.5	60.9
2021	333.5	63.7	321.6	61.5
2022	342.4	65.4	328.5	62.8

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Approximatley 24MW demand will be transferred onto HTS in 2014/15 from SVTS and ERTS when new Keysborough zone substation is commissioned.

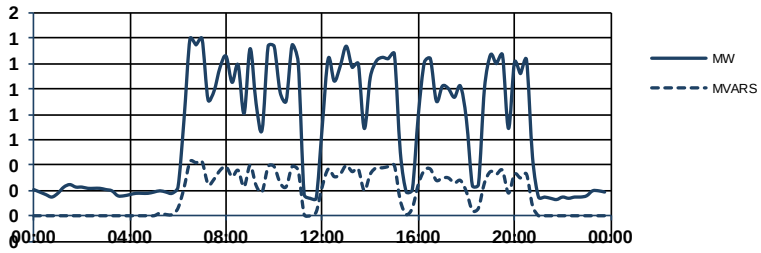
HYTS22: Heywood Terminal Station 22 kV bus

Summer Demand

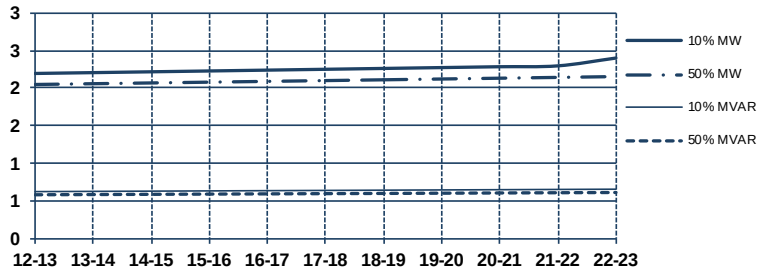
2011-12 MD	MW	MVAR
20 Dec 2011 07:00	1.4	0.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	2.2	0.6	2.0	0.6
13-14	2.2	0.6	2.1	0.6
14-15	2.2	0.6	2.1	0.6
15-16	2.2	0.6	2.1	0.6
16-17	2.2	0.6	2.1	0.6
17-18	2.2	0.6	2.1	0.6
18-19	2.3	0.6	2.1	0.6
19-20	2.3	0.6	2.1	0.6
20-21	2.3	0.7	2.1	0.6
21-22	2.3	0.7	2.1	0.6
22-23	2.4	0.7	2.2	0.6

Load Curve on High Demand Day



Forecast

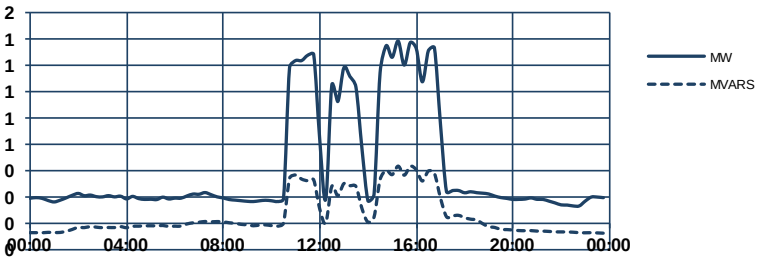


Winter Demand

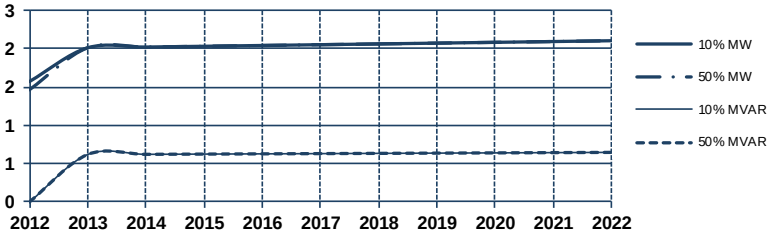
2011 MD	MW	MVAR
15 Sep 2011 16:00	1.4	0.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	1.6	0.0	1.5	0.0
2013	2.0	0.6	2.0	0.6
2014	2.0	0.6	2.0	0.6
2015	2.0	0.6	2.0	0.6
2016	2.0	0.6	2.0	0.6
2017	2.1	0.6	2.1	0.6
2018	2.1	0.6	2.1	0.6
2019	2.1	0.6	2.1	0.6
2020	2.1	0.6	2.1	0.6
2021	2.1	0.6	2.1	0.6
2022	2.1	0.6	2.1	0.6

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

HYTS 22kV supply established in 2009. The load is small, and industrial / agricultural in nature.

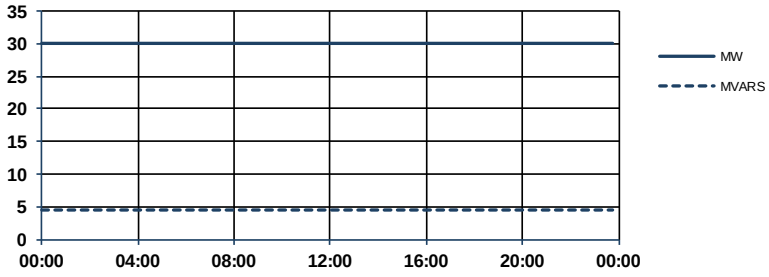
JLA220: John Lysaght 220 kV bus

Summer Demand

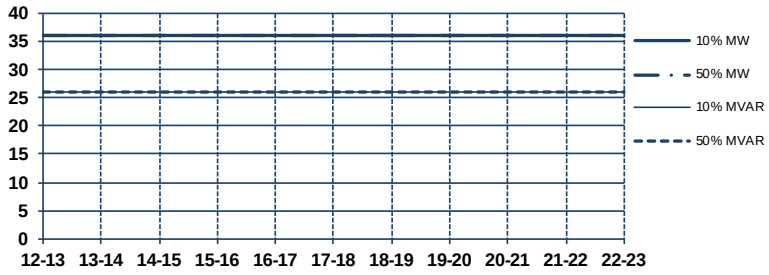
2011-12 MD	MW	MVAR
01 Mar 2012 19:00	30.0	4.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	36.0	26.0	36.0	26.0
13-14	36.0	26.0	36.0	26.0
14-15	36.0	26.0	36.0	26.0
15-16	36.0	26.0	36.0	26.0
16-17	36.0	26.0	36.0	26.0
17-18	36.0	26.0	36.0	26.0
18-19	36.0	26.0	36.0	26.0
19-20	36.0	26.0	36.0	26.0
20-21	36.0	26.0	36.0	26.0
21-22	36.0	26.0	36.0	26.0
22-23	36.0	26.0	36.0	26.0

Load Curve on High Demand Day



Forecast

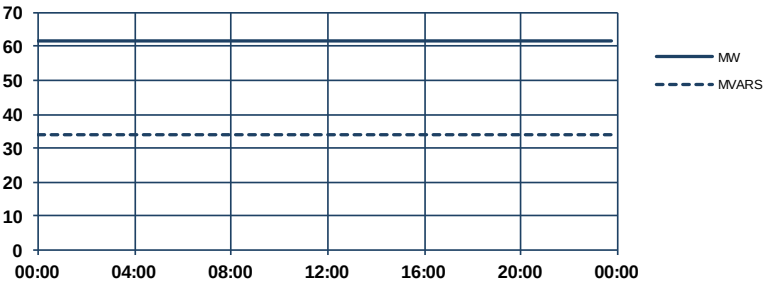


Winter Demand

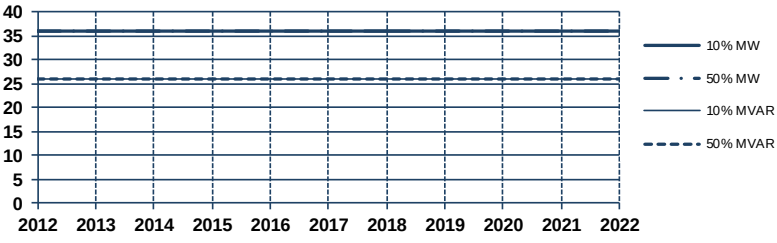
2011 MD	MW	MVAR
14 Aug 2011 07:30	61.6	33.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	36.0	26.0	36.0	26.0
2013	36.0	26.0	36.0	26.0
2014	36.0	26.0	36.0	26.0
2015	36.0	26.0	36.0	26.0
2016	36.0	26.0	36.0	26.0
2017	36.0	26.0	36.0	26.0
2018	36.0	26.0	36.0	26.0
2019	36.0	26.0	36.0	26.0
2020	36.0	26.0	36.0	26.0
2021	36.0	26.0	36.0	26.0
2022	36.0	26.0	36.0	26.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This load is a direct connect customer, near Tyabb Terminal Station.

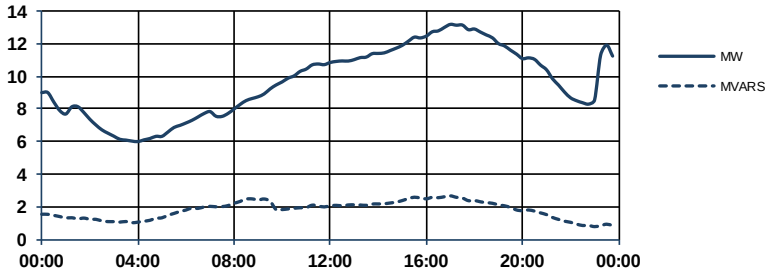
KGTS22: Kerang Terminal Station 22 kV bus

Summer Demand

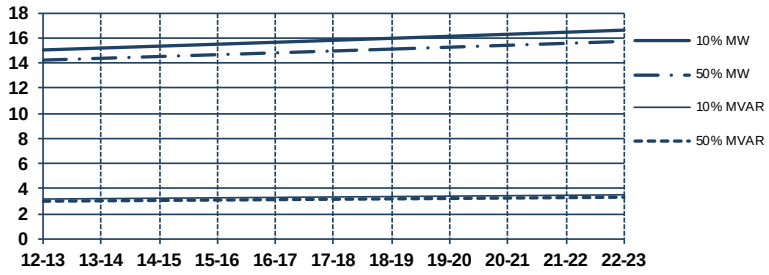
2011-12 MD	MW	MVAR
02 Jan 2012 17:30	13.2	2.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	15.0	3.2	14.2	3.0
13-14	15.2	3.2	14.4	3.0
14-15	15.4	3.3	14.5	3.1
15-16	15.5	3.3	14.7	3.1
16-17	15.7	3.3	14.8	3.1
17-18	15.8	3.3	15.0	3.2
18-19	16.0	3.4	15.1	3.2
19-20	16.1	3.4	15.3	3.2
20-21	16.3	3.5	15.4	3.3
21-22	16.5	3.5	15.6	3.3
22-23	16.6	3.5	15.7	3.3

Load Curve on High Demand Day



Forecast

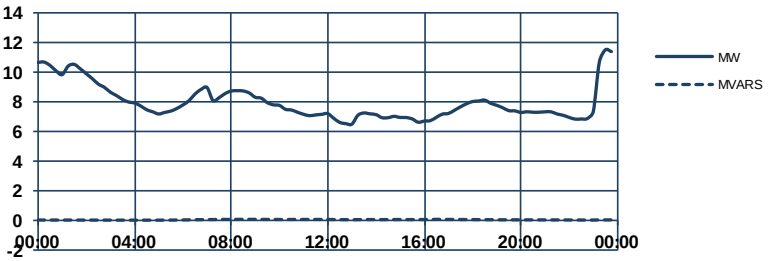


Winter Demand

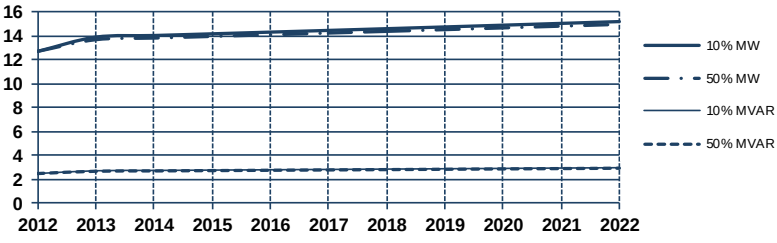
2011 MD	MW	MVAR
16 Jul 2011 00:00	11.5	0.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	12.7	2.5	12.7	2.5
2013	13.9	2.7	13.7	2.7
2014	14.0	2.8	13.8	2.7
2015	14.2	2.8	14.0	2.7
2016	14.3	2.8	14.1	2.8
2017	14.5	2.8	14.2	2.8
2018	14.6	2.9	14.4	2.8
2019	14.7	2.9	14.5	2.9
2020	14.9	2.9	14.7	2.9
2021	15.0	3.0	14.8	2.9
2022	15.2	3.0	15.0	2.9

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at KGTS.

For embedded generation details, please see next section of report.

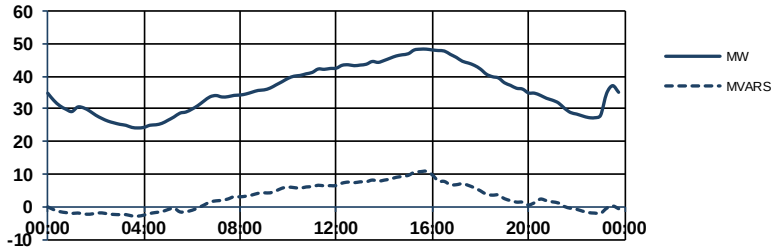
KGTS66: Kerang Terminal Station 66 kV bus

Summer Demand

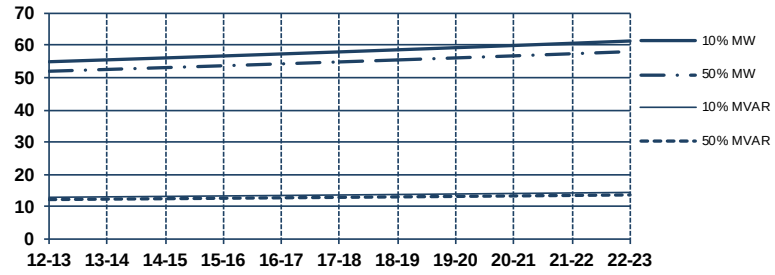
2011-12 MD	MW	MVAR
03 Jan 2012 16:00	48.3	10.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	54.9	12.9	51.9	12.2
13-14	55.5	13.1	52.5	12.4
14-15	56.1	13.2	53.1	12.5
15-16	56.7	13.4	53.6	12.6
16-17	57.3	13.5	54.2	12.8
17-18	57.9	13.6	54.8	12.9
18-19	58.6	13.8	55.4	13.1
19-20	59.2	14.0	56.1	13.2
20-21	59.9	14.1	56.7	13.4
21-22	60.6	14.3	57.3	13.5
22-23	61.3	14.4	58.0	13.7

Load Curve on High Demand Day



Forecast

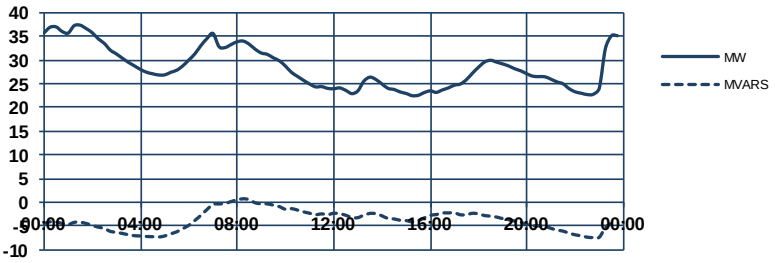


Winter Demand

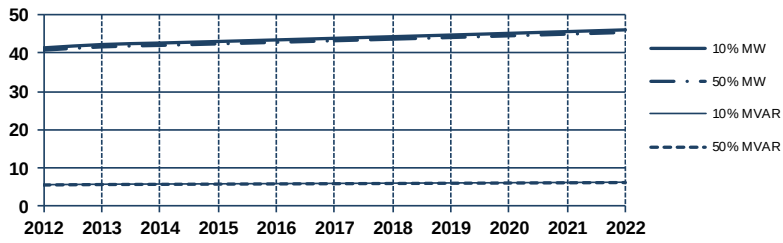
2011 MD	MW	MVAR
09 Jun 2011 01:30	37.3	-3.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	41.4	5.7	40.8	5.6
2013	42.3	5.8	41.7	5.7
2014	42.7	5.9	42.0	5.8
2015	43.1	5.9	42.4	5.8
2016	43.5	6.0	42.9	5.9
2017	43.9	6.0	43.3	5.9
2018	44.3	6.1	43.7	6.0
2019	44.8	6.2	44.1	6.1
2020	45.2	6.2	44.5	6.1
2021	45.7	6.3	45.0	6.2
2022	46.1	6.3	45.4	6.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

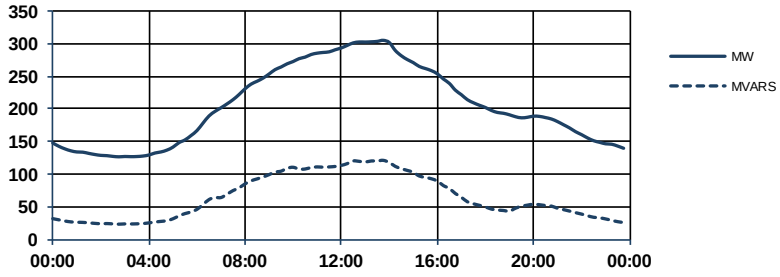
KTS_East66: Eastern area served by Keilor Terminal Stn. 66 kV bus

Summer Demand

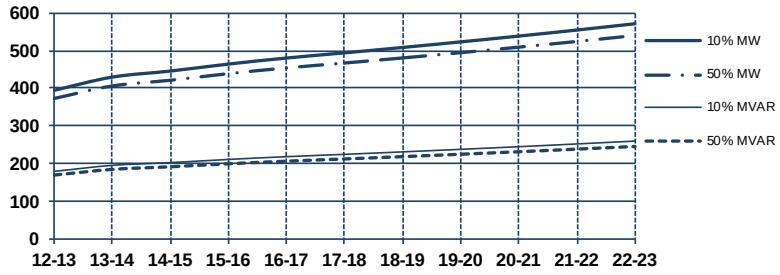
2011-12 MD	MW	MVAR
24 Jan 2012 15:30	304.8	120.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	394.5	179.6	372.9	169.7
13-14	429.6	195.5	406.1	184.8
14-15	445.6	202.8	421.3	191.7
15-16	464.1	211.2	438.8	199.7
16-17	480.2	218.6	453.9	206.6
17-18	493.9	224.8	466.9	212.5
18-19	508.2	231.3	480.4	218.7
19-20	523.0	238.0	494.4	225.0
20-21	538.4	245.0	509.0	231.7
21-22	554.4	252.3	524.1	238.5
22-23	571.1	259.9	539.9	245.7

Load Curve on High Demand Day



Forecast

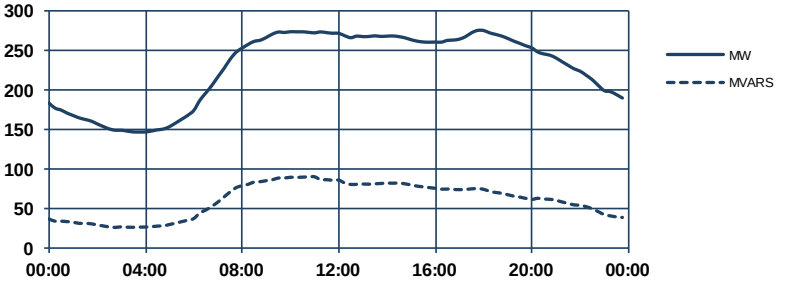


Winter Demand

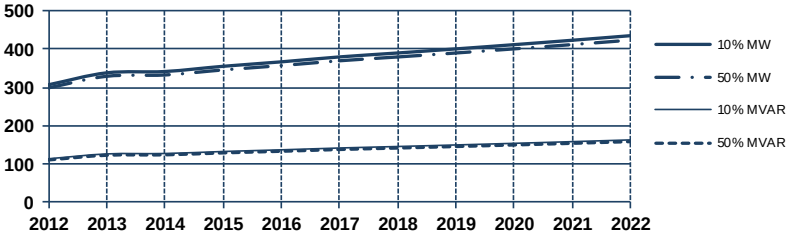
2011 MD	MW	MVAR
08 Jun 2011 18:00	274.9	89.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	307.2	114.1	299.2	111.1
2013	338.4	126.8	329.4	123.3
2014	341.9	127.9	332.8	124.4
2015	355.5	133.1	346.0	129.5
2016	367.1	137.5	357.3	133.7
2017	380.0	142.2	369.9	138.4
2018	390.2	146.1	379.9	142.2
2019	400.9	150.2	390.2	146.1
2020	412.0	154.4	401.0	150.2
2021	423.5	158.8	412.2	154.5
2022	435.4	163.4	423.8	158.9

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

KTS is split for planning purposes. KTS East is supplied by Transformers 1, 2 and 3.

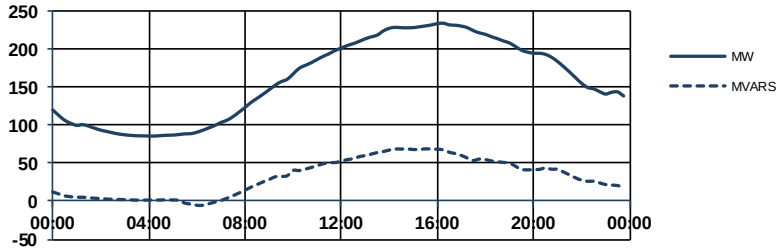
KTS_West66: Western area served by Keilor Terminal Stn. 66 kV bus

Summer Demand

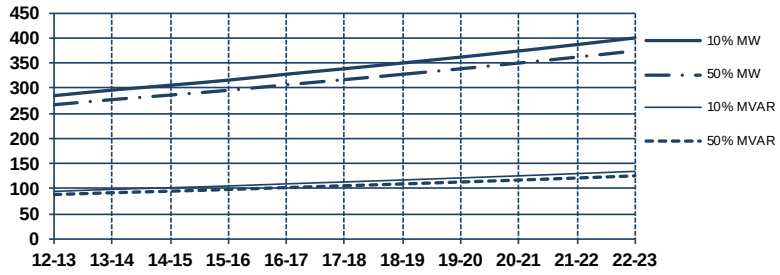
2011-12 MD	MW	MVAR
02 Jan 2012 17:30	233.7	68.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	285.3	94.9	267.2	88.6
13-14	296.4	98.9	277.4	92.3
14-15	306.1	102.2	286.5	95.3
15-16	316.2	105.6	296.0	98.6
16-17	327.9	109.9	307.0	102.5
17-18	338.9	113.7	317.1	106.1
18-19	350.2	117.6	327.8	109.7
19-20	362.0	121.7	338.8	113.5
20-21	374.2	125.8	350.2	117.4
21-22	386.9	130.3	362.0	121.5
22-23	400.1	134.8	374.3	125.7

Load Curve on High Demand Day



Forecast

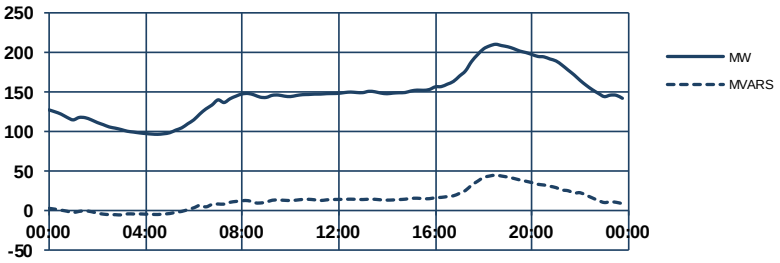


Winter Demand

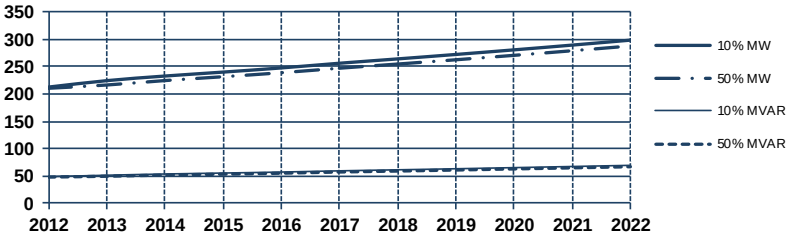
2011 MD	MW	MVAR
07 Jun 2011 18:30	209.9	44.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	212.7	49.0	210.5	48.2
2013	224.4	51.7	216.5	49.8
2014	232.9	53.9	224.6	52.0
2015	240.1	55.7	231.6	53.6
2016	247.7	57.5	238.9	55.4
2017	256.3	59.7	247.2	57.5
2018	264.2	61.6	254.8	59.3
2019	272.3	63.5	262.6	61.2
2020	280.7	65.5	270.7	63.2
2021	289.4	67.6	279.1	65.1
2022	298.4	69.7	287.8	67.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

KTS is split for planning purposes. KTS West is supplied by transformers 3 and 4.

