United Energy United Energy Load Forecast Manual 2018/19

This page intentionally blank

Table of Contents

This page intentionally blank

1. Purpose

The purpose of this document is to summarise UE's summer maximum demand forecasts. This document shall be updated annually to reflect the most up to date demand forecast. All enquiries relating to this document shall be directed to the email address planning@ue.com.au .

2. Scope

UE annually prepares a maximum demand forecast for each zone substation based on the historical actual demands, planned new load connections, planned new large scale developments such as data centres, urban redevelopment projects, industrial and residential estates; and knowledge of the other growth activities in local areas. This bottom-up forecast is then reconciled with the UE-wide forecast prepared annually by NIEIR for consistency.

All the actual and forecast data is provided as summer maximum demands under system normal network configuration. The ratings presented in this document are correct at the time of printing. Any revision to ratings during the year will be updated in the Ratings Database.

This document presents the following key information related to the UE's maximum demand forecast.

- Forecast 10%, 50% and 90% PoE UE 'boundary load' maximum demand for the next 10 years
- N and N-1 ratings of each zone substation
- Actual maximum demand at each zone substation for the last seven summers
- Weather corrected actual maximum demand at each zone substation for the last two summers
- Forecast 10% PoE summer maximum demand at each zone substation for the next 10 years
- N rating of each feeder
- Actual maximum demand of each feeder for last seven summers
- Forecast 10% PoE demand of each feeder for the next five years
- Anticipated load transfers and large new load information
- Reserve capacity requirements at zone substations where applicable
- For each cross-border feeder, respective N rating, actual maximum demand for last seven summers and forecast 10% PoE demand for the next five years.

3. Objective

The objective of this document is to:

- summarise UE's maximum demand forecast
- provide a common reference document for all the internal stakeholders

4. Responsibilities

The Network Planning group shall be responsible for updating this document annually.

5. UE Maximum Demand Forecast

UE System Summer Peak Demand MW - Historical & NIEIR Forecast Medium Economic Growth (Boundary Load)

FY Ending	UE Actual	UE Load Factor	Date/Time of MD (EST)	Avg Day Temp.	Actual PoE	Forecast at Actual PoE	Weather Corrected 10% PoE	Weather Corrected 90% PoE	Weather Corrected 50% PoE	50% PoE F'Cast Error	Corrected Load Factor	2018 Forecast		
Year	MW	MW/MW		°C	%	MW	MW	MW	MW	%	MW/MW	50% POE	90% POE	10% POE
1997	1352	0.57												
1998	1350	0.58	Thu 12/03/1998											
1999	1404	0.57	Thu 04/02/1999											
2000	1455	0.55	Thu 02/03/2000											
2001	1564	0.55	Thu 08/02/2001											
2002	1441	0.59	Fri 15/02/2002	27.7	82%									
2003	1468	0.59	Mon 24/02/2003	30.1	31%		1657		1519		0.57			
2004	1646	0.55	Wed 17/12/2003	30.1	31%	1663	1716	1450	1583	1.2%	0.57			
2005	1572	0.57	Tue 01/03/2005 14:00	26.8	98%	1508	1878	1600	1739	-3.6%	0.52			
2006	1649	0.57	Fri 24/02/2006 16:00	27.8	80%	1632	1903	1613	1758	-0.8%	0.53			
2007	1750	0.54	Tue 16/01/2007 15:00	28.8	62%	1788	1948	1643	1795	2.3%	0.52			
2008	1918	0.50	Mon 17/03/2008 16:00	29.7	47%	1893	2062	1749	1906	-1.1%	0.50			
2009	2084	0.46	Thu 29/01/2009 13:00	35.0	4%	2066	2060	1746	1903	-0.7%	0.50			
2010	2016	0.48	Mon 11/01/2010 16:00	31.3	22%	2044	2064	1743	1904	1.7%	0.51			
2011	1962	0.49	Tue 01/02/2011 13:00	32.4	15%	2225	2173	1803	1988	3.2%	0.48			
2012	1700	0.57	Tue 24/01/2012 16:00	27.7	82%	1953	2185	1868	2027	2.2%	0.48			
2013	1982	0.48	Tue 12/03/2013 16:00	29.3	77%	1932	2284	1923	2104	-3.3%	0.45			
2014	2066	0.45	Thu 16/01/2014 17:00	35.5	2%	2268	2237	1839	2038	-1.2%	0.45			
2015	1736	0.53	Thu 22/01/2015 16:00	26.9	100%	1705	2194	1787	1991	-2.5%	0.46			
2016	1964	0.47	Wed 13/01/2016 16:30	30.6	50%	1954	2152	1775	1964	-2.6%	0.47			
2017	1858	0.50	Thu 09/02/2017 13:30	31.1	40%	2027	2120	1734	1927	1.4%	0.48			
2018	1911		Fri 19/01/2018 16:30	31.4	40%	2008	2102	1728	1915	0.6%				
2019												2009	1821	2223
2020												2012	1825	2242
2021												2018	1829	2248
2022												2035	1859	2259
2023												2073	1879	2293
2024												2091	1900	2307
2025												2117	1933	2355
2026												2160	1980	2401
2027												2190	1992	2444
2028												2210	2007	2462
2029												2241	2043	2481

