Appendix J:

SPI PowerNet Pty Ltd

Transmission Revenue Reset (TRR)
2014/15 – 2016/17

2013 Terminal Station Demand Forecasts - AEMO

11 October 2013

VICTORIAN TERMINAL STATION DEMAND FORECASTS

For 2013–14 to 2023–24

2013

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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 5.11.1(a).

The demand 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. These forecasts are not explicitly developed by AEMO.

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 2013–2014 to 2023–2024.
- 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 (2012–13 and 2013).

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

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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 subset 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 accommodates the requirements of different readers of this report.

Due to diversity of demand, the summated split bus group forecasts may exceed 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.

Table 2-1 lists the points of connection that are included in this report. 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 — 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

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Abbreviation	Type	Description
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
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

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Abbreviation	Type	Description
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

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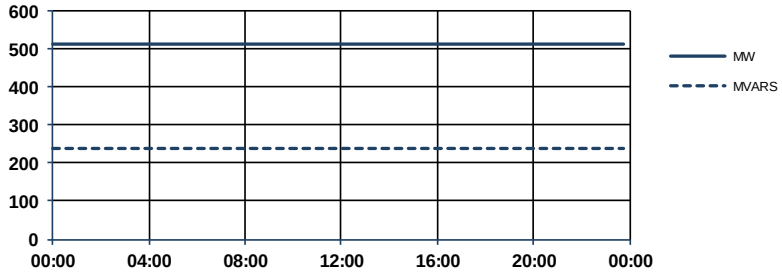
APD500: Portland 500 kV bus

Summer Demand

2012-13 MD	MW	MVAR
02 Nov 2012 03:30	512.2	238.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	518.5	240.0	518.5	240.0
14-15	518.5	240.0	518.5	240.0
15-16	518.5	240.0	518.5	240.0
16-17	518.5	240.0	518.5	240.0
17-18	518.5	240.0	518.5	240.0
18-19	518.5	240.0	518.5	240.0
19-20	518.5	240.0	518.5	240.0
20-21	518.5	240.0	518.5	240.0
21-22	518.5	240.0	518.5	240.0
22-23	518.5	240.0	518.5	240.0
23-24	518.5	240.0	518.5	240.0

Load Curve on High Demand Day



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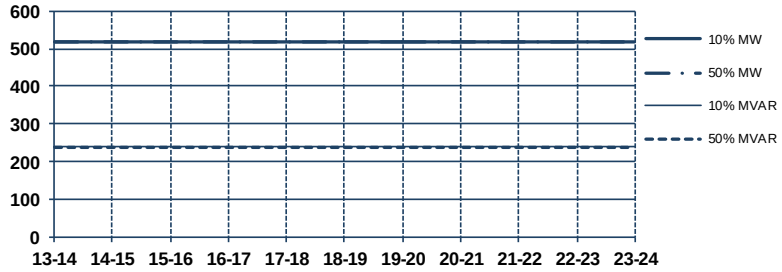
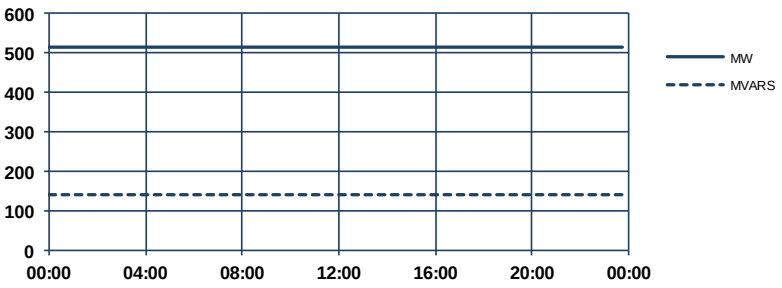


Winter Demand

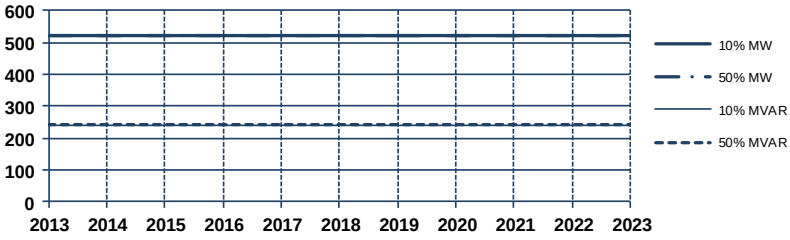
2012 MD	MW	MVAR
15 Sep 2012 00:30	513.2	139.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	518.5	240.0	518.5	240.0
2014	518.5	240.0	518.5	240.0
2015	518.5	240.0	518.5	240.0
2016	518.5	240.0	518.5	240.0
2017	518.5	240.0	518.5	240.0
2018	518.5	240.0	518.5	240.0
2019	518.5	240.0	518.5	240.0
2020	518.5	240.0	518.5	240.0
2021	518.5	240.0	518.5	240.0
2022	518.5	240.0	518.5	240.0
2023	518.5	240.0	518.5	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.

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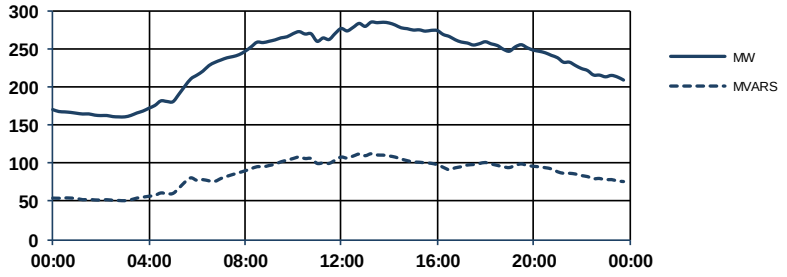
ATS_BLTS66: Altona/Brooklyn Terminal Station 66 kV bus

Summer Demand

2012-13 MD	MW	MVAR
13 Dec 2012 12:30	285.3	112.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	322.4	141.6	305.0	134.0
14-15	329.0	144.6	311.3	136.8
15-16	336.5	148.0	318.4	140.0
16-17	341.2	150.0	322.8	142.0
17-18	346.1	152.2	327.4	144.0
18-19	350.7	154.3	331.9	146.0
19-20	355.5	156.5	336.4	148.1
20-21	360.4	158.7	341.0	150.1
21-22	365.5	160.9	345.8	152.3
22-23	370.6	163.2	350.6	154.4
23-24	375.8	165.6	355.6	156.7

Load Curve on High Demand Day



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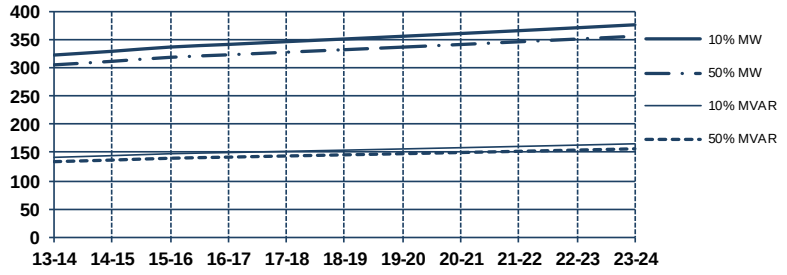
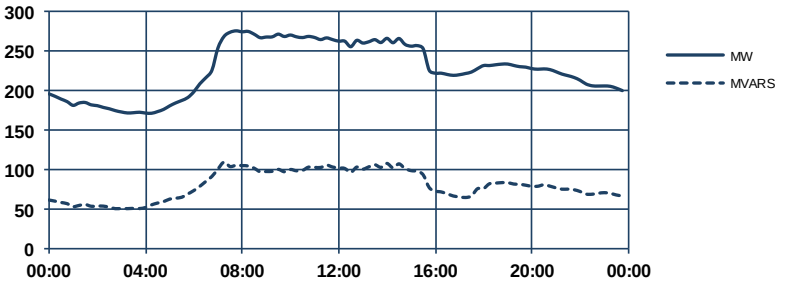


Winter Demand

2012 MD	MW	MVAR
22 May 2012 08:30	275.0	109.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	285.9	103.7	279.7	101.5
2014	293.0	106.6	286.7	104.3
2015	299.2	109.1	292.8	106.7
2016	306.3	111.9	299.7	109.5
2017	310.5	113.5	303.8	111.0
2018	314.9	115.2	308.1	112.7
2019	319.1	116.8	312.2	114.3
2020	323.4	118.5	316.4	115.9
2021	327.8	120.2	320.7	117.6
2022	332.3	122.0	325.1	119.3
2023	336.9	123.8	329.6	121.1

Load Curve on High Demand Day



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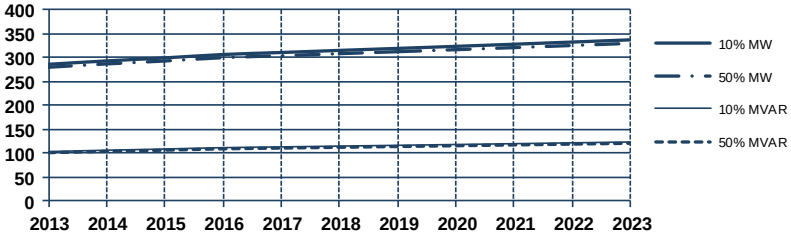

Notes: *For embedded generation details, please see next section of report.*

ATS/BLTS comprises demand that is serviced jointly by parts of ATS and BLTS. A major customer installed a 22.8 MW gas generator in January 2013 and load was reduced from ATS-BLTS and BLTS 66 KV due to the generation.

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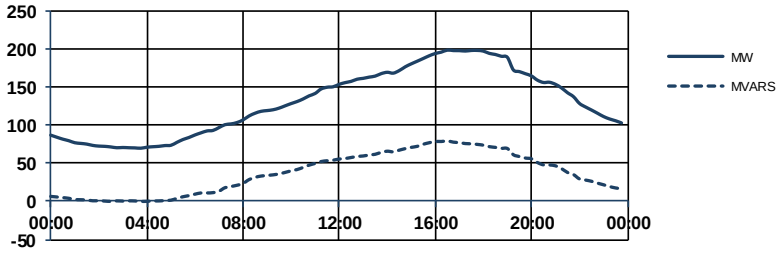
ATS_WEST66: Altona West Terminal Station 66 kV bus

Summer Demand

2012-13 MD	MW	MVAR
12 Mar 2013 17:00	198.5	79.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	225.9	93.4	213.6	88.4
14-15	230.3	95.1	217.8	90.1
15-16	235.8	97.3	222.9	92.2
16-17	241.5	99.6	228.3	94.3
17-18	247.3	101.9	233.8	96.5
18-19	253.4	104.3	239.4	98.8
19-20	259.6	106.8	245.3	101.1
20-21	266.0	109.4	251.3	103.5
21-22	272.6	112.0	257.5	106.0
22-23	279.4	114.7	264.0	108.6
23-24	286.4	117.6	270.6	111.2

Load Curve on High Demand Day



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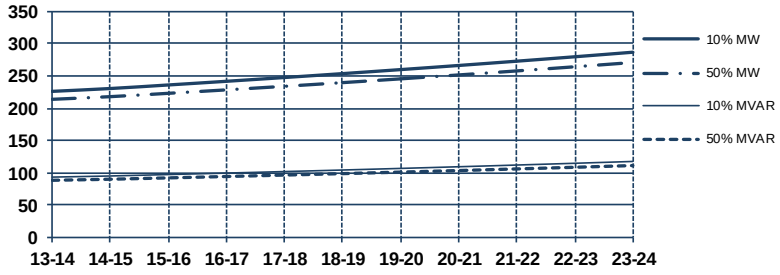
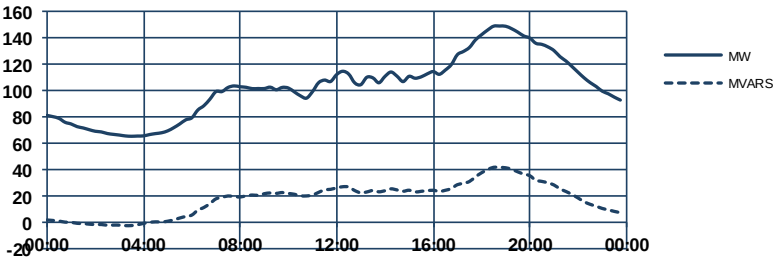


Winter Demand

2012 MD	MW	MVAR
09 Aug 2012 19:00	148.7	41.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	160.8	34.0	158.1	33.5
2014	165.8	47.2	163.0	46.5
2015	168.7	47.9	165.8	47.2
2016	172.5	48.9	169.5	48.2
2017	176.5	49.9	173.4	49.2
2018	180.5	51.0	177.4	50.2
2019	184.8	52.1	181.6	51.2
2020	189.2	53.2	185.9	52.4
2021	193.7	54.4	190.3	53.5
2022	198.4	55.6	194.9	54.7
2023	203.2	56.8	199.7	55.9

Load Curve on High Demand Day



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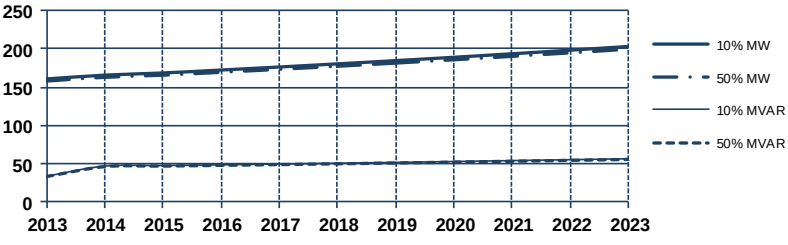

Notes:

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

The area that is serviced by the west part of ATS.

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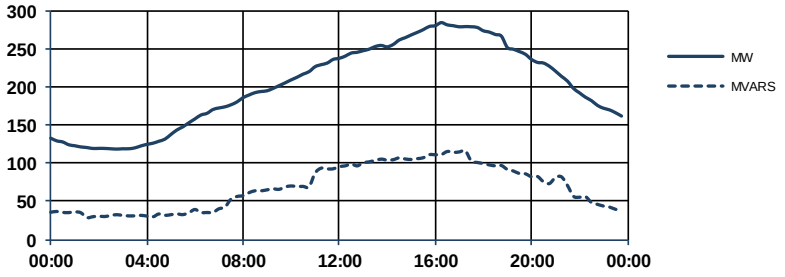
ATS66: Altona Terminal Station 66 kV bus

Summer Demand

2012-13 MD	MW	MVAR
12 Mar 2013 16:30	284.6	116.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	316.3	130.1	298.7	123.0
14-15	323.5	133.0	305.5	125.8
15-16	332.0	136.4	313.5	129.0
16-17	338.5	139.0	319.6	131.4
17-18	345.1	141.7	325.9	134.0
18-19	352.0	144.5	332.3	136.6
19-20	359.1	147.3	339.0	139.2
20-21	366.4	150.2	345.9	142.0
21-22	373.9	153.3	352.9	144.8
22-23	381.6	156.4	360.2	147.8
23-24	389.6	159.6	367.7	150.8

Load Curve on High Demand Day



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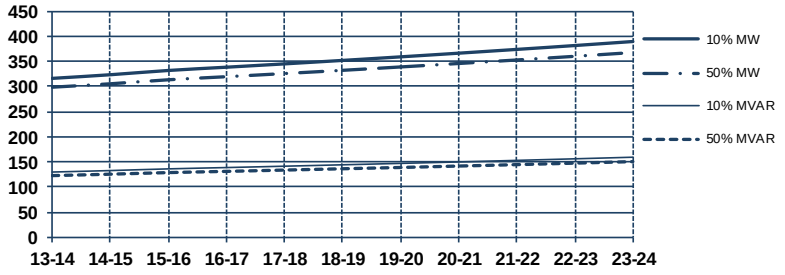
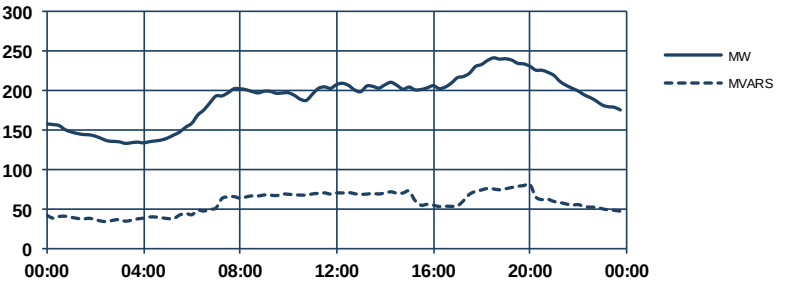


Winter Demand

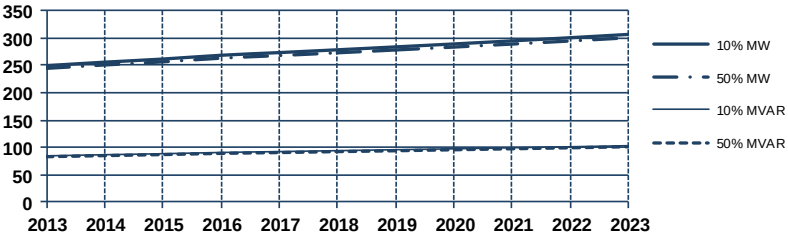
2012 MD	MW	MVAR
09 Aug 2012 19:00	240.8	81.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	249.5	84.8	244.6	83.2
2014	255.9	86.9	250.8	85.2
2015	261.6	88.7	256.5	87.1
2016	268.5	91.0	263.2	89.3
2017	273.4	92.6	268.0	90.8
2018	278.5	94.3	273.0	92.5
2019	283.8	96.0	278.2	94.1
2020	289.1	97.7	283.5	95.9
2021	294.7	99.6	288.9	97.7
2022	300.5	101.4	294.5	99.5
2023	306.5	103.4	300.4	101.4

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.

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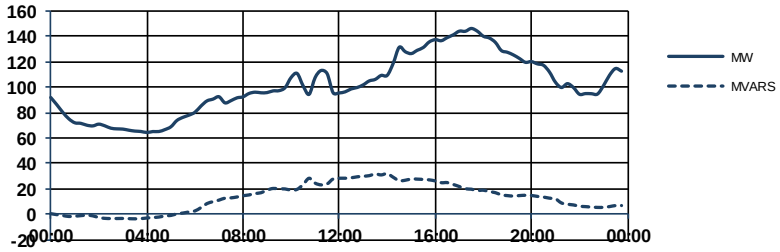
BATS66: Ballarat Terminal Station 66 kV bus

Summer Demand

2012-13 MD	MW	MVAR
18 Feb 2013 17:30	146.2	31.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	163.9	54.6	155.8	51.8
14-15	167.8	55.8	159.4	53.1
15-16	169.4	56.4	160.9	53.6
16-17	172.9	57.6	164.3	54.7
17-18	174.6	58.1	165.9	55.2
18-19	178.0	59.2	169.1	56.3
19-20	179.7	59.8	170.8	56.8
20-21	182.4	60.7	173.3	57.7
21-22	184.1	61.3	174.9	58.2
22-23	188.8	62.8	179.4	59.7
23-24	192.5	64.1	182.9	60.9

Load Curve on High Demand Day



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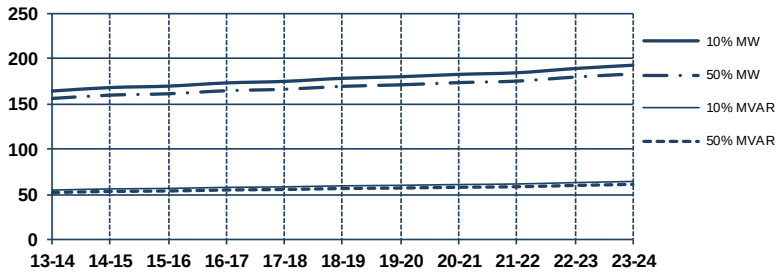
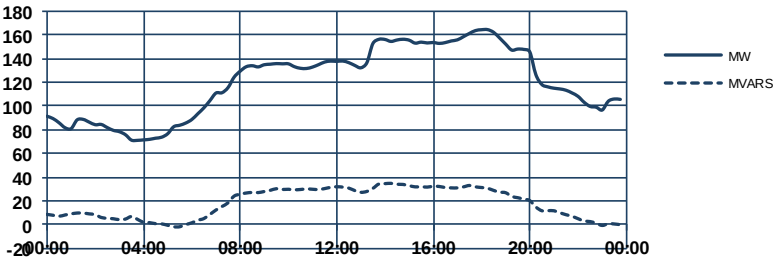


Winter Demand

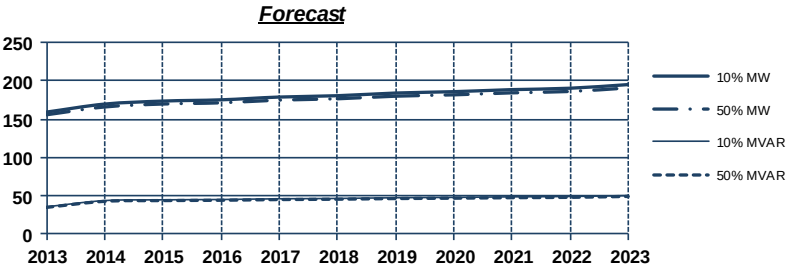
2012 MD	MW	MVAR
21 Jun 2012 18:00	164.4	34.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	159.4	35.8	155.8	35.1
2014	169.8	43.9	166.1	43.0
2015	173.8	45.0	169.9	44.0
2016	175.4	45.4	171.5	44.4
2017	179.0	46.3	175.0	45.3
2018	180.7	46.8	176.7	45.7
2019	184.2	47.7	180.2	46.6
2020	186.0	48.1	181.9	47.1
2021	188.7	48.8	184.5	47.7
2022	190.5	49.3	186.3	48.2
2023	195.3	50.5	191.0	49.4

Load Curve on High Demand Day



Forecast



Notes:

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

Coincident generation 5 MW.

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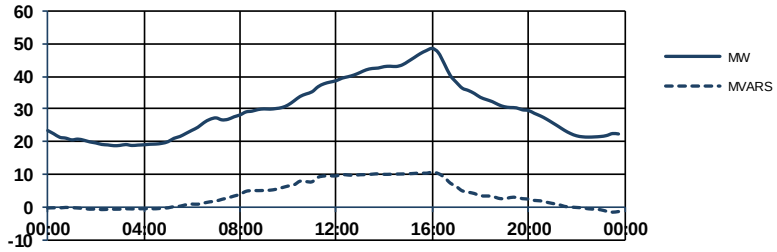
BETS22: Bendigo Terminal Station 22 kV bus

Summer Demand

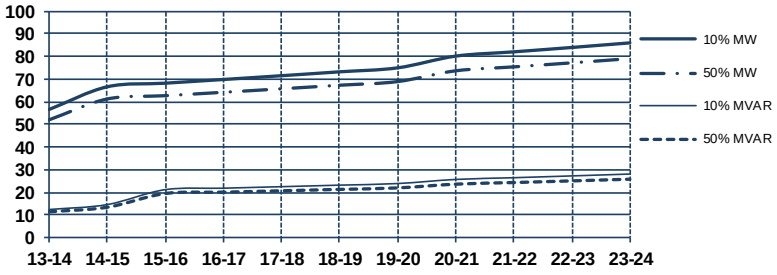
2012-13 MD	MW	MVAR
25 Feb 2013 16:00	48.5	10.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	56.6	12.3	52.0	11.3
14-15	66.6	14.5	61.2	13.4
15-16	68.2	21.1	62.6	19.4
16-17	69.8	21.8	64.1	20.0
17-18	71.5	22.4	65.7	20.6
18-19	73.2	23.1	67.3	21.3
19-20	74.9	23.8	68.9	21.9
20-21	80.1	25.6	73.6	23.6
21-22	82.0	26.4	75.4	24.3
22-23	83.9	27.2	77.2	25.0
23-24	86.0	28.0	79.0	25.8

Load Curve on High Demand Day



Forecast

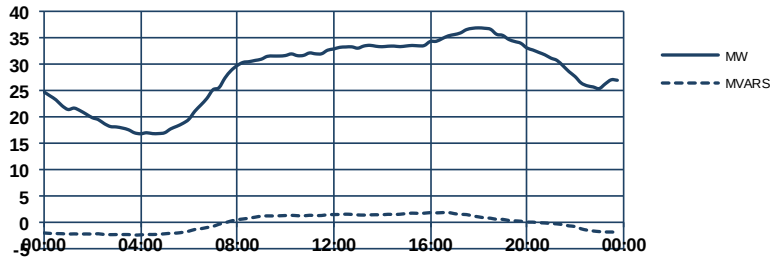


Winter Demand

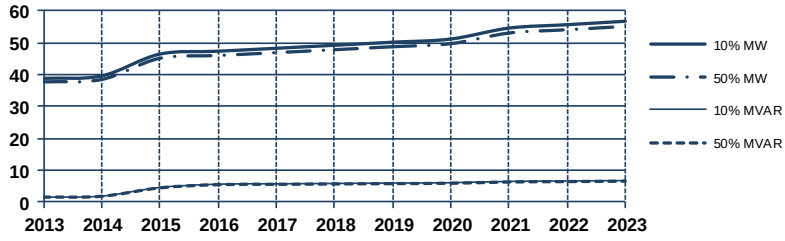
2012 MD	MW	MVAR
21 Jun 2012 18:00	36.8	1.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	38.8	1.6	37.7	1.6
2014	39.6	1.9	38.4	1.9
2015	46.4	4.6	45.1	4.5
2016	47.3	5.7	45.9	5.5
2017	48.2	5.8	46.8	5.6
2018	49.2	5.9	47.8	5.7
2019	50.1	6.0	48.7	5.8
2020	51.1	6.1	49.7	6.0
2021	54.5	6.5	53.0	6.4
2022	55.6	6.7	54.0	6.5
2023	56.7	6.8	55.1	6.6

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at BETS.

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

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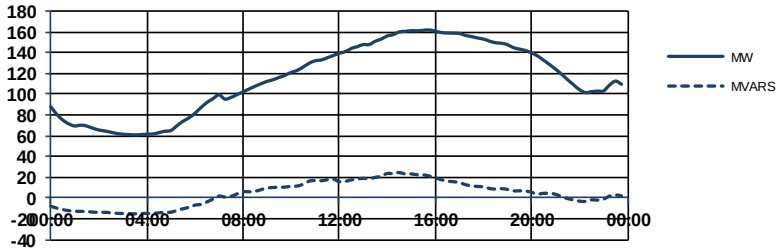
BETS66: Bendigo Terminal Station 66 kV bus

Summer Demand

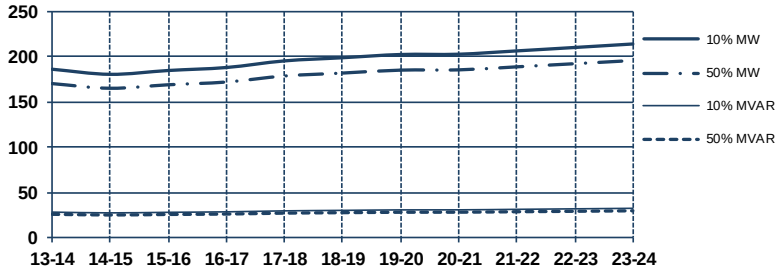
2012-13 MD	MW	MVAR
29 Nov 2012 15:30	161.6	24.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	185.8	28.0	169.9	25.6
14-15	180.2	27.2	164.8	24.9
15-16	184.4	27.8	168.7	25.4
16-17	187.7	28.3	171.7	25.9
17-18	195.0	29.4	178.4	26.9
18-19	198.5	29.9	181.6	27.4
19-20	202.1	30.5	184.8	27.9
20-21	202.4	30.5	185.1	27.9
21-22	206.1	31.1	188.5	28.4
22-23	209.9	31.7	191.9	28.9
23-24	213.7	32.2	195.5	29.5

Load Curve on High Demand Day



Forecast

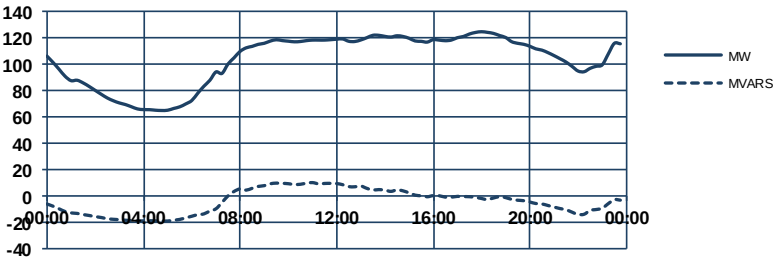


Winter Demand

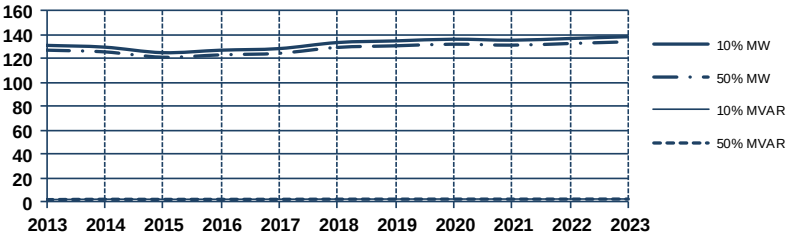
2012 MD	MW	MVAR
21 Jun 2012 18:00	124.3	-1.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	131.0	2.2	127.0	2.2
2014	129.5	2.6	125.6	2.5
2015	124.9	2.5	121.1	2.4
2016	127.0	2.5	123.1	2.5
2017	128.3	2.6	124.4	2.5
2018	133.4	2.7	129.3	2.6
2019	134.7	2.7	130.6	2.6
2020	136.1	2.7	132.0	2.6
2021	135.3	2.7	131.2	2.6
2022	136.7	2.7	132.6	2.7
2023	138.2	2.8	134.0	2.7

Load Curve on High Demand Day



Forecast



Notes:

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

© AEMO 2013

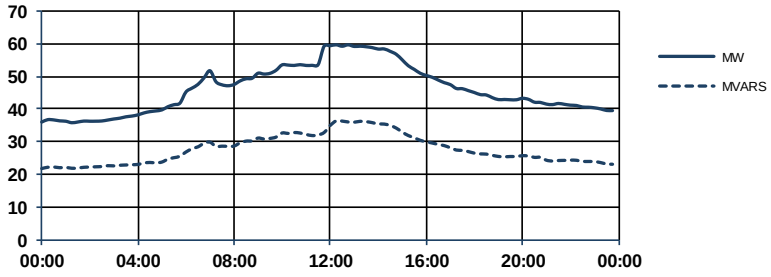
BLTS22: Brooklyn Terminal Station 22 kV bus

Summer Demand

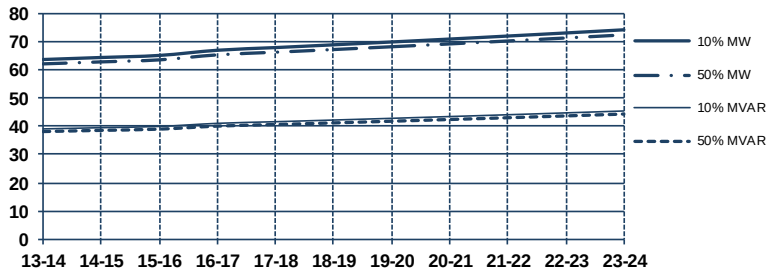
2012-13 MD	MW	MVAR
13 Dec 2012 13:00	59.6	36.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	63.6	39.1	62.1	38.1
14-15	64.3	39.5	62.8	38.6
15-16	65.1	40.0	63.5	39.0
16-17	66.9	41.0	65.3	40.1
17-18	67.8	41.6	66.2	40.6
18-19	68.8	42.2	67.1	41.2
19-20	69.8	42.8	68.1	41.8
20-21	70.8	43.4	69.1	42.4
21-22	71.9	44.1	70.2	43.0
22-23	73.0	44.7	71.2	43.7
23-24	74.1	45.4	72.3	44.3

Load Curve on High Demand Day



Forecast

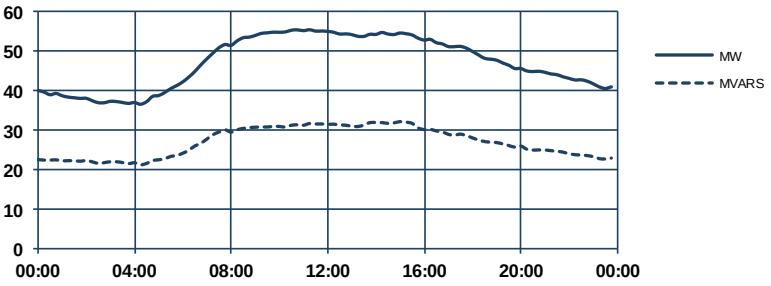


Winter Demand

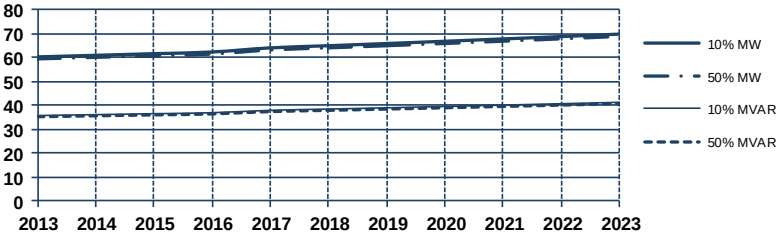
2012 MD	MW	MVAR
10 Jul 2012 11:00	55.3	32.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	60.3	35.8	59.4	35.3
2014	60.9	36.2	60.1	35.7
2015	61.6	36.6	60.8	36.1
2016	62.3	37.0	61.4	36.5
2017	64.0	38.0	63.1	37.4
2018	64.9	38.5	64.0	38.0
2019	65.8	39.0	64.9	38.5
2020	66.8	39.6	65.9	39.0
2021	67.8	40.1	66.8	39.6
2022	68.8	40.7	67.8	40.2
2023	69.8	41.3	68.8	40.7

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at BLTS.

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

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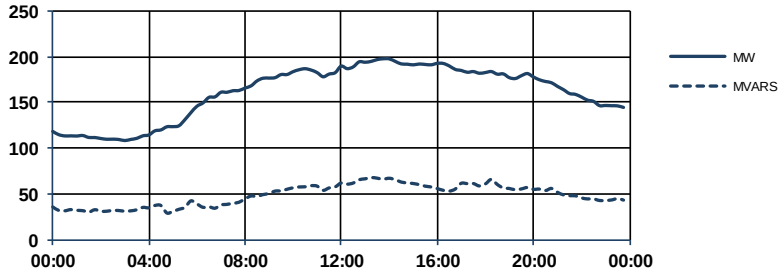
BLTS66: Brooklyn Terminal Station 66 kV bus

Summer Demand

2012-13 MD	MW	MVAR
13 Dec 2012 12:30	197.6	67.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	225.1	102.1	212.9	96.5
14-15	228.8	103.9	216.4	98.2
15-16	233.1	105.9	220.4	100.2
16-17	235.9	107.3	223.1	101.5
17-18	239.0	108.7	226.1	102.9
18-19	241.9	110.1	228.7	104.1
19-20	244.7	111.4	231.5	105.4
20-21	247.7	112.8	234.2	106.7
21-22	250.7	114.3	237.1	108.1
22-23	253.7	115.7	240.0	109.5
23-24	256.9	117.2	242.9	110.9

Load Curve on High Demand Day



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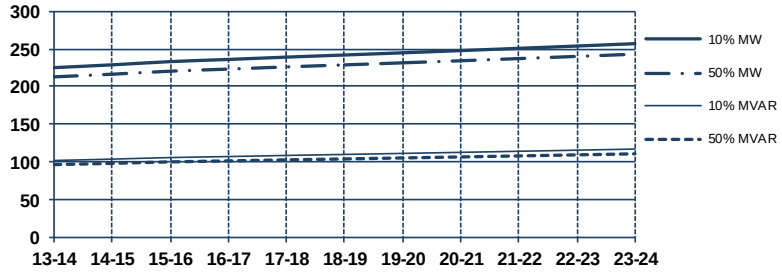
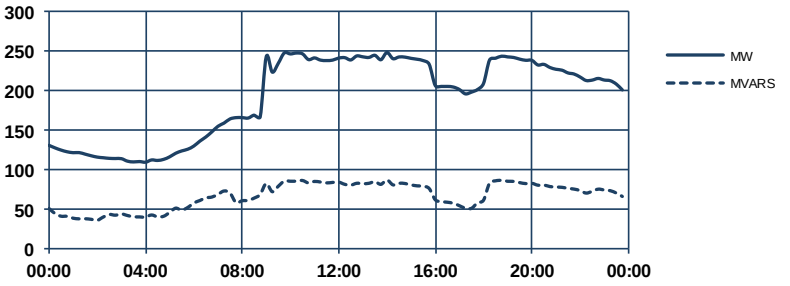


Winter Demand

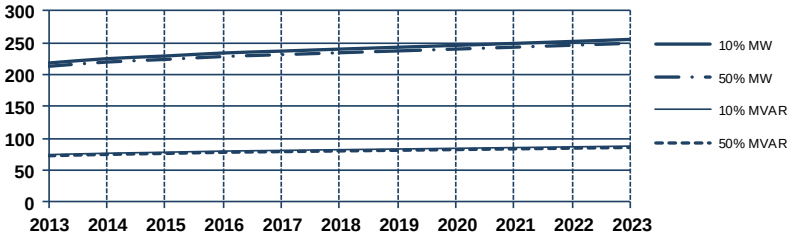
2012 MD	MW	MVAR
18 Sep 2012 15:00	247.7	86.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	218.0	74.6	212.8	72.8
2014	224.8	76.8	219.5	74.9
2015	228.9	78.3	223.5	76.4
2016	233.7	80.1	228.2	78.2
2017	236.6	81.2	231.0	79.2
2018	239.7	82.3	234.1	80.3
2019	242.7	83.4	236.9	81.4
2020	245.6	84.5	239.8	82.4
2021	248.7	85.6	242.8	83.5
2022	251.8	86.8	245.8	84.7
2023	255.0	88.0	248.9	85.8

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. Summer top MD was abnormal due to LVN, TYA and AL ZSS transfer from ATS at the time of MD. The actual MD for BLTS was on 25 February 2013. A major customer installed a 22.8 MW gas generator in January 2013 and load was reduced from ATS-BLTS and BLTS 66 KV due to the generation.