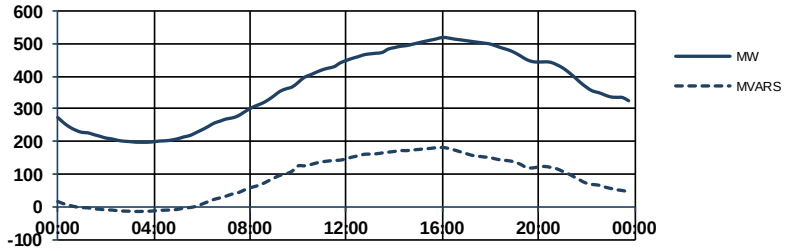
KTS66: Keilor Terminal Station 66 kV bus

Summer Demand

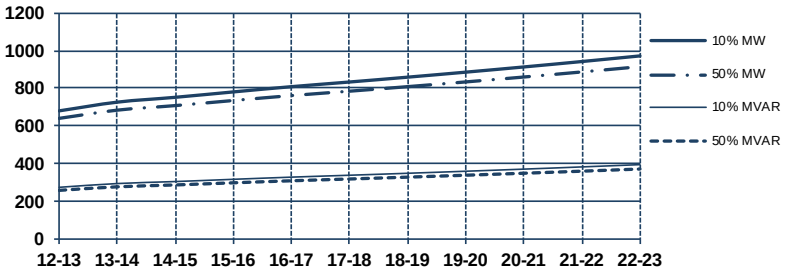
2011-12 MD	MW	MVAR
24 Jan 2012 16:30	518.3	181.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	680.1	274.6	640.4	258.4
13-14	726.3	294.6	683.8	277.2
14-15	752.1	305.2	708.1	287.2
15-16	780.7	317.1	735.1	298.5
16-17	808.5	328.6	761.3	309.3
17-18	833.2	338.7	784.5	318.8
18-19	858.8	349.1	808.6	328.6
19-20	885.4	359.9	833.6	338.8
20-21	913.1	371.1	859.6	349.3
21-22	941.8	382.8	886.6	360.2
22-23	971.6	394.9	914.6	371.6

Load Curve on High Demand Day



Forecast

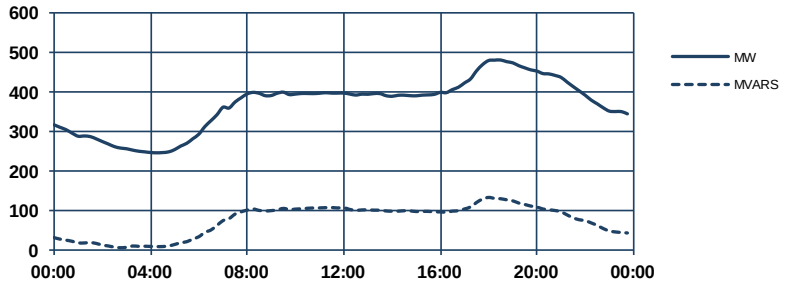


Winter Demand

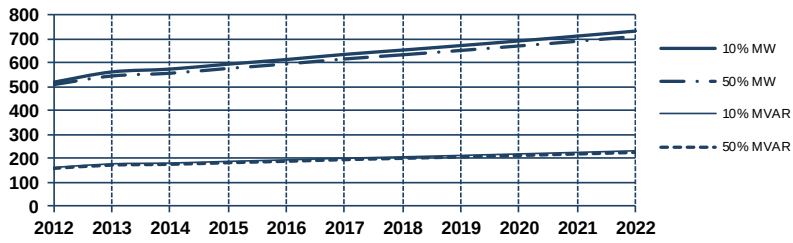
2011 MD	MW	MVAR
08 Jun 2011 18:00	480.0	132.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	518.9	162.8	508.8	159.0
2013	561.8	178.1	545.0	172.8
2014	573.7	181.4	556.4	176.0
2015	594.5	188.5	576.6	182.8
2016	613.7	194.6	595.2	188.7
2017	635.1	201.6	616.0	195.5
2018	653.3	207.3	633.5	201.1
2019	672.0	213.3	651.7	206.9
2020	691.5	219.6	670.5	213.0
2021	711.6	226.0	690.1	219.2
2022	732.6	232.7	710.3	225.7

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

KTS is split for planning purposes. Please see KTS East and KTS West.

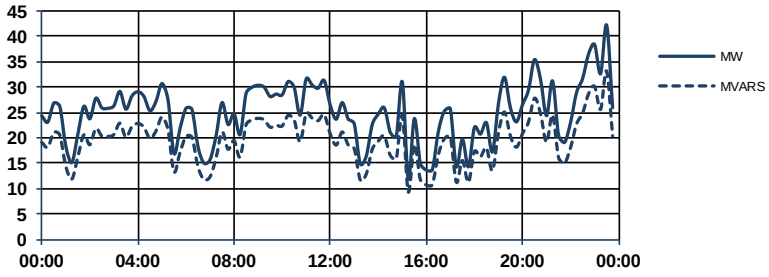
LY66: Loy Yang Substation 66 kV bus

Summer Demand

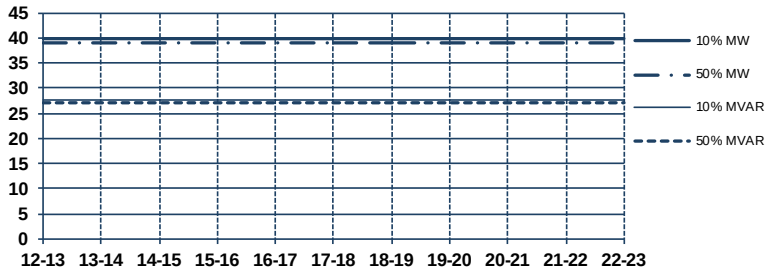
2011-12 MD	MW	MVAR
24 Nov 2011 11:30	42.2	33.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	39.9	27.7	39.0	27.1
13-14	39.9	27.7	39.0	27.1
14-15	39.9	27.7	39.0	27.1
15-16	39.9	27.7	39.0	27.1
16-17	39.9	27.7	39.0	27.1
17-18	39.9	27.7	39.0	27.1
18-19	39.9	27.7	39.0	27.1
19-20	39.9	27.7	39.0	27.1
20-21	39.9	27.7	39.0	27.1
21-22	39.9	27.7	39.0	27.1
22-23	39.9	27.7	39.0	27.1

Load Curve on High Demand Day



Forecast

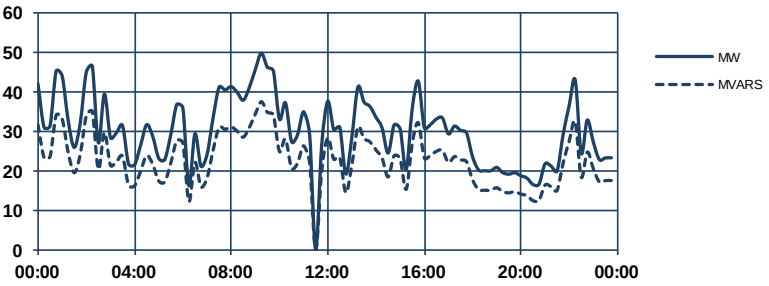


Winter Demand

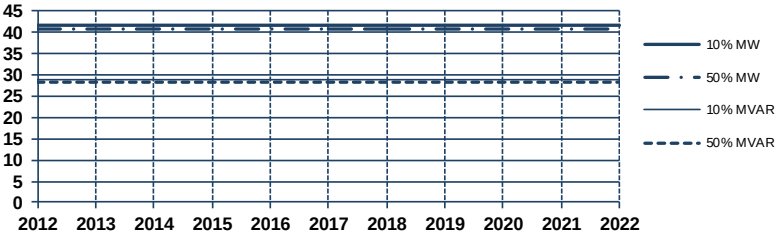
2011 MD	MW	MVAR
29 Jun 2011 11:30	49.7	37.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	41.6	28.9	40.8	28.3
2013	41.6	28.9	40.8	28.3
2014	41.6	28.9	40.8	28.3
2015	41.6	28.9	40.8	28.3
2016	41.6	28.9	40.8	28.3
2017	41.6	28.9	40.8	28.3
2018	41.6	28.9	40.8	28.3
2019	41.6	28.9	40.8	28.3
2020	41.6	28.9	40.8	28.3
2021	41.6	28.9	40.8	28.3
2022	41.6	28.9	40.8	28.3

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Includes SP-Ausnet distribution and the direct connect customer Loy Yang Power. This is a substation whose demand is also included in this report under MWTS. AEMO advises that if an outage of a Loy Yang power station unit transformer occurs, approximately 50 MW of additional demand may be drawn from the Morwell terminal station.

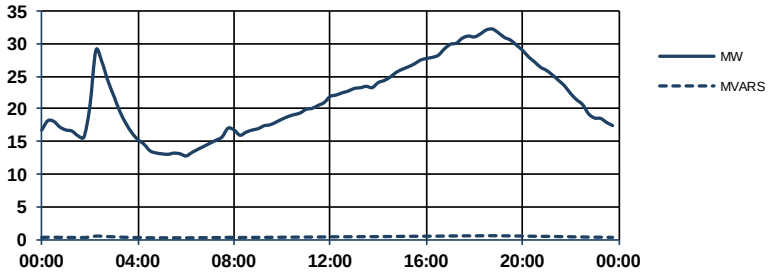
MBTS66: Mount Beauty Terminal Station 66 kV bus

Summer Demand

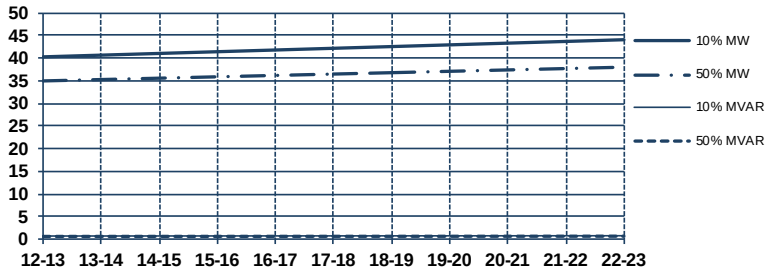
2011-12 MD	MW	MVAR
02 Jan 2012 17:00	32.2	0.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	40.3	0.7	35.0	0.6
13-14	40.7	0.7	35.3	0.6
14-15	41.0	0.7	35.6	0.6
15-16	41.4	0.7	35.9	0.6
16-17	41.8	0.7	36.2	0.6
17-18	42.2	0.7	36.5	0.6
18-19	42.5	0.7	36.8	0.6
19-20	42.9	0.7	37.1	0.6
20-21	43.3	0.7	37.4	0.6
21-22	43.7	0.7	37.7	0.6
22-23	44.1	0.7	38.0	0.6

Load Curve on High Demand Day



Forecast

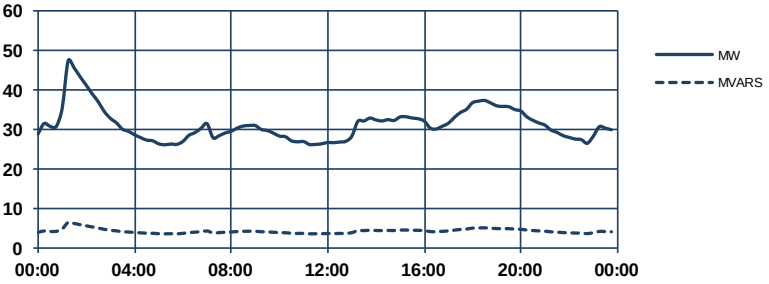


Winter Demand

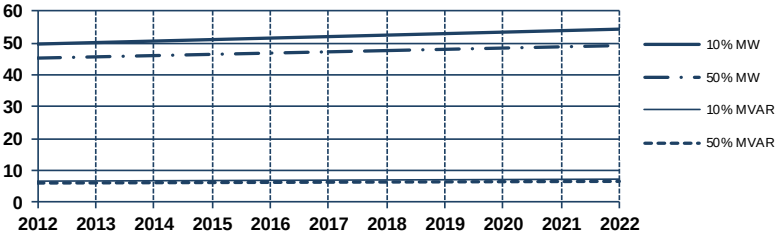
2011 MD	MW	MVAR
09 Jul 2011 01:30	47.3	6.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	49.6	6.7	45.2	6.1
2013	50.1	6.7	45.6	6.1
2014	50.6	6.8	46.0	6.2
2015	51.0	6.9	46.4	6.3
2016	51.5	6.9	46.8	6.3
2017	52.0	7.0	47.2	6.4
2018	52.4	7.1	47.6	6.4
2019	52.9	7.1	48.0	6.5
2020	53.4	7.2	48.4	6.5
2021	53.8	7.3	48.8	6.6
2022	54.3	7.3	49.2	6.6

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

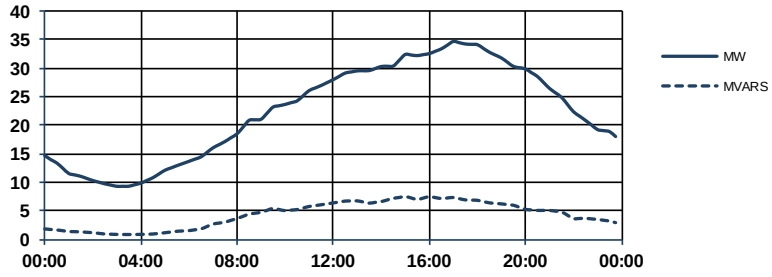
MTS22: Malvern Terminal Station 22 kV bus

Summer Demand

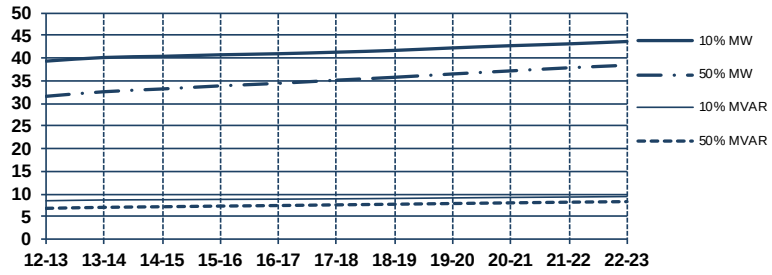
2011-12 MD	MW	MVAR
24 Feb 2012 17:00	34.6	7.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	39.3	8.5	31.6	6.8
13-14	40.1	8.6	32.6	7.0
14-15	40.4	8.7	33.2	7.1
15-16	40.7	8.8	33.9	7.3
16-17	41.0	8.8	34.4	7.4
17-18	41.3	8.9	35.1	7.6
18-19	41.7	9.0	35.8	7.7
19-20	42.3	9.1	36.5	7.9
20-21	42.7	9.2	37.2	8.0
21-22	43.1	9.3	37.9	8.2
22-23	43.7	9.4	38.4	8.3

Load Curve on High Demand Day



Forecast

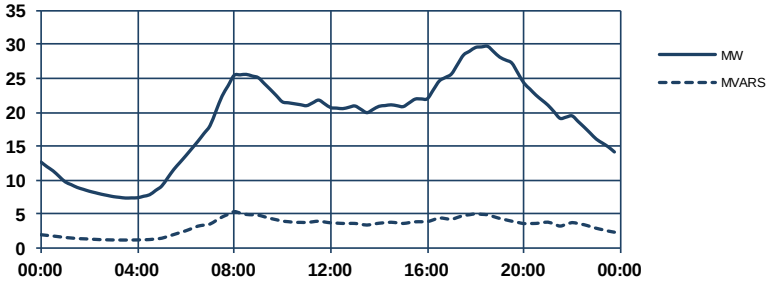


Winter Demand

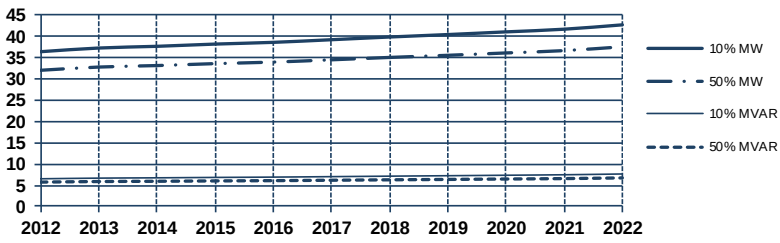
2011 MD	MW	MVAR
07 Jun 2011 18:30	29.7	5.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	36.4	6.5	32.0	5.7
2013	37.2	6.7	32.8	5.9
2014	37.6	6.7	33.1	5.9
2015	38.2	6.8	33.6	6.0
2016	38.6	6.9	33.9	6.1
2017	39.2	7.0	34.5	6.2
2018	39.8	7.1	35.0	6.3
2019	40.4	7.2	35.5	6.4
2020	41.0	7.3	36.1	6.5
2021	41.7	7.5	36.6	6.6
2022	42.7	7.6	37.5	6.7

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This includes only the 22kV load at MTS representing the demand through the 66/22kV transformers.

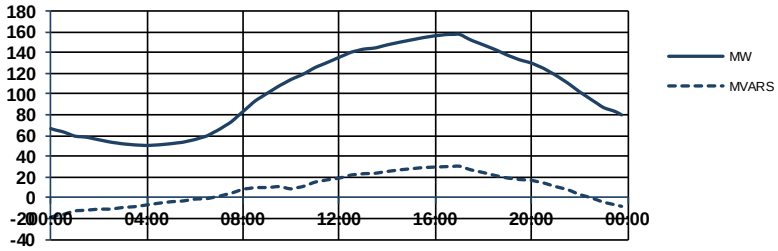
MTS66: Malvern Terminal Station 66 kV bus

Summer Demand

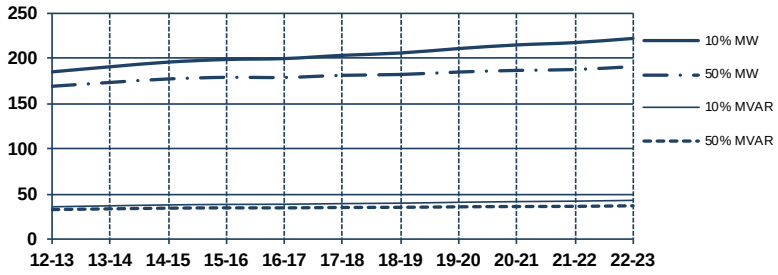
2011-12 MD	MW	MVAR
25 Feb 2012 17:00	157.4	30.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	184.8	35.7	168.9	32.6
13-14	190.4	36.8	173.1	33.4
14-15	195.6	37.8	177.0	34.2
15-16	198.5	38.3	178.7	34.5
16-17	199.5	38.5	178.6	34.5
17-18	203.0	39.2	181.0	34.9
18-19	205.7	39.7	181.9	35.1
19-20	210.6	40.6	184.6	35.6
20-21	214.5	41.4	186.4	36.0
21-22	217.1	41.9	187.3	36.2
22-23	221.7	42.8	190.6	36.8

Load Curve on High Demand Day



Forecast

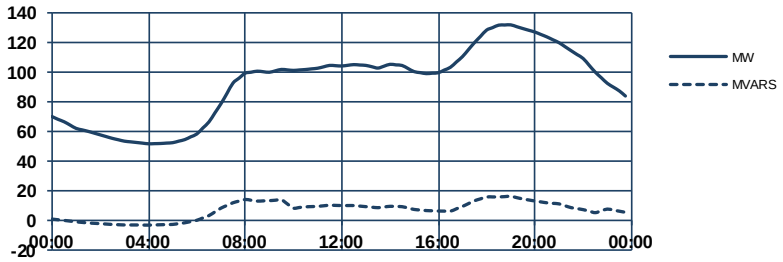


Winter Demand

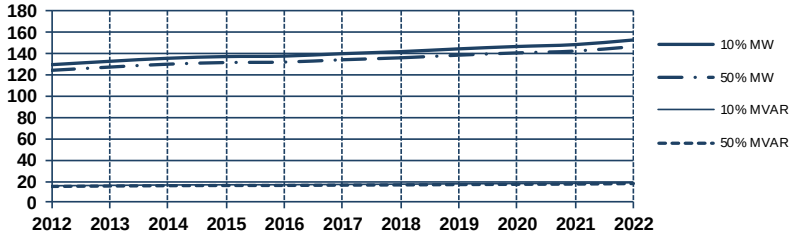
2011 MD	MW	MVAR
07 Jun 2011 19:00	131.7	16.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	129.5	15.7	124.2	15.1
2013	132.7	16.1	127.2	15.5
2014	135.5	16.5	130.0	15.8
2015	137.1	16.7	131.5	16.0
2016	137.6	16.7	131.9	16.0
2017	139.9	17.0	134.1	16.3
2018	141.8	17.2	136.0	16.5
2019	144.4	17.5	138.5	16.8
2020	146.6	17.8	140.6	17.1
2021	148.4	18.0	142.3	17.3
2022	152.7	18.6	146.5	17.8

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This includes only the 66kV load at MTS excluding the 22kV load at MTS

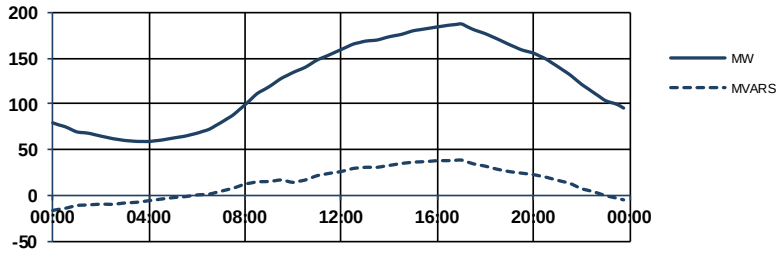
MTS662266: Malvern T.S. - 66 and 22 kV loads combined 66 kV bus

Summer Demand

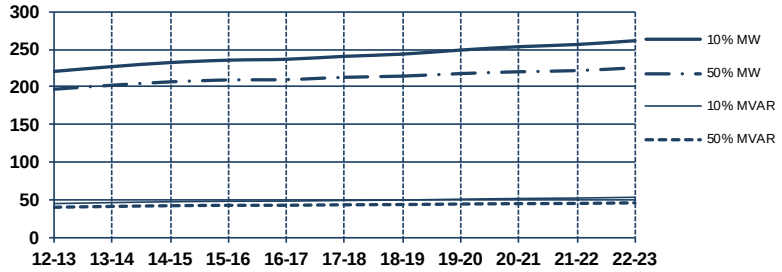
2011-12 MD	MW	MVAR
25 Feb 2012 17:00	187.5	38.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	220.6	45.3	197.0	40.5
13-14	226.9	46.6	202.3	41.6
14-15	232.3	47.7	206.7	42.5
15-16	235.5	48.4	209.2	43.0
16-17	236.7	48.6	209.7	43.1
17-18	240.6	49.4	212.8	43.7
18-19	243.5	50.0	214.3	44.0
19-20	248.9	51.1	217.7	44.7
20-21	253.3	52.0	220.1	45.2
21-22	256.3	52.7	221.7	45.5
22-23	261.3	53.7	225.4	46.3

Load Curve on High Demand Day



Forecast

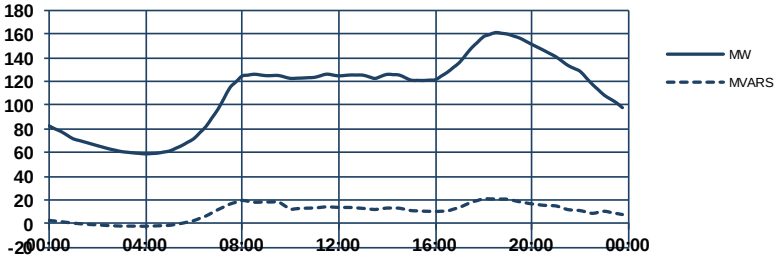


Winter Demand

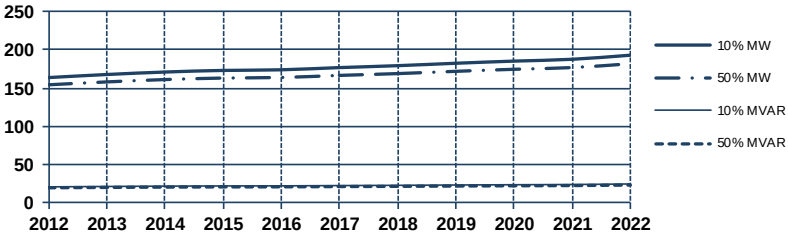
2011 MD	MW	MVAR
07 Jun 2011 18:30	161.2	20.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	163.9	21.3	154.5	20.1
2013	167.9	21.8	158.2	20.5
2014	171.1	22.2	161.3	20.9
2015	173.2	22.5	163.3	21.2
2016	174.1	22.6	164.0	21.3
2017	176.9	23.0	166.7	21.7
2018	179.4	23.3	169.1	22.0
2019	182.6	23.7	172.1	22.3
2020	185.4	24.1	174.7	22.7
2021	187.8	24.4	177.0	23.0
2022	193.1	25.1	182.0	23.6

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This includes the 66kV load plus the 22kV load at MTS representing the demand through the 220/66kV transformers.

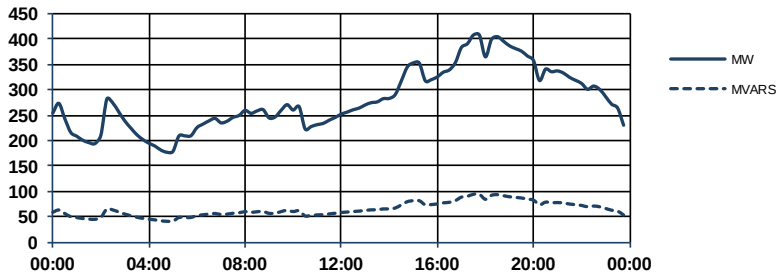
MWTS66: Morwell Terminal Station 66 kV bus

Summer Demand

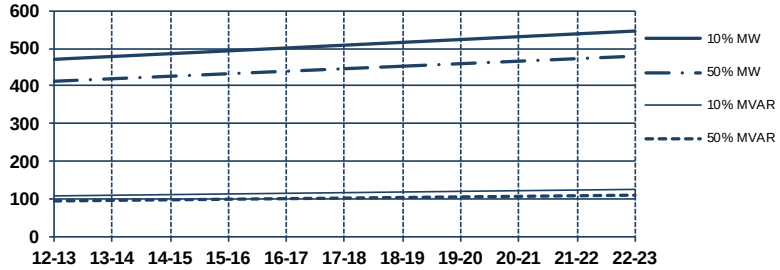
2011-12 MD	MW	MVAR
02 Jan 2012 17:30	407.7	94.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	470.8	108.5	412.6	95.1
13-14	478.3	110.3	419.2	96.6
14-15	485.8	112.0	425.9	98.2
15-16	493.3	113.7	432.5	99.7
16-17	500.8	115.4	439.2	101.3
17-18	508.3	117.2	445.9	102.8
18-19	515.8	118.9	452.5	104.3
19-20	523.3	120.6	459.2	105.9
20-21	530.8	122.4	465.8	107.4
21-22	538.3	124.1	472.5	108.9
22-23	545.8	125.8	479.1	110.5

Load Curve on High Demand Day



Forecast

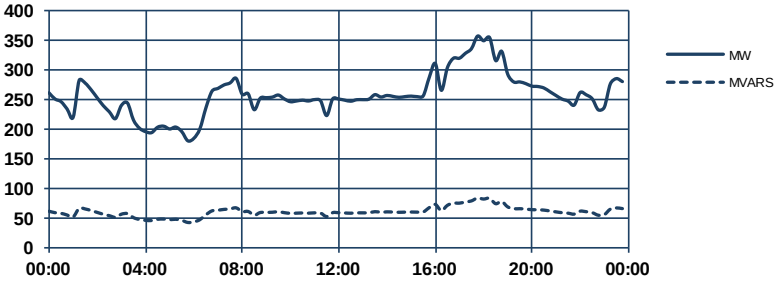


Winter Demand

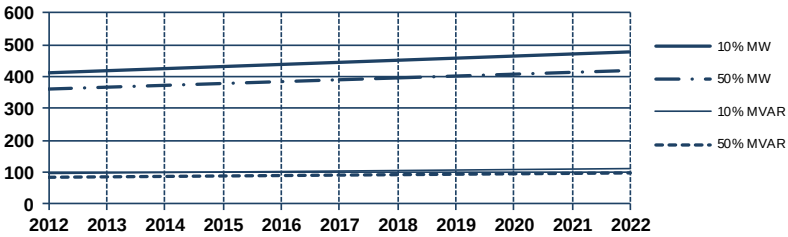
2011 MD	MW	MVAR
11 May 2011 18:00	356.5	83.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	411.7	96.4	360.8	84.4
2013	418.2	97.9	366.6	85.8
2014	424.8	99.4	372.4	87.2
2015	431.3	101.0	378.2	88.5
2016	437.9	102.5	384.1	89.9
2017	444.4	104.0	389.9	91.3
2018	451.0	105.6	395.7	92.6
2019	457.6	107.1	401.5	94.0
2020	464.1	108.6	407.3	95.3
2021	470.7	110.2	413.2	96.7
2022	477.2	111.7	419.0	98.1

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This terminal station supplies a large area - all of Gippsland. Also included in this demand is LY66, which is also reported separately in this document.