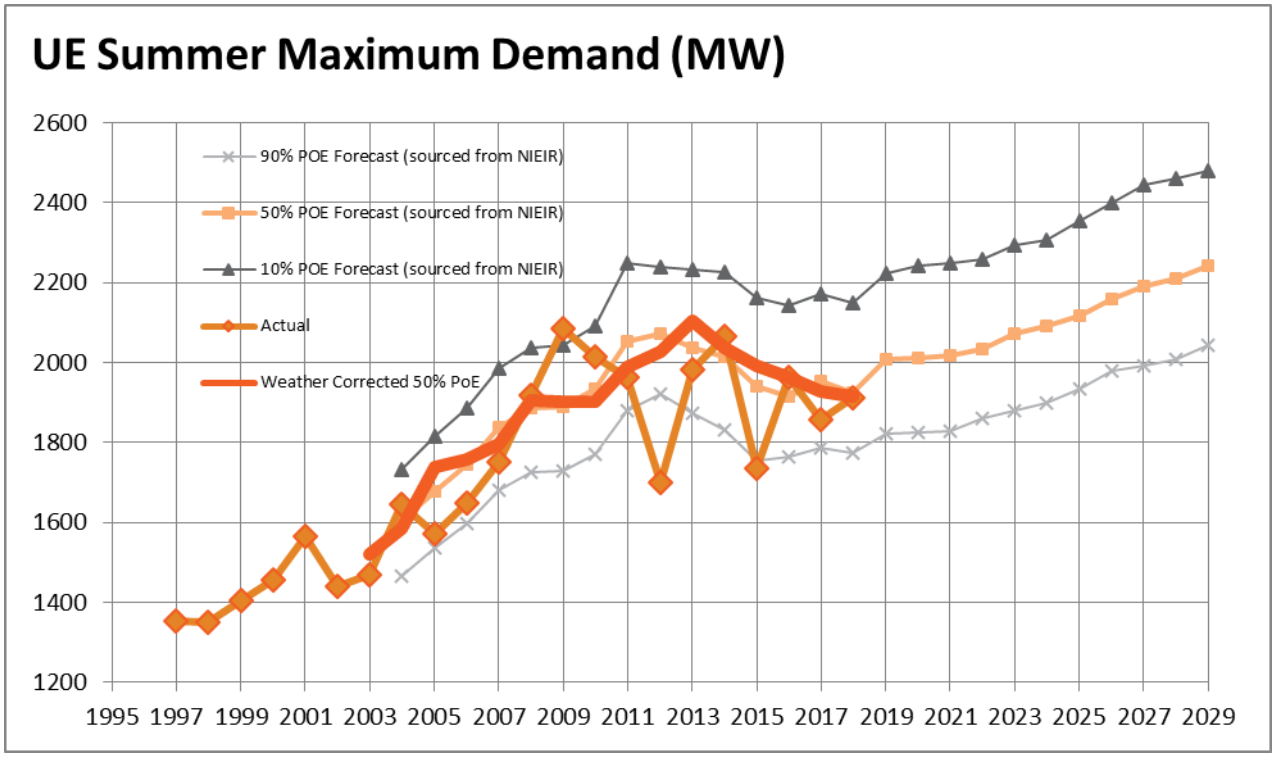


Figure 1: UE Summer Maximum Demand

6. Zone Substation Maximum Demand Forecasts

United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

BOX HILL **BH** — Load / Next / Save / Previous

Voltage 22.7 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	39.3	45.8	46.9	41.9	46.0	41.7	**44.1**	47.8	48.2	48.8	50.1	51.9	52.6	53.7	54.8	55.7	56.1
10% POE actual MD	45.0	47.8	46.9	46.1	46.9	46.6	46.1										
Load transfers (MW)																	
Extra new load (MW)			0.2	0.3	1.7	1.1	**0.9**	0.8	0.9	1.2	1.7	1.7	0.8				
% growth (MW)		16.7%	2.3%	-10.6%	9.7%	-9.4%	**5.9%**	8.4%	0.9%	1.3%	2.6%	3.6%	1.4%	2.2%	1.9%	1.7%	0.7%
Feeder summation reactive demand (MVAr)	18.1	19.2	17.3	16.7	15.1	13.1	**13.1**	14.7	14.9	15.2	15.7	16.5	16.8	17.3	17.8	18.2	18.3
Zone substation capacitor bank (MVAr)	15.0	15.0	15.0	15.0	15.0	15.0	**15.0**	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Feeder line capacitors (MVAr)	5.7	5.7	5.7	4.2	4.2	4.2	**5.7**	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Reactive load on transformers (MVAr)	2.1	3.3	1.4	0.7	-0.8	-2.8	**-2.8**	-1.2	-1.0	-0.7	-0.2	0.6	0.9	1.4	1.8	2.2	2.4
Feeder summation power factor	0.91	0.92	0.94	0.93	0.95	0.95	**0.96**	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	39.3	46.0	46.9	41.9	46.0	41.8	**44.2**	47.8	48.2	48.8	50.1	51.9	52.6	53.8	54.8	55.7	56.1
(N-1) Cyclic Rating (MVA)	36.3	36.3	72.6	72.6	72.6	72.6	**72.6**	72.6	72.6	72.6	72.6	72.6	72.6	72.6	72.6	72.6	72.6
(N-1) Limited Cyclic Rating (MVA)	38.7	38.7	77.3	77.3	77.3	77.3	**77.3**	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
(N-1) 2 Hour Emergency Rating (MVA)	43.6	43.8	87.7	87.7	87.7	87.7	**87.7**	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