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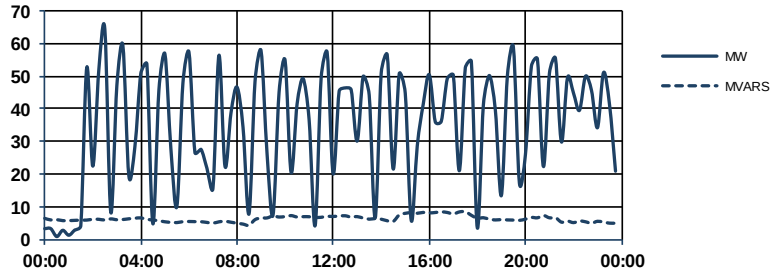
BLTS-SCI66: Brooklyn-SCI 66 kV bus

Summer Demand

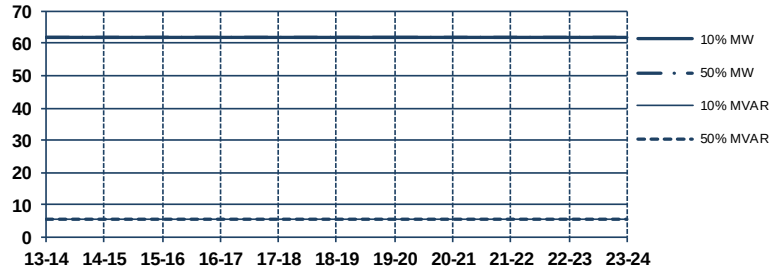
2012-13 MD	MW	MVAR
24 Feb 2013 02:30	64.3	8.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	61.8	5.6	61.8	5.6
14-15	61.8	5.6	61.8	5.6
15-16	61.8	5.6	61.8	5.6
16-17	61.8	5.6	61.8	5.6
17-18	61.8	5.6	61.8	5.6
18-19	61.8	5.6	61.8	5.6
19-20	61.8	5.6	61.8	5.6
20-21	61.8	5.6	61.8	5.6
21-22	61.8	5.6	61.8	5.6
22-23	61.8	5.6	61.8	5.6
23-24	61.8	5.6	61.8	5.6

Load Curve on High Demand Day



Forecast

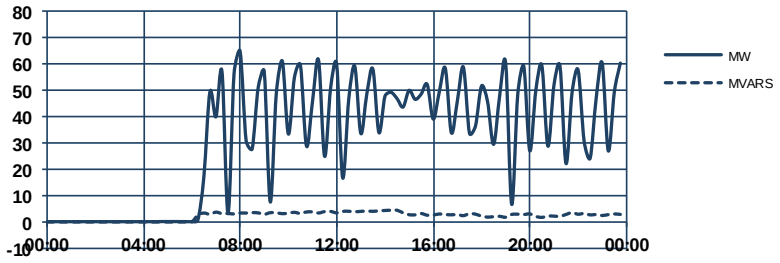


Winter Demand

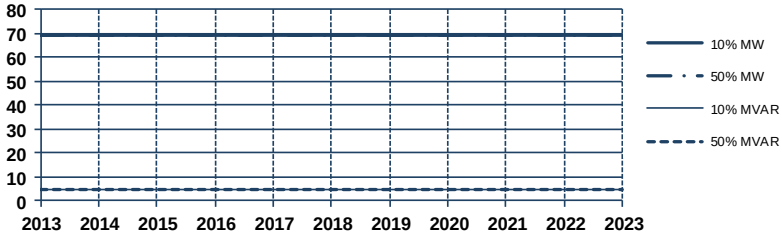
2012 MD	MW	MVAR
24 Aug 2012 08:00	64.7	4.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	69.2	4.8	69.2	4.8
2014	69.2	4.8	69.2	4.8
2015	69.2	4.8	69.2	4.8
2016	69.2	4.8	69.2	4.8
2017	69.2	4.8	69.2	4.8
2018	69.2	4.8	69.2	4.8
2019	69.2	4.8	69.2	4.8
2020	69.2	4.8	69.2	4.8
2021	69.2	4.8	69.2	4.8
2022	69.2	4.8	69.2	4.8
2023	69.2	4.8	69.2	4.8

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.

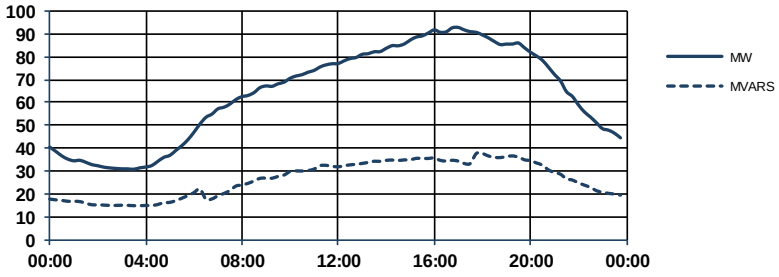
BTS22: Brunswick Terminal Station 22 kV bus

Summer Demand

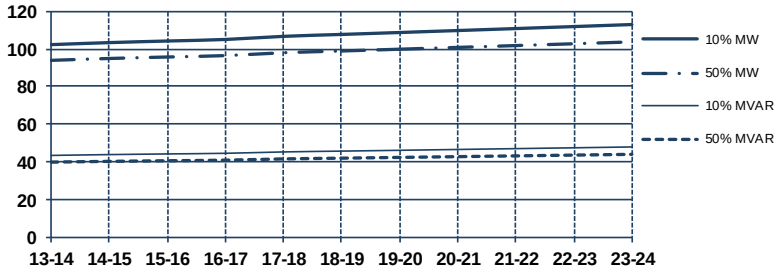
2012-13 MD	MW	MVAR
12 Mar 2013 17:00	92.8	37.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	102.2	43.5	93.9	40.0
14-15	103.3	43.9	94.9	40.4
15-16	104.2	44.3	95.7	40.7
16-17	105.0	44.6	96.4	41.0
17-18	106.6	45.4	97.9	41.7
18-19	107.6	45.8	98.9	42.0
19-20	108.7	46.2	99.8	42.4
20-21	109.7	46.7	100.8	42.9
21-22	110.8	47.1	101.7	43.3
22-23	111.8	47.5	102.7	43.7
23-24	112.9	48.0	103.7	44.1

Load Curve on High Demand Day



Forecast

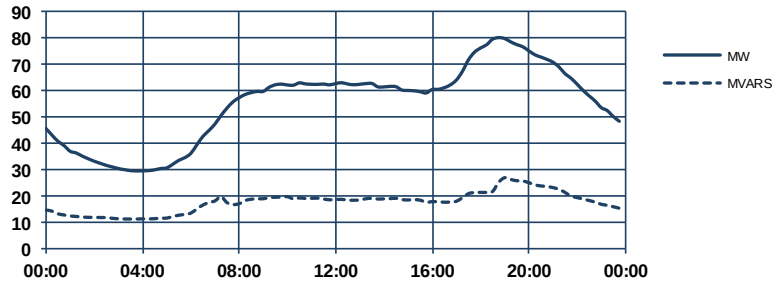


Winter Demand

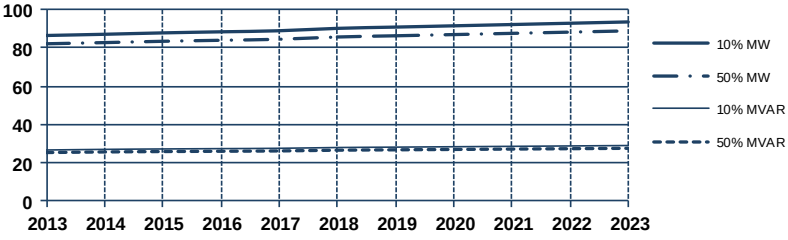
2012 MD	MW	MVAR
09 Aug 2012 19:00	79.9	26.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	86.5	26.8	82.2	25.4
2014	87.1	27.1	82.8	25.7
2015	87.9	27.3	83.5	26.0
2016	88.4	27.5	84.0	26.1
2017	89.0	27.6	84.5	26.3
2018	90.2	28.1	85.7	26.7
2019	90.9	28.3	86.4	26.9
2020	91.6	28.5	87.0	27.1
2021	92.2	28.7	87.6	27.2
2022	92.9	28.9	88.3	27.4
2023	93.6	29.1	88.9	27.6

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 BTS.

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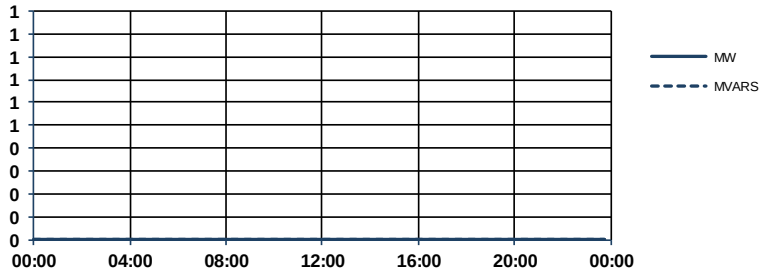
BTS66: Brunswick Terminal Station 66 kV bus

Summer Demand

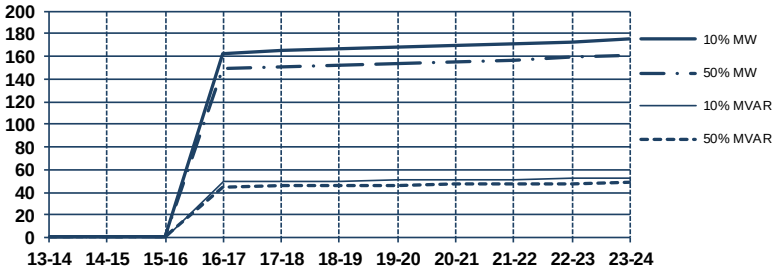
2012-13 MD	MW	MVAR
#N/A	0.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	0.0	0.0	0.0	0.0
14-15	0.0	0.0	0.0	0.0
15-16	0.0	0.0	0.0	0.0
16-17	163.0	48.9	149.6	44.9
17-18	164.6	49.4	151.1	45.3
18-19	166.3	49.9	152.6	45.8
19-20	168.0	50.4	154.1	46.2
20-21	169.6	50.9	155.6	46.7
21-22	171.3	51.4	157.2	47.2
22-23	173.0	51.9	158.8	47.6
23-24	174.8	52.4	160.3	48.1

Load Curve on High Demand Day



Forecast

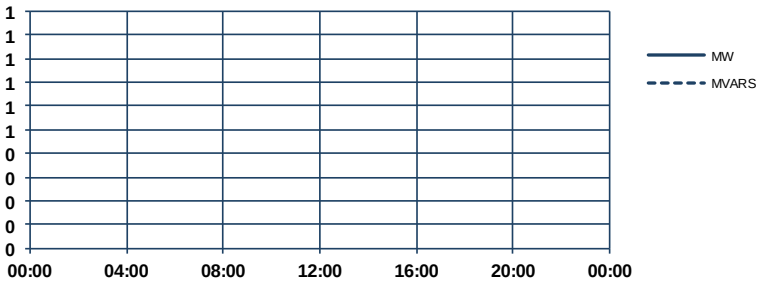


Winter Demand

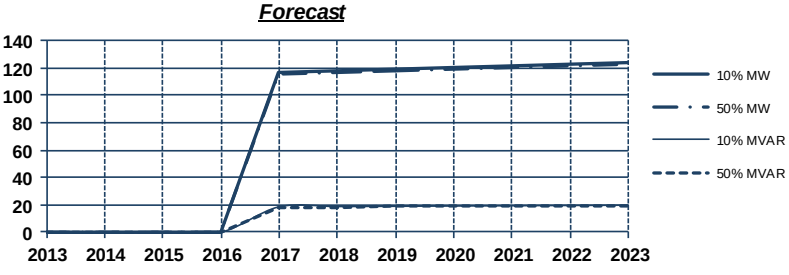
2012 MD	MW	MVAR
#N/A	0.0	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
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	0.0	0.0	0.0	0.0
2017	116.4	18.6	115.3	18.4
2018	117.6	18.8	116.4	18.6
2019	118.8	19.0	117.6	18.8
2020	120.0	19.2	118.8	19.0
2021	121.2	19.4	120.0	19.2
2022	122.4	19.6	121.2	19.4
2023	123.6	19.8	122.4	19.6

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 22 kV terminal station. Demand is forecast to be transferred from WMTS.

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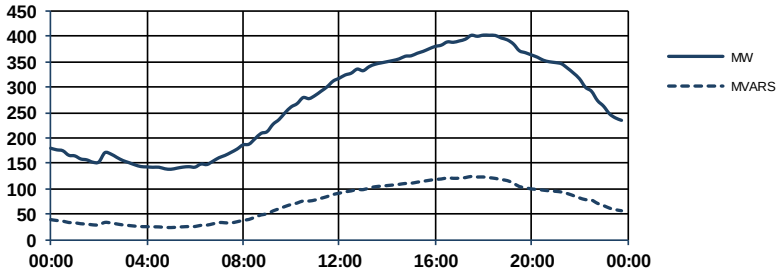
CBTS66: Cranbourne Terminal Station 66 kV bus

Summer Demand

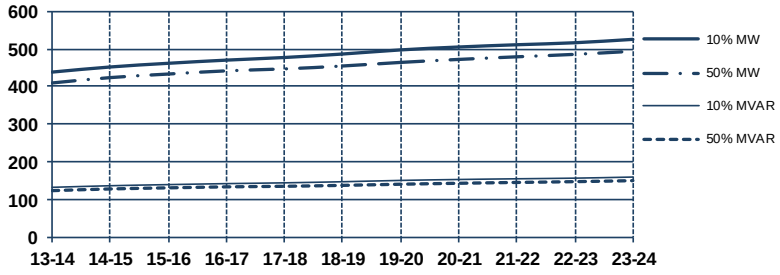
2012-13 MD	MW	MVAR
12 Mar 2013 17:00	402.4	124.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	438.4	132.9	409.6	124.2
14-15	451.9	137.2	423.8	128.7
15-16	461.7	140.2	433.2	131.6
16-17	470.1	142.7	441.7	134.2
17-18	477.1	144.9	446.9	135.7
18-19	486.3	147.8	454.6	138.1
19-20	497.2	151.3	464.0	141.2
20-21	504.9	153.7	472.0	143.7
21-22	510.9	155.6	478.9	145.9
22-23	516.2	157.3	485.4	148.0
23-24	525.1	160.2	493.7	150.6

Load Curve on High Demand Day



Forecast

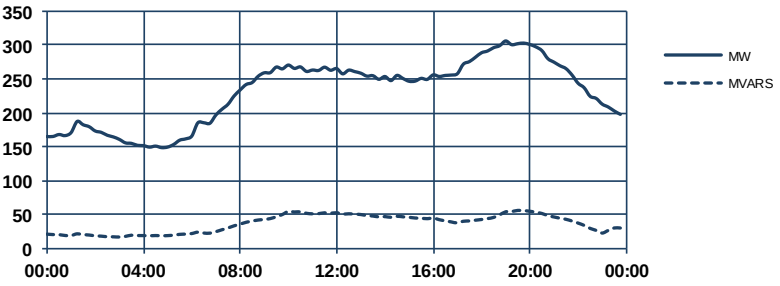


Winter Demand

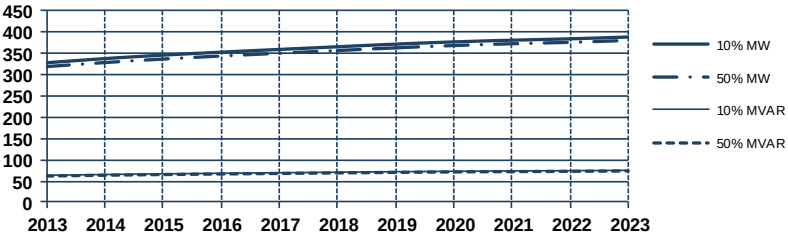
2012 MD	MW	MVAR
06 Aug 2012 18:30	305.9	55.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	327.5	63.4	318.6	61.6
2014	337.3	65.3	328.0	63.5
2015	345.5	66.8	336.2	65.1
2016	352.5	68.2	343.3	66.4
2017	358.9	69.4	349.9	67.7
2018	365.1	70.6	356.3	68.9
2019	371.3	71.9	362.6	70.2
2020	376.6	72.9	368.0	71.2
2021	380.6	73.7	372.2	72.1
2022	383.8	74.3	375.6	72.7
2023	388.1	75.1	380.0	73.6

Load Curve on High Demand Day



Forecast



Notes:

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

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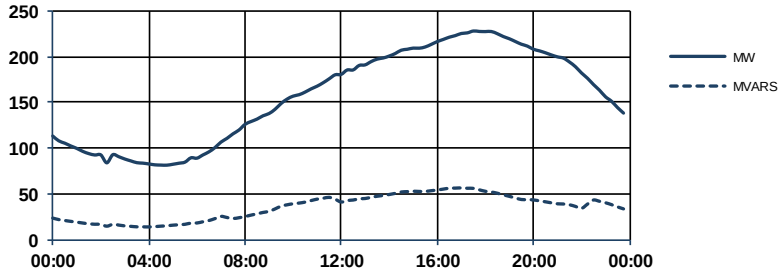
ERTS1266: East Rowville Terminal Station buses 1&2 66 kV bus

Summer Demand

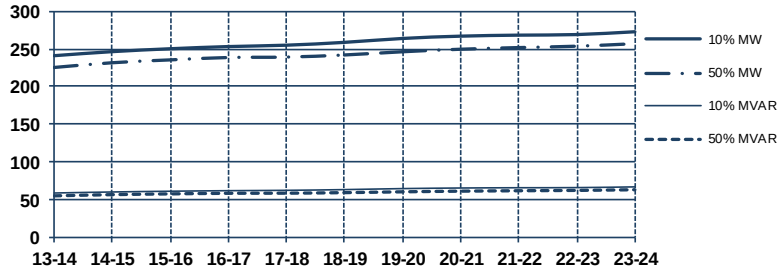
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	228.0	56.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	240.9	58.9	225.3	55.2
14-15	246.3	60.3	231.6	56.8
15-16	250.1	61.3	235.4	57.8
16-17	253.0	62.0	238.5	58.6
17-18	254.9	62.5	239.1	58.7
18-19	258.6	63.5	241.9	59.4
19-20	263.8	64.8	246.2	60.5
20-21	266.8	65.6	249.5	61.4
21-22	268.2	65.9	251.7	61.9
22-23	268.9	66.1	253.5	62.4
23-24	272.7	67.1	256.9	63.3

Load Curve on High Demand Day



Forecast

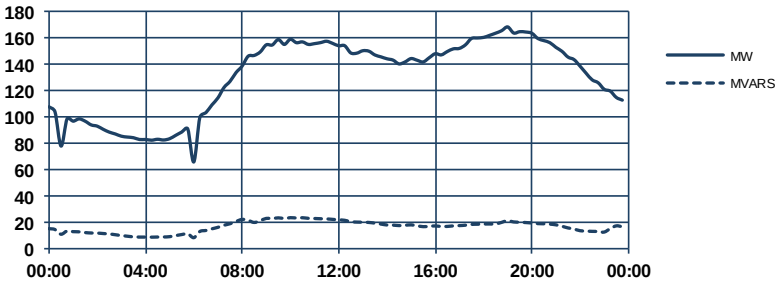


Winter Demand

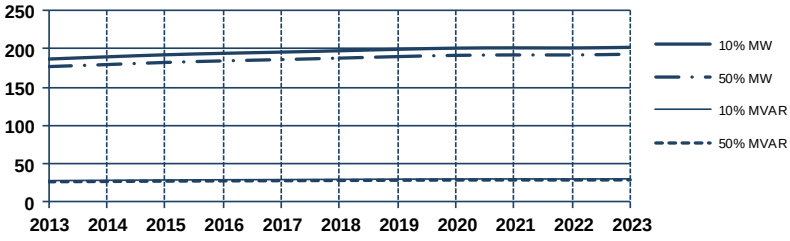
2012 MD	MW	MVAR
26 Jun 2012 18:30	168.0	23.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	186.8	28.2	177.0	26.8
2014	189.7	28.7	179.6	27.2
2015	192.4	29.1	182.4	27.6
2016	194.3	29.4	184.4	27.9
2017	195.9	29.6	186.2	28.2
2018	197.6	29.9	188.0	28.4
2019	199.6	30.2	190.1	28.7
2020	201.0	30.4	191.7	29.0
2021	201.5	30.5	192.2	29.1
2022	201.3	30.4	192.2	29.1
2023	202.1	30.6	193.1	29.2

Load Curve on High Demand Day



Forecast



Notes:

Buses 1 and 2 at ERTS.

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

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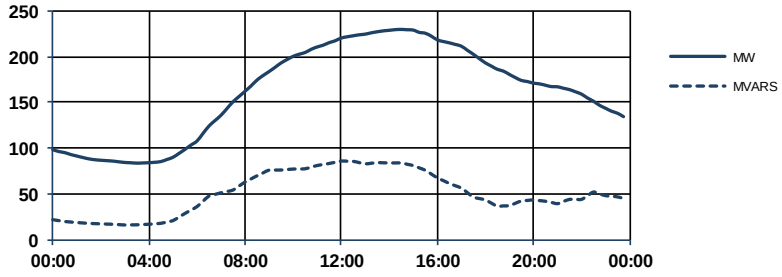
ERTS3466: East Rowville Terminal Station buses 3&4 66 kV bus

Summer Demand

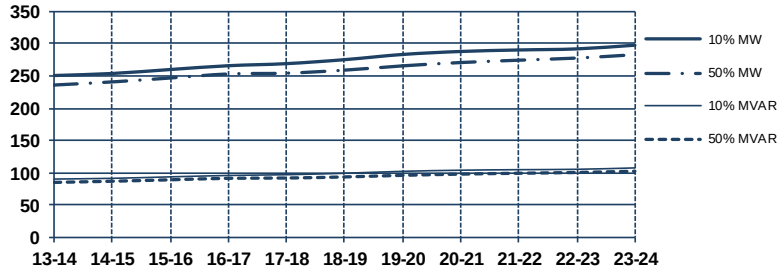
2012-13 MD	MW	MVAR
13 Dec 2012 13:30	229.8	85.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	250.4	90.3	235.7	85.2
14-15	253.6	91.5	240.6	87.0
15-16	259.7	93.7	246.6	89.2
16-17	265.6	95.9	252.8	91.5
17-18	268.8	97.1	254.1	91.9
18-19	274.9	99.3	258.7	93.6
19-20	283.0	102.3	265.4	96.1
20-21	287.6	104.0	270.5	98.0
21-22	289.9	104.8	274.1	99.3
22-23	291.6	105.4	277.4	100.5
23-24	297.3	107.6	282.6	102.5

Load Curve on High Demand Day



Forecast

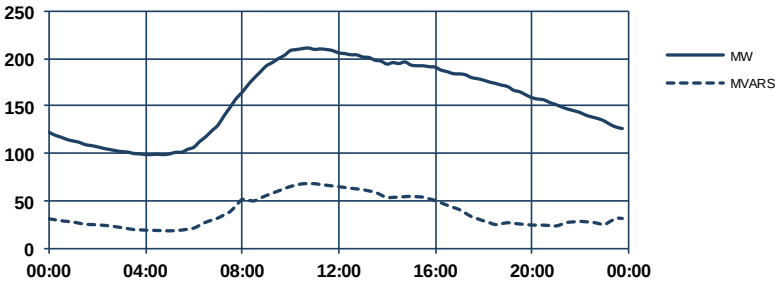


Winter Demand

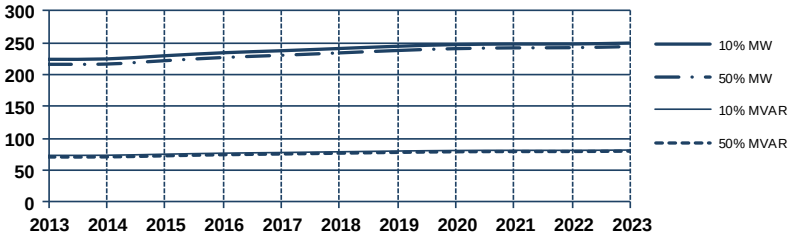
2012 MD	MW	MVAR
09 Aug 2012 10:30	211.1	68.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	223.8	73.5	216.0	70.9
2014	224.4	73.6	216.4	71.0
2015	229.4	75.3	221.6	72.7
2016	234.0	76.9	226.6	74.4
2017	237.2	77.9	230.1	75.6
2018	240.7	79.1	233.8	76.8
2019	244.2	80.2	237.6	78.1
2020	246.8	81.1	240.5	79.0
2021	247.7	81.4	241.7	79.4
2022	247.8	81.3	242.0	79.5
2023	249.2	81.8	243.7	80.0

Load Curve on High Demand Day



Forecast



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

Buses 3 and 4 at ERTS. Approximately 6 MW of demand will be transferred away from ERTS34 to HTS in 2014-15 when the new Keysborough zone substation is commissioned.

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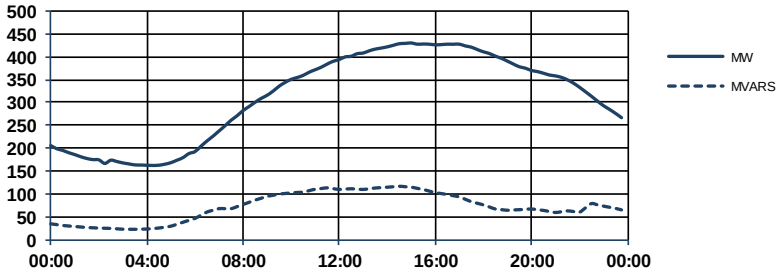
ERTS66: East Rowville Terminal Station 66 kV bus

Summer Demand

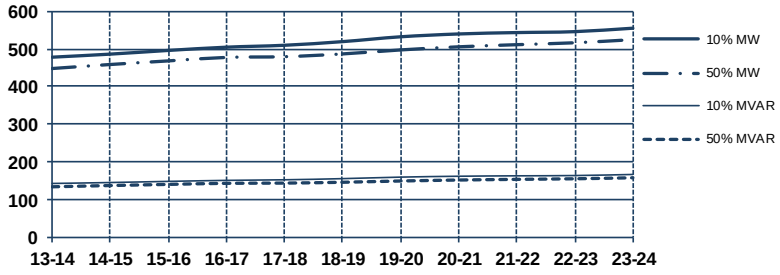
2012-13 MD	MW	MVAR
29 Nov 2012 15:30	429.9	116.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	477.9	143.2	447.9	134.4
14-15	486.0	145.7	458.5	137.7
15-16	495.8	148.7	468.1	140.7
16-17	504.4	151.4	477.3	143.6
17-18	509.5	152.9	479.2	144.1
18-19	519.1	156.0	486.5	146.4
19-20	532.0	160.0	497.1	149.7
20-21	539.5	162.3	505.4	152.3
21-22	543.1	163.4	511.1	154.1
22-23	545.6	164.2	516.1	155.6
23-24	554.8	167.1	524.4	158.2

Load Curve on High Demand Day



Forecast

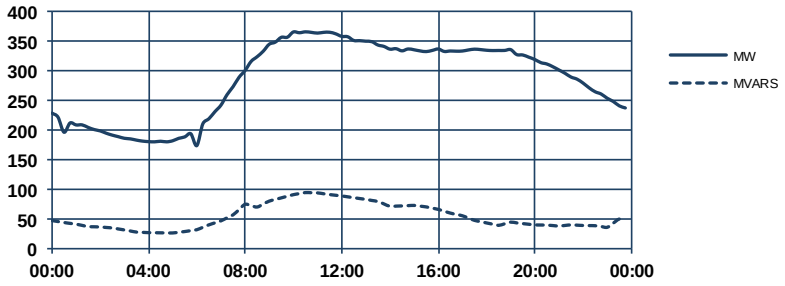


Winter Demand

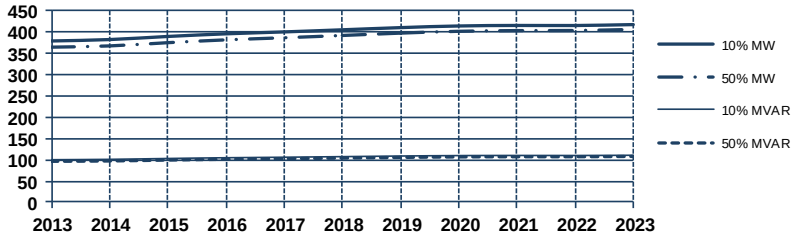
2012 MD	MW	MVAR
27 Jun 2012 09:30	365.0	94.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	378.7	100.0	364.2	96.2
2014	382.1	100.9	367.1	97.0
2015	389.3	102.9	374.8	99.1
2016	395.5	104.6	381.4	101.0
2017	400.0	105.8	386.3	102.3
2018	405.0	107.2	391.7	103.8
2019	410.1	108.6	397.2	105.3
2020	414.0	109.7	401.4	106.5
2021	415.2	110.0	403.1	106.9
2022	415.1	109.9	403.4	107.0
2023	417.2	110.4	405.9	107.6

Load Curve on High Demand Day



Forecast



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

Approximately 6 MW 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.

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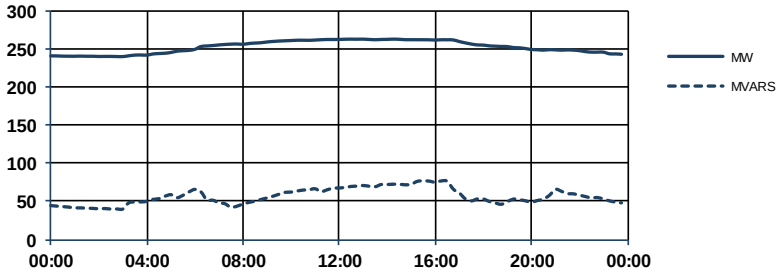
FBTS66: Fishermans Bend Terminal Station 66 kV bus

Summer Demand

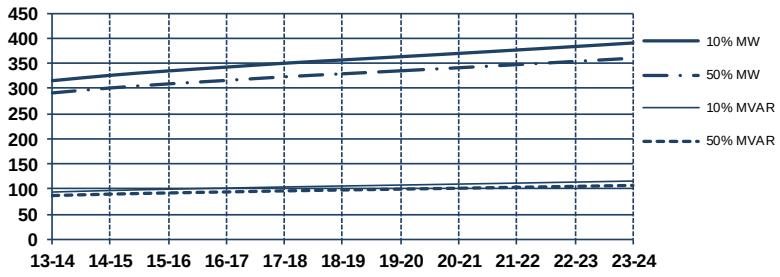
2012-13 MD	MW	MVAR
12 Mar 2013 14:30	262.9	76.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	315.6	94.3	291.3	87.3
14-15	326.3	97.4	301.2	90.2
15-16	335.1	100.0	309.3	92.5
16-17	342.7	102.2	316.2	94.5
17-18	350.4	104.4	323.4	96.6
18-19	356.9	106.3	329.4	98.4
19-20	363.3	108.2	335.3	100.1
20-21	369.9	110.1	341.4	101.9
21-22	376.7	112.1	347.6	103.7
22-23	383.6	114.1	354.0	105.6
23-24	390.7	116.2	360.5	107.5

Load Curve on High Demand Day



Forecast

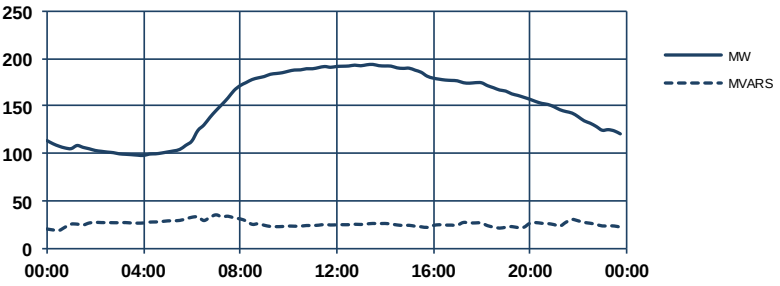


Winter Demand

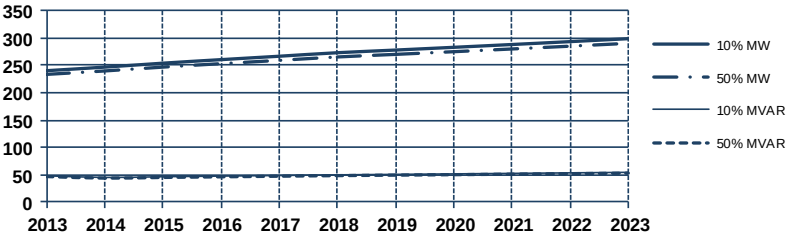
2012 MD	MW	MVAR
08 Aug 2012 13:30	193.8	35.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	240.3	48.4	233.5	47.0
2014	246.8	45.4	239.8	44.1
2015	254.0	46.7	246.8	45.4
2016	260.5	47.8	253.1	46.5
2017	266.7	48.9	259.2	47.6
2018	273.1	50.1	265.4	48.7
2019	278.0	51.0	270.1	49.6
2020	283.0	51.9	275.0	50.4
2021	288.1	52.8	280.0	51.3
2022	293.4	53.7	285.1	52.2
2023	298.8	54.7	290.3	53.2

Load Curve on High Demand Day



Forecast



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

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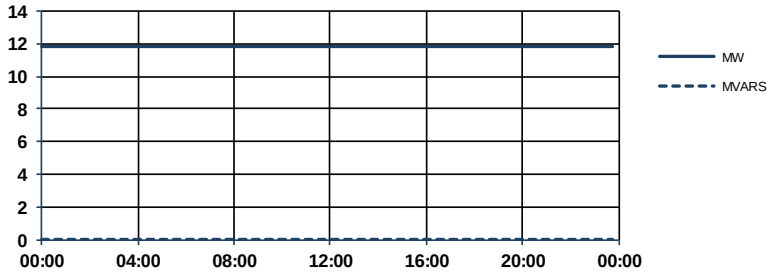
FVTS220: Fosterville Terminal Station 220 kV bus

Summer Demand

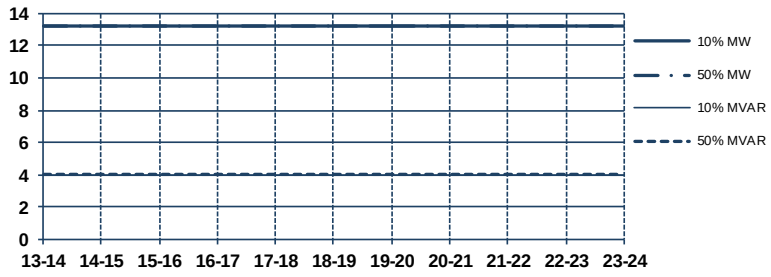
2012-13 MD	MW	MVAR
09 Nov 2012 08:30	11.8	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	13.2	4.0	13.2	4.0
14-15	13.2	4.0	13.2	4.0
15-16	13.2	4.0	13.2	4.0
16-17	13.2	4.0	13.2	4.0
17-18	13.2	4.0	13.2	4.0
18-19	13.2	4.0	13.2	4.0
19-20	13.2	4.0	13.2	4.0
20-21	13.2	4.0	13.2	4.0
21-22	13.2	4.0	13.2	4.0
22-23	13.2	4.0	13.2	4.0
23-24	13.2	4.0	13.2	4.0

Load Curve on High Demand Day



Forecast

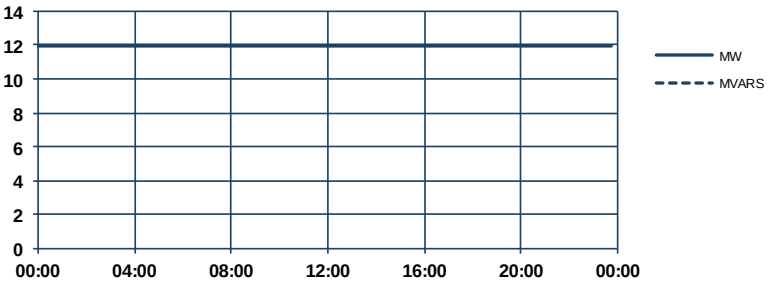


Winter Demand

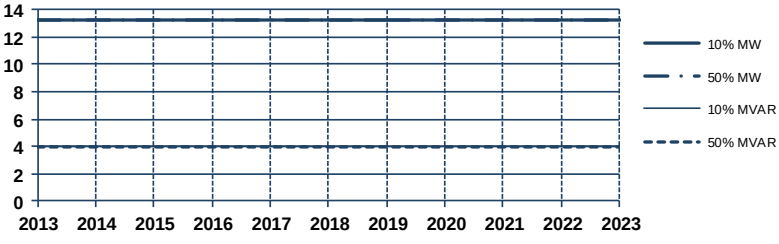
2012 MD	MW	MVAR
09 Sep 2012 02:00	11.9	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	13.2	4.0	13.2	4.0
2014	13.2	4.0	13.2	4.0
2015	13.2	4.0	13.2	4.0
2016	13.2	4.0	13.2	4.0
2017	13.2	4.0	13.2	4.0
2018	13.2	4.0	13.2	4.0
2019	13.2	4.0	13.2	4.0
2020	13.2	4.0	13.2	4.0
2021	13.2	4.0	13.2	4.0
2022	13.2	4.0	13.2	4.0
2023	13.2	4.0	13.2	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.