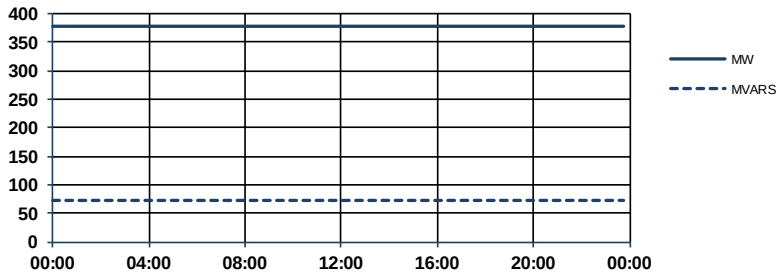
PTH220: Point Henry 220 kV bus

Summer Demand

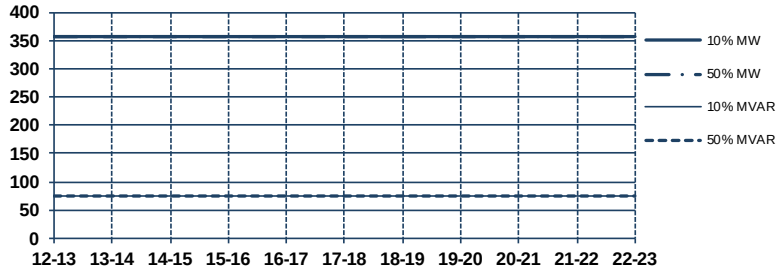
2011-12 MD	MW	MVAR
08 Jan 2012 10:30	377.6	72.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	357.0	75.0	357.0	75.0
13-14	357.0	75.0	357.0	75.0
14-15	357.0	75.0	357.0	75.0
15-16	357.0	75.0	357.0	75.0
16-17	357.0	75.0	357.0	75.0
17-18	357.0	75.0	357.0	75.0
18-19	357.0	75.0	357.0	75.0
19-20	357.0	75.0	357.0	75.0
20-21	357.0	75.0	357.0	75.0
21-22	357.0	75.0	357.0	75.0
22-23	357.0	75.0	357.0	75.0

Load Curve on High Demand Day



Forecast

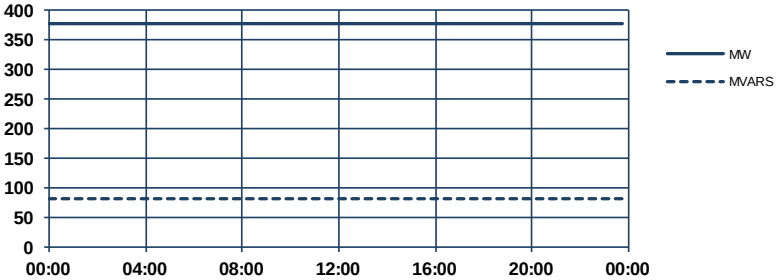


Winter Demand

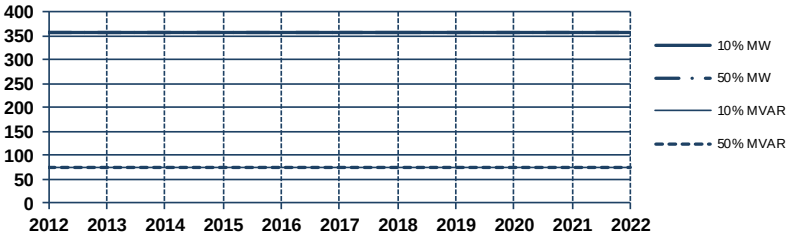
2011 MD	MW	MVAR
27 Sep 2011 00:30	376.6	81.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	357.0	75.0	357.0	75.0
2013	357.0	75.0	357.0	75.0
2014	357.0	75.0	357.0	75.0
2015	357.0	75.0	357.0	75.0
2016	357.0	75.0	357.0	75.0
2017	357.0	75.0	357.0	75.0
2018	357.0	75.0	357.0	75.0
2019	357.0	75.0	357.0	75.0
2020	357.0	75.0	357.0	75.0
2021	357.0	75.0	357.0	75.0
2022	357.0	75.0	357.0	75.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is a direct connect customer. The total demand shown here includes supply from the power system, and also the supply direct from Anglesea Power Station.

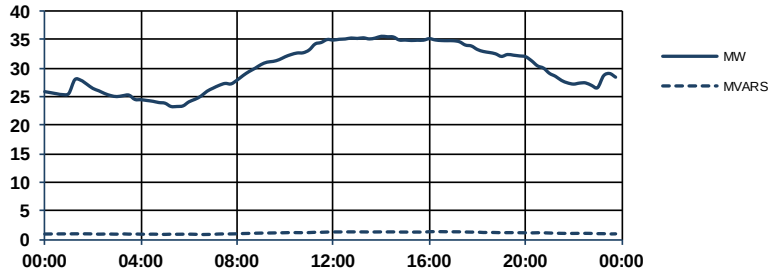
RCTS22: Red Cliffs Terminal Station 22 kV bus

Summer Demand

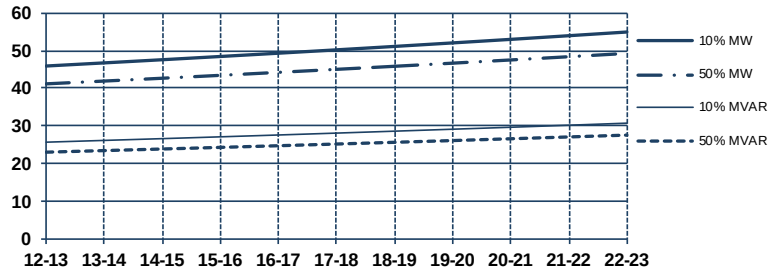
2011-12 MD	MW	MVAR
25 Feb 2012 14:30	35.5	1.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	45.9	25.7	41.2	23.1
13-14	46.7	26.2	41.9	23.5
14-15	47.6	26.6	42.7	23.9
15-16	48.4	27.1	43.4	24.3
16-17	49.3	27.6	44.2	24.8
17-18	50.2	28.1	45.0	25.2
18-19	51.1	28.6	45.8	25.7
19-20	52.0	29.1	46.7	26.1
20-21	53.0	29.7	47.5	26.6
21-22	53.9	30.2	48.4	27.1
22-23	54.9	30.8	49.3	27.6

Load Curve on High Demand Day



Forecast

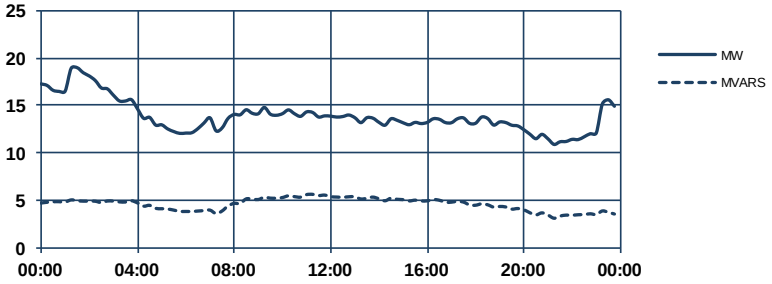


Winter Demand

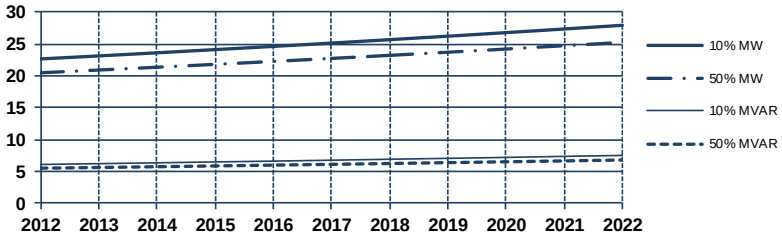
2011 MD	MW	MVAR
16 Sep 2011 01:30	19.0	5.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	22.6	6.1	20.5	5.5
2013	23.1	6.2	20.9	5.6
2014	23.6	6.4	21.3	5.8
2015	24.1	6.5	21.8	5.9
2016	24.6	6.6	22.3	6.0
2017	25.1	6.8	22.7	6.1
2018	25.7	6.9	23.2	6.3
2019	26.2	7.1	23.7	6.4
2020	26.8	7.2	24.2	6.5
2021	27.3	7.4	24.7	6.7
2022	27.9	7.5	25.2	6.8

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

This includes only the 22 kV demand at RCTS.

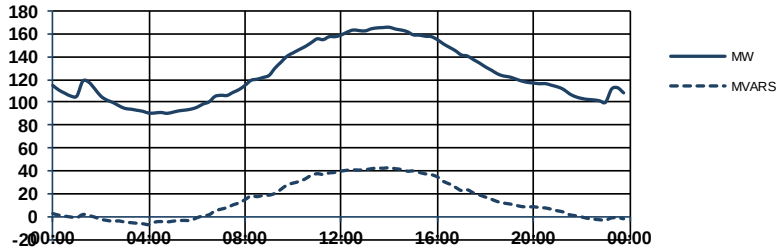
RCTS66: Red Cliffs Terminal Station 66 kV bus

Summer Demand

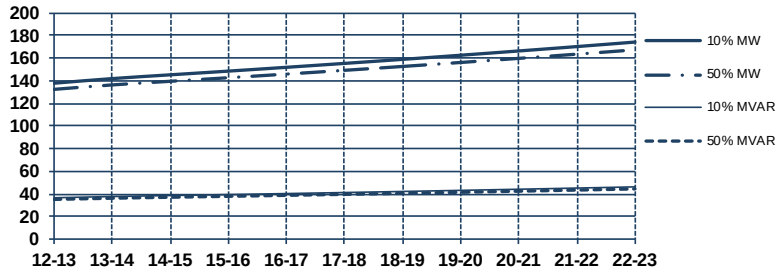
2011-12 MD	MW	MVAR
03 Jan 2012 14:00	165.6	42.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	137.8	36.5	132.4	35.1
13-14	141.9	37.6	136.3	36.1
14-15	145.2	38.5	139.5	37.0
15-16	148.5	39.4	142.6	37.8
16-17	151.9	40.3	145.9	38.7
17-18	155.3	41.2	149.2	39.6
18-19	158.9	42.1	152.6	40.5
19-20	162.5	43.1	156.1	41.4
20-21	166.3	44.1	159.8	42.4
21-22	170.2	45.1	163.5	43.3
22-23	174.2	46.2	167.3	44.4

Load Curve on High Demand Day



Forecast

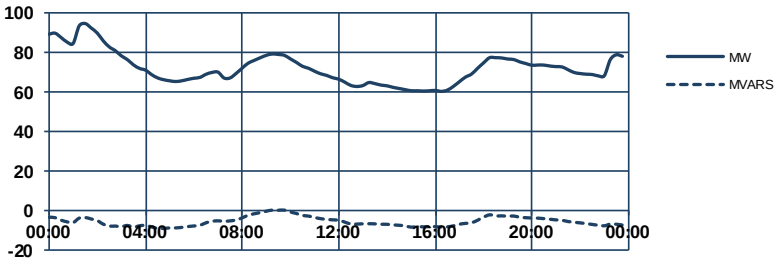


Winter Demand

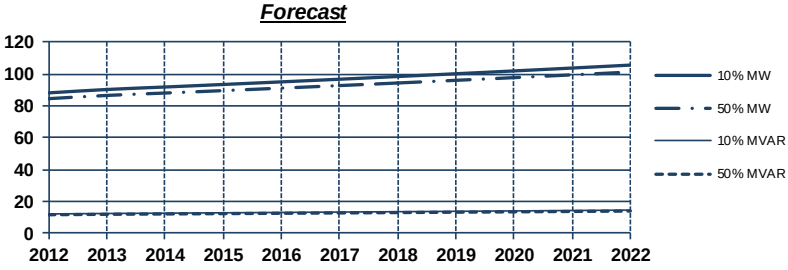
2011 MD	MW	MVAR
23 Jul 2011 01:30	94.5	-3.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	88.1	12.2	84.5	11.7
2013	90.2	12.5	86.5	12.0
2014	91.8	12.8	88.0	12.2
2015	93.4	13.0	89.5	12.4
2016	95.0	13.2	91.1	12.7
2017	96.6	13.4	92.7	12.9
2018	98.3	13.7	94.3	13.1
2019	100.1	13.9	96.0	13.3
2020	101.8	14.2	97.6	13.6
2021	103.7	14.4	99.4	13.8
2022	105.5	14.7	101.2	14.1

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

Load has been transferred to WETS, starting in 2012.

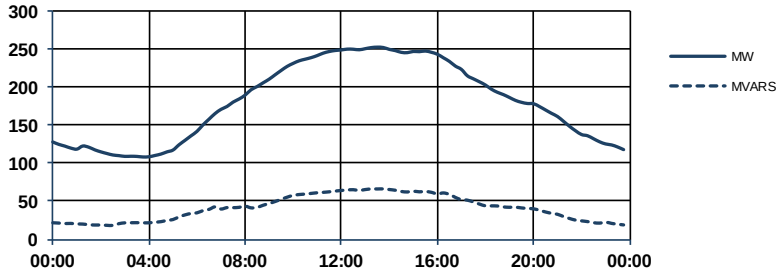
RTS1266: Richmond Terminal Station 1&2 66 kV bus

Summer Demand

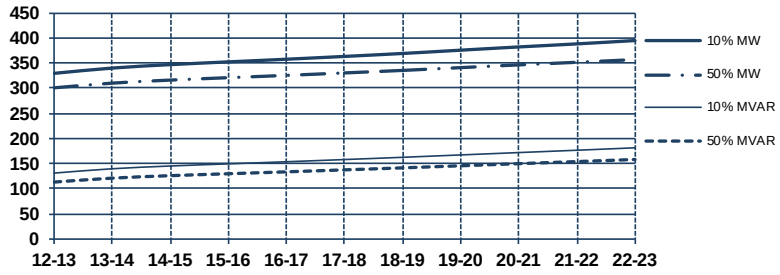
2011-12 MD	MW	MVAR
30 Jan 2012 13:30	252.3	66.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	329.7	131.3	300.9	113.4
13-14	340.2	139.9	310.2	121.2
14-15	347.0	145.4	316.2	126.1
15-16	352.5	149.6	321.1	130.0
16-17	357.8	153.8	325.6	133.8
17-18	363.3	158.2	330.5	137.7
18-19	369.2	162.7	335.5	141.7
19-20	375.8	167.4	341.1	145.8
20-21	382.2	172.1	346.5	150.0
21-22	388.3	176.7	351.7	154.1
22-23	394.9	181.6	357.0	158.4

Load Curve on High Demand Day



Forecast

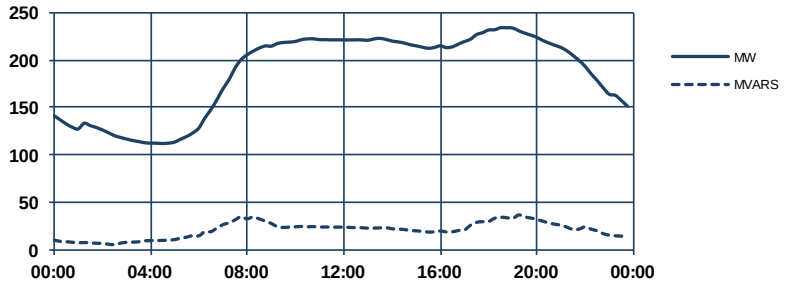


Winter Demand

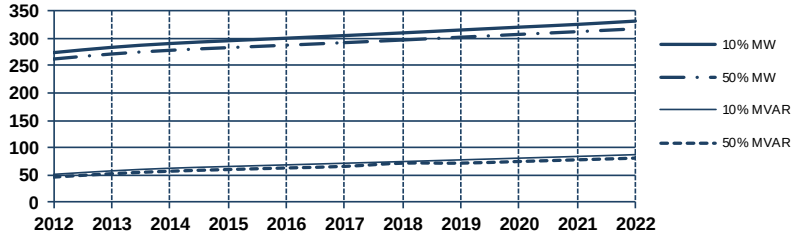
2011 MD	MW	MVAR
07 Jun 2011 19:00	234.0	36.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	273.8	51.4	262.1	46.4
2013	283.4	57.8	271.3	52.6
2014	290.5	62.6	278.1	57.2
2015	295.5	65.8	282.9	60.2
2016	300.2	68.7	287.4	63.1
2017	305.0	71.7	292.1	66.0
2018	309.9	74.8	296.9	71.8
2019	315.2	77.9	302.0	71.9
2020	320.4	81.0	307.1	74.9
2021	325.4	84.2	312.1	78.0
2022	331.5	87.4	317.3	81.1

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 1 and 2, fed by transformers B1 and B4. In previous reports, this location was called "RTS14" after the transformers, but it's been renamed by the buses for consistency with other locations. This forecast does not include feeder level load transfers established to manage the loading at RTS. The weather corrected actuals during last summer after adjusting for network abnormalities were higher than the previous forecast.

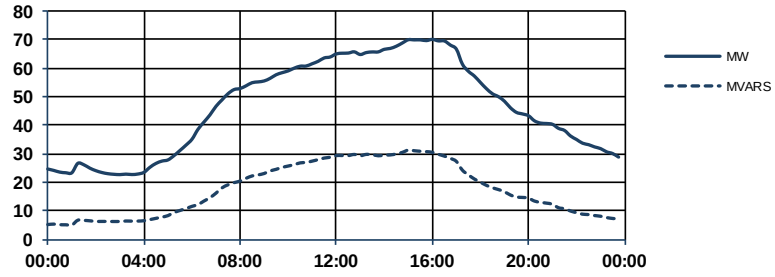
RTS22: Richmond Terminal Station 22 kV bus

Summer Demand

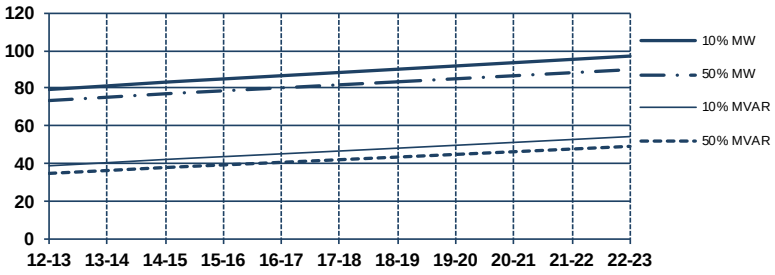
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	70.0	31.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	79.4	38.9	73.5	34.9
13-14	81.3	40.5	75.2	36.4
14-15	83.2	42.2	77.1	38.0
15-16	84.9	43.7	78.7	39.3
16-17	86.7	45.2	80.2	40.7
17-18	88.4	46.7	81.8	42.1
18-19	90.1	48.2	83.4	43.5
19-20	91.8	49.7	85.0	44.9
20-21	93.6	51.3	86.6	46.3
21-22	95.3	52.8	88.3	47.8
22-23	97.1	54.4	89.9	49.2

Load Curve on High Demand Day



Forecast

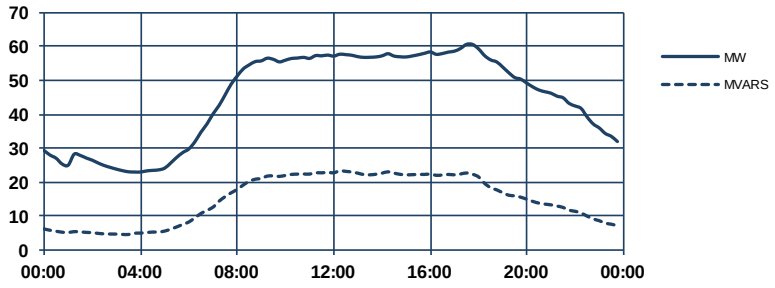


Winter Demand

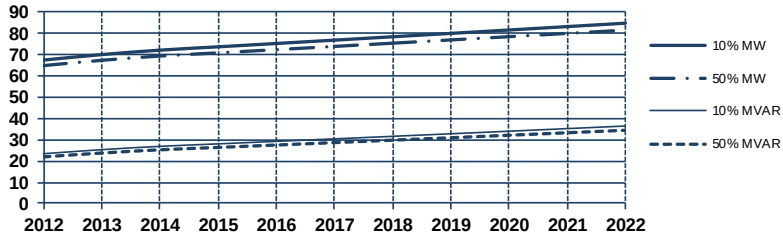
2011 MD	MW	MVAR
07 Jun 2011 18:00	60.6	23.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	67.4	23.4	64.8	21.9
2013	70.0	25.3	67.3	23.7
2014	72.0	26.8	69.3	25.2
2015	73.6	28.0	70.8	26.3
2016	75.2	29.2	72.3	27.5
2017	76.8	30.4	73.8	28.6
2018	78.3	31.6	75.3	29.8
2019	79.9	32.8	76.8	30.9
2020	81.5	34.0	78.4	32.1
2021	83.1	35.2	79.9	33.2
2022	84.7	36.4	81.5	34.4

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at RTS.

For embedded generation details, please see next section of report.

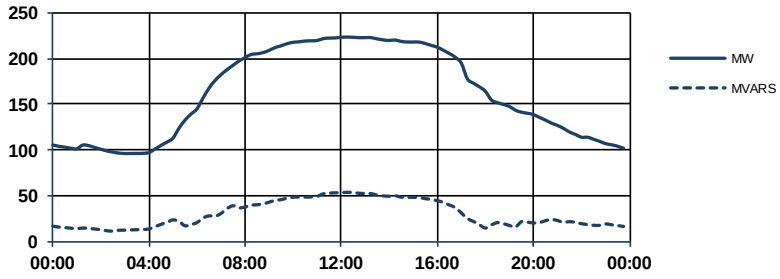
RTS3466: Richmond Terminal Station 3&4 66 kV bus

Summer Demand

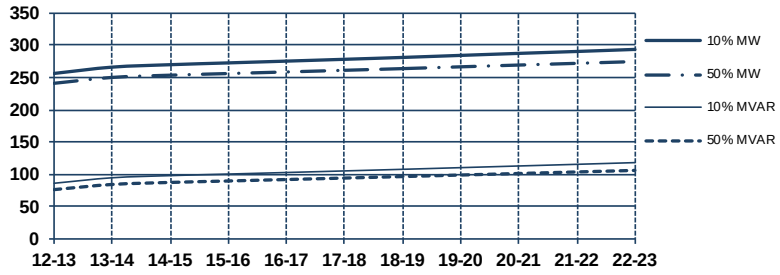
2011-12 MD	MW	MVAR
30 Jan 2012 13:30	223.4	53.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	256.1	86.2	240.9	76.3
13-14	265.9	94.7	249.9	84.3
14-15	269.6	98.0	253.4	87.4
15-16	272.4	100.4	255.9	89.7
16-17	275.2	102.8	258.4	91.9
17-18	278.0	105.2	261.0	94.2
18-19	280.9	107.7	263.6	96.5
19-20	284.0	110.3	266.3	98.9
20-21	287.1	112.9	269.1	101.3
21-22	290.1	115.5	271.7	103.6
22-23	293.3	118.1	274.4	106.0

Load Curve on High Demand Day



Forecast

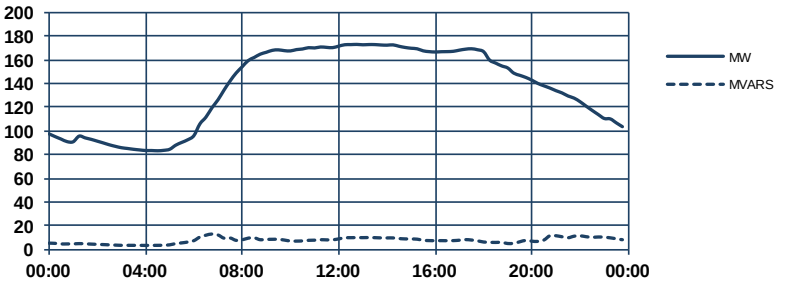


Winter Demand

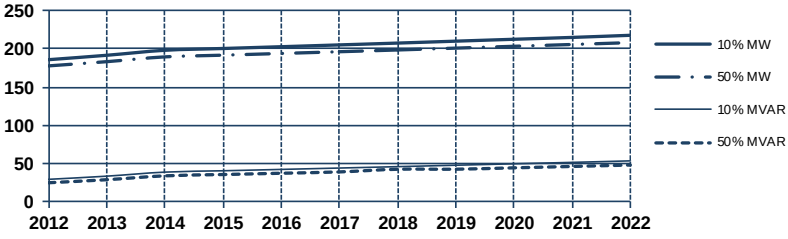
2011 MD	MW	MVAR
08 Jun 2011 09:30	173.0	13.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	186.0	29.8	177.9	25.3
2013	191.7	33.9	183.4	29.3
2014	198.3	39.2	189.6	34.4
2015	200.6	41.0	191.9	36.1
2016	202.9	42.8	194.1	37.8
2017	205.3	44.5	196.4	39.5
2018	207.7	46.4	198.7	43.0
2019	210.2	48.2	201.1	43.0
2020	212.7	50.1	203.5	44.8
2021	215.1	51.9	205.8	46.6
2022	217.8	53.9	208.3	48.5

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 3 and 4, fed by transformers B2 and B3. In previous reports, this location was called "RTS23" after the transformers, but it's been renamed by the buses for consistency with other locations.