(N-1) 10 Minute Emergency Rating (MVA)	43.6	43.8	87.7	87.7	87.7	87.7	**87.7**	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7	87.7
(N) Cyclic Rating (MVA)	72.6	72.6	108.9	87.7	108.9	108.9	**108.9**	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9	108.9

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
BH 11	0	0	0	0	0
BH 12	0	0	0	0	0
BH 14	0	0	0	0	0
BH 21	0	0	0	0	0
BH 22	0	0	0	0	0
BH 23	0	0	0	0	0
BH 24	0	0	0	0	0
BH 31	0	0	0	0	0
BH 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
BH 11	300	300	55%	58%	58%	204	220	254	140	175	137	**164**	174	175	176	176	178	126 A	5 MVA	1.7%	
BH 12	280	280	25%	28%	33%	62	69	70	59	58	73	**70**	79	94	117	152	187	201 A	7.9 MVA	33.4%	
BH 14	550	550	32%	96%	96%	180	162	148	179	166	169	**176**	526	526	527	527	527	24 A	0.9 MVA	39.9%	
BH 21	285	285	50%	53%	54%	159	190	216	179	122	117	**142**	151	153	154	154	156	134 A	5.3 MVA	2.0%	
BH 22	265	265	42%	47%	48%	85	111	117	97	115	118	**111**	124	127	132	136	138	141 A	5.6 MVA	4.7%	
BH 23	350	350	58%	62%	63%	222	316	270	234	243	233	**203**	217	220	220	220	223	133 A	5.2 MVA	1.9%	
BH 24	565	565	60%	96%	96%	332	343	353	326	328	334	**342**	542	542	543	543	543	23 A	0.9 MVA	11.8%	
BH 31	265	265	36%	40%	42%			42	80	92	86	**95**	107	112	116	123	139	158 A	6.2 MVA	9.3%	
BH 34	350	350	23%	25%	25%				64	72	65	**81**	86	87	88	89	90	264 A	10.4 MVA	2.1%	
Average	357	357	43%	62%	62%	178	202	163	151	152	148	**154**	223	226	230	236	242	134 A	5.3 MVA	11.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
BH 11	0	1	0	0	0
BH 12	5	14	23	35	33
BH 14	0	0	0	0	0
BH 21	1	1	1	0	0
BH 22	6	3	5	4	0
BH 23	3	1	0	0	0
BH 24	0	0	0	0	0
BH 31	7	5	4	7	14
BH 34	0	0	1	1	0