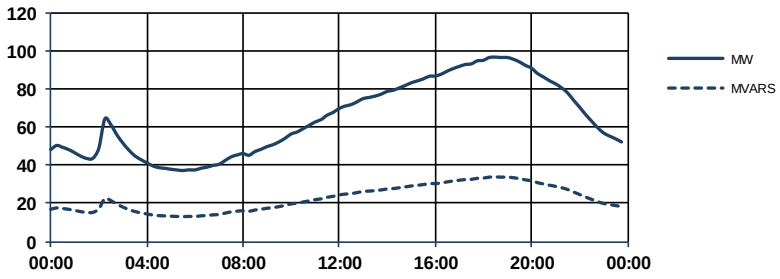
GNTS66: Glenrowan Terminal Station 66 kV bus

Summer Demand

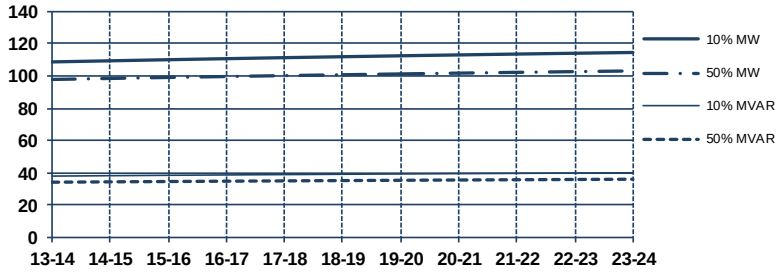
2012-13 MD	MW	MVAR
07 Jan 2013 18:00	96.8	33.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	108.6	38.0	97.7	34.2
14-15	109.3	38.2	98.4	34.4
15-16	109.9	38.5	99.0	34.6
16-17	110.6	38.7	99.6	34.8
17-18	111.2	38.9	100.1	35.0
18-19	111.8	39.1	100.6	35.2
19-20	112.4	39.3	101.2	35.4
20-21	112.9	39.5	101.7	35.6
21-22	113.4	39.7	102.1	35.7
22-23	113.9	39.9	102.6	35.9
23-24	114.4	40.0	103.0	36.0

Load Curve on High Demand Day



Forecast

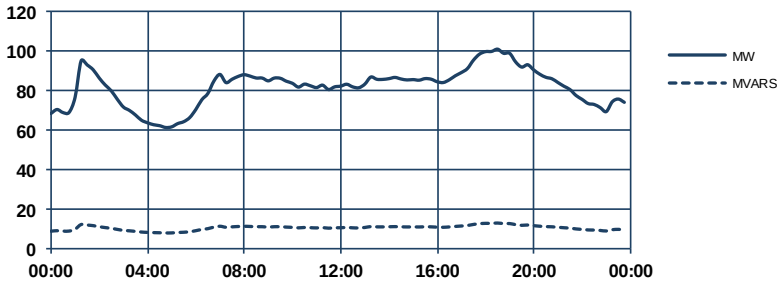


Winter Demand

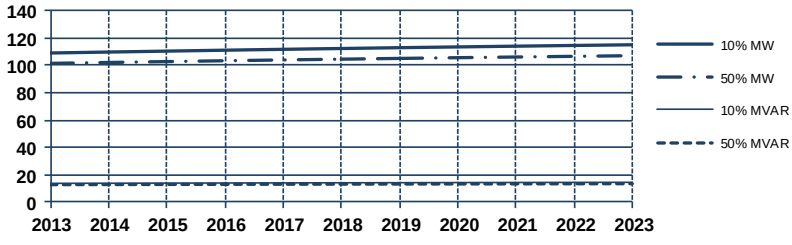
2012 MD	MW	MVAR
07 Jul 2012 02:00	100.7	12.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	109.0	13.8	101.5	12.9
2014	109.7	13.9	102.1	13.0
2015	110.4	14.0	102.8	13.0
2016	111.1	14.1	103.4	13.1
2017	111.7	14.2	104.0	13.2
2018	112.3	14.3	104.5	13.3
2019	112.9	14.3	105.1	13.3
2020	113.5	14.4	105.6	13.4
2021	114.0	14.5	106.1	13.5
2022	114.6	14.5	106.6	13.5
2023	115.1	14.6	107.1	13.6

Load Curve on High Demand Day



Forecast



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

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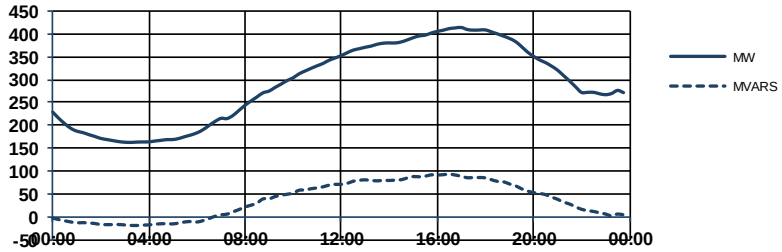
GTS66: Geelong Terminal Station 66 kV bus

Summer Demand

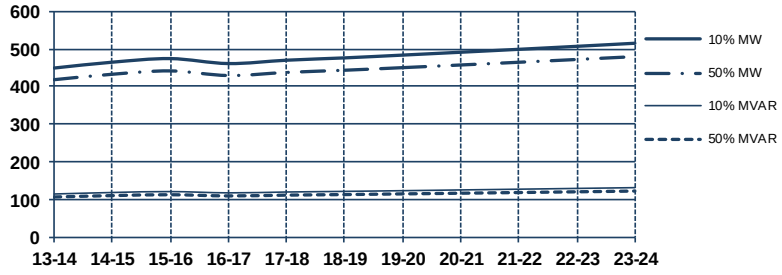
2012-13 MD	MW	MVAR
04 Jan 2013 17:00	413.8	92.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	449.1	115.3	418.2	107.3
14-15	464.6	119.2	432.7	111.0
15-16	474.2	121.7	441.6	113.3
16-17	461.0	118.3	429.3	110.2
17-18	469.9	120.6	437.6	112.3
18-19	476.1	122.2	443.3	113.8
19-20	483.4	124.1	450.2	115.5
20-21	491.0	126.0	457.2	117.3
21-22	498.8	128.0	464.4	119.2
22-23	506.7	130.0	471.8	121.1
23-24	514.8	132.1	479.4	123.0

Load Curve on High Demand Day



Forecast

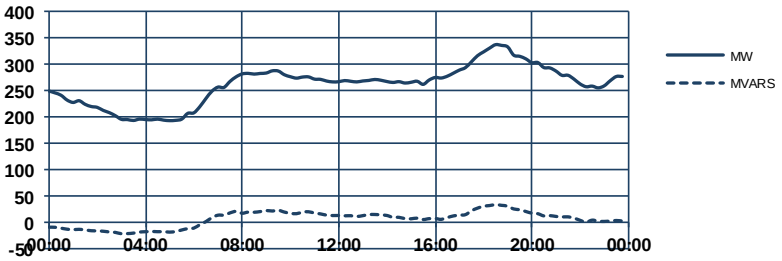


Winter Demand

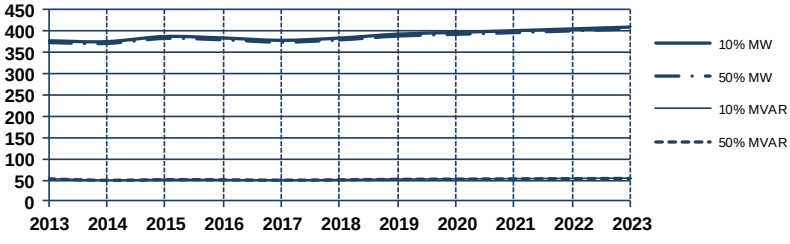
2012 MD	MW	MVAR
30 Jul 2012 19:00	336.3	32.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	376.9	53.2	372.6	52.6
2014	374.8	49.8	370.6	49.2
2015	386.9	51.4	382.4	50.8
2016	383.4	51.0	379.1	50.4
2017	377.9	50.2	373.6	49.7
2018	383.3	50.9	378.9	50.3
2019	392.4	52.1	387.9	51.6
2020	396.4	52.7	391.9	52.1
2021	400.6	53.2	396.0	52.6
2022	404.8	53.8	400.1	53.2
2023	409.0	54.4	404.4	53.7

Load Curve on High Demand Day



Forecast



Notes:

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

© AEMO 2013

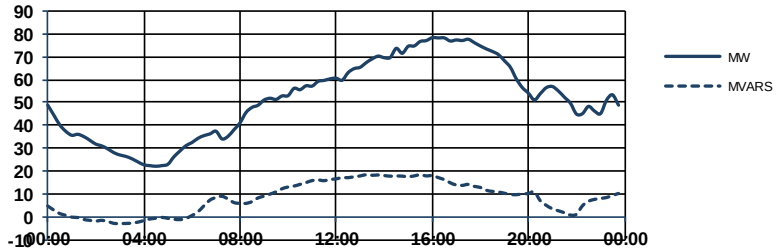
HOTS66: Horsham Terminal Station 66 kV bus

Summer Demand

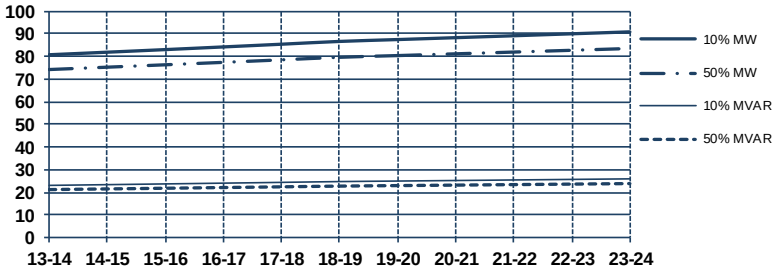
2012-13 MD	MW	MVAR
29 Nov 2012 16:30	78.3	18.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	80.7	23.0	74.2	21.2
14-15	81.9	23.3	75.2	21.5
15-16	83.0	23.7	76.3	21.8
16-17	84.2	24.0	77.4	22.1
17-18	85.4	24.3	78.5	22.4
18-19	86.6	24.7	79.6	22.7
19-20	87.4	24.9	80.4	22.9
20-21	88.3	25.2	81.1	23.1
21-22	89.1	25.4	81.9	23.4
22-23	90.0	25.7	82.7	23.6
23-24	90.8	25.9	83.5	23.8

Load Curve on High Demand Day



Forecast

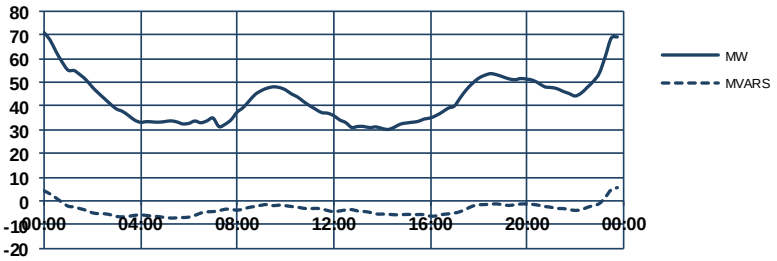


Winter Demand

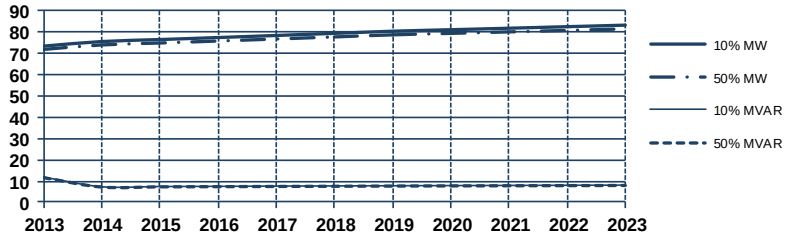
2012 MD	MW	MVAR
07 Jul 2012 00:00	71.0	5.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	73.3	11.8	71.8	11.6
2014	75.5	7.3	73.9	7.2
2015	76.4	7.4	74.8	7.2
2016	77.4	7.5	75.7	7.3
2017	78.3	7.6	76.7	7.4
2018	79.3	7.7	77.6	7.5
2019	80.3	7.8	78.6	7.6
2020	81.0	7.9	79.3	7.7
2021	81.7	7.9	80.0	7.8
2022	82.5	8.0	80.7	7.8
2023	83.2	8.1	81.4	7.9

Load Curve on High Demand Day



Forecast



Notes:

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

© AEMO 2013

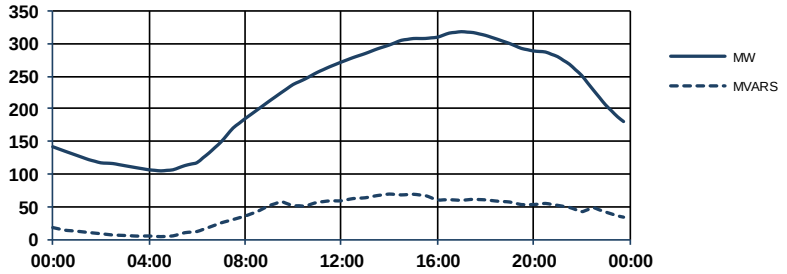
HTS66: Heatherton Terminal Station 66 kV bus

Summer Demand

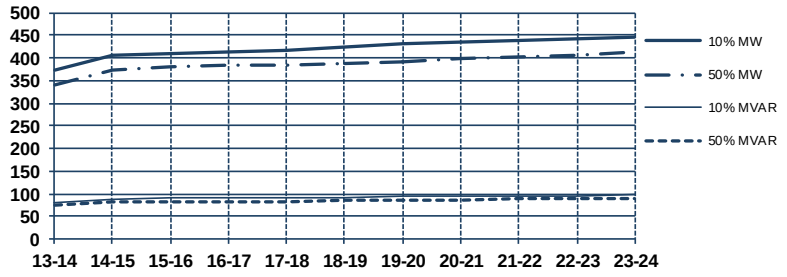
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	318.0	69.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	373.8	81.3	341.9	74.3
14-15	406.3	88.3	374.7	81.4
15-16	411.0	89.3	379.5	82.5
16-17	414.2	90.0	383.6	83.4
17-18	417.2	90.7	383.3	83.3
18-19	423.4	92.0	387.0	84.1
19-20	430.3	93.5	391.6	85.1
20-21	434.9	94.5	396.9	86.3
21-22	438.4	95.3	402.2	87.4
22-23	441.4	95.9	407.6	88.6
23-24	447.2	97.2	412.3	89.6

Load Curve on High Demand Day



Forecast

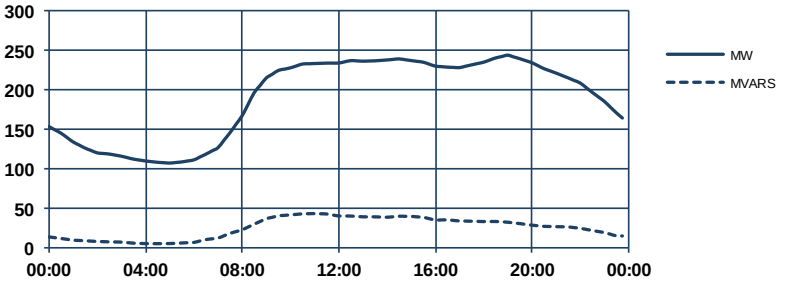


Winter Demand

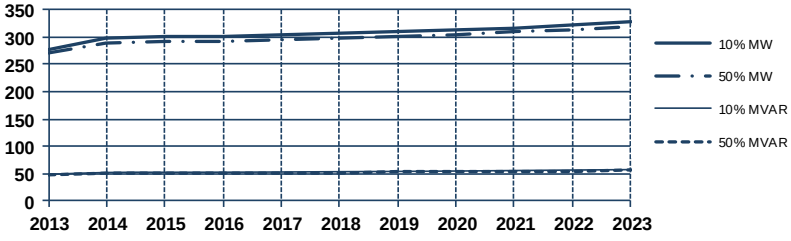
2012 MD	MW	MVAR
21 Jun 2012 18:00	243.3	42.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	278.0	48.9	270.6	47.6
2014	297.6	52.4	289.3	50.9
2015	299.6	52.7	291.8	51.4
2016	300.5	52.9	293.2	51.6
2017	302.4	53.2	295.5	52.0
2018	305.8	53.8	296.9	52.3
2019	308.6	54.3	300.1	52.8
2020	312.6	55.0	303.4	53.4
2021	317.5	55.9	308.6	54.3
2022	322.8	56.8	314.2	55.3
2023	327.4	57.6	317.9	56.0

Load Curve on High Demand Day



Forecast



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

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

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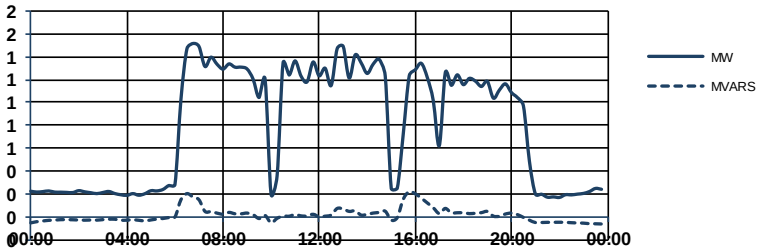
HYTS22: Heywood Terminal Station 22 kV bus

Summer Demand

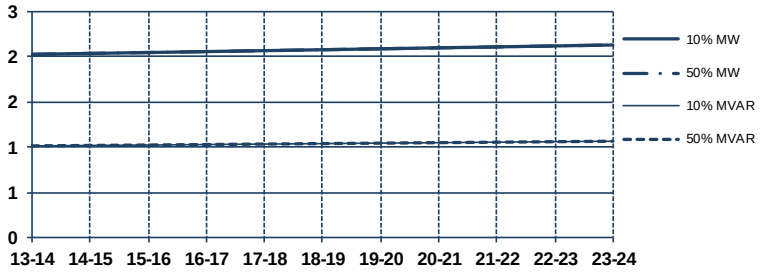
2012-13 MD	MW	MVAR
08 Mar 2013 07:00	1.5	0.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	2.0	1.0	2.0	1.0
14-15	2.0	1.0	2.0	1.0
15-16	2.0	1.0	2.0	1.0
16-17	2.1	1.0	2.1	1.0
17-18	2.1	1.0	2.1	1.0
18-19	2.1	1.0	2.1	1.0
19-20	2.1	1.0	2.1	1.0
20-21	2.1	1.0	2.1	1.0
21-22	2.1	1.1	2.1	1.1
22-23	2.1	1.1	2.1	1.1
23-24	2.1	1.1	2.1	1.1

Load Curve on High Demand Day



Forecast

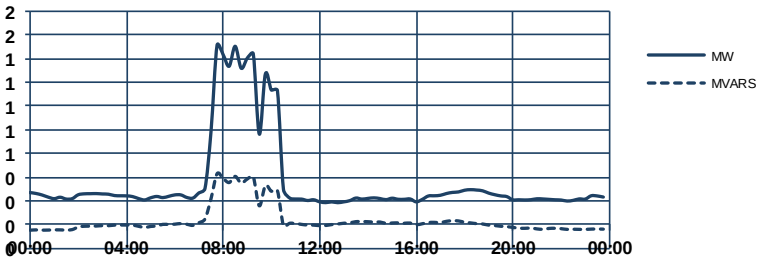


Winter Demand

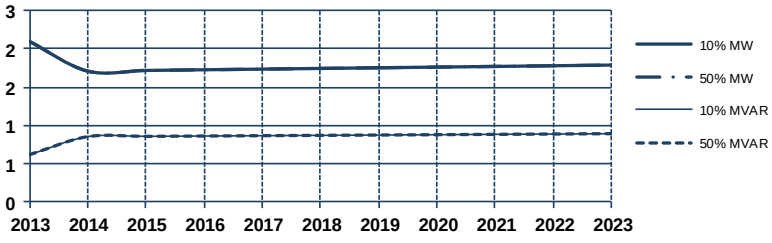
2012 MD	MW	MVAR
23 Jun 2012 08:00	1.5	0.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	2.1	0.6	2.1	0.6
2014	1.7	0.9	1.7	0.9
2015	1.7	0.9	1.7	0.9
2016	1.7	0.9	1.7	0.9
2017	1.7	0.9	1.7	0.9
2018	1.7	0.9	1.7	0.9
2019	1.8	0.9	1.8	0.9
2020	1.8	0.9	1.8	0.9
2021	1.8	0.9	1.8	0.9
2022	1.8	0.9	1.8	0.9
2023	1.8	0.9	1.8	0.9

Load Curve on High Demand Day



Forecast



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

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

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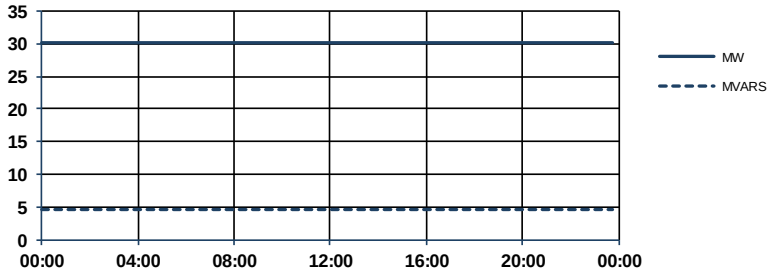
JLA220: John Lysaght 220 kV bus

Summer Demand

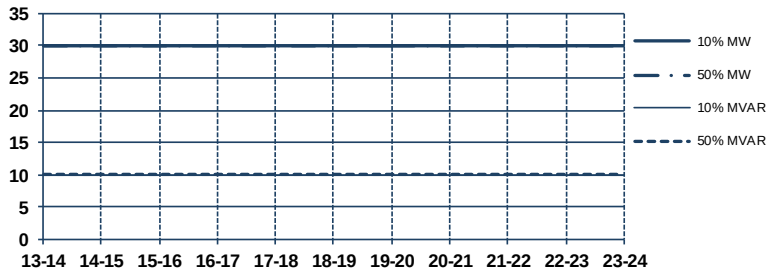
2012-13 MD	MW	MVAR
20 Mar 2013 02:00	30.1	4.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	30.0	10.0	30.0	10.0
14-15	30.0	10.0	30.0	10.0
15-16	30.0	10.0	30.0	10.0
16-17	30.0	10.0	30.0	10.0
17-18	30.0	10.0	30.0	10.0
18-19	30.0	10.0	30.0	10.0
19-20	30.0	10.0	30.0	10.0
20-21	30.0	10.0	30.0	10.0
21-22	30.0	10.0	30.0	10.0
22-23	30.0	10.0	30.0	10.0
23-24	30.0	10.0	30.0	10.0

Load Curve on High Demand Day



Forecast

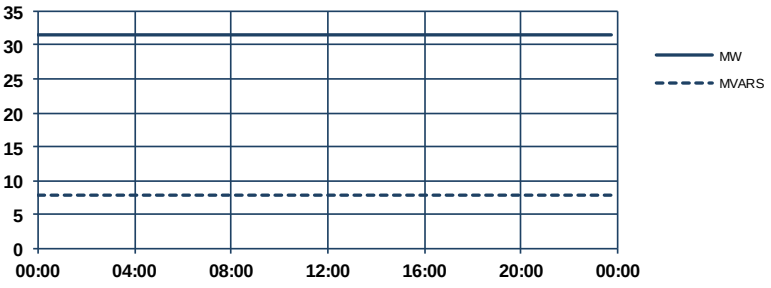


Winter Demand

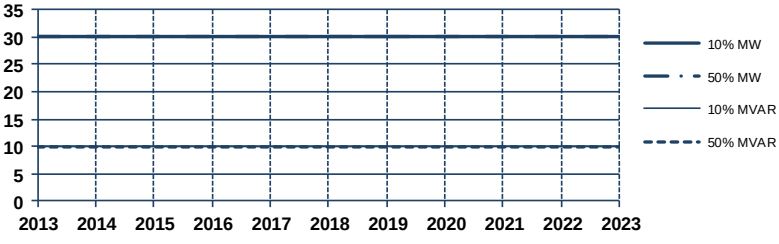
2012 MD	MW	MVAR
30 Aug 2012 13:00	31.5	7.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	30.0	10.0	30.0	10.0
2014	30.0	10.0	30.0	10.0
2015	30.0	10.0	30.0	10.0
2016	30.0	10.0	30.0	10.0
2017	30.0	10.0	30.0	10.0
2018	30.0	10.0	30.0	10.0
2019	30.0	10.0	30.0	10.0
2020	30.0	10.0	30.0	10.0
2021	30.0	10.0	30.0	10.0
2022	30.0	10.0	30.0	10.0
2023	30.0	10.0	30.0	10.0

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.

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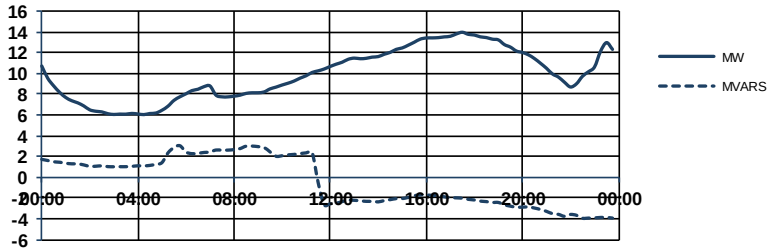
KGTS22: Kerang Terminal Station 22 kV bus

Summer Demand

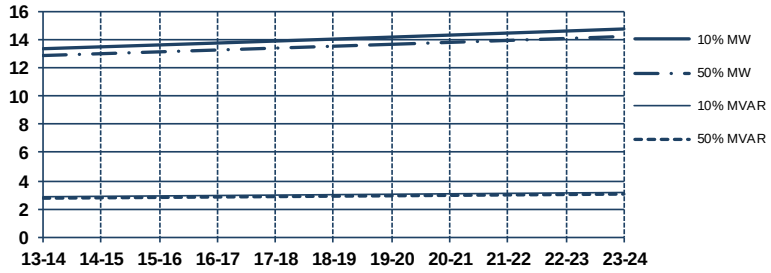
2012-13 MD	MW	MVAR
07 Jan 2013 17:30	13.9	3.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	13.3	2.9	12.9	2.8
14-15	13.5	2.9	13.0	2.8
15-16	13.6	2.9	13.1	2.8
16-17	13.7	3.0	13.3	2.9
17-18	13.9	3.0	13.4	2.9
18-19	14.0	3.0	13.5	2.9
19-20	14.2	3.1	13.7	2.9
20-21	14.3	3.1	13.8	3.0
21-22	14.4	3.1	13.9	3.0
22-23	14.6	3.1	14.1	3.0
23-24	14.7	3.2	14.2	3.1

Load Curve on High Demand Day



Forecast

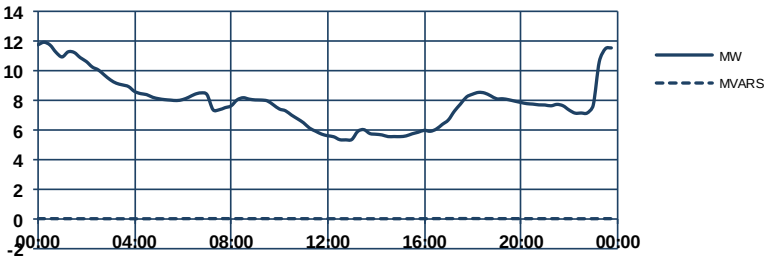


Winter Demand

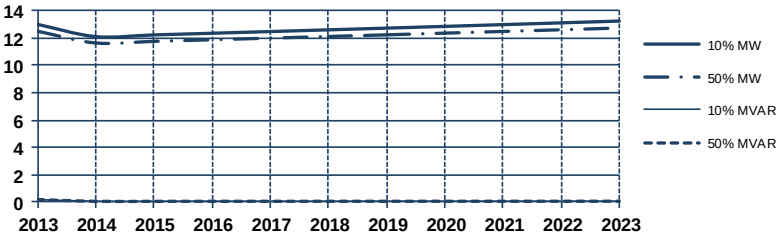
2012 MD	MW	MVAR
07 Jul 2012 00:00	11.9	0.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	13.0	0.2	12.5	0.2
2014	12.1	0.1	11.6	0.1
2015	12.2	0.1	11.8	0.1
2016	12.3	0.1	11.9	0.1
2017	12.5	0.1	12.0	0.1
2018	12.6	0.1	12.1	0.1
2019	12.7	0.1	12.2	0.1
2020	12.8	0.1	12.4	0.1
2021	13.0	0.1	12.5	0.1
2022	13.1	0.1	12.6	0.1
2023	13.2	0.1	12.7	0.1

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 KGTS.

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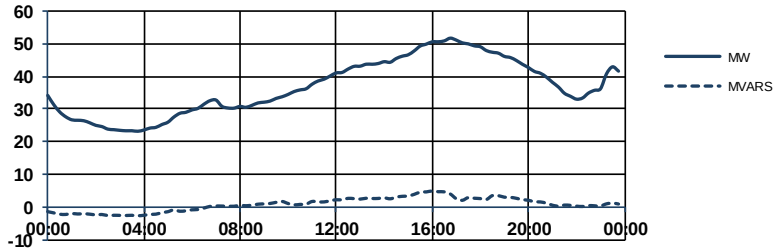
KGTS66: Kerang Terminal Station 66 kV bus

Summer Demand

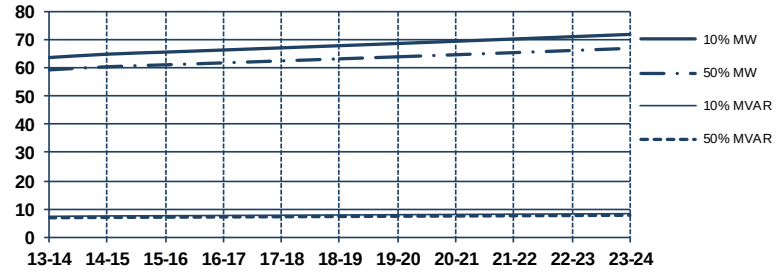
2012-13 MD	MW	MVAR
04 Jan 2013 16:30	51.7	4.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	63.6	7.5	59.2	7.0
14-15	64.8	7.6	60.3	7.1
15-16	65.5	7.7	61.0	7.2
16-17	66.3	7.8	61.7	7.2
17-18	67.0	7.9	62.4	7.3
18-19	67.8	8.0	63.1	7.4
19-20	68.6	8.0	63.9	7.5
20-21	69.3	8.1	64.6	7.6
21-22	70.1	8.2	65.3	7.7
22-23	71.0	8.3	66.1	7.8
23-24	71.8	8.4	66.8	7.8

Load Curve on High Demand Day



Forecast

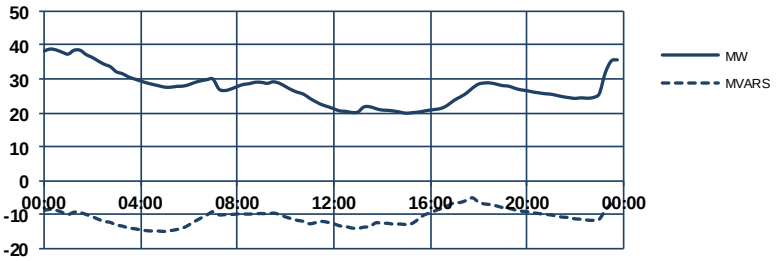


Winter Demand

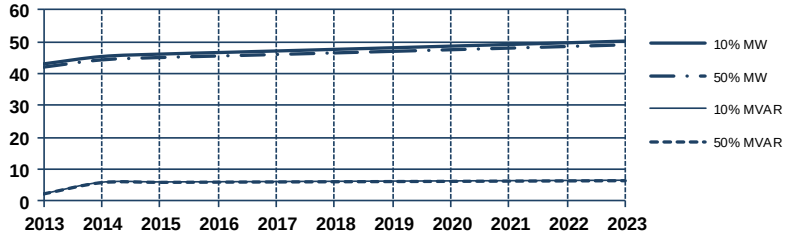
2012 MD	MW	MVAR
07 Jul 2012 00:30	38.8	-5.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	43.0	2.3	42.0	2.3
2014	45.3	6.0	44.3	5.8
2015	46.1	6.1	45.0	5.9
2016	46.6	6.1	45.5	6.0
2017	47.1	6.2	46.0	6.0
2018	47.6	6.3	46.4	6.1
2019	48.1	6.3	46.9	6.2
2020	48.6	6.4	47.4	6.2
2021	49.1	6.5	48.0	6.3
2022	49.6	6.5	48.5	6.4
2023	50.2	6.6	49.0	6.4

Load Curve on High Demand Day



Forecast



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

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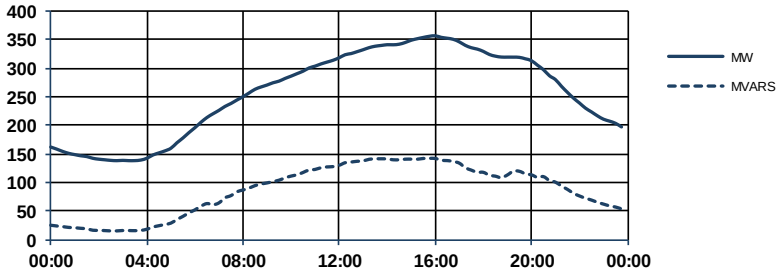
KTS_East66: Eastern area served by Keilor Terminal Stn. 66 kV bus

Summer Demand

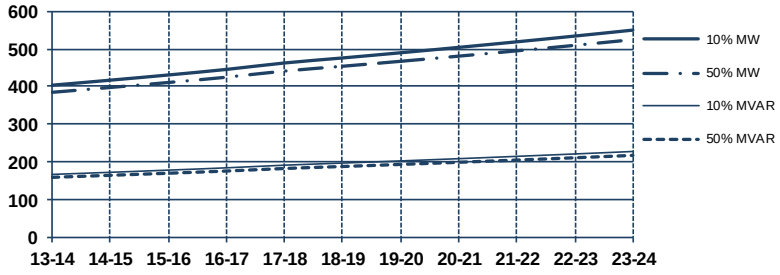
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	356.4	141.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	403.6	167.1	384.8	159.4
14-15	417.0	172.8	397.6	164.8
15-16	430.7	178.5	410.8	170.3
16-17	445.5	184.6	424.8	176.1
17-18	462.5	191.7	441.1	182.9
18-19	475.8	197.2	453.8	188.2
19-20	489.6	203.0	467.0	193.7
20-21	503.9	208.9	480.6	199.3
21-22	518.6	215.0	494.7	205.2
22-23	533.9	221.4	509.3	211.3
23-24	549.7	228.0	524.4	217.6

Load Curve on High Demand Day



Forecast

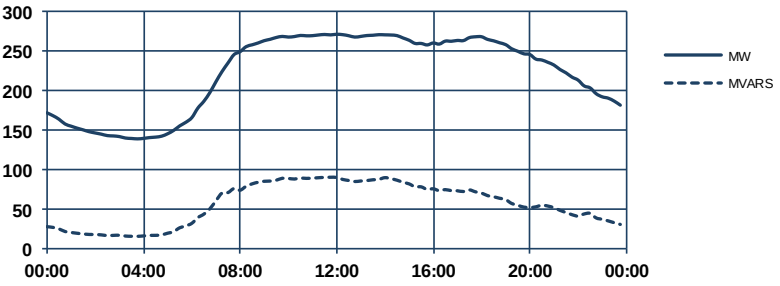


Winter Demand

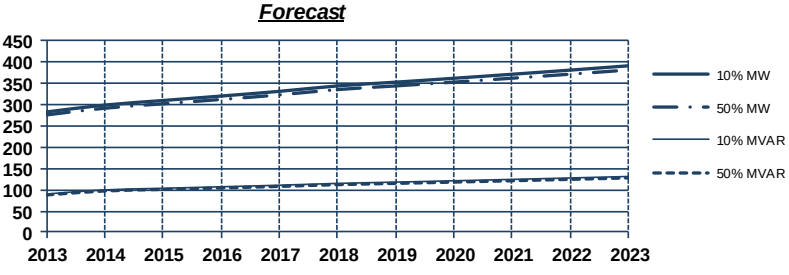
2012 MD	MW	MVAR
21 Aug 2012 10:00	270.7	89.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	282.4	89.8	275.5	87.6
2014	298.6	99.5	291.2	97.0
2015	309.3	103.3	301.6	100.6
2016	319.8	106.9	311.8	104.1
2017	330.9	110.5	322.6	107.7
2018	343.6	114.8	335.0	111.8
2019	352.5	117.8	343.6	114.8
2020	361.6	120.9	352.5	117.8
2021	371.0	124.2	361.7	121.0
2022	380.8	127.5	371.2	124.3
2023	390.9	131.0	381.0	127.7

Load Curve on High Demand Day



Forecast



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

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

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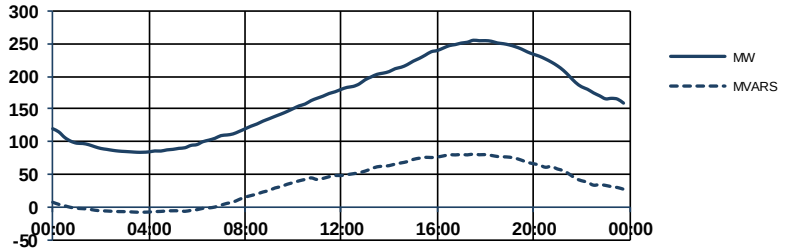
KTS_West66: Western area served by Keilor Terminal Stn. 66 kV bus

Summer Demand

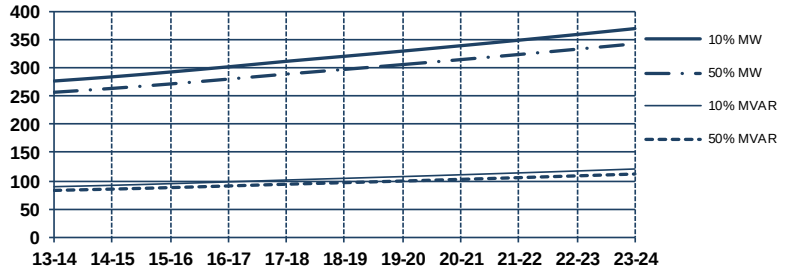
2012-13 MD	MW	MVAR
04 Jan 2013 18:00	255.1	80.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	276.5	89.8	256.6	83.2
14-15	283.9	92.2	263.4	85.5
15-16	292.4	95.1	271.3	88.1
16-17	301.6	98.2	279.8	91.1
17-18	311.3	101.5	288.8	94.1
18-19	320.2	104.5	297.0	96.9
19-20	329.4	107.6	305.5	99.7
20-21	338.8	110.8	314.3	102.7
21-22	348.6	114.1	323.3	105.7
22-23	358.7	117.5	332.7	108.9
23-24	369.1	121.0	342.3	112.2

Load Curve on High Demand Day



Forecast

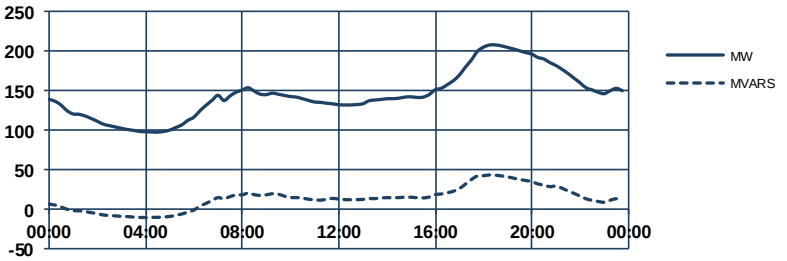


Winter Demand

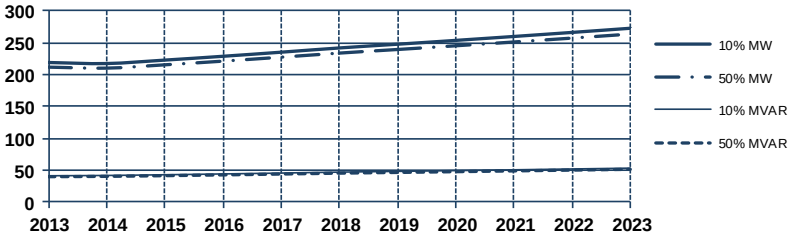
2012 MD	MW	MVAR
20 Jun 2012 18:30	207.2	42.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	218.8	41.5	211.5	40.1
2014	217.2	42.0	210.0	40.6
2015	222.6	43.1	215.2	41.7
2016	228.5	44.4	220.9	42.9
2017	234.9	45.8	227.1	44.2
2018	241.6	47.2	233.5	45.6
2019	247.4	48.4	239.2	46.7
2020	253.4	49.6	245.0	47.9
2021	259.6	50.9	250.9	49.1
2022	265.9	52.1	257.0	50.4
2023	272.4	53.5	263.3	51.6

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.