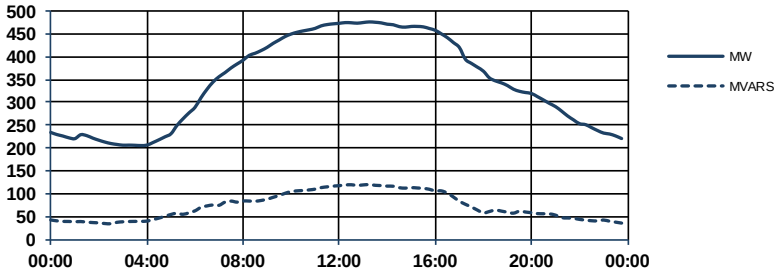
RTS66: Richmond Terminal Station 66 kV bus

Summer Demand

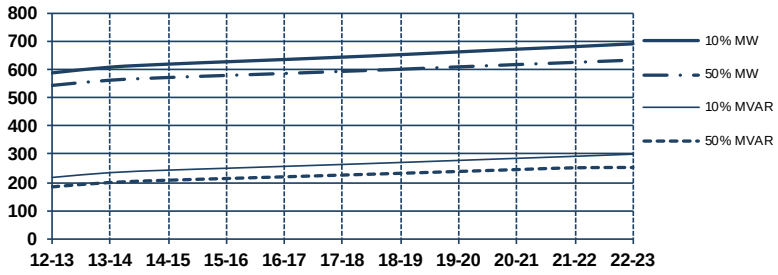
2011-12 MD	MW	MVAR
30 Jan 2012 13:30	475.7	119.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	587.7	217.9	543.5	184.7
13-14	608.0	235.0	561.9	200.2
14-15	618.7	243.8	571.4	208.2
15-16	627.0	250.5	578.7	214.2
16-17	635.0	257.2	585.7	220.2
17-18	643.4	264.0	593.1	226.4
18-19	652.2	270.9	600.7	232.7
19-20	662.0	278.2	609.0	239.2
20-21	671.6	285.6	617.1	245.7
21-22	680.7	292.8	624.9	252.2
22-23	690.5	300.3	633.0	253.2

Load Curve on High Demand Day



Forecast

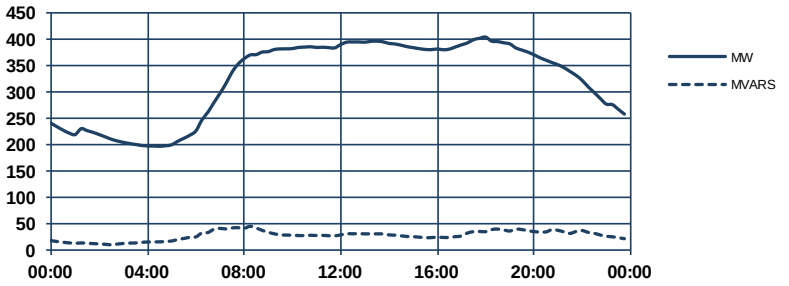


Winter Demand

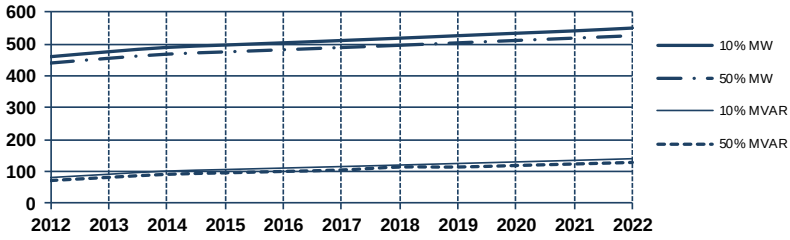
2011 MD	MW	MVAR
08 Jun 2011 18:00	403.5	44.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	459.8	81.3	439.9	71.9
2013	475.3	91.6	454.7	81.8
2014	488.9	101.5	467.7	91.3
2015	496.3	106.4	474.8	96.0
2016	503.3	111.0	481.6	100.4
2017	510.5	115.7	488.5	105.0
2018	517.8	120.4	495.6	114.1
2019	525.6	125.3	503.2	114.3
2020	533.2	130.2	510.7	119.0
2021	540.7	135.1	518.0	123.8
2022	549.5	140.3	525.6	128.6

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

Please see the comments for RTS12 and RTS34.

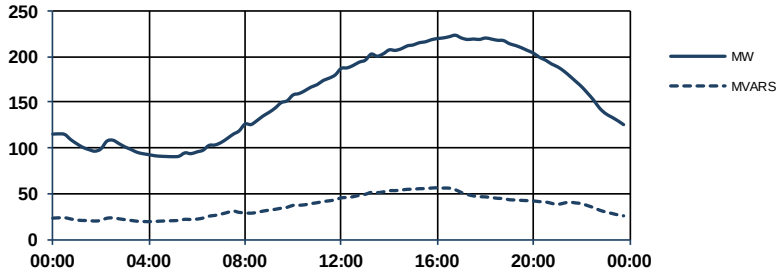
RWTS1366: Ringwood Terminal Station 1&3 66 kV bus

Summer Demand

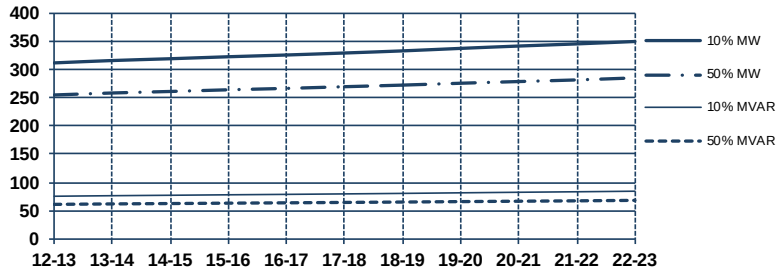
2011-12 MD	MW	MVAR
02 Jan 2012 17:00	223.3	56.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	311.5	75.7	254.8	61.4
13-14	315.7	76.7	258.3	62.2
14-15	318.9	77.5	261.0	62.8
15-16	322.4	78.3	264.0	63.5
16-17	325.5	79.1	266.4	64.1
17-18	329.0	79.9	269.4	64.8
18-19	332.8	80.8	272.3	65.5
19-20	337.2	81.8	275.6	66.3
20-21	341.3	82.8	278.5	67.0
21-22	345.1	83.7	281.4	67.6
22-23	349.4	84.7	285.0	68.5

Load Curve on High Demand Day



Forecast

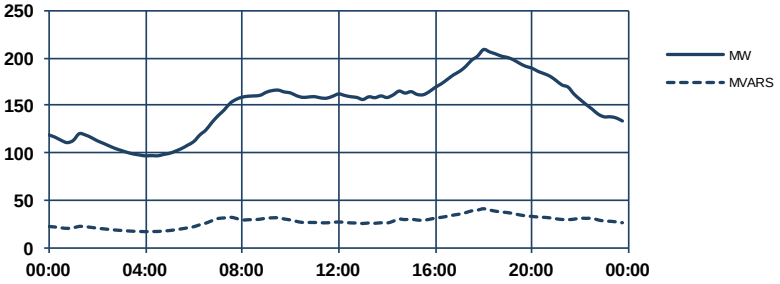


Winter Demand

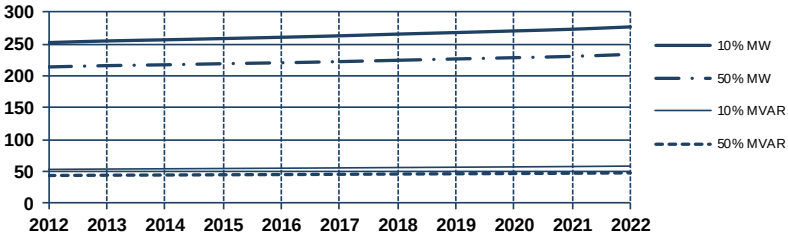
2011 MD	MW	MVAR
11 May 2011 18:30	208.9	41.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	252.0	53.4	213.8	43.9
2013	254.6	53.9	215.9	44.3
2014	256.3	54.4	217.2	44.6
2015	258.3	54.8	219.0	45.0
2016	260.3	55.3	220.4	45.3
2017	262.6	55.8	222.2	45.7
2018	265.3	56.3	224.3	46.1
2019	267.7	56.8	226.3	46.6
2020	270.3	57.3	228.3	47.0
2021	272.9	57.9	230.4	47.4
2022	276.6	58.6	233.6	48.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 1 and 3, separated out for planning purposes.

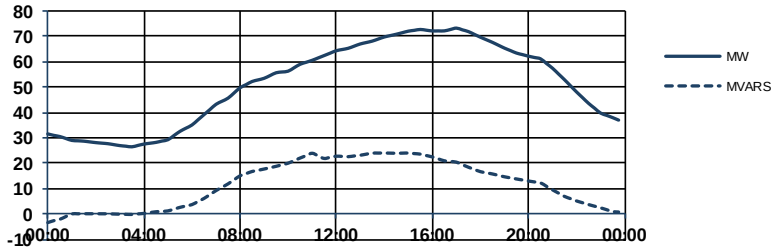
RWTS22: Ringwood Terminal Station 22 kV bus

Summer Demand

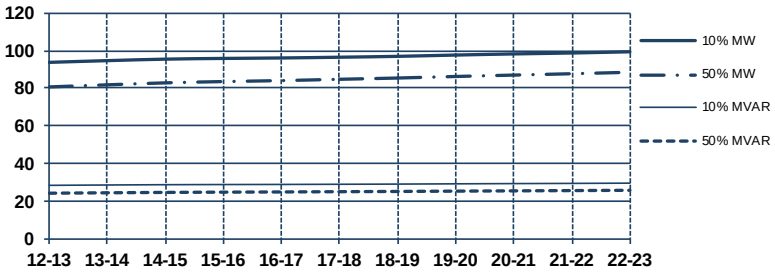
2011-12 MD	MW	MVAR
24 Jan 2012 16:30	73.2	24.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	93.7	28.5	80.7	24.3
13-14	94.6	28.7	81.8	24.6
14-15	95.4	28.8	82.9	24.8
15-16	95.8	28.9	83.6	24.9
16-17	96.1	29.0	84.1	25.0
17-18	96.5	29.1	84.8	25.1
18-19	96.9	29.2	85.4	25.3
19-20	97.6	29.3	86.2	25.4
20-21	98.2	29.4	87.0	25.6
21-22	98.7	29.5	87.7	25.7
22-23	99.4	29.7	88.5	25.9

Load Curve on High Demand Day



Forecast

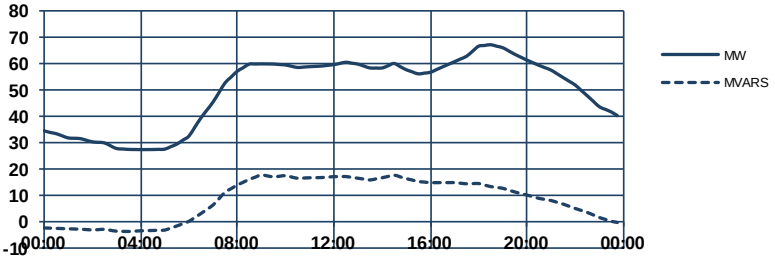


Winter Demand

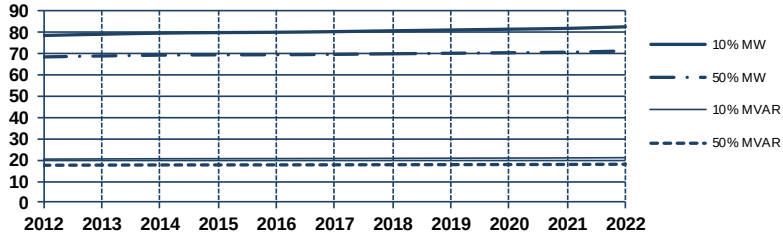
2011 MD	MW	MVAR
14 Jun 2011 18:00	67.0	17.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	78.5	20.4	68.4	17.5
2013	79.1	20.5	68.9	17.6
2014	79.6	20.6	69.2	17.6
2015	79.8	20.6	69.4	17.7
2016	80.0	20.6	69.4	17.7
2017	80.3	20.7	69.6	17.7
2018	80.7	20.8	69.9	17.8
2019	81.0	20.8	70.1	17.8
2020	81.4	20.9	70.4	17.8
2021	81.8	20.9	70.6	17.9
2022	82.5	21.1	71.2	18.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the 22 kV supply from RWTS, which is not split into bus groups.

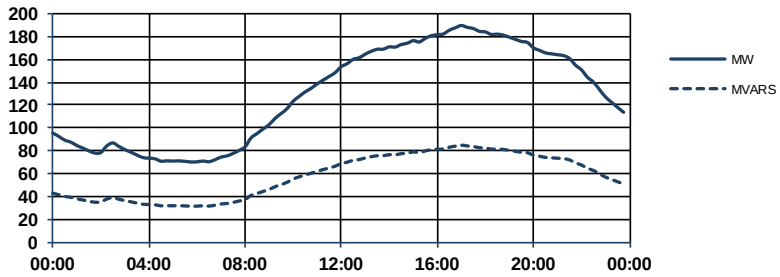
RWTS2466: Ringwood Terminal Station 2&4 66 kV bus

Summer Demand

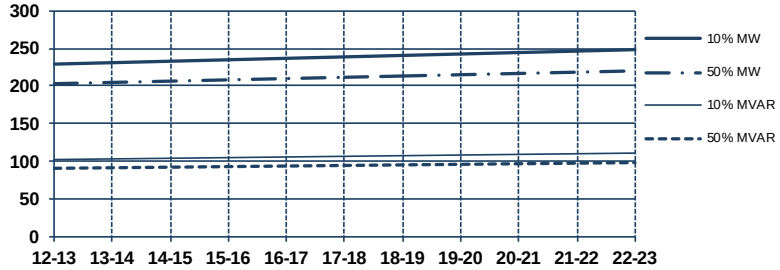
2011-12 MD	MW	MVAR
24 Jan 2012 15:00	189.5	84.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	229.0	102.5	203.1	90.8
13-14	230.9	103.3	204.8	91.6
14-15	232.9	104.2	206.5	92.4
15-16	234.8	105.0	208.2	93.1
16-17	236.7	105.9	209.9	93.9
17-18	238.6	106.7	211.6	94.6
18-19	240.5	107.6	213.3	95.4
19-20	242.5	108.5	215.0	96.2
20-21	244.4	109.3	216.7	96.9
21-22	246.3	110.2	218.3	97.7
22-23	248.2	111.0	220.0	98.4

Load Curve on High Demand Day



Forecast

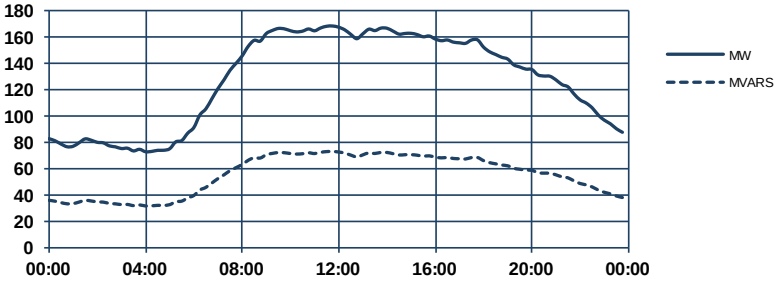


Winter Demand

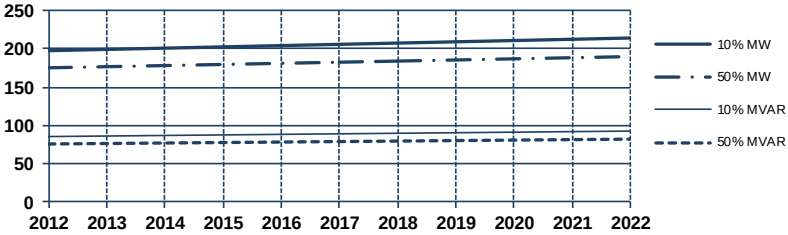
2011 MD	MW	MVAR
08 Jun 2011 11:00	168.1	72.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	197.8	85.7	175.4	76.0
2013	199.5	86.4	176.9	76.7
2014	201.1	87.1	178.4	77.3
2015	202.8	87.9	179.8	77.9
2016	204.4	88.6	181.3	78.6
2017	206.1	89.3	182.8	79.2
2018	207.7	90.0	184.2	79.8
2019	209.4	90.7	185.7	80.5
2020	211.0	91.4	187.1	81.1
2021	212.7	92.2	188.6	81.7
2022	214.3	92.9	190.1	82.4

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 2 and 4, separated out for planning purposes.

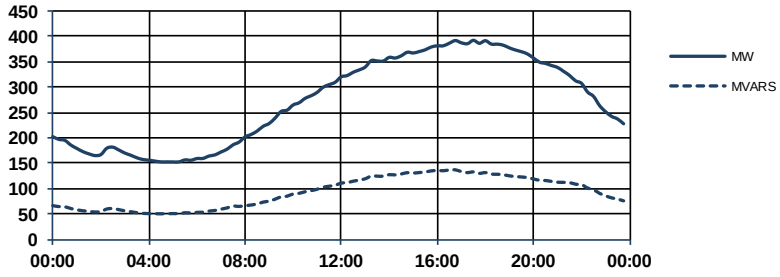
RWTS66: Ringwood Terminal Station 66 kV bus

Summer Demand

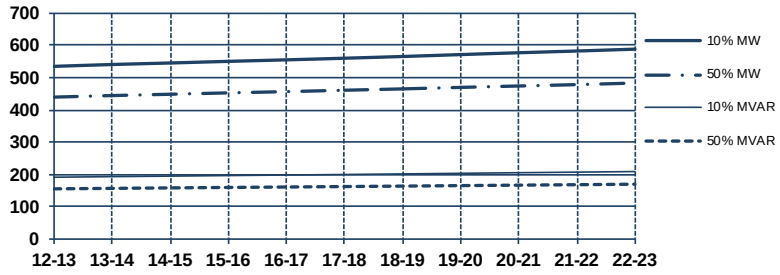
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	391.9	136.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	534.4	191.4	439.3	155.4
13-14	540.2	193.2	444.1	157.0
14-15	544.9	194.9	448.1	158.3
15-16	549.9	196.6	452.5	159.8
16-17	554.6	198.2	456.2	161.1
17-18	559.6	199.9	460.6	162.5
18-19	564.9	201.6	464.7	163.9
19-20	570.9	203.5	469.4	165.4
20-21	576.6	205.4	473.7	166.9
21-22	581.9	207.1	477.9	168.3
22-23	587.7	209.0	482.9	169.9

Load Curve on High Demand Day



Forecast

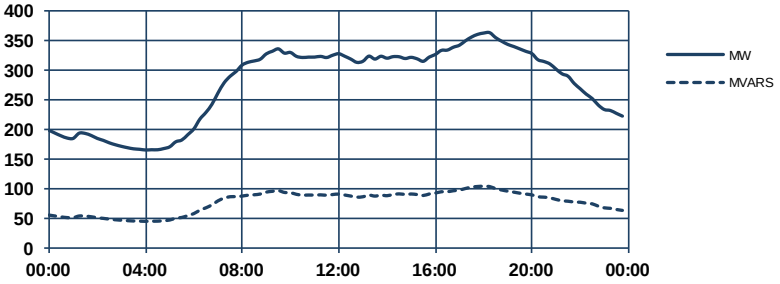


Winter Demand

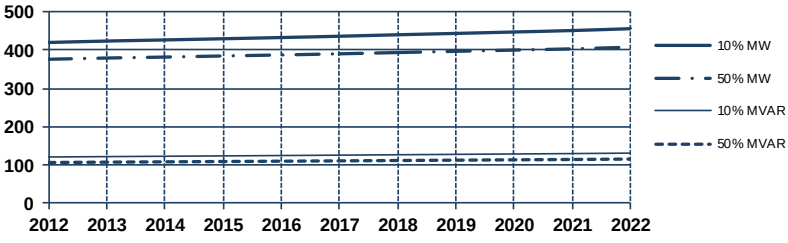
2011 MD	MW	MVAR
11 May 2011 18:00	362.8	103.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	420.3	121.4	376.5	107.0
2013	424.0	122.4	379.7	107.9
2014	426.9	123.3	382.2	108.7
2015	430.0	124.2	385.1	109.6
2016	433.2	125.2	387.7	110.4
2017	436.6	126.2	390.7	111.3
2018	440.4	127.2	394.0	112.2
2019	443.9	128.2	397.2	113.1
2020	447.7	129.3	400.4	114.0
2021	451.4	130.3	403.7	114.9
2022	456.3	131.5	408.0	116.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Please see the comments for RWTS13 and RWTS24.

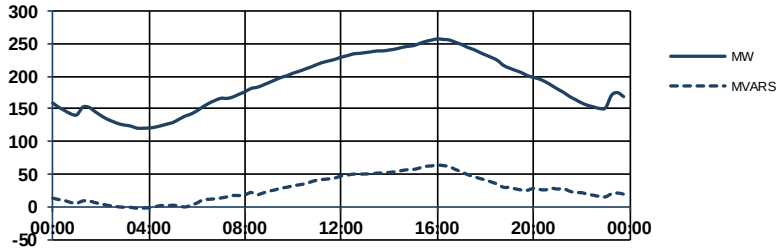
SHTS66: Shepparton Terminal Station 66 kV bus

Summer Demand

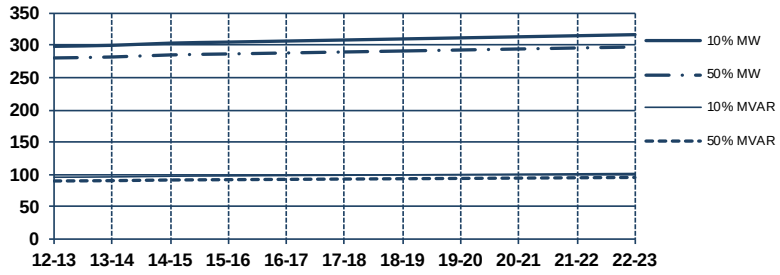
2011-12 MD	MW	MVAR
03 Jan 2012 16:00	256.9	63.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	298.2	95.7	280.2	89.9
13-14	299.8	96.2	281.7	90.4
14-15	303.2	97.3	284.9	91.4
15-16	304.8	97.8	286.4	91.9
16-17	306.4	98.3	287.9	92.4
17-18	308.0	98.8	289.5	92.9
18-19	309.6	99.4	291.0	93.4
19-20	311.3	99.9	292.6	93.9
20-21	312.9	100.4	294.1	94.4
21-22	314.6	100.9	295.7	94.9
22-23	316.3	101.5	297.2	95.4

Load Curve on High Demand Day



Forecast

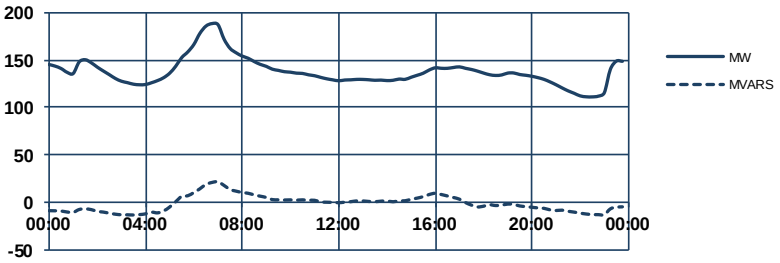


Winter Demand

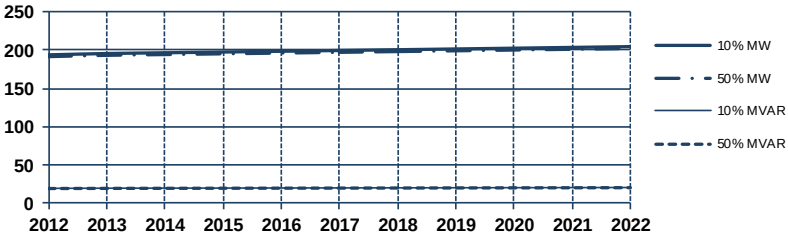
2011 MD	MW	MVAR
07 Jun 2011 18:00	188.4	21.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	194.0	19.8	191.7	19.5
2013	195.7	19.9	193.4	19.7
2014	196.7	20.0	194.4	19.8
2015	197.7	20.1	195.3	19.9
2016	198.7	20.2	196.3	20.0
2017	199.7	20.3	197.3	20.1
2018	200.7	20.5	198.3	20.2
2019	201.7	20.6	199.3	20.3
2020	202.7	20.7	200.3	20.4
2021	203.7	20.8	201.3	20.5
2022	204.7	20.9	202.3	20.6

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

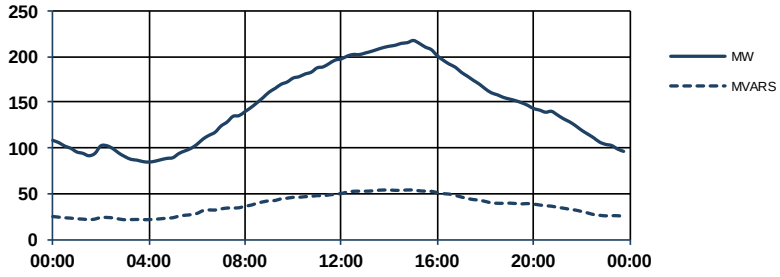
SMTS66: South Morang Terminal Station 66 kV bus