Zone Substation Comments

1. Zone substation ratings were reviewed in 2010.
2. Line Capacitors: Installed 3.6MVAr line capacitors prior to summer 2000.
   Installed 9.0MVAr capacitor bank at BH for summer 2000.
3. Load transfers:
   2.0MW from DC to BH prior to summer 2009.

4. New Load
   4.0MW new load from Deakin University on BH21.
   ?? proposed 3.5MW at 249 Middleborough Rd, Box Hill on BH22.

5. Carter Holt Harvey reduced their demand by about 2.0MW since Apr 1999.
   Carter Holt Harvey expected to reduce their demand by 4MW in 2005.

Reserve Capacity Requirements

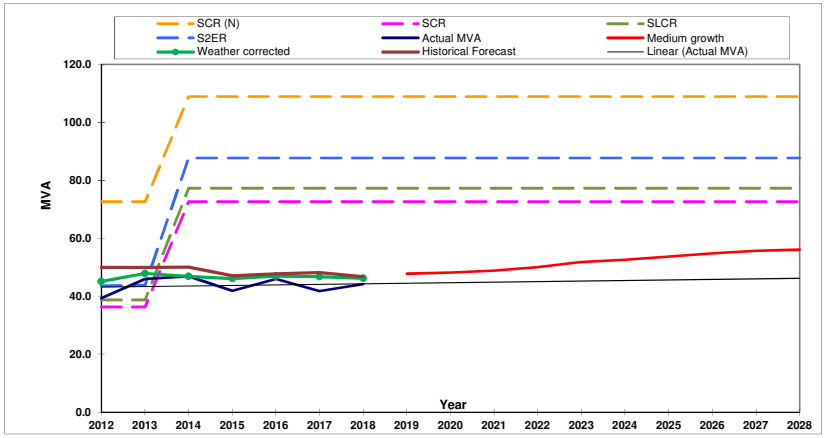
1. SCA Hygiene (former Carter Holt Harvey):
   Ailsa St Box Hill
   BH14 & BH24 (preferred)

Feeder ratings with one feeder out of service:

BH24 ratings (with BH14 out of service):
- Summer continuous = 654A
- Winter continuous = 698A
- Summer cyclic = 665A
- Winter cyclic = 708A

BH14 ratings (with BH24 out of service):
- Summer continuous = 618A
- Winter continuous = 660A
- Summer cyclic = 635A
- Winter cyclic = 670A