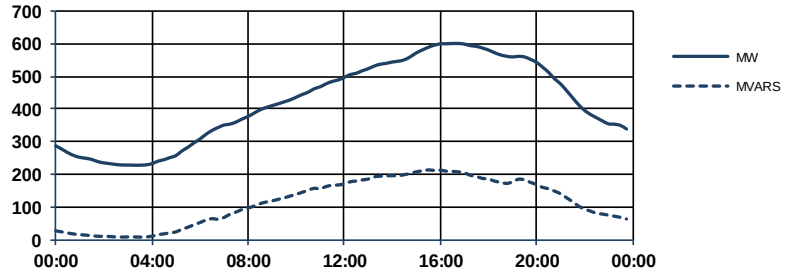
KTS66: Keilor Terminal Station 66 kV bus

Summer Demand

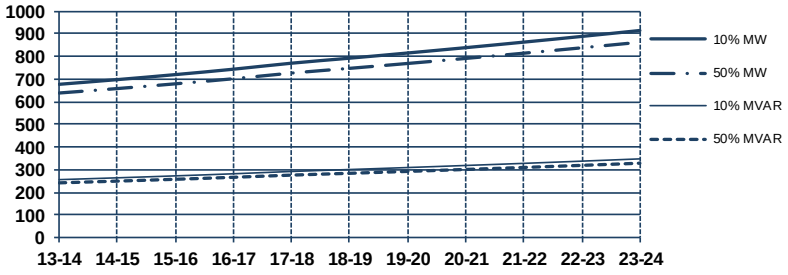
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	600.2	213.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	676.7	255.5	638.2	241.4
14-15	697.4	263.6	657.8	249.0
15-16	719.6	272.2	678.8	257.2
16-17	743.4	281.4	701.2	265.8
17-18	769.9	291.7	726.3	275.5
18-19	792.1	300.2	747.2	283.6
19-20	814.9	309.0	768.7	291.9
20-21	838.6	318.1	791.1	300.5
21-22	863.0	327.5	814.1	309.4
22-23	888.2	337.2	837.9	318.6
23-24	914.3	347.3	862.6	328.1

Load Curve on High Demand Day



Forecast

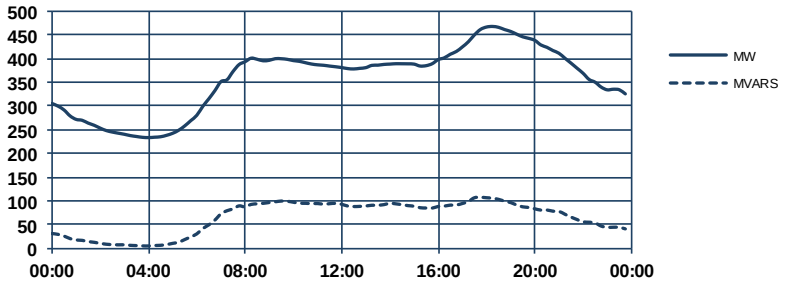


Winter Demand

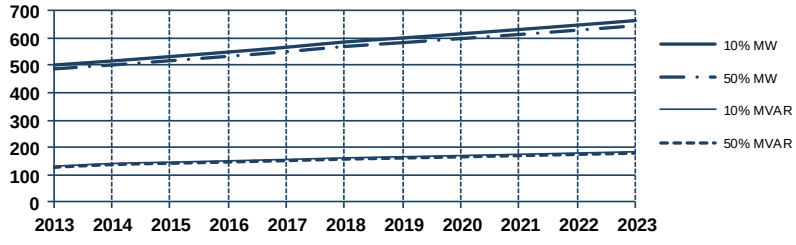
2012 MD	MW	MVAR
20 Jun 2012 18:00	467.6	107.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	501.2	131.4	487.1	127.7
2014	516.0	141.7	501.3	137.7
2015	532.1	146.5	517.0	142.4
2016	548.6	151.4	533.0	147.2
2017	566.0	156.5	549.9	152.1
2018	585.4	162.1	568.8	157.6
2019	600.1	166.4	583.0	161.7
2020	615.3	170.7	597.7	165.9
2021	630.9	175.3	612.9	170.3
2022	647.0	179.9	628.5	174.8
2023	663.6	184.7	644.7	179.5

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.

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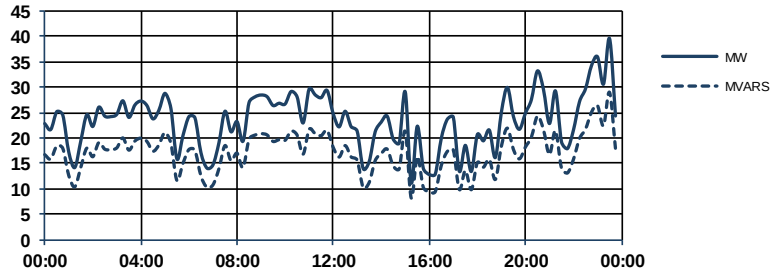
LY66: Loy Yang Substation 66 kV bus

Summer Demand

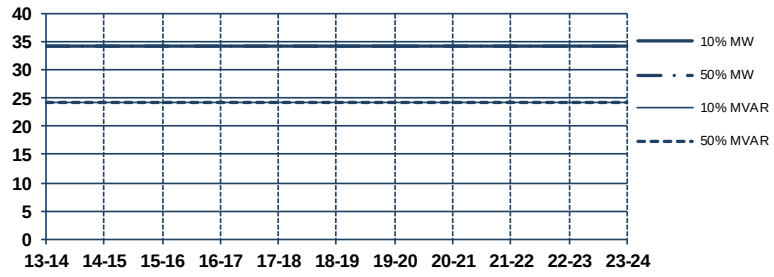
2012-13 MD	MW	MVAR
23 Nov 2012 22:30	39.6	29.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	34.2	24.2	34.2	24.2
14-15	34.2	24.2	34.2	24.2
15-16	34.2	24.2	34.2	24.2
16-17	34.2	24.2	34.2	24.2
17-18	34.2	24.2	34.2	24.2
18-19	34.2	24.2	34.2	24.2
19-20	34.2	24.2	34.2	24.2
20-21	34.2	24.2	34.2	24.2
21-22	34.2	24.2	34.2	24.2
22-23	34.2	24.2	34.2	24.2
23-24	34.2	24.2	34.2	24.2

Load Curve on High Demand Day



Forecast

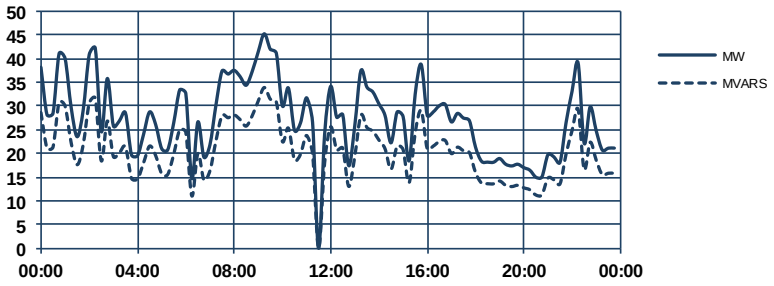


Winter Demand

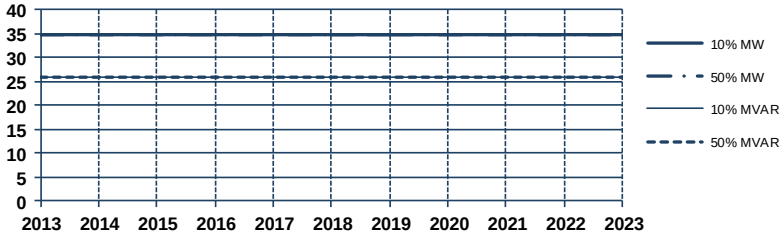
2012 MD	MW	MVAR
31 Aug 2012 22:00	45.2	33.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	34.8	25.9	34.8	25.9
2014	34.8	25.9	34.8	25.9
2015	34.8	25.9	34.8	25.9
2016	34.8	25.9	34.8	25.9
2017	34.8	25.9	34.8	25.9
2018	34.8	25.9	34.8	25.9
2019	34.8	25.9	34.8	25.9
2020	34.8	25.9	34.8	25.9
2021	34.8	25.9	34.8	25.9
2022	34.8	25.9	34.8	25.9
2023	34.8	25.9	34.8	25.9

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.

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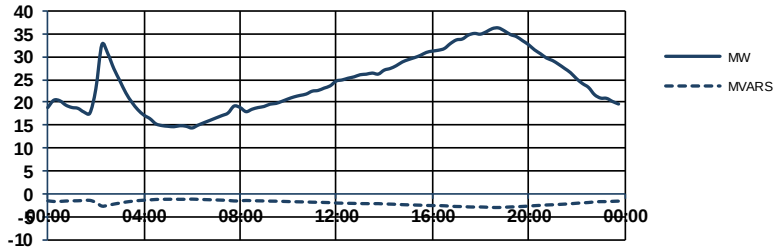
MBTS66: Mount Beauty Terminal Station 66 kV bus

Summer Demand

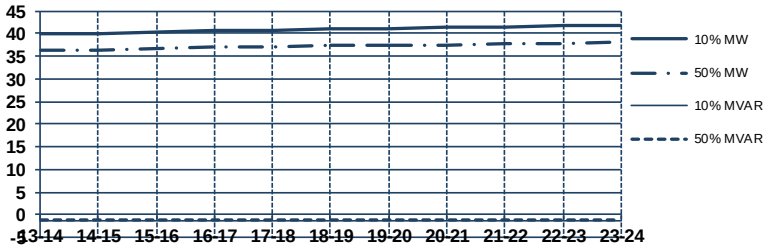
2012-13 MD	MW	MVAR
04 Jan 2013 17:30	36.3	-1.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	39.8	-1.3	36.2	-1.2
14-15	40.1	-1.3	36.5	-1.2
15-16	40.3	-1.3	36.7	-1.2
16-17	40.5	-1.3	36.9	-1.2
17-18	40.8	-1.4	37.1	-1.2
18-19	41.0	-1.4	37.3	-1.2
19-20	41.1	-1.4	37.4	-1.2
20-21	41.3	-1.4	37.6	-1.2
21-22	41.5	-1.4	37.7	-1.3
22-23	41.6	-1.4	37.9	-1.3
23-24	41.8	-1.4	38.0	-1.3

Load Curve on High Demand Day



Forecast

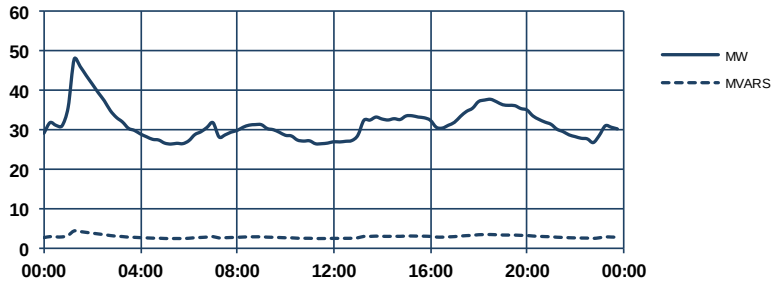


Winter Demand

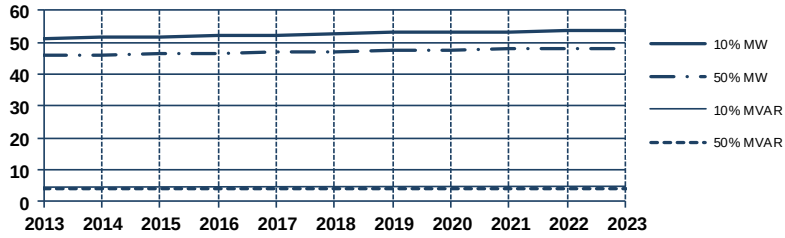
2012 MD	MW	MVAR
03 Jul 2012 01:30	47.7	4.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	51.0	4.6	45.7	4.1
2014	51.3	4.6	46.0	4.2
2015	51.7	4.7	46.3	4.2
2016	52.0	4.7	46.6	4.2
2017	52.3	4.7	46.9	4.2
2018	52.6	4.7	47.2	4.3
2019	52.9	4.8	47.4	4.3
2020	53.1	4.8	47.6	4.3
2021	53.4	4.8	47.8	4.3
2022	53.6	4.8	48.0	4.3
2023	53.8	4.9	48.2	4.4

Load Curve on High Demand Day



Forecast



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

Forecast demand shown here assumes the Clover Power Station is switched off at the time of maximum demand. Actual previous year summer and winter generation of Clover Power Station at time of maximum demand was zero.

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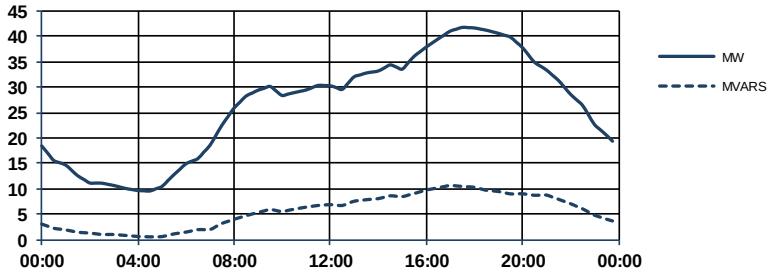
MTS22: Malvern Terminal Station 22 kV bus

Summer Demand

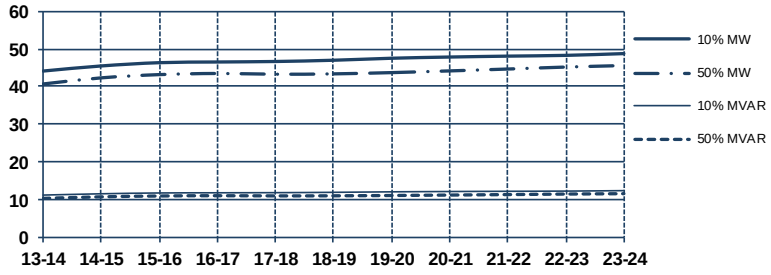
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	41.8	10.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	44.1	11.2	40.7	10.4
14-15	45.5	11.6	42.3	10.8
15-16	46.3	11.8	43.2	11.0
16-17	46.5	11.8	43.5	11.1
17-18	46.6	11.9	43.3	11.0
18-19	47.0	12.0	43.4	11.0
19-20	47.5	12.1	43.7	11.1
20-21	47.8	12.2	44.2	11.2
21-22	48.1	12.2	44.6	11.4
22-23	48.3	12.3	45.2	11.5
23-24	48.7	12.4	45.6	11.6

Load Curve on High Demand Day



Forecast

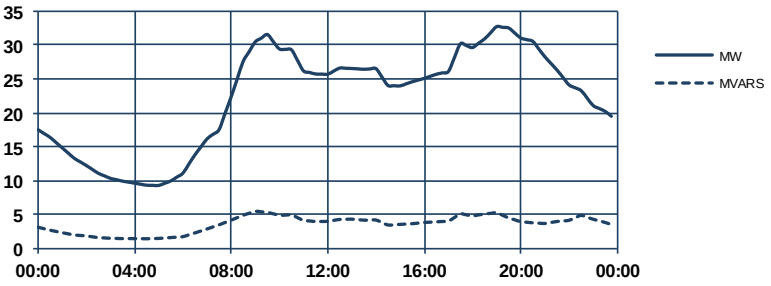


Winter Demand

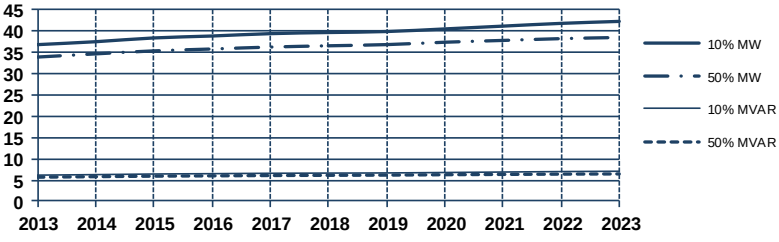
2012 MD	MW	MVAR
20 Jun 2012 18:00	32.7	5.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	36.8	6.1	33.9	5.7
2014	37.5	6.3	34.6	5.8
2015	38.4	6.4	35.3	5.9
2016	38.8	6.5	35.8	6.0
2017	39.4	6.6	36.2	6.0
2018	39.6	6.6	36.5	6.1
2019	39.9	6.7	36.8	6.1
2020	40.5	6.8	37.3	6.2
2021	41.1	6.9	37.8	6.3
2022	41.8	7.0	38.2	6.4
2023	42.2	7.1	38.5	6.4

Load Curve on High Demand Day



Forecast



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

This includes only the 22 kV load at MTS representing the demand through the 66/22kV transformers. The 2012-13 weather-corrected actual was higher than the 2012-13 forecast. Therefore, the forecast for 2013-14 is marginally higher compared to last year.

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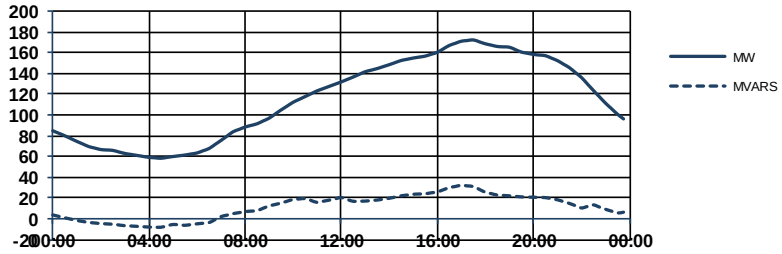
MTS66: Malvern Terminal Station 66 kV bus

Summer Demand

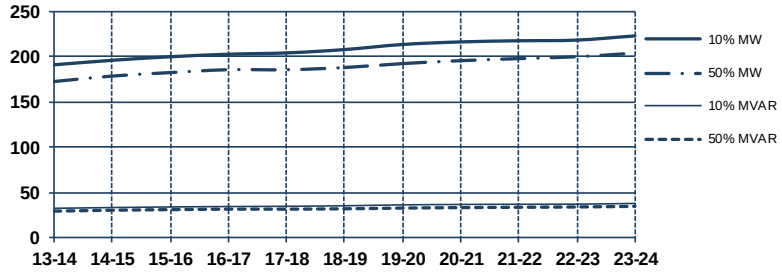
2012-13 MD	MW	MVAR
29 Nov 2012 18:00	172.1	32.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	190.7	32.2	172.2	29.1
14-15	195.7	33.0	178.2	30.1
15-16	199.6	33.7	182.1	30.8
16-17	202.4	34.2	185.3	31.3
17-18	203.8	34.4	185.2	31.3
18-19	207.5	35.1	187.7	31.7
19-20	213.2	36.0	192.1	32.4
20-21	216.0	36.5	195.3	33.0
21-22	217.3	36.7	197.6	33.4
22-23	218.0	36.8	199.6	33.7
23-24	222.6	37.6	203.6	34.4

Load Curve on High Demand Day



Forecast

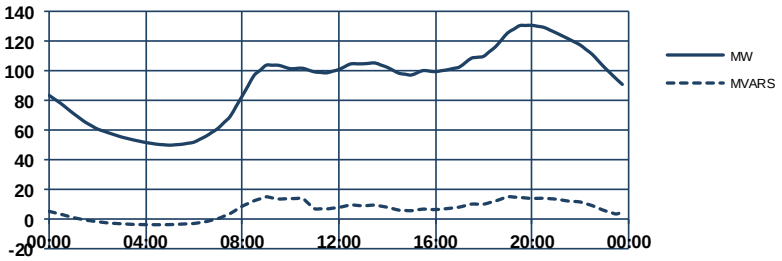


Winter Demand

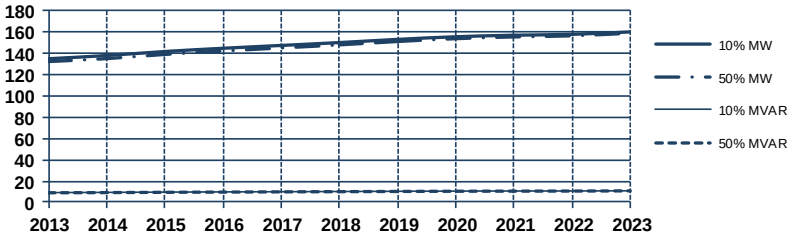
2012 MD	MW	MVAR
09 Aug 2012 19:00	130.4	14.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	134.8	9.1	132.2	8.9
2014	137.8	9.3	134.9	9.1
2015	141.6	9.6	138.9	9.4
2016	144.6	9.8	142.1	9.6
2017	147.3	9.9	144.9	9.8
2018	150.0	10.1	147.8	10.0
2019	153.0	10.3	151.0	10.2
2020	155.5	10.5	153.7	10.4
2021	156.9	10.6	155.3	10.5
2022	157.7	10.6	156.3	10.5
2023	160.0	10.8	158.8	10.7

Load Curve on High Demand Day



Forecast



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

This includes only the 66 kV load at MTS excluding the 22 kV load at MTS. The 2012-13 weather-corrected actual was higher than the 2012-13 forecast. Therefore, the forecast for 2013-14 is marginally higher compared to last year.

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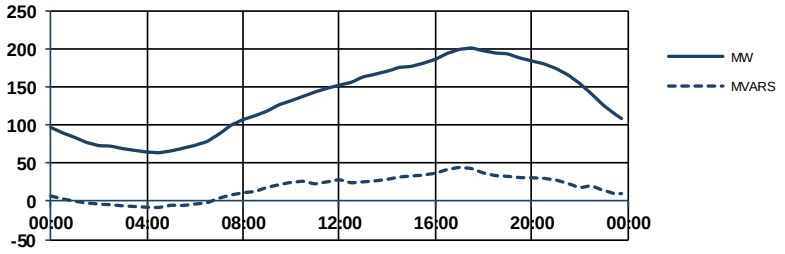
MTS662266: Malvern T.S. - 66 and 22 kV loads combined 66 kV bus

Summer Demand

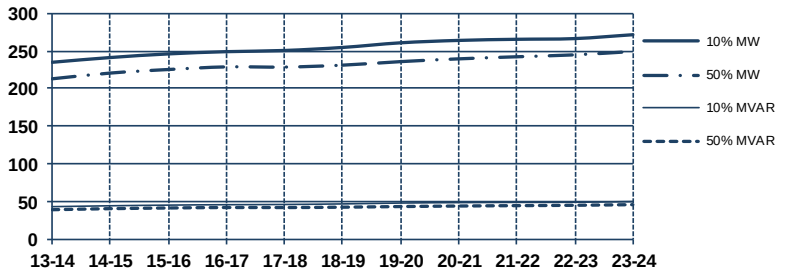
2012-13 MD	MW	MVAR
29 Nov 2012 17:00	201.3	44.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	234.9	43.5	212.9	39.4
14-15	241.1	44.7	220.6	40.9
15-16	245.9	45.6	225.3	41.7
16-17	248.9	46.1	228.8	42.4
17-18	250.5	46.4	228.5	42.3
18-19	254.5	47.1	231.0	42.8
19-20	260.7	48.3	235.7	43.7
20-21	263.8	48.9	239.4	44.3
21-22	265.3	49.1	242.2	44.9
22-23	266.3	49.3	244.7	45.3
23-24	271.4	50.3	249.2	46.2

Load Curve on High Demand Day



Forecast

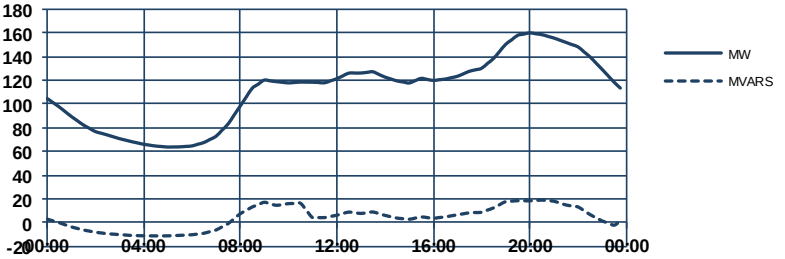


Winter Demand

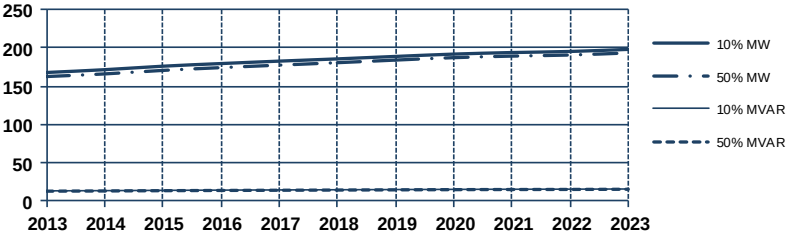
2012 MD	MW	MVAR
09 Aug 2012 19:00	159.9	19.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	168.0	13.6	162.7	13.2
2014	171.6	13.9	166.1	13.5
2015	176.2	14.3	170.7	13.8
2016	179.6	14.6	174.3	14.1
2017	182.8	14.8	177.6	14.4
2018	185.7	15.0	180.8	14.6
2019	188.9	15.3	184.2	14.9
2020	192.0	15.6	187.4	15.2
2021	194.0	15.7	189.4	15.3
2022	195.4	15.8	190.8	15.5
2023	198.1	16.1	193.5	15.7

Load Curve on High Demand Day



Forecast



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

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

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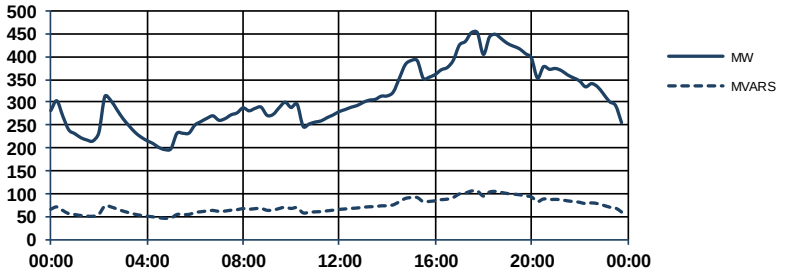
MWTS66: Morwell Terminal Station 66 kV bus

Summer Demand

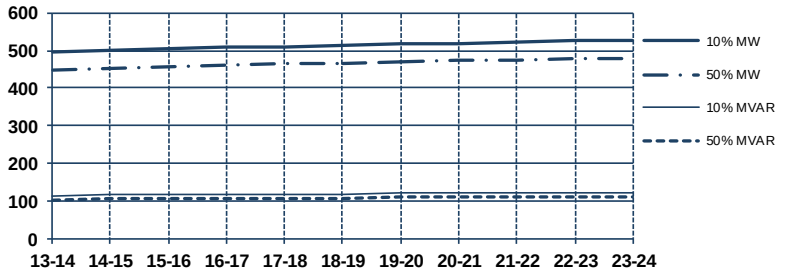
2012-13 MD	MW	MVAR
04 Jan 2013 17:30	452.1	105.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	494.4	115.2	449.4	104.7
14-15	499.0	116.3	453.5	105.7
15-16	503.2	117.3	457.3	106.6
16-17	507.0	118.2	460.7	107.4
17-18	510.6	119.0	463.9	108.1
18-19	513.8	119.8	466.8	108.8
19-20	516.8	120.4	469.5	109.4
20-21	519.5	121.1	471.9	110.0
21-22	522.1	121.7	474.2	110.5
22-23	524.4	122.2	476.3	111.0
23-24	526.5	122.7	478.2	111.4

Load Curve on High Demand Day



Forecast

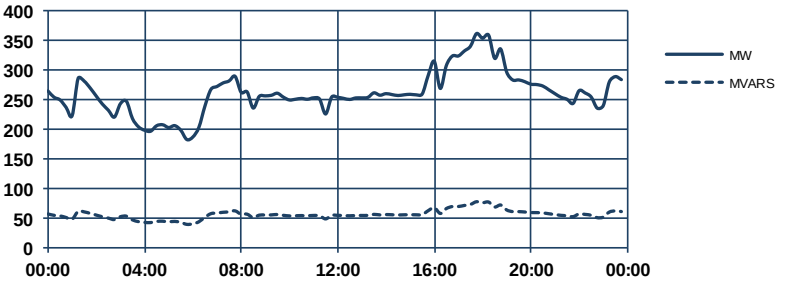


Winter Demand

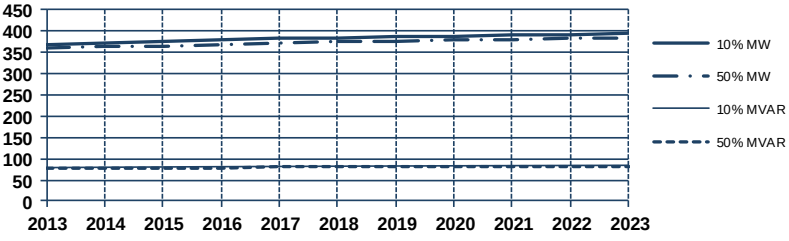
2012 MD	MW	MVAR
21 Jun 2012 18:00	360.8	77.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	369.0	78.8	359.0	76.7
2014	372.6	79.6	362.4	77.4
2015	375.9	80.3	365.6	78.1
2016	378.8	80.9	368.5	78.7
2017	381.6	81.5	371.2	79.3
2018	384.1	82.1	373.6	79.8
2019	386.4	82.6	375.9	80.3
2020	388.6	83.0	378.0	80.8
2021	390.5	83.4	379.9	81.2
2022	392.3	83.8	381.6	81.5
2023	394.0	84.2	383.2	81.9

Load Curve on High Demand Day



Forecast



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

This terminal station supplies Gippsland. Also included in this demand is LY66, which is reported separately in this document. Morwell Power Station and Bairnsdale Power Station are assumed to be switched off at the time of maximum demand in the forecasts, and are not netted off actual previous year summer and winter generation.

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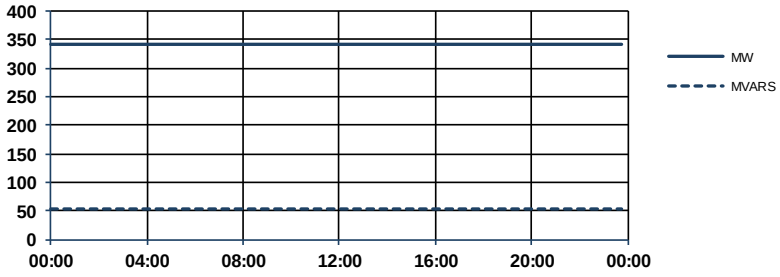
PTH220: Point Henry 220 kV bus

Summer Demand

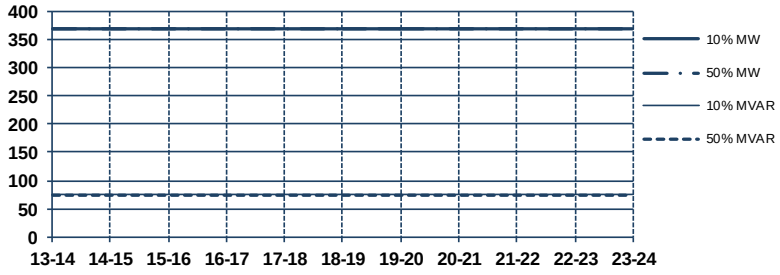
2012-13 MD	MW	MVAR
21 Mar 2013 15:30	341.4	53.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	367.5	75.0	367.5	75.0
14-15	367.5	75.0	367.5	75.0
15-16	367.5	75.0	367.5	75.0
16-17	367.5	75.0	367.5	75.0
17-18	367.5	75.0	367.5	75.0
18-19	367.5	75.0	367.5	75.0
19-20	367.5	75.0	367.5	75.0
20-21	367.5	75.0	367.5	75.0
21-22	367.5	75.0	367.5	75.0
22-23	367.5	75.0	367.5	75.0
23-24	367.5	75.0	367.5	75.0

Load Curve on High Demand Day



Forecast

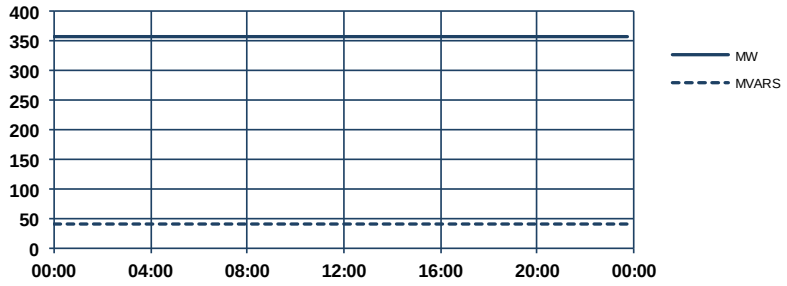


Winter Demand

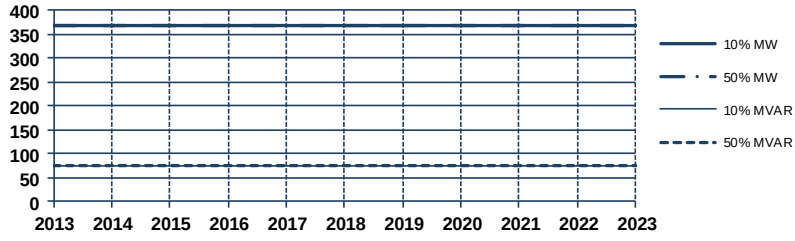
2012 MD	MW	MVAR
08 Jun 2012 00:00	356.4	40.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	367.5	75.0	367.5	75.0
2014	367.5	75.0	367.5	75.0
2015	367.5	75.0	367.5	75.0
2016	367.5	75.0	367.5	75.0
2017	367.5	75.0	367.5	75.0
2018	367.5	75.0	367.5	75.0
2019	367.5	75.0	367.5	75.0
2020	367.5	75.0	367.5	75.0
2021	367.5	75.0	367.5	75.0
2022	367.5	75.0	367.5	75.0
2023	367.5	75.0	367.5	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. Forecast demand shown here assumes the Anglesea Power Station is switched off at the time of maximum demand. Actual previous year summer and winter generation of Anglesea Power Station at time of maximum demand was zero.