Summer Demand

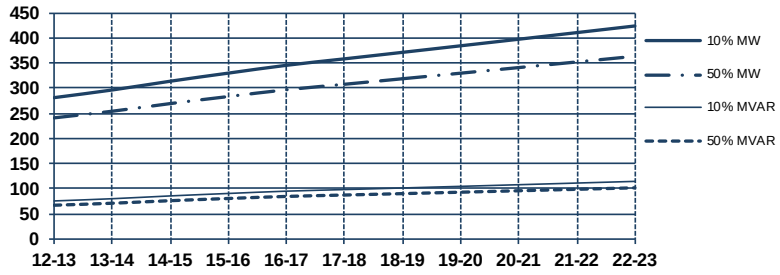
2011-12 MD	MW	MVAR
24 Jan 2012 16:30	217.6	53.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	281.3	75.9	241.1	67.3
13-14	296.6	80.3	254.3	71.3
14-15	314.0	85.9	269.6	76.4
15-16	330.1	90.8	283.6	80.8
16-17	345.7	95.3	297.0	84.9
17-18	358.5	98.5	307.9	87.6
18-19	371.5	101.7	318.9	90.4
19-20	384.5	104.9	330.0	93.3
20-21	397.6	108.2	341.2	96.1
21-22	410.7	111.5	352.4	99.0
22-23	423.9	114.8	363.6	102.0

Load Curve on High Demand Day



Forecast

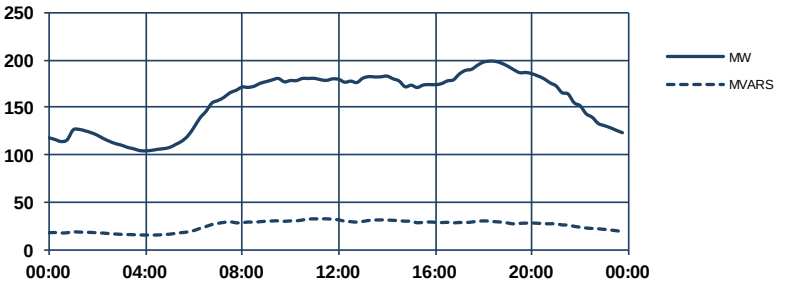


Winter Demand

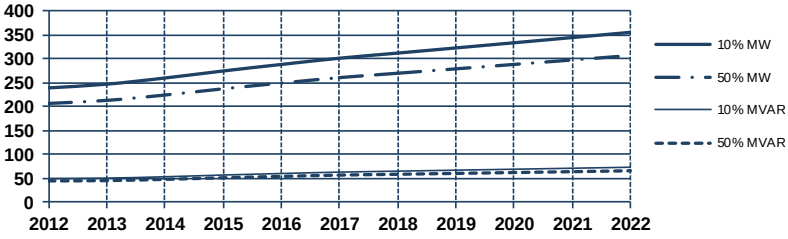
2011 MD	MW	MVAR
07 Jun 2011 18:30	198.8	32.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	239.3	50.1	206.9	45.1
2013	247.0	50.9	213.2	45.7
2014	259.9	53.7	224.4	48.3
2015	274.6	57.3	237.4	51.6
2016	288.2	60.5	249.3	54.5
2017	301.3	63.4	260.7	57.2
2018	312.0	65.4	269.9	59.0
2019	322.7	67.5	279.1	60.7
2020	333.5	69.5	288.3	62.5
2021	344.4	71.6	297.6	64.4
2022	355.3	73.6	306.9	66.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

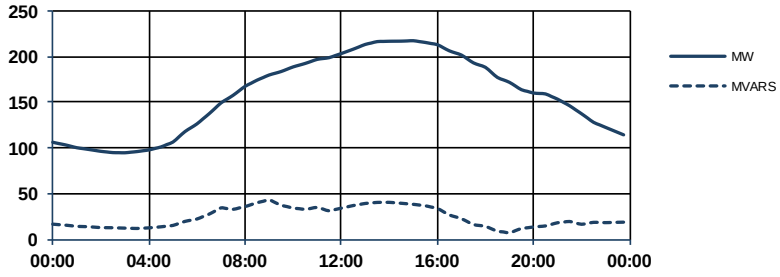
SVTS1266: Springvale Terminal Station buses 1&2 66 kV bus

Summer Demand

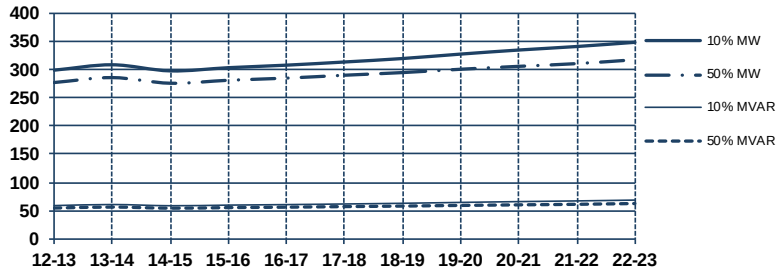
2011-12 MD	MW	MVAR
24 Jan 2012 15:00	217.3	43.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	298.7	59.2	276.8	54.9
13-14	308.2	61.1	285.5	56.6
14-15	297.4	59.0	275.6	54.6
15-16	303.0	60.1	280.8	55.7
16-17	307.5	61.0	284.6	56.4
17-18	313.1	62.1	289.7	57.4
18-19	319.3	63.3	294.4	58.4
19-20	327.1	64.8	300.3	59.5
20-21	334.3	66.3	305.4	60.5
21-22	340.5	67.5	310.3	61.5
22-23	347.9	69.0	317.1	62.9

Load Curve on High Demand Day



Forecast

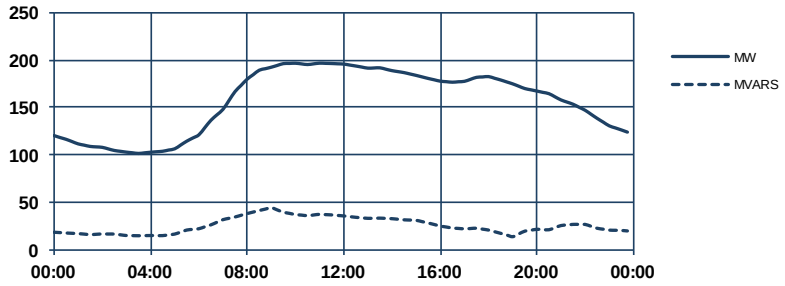


Winter Demand

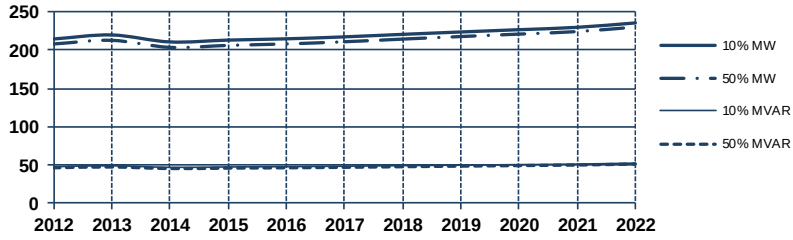
2011 MD	MW	MVAR
08 Jun 2011 11:00	196.7	44.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	214.7	48.0	208.2	46.6
2013	220.0	49.2	212.9	47.6
2014	210.9	47.2	203.8	45.6
2015	213.2	47.7	206.4	46.2
2016	214.9	48.1	208.3	46.6
2017	217.5	48.7	211.1	47.2
2018	220.7	49.4	214.6	48.0
2019	223.9	50.1	217.9	48.8
2020	226.8	50.8	221.1	49.5
2021	229.9	51.4	224.4	50.2
2022	235.7	52.7	230.3	51.5

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 1 and 2, separated out for planning purposes. Approximately 18MW demand will be transferred away from SVTS12 to HTS in 2014/15 when new Keysborough zone substation is commissioned.

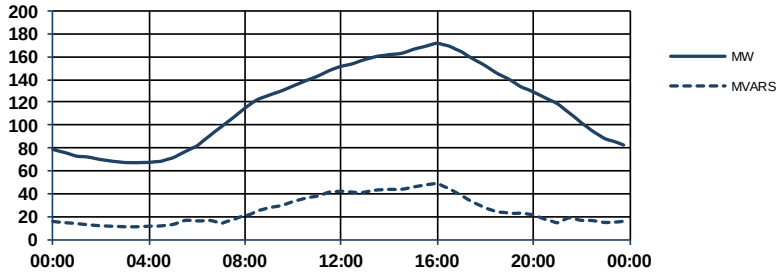
SVTS3466: Springvale Terminal Station buses 3&4 66 kV bus

Summer Demand

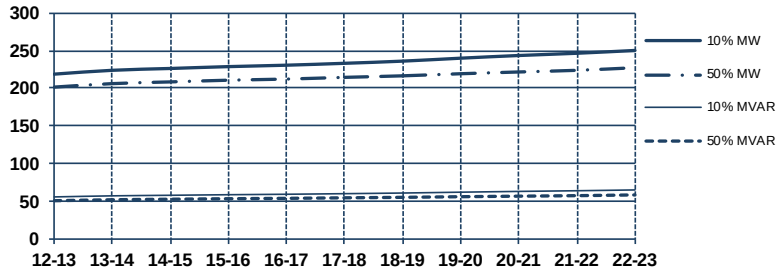
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	171.6	48.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	218.7	55.9	201.5	50.9
13-14	223.8	57.3	206.2	52.2
14-15	226.2	58.1	208.4	52.8
15-16	228.7	58.8	210.7	53.5
16-17	230.6	59.5	212.2	54.0
17-18	233.1	60.2	214.5	54.7
18-19	236.0	61.1	216.5	55.4
19-20	239.9	62.2	219.3	56.2
20-21	243.4	63.2	221.6	56.9
21-22	246.4	64.1	223.8	57.6
22-23	250.1	65.2	227.2	58.6

Load Curve on High Demand Day



Forecast

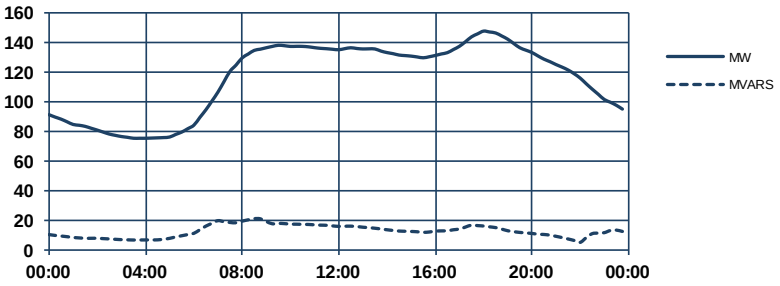


Winter Demand

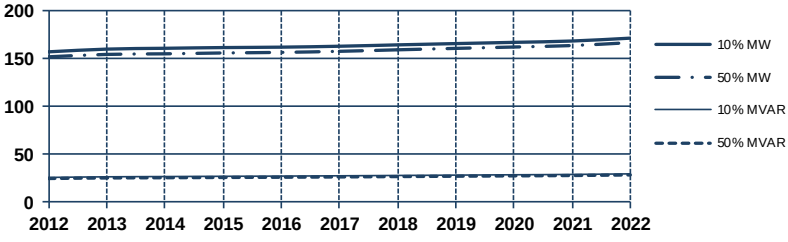
2011 MD	MW	MVAR
08 Jun 2011 18:00	147.5	20.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	157.3	26.2	152.1	25.0
2013	160.1	26.8	154.6	25.6
2014	161.0	27.1	155.2	25.8
2015	161.8	27.4	156.1	26.1
2016	162.2	27.6	156.7	26.4
2017	163.2	27.9	157.8	26.7
2018	164.6	28.2	159.4	27.1
2019	165.9	28.6	160.9	27.4
2020	167.2	28.9	162.3	27.8
2021	168.6	29.3	163.9	28.2
2022	171.6	29.9	166.9	28.8

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 3 and 4, separated out for planning purposes.

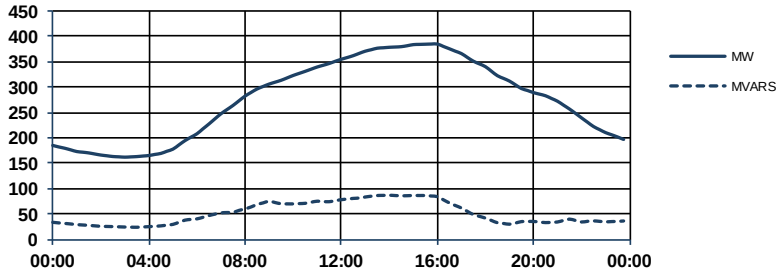
SVTS66: Springvale Terminal Station 66 kV bus

Summer Demand

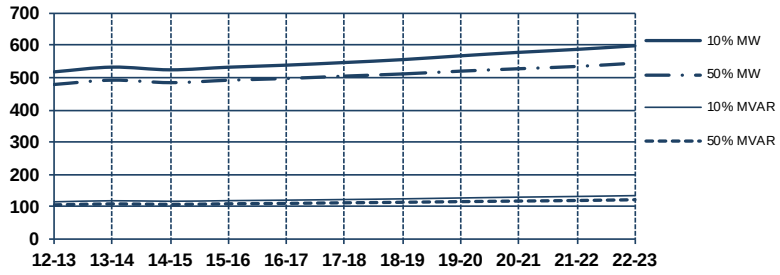
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	384.6	86.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	517.4	115.3	478.4	105.9
13-14	532.1	118.7	491.7	109.0
14-15	523.7	117.0	484.1	107.5
15-16	531.8	118.9	491.6	109.2
16-17	538.2	120.5	496.8	110.5
17-18	546.3	122.4	504.3	112.3
18-19	555.3	124.5	511.0	113.9
19-20	567.1	127.2	519.6	115.9
20-21	577.8	129.7	527.1	117.7
21-22	587.0	131.9	534.1	119.4
22-23	598.1	134.5	544.5	121.7

Load Curve on High Demand Day



Forecast

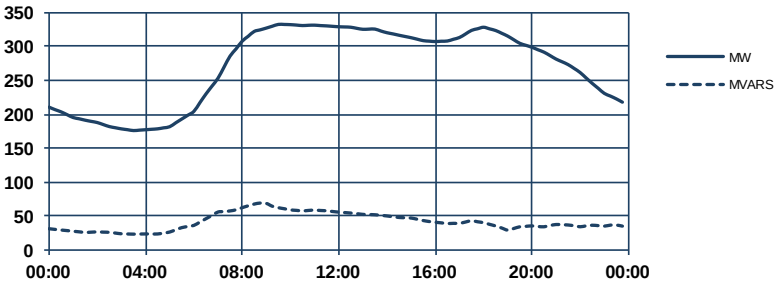


Winter Demand

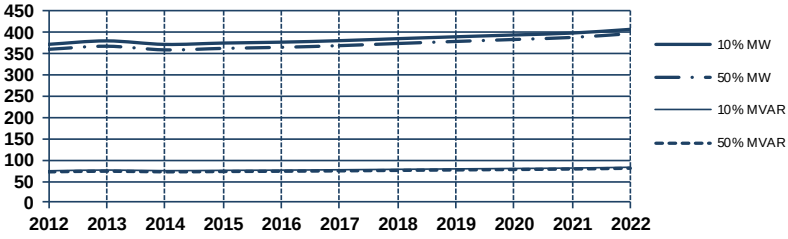
2011 MD	MW	MVAR
08 Jun 2011 09:30	332.5	68.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	371.5	74.5	359.8	71.9
2013	379.7	76.3	367.1	73.5
2014	371.4	74.8	358.5	71.9
2015	374.6	75.5	362.0	72.7
2016	376.6	76.1	364.6	73.4
2017	380.2	76.9	368.5	74.3
2018	384.8	78.0	373.5	75.4
2019	389.3	79.0	378.3	76.4
2020	393.6	79.9	383.0	77.5
2021	398.0	80.9	387.8	78.6
2022	406.8	82.8	396.7	80.4

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

Please see the comments for SVTS12 and SVTS34.

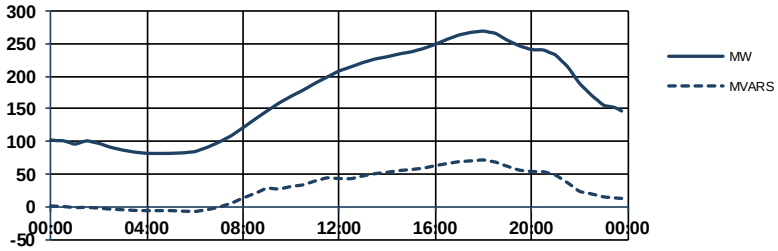
TBTS66: Tyabb Terminal Station 66 kV bus

Summer Demand

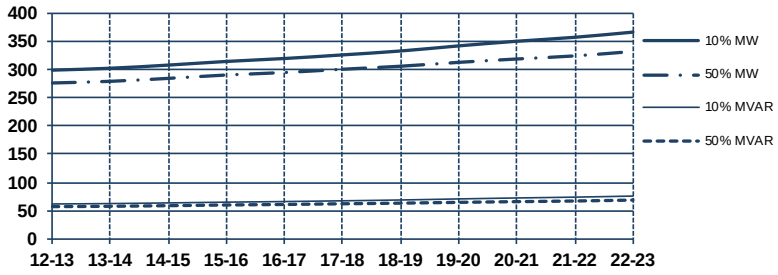
2011-12 MD	MW	MVAR
02 Jan 2012 18:00	268.9	71.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	298.7	62.1	276.0	57.4
13-14	302.1	62.8	279.0	58.0
14-15	307.6	64.0	284.1	59.1
15-16	314.1	65.3	290.1	60.3
16-17	319.3	66.4	294.5	61.2
17-18	325.7	67.7	300.3	62.4
18-19	332.6	69.1	305.6	63.5
19-20	341.6	71.0	312.5	65.0
20-21	349.8	72.7	318.4	66.2
21-22	356.8	74.2	323.9	67.3
22-23	365.9	76.1	331.7	69.0

Load Curve on High Demand Day



Forecast

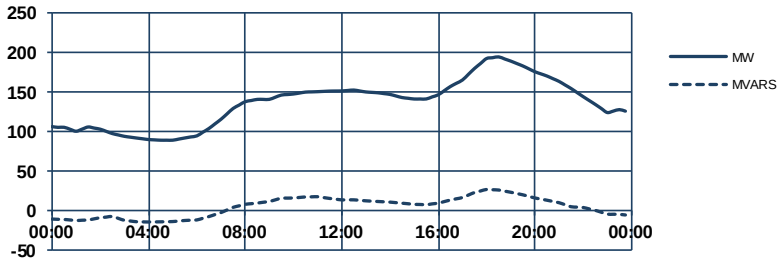


Winter Demand

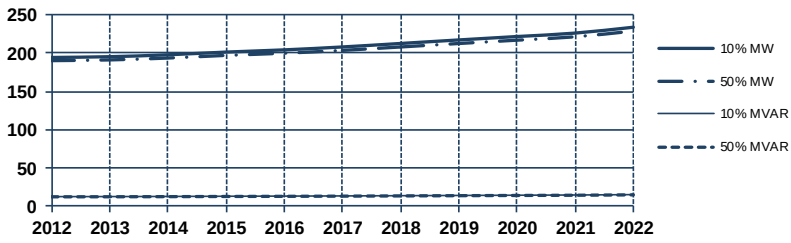
2011 MD	MW	MVAR
07 Jun 2011 18:30	193.9	26.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	194.5	12.9	190.3	12.6
2013	195.5	13.0	191.3	12.7
2014	198.0	13.1	193.7	12.9
2015	201.5	13.4	197.2	13.1
2016	204.4	13.6	200.0	13.3
2017	208.2	13.8	203.8	13.5
2018	212.8	14.1	208.2	13.8
2019	217.4	14.4	212.7	14.1
2020	221.8	14.7	217.1	14.4
2021	226.3	15.0	221.5	14.7
2022	234.0	15.5	229.0	15.2

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

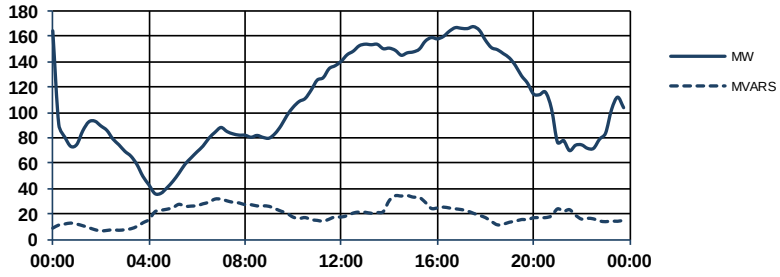
TGTS66: Terang Terminal Station 66 kV bus

Summer Demand

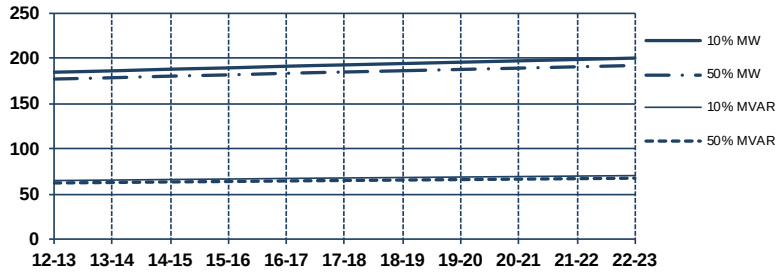
2011-12 MD	MW	MVAR
23 Jan 2012 17:30	167.5	34.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	184.4	64.7	176.9	62.0
13-14	185.9	65.2	178.3	62.5
14-15	187.8	65.9	180.1	63.2
15-16	189.2	66.4	181.4	63.7
16-17	191.0	67.0	183.2	64.3
17-18	192.5	67.5	184.6	64.8
18-19	194.0	68.0	186.0	65.3
19-20	195.5	68.6	187.5	65.8
20-21	197.0	69.1	188.9	66.3
21-22	198.5	69.6	190.4	66.8
22-23	200.0	70.2	191.8	67.3

Load Curve on High Demand Day



Forecast

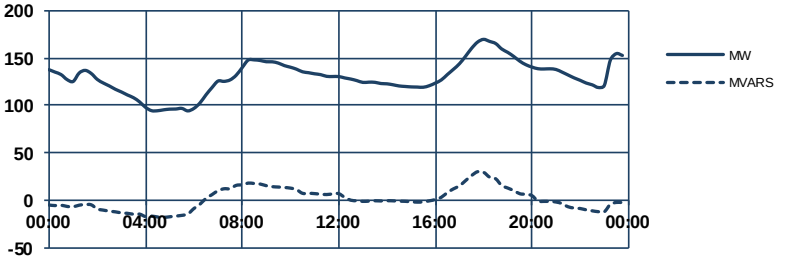


Winter Demand

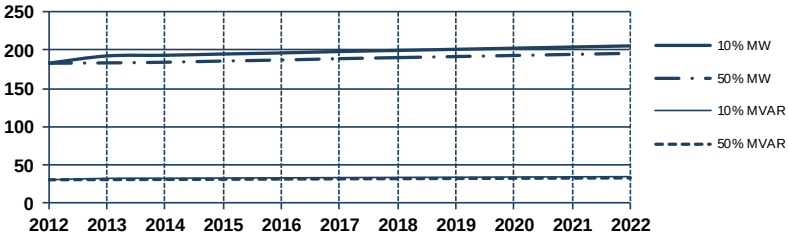
2011 MD	MW	MVAR
31 May 2011 18:00	169.7	30.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	183.1	30.9	183.1	30.9
2013	192.5	32.8	183.5	31.3
2014	193.4	32.9	184.4	31.4
2015	195.1	33.2	185.9	31.7
2016	196.5	33.5	187.3	31.9
2017	198.3	33.8	189.0	32.2
2018	199.8	34.0	190.4	32.4
2019	201.2	34.3	191.8	32.7
2020	202.7	34.5	193.2	32.9
2021	204.2	34.8	194.6	33.1
2022	205.7	35.0	196.0	33.4

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

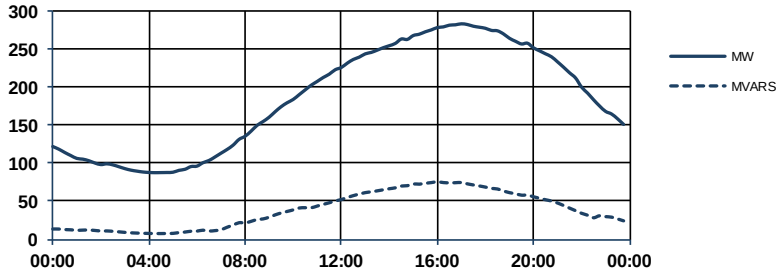
TSTS66: Templestowe Terminal Station 66 kV bus

Summer Demand

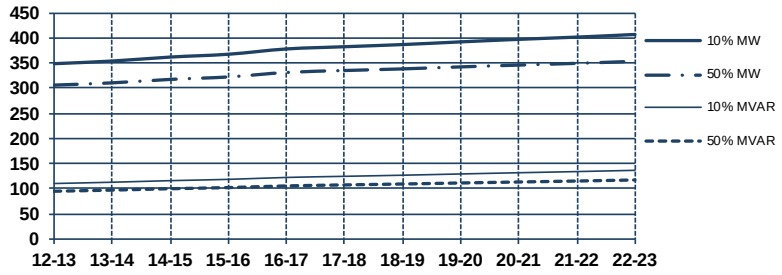
2011-12 MD	MW	MVAR
25 Feb 2012 17:00	282.9	75.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	348.9	110.6	306.3	95.2
13-14	354.2	113.1	310.8	97.4
14-15	362.1	116.2	317.6	100.2
15-16	367.7	118.8	322.5	102.5
16-17	378.2	122.6	331.4	105.8
17-18	382.6	124.8	335.3	107.7
18-19	386.9	127.1	338.5	109.6
19-20	392.3	129.6	342.5	111.6
20-21	397.3	132.0	346.1	113.6
21-22	401.8	134.3	349.6	115.5
22-23	407.0	136.8	353.6	117.6