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

BEAUMARIS **BR**

Voltage **11.4 kV**

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	23.7	25.7	27.3	21.5	25.2	26.0	**29.1**	30.6	30.6	30.6	30.5	30.8	30.9	31.6	32.2	32.7	32.8
10% POE actual MD	28.4	29.0	29.4	28.5	28.6	29.5	29.7										
Load transfers (MW)																	
Extra new load (MW)			0.3	0.2	0.1	0.1	**0.1**	0.1	0.3	0.2	0.1	0.0					
% growth (MW)		8.4%	6.5%	-21.4%	17.3%	3.2%	**11.8%**	5.1%	0.2%	-0.2%	-0.2%	1.0%	0.3%	2.1%	1.9%	1.8%	0.3%
Feeder summation reactive demand (MVAr)	6.5	7.4	7.7	4.3	-4.9	-4.8	**-5.2**	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-4.9	-4.9	-4.8	-4.8
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	1.8	1.8	1.8	1.8	1.8	1.8	**1.8**	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Reactive load on transformers (MVAr)	6.5	7.4	7.7	4.3	-4.9	-4.8	**-5.2**	-5.0	-5.0	-5.0	-5.0	-5.0	-5.0	-4.9	-4.9	-4.8	-4.8
Feeder summation power factor	0.96	0.96	0.96	0.98	0.98	0.98	**0.98**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.96	0.96	0.96	0.98	0.98	0.98	**0.98**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	24.5	26.7	28.4	21.9	25.7	26.4	**29.5**	31.0	31.0	31.0	30.9	31.2	31.3	31.9	32.5	33.1	33.2
(N-1) Cyclic Rating (MVA)	31.5	31.5	31.5	31.5	31.5	31.5	**31.5**	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
(N-1) Limited Cyclic Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N-1) 2 Hour Emergency Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N-1) 10 Minute Emergency Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N) Cyclic Rating (MVA)	63.0	63.0	63.0	32.4	63.0	63.0	**63.0**	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0	63.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
BR 1	0	0	0	0	0
BR 4	0	0	0	0	0
BR 6	0	0	0	0	0
BR 9	0	0	0	0	0
BR 10	0	0	0	0	0
BR 13	0	0	0	0	0
BR 15	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
BR 1	290	290	89%	92%	93%	219	233	252	141	227	224	**260**	267	269	272	276	281	23 A	0.5 MVA	1.7%	
BR 4	300	300	78%	80%	80%	195	215	227	189	204	206	**233**	239	241	242	243	245	61 A	1.2 MVA	1.0%	
BR 6	295	295	65%	69%	73%	171	185	197	164	189	206	**193**	203	215	225	226	228	92 A	1.8 MVA	3.7%	
BR 9	350	350	85%	88%	88%	245	253	276	218	240	247	**299**	307	308	310	311	314	43 A	0.8 MVA	1.0%	
BR 10	290	290	65%	67%	68%	132	159	164	146	156	173	**189**	195	198	201	202	203	95 A	1.9 MVA	1.6%	
BR 13	295	295	74%	76%	76%	179	190	216	172	209	197	**217**	223	224	225	226	228	72 A	1.4 MVA	1.0%	
BR 15	265	265	80%	82%	83%	175	189	209	169	190	187	**212**	218	219	220	221	223	47 A	0.9 MVA	1.0%	
Average	298	298	77%	79%	79%	188	203	220	171	202	206	**229**	236	239	242	244	246	62 A	1.2 MVA	1.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
BR 1	0	1	2	3	2
BR 4	0	0	0	0	0
BR 6	6	11	8	0	0
BR 9	0	0	0	0	0
BR 10	1	2	2	0	0
BR 13	0	0	0	0	0
BR 15	0	0	0	0	0