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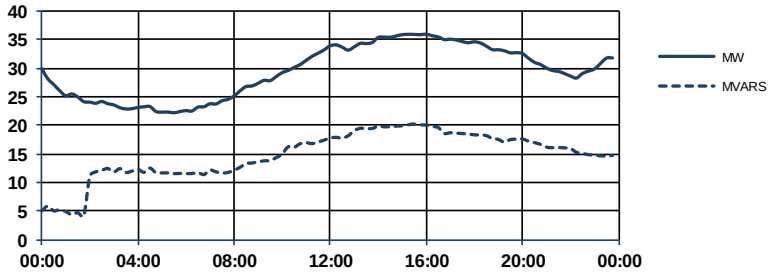
RCTS22: Red Cliffs Terminal Station 22 kV bus

Summer Demand

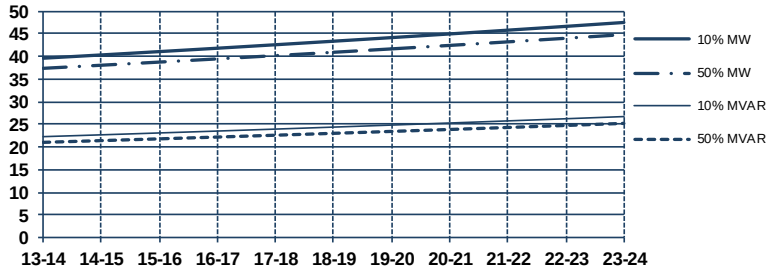
2012-13 MD	MW	MVAR
24 Feb 2013 15:30	35.9	20.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	39.6	22.3	37.4	21.0
14-15	40.3	22.7	38.0	21.4
15-16	41.1	23.1	38.7	21.8
16-17	41.8	23.5	39.5	22.2
17-18	42.6	23.9	40.2	22.6
18-19	43.4	24.4	40.9	23.0
19-20	44.1	24.8	41.7	23.4
20-21	45.0	25.3	42.4	23.9
21-22	45.8	25.8	43.2	24.3
22-23	46.6	26.2	44.0	24.7
23-24	47.5	26.7	44.8	25.2

Load Curve on High Demand Day



Forecast

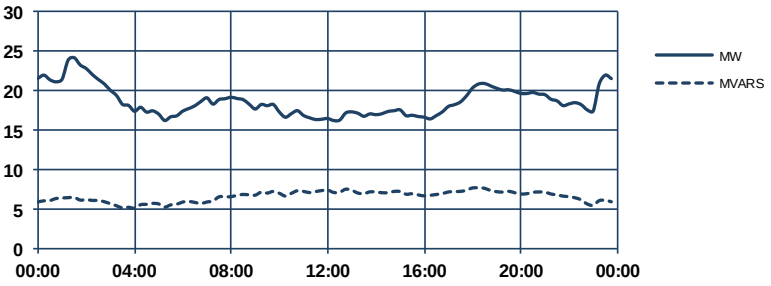


Winter Demand

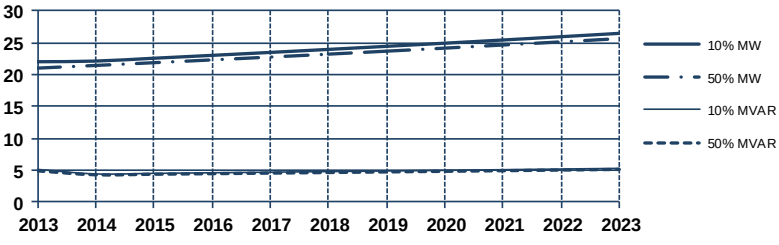
2012 MD	MW	MVAR
15 Sep 2012 13:00	24.1	7.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	22.0	5.2	21.0	4.9
2014	22.1	4.4	21.4	4.3
2015	22.5	4.5	21.8	4.4
2016	23.0	4.6	22.3	4.5
2017	23.5	4.7	22.7	4.6
2018	23.9	4.8	23.2	4.7
2019	24.4	4.9	23.7	4.8
2020	24.9	5.0	24.1	4.8
2021	25.4	5.1	24.6	4.9
2022	25.9	5.2	25.1	5.0
2023	26.4	5.3	25.6	5.1

Load Curve on High Demand Day



Forecast



Notes:

This includes only the 22 kV demand at RCTS.

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

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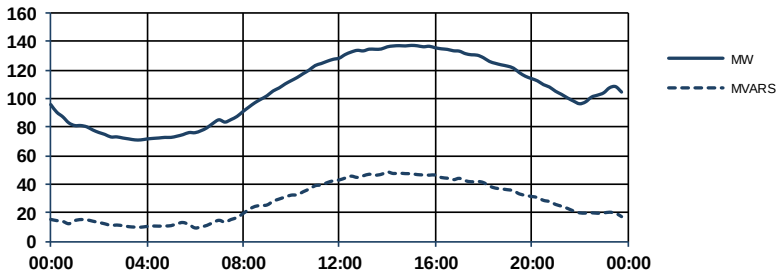
RCTS66: Red Cliffs Terminal Station 66 kV bus

Summer Demand

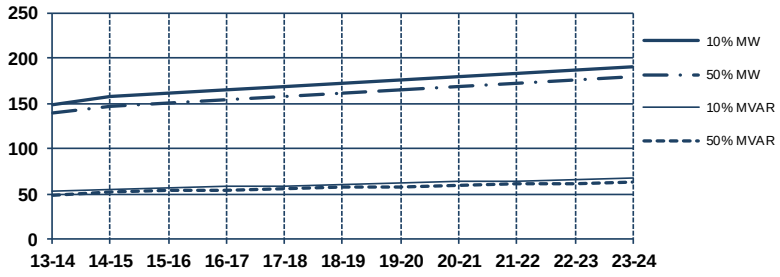
2012-13 MD	MW	MVAR
17 Jan 2013 15:00	137.2	48.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	148.1	52.3	138.9	49.0
14-15	156.6	55.3	146.9	51.9
15-16	160.3	56.6	150.3	53.1
16-17	164.0	57.9	153.8	54.3
17-18	167.5	59.1	157.1	55.5
18-19	171.2	60.4	160.6	56.7
19-20	174.9	61.7	164.1	57.9
20-21	178.8	63.1	167.7	59.2
21-22	182.7	64.5	171.4	60.5
22-23	186.8	66.0	175.3	61.9
23-24	191.0	67.4	179.2	63.3

Load Curve on High Demand Day



Forecast

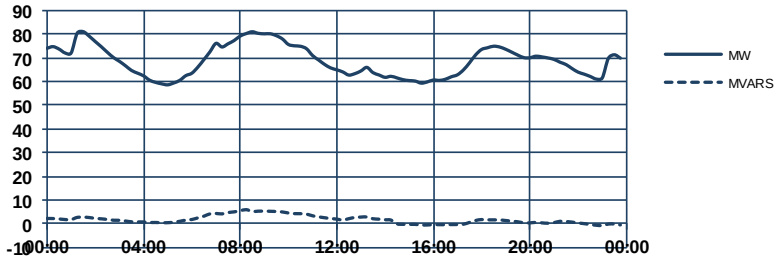


Winter Demand

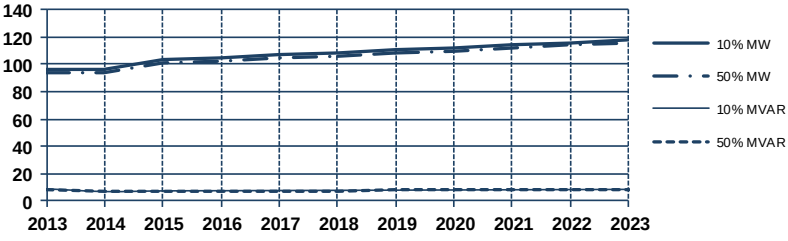
2012 MD	MW	MVAR
28 Jun 2012 01:30	81.0	5.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	95.9	9.0	94.4	8.9
2014	96.1	7.0	94.3	6.9
2015	103.0	7.5	101.0	7.4
2016	104.8	7.6	102.8	7.5
2017	106.6	7.8	104.6	7.6
2018	108.4	7.9	106.4	7.7
2019	110.3	8.0	108.2	7.9
2020	112.1	8.2	110.1	8.0
2021	114.1	8.3	111.9	8.2
2022	116.0	8.4	113.9	8.3
2023	118.1	8.6	115.9	8.4

Load Curve on High Demand Day



Forecast



Notes:

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

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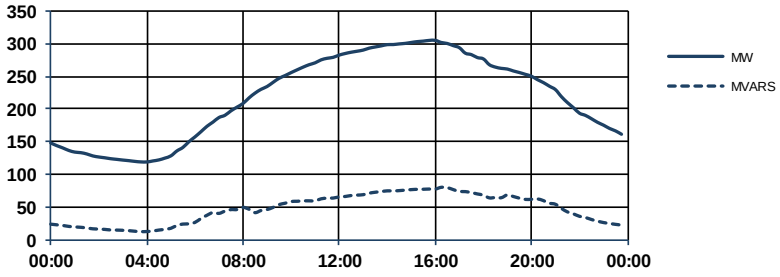
RTS1266: Richmond Terminal Station 1&2 66 kV bus

Summer Demand

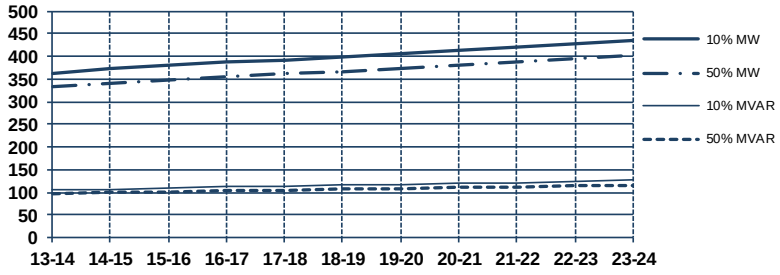
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	304.9	79.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	361.6	104.2	332.0	95.7
14-15	372.1	107.2	342.0	98.6
15-16	380.2	109.6	349.5	100.7
16-17	386.7	111.5	355.6	102.5
17-18	393.0	113.3	361.1	104.1
18-19	399.9	115.3	367.2	105.8
19-20	407.5	117.5	373.9	107.8
20-21	414.3	119.4	380.4	109.6
21-22	421.1	121.4	387.0	111.5
22-23	428.0	123.3	393.7	113.4
23-24	436.0	125.7	400.9	115.5

Load Curve on High Demand Day



Forecast

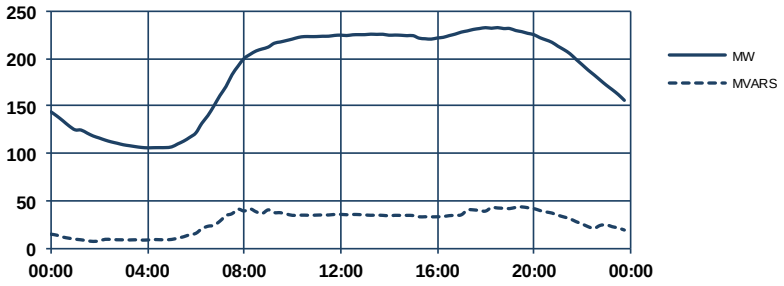


Winter Demand

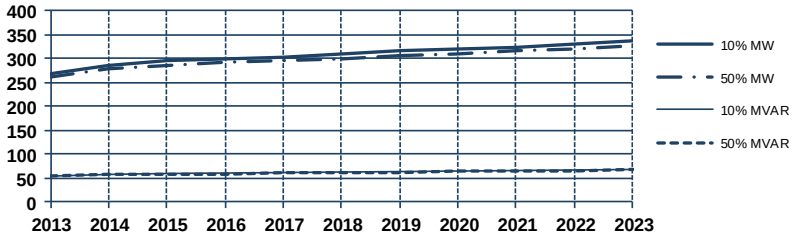
2012 MD	MW	MVAR
21 Jun 2012 18:00	232.6	43.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	269.1	54.5	261.1	53.3
2014	285.4	58.1	277.2	56.7
2015	294.5	60.1	286.2	58.6
2016	299.4	61.1	291.0	59.7
2017	304.0	62.1	295.3	60.6
2018	309.2	63.1	300.2	61.7
2019	314.7	64.1	305.4	62.7
2020	319.9	65.2	310.5	63.7
2021	324.9	66.3	315.6	64.7
2022	330.1	67.4	320.9	65.9
2023	335.9	68.5	326.5	67.0

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 2, fed by transformers B1 and B4.

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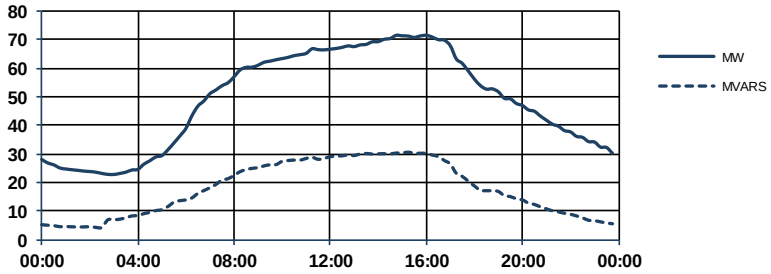
RTS22: Richmond Terminal Station 22 kV bus

Summer Demand

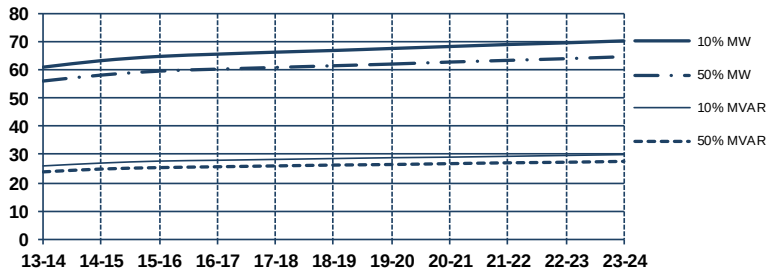
2012-13 MD	MW	MVAR
12 Mar 2013 15:00	71.5	30.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	60.9	26.0	56.0	23.9
14-15	63.2	27.0	58.1	24.9
15-16	64.7	27.7	59.5	25.4
16-17	65.5	28.0	60.2	25.7
17-18	66.2	28.3	60.8	26.0
18-19	66.8	28.6	61.4	26.3
19-20	67.5	28.9	62.0	26.5
20-21	68.2	29.1	62.7	26.8
21-22	68.9	29.4	63.3	27.1
22-23	69.5	29.7	63.9	27.3
23-24	70.2	30.0	64.6	27.6

Load Curve on High Demand Day



Forecast

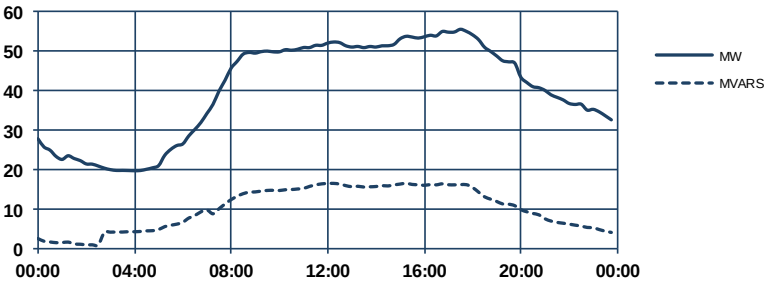


Winter Demand

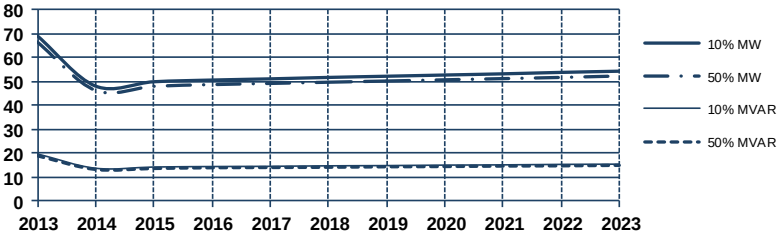
2012 MD	MW	MVAR
25 May 2012 17:30	55.4	16.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	69.1	19.8	66.5	19.0
2014	48.1	13.8	46.3	13.3
2015	49.9	14.3	48.0	13.7
2016	50.6	14.5	48.7	14.0
2017	51.1	14.6	49.2	14.1
2018	51.7	14.8	49.7	14.2
2019	52.2	14.9	50.2	14.4
2020	52.7	15.1	50.7	14.5
2021	53.2	15.2	51.2	14.7
2022	53.8	15.4	51.7	14.8
2023	54.3	15.5	52.3	15.0

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.

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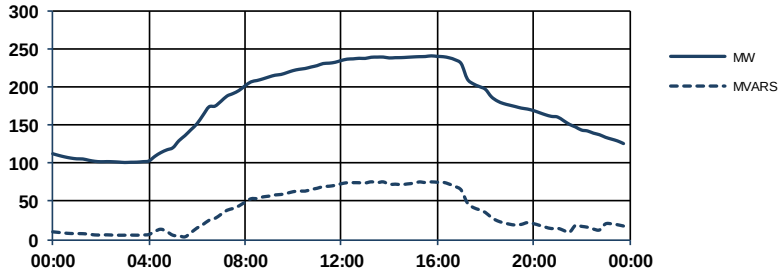
RTS3466: Richmond Terminal Station 3&4 66 kV bus

Summer Demand

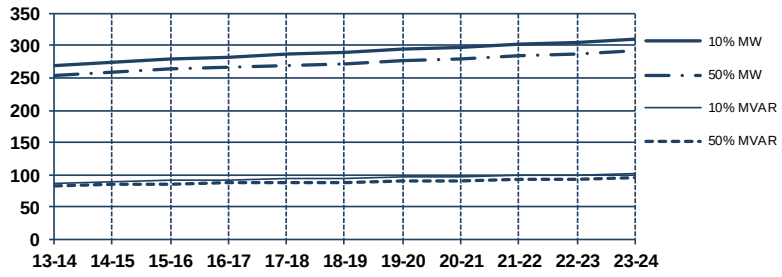
2012-13 MD	MW	MVAR
12 Mar 2013 14:00	241.0	75.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	268.9	87.8	252.8	82.6
14-15	274.9	89.8	258.6	84.5
15-16	279.3	91.2	262.8	85.9
16-17	282.7	92.4	266.1	86.9
17-18	286.1	93.5	269.2	87.9
18-19	289.9	94.7	272.6	89.1
19-20	293.9	96.0	276.3	90.3
20-21	297.7	97.2	279.9	91.4
21-22	301.3	98.4	283.4	92.6
22-23	305.0	99.6	287.1	93.8
23-24	309.1	101.0	290.9	95.0

Load Curve on High Demand Day



Forecast

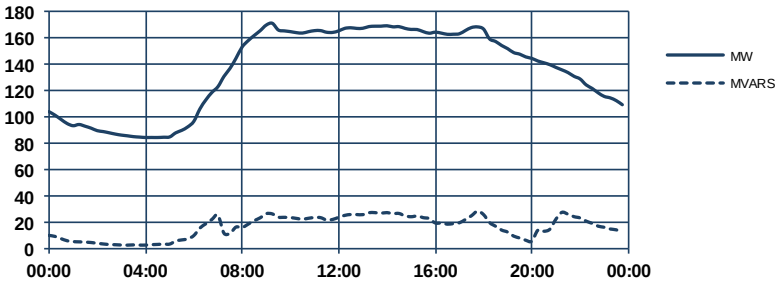


Winter Demand

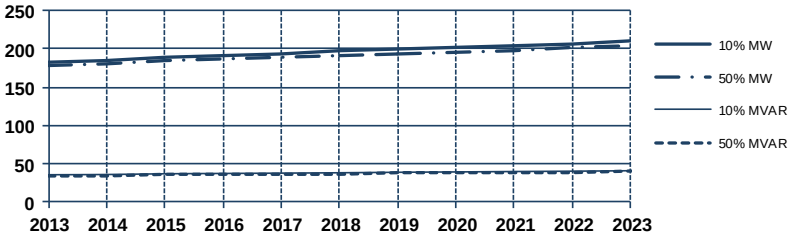
2012 MD	MW	MVAR
20 Jun 2012 18:00	170.7	28.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	183.6	35.9	177.9	34.7
2014	185.2	36.2	179.5	35.0
2015	189.9	37.2	184.2	36.0
2016	192.2	37.6	186.4	36.4
2017	194.5	38.0	188.5	36.8
2018	197.1	38.5	191.0	37.3
2019	200.0	39.1	193.6	37.8
2020	202.5	39.6	196.2	38.3
2021	204.9	40.1	198.7	38.8
2022	207.4	40.6	201.2	39.3
2023	210.3	41.2	203.9	39.8

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, fed by transformers B2 and B3.

© AEMO 2013

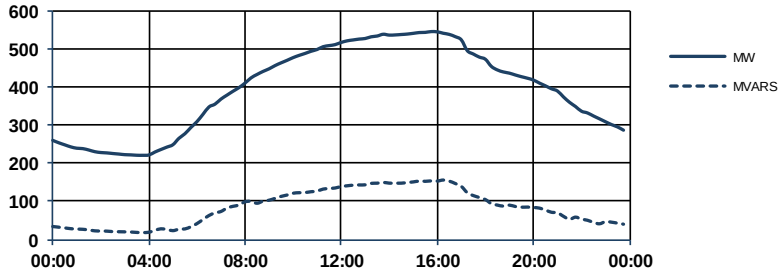
RTS66: Richmond Terminal Station 66 kV bus

Summer Demand

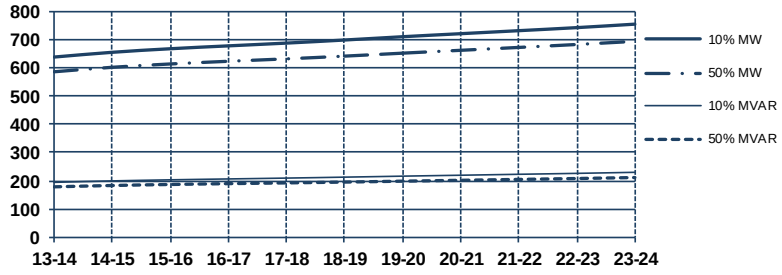
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	545.7	156.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	637.7	194.9	585.7	179.0
14-15	654.4	199.9	601.5	183.8
15-16	667.0	203.8	613.2	187.3
16-17	677.2	206.9	622.8	190.3
17-18	687.0	209.9	631.3	192.9
18-19	697.8	213.2	640.9	195.8
19-20	709.5	216.7	651.4	199.0
20-21	720.3	220.0	661.5	202.1
21-22	730.9	223.3	671.7	205.2
22-23	741.7	226.6	682.1	208.4
23-24	753.9	230.4	693.2	211.8

Load Curve on High Demand Day



Forecast

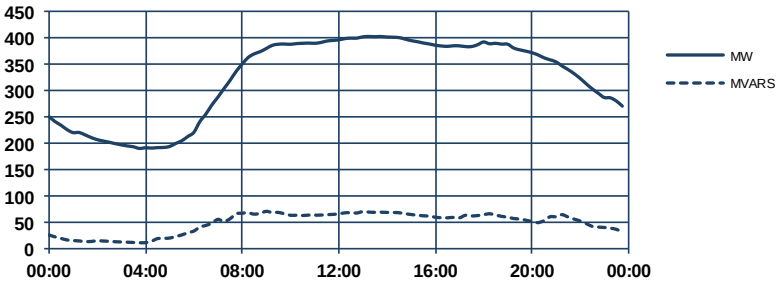


Winter Demand

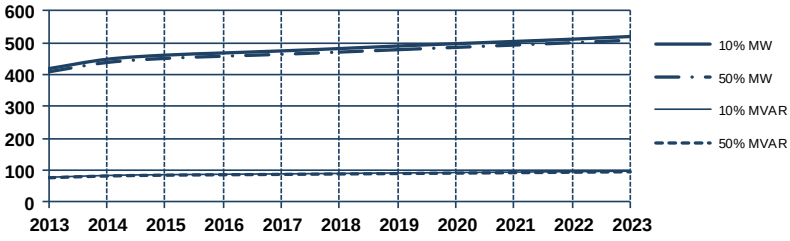
2012 MD	MW	MVAR
20 Jun 2012 18:00	401.8	70.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	418.1	78.3	408.2	76.7
2014	447.5	84.0	437.5	82.3
2015	460.6	86.5	450.4	84.8
2016	467.4	87.7	457.3	86.1
2017	473.9	89.0	463.3	87.3
2018	481.2	90.4	470.2	88.6
2019	489.2	91.8	477.7	90.0
2020	496.5	93.2	485.0	91.3
2021	503.5	94.6	492.2	92.7
2022	510.6	95.9	499.6	94.1
2023	519.0	97.4	507.6	95.5

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.

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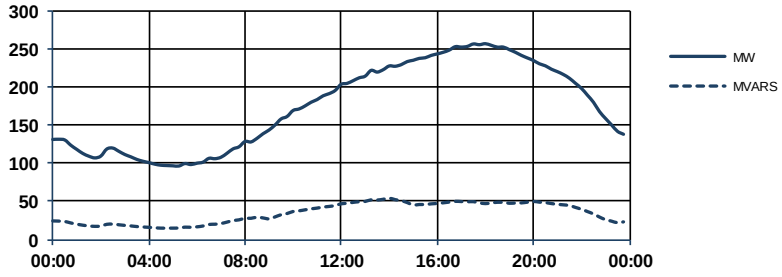
RWTS1366: Ringwood Terminal Station 1&3 66 kV bus

Summer Demand

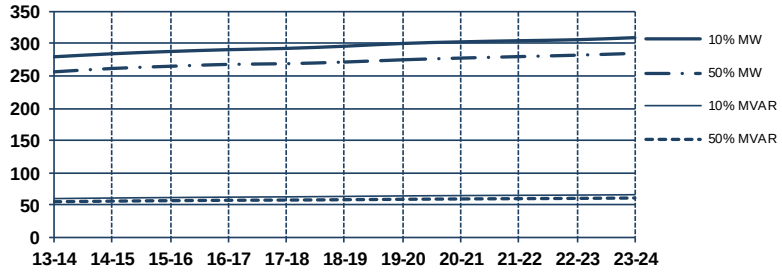
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	257.0	54.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	279.4	60.1	256.1	55.3
14-15	284.1	61.0	261.3	56.2
15-16	287.6	61.7	264.7	56.9
16-17	290.4	62.3	267.7	57.5
17-18	292.4	62.8	268.7	57.9
18-19	295.7	63.5	271.3	58.4
19-20	300.0	64.3	274.7	59.0
20-21	302.5	64.8	277.4	59.6
21-22	304.2	65.2	279.7	60.0
22-23	305.8	65.6	281.9	60.5
23-24	309.0	66.1	284.7	61.0

Load Curve on High Demand Day



Forecast

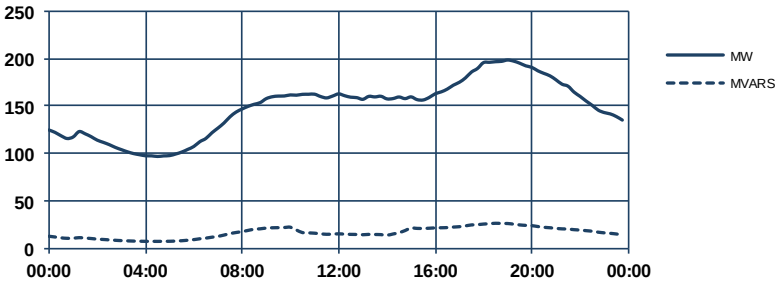


Winter Demand

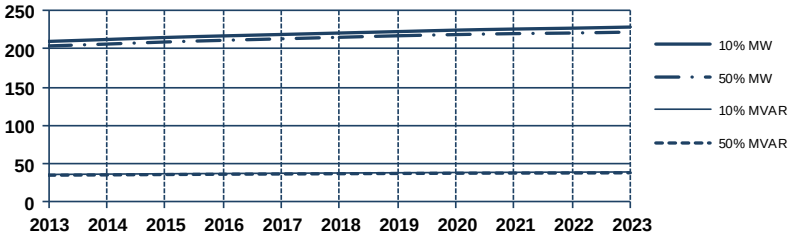
2012 MD	MW	MVAR
20 Jun 2012 18:30	198.4	26.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	209.8	36.3	204.0	35.3
2014	212.4	36.8	206.4	35.7
2015	215.0	37.2	209.1	36.2
2016	217.0	37.6	211.3	36.6
2017	218.9	37.9	213.2	36.9
2018	220.8	38.2	215.2	37.3
2019	222.6	38.5	217.2	37.6
2020	224.5	38.9	218.7	37.9
2021	226.0	39.1	220.0	38.1
2022	227.1	39.3	220.8	38.2
2023	228.6	39.6	222.0	38.4

Load Curve on High Demand Day



Forecast



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

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

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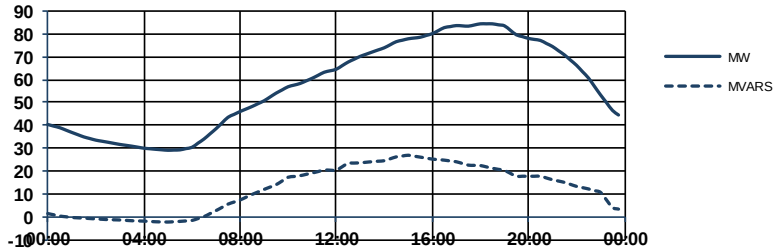
RWTS22: Ringwood Terminal Station 22 kV bus

Summer Demand

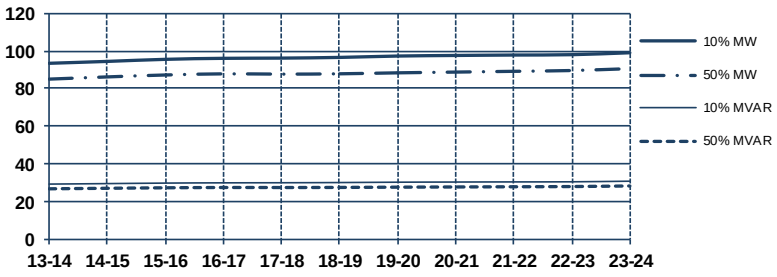
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	84.3	26.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	93.4	29.4	85.0	26.9
14-15	94.4	29.6	86.2	27.1
15-16	95.5	29.9	87.2	27.4
16-17	96.0	30.0	87.8	27.6
17-18	96.2	30.1	87.7	27.5
18-19	96.5	30.2	87.8	27.6
19-20	97.2	30.4	88.3	27.7
20-21	97.6	30.5	88.7	27.8
21-22	97.8	30.5	89.2	27.9
22-23	98.0	30.6	89.6	28.1
23-24	99.0	30.9	90.6	28.4

Load Curve on High Demand Day



Forecast

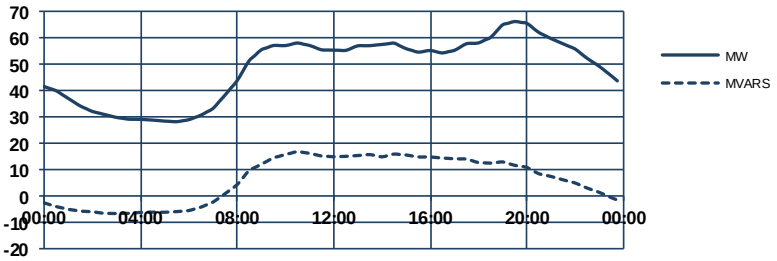


Winter Demand

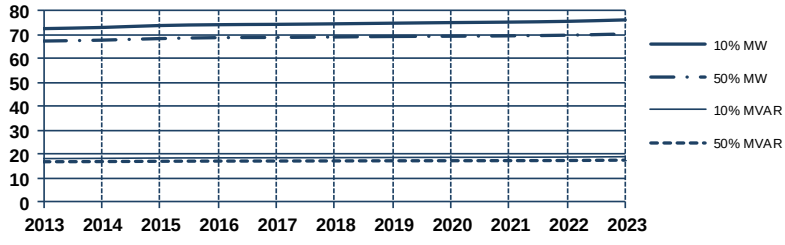
2012 MD	MW	MVAR
26 Jun 2012 18:30	66.1	16.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	72.5	18.2	67.3	16.9
2014	73.0	18.3	67.7	17.0
2015	73.8	18.5	68.3	17.1
2016	74.1	18.6	68.7	17.2
2017	74.3	18.6	68.8	17.2
2018	74.5	18.6	69.0	17.3
2019	74.8	18.7	69.2	17.3
2020	75.0	18.8	69.3	17.3
2021	75.2	18.8	69.5	17.4
2022	75.5	18.9	69.8	17.4
2023	76.1	19.0	70.3	17.6

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.