Load Curve on High Demand Day



Forecast

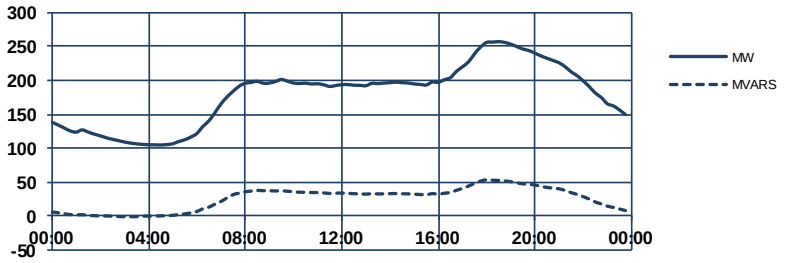


Winter Demand

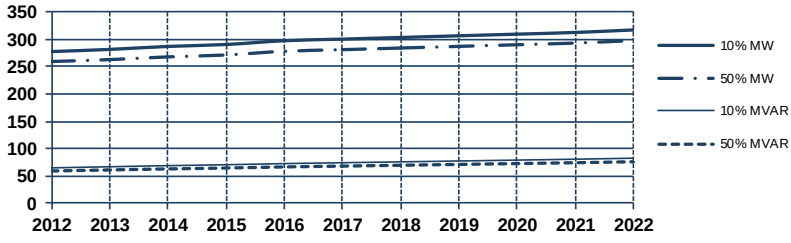
2011 MD	MW	MVAR
07 Jun 2011 18:30	257.1	53.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	277.6	65.1	259.4	59.4
2013	281.5	67.1	262.9	61.3
2014	287.0	69.2	267.9	63.2
2015	290.5	70.8	271.4	64.8
2016	297.4	72.9	278.1	66.8
2017	300.3	74.5	281.0	68.3
2018	303.4	76.1	284.1	69.9
2019	306.4	77.7	287.1	71.4
2020	309.4	79.3	290.1	72.9
2021	312.5	80.9	293.2	74.5
2022	317.1	82.8	297.7	76.3

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

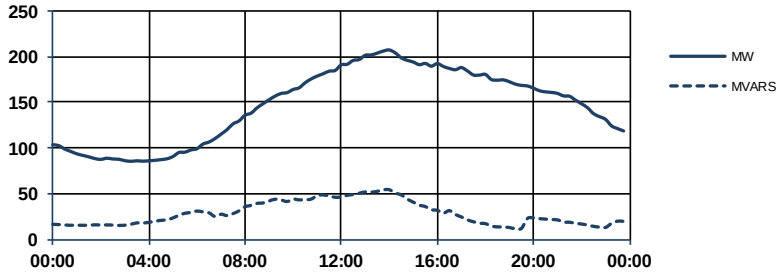
TTS1266: Thomastown Terminal Station 1&2 66 kV bus

Summer Demand

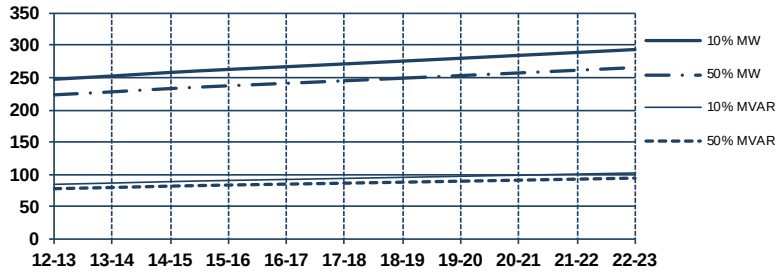
2011-12 MD	MW	MVAR
24 Jan 2012 16:00	207.1	54.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	247.3	84.7	223.2	78.0
13-14	252.3	86.7	227.8	79.8
14-15	257.8	88.9	232.9	81.9
15-16	262.5	90.7	237.1	83.6
16-17	266.7	92.3	241.0	85.0
17-18	271.0	93.9	244.9	86.5
18-19	275.3	95.5	248.9	88.0
19-20	279.7	97.2	253.0	89.6
20-21	284.2	98.8	257.0	91.1
21-22	288.7	100.6	261.2	92.7
22-23	293.3	102.3	265.3	94.3

Load Curve on High Demand Day



Forecast

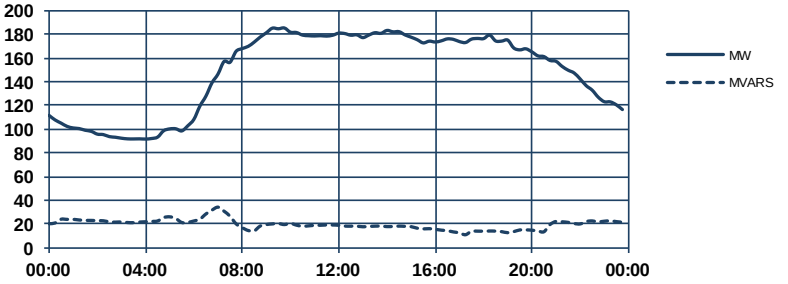


Winter Demand

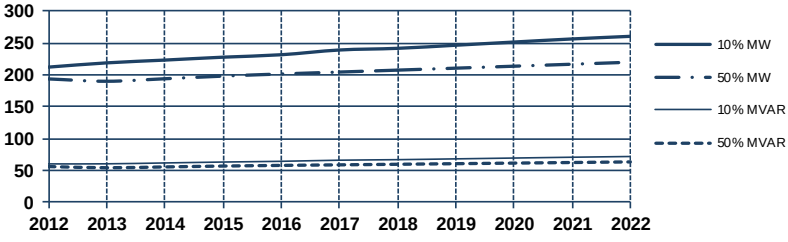
2011 MD	MW	MVAR
08 Jun 2011 09:30	185.3	34.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	212.0	60.5	193.6	56.3
2013	218.7	60.6	189.9	54.5
2014	223.0	61.9	193.8	55.7
2015	227.6	63.4	197.9	57.1
2016	231.4	64.5	201.3	58.1
2017	238.8	66.2	204.3	59.0
2018	241.5	67.1	207.3	59.9
2019	246.3	68.3	210.4	60.8
2020	251.3	69.6	213.5	61.7
2021	256.1	70.9	216.6	62.6
2022	260.2	72.0	219.7	63.6

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 1 and 2, separated out for planning purposes. Austin Hospital embedded generator in Heidelberg is not included in the forecast. During 2012 summer peak and 2011 winter peak demand, the generator was not operating. Australian Paper Fairfield embedded generator is assumed to be running in the forecast.

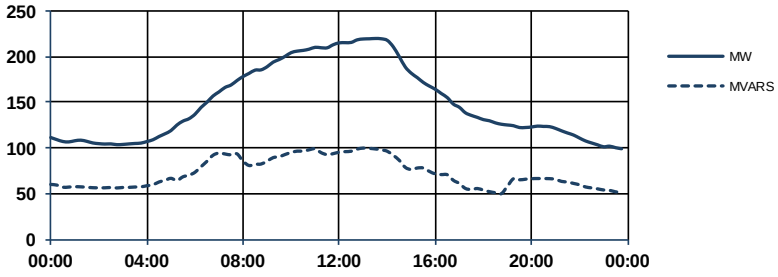
TTS3466: Thomastown Terminal Station 3&4 66 kV bus

Summer Demand

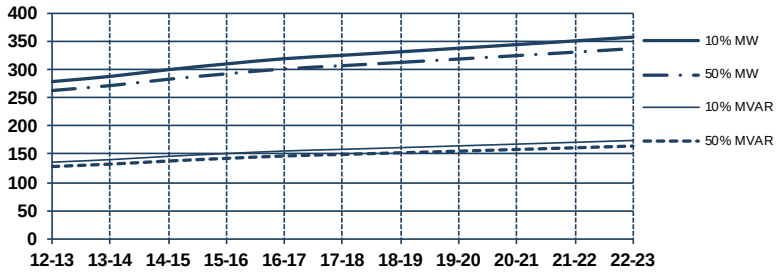
2011-12 MD	MW	MVAR
24 Jan 2012 14:30	219.7	99.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	278.5	136.0	262.7	128.3
13-14	287.6	140.5	271.4	132.5
14-15	299.5	146.3	282.6	138.0
15-16	309.7	151.3	292.2	142.7
16-17	318.9	155.8	300.9	146.9
17-18	325.0	158.7	306.6	149.7
18-19	331.1	161.7	312.4	152.6
19-20	337.4	164.8	318.3	155.5
20-21	343.9	167.9	324.4	158.4
21-22	350.4	171.1	330.6	161.4
22-23	357.0	174.4	336.8	164.5

Load Curve on High Demand Day



Forecast

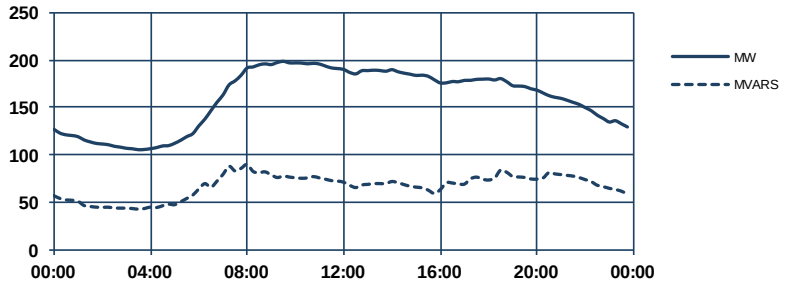


Winter Demand

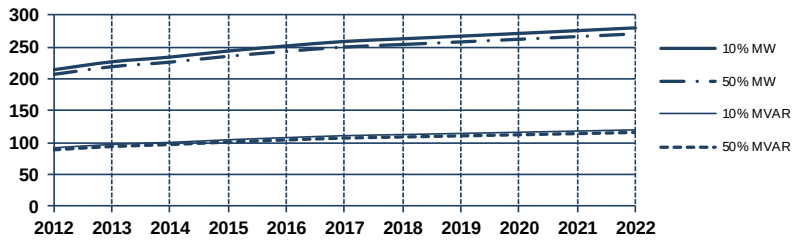
2011 MD	MW	MVAR
08 Jun 2011 09:30	198.6	89.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	214.1	91.8	206.8	88.7
2013	226.5	97.2	218.9	93.9
2014	233.9	100.4	226.0	97.0
2015	243.5	104.5	235.2	100.9
2016	251.4	107.9	242.9	104.2
2017	258.5	110.9	249.7	107.1
2018	262.6	112.7	253.7	108.8
2019	266.8	114.5	257.8	110.6
2020	271.1	116.3	261.9	112.4
2021	275.4	118.1	266.1	114.2
2022	279.8	120.0	270.3	116.0

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

This is the demand on buses 3 and 4, separated out for planning purposes. Bolinda Landfill embedded generator in Broadmeadows, Preston Mini Hydro embedded generator in Reservoir and Visyboard embedded generator in Coolaroo are not included in the forecast. During 2012 summer peak demand and 2011 winter peak demand, these generators were operating at about 6.4MW and 5.8MW respectively.

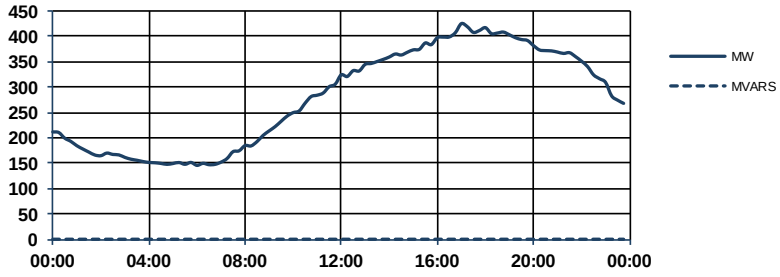
TTS66: Thomastown Terminal Station 66 kV bus

Summer Demand

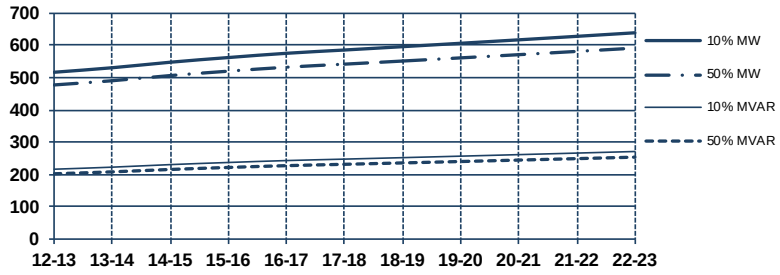
2011-12 MD	MW	MVAR
24 Jan 2012 14:30	424.8	157.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	516.2	216.2	477.0	202.1
13-14	530.2	222.6	490.0	208.0
14-15	547.2	230.4	506.0	215.4
15-16	561.7	237.0	519.5	221.6
16-17	574.9	242.9	531.8	227.2
17-18	585.0	247.4	541.3	231.4
18-19	595.4	252.0	550.9	235.7
19-20	605.9	256.6	560.7	240.0
20-21	616.5	261.3	570.6	244.4
21-22	627.3	266.1	580.7	248.9
22-23	638.3	271.0	591.0	253.5

Load Curve on High Demand Day



Forecast

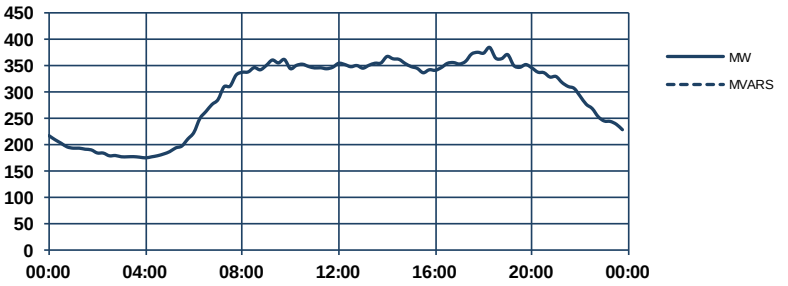


Winter Demand

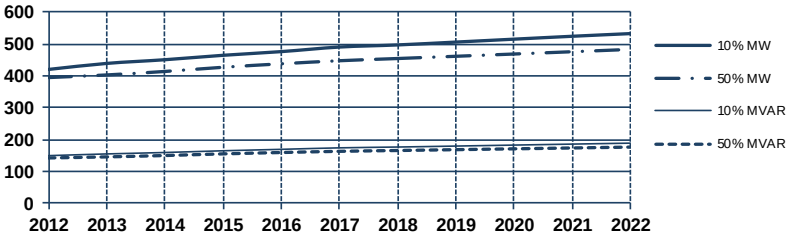
2011 MD	MW	MVAR
08 Jun 2011 09:30	383.9	124.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	419.8	149.9	394.4	142.7
2013	438.7	155.3	402.6	146.0
2014	450.3	159.7	413.6	150.2
2015	464.2	165.2	426.7	155.4
2016	475.7	169.6	437.5	159.7
2017	490.0	174.3	447.2	163.4
2018	496.7	176.9	454.1	166.0
2019	505.6	179.9	461.1	168.6
2020	514.7	183.0	468.2	171.2
2021	523.8	186.0	475.4	173.9
2022	532.2	189.0	482.7	176.6

Load Curve on High Demand Day



Forecast



Notes:

Please see the comments for TTS12 and TTS34

For embedded generation details, please see next section of report.

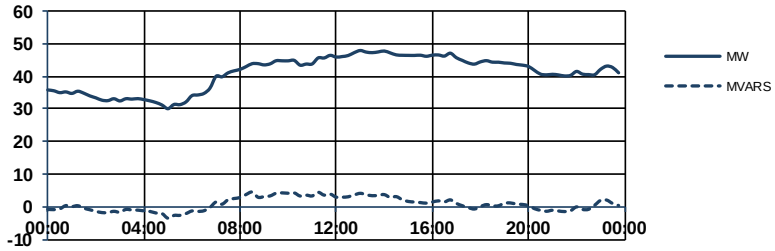
WETS66: Wemen Terminal Station 66 kV bus

Summer Demand

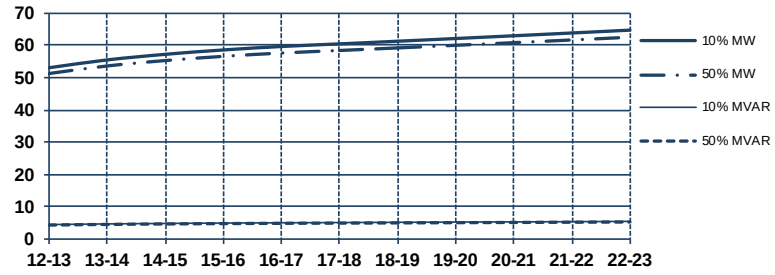
2011-12 MD	MW	MVAR
24 Feb 2012 17:30	47.8	-2.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	53.0	4.5	51.2	4.3
13-14	55.4	4.7	53.6	4.5
14-15	57.2	4.8	55.2	4.7
15-16	58.5	5.0	56.5	4.8
16-17	59.6	5.1	57.6	4.9
17-18	60.4	5.1	58.4	4.9
18-19	61.2	5.2	59.2	5.0
19-20	62.1	5.3	60.0	5.1
20-21	62.9	5.3	60.8	5.2
21-22	63.8	5.4	61.6	5.2
22-23	64.7	5.5	62.5	5.3

Load Curve on High Demand Day



Forecast

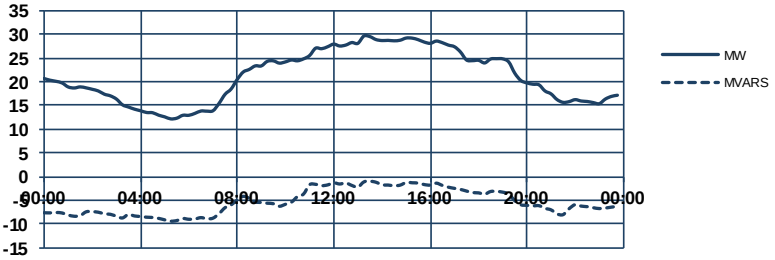


Winter Demand

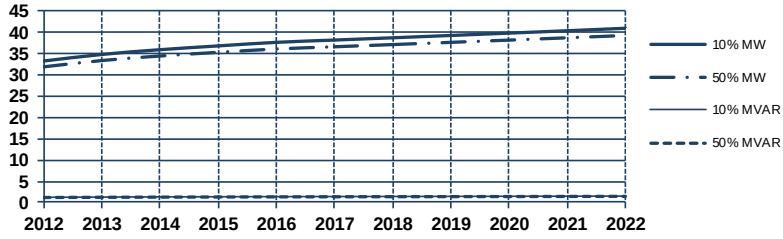
2011 MD	MW	MVAR
00 Jan 1900 00:00	0.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	33.2	1.2	31.9	1.2
2013	34.8	1.3	33.3	1.2
2014	35.9	1.3	34.4	1.3
2015	36.8	1.4	35.3	1.3
2016	37.6	1.4	36.1	1.3
2017	38.2	1.4	36.6	1.3
2018	38.7	1.4	37.1	1.4
2019	39.2	1.4	37.6	1.4
2020	39.8	1.5	38.2	1.4
2021	40.4	1.5	38.7	1.4
2022	40.9	1.5	39.2	1.4

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

New terminal station, started operating on 9/2/2012.

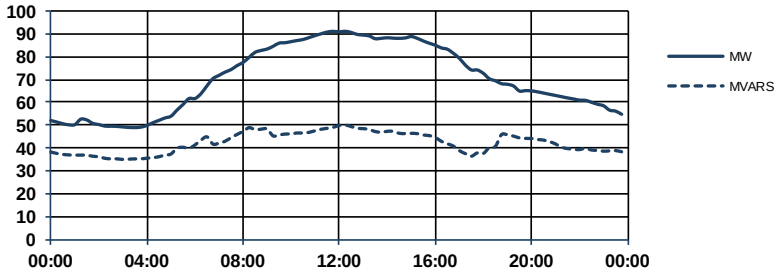
WMTS22: West Melbourne Terminal Station 22 kV bus

Summer Demand

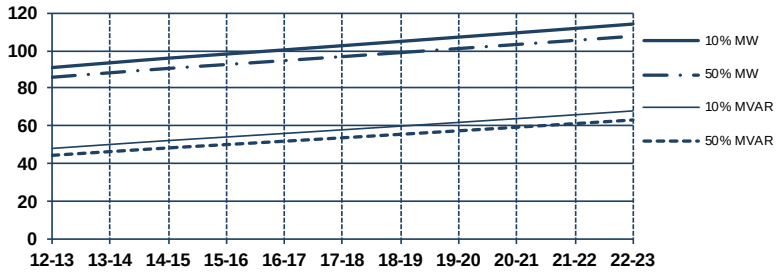
2011-12 MD	MW	MVAR
18 Nov 2011 11:30	91.0	50.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	91.0	48.1	85.8	44.4
13-14	93.5	50.2	88.2	46.4
14-15	96.0	52.3	90.5	48.4
15-16	98.2	54.1	92.6	50.1
16-17	100.4	56.0	94.7	51.9
17-18	102.6	58.0	96.8	53.7
18-19	104.9	59.9	98.9	55.6
19-20	107.1	61.9	101.1	57.4
20-21	109.4	63.9	103.2	59.3
21-22	111.7	65.9	105.4	61.2
22-23	114.1	68.0	107.6	63.2

Load Curve on High Demand Day



Forecast

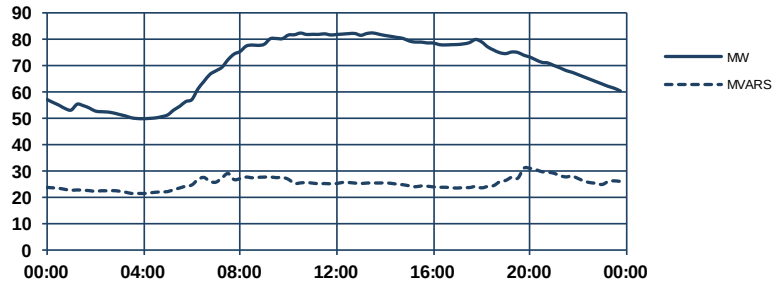


Winter Demand

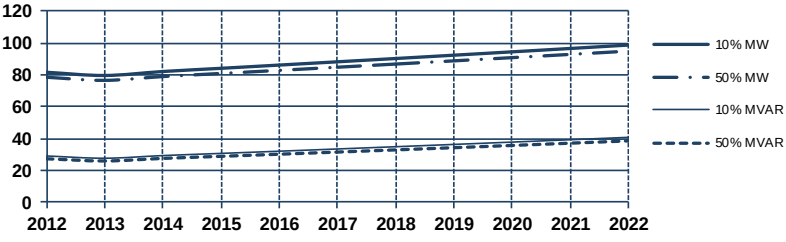
2011 MD	MW	MVAR
08 Jun 2011 09:00	82.3	30.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	81.6	29.2	78.5	27.4
2013	79.6	27.7	76.5	26.0
2014	82.0	29.4	78.9	27.6
2015	84.1	30.8	80.8	28.9
2016	86.1	32.1	82.8	30.3
2017	88.1	33.5	84.7	31.6
2018	90.2	34.9	86.7	33.0
2019	92.3	36.4	88.7	34.3
2020	94.4	37.8	90.7	35.7
2021	96.5	39.3	92.8	37.2
2022	98.6	40.8	94.8	38.6

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at WMTS.

For embedded generation details, please see next section of report.

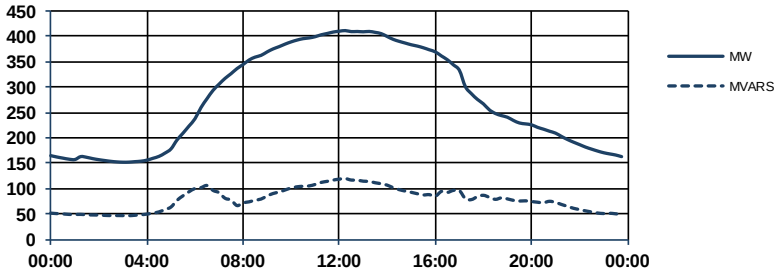
WMTS66: West Melbourne Terminal Station 66 kV bus

Summer Demand

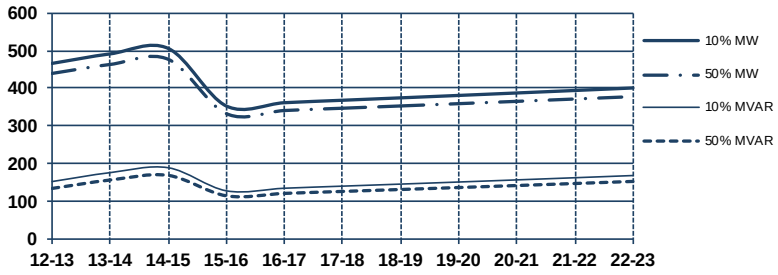
2011-12 MD	MW	MVAR
30 Jan 2012 13:30	411.0	119.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	466.0	152.6	439.4	134.4
13-14	491.2	176.3	463.2	156.7
14-15	505.6	189.2	476.7	168.9
15-16	352.9	128.0	332.7	114.7
16-17	361.7	134.9	341.0	121.2
17-18	368.2	140.4	347.1	126.4
18-19	374.6	145.8	353.1	131.5
19-20	381.0	151.4	359.2	136.7
20-21	387.5	157.0	365.3	142.0
21-22	394.1	162.7	371.5	147.4
22-23	400.8	168.5	377.8	152.9

Load Curve on High Demand Day



Forecast

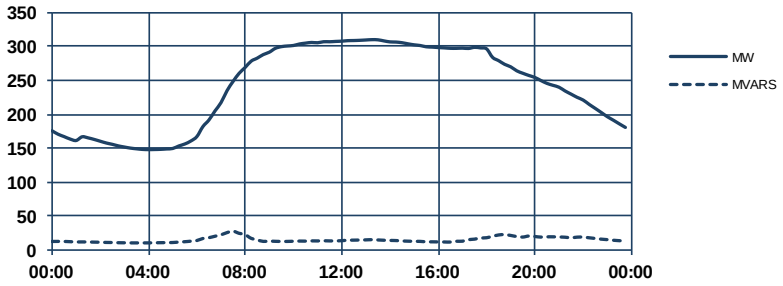


Winter Demand

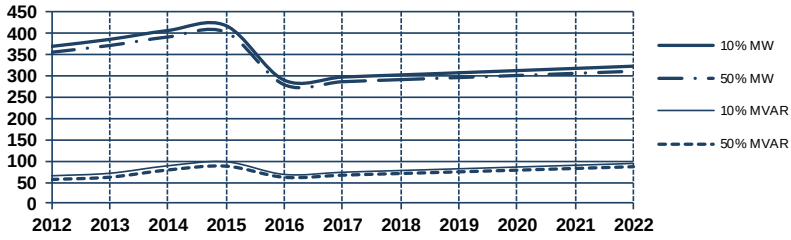
2011 MD	MW	MVAR
08 Jun 2011 13:00	310.0	27.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	369.0	65.1	355.3	56.4
2013	385.5	71.0	371.2	61.8
2014	406.3	88.6	391.2	78.7
2015	417.9	98.0	402.3	87.8
2016	289.8	68.3	279.2	61.6
2017	297.0	73.4	286.1	66.6
2018	302.1	77.5	291.0	70.5
2019	307.1	81.5	295.8	74.4
2020	312.2	85.7	300.8	78.3
2021	317.4	89.8	305.7	82.3
2022	322.6	94.1	310.7	86.4

Load Curve on High Demand Day



Forecast



Notes:

Load is forecast to be transferred to BTS66.