Zone Substation Comments

1. Station summer rating is limited by O/V on tap.

2. Line Capacitors
   Install 1.8MVAr in 2002.

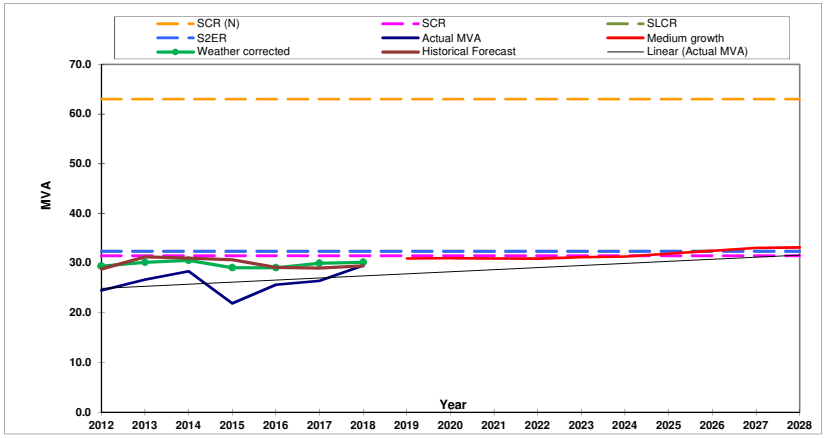
3. Load Transfers

4. Zone substation capacitor bank is out of service.

5. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

BENTLEIGH **BT**
Voltage 11.65 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	24.2	27.3	29.2	22.6	27.3	24.9	**30.1**	31.7	32.3	32.5	32.7	33.0	33.1	33.7	34.4	35.0	35.1
10% POE actual MD	27.0	27.9	29.2	28.9	31.0	30.2	30.7										
Load transfers (MW)						-1.7	0.9	-0.5									
Extra new load (MW)			0.3	0.3	0.7	1.1	**0.9**	0.9	0.8	0.6	0.4	0.1					
% growth (MW)		12.8%	7.1%	-22.7%	20.8%	-8.8%	**21.0%**	5.2%	1.8%	0.7%	0.6%	1.0%	0.1%	2.1%	1.9%	1.8%	0.2%
Feeder summation reactive demand (MVAr)	6.5	6.5	5.5	2.9	4.1	3.2	**3.5**	4.0	4.2	4.2	4.3	4.4	4.4	4.6	4.8	5.0	5.0
Zone substation capacitor bank (MVAr)	6.4	6.4	6.4	6.4	6.4	6.4	**6.4**	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4	6.4
Feeder line capacitors (MVAr)	4.5	4.5	4.5	6.9	6.9	6.9	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Reactive load on transformers (MVAr)	-0.7	-0.6	-1.7	-4.3	-3.1	-3.9	**-3.7**	-3.2	-3.0	-2.9	-2.9	-2.8	-2.8	-2.5	-2.3	-2.1	-2.1
Feeder summation power factor	0.97	0.97	0.98	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	0.98	0.99	0.99	**0.99**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	24.2	27.3	29.3	23.0	27.5	25.2	**30.4**	31.9	32.4	32.6	32.8	33.1	33.2	33.8	34.5	35.1	35.1
(N-1) Cyclic Rating (MVA)	31.1	31.1	31.1	31.1	31.1	31.1	**31.1**	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1	31.1
(N-1) Limited Cyclic Rating (MVA)	32.3	32.3	32.3	32.3	32.3	32.3	**32.3**	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
(N-1) 2 Hour Emergency Rating (MVA)	32.3	32.3	32.3	32.3	32.3	32.3	**32.3**	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
(N-1) 10 Minute Emergency Rating (MVA)	32.3	32.3	32.3	32.3	32.3	32.3	**32.3**	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
(N) Cyclic Rating (MVA)	62.1	62.1	62.1	32.3	62.1	62.1	**62.1**	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1	62.1

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
BT 2	0	0	0	0	0
BT 4	0	0	0	0	0
BT 5	0	0	0	0	0
BT 6	0	0	0	0	0
BT 9	0	0	0	0	0
BT 10	-29	0	0	0	0
BT 14	0	0	0	0	0
BT 15	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
BT 2	275	275	75%	78%	79%	171	199	205	168	184	178	**205**	214	217	218	219	221	61 A	1.2 MVA	1.5%	
BT 4	335	335	76%	80%	81%	218	237	259	268	295	196	**255**	266	272	276	280	283	69 A	1.4 MVA	2.2%	
BT 5	285	285	37%	38%	38%	98	94	103	84	94	85	**107**	109	110	110	110	111	176 A	3.5 MVA	0.9%	
BT 6	270	270	50%	54%	56%	134	138	149	126	134	127	**136**	146	152	159	163	166	124 A	2.5 MVA	4.3%	
BT 9	280	280	56%	61%	65%	185	205	253	164	192	125	**157**	171	182	189	194	196	109 A	2.2 MVA	4.9%	
BT 10	310	310	99%	92%	92%	247	287	301	235	267	254	**307**	285	286	287	288	291	25 A	0.5 MVA	-1.1%	
BT 14	270	270	71%	73%	75%	177	258	221	165	184	176	**191**	198	202	202	203	205	72 A	1.4 MVA	1.5%	
BT 15	305	305	68%	76%	83%	101	118	121	100	114	182	**208**	232	253	268	279	284	73 A	1.5 MVA	7.3%	
Average	291	291	67%	70%	70%	166	192	201	164	183	165	**196**	203	209	214	217	220	89 A	1.8 MVA	2.4%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
BT 2	4	3	0	0	0
BT 4	6	4	4	3	0
BT 5	0	0	0	0	0
BT 6	6	6	6	4	1
BT 9	10	10	7	5	0
BT 10	0	0	0	0	0
BT 14	3	2	0	0	0
BT 15	18	20	14	10	3