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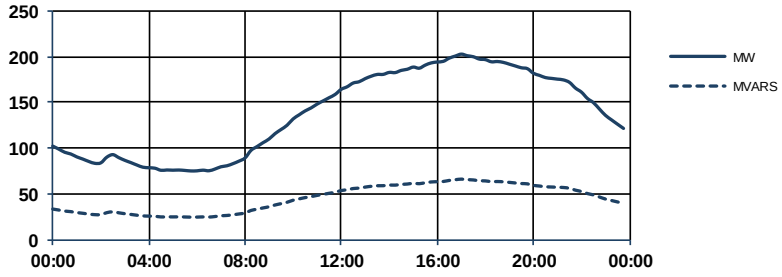
RWTS2466: Ringwood Terminal Station 2&4 66 kV bus

Summer Demand

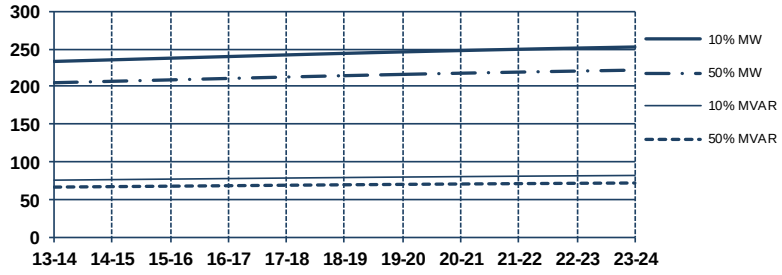
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	202.7	66.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	233.3	76.0	205.1	66.8
14-15	235.5	76.7	207.0	67.4
15-16	237.6	77.4	208.9	68.0
16-17	239.8	78.1	210.8	68.6
17-18	242.0	78.8	212.7	69.2
18-19	244.0	79.5	214.5	69.8
19-20	246.0	80.1	216.1	70.4
20-21	247.8	80.7	217.7	70.9
21-22	249.4	81.2	219.2	71.4
22-23	251.0	81.7	220.6	71.8
23-24	252.5	82.2	221.8	72.2

Load Curve on High Demand Day



Forecast

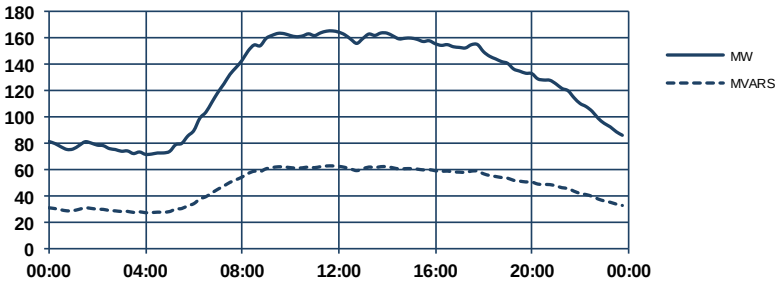


Winter Demand

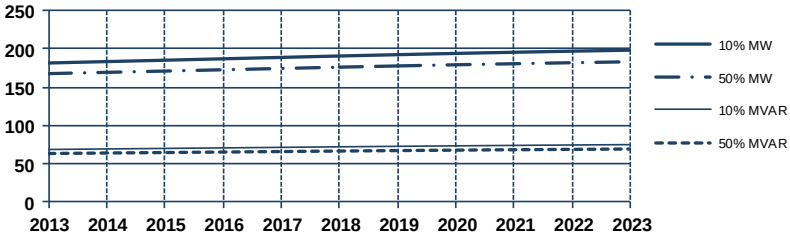
2012 MD	MW	MVAR
02 Aug 2012 09:30	164.9	62.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	181.7	68.9	167.8	63.6
2014	183.5	69.6	169.5	64.3
2015	185.3	70.3	171.2	64.9
2016	187.2	71.0	172.9	65.5
2017	189.0	71.7	174.6	66.2
2018	190.8	72.3	176.2	66.8
2019	192.5	73.0	177.8	67.4
2020	194.2	73.6	179.4	68.0
2021	195.7	74.2	180.8	68.5
2022	197.1	74.7	182.1	69.0
2023	198.4	75.2	183.3	69.5

Load Curve on High Demand Day



Forecast



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

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

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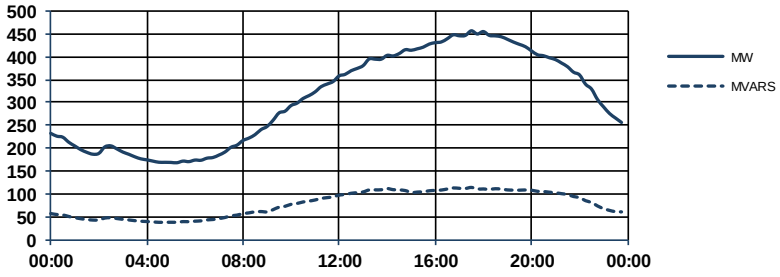
RWTS66: Ringwood Terminal Station 66 kV bus

Summer Demand

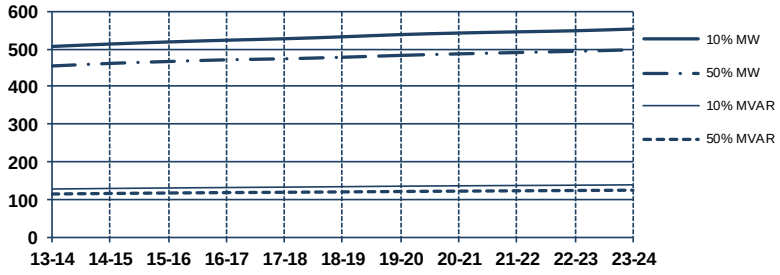
2012-13 MD	MW	MVAR
12 Mar 2013 16:30	456.5	113.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	506.3	128.5	454.6	115.2
14-15	512.8	129.9	461.4	116.7
15-16	518.3	131.2	466.5	117.9
16-17	522.9	132.4	471.0	119.0
17-18	526.8	133.5	473.7	119.8
18-19	531.9	134.7	477.8	120.8
19-20	537.8	136.0	482.7	121.9
20-21	541.9	137.0	486.7	122.9
21-22	545.1	137.8	490.2	123.7
22-23	548.0	138.6	493.6	124.5
23-24	552.4	139.5	497.5	125.3

Load Curve on High Demand Day



Forecast

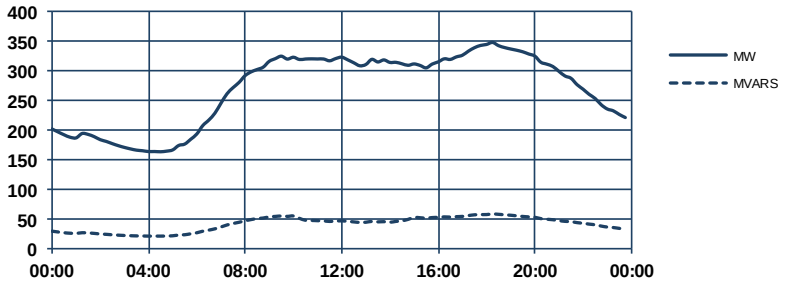


Winter Demand

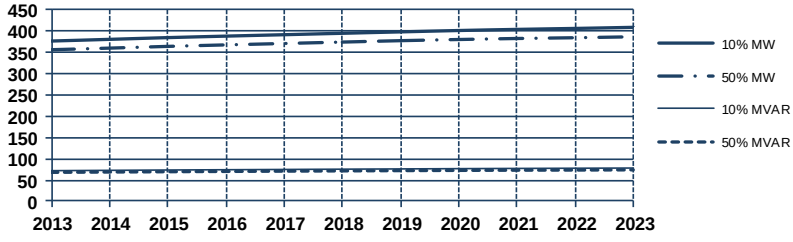
2012 MD	MW	MVAR
09 Aug 2012 18:30	347.1	57.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	376.2	71.9	355.9	68.0
2014	380.2	72.6	359.6	68.7
2015	384.3	73.4	363.7	69.4
2016	387.8	74.1	367.2	70.1
2017	391.1	74.7	370.5	70.7
2018	394.5	75.4	373.8	71.4
2019	397.7	76.0	377.1	72.0
2020	401.0	76.6	379.8	72.5
2021	403.6	77.1	382.2	73.0
2022	405.9	77.6	384.0	73.4
2023	408.4	78.1	386.2	73.8

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.

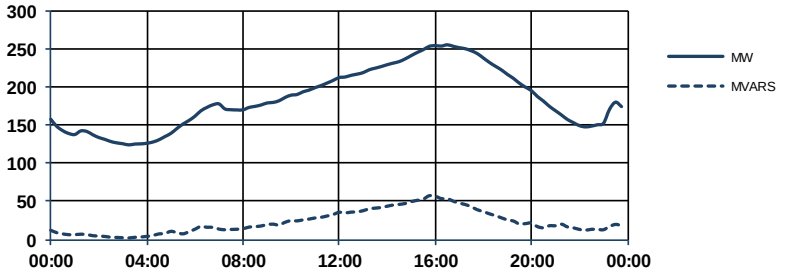
SHTS66: Shepparton Terminal Station 66 kV bus

Summer Demand

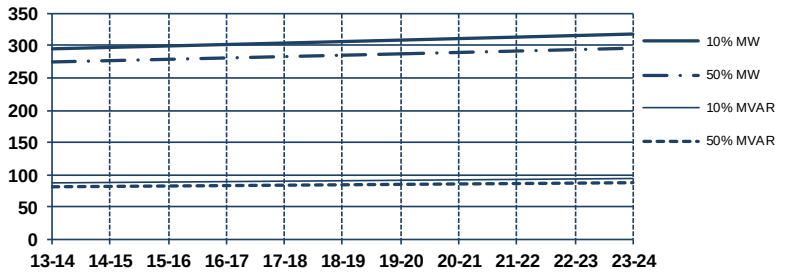
2012-13 MD	MW	MVAR
25 Feb 2013 16:30	255.5	57.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	294.8	87.5	274.5	81.5
14-15	297.0	88.2	276.5	82.1
15-16	299.2	88.8	278.6	82.7
16-17	301.5	89.5	280.7	83.3
17-18	303.7	90.2	282.8	83.9
18-19	306.0	90.8	284.9	84.6
19-20	308.3	91.5	287.0	85.2
20-21	310.6	92.2	289.2	85.9
21-22	312.9	92.9	291.4	86.5
22-23	315.3	93.6	293.6	87.1
23-24	317.7	94.3	295.8	87.8

Load Curve on High Demand Day



Forecast

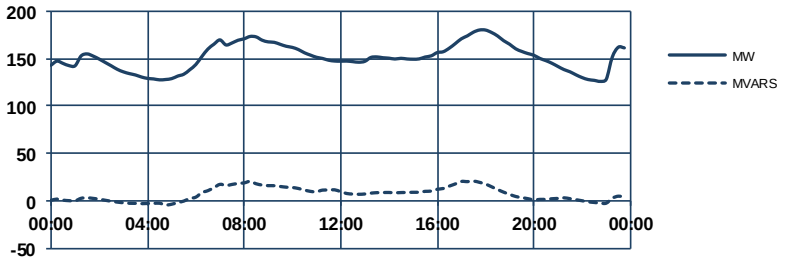


Winter Demand

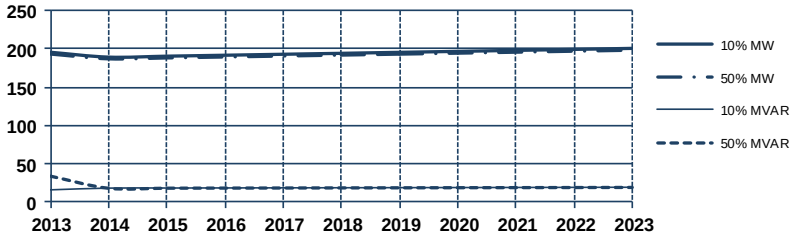
2012 MD	MW	MVAR
04 Jun 2012 18:00	180.1	20.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	195.7	16.2	193.4	34.1
2014	189.4	18.5	187.1	18.3
2015	190.6	18.6	188.3	18.4
2016	191.8	18.7	189.5	18.5
2017	193.1	18.9	190.8	18.6
2018	194.3	19.0	192.0	18.8
2019	195.6	19.1	193.3	18.9
2020	196.9	19.2	194.5	19.0
2021	198.2	19.3	195.8	19.1
2022	199.4	19.5	197.1	19.2
2023	200.8	19.6	198.4	19.4

Load Curve on High Demand Day



Forecast



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

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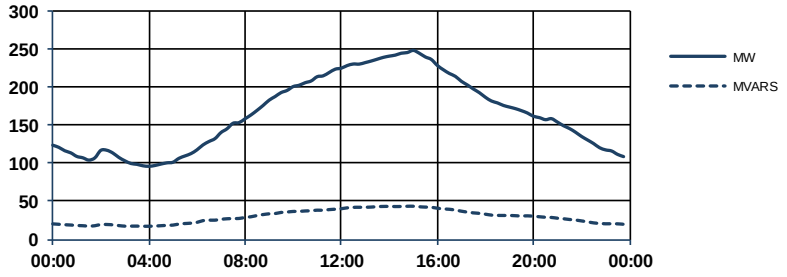
SMTS66: South Morang Terminal Station 66 kV bus

Summer Demand

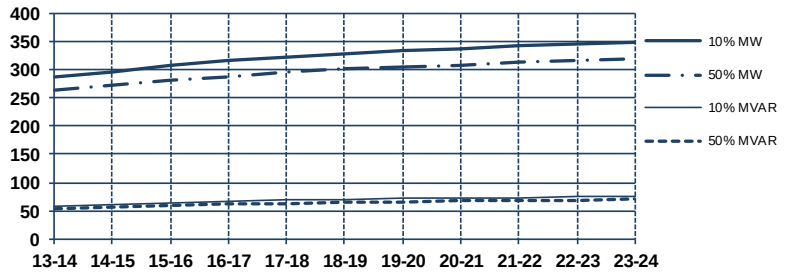
2012-13 MD	MW	MVAR
12 Mar 2013 17:00	248.1	43.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	287.3	59.6	262.6	55.0
14-15	296.9	62.0	271.4	57.3
15-16	306.9	64.8	280.8	59.9
16-17	314.8	66.9	288.1	61.9
17-18	322.3	69.0	295.1	63.8
18-19	327.7	70.3	300.1	65.0
19-20	332.5	71.6	304.5	66.2
20-21	336.8	72.9	308.5	67.4
21-22	341.0	74.1	312.3	68.5
22-23	345.2	75.3	316.2	69.7
23-24	349.4	76.6	320.2	70.9

Load Curve on High Demand Day



Forecast

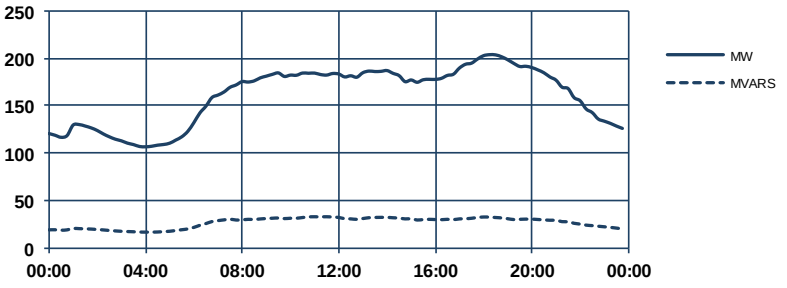


Winter Demand

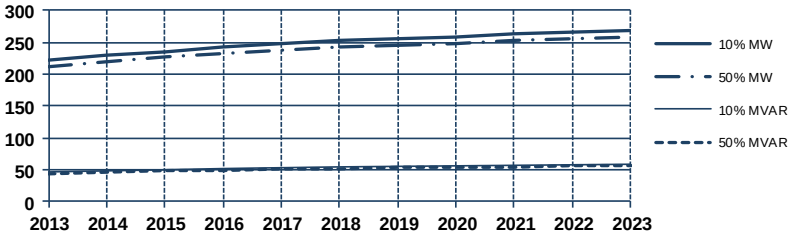
2012 MD	MW	MVAR
20 Jun 2012 18:30	203.7	32.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	221.3	46.8	212.2	44.9
2014	228.6	48.5	219.2	46.5
2015	235.6	50.2	225.9	48.2
2016	242.7	52.0	232.7	50.0
2017	247.9	53.4	237.7	51.3
2018	252.7	54.7	242.3	52.5
2019	255.9	55.5	245.4	53.3
2020	259.1	56.3	248.5	54.1
2021	262.3	57.1	251.5	54.9
2022	265.4	58.0	254.5	55.7
2023	268.6	58.8	257.5	56.5

Load Curve on High Demand Day



Forecast



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

Somerton Power Station is assumed to be switched off at the time of maxium demand for forecasts, and is not netted off actual previous year summer and winter generation.

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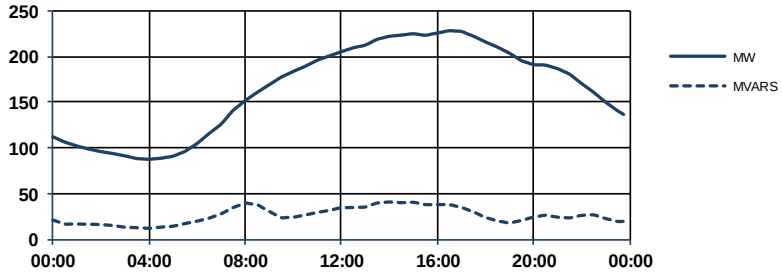
SVTS1266: Springvale Terminal Station buses 1&2 66 kV bus

Summer Demand

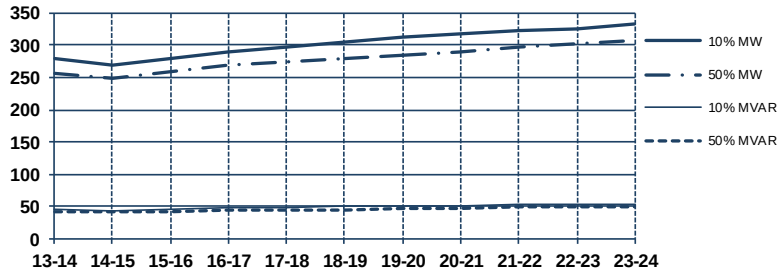
2012-13 MD	MW	MVAR
12 Mar 2013 15:30	228.2	40.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	279.3	46.0	255.3	42.1
14-15	269.0	44.3	248.1	40.9
15-16	280.0	46.1	258.5	42.6
16-17	289.6	47.7	268.4	44.2
17-18	296.6	48.9	272.8	44.9
18-19	304.1	50.1	278.2	45.8
19-20	311.4	51.3	283.8	46.8
20-21	316.9	52.2	289.8	47.7
21-22	321.6	53.0	295.8	48.7
22-23	325.9	53.7	301.8	49.7
23-24	332.3	54.8	307.4	50.7

Load Curve on High Demand Day



Forecast

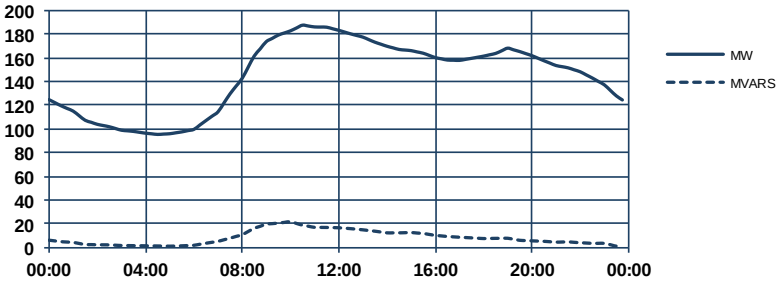


Winter Demand

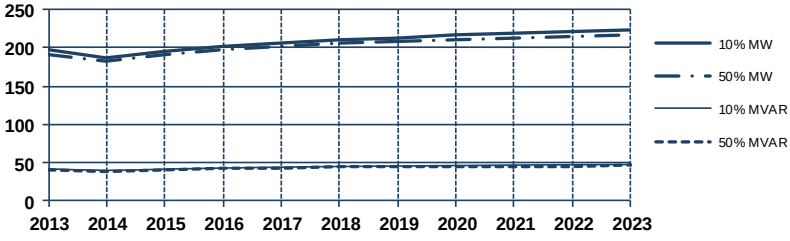
2012 MD	MW	MVAR
25 May 2012 12:00	187.5	21.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	197.0	42.2	192.1	41.2
2014	187.7	40.2	182.8	39.1
2015	195.1	41.8	190.3	40.8
2016	201.6	43.2	197.0	42.2
2017	207.1	44.4	202.7	43.4
2018	211.2	45.2	206.4	44.2
2019	213.7	45.8	208.5	44.7
2020	216.9	46.5	211.3	45.3
2021	219.7	47.1	213.7	45.8
2022	221.8	47.5	215.4	46.1
2023	223.4	47.9	216.6	46.4

Load Curve on High Demand Day



Forecast



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

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

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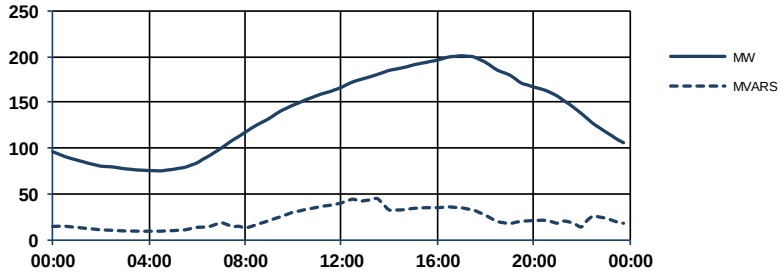
SVTS3466: Springvale Terminal Station buses 3&4 66 kV bus

Summer Demand

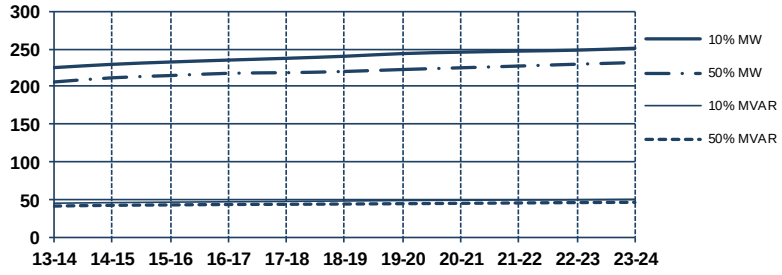
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	201.0	44.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	225.1	45.4	206.1	41.6
14-15	229.5	46.2	211.6	42.6
15-16	232.5	46.8	214.6	43.1
16-17	235.1	47.3	217.6	43.7
17-18	237.5	47.8	218.4	44.0
18-19	240.2	48.4	220.0	44.4
19-20	243.7	49.0	222.6	44.8
20-21	245.6	49.4	224.9	45.3
21-22	247.0	49.7	227.2	45.8
22-23	248.3	50.0	229.7	46.3
23-24	250.8	50.5	231.8	46.6

Load Curve on High Demand Day



Forecast

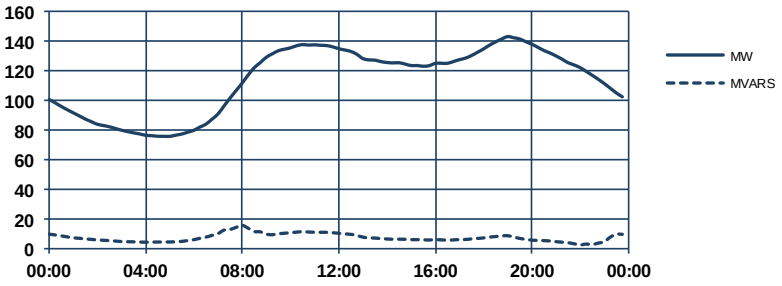


Winter Demand

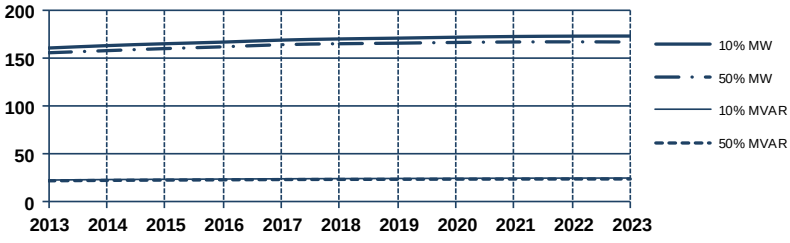
2012 MD	MW	MVAR
09 Aug 2012 18:30	142.8	15.5

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	161.0	23.2	156.0	22.4
2014	163.5	23.7	158.2	22.8
2015	165.5	24.0	160.4	23.1
2016	167.1	24.2	162.2	23.4
2017	169.2	24.5	164.5	23.7
2018	170.5	24.7	165.5	23.9
2019	171.3	24.9	166.0	24.0
2020	172.3	25.0	166.8	24.1
2021	173.0	25.2	167.3	24.2
2022	173.4	25.2	167.4	24.3
2023	173.5	25.3	167.3	24.3

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.

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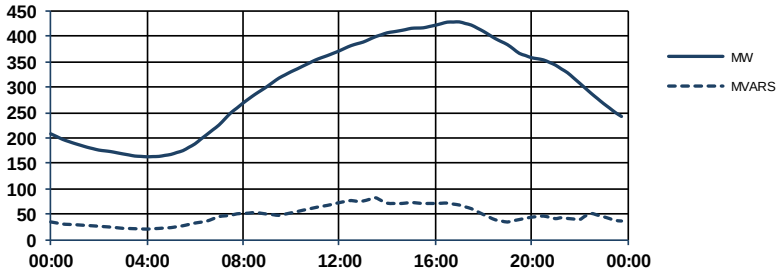
SVTS66: Springvale Terminal Station 66 kV bus

Summer Demand

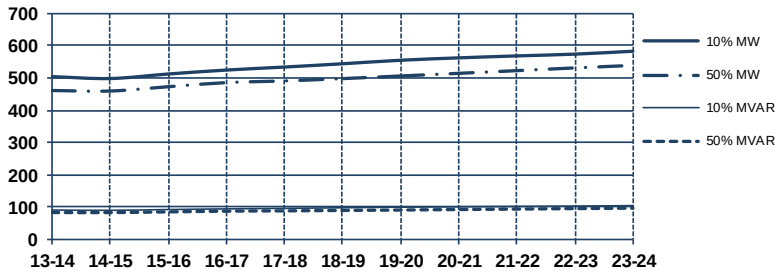
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	428.4	82.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	503.6	91.0	460.6	83.3
14-15	497.8	90.2	459.0	83.2
15-16	511.7	92.6	472.4	85.4
16-17	523.9	94.6	485.2	87.6
17-18	533.2	96.3	490.4	88.5
18-19	543.4	98.0	497.4	89.8
19-20	554.2	99.8	505.6	91.1
20-21	561.6	101.1	513.8	92.6
21-22	567.7	102.2	522.1	94.0
22-23	573.2	103.2	530.6	95.5
23-24	582.1	104.8	538.3	96.8

Load Curve on High Demand Day



Forecast

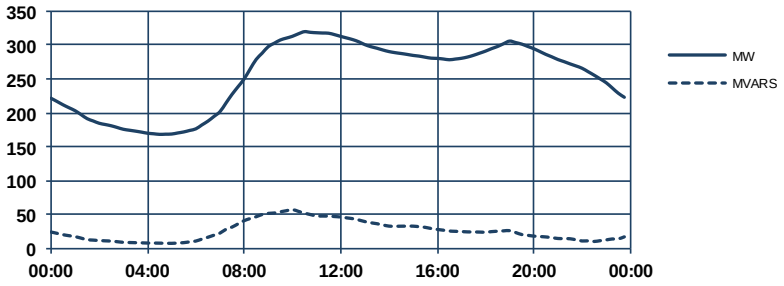


Winter Demand

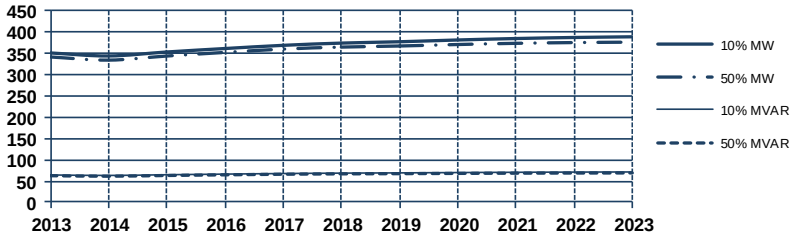
2012 MD	MW	MVAR
27 Jun 2012 09:30	319.6	57.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	350.7	64.2	341.2	62.4
2014	343.6	63.0	333.8	61.2
2015	352.9	64.7	343.4	62.9
2016	361.0	66.2	351.9	64.4
2017	368.5	67.5	359.7	65.9
2018	373.8	68.5	364.4	66.7
2019	376.9	69.1	366.9	67.2
2020	381.1	69.8	370.4	67.8
2021	384.5	70.5	373.2	68.3
2022	386.9	70.9	375.0	68.7
2023	388.6	71.2	376.0	68.9

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.

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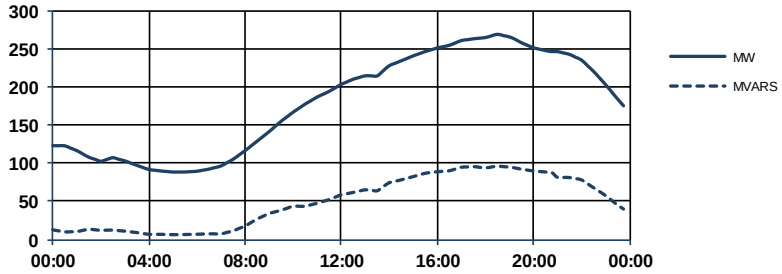
TBTS66: Tyabb Terminal Station 66 kV bus

Summer Demand

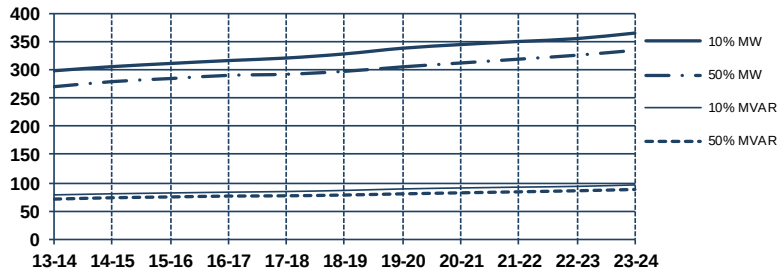
2012-13 MD	MW	MVAR
04 Jan 2013 17:30	269.3	96.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	298.1	78.8	270.0	71.4
14-15	305.4	80.7	279.0	73.7
15-16	311.0	82.2	284.4	75.2
16-17	316.2	83.6	290.0	76.7
17-18	320.6	84.8	291.9	77.2
18-19	328.0	86.7	297.1	78.5
19-20	338.0	89.3	305.0	80.6
20-21	344.4	91.1	311.9	82.4
21-22	349.9	92.5	318.6	84.2
22-23	355.0	93.8	325.6	86.1
23-24	364.7	96.4	334.3	88.4

Load Curve on High Demand Day



Forecast

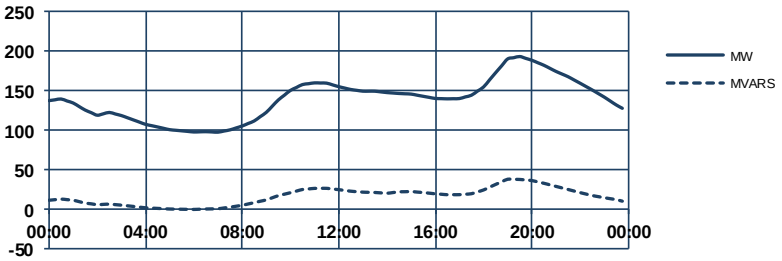


Winter Demand

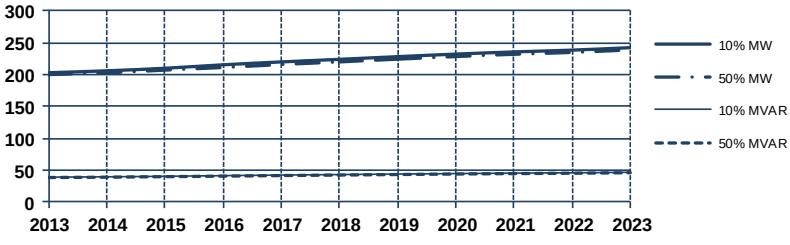
2012 MD	MW	MVAR
11 Jun 2012 18:30	192.5	37.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	202.8	39.3	199.9	38.8
2014	205.8	39.9	202.6	39.3
2015	209.8	40.7	206.9	40.1
2016	215.2	41.7	211.0	40.9
2017	219.7	42.6	215.6	41.8
2018	223.8	43.4	219.7	42.6
2019	228.0	44.2	224.0	43.5
2020	231.9	45.0	228.1	44.2
2021	235.4	45.7	231.7	44.9
2022	238.2	46.2	234.6	45.5
2023	242.0	46.9	238.5	46.3

Load Curve on High Demand Day



Forecast



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

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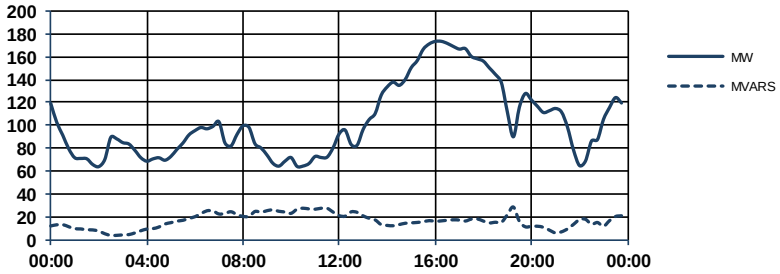
TGTS66: Terang Terminal Station 66 kV bus

Summer Demand

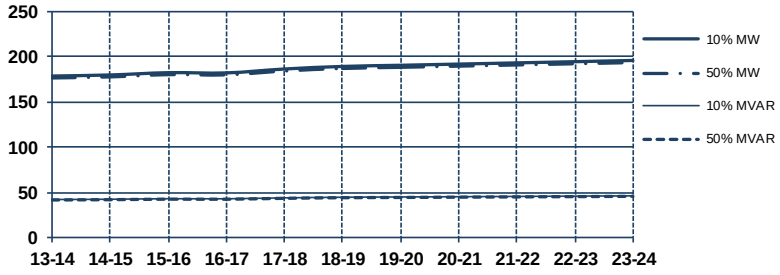
2012-13 MD	MW	MVAR
29 Nov 2012 16:30	173.4	28.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	178.3	41.9	176.2	41.4
14-15	179.5	42.2	177.4	41.7
15-16	182.0	42.8	179.9	42.3
16-17	181.8	42.8	179.6	42.3
17-18	186.1	43.8	183.9	43.3
18-19	188.9	44.4	186.7	43.9
19-20	190.2	44.7	188.0	44.2
20-21	191.5	45.1	189.2	44.5
21-22	192.8	45.4	190.5	44.8
22-23	194.2	45.7	191.9	45.1
23-24	195.5	46.0	193.2	45.4

Load Curve on High Demand Day



Forecast

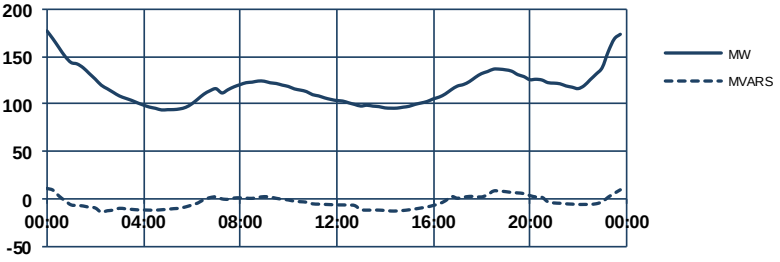


Winter Demand

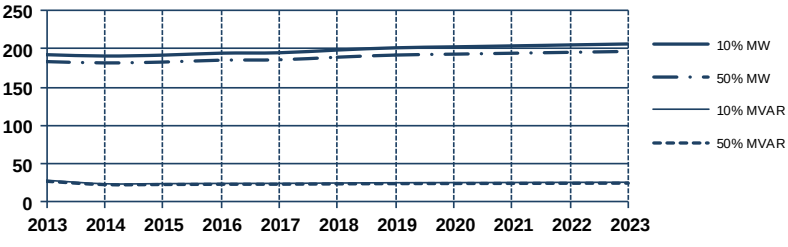
2012 MD	MW	MVAR
15 Sep 2012 00:00	177.0	11.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	192.5	28.7	183.5	27.4
2014	190.8	24.2	181.8	23.0
2015	191.9	24.3	182.9	23.2
2016	194.5	24.6	185.4	23.5
2017	195.0	24.7	185.9	23.5
2018	198.6	25.1	189.3	24.0
2019	201.5	25.5	192.1	24.3
2020	202.8	25.7	193.2	24.5
2021	204.0	25.8	194.4	24.6
2022	205.3	26.0	195.6	24.8
2023	206.5	26.2	196.8	24.9

Load Curve on High Demand Day



Forecast



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

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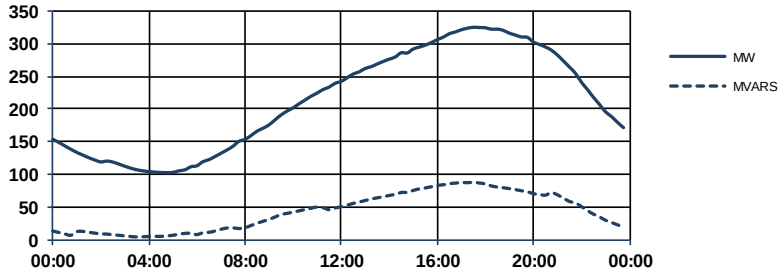
TSTS66: Templestowe Terminal Station 66 kV bus

Summer Demand

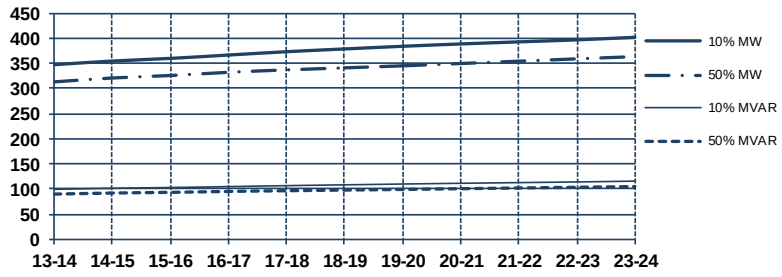
2012-13 MD	MW	MVAR
12 Mar 2013 17:00	324.9	87.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	347.5	99.7	313.3	90.2
14-15	354.7	101.7	321.0	92.3
15-16	360.0	103.3	326.0	93.7
16-17	366.6	105.1	332.3	95.5
17-18	373.3	107.0	337.1	96.9
18-19	378.8	108.6	341.2	98.2
19-20	384.1	110.3	345.3	99.5
20-21	388.7	111.7	349.8	100.9
21-22	392.9	113.1	354.4	102.4
22-23	396.8	114.4	359.1	103.8
23-24	401.9	116.0	363.5	105.2

Load Curve on High Demand Day



Forecast

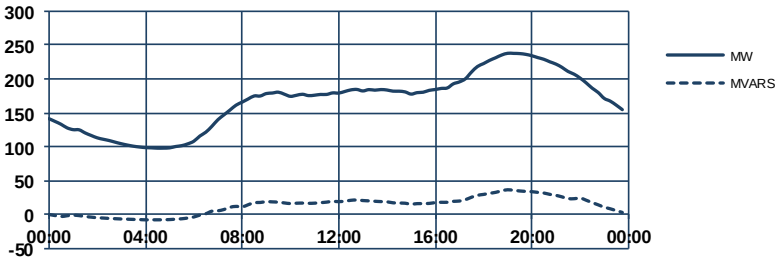


Winter Demand

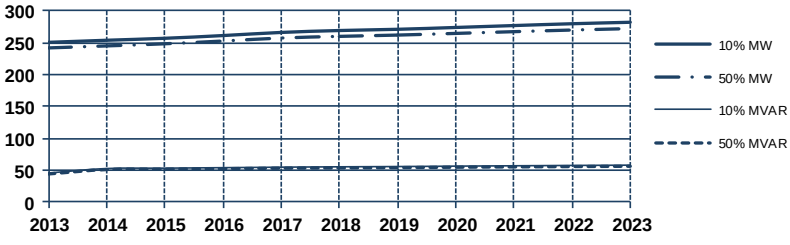
2012 MD	MW	MVAR
20 Jun 2012 18:30	237.7	36.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	250.4	45.8	241.6	44.3
2014	253.6	52.8	244.8	51.2
2015	256.7	53.4	248.1	51.8
2016	261.0	54.2	252.4	52.6
2017	265.9	55.0	257.1	53.4
2018	268.8	55.5	259.7	53.9
2019	270.8	55.9	261.7	54.3
2020	273.6	56.6	264.3	54.9
2021	276.6	57.1	267.0	55.4
2022	279.5	57.7	269.6	55.9
2023	281.8	58.1	271.9	56.4

Load Curve on High Demand Day



Forecast



Notes:

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

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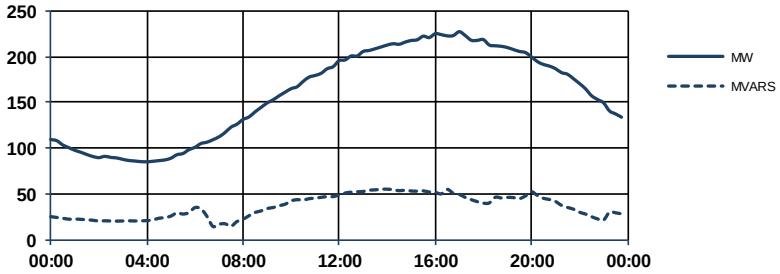
TTS1266: Thomastown Terminal Station 1&2 66 kV bus

Summer Demand

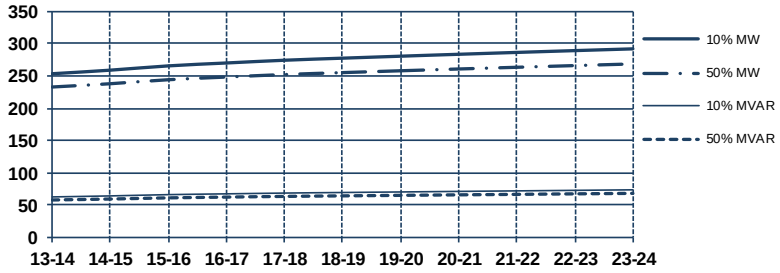
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	227.3	55.0

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	253.2	62.7	232.6	58.0
14-15	258.7	64.3	237.7	59.5
15-16	265.3	66.2	243.9	61.3
16-17	269.8	67.5	248.0	62.4
17-18	274.0	68.7	252.0	63.5
18-19	277.2	69.5	254.9	64.4
19-20	280.3	70.4	257.8	65.2
20-21	283.3	71.2	260.5	65.9
21-22	286.1	72.1	263.2	66.7
22-23	288.9	72.9	265.8	67.5
23-24	291.7	73.7	268.3	68.2

Load Curve on High Demand Day



Forecast

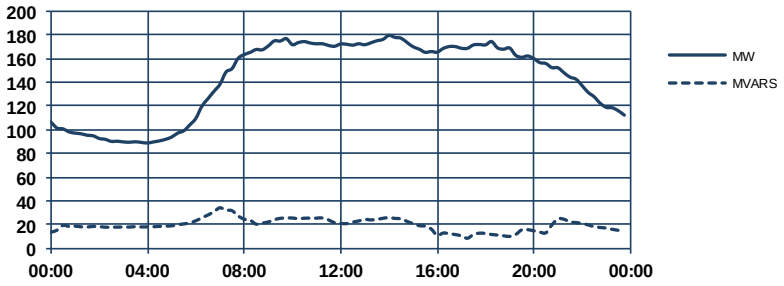


Winter Demand

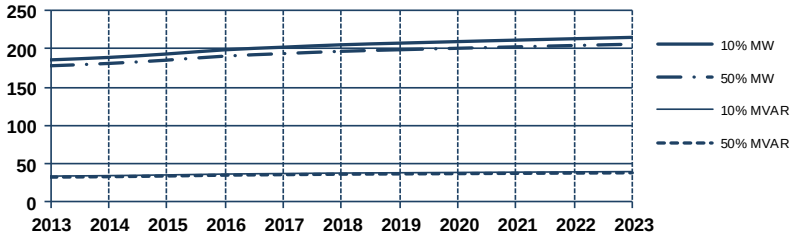
2012 MD	MW	MVAR
08 Aug 2012 14:00	179.5	34.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	185.7	34.2	178.1	32.8
2014	188.9	34.8	181.1	33.4
2015	193.5	35.7	185.4	34.3
2016	198.9	36.8	190.7	35.3
2017	202.3	37.5	193.9	36.0
2018	205.4	38.1	196.9	36.6
2019	207.6	38.5	199.0	37.0
2020	209.6	38.9	200.9	37.4
2021	211.5	39.3	202.8	37.7
2022	213.4	39.7	204.5	38.1
2023	215.1	40.0	206.2	38.4

Load Curve on High Demand Day



Forecast



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

This is the demand on buses 1 and 2, separated out for planning purposes.