For embedded generation details, please see next section of report.

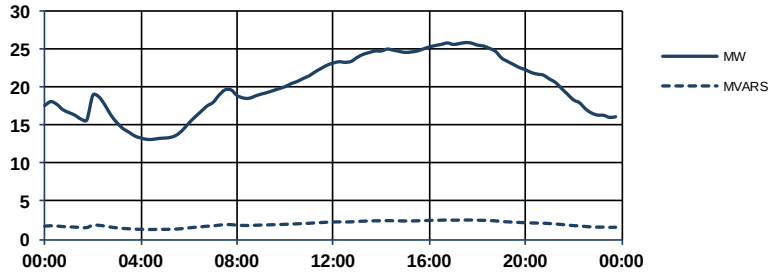
WOTS22: Wodonga Terminal Station 22 kV bus

Summer Demand

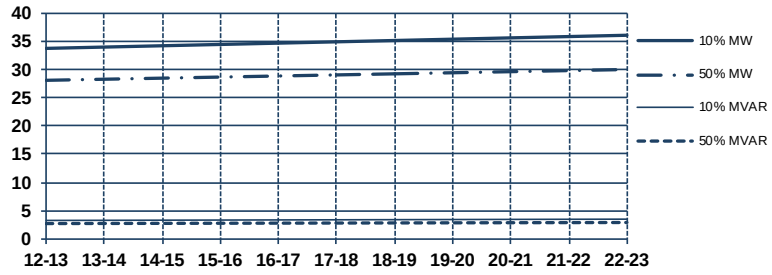
2011-12 MD	MW	MVAR
03 Jan 2012 17:00	25.8	2.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	33.7	3.3	28.1	2.7
13-14	33.9	3.3	28.3	2.8
14-15	34.2	3.3	28.5	2.8
15-16	34.4	3.4	28.6	2.8
16-17	34.6	3.4	28.8	2.8
17-18	34.9	3.4	29.0	2.8
18-19	35.1	3.4	29.2	2.9
19-20	35.3	3.5	29.4	2.9
20-21	35.6	3.5	29.6	2.9
21-22	35.8	3.5	29.8	2.9
22-23	36.0	3.5	30.0	2.9

Load Curve on High Demand Day



Forecast

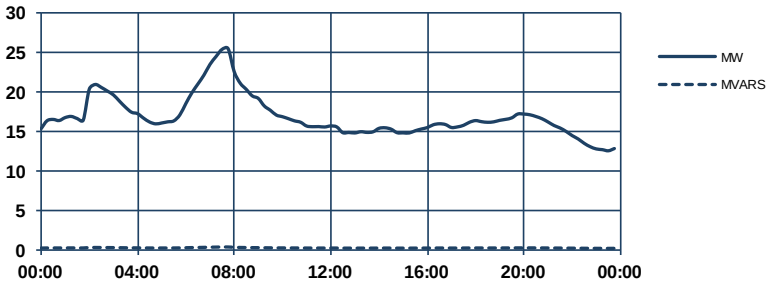


Winter Demand

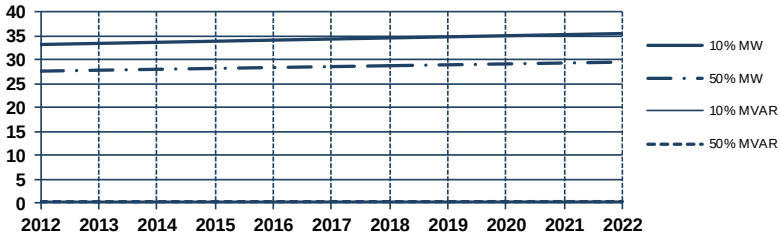
2011 MD	MW	MVAR
08 Jun 2011 08:30	25.4	0.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	33.2	0.4	27.6	0.4
2013	33.4	0.4	27.8	0.4
2014	33.7	0.4	28.0	0.4
2015	33.9	0.5	28.2	0.4
2016	34.1	0.5	28.4	0.4
2017	34.3	0.5	28.6	0.4
2018	34.6	0.5	28.8	0.4
2019	34.8	0.5	29.0	0.4
2020	35.0	0.5	29.1	0.4
2021	35.3	0.5	29.3	0.4
2022	35.5	0.5	29.5	0.4

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at WOTS.

For embedded generation details, please see next section of report.

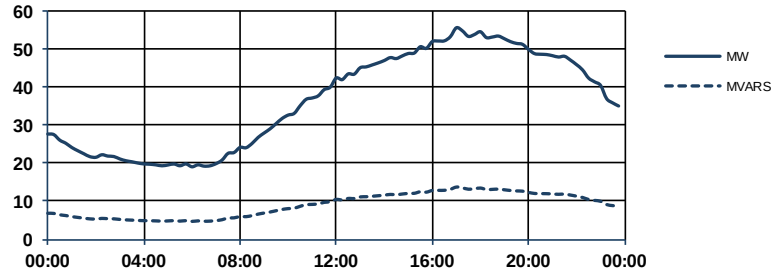
WOTS66: Wodonga Terminal Station 66 kV bus

Summer Demand

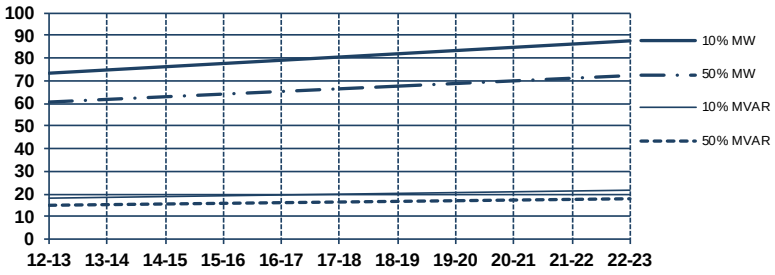
2011-12 MD	MW	MVAR
19 Jan 2012 15:30	55.5	13.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	73.3	18.1	60.6	14.9
13-14	74.8	18.4	61.7	15.2
14-15	76.2	18.8	62.9	15.5
15-16	77.6	19.1	64.1	15.8
16-17	79.1	19.5	65.3	16.1
17-18	80.5	19.9	66.4	16.4
18-19	81.9	20.2	67.6	16.7
19-20	83.3	20.6	68.8	17.0
20-21	84.8	20.9	69.9	17.3
21-22	86.2	21.3	71.1	17.5
22-23	87.6	21.6	72.3	17.8

Load Curve on High Demand Day



Forecast

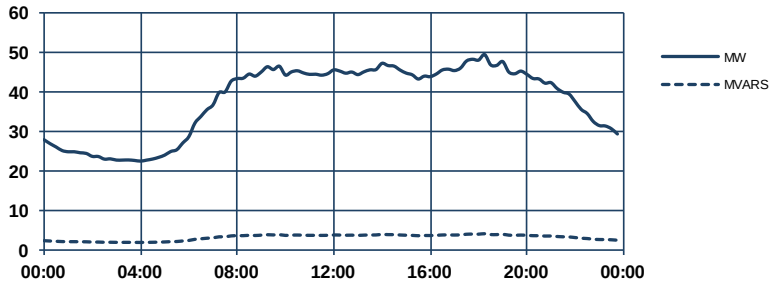


Winter Demand

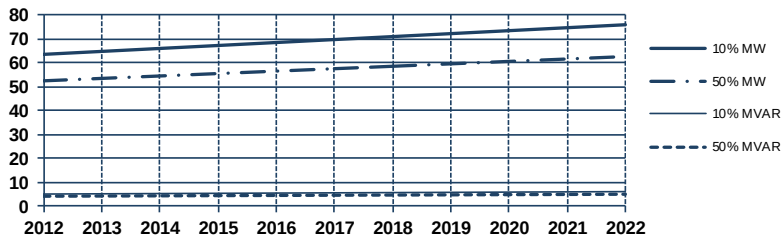
2011 MD	MW	MVAR
07 Jun 2011 18:00	49.4	4.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	63.5	5.2	52.5	4.3
2013	64.8	5.3	53.5	4.4
2014	66.0	5.4	54.5	4.5
2015	67.2	5.5	55.5	4.5
2016	68.5	5.6	56.5	4.6
2017	69.7	5.7	57.5	4.7
2018	71.0	5.8	58.6	4.8
2019	72.2	5.9	59.6	4.9
2020	73.4	6.0	60.6	5.0
2021	74.7	6.1	61.6	5.0
2022	75.9	6.2	62.6	5.1

Load Curve on High Demand Day



Forecast



Notes:

For embedded generation details, please see next section of report.

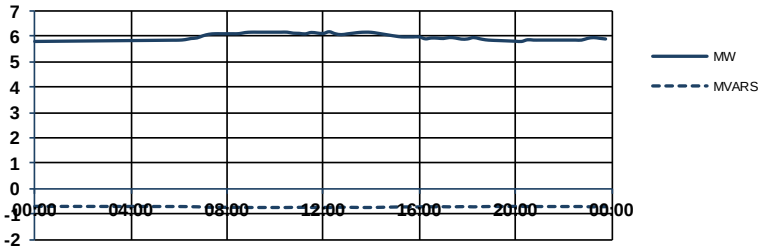
YPS11: Yallourn PS Terminal Station 11 kV bus

Summer Demand

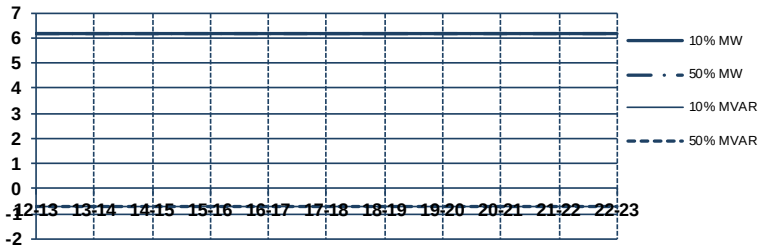
2011-12 MD	MW	MVAR
23 Nov 2011 14:00	6.2	-0.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
12-13	6.2	-0.7	6.2	-0.7
13-14	6.2	-0.7	6.2	-0.7
14-15	6.2	-0.7	6.2	-0.7
15-16	6.2	-0.7	6.2	-0.7
16-17	6.2	-0.7	6.2	-0.7
17-18	6.2	-0.7	6.2	-0.7
18-19	6.2	-0.7	6.2	-0.7
19-20	6.2	-0.7	6.2	-0.7
20-21	6.2	-0.7	6.2	-0.7
21-22	6.2	-0.7	6.2	-0.7
22-23	6.2	-0.7	6.2	-0.7

Load Curve on High Demand Day



Forecast

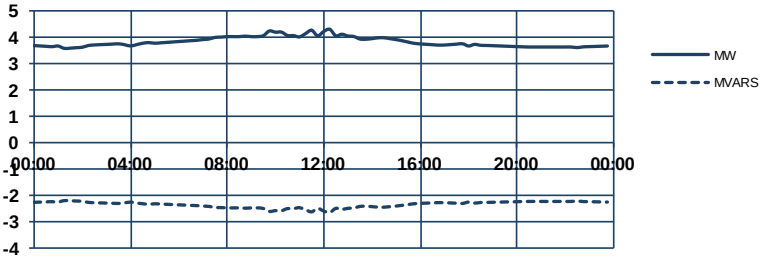


Winter Demand

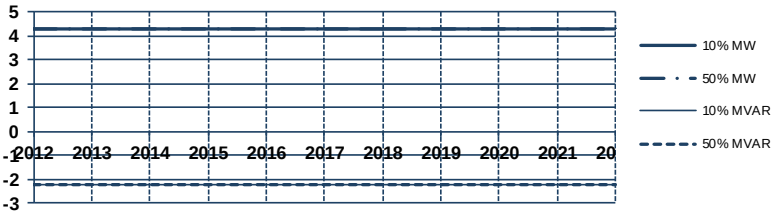
2011 MD	MW	MVAR
07 Jul 2011 11:00	4.3	-2.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2012	4.3	-2.2	4.3	-2.2
2013	4.3	-2.2	4.3	-2.2
2014	4.3	-2.2	4.3	-2.2
2015	4.3	-2.2	4.3	-2.2
2016	4.3	-2.2	4.3	-2.2
2017	4.3	-2.2	4.3	-2.2
2018	4.3	-2.2	4.3	-2.2
2019	4.3	-2.2	4.3	-2.2
2020	4.3	-2.2	4.3	-2.2
2021	4.3	-2.2	4.3	-2.2
2022	4.3	-2.2	4.3	-2.2

Load Curve on High Demand Day



Forecast



Notes: *For embedded generation details, please see next section of report.*

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CHAPTER 3 - METHODOLOGY

This chapter describes the methodology used to develop the terminal station demand forecasts (TSDF). Methodology details for specific terminal stations, where relevant, are provided with that terminal station's data in Chapter 2.

3.1 Date Ranges and times

Summer 2011–12 refers to the period 1 November 2011 to 30 April 2012. Winter 2011 refers to the period 1 May 2011 to 31 October 2011. Demand values are based on 30 minute energy forecasts. Where an interval time is noted, it refers to the end time of the 30-minute interval.

Time of day is shown in this report in Australian Eastern Standard Time (EST). Daylight Saving Time is not used.

3.2 Embedded Generation

Actual demand at a point of connection will be the total of the following:

- Customer demand connected to the distribution networks.
- Losses in the distribution networks.
- A deduction representing generation from generators embedded in the distribution networks.

This forecast assumes that relatively large embedded generators will be modelled separately, and they are assumed to be switched off at the time of maximum demand. This applies to the following generators:

- Morwell power station units G1-3.
- Clover power station.
- Hume power station.
- Somerton power station.
- Bairnsdale power station.
- Anglesea power station.

Table 3-1 describes the treatment of each smaller embedded generator. The final two columns provide the assumed embedded generation at the time of peak demand. The TSDF forecast values have been reduced by this amount. Some terminal stations have multiple rows, for example for split bus group locations.

Table 3-1 — Embedded generation locations

Location	Location Type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
ATS	Hybrid	66	Boral Tip Cogen off LV ZSS	Daily	2.94	
ATS	Hybrid	66	Wyndham Tip Cogen off WBE ZSS	Sporadic	0	0
ATS	Hybrid	66	Melbourne Water/AGL Cogen off WBE ZSS.	Daily. Rarely generates on MD day	0	0
ATS_BLTS	Hybrid	66	Brooklyn Landfill	Daily	0	0
ATS_WEST	Hybrid	66	Boral Tip Cogen off LV ZSS	Daily	2.94	

Location	Location Type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
ATS_WEST	Hybrid	66	Wyndham Tip Cogen off WBE ZSS	Sporadic	0	0
ATS_WEST	Hybrid	66	Melbourne Water/AGL Cogen off WBE ZSS.	Daily. Rarely generates on MD day	0	0
BATS	Entire	66	Challicum Hills wind farm	Wind Dependent	9.94	4.12
BATS	Entire	66	Ballarat Hospital cogen	Sporadic	0	0
BATS	Entire	66	Charles Piggery	unknown	Unknown	Unknown
BATS	Entire	66	Smythesdale Tip cogen	Daily	0	0.489
BATS	Entire	66	Leonard's Hill Wind Farm	Wind Dependent	0.0015	0
BETS	Entire	22	Ballarat Hospital cogen	sporadic	0	0
BETS	Entire	66	Charles Piggery	unknown	0	0
BLTS	Entire	22	Smythesdale Tip cogen	daily	0.47	0.48
BLTS	Entire	66	Brooklyn Landfill	Daily	0	0
CBTS	Entire	66	South Eastern Purification Plant	As required by the customer	0	0
ERTS	Entire	66	Berwick Tip	daily	5.15	5.15
ERTS	Entire	66	Cardinia	daily	3.8	3.8
ERTS	Entire	66	Hallam Tip	daily	6.6	6.6
ERTS	Entire	66	Dandenong Hospital (likely to have 5MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
ERTS34	Split Bus	66	Dandenong Hospital (likely to have 5MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
FBTS	Entire	66	Crown Casino	Not available	0	0
FBTS	Entire	66	Symex	Market non-scheduled demand side response generator	0	0
FBTS	Entire	66	AGL	Customer claims to run normally 24hrs a day, 7 days a week	0	0
GNTS	Entire	66	Lake William Hovell	seasonal	0.3	1.6
GTS	Entire	66	Corio Tip Cogen	Daily	0.66	0.95
GTS	Entire	66	Geelong Hospital export	Daily	2.8	2.6
GTS	Entire	66	Breamlea Wind Generator	Wind Dependent	unknown	unknown
GTS	Entire	66	Shell Refinery Corio (SRC)	unknown	unknown	unknown

Location	Location Type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
HOTS	Entire	66	Challicum Hills wind farm	Wind dependant	9.45	0
MWTS	Entire	66	Blue Rock Dam	daily	2.80	2.80
MWTS	Entire	66	Thompson Dam	daily	7.60	7.60
MWTS	Entire	66	Lake Glenmaggie	daily	3.80	3.80
MWTS	Entire	66	Toora Wind Farm	wind related	15.6	14
MWTS	Entire	66	Wonthaggi Wind Farm	wind related	9.8	10.3
RTS	Entire	66	St Vincent Hospital	Not available	0	0
RTS14	Split Bus	66	St Vincent Hospital	Not available	0	0
RTS23	Split Bus	66	Alfred Hospital	Not available	0	0
RWTS13	Split Bus	66	Olinda Creek Hydro	daily	1	1
RWTS13	Split Bus	66	Upper Yarra Hydro	daily	1	1
RWTS13	Split Bus	66	Silvan Inlet Hydro	daily	1.8	1.8
SHTS	Entire	66	Lake Mulwala Hydro	Daily	6.99	7.08
SMTS	Entire	66	Wollert Tip	daily	4.4	4.4
SMTS	Entire	66	Eildon Pondage	seasonal	3.8	0
SMTS	Entire	66	Somerton Power Station	Market driven	0	0
SVTS	Entire	66	Clayton Landfill (likely to have 5MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
SVTS	Entire	66	Springvale Landfill (likely to have 2MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
SVTS12	Split Bus	66	Clayton Landfill (likely to have 5MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
SVTS12	Split Bus	66	Springvale Landfill (likely to have 2MW generation during peak demand)	7am to 11pm, Mon to Fri	0	0
TGTS	Entire	66	Codrington wind farm	Wind dependant	4.5	0
TGTS	Entire	66	Yambuk wind farm	Wind dependant	6.1	0
TTS12	Split Bus	66	Austin Hospital	Not operating	0	0
TTS12	Split Bus	66	APM Fairfield	Part of APM Fairfield load	5	5
TTS34	Split Bus	66	Bolinda Landfill	Daily	0	0
TTS34	Split Bus	66	Preston Mini Hydro	Daily	0	0
WMTS	Entire	22	Royal Melbourne Hospital	Not available	0	0
WMTS	Entire	66	Channel 7	Not available	0	0

Location	Location Type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
WMTS	Entire	66	Royal Children Hospital (new generator scheduled for commissioning in 2nd half of 2011)	Not available	0	0

3.3 Capacitance and reactance

Reactive loading forecasts are the reactive loading levels expected to be imposed on locations by licensed distribution areas. Thus they incorporate the reactive losses of the distribution network, including any reactors, and are offset by line and cable charging and those capacitors in the distribution network assessed by participants (DNSPs and direct-connect customers) to be in service at the relevant time. Terminal station capacitors, compensators, reactors and transformation reactive losses are not considered as part of the demand.

3.4 Demand diversity

3.4.1 Terminal station diversity

Where more than one participant connects to a point of connection, a participant's maximum demand (MD) sometimes does not occur at the same time as the point of connection as a whole. AEMO refers to this as diversity between the participant's MD and the point of connection's MD. This diversity is represented by a "terminal station diversity factor", a number between zero and one.

Based on metered historical demand at the point of connection, AEMO calculates a terminal station diversity factor, which is then agreed with the participant. To obtain an aggregate demand forecast for each point of connection, demand forecasts contributed by participants are multiplied by the terminal station diversity factor before being summed.

Where only one participant connects to a point of connection, demand forecasts are presented as provided by the participant.

3.4.2 System diversity

Points of connection typically do not experience maximum demand at the same time. To obtain an aggregate demand forecast for Victoria as a whole, this diversity between points of connection must be allowed for.

AEMO determines a "system diversity factor" following a similar process to that for the "terminal station diversity factor", but based on historical times of high demand for Victoria as a whole.

CHAPTER 4 - VICTORIAN MAXIMUM DEMAND FORECASTS

This chapter reviews the aggregate total of the TSDF forecasts, and compares it to AEMO's regional forecast for Victoria from the 2012 National Electricity Forecast Report (NEFR).

4.1 National Electricity Forecasting Report forecast

AEMO publishes maximum demand (MD) forecasts for Victoria in its National Electricity Forecasting Report (NEFR).[1] This forecast is determined using a "top-down" approach, based on the following factors:

- Historical electricity demand.
- Economic and demographic forecasts.
- Drivers of future changes in demand, such as rooftop PV and energy efficiency.

For more information on this forecast, please see the NEFR, and the Forecasting Methodology Information Paper.[2]

4.2 TSDF system forecast

From the individual participant (DNSP and direct-connect customer) forecasts at 10% and 50% probability of exceedence (POE) for summer and winter, AEMO derived an overall Victorian forecast using the following steps:

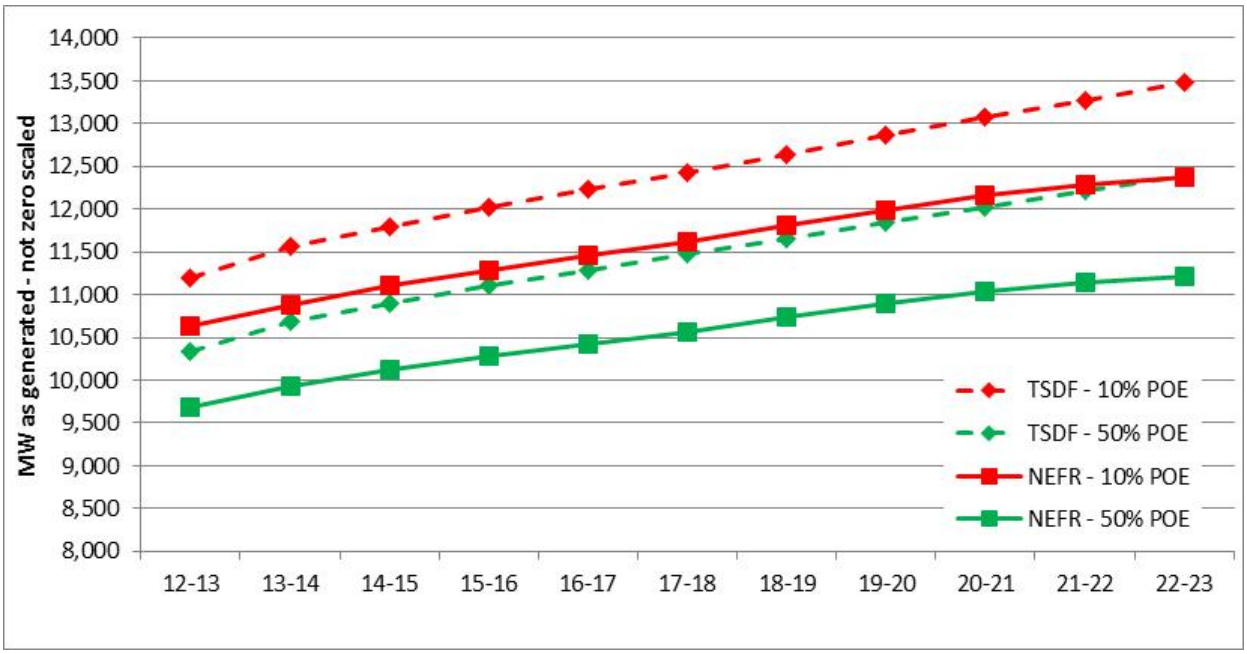
- Multiplied each participant's demand forecasts for its points of connection by the relevant system diversity factor to produce terminal station demand forecasts for the time of system maximum demand (MD) (see Chapter 3, Methodology).;
- Aggregated these system-diversified participant demand forecasts.
- Ensured that no double-counting occurs, such as split bus groups within a single point of connection and Loy Yang Switching station within Morwell Terminal Station.
- Adjusted the overall forecast by adding forecasted transmission losses and generator auxiliaries.

4.3 Summer maximum demand

Figure 4-1 compares TSDF and NEFR summer MD forecasts at the 10% POE and 50% POE levels. Summer demand in the TSDF forecast exceeds the NEFR forecast. For 10% POE, the difference increases from 569 MW (approximately 5.4%) in 2012–13 to 1,116 MW (approximately 9.0%) in 2022–23. For 50% POE, the difference increases from 641 MW (approximately 6.6%) to 1,180 MW (approximately 10.5%).