Zone Substation Comments

1. Station summer rating is limited by O/V on tap. With 5.4MVAr line caps installed, station rating will be limited by transformer thermal limits. Post 2001 ratings shown are based on 40deg C ambient temperature.

2. Line Capacitors:
   Install 5.4MVAr prior to summer 2002.

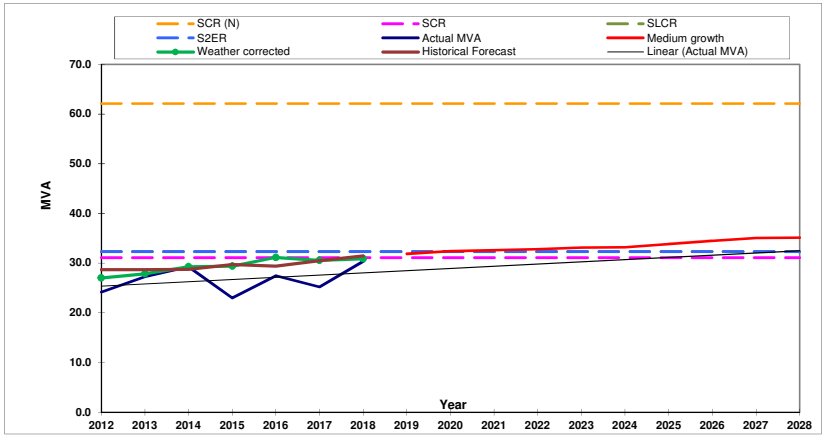
3. PCB Cap Bank Replacement; 6.3MVAr in Oct 2001

4. Load Transfers:
   1.0MW from NB21 to BT10 prior to summer 2009
   2MW from BT to CFD prior to summer 2009
   0.5MW from BT to NB prior to summer 2009
   0.4MW from BT to MR prior to summer 2011
   1.7MW from BT04 to MR14 prior to summer 2016

5. New Load:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

BULLEEN **BU**

Voltage 11.3 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	24.5	27.2	29.3	23.2	27.3	26.0	**29.8**	31.3	31.3	31.0	30.9	31.3	31.3	31.8	32.3	32.7	32.9
10% POE actual MD	26.9	29.8	30.5	30.0	29.9	29.3	30.4										
Load transfers (MW)																	
Extra new load (MW)			0.2	0.2	0.2	0.4	**0.3**	0.2	0.2	0.1	0.1	0.0					
% growth (MW)		10.9%	7.5%	-20.6%	17.4%	-4.6%	**14.3%**	5.3%	-0.1%	-0.8%	-0.3%	1.1%	0.2%	1.7%	1.5%	1.3%	0.4%
Feeder summation reactive demand (MVAr)	5.8	6.5	6.4	4.1	4.4	4.7	**4.2**	4.6	4.6	4.5	4.5	4.6	4.6	4.8	4.9	5.1	5.1
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	4.5	4.5	4.5	4.5	4.5	4.5	**4.5**	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Reactive load on transformers (MVAr)	5.8	6.5	6.4	4.1	4.4	4.7	**4.2**	4.6	4.6	4.5	4.5	4.6	4.6	4.8	4.9	5.1	5.1
Feeder summation power factor	0.97	0.97	0.98	0.98	0.99	0.98	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.97	0.97	0.98	0.98	0.99	0.98	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	25.2	28.0	30.0	23.6	27.6	26.4	**30.0**	31.7	31.6	31.4	31.3	31.6	31.7	32.2	32.7	33.1	33.2
(N-1) Cyclic Rating (MVA)	29.7	29.7	29.7	29.7	29.7	29.7	**29.7**	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7	29.7
(N-1) Limited Cyclic Rating (MVA)	31.3	31.3	31.3	31.3	31.3	31.3	**31.3**	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3
(N-1) 2 Hour Emergency Rating (MVA)	31.3	31.3	31.3	31.3	31.3	31.3	**31.3**	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3
(N-1) 10 Minute Emergency Rating (MVA)	31.3	31.3	31.3	31.3	31.3	31.3	**31.3**	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3	31.3
(N) Cyclic Rating (MVA)	59.5	59.5	59.5	31.3	59.5	59.5	**59.5**	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5	59.5