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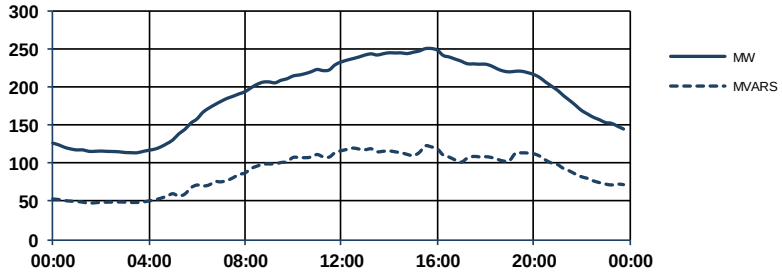
TTS3466: Thomastown Terminal Station 3&4 66 kV bus

Summer Demand

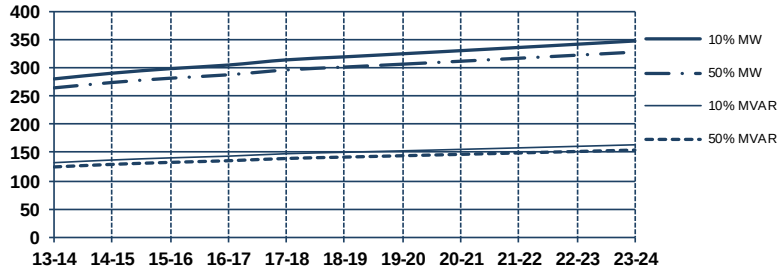
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	250.7	122.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	280.2	132.2	264.4	124.7
14-15	290.3	136.9	273.9	129.2
15-16	298.3	140.7	281.4	132.7
16-17	304.7	143.7	287.5	135.6
17-18	313.9	148.0	296.1	139.7
18-19	319.2	150.6	301.1	142.0
19-20	324.6	153.1	306.2	144.4
20-21	330.1	155.7	311.5	146.9
21-22	335.8	158.4	316.7	149.4
22-23	341.5	161.1	322.1	151.9
23-24	347.3	163.8	327.6	154.5

Load Curve on High Demand Day



Forecast

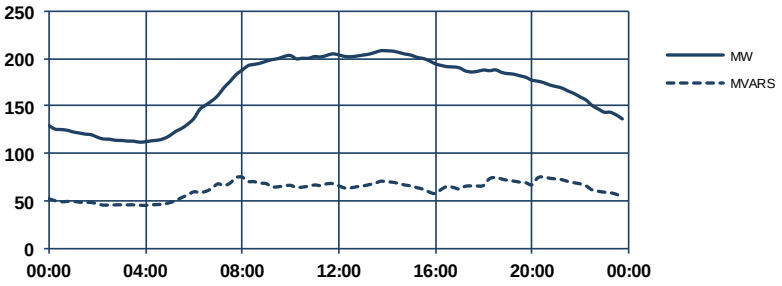


Winter Demand

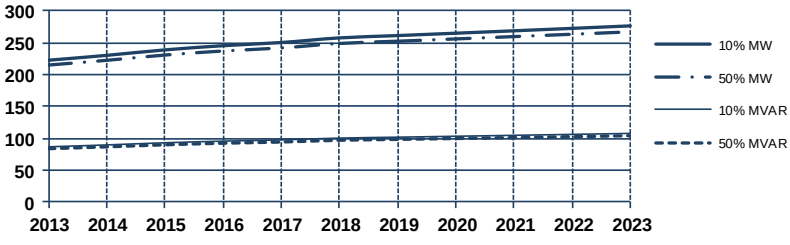
2012 MD	MW	MVAR
08 Aug 2012 14:00	208.3	75.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	222.3	86.8	214.8	83.9
2014	229.9	89.8	222.2	86.8
2015	238.5	93.1	230.4	90.0
2016	245.1	95.7	236.8	92.5
2017	250.1	97.6	241.6	94.3
2018	257.3	100.5	248.6	97.1
2019	260.9	101.9	252.1	98.4
2020	264.7	103.3	255.7	99.8
2021	268.4	104.8	259.3	101.3
2022	272.2	106.3	263.0	102.7
2023	276.1	107.8	266.8	104.2

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.

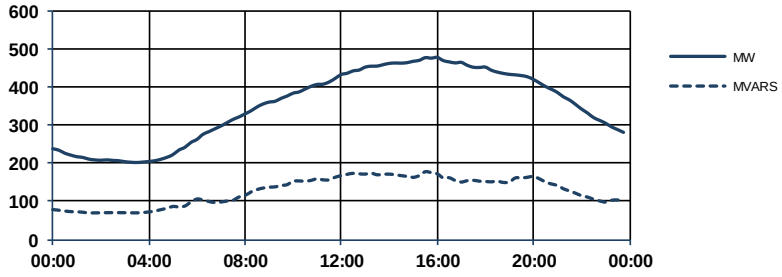
TTS66: Thomastown Terminal Station 66 kV bus

Summer Demand

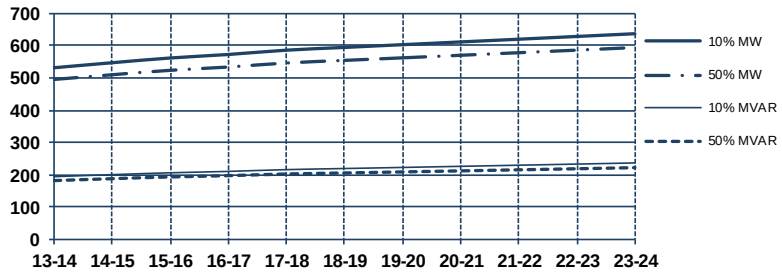
2012-13 MD	MW	MVAR
12 Mar 2013 16:00	477.9	177.7

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	531.1	194.3	494.9	182.1
14-15	546.6	200.6	509.5	188.0
15-16	561.3	206.3	523.2	193.4
16-17	572.1	210.5	533.3	197.4
17-18	585.4	216.0	545.8	202.6
18-19	593.9	219.4	553.8	205.7
19-20	602.4	222.8	561.7	208.9
20-21	610.9	226.2	569.7	212.2
21-22	619.3	229.7	577.6	215.4
22-23	627.8	233.2	585.6	218.7
23-24	636.3	236.7	593.6	222.0

Load Curve on High Demand Day



Forecast

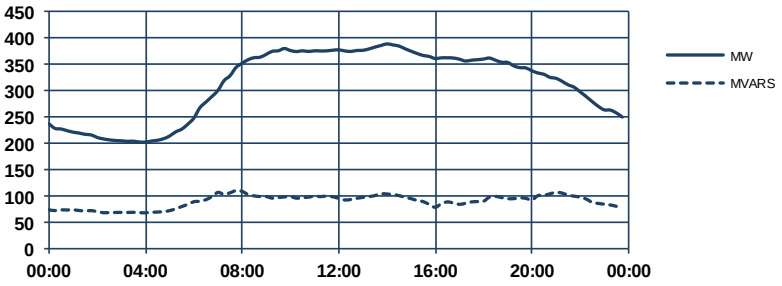


Winter Demand

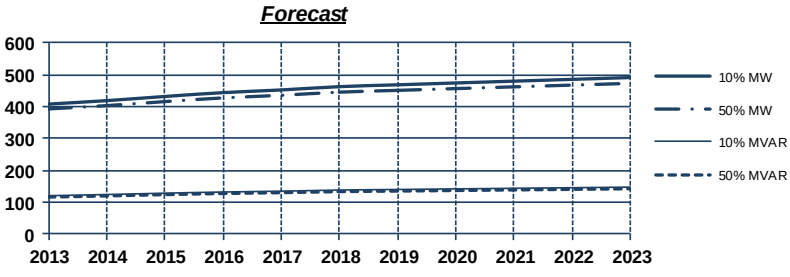
2012 MD	MW	MVAR
08 Aug 2012 14:00	387.7	109.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	407.6	120.9	392.4	116.6
2014	418.4	124.5	402.8	120.0
2015	431.4	128.7	415.4	124.1
2016	443.4	132.4	426.9	127.7
2017	451.8	135.0	435.0	130.2
2018	462.2	138.5	445.0	133.6
2019	467.9	140.3	450.5	135.3
2020	473.7	142.2	456.1	137.1
2021	479.4	144.0	461.6	138.9
2022	485.0	145.9	467.0	140.7
2023	490.6	147.7	472.4	142.5

Load Curve on High Demand Day



Forecast



Notes:

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

Please see the comments for TTS12 and TTS34

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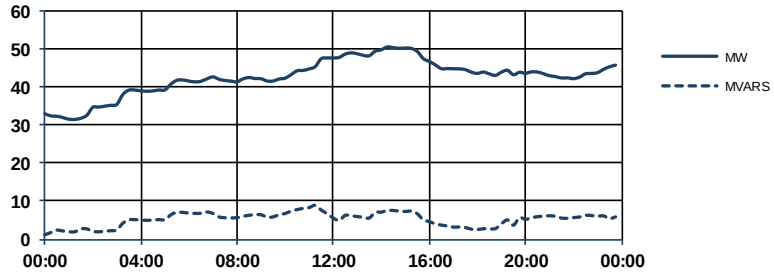
WETS66: Wemen Terminal Station 66 kV bus

Summer Demand

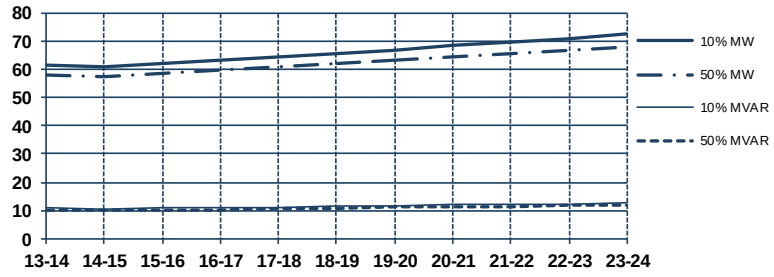
2012-13 MD	MW	MVAR
08 Jan 2013 14:30	50.5	8.9

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	61.4	10.8	57.8	10.2
14-15	60.7	10.7	57.1	10.0
15-16	62.0	10.9	58.4	10.3
16-17	63.2	11.1	59.5	10.5
17-18	64.4	11.3	60.6	10.7
18-19	65.7	11.6	61.8	10.9
19-20	66.9	11.8	63.0	11.1
20-21	68.2	12.0	64.2	11.3
21-22	69.6	12.2	65.4	11.5
22-23	70.9	12.5	66.7	11.7
23-24	72.3	12.7	68.0	12.0

Load Curve on High Demand Day



Forecast

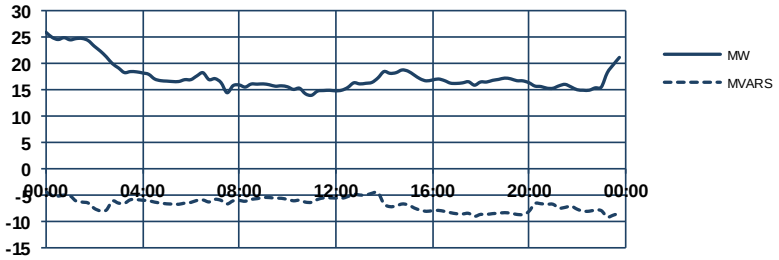


Winter Demand

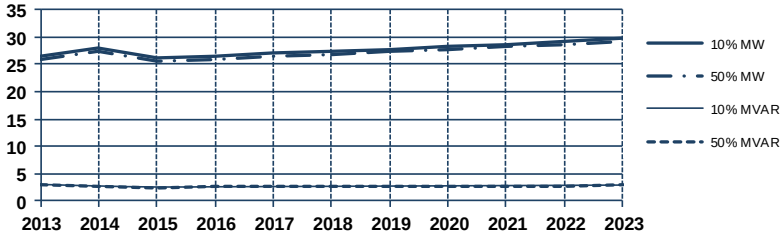
2012 MD	MW	MVAR
13 Sep 2012 00:00	25.8	-4.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	26.5	3.1	26.0	3.0
2014	28.0	2.8	27.4	2.7
2015	26.1	2.6	25.6	2.5
2016	26.5	2.6	26.0	2.6
2017	26.9	2.7	26.4	2.6
2018	27.4	2.7	26.8	2.7
2019	27.8	2.8	27.3	2.7
2020	28.3	2.8	27.7	2.7
2021	28.7	2.8	28.2	2.8
2022	29.2	2.9	28.6	2.8
2023	29.7	2.9	29.1	2.9

Load Curve on High Demand Day



Forecast



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

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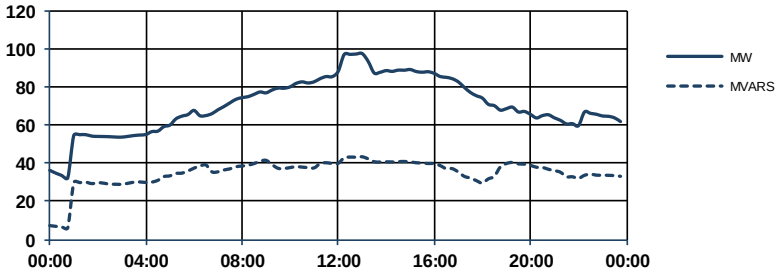
WMTS22: West Melbourne Terminal Station 22 kV bus

Summer Demand

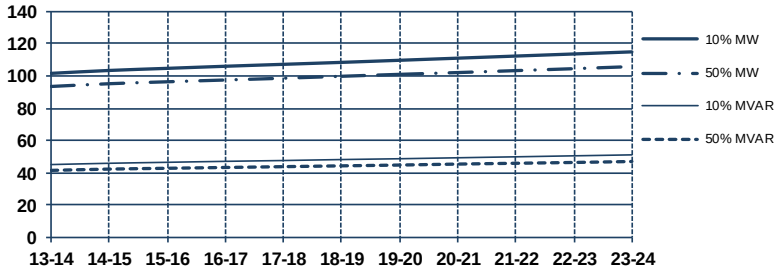
2012-13 MD	MW	MVAR
12 Mar 2013 13:00	97.6	43.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	101.5	45.1	93.4	41.5
14-15	103.3	45.9	95.1	42.3
15-16	104.6	46.5	96.3	42.8
16-17	105.9	47.1	97.4	43.3
17-18	107.1	47.6	98.5	43.8
18-19	108.3	48.2	99.7	44.3
19-20	109.6	48.7	100.9	44.8
20-21	110.9	49.3	102.0	45.4
21-22	112.2	49.9	103.2	45.9
22-23	113.5	50.5	104.4	46.4
23-24	114.8	51.1	105.7	47.0

Load Curve on High Demand Day



Forecast

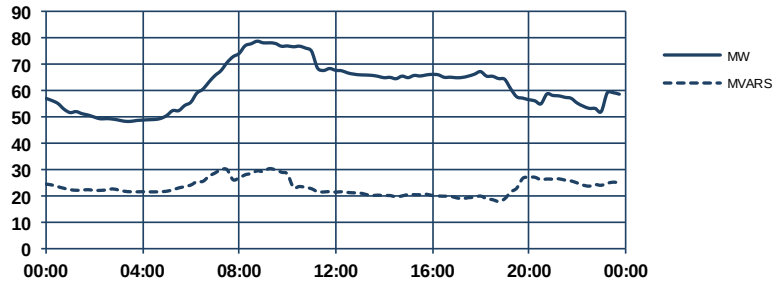


Winter Demand

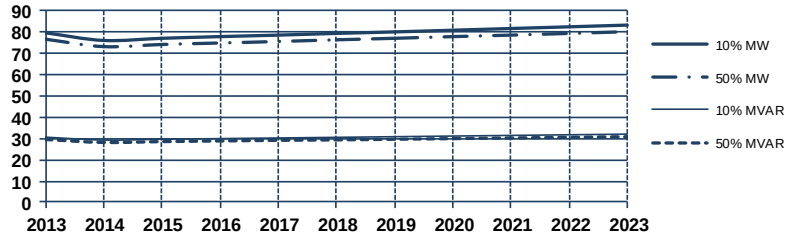
2012 MD	MW	MVAR
02 Aug 2012 09:00	78.6	30.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	79.6	30.6	76.6	29.5
2014	76.0	29.2	73.1	28.1
2015	77.0	29.6	74.1	28.5
2016	77.8	29.9	74.8	28.8
2017	78.5	30.2	75.5	29.1
2018	79.3	30.5	76.3	29.3
2019	80.0	30.8	77.0	29.6
2020	80.8	31.1	77.8	29.9
2021	81.6	31.4	78.5	30.2
2022	82.4	31.7	79.3	30.5
2023	83.2	32.0	80.1	30.8

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 WMTS.

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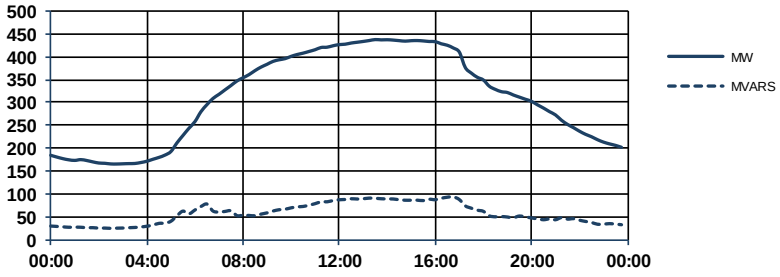
WMTS66: West Melbourne Terminal Station 66 kV bus

Summer Demand

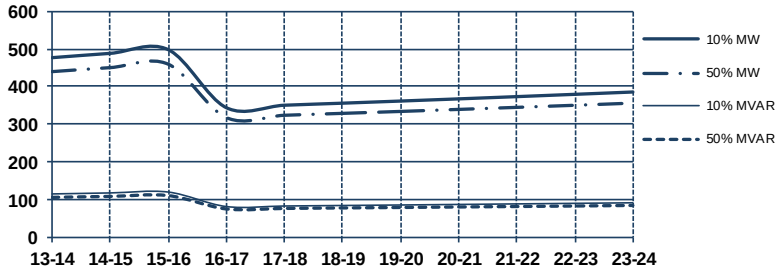
2012-13 MD	MW	MVAR
12 Mar 2013 14:00	437.3	93.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	476.6	115.4	439.7	106.4
14-15	488.0	118.1	450.2	108.9
15-16	497.8	120.4	459.3	111.1
16-17	344.0	82.0	317.8	75.6
17-18	350.6	83.4	323.9	77.1
18-19	356.0	84.8	329.0	78.3
19-20	361.6	86.1	334.1	79.5
20-21	367.4	87.6	339.5	80.9
21-22	373.4	89.0	344.9	82.1
22-23	379.4	90.5	350.5	83.5
23-24	385.6	91.9	356.2	84.9

Load Curve on High Demand Day



Forecast

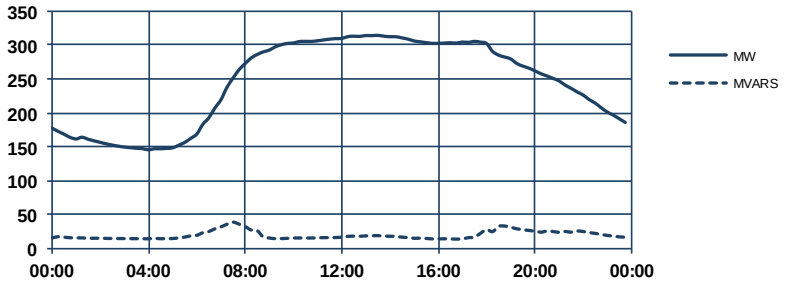


Winter Demand

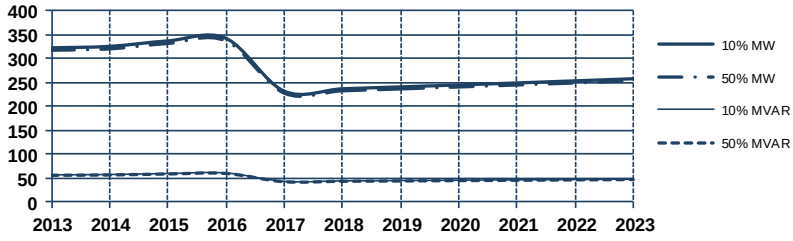
2012 MD	MW	MVAR
21 Jun 2012 13:30	314.2	38.6

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	322.4	57.3	317.3	56.3
2014	325.4	58.0	320.1	57.0
2015	336.8	60.1	331.4	59.0
2016	342.3	61.2	336.8	60.2
2017	232.0	43.7	228.0	43.0
2018	236.8	44.7	232.7	43.9
2019	240.9	45.4	236.7	44.5
2020	244.9	46.1	240.7	45.2
2021	249.1	46.9	244.9	46.0
2022	253.4	47.6	249.1	46.7
2023	257.8	48.4	253.4	47.5

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.

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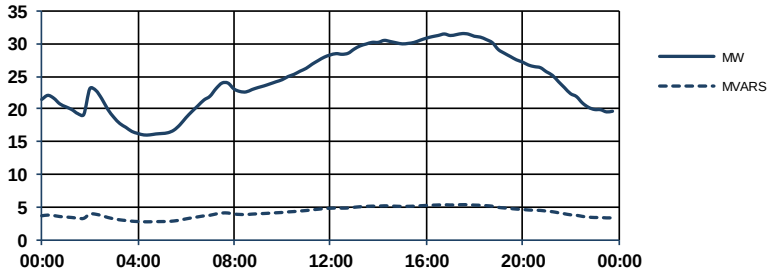
WOTS22: Wodonga Terminal Station 22 kV bus

Summer Demand

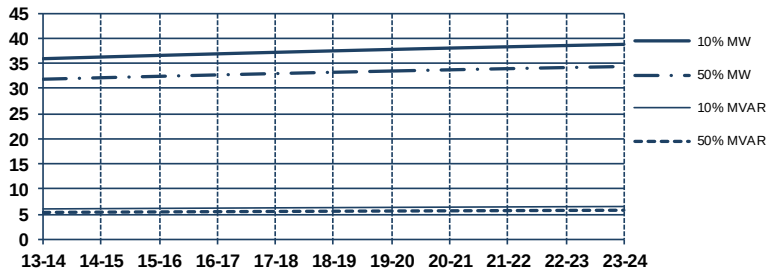
2012-13 MD	MW	MVAR
07 Jan 2013 17:00	31.5	5.3

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	35.9	6.1	31.9	5.4
14-15	36.3	6.1	32.2	5.4
15-16	36.6	6.2	32.4	5.5
16-17	36.9	6.2	32.7	5.5
17-18	37.2	6.3	33.0	5.6
18-19	37.5	6.3	33.2	5.6
19-20	37.8	6.4	33.5	5.7
20-21	38.1	6.4	33.7	5.7
21-22	38.3	6.5	34.0	5.7
22-23	38.6	6.5	34.2	5.8
23-24	38.8	6.6	34.4	5.8

Load Curve on High Demand Day



Forecast

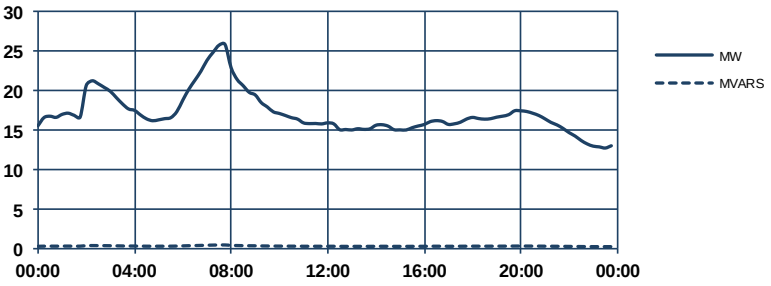


Winter Demand

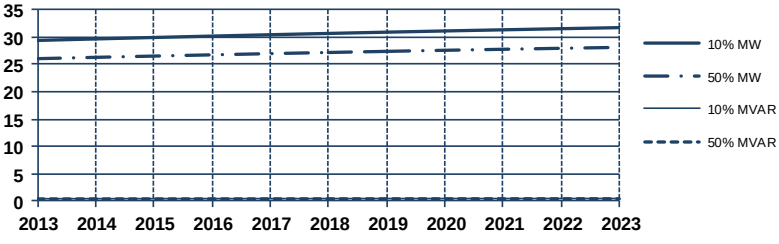
2012 MD	MW	MVAR
31 Jul 2012 08:00	25.8	0.4

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	29.4	0.5	26.0	0.4
2014	29.6	0.5	26.3	0.4
2015	29.9	0.5	26.5	0.4
2016	30.2	0.5	26.7	0.4
2017	30.4	0.5	27.0	0.4
2018	30.7	0.5	27.2	0.4
2019	30.9	0.5	27.4	0.4
2020	31.1	0.5	27.6	0.5
2021	31.3	0.5	27.8	0.5
2022	31.5	0.5	27.9	0.5
2023	31.7	0.5	28.1	0.5

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 WOTS.

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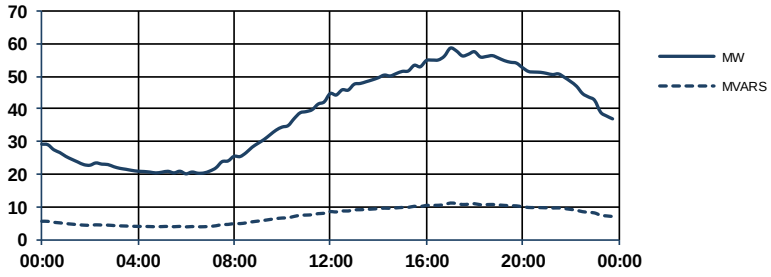
WOTS66: Wodonga Terminal Station 66 kV bus

Summer Demand

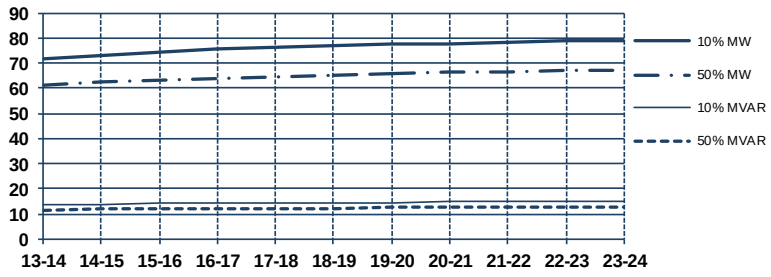
2012-13 MD	MW	MVAR
07 Jan 2013 18:00	58.6	11.1

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	71.9	13.6	61.2	11.6
14-15	73.3	13.9	62.4	11.8
15-16	74.5	14.1	63.4	12.0
16-17	75.4	14.3	64.1	12.2
17-18	76.2	14.5	64.8	12.3
18-19	76.9	14.6	65.3	12.4
19-20	77.4	14.7	65.8	12.5
20-21	78.0	14.8	66.3	12.6
21-22	78.4	14.9	66.6	12.6
22-23	78.7	14.9	66.9	12.7
23-24	79.0	15.0	67.2	12.7

Load Curve on High Demand Day



Forecast

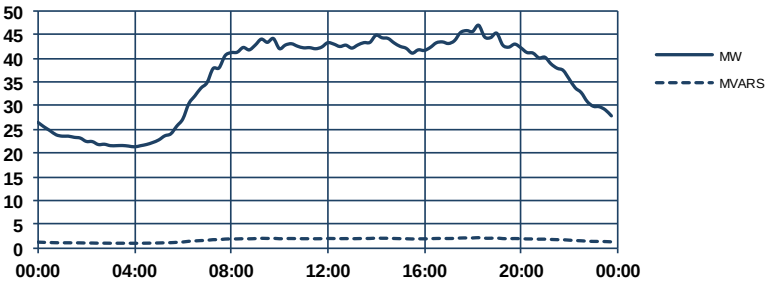


Winter Demand

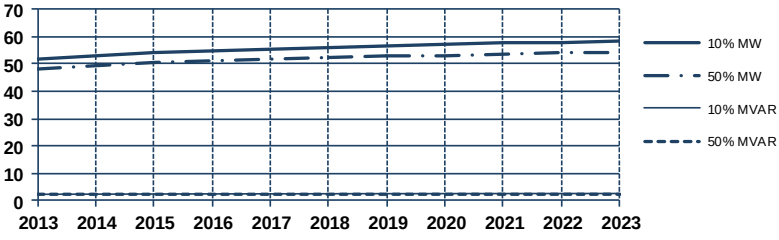
2012 MD	MW	MVAR
06 Aug 2012 18:30	47.0	2.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	51.5	2.4	48.1	2.2
2014	52.8	2.4	49.2	2.3
2015	53.9	2.5	50.3	2.3
2016	54.8	2.5	51.1	2.4
2017	55.5	2.6	51.8	2.4
2018	56.1	2.6	52.3	2.4
2019	56.7	2.6	52.8	2.4
2020	57.1	2.6	53.2	2.5
2021	57.5	2.7	53.6	2.5
2022	57.8	2.7	53.9	2.5
2023	58.1	2.7	54.1	2.5

Load Curve on High Demand Day



Forecast



Notes:

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

Hume Power Station is assumed to be switched off at the time of maximum demand for forecasts and is not netted off actual previous year summer and winter generation.

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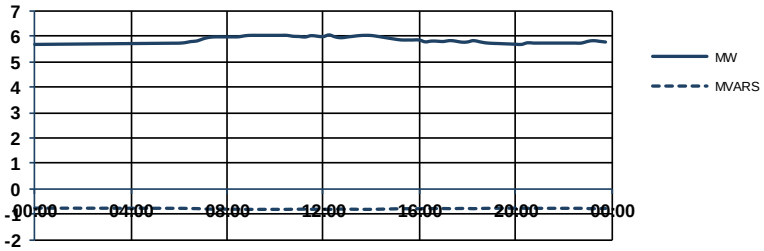
YPS11: Yallourn PS Terminal Station 11 kV bus

Summer Demand

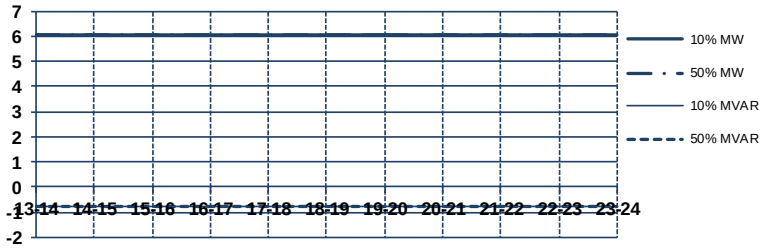
2012-13 MD	MW	MVAR
12 Nov 2012 13:00	6.1	-0.8

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
13-14	6.1	-0.8	6.1	-0.8
14-15	6.1	-0.8	6.1	-0.8
15-16	6.1	-0.8	6.1	-0.8
16-17	6.1	-0.8	6.1	-0.8
17-18	6.1	-0.8	6.1	-0.8
18-19	6.1	-0.8	6.1	-0.8
19-20	6.1	-0.8	6.1	-0.8
20-21	6.1	-0.8	6.1	-0.8
21-22	6.1	-0.8	6.1	-0.8
22-23	6.1	-0.8	6.1	-0.8
23-24	6.1	-0.8	6.1	-0.8

Load Curve on High Demand Day



Forecast

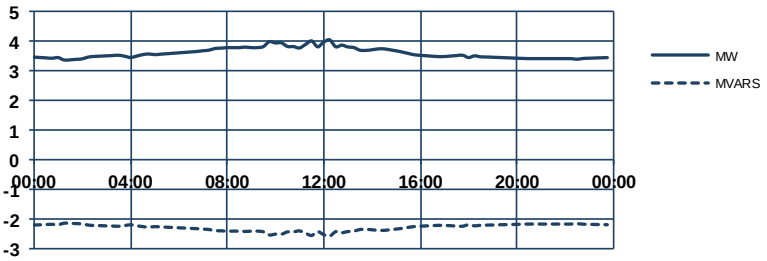


Winter Demand

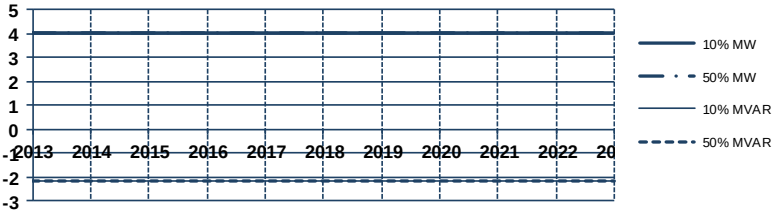
2012 MD	MW	MVAR
15 Aug 2012 10:00	4.0	-2.2

	10% POE		50% POE	
Year	MW	MVAR	MW	MVAR
2013	4.0	-2.2	4.0	-2.2
2014	4.0	-2.2	4.0	-2.2
2015	4.0	-2.2	4.0	-2.2
2016	4.0	-2.2	4.0	-2.2
2017	4.0	-2.2	4.0	-2.2
2018	4.0	-2.2	4.0	-2.2
2019	4.0	-2.2	4.0	-2.2
2020	4.0	-2.2	4.0	-2.2
2021	4.0	-2.2	4.0	-2.2
2022	4.0	-2.2	4.0	-2.2
2023	4.0	-2.2	4.0	-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). Where relevant, methodology details for specific terminal stations are provided with the terminal station data in Chapter 2.