[1] http://www.aemo.com.au/Electricity/Forecasting
[2] http://www.aemo.com.au/en/Electricity/Forecasting/2012-Information-Papers

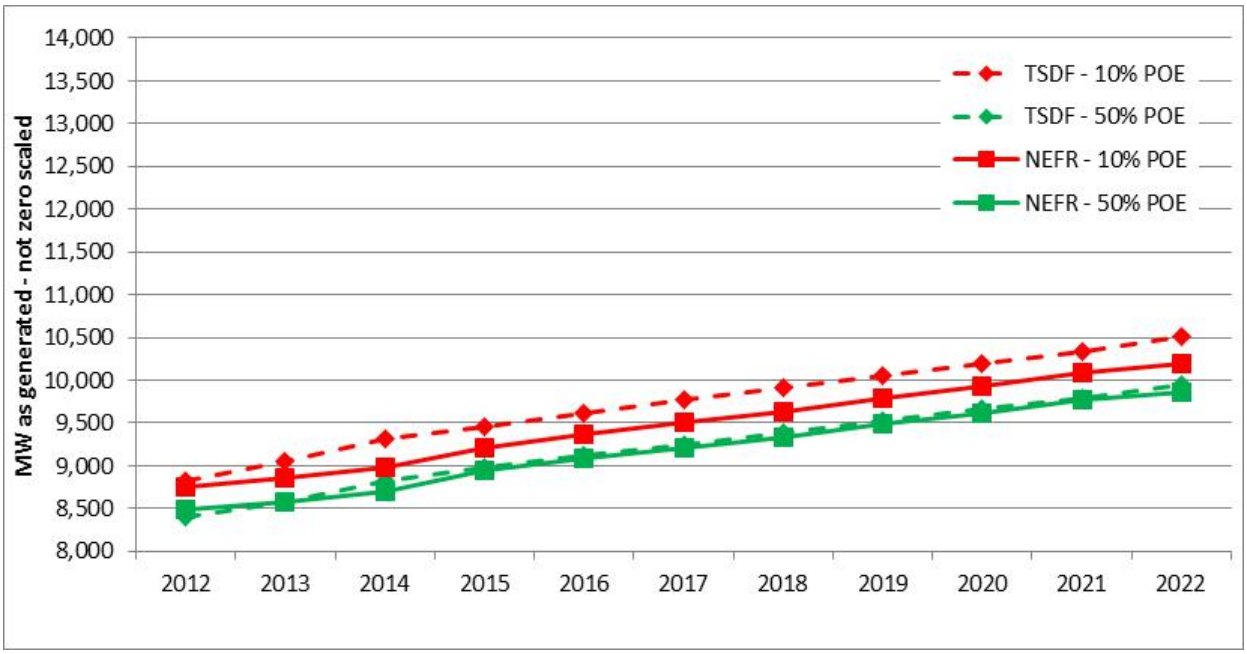
Figure 4-1 — TSDF and NEFR summer maximum demand forecasts



4.4 Winter maximum demand

Figure 4-2 compares TSDF and NEFR winter maximum demand forecasts at the 10% POE and 50% POE levels. Overall, winter TSDF forecasts exceed the NEFR forecasts. For 10% POE, the difference varies from 75 MW (approximately 0.9%) in 2012 to 313 MW (approximately 3.1%) in 2022. For 50% POE, the TSDF forecast for 2012 is 81 MW (approximately 1.0%) lower than the NEFR forecast. By 2022 the TSDF forecast is 77 MW (approximately 0.8%) higher than the NEFR forecast.

Figure 4-2 — TSDF and NEFR winter maximum demand forecasts



4.5 Differences between the forecasts

Differences between the NEFR forecasts and the aggregated TSDF forecasts derive to some extent from the different methods used to develop them. The NEFR is focused on forecasting regional demand for each National Electricity Market (NEM) region, including Victoria, whereas the TSDF uses local information to develop forecasts for each connection point. The TSDF is aggregated to a system total only for comparative purposes.

As discussed in Section 4.5.1 and Section 4.5.2, compared to the difference between AEMO's 2011 forecast and last year's TSDF report (for 2011–12 – 2021–22), the difference for summer has increased, however the difference for winter has decreased.

This is because the point of connection forecasts have not decreased as much from 2011 to 2012, compared to the decrease in AEMO forecasts. For example, AEMO's 2012 NEFR 50% POE summer MD for 2012–13 is 958 MW less than AEMO's 2011 forecast for the same period, whereas the 2012 TSDF 50% POE summer MD for 2012–13 is 649 MW less than the 2011 TSDF forecast for the same period.

4.5.1 Summer

The TSDF summer forecast grows throughout the forecast horizon, averaging 1.89% per annum for 50% POE. By comparison, the NEFR 50% POE growth rate for the same period is 1.47%. This difference is influenced by different forecasts for rooftop PV, energy efficiency and economic and demographic assumptions. These are areas where AEMO will be seeking closer alignment with DNSP forecasts in 2013.

4.5.2 Winter

The difference between the NEFR and the TSDF is smaller for winter than for summer. Winter MD levels are generally more stable than summer MD levels, as they are less subject to extreme weather events. Also, rooftop PV makes no contribution to the NEFR winter MD forecast, because winter MDs typically occur after the sun has set.

4.6 Closer alignment of the forecasts

AEMO is working with Victorian DNSPs to develop a common approach to regional and point of connection forecasts, to more closely align regional and connection point forecasts for 2013 onwards.

As AEMO develops its next NEFR forecasts early in 2013, the Victorian DNSPs will be consulted on key inputs including economic forecasts and the impact of rooftop PV and energy efficiency. AEMO will engage with DNSPs through the process to finalise the NEFR forecasts and the process to develop each DNSP's forecast for the 2013 TSDF.

4.7 Reactive demand forecasts

Figure 4-3 and Figure 4-4 show the aggregate reactive demands forecast to be drawn from terminal station points of connection (usually stations' lower voltage terminals) at the times of Victorian system maximum summer and winter active power demand. The higher levels of motorised cooling demand in summer are considered mainly responsible for the higher reactive demand in summer compared to winter.

Calculation of power factors indicates little change over the forecast horizon, regardless of POE or season.

Figure 4-3 — Summer maximum demand reactive demand forecast

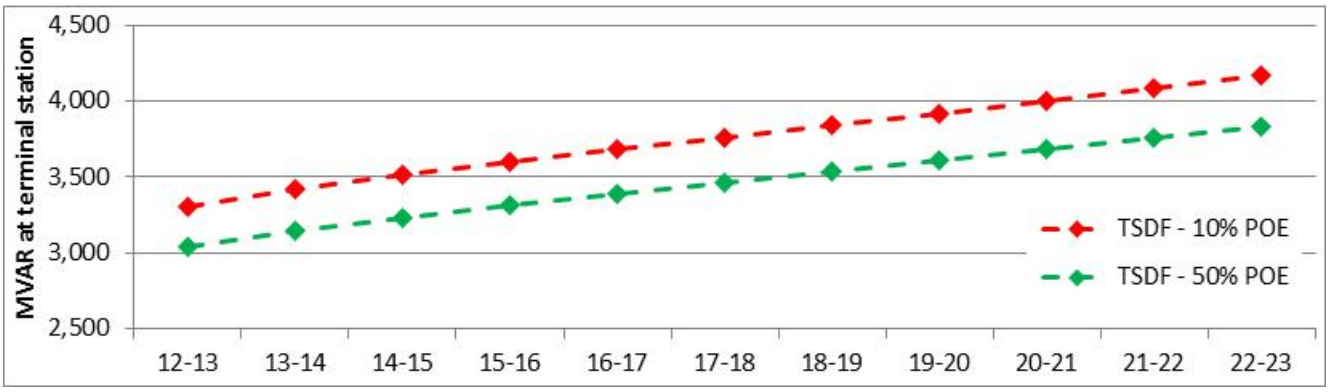
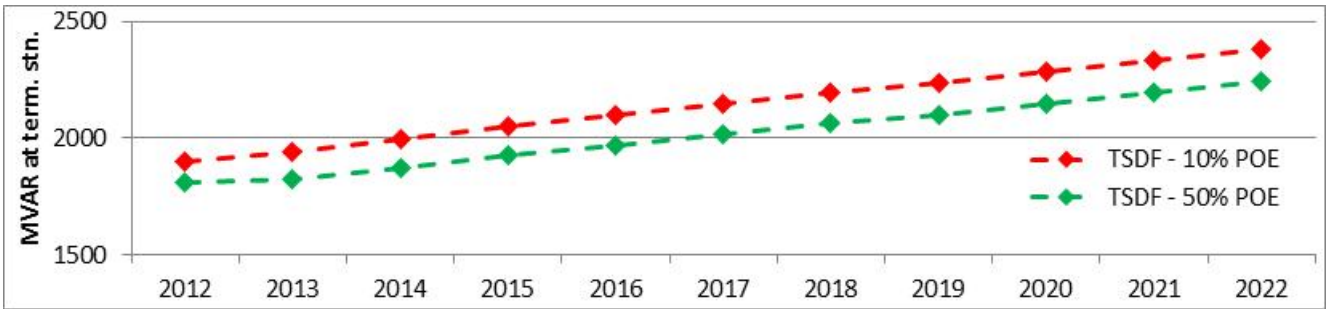


Figure 4-4 — Winter maximum demand reactive demand forecast



CHAPTER 5 - ACTUAL DEMAND AND PREVIOUS FORECASTS COMPARISON

5.1 Summer maximum demand

AEMO assessed the temperature conditions at time of Victorian maximum demand (MD) during the 2011–12 year. The highest summer half-hourly demand of 9,190 MW occurred at 4:00 PM Australian Eastern Standard Time (EST) on Tuesday 24 January 2012. On this day, temperatures peaked at 34˚C at 1:30 PM EST and remained above 34˚C until 5:30 PM EST. For further information on the actual MD level, please see the 2011–12 NEM Demand Review[3].

At the time of this year's MD, the most recent TSDF was the 2011 report, which covered the period from 2011–12 to 2021–22.

For each location, Figure 5-1 and Figure 5-2 compare the MD against the forecast demand for summer 2011–12.

For many locations, the actual MD was less than last year's 50% POE forecast. This is explained by the mild weather conditions in summer 2011–12, leading to a 2011–12 MD that fell below a 90% POE level.

5.2 Winter maximum demand

AEMO has assessed the temperature conditions for the 2011 winter maximum demand, recorded as 8.349 MW for the half hour ending 6:00 PM EST on 7 June 2011.

For each location, Figure 5-3 and Figure 5-4 compare the unadjusted actual MD against the forecast demand for winter 2011.

5.3 Chart notes

For brevity, the following charts present only the "entire station" locations, not their split bus locations (if those exist). In last year's TSDF, some of these stations were not forecast as "entire stations", hence the forecasts are zero in these cases.

[3] http://www.aemo.com.au/en/Electricity/Forecasting/2012-Information-Papers

Figure 5-1 — Summer maximum demand actual and forecast comparison by location

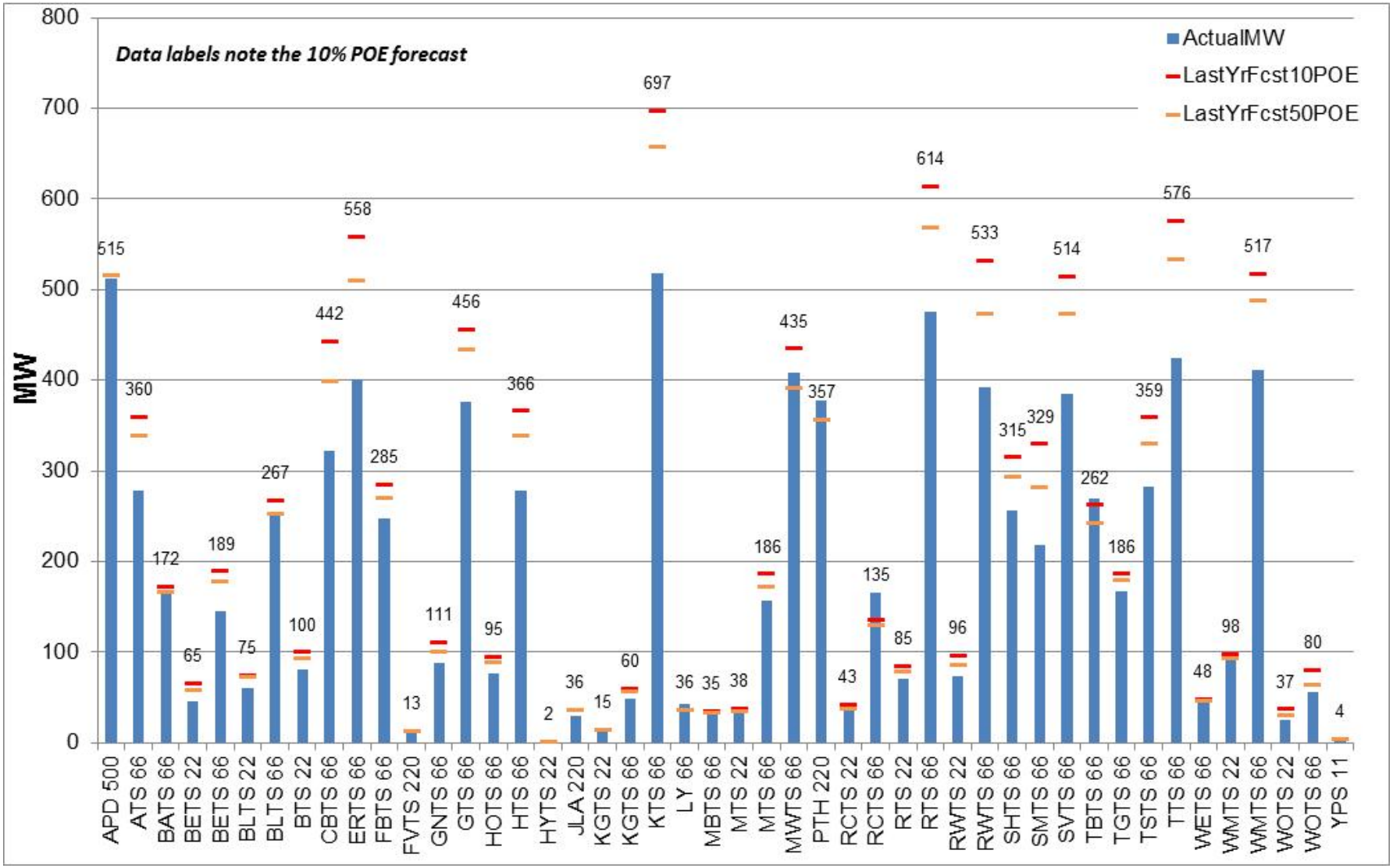


Figure 5-2 — Summer maximum demand actual and forecast reactive demand comparison by location

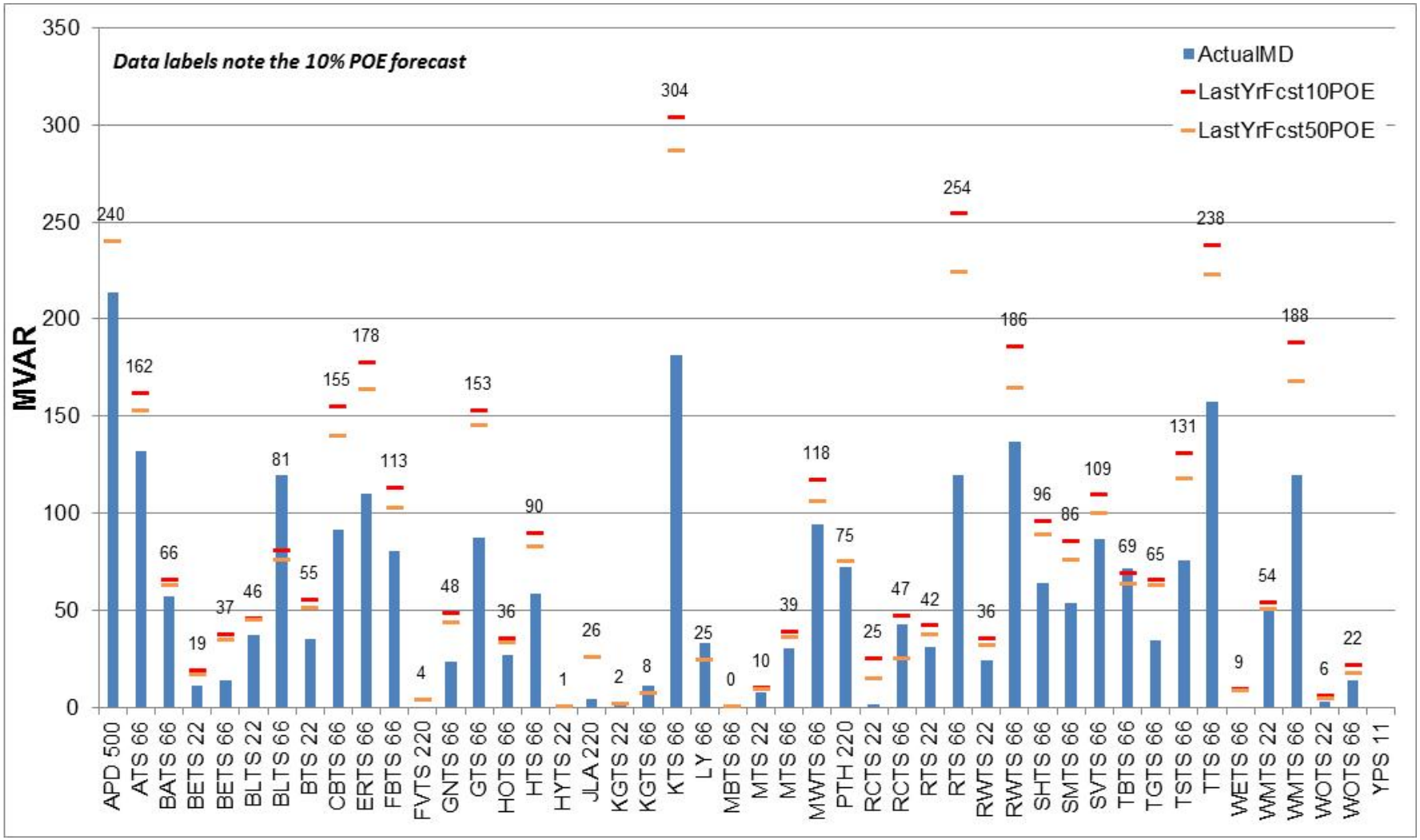


Figure 5-3 — Winter maximum demand actual and forecast comparison by location

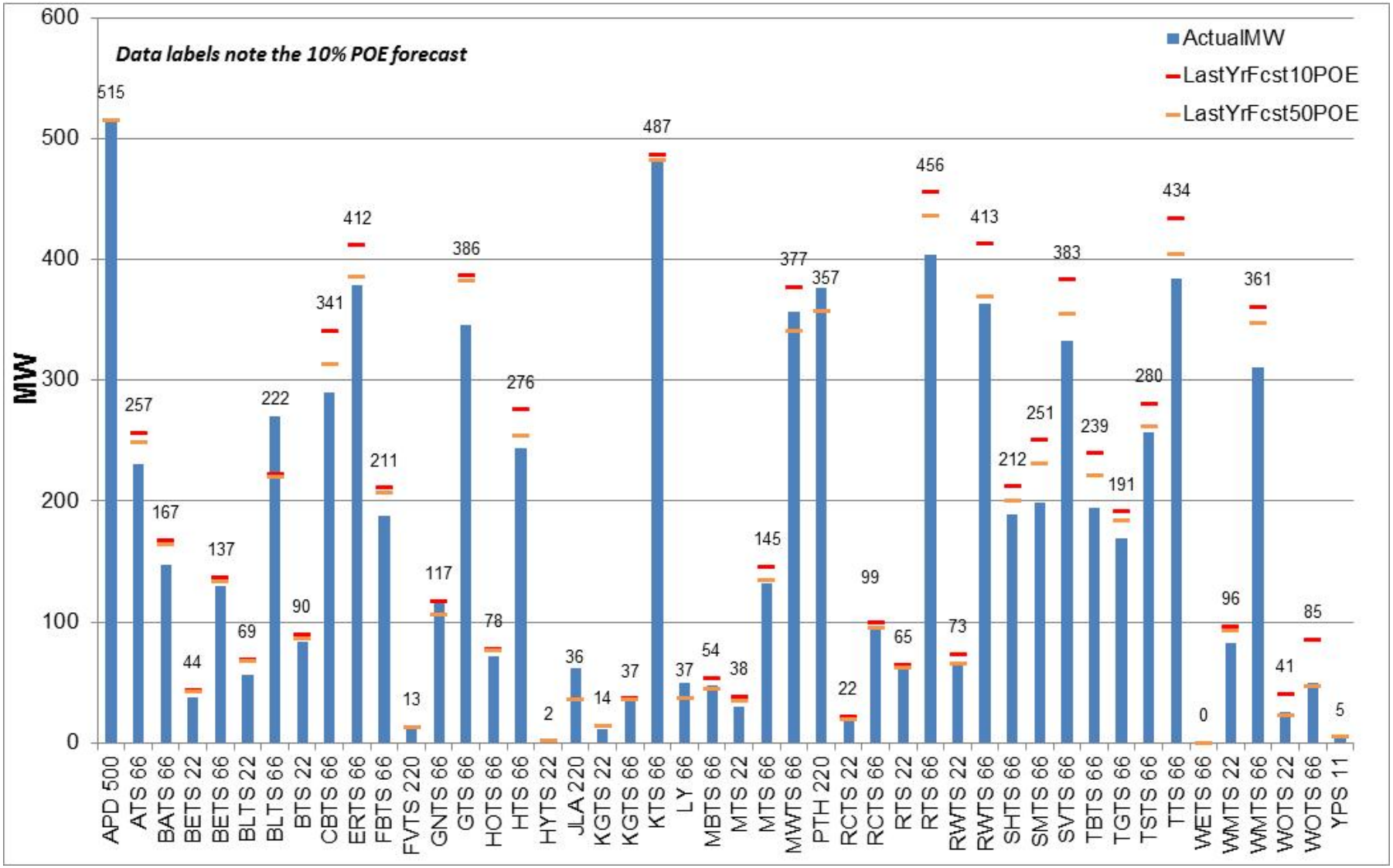
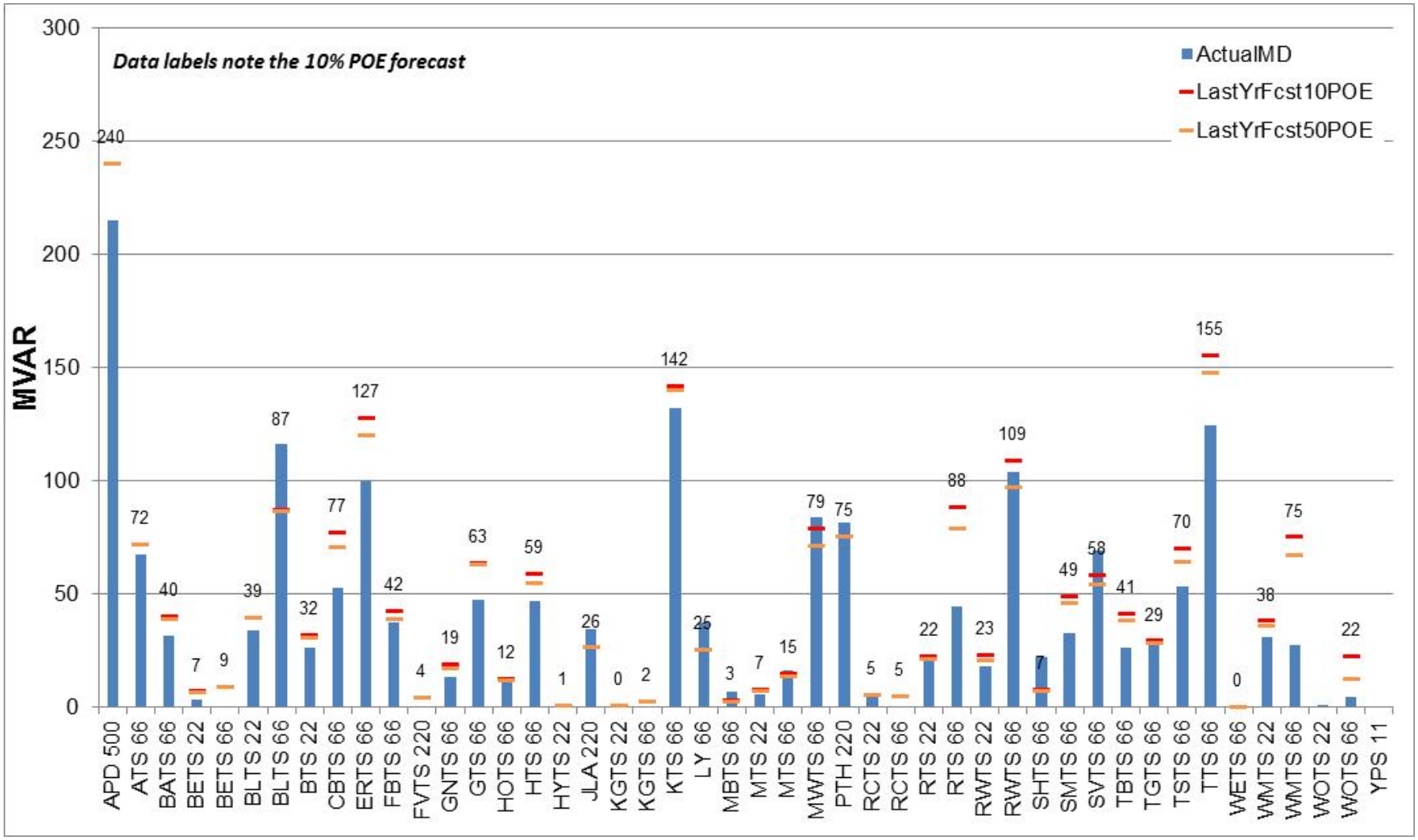


Figure 5-4 — Winter maximum demand actual and forecast reactive demand comparison by location



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Acknowledgement

AEMO acknowledges the support, co-operation and contribution of all participants in providing data and information used in this publication.

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