The demand 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. These forecasts are not explicitly developed by AEMO.

3.1 Date ranges and times

Summer 2012–13 refers to the period 1 November 2012 to 30 April 2013.

Winter 2012 refers to the period 1 May 2012 to 31 October 2012.

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 Australian Eastern Standard Time (EST). Daylight Saving Time is not used.

3.2 Embedded generation

The actual demands shown for summer 2012-13 and winter 2012 at a point of connection represents 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.

The forecasts assume that relatively large embedded generators will be modelled separately, and they are assumed to be switched off at times 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 in the forecasts. 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	Entire	66	Boral Tip Cogen off LV ZSS	Daily	4.025	4.22
ATS	Entire	66	Wyndham Tip Cogen off WBE ZSS	Sporadic	0.58	0

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Location	Location type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
ATS	Entire	66	Werribee Treatment Plant	Daily. Rarely generates on max demand (MD) day	4.04	2.99
ATS_BLTS	Hybrid	66	Brooklyn Landfill	Daily	0	0
ATS_WEST	Hybrid	66	Boral Tip Cogen off LV ZSS	Daily	4.03	4.22
ATS_WEST	Hybrid	66	Wyndham Tip Cogen off WBE ZSS	Sporadic	0.58	0
ATS_WEST	Hybrid	66	Werribee Treatment Plant	Daily. Rarely generates on MD day	4.04	2.99
BATS	Entire	66	Challicum Hills wind farm	Wind daily	3.66	0.68
BATS	Entire	66	Leonards Hills Wind Farm	Wind daily	0.32	1.39
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	3.80	3.80
ERTS	Entire	66	Hallam Tip	Daily	6.60	6.60
ERTS	Entire	66	Dandenong Hospital (likely to have 5 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
ERTS	Entire	66	Dandenong PEP (likely to have 2 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
ERTS34	Split bus	66	Dandenong Hospital (likely to have 5 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
ERTS34	Split bus	66	Dandenong PEP (likely to have 2 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
FBTS	Entire	66	Crown Casino	Not available	3.90	3.70
FBTS	Entire	66	ANZ	Not available	0	0.55
FBTS	Entire	66	Next DC Drups	Not available	0	0
FBTS	Entire	66	AGL	Not available	0	3.70
GNTS	Entire	66	Lake William Hovell	Seasonal	0.30	1.60
GTS	Entire	66	Corio Tip Cogen	Not available	0.52	0
GTS	Entire	66	Geelong Hospital export	Not available	3.46	0
GTS	Entire	66	Shell Refinery	Not available	0	0
HOTS	Entire	66	Challicum Hills Wind Farm	Wind dependant	1.66	1.44
HOTS	Entire	66	Leonards Hills Wind Farm	Wind dependant	0.20	0.13

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Location	Location type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
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	21	21
MWTS	Entire	66	Wonthaggi Wind Farm	Wind related	12	12
MWTS	Entire	66	Traralgon Power Station	Market/Network Support	10	5
RTS	Entire	66	St Vincent Hospital	Not available	4.50	0
RTS	Entire	66	Alfred Hospital	Not available	5.70	5.70
RTS12	Split bus	66	St Vincent Hospital	Not available	4.50	0
RTS34	Split bus	66	Alfred Hospital	Not available	5.70	5.70
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	1.80	1.80
SHTS	Entire	66	Lake Mulwala Hydro	Daily	5.78	3
SHTS	Entire	66	Shepparton Wastewater	Daily	0.36	0.19
SHTS	Entire	66	Cosgrove Landfill	Daily	0.13	0.16
SHTS	Entire	66	Diamond Energy	Daily	0	0
SMTS	Entire	66	Wollert Tip	Daily	4.40	4.40
SMTS	Entire	66	Eildon Pondage	Seasonal	3.80	0
SMTS	Entire	66	Somerton Power Station	Market driven	0	0
SVTS	Entire	66	Clayton Landfill (likely to have 5 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
SVTS	Entire	66	Springvale Landfill (likely to have 2 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
SVTS12	Split bus	66	Clayton Landfill (likely to have 5 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
SVTS12	Split bus	66	Springvale Landfill (likely to have 2 MW generation during peak demand)	7 AM to 11 PM, Mon to Fri	0	0
TGTS	Entire	66	Codrington Wind Farm	Wind daily	0	0.29
TGTS	Entire	66	Yambuk Wind Farm	Wind daily	0	0.59
TGTS	Entire	66	Mortons Lane Wind Farm	Wind daily	1.37	0
TGTS	Entire	66	Oaklands Wind Farm	Wind daily	2.53	0
TTS12	Split bus	66	Austin Hospital	Not operating	0	0

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Location	Location type	Voltage (kV)	Generator	Operating characteristics	Summer forecast load offset (MW)	Winter forecast load offset (MW)
TTS12	Split bus	66	APM Fairfield	Decommissioned in early 2013	-	-
TTS34	Split bus	66	Bolinda Landfill	Not available	0	0
TTS34	Split bus	66	Preston Mini Hydro	Not available	0	0
TTS34	Split bus	66	Visyboard	Not available	0	0
WMTS	Entire	22	Royal Melbourne Hospital	Not available	11.50	0
WMTS	Entire	22	Channel 7	Not available	0	0
WMTS	Entire	22	Royal Children Hospital (new generator)	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. 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) may not occur at the same time as the point of connection as a whole. AEMO refers to this as diversity between the participant MD and the point of connection MD. This diversity is represented by a "terminal station diversity factor", a number between zero and one.

AEMO calculates a terminal station diversity factor based on metered historical demand at the point of connection. This 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 MD at the same time. To obtain an aggregate demand forecast for Victoria as a whole, AEMO must allow for this diversity between points of connection.

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.

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CHAPTER 4 - VICTORIAN MAXIMUM DEMAND FORECASTS

This chapter reviews the aggregate total of the Terminal Station Demand Forecasts (TSDF), and compares it to AEMO's regional forecast for Victoria from the 2013 National Electricity Forecast Report (NEFR).[1]

4.1 NEFR forecast

AEMO publishes maximum demand (MD) forecasts for Victoria in the NEFR. 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.

Electricity demand forecasts from large industrial loads are obtained directly from large industrial customers and transmission network service providers (TNSPs) or distribution network service providers (DNSPs). For more information on the forecast and the methodology used, 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:

a) Multiplied each participant's points of connection demand forecasts by the relevant system diversity factor to produce terminal station demand forecasts for the time of system MD (see Chapter 3, Methodology).

b) Aggregated these system-diversified participant demand forecasts.

c) Ensured no double-counting, such as split bus groups within a single point of connection and Loy Yang Switching Station within Morwell Terminal Station.

d) Adjusted the overall forecast by adding forecast transmission losses and generator auxiliaries.

4.3 Summer MD

Figure 4-1 compares TSDF and NEFR summer MD forecasts at 10% POE and 50% POE.

Summer demand in the TSDF forecast exceeds the NEFR forecast.

For 10% POE, the difference is an increase from 470 MW (approximately 4.5%) in 2013–14 to 968 MW (approximately 8.4%) in 2023–24.

For 50% POE, the difference is an increase from 601 MW (approximately 6.2%) to 1,229 MW (approximately 11.8%).

[1] AEMO. Available at: http://www.aemo.com.au/Electricity/Planning/Forecasting.

[2] AEMO. Available at: http://www.aemo.com.au/en/Electricity/Planning/Forecasting/National-Electricity-Forecasting-Report-2013/NEFR-Supplementary –Information-2013.

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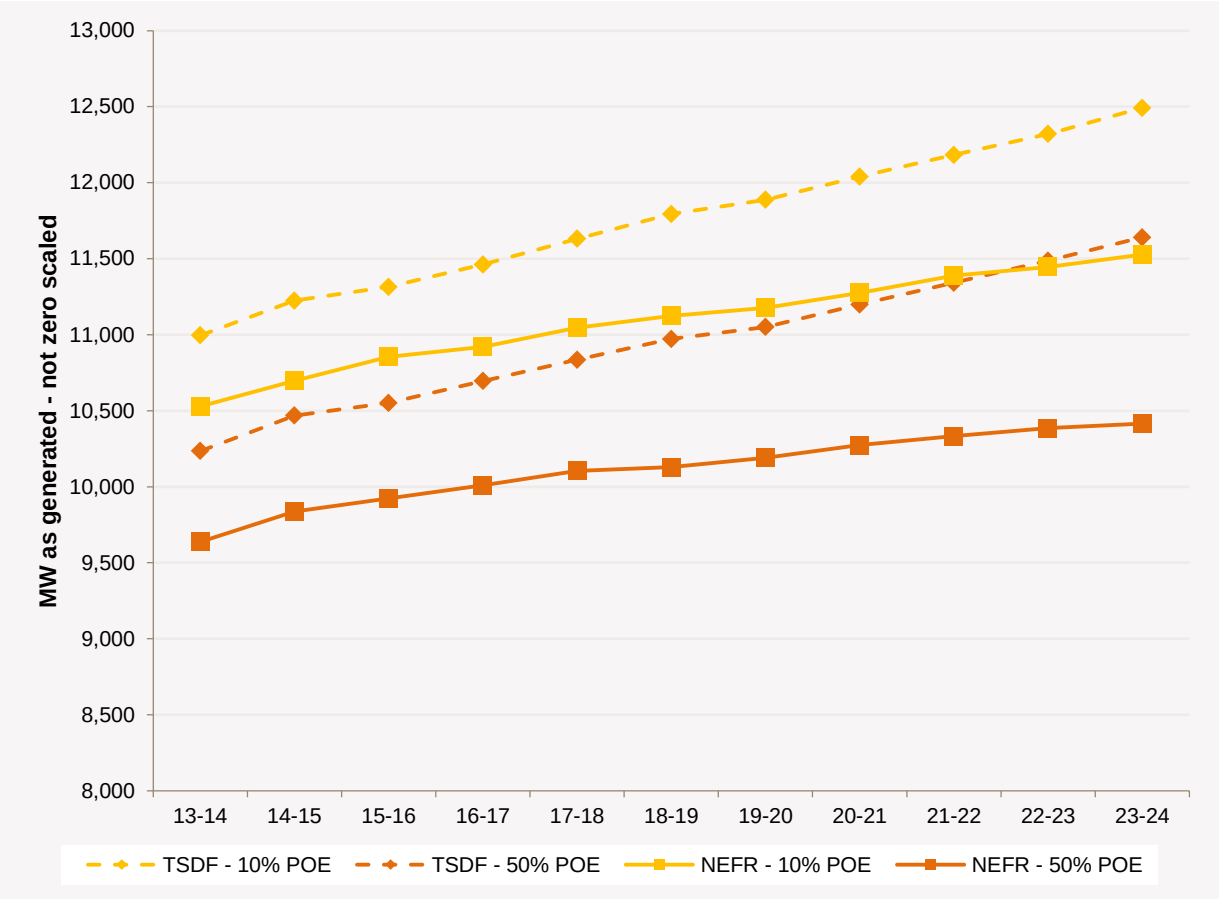
Figure 4-1 — TSDF and NEFR summer MD forecasts



4.4 Winter MD

Figure 4-2 compares TSDF and NEFR winter maximum demand forecasts at the 10% POE and 50% POE levels. Overall, winter NEFR forecasts generally exceed the TSDF forecasts.

For 10% POE, the difference varies from 178 MW (approximately 2.1%) in 2013 to 11 MW (approximately 0.1%) in 2023.

For 50% POE, the TSDF forecast for 2013 is 199 MW (approximately 2.4%) lower than the NEFR forecast. By 2023 the TSDF forecast is 18 MW (approximately 0.2%) lower than the NEFR forecast.

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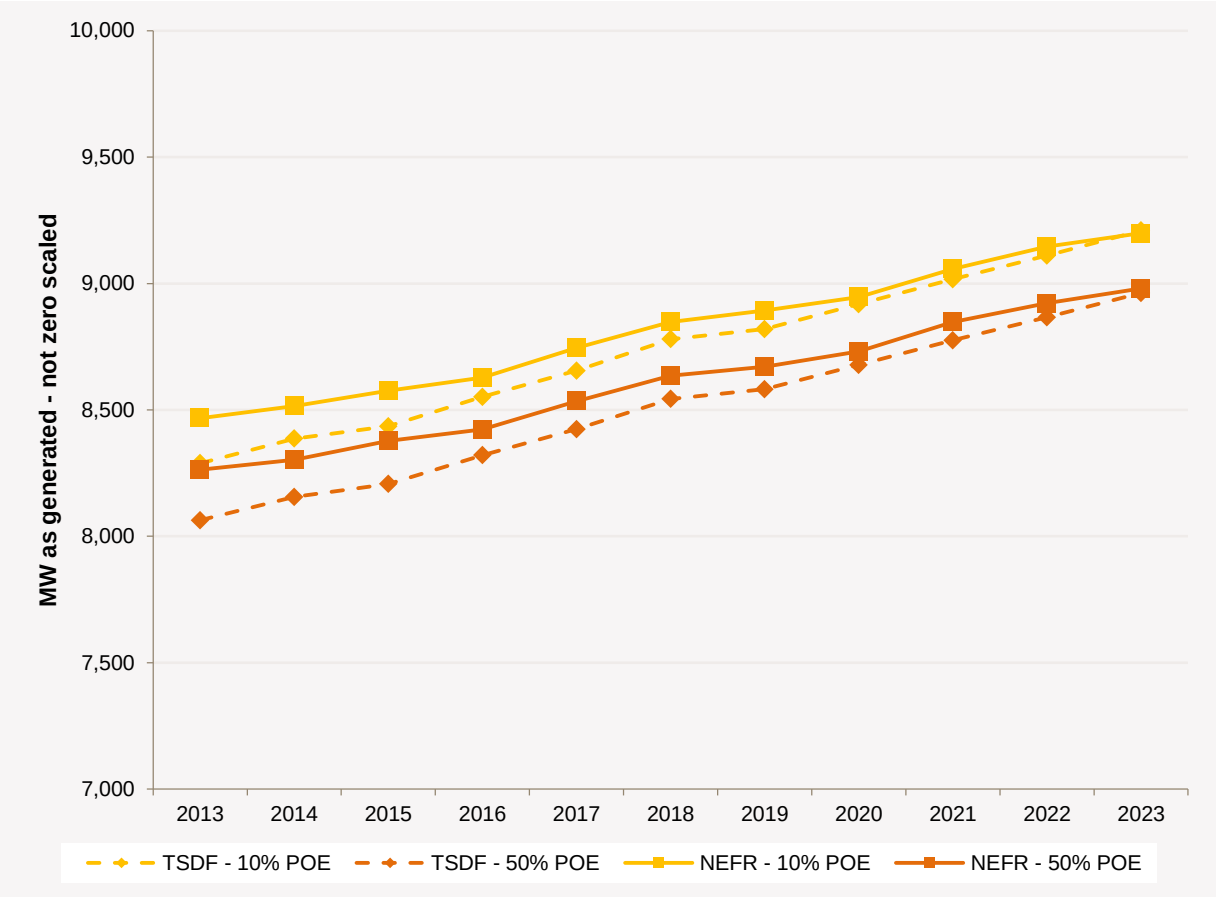
Figure 4-2 — TSDF and NEFR winter MD forecasts



4.5 Differences between the NEFR and TSDF 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 focusses on forecasting total 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.

A comparison between AEMO's 2012 NEFR forecast and the 2012 TSDF (for 2012–13 to 2022–23) shows a decrease in the summer forecast. Winter shows a decrease for 10% POE and an increase for 50% POE.

4.5.1 Summer

The TSDF 2013 summer forecast grows at an annual average of 1.3% for 50% POE throughout the forecast horizon. By comparison, the NEFR 50% POE growth rate for the same period is 0.8%. 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 2014.

4.5.2 Winter

Differences between the NEFR and the TSDF are smaller for winter than for summer. Winter MD levels are generally more stable than summer levels, as they are less subject to extreme weather events. Also, rooftop PV makes no contribution to the NEFR winter MD forecast, because winter MD typically occurs after sunset.

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4.6 Closer alignment of the forecasts

AEMO will be developing transmission connection point forecasts from the second half of 2013 onwards, which will assist with closer alignment between regional and connection point forecasts.

In June 2013 AEMO released its consistent methodology for forecasting demand at transmission connection point on a consistent basis. Commencing in the second half of 2013, AEMO will apply this methodology to transmission connection points in New South Wales (NSW) and Tasmania. These forecasts will be submitted to the Australian Energy Regulator (AER) as independent references for the 2014 regulatory determinations.

As AEMO develops the 2014 NEFR forecasts early in 2014, it will consult Victorian DNSPs on key inputs including economic forecasts and the impact of rooftop PV and energy efficiency. AEMO will engage with DNSPs throughout the process to finalise the NEFR forecasts and the process to develop each DNSP's forecast for the 2014 TSDF.

4.7 Reactive demand forecasts

Figure 4-3 and Figure 4-4 show the aggregate reactive demand forecasts to be drawn from terminal station points of connection (usually stations' lower voltage terminals) at 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 MD reactive demand forecast

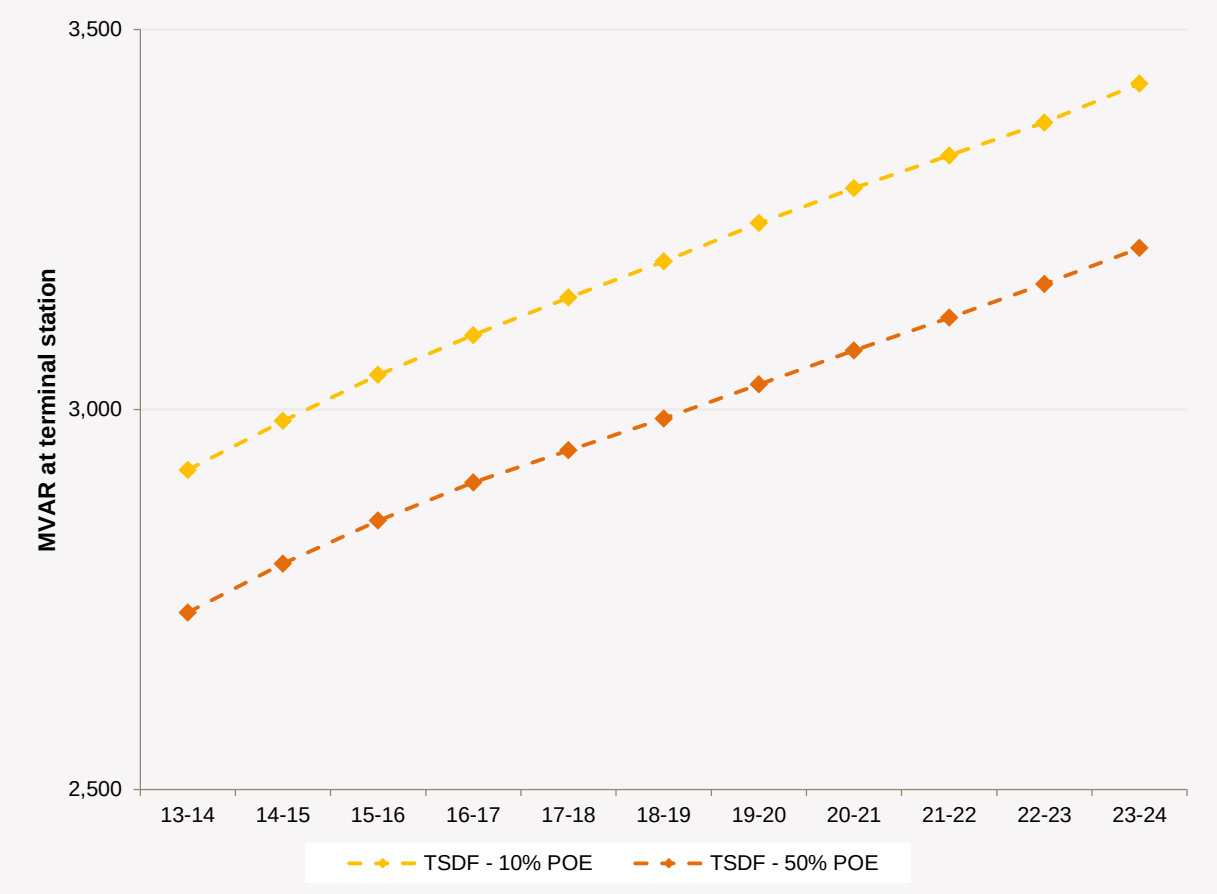

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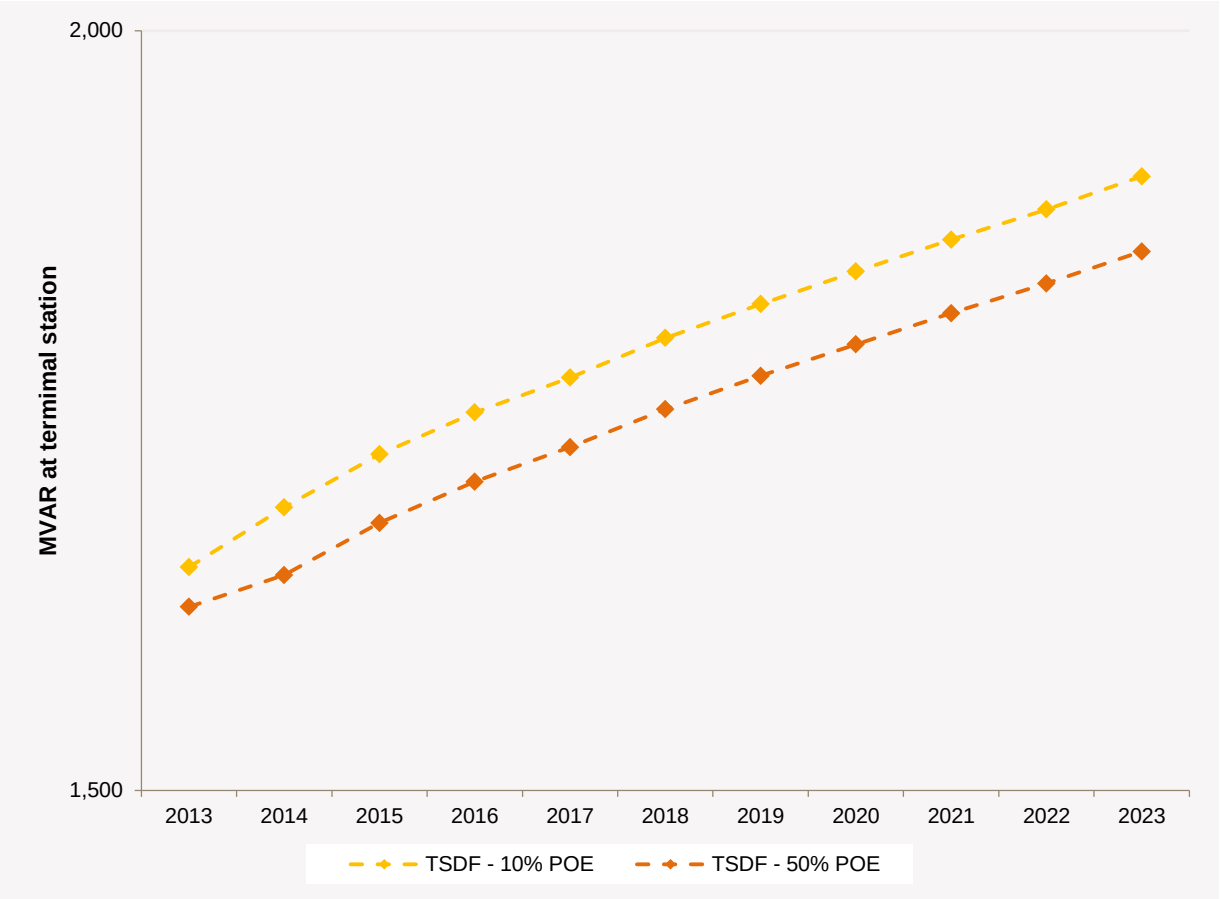
Figure 4-4 — Winter MD reactive demand forecast



CHAPTER 5 - ACTUAL DEMAND AND PREVIOUS FORECAST COMPARISONS

5.1 Summer maximum demand

AEMO assessed the temperature conditions at time of Victorian maximum demand (MD) during the 2012–13 year. The highest summer half-hourly demand of 9,793 MW occurred at 4:00 PM Australian Eastern Standard Time (AEST) on Tuesday 12 March 2013. This summer MD was caused by Melbourne's longest hot spell on record, with maximum temperatures in Melbourne exceeding 30 °C for nine days in a row. For further information on the actual summer MD level, see the NEM Demand Review 2013.[3]

At the time of this year's MD, the most recent TSDF was the 2012 report, which covered the period 2012–13 to 2022–23.

Figure 5-1 and Figure 5-2 compare the unadjusted MD against the TSDF 2012 forecast demand for summer 2012–13 for each point of connection.

For many locations, actual MD was less than the 2012 50% POE forecast. Summer MD rose compared to 2011–12 as a result of warmer weather. Despite this growth in summer MD, average demand has continued to decline; most likely due to increased energy efficiency standards and greater penetration of rooftop PV.

5.2 Winter maximum demand

AEMO assessed the temperature conditions for the 2012 winter MD, recorded as 7,988 MW at 5:30 PM AEST on 21 June 2012.

Figure 5-3 and Figure 5-4 compare the unadjusted actual MD against the TSDF 2012 forecast demand for winter 2012 for each connection point.

5.3 Chart notes

For brevity, the following charts present only the "entire station" locations, not their split bus locations (if they exist). In the 2012 TSDF, some of these stations were not forecast as "entire stations", so the forecasts are zero in these cases.

[3] AEMO. Available at: http://www.aemo.com.au/Electricity/Planning/Forecasting/National-Electricity-Forecasting-Report-2013/NEFR-Supplementary-Information-2013.

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

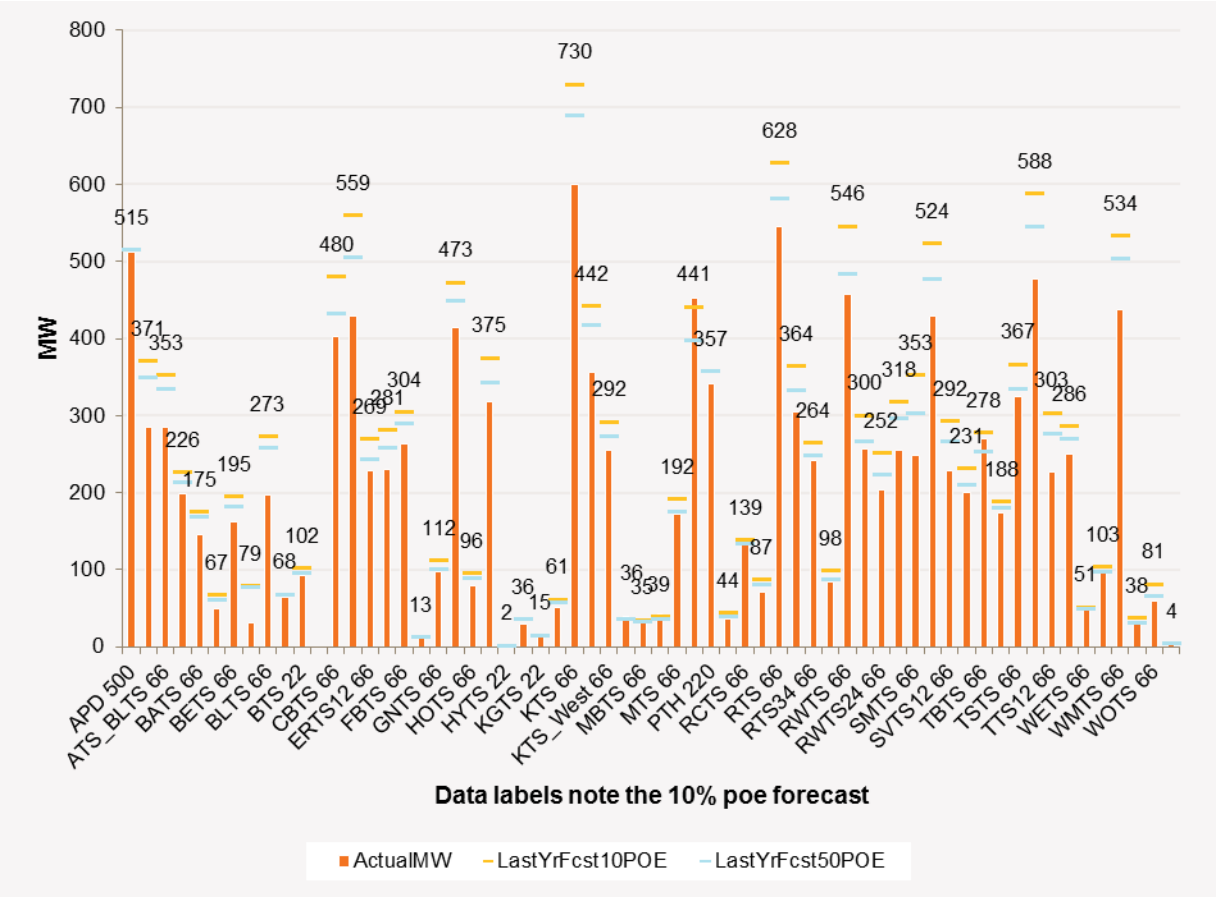

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Figure 5-2 — Summer MD actual and forecast reactive demand comparison by location

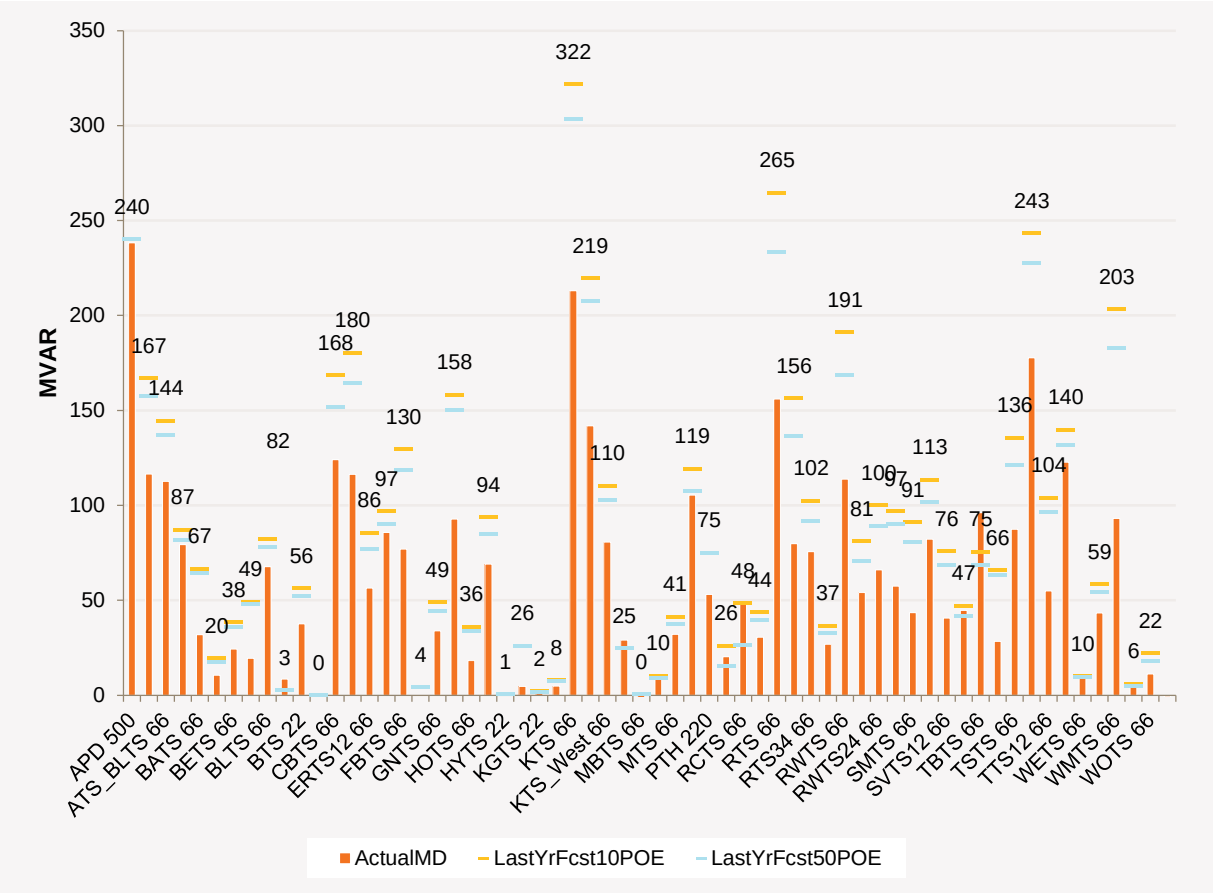

Figure 5-3 — Winter MD actual and forecast comparison by location

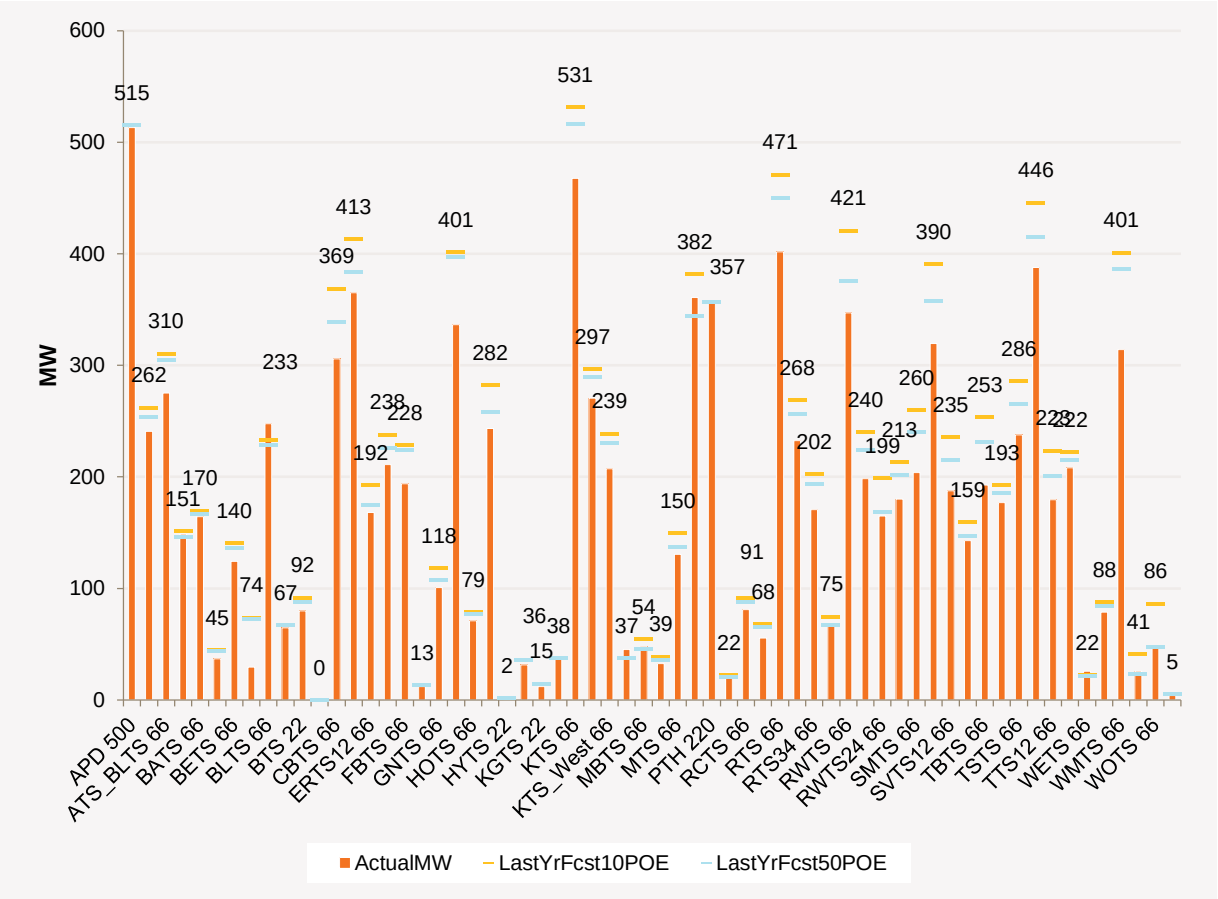

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Figure 5-4 — Winter MD actual and forecast reactive demand comparison by location