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
BU 1	0	0	0	0	0
BU 2	0	0	0	0	0
BU 4	0	0	0	0	0
BU 6	0	0	0	0	0
BU 9	0	0	0	0	0
BU 10	0	0	0	0	0
BU 13	0	0	0	0	0
BU 14	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
BU 1	295	295	69%	71%	71%	167	188	217	173	184	204	**204**	210	211	212	212	214	85 A	1.7 MVA	1.0%	
BU 2	305	305	79%	84%	87%	199	230	259	187	230	181	**241**	257	265	266	267	269	48 A	0.9 MVA	2.4%	
BU 4	305	305	65%	67%	67%	169	197	212	172	195	196	**200**	205	206	207	208	210	100 A	2 MVA	1.0%	
BU 6	235	235	87%	89%	90%	165	192	202	159	191	178	**204**	210	211	214	217	221	25 A	0.5 MVA	1.7%	
BU 9	295	295	75%	77%	78%	188	206	218	171	200	189	**221**	227	229	232	234	236	68 A	1.3 MVA	1.4%	
BU 10	305	305	78%	81%	82%	188	215	220	181	223	202	**237**	246	251	254	254	257	59 A	1.1 MVA	1.7%	
BU 13	350	350	34%	35%	35%	106	115	137	106	114	116	**119**	122	122	123	123	125	228 A	4.5 MVA	1.0%	
BU 14	290	290	87%	89%	90%	203	220	252	203	234	222	**252**	259	260	261	262	265	31 A	0.6 MVA	1.0%	
Average	298	298	70%	73%	73%	173	195	215	169	196	186	**210**	217	219	221	222	225	80 A	1.6 MVA	1.4%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
BU 1	0	0	0	0	0
BU 2	9	7	0	0	0
BU 4	0	0	0	0	0
BU 6	0	1	1	3	2
BU 9	0	1	2	1	0
BU 10	3	3	2	0	0
BU 13	0	0	0	0	0
BU 14	0	0	0	0	0

Zone Substation Comments

1. Station summer rating is limited by overvoltage on tap.

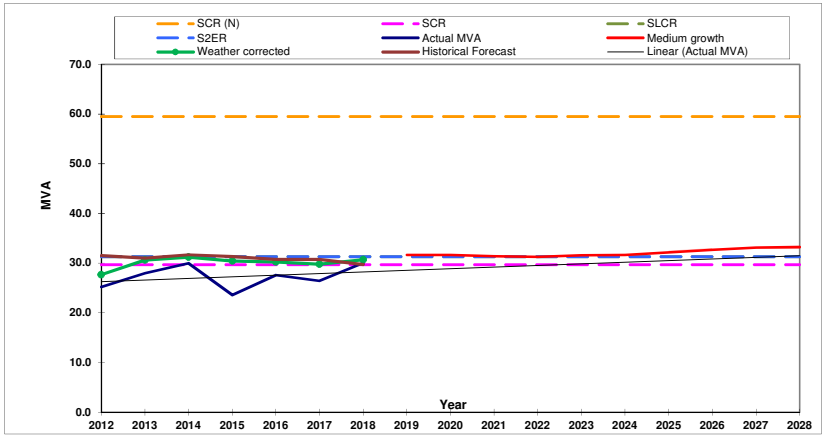
2. Line Capacitors:
   Installed 2.7MVAr in 2000 for summer 2001.
   Install 1.8MVAr in 2002 for summer 2003.

3. Load Transfers:

4. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

BURWOOD **BW** — Load / Next / Save / Previous

Voltage 11.32 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	18.8	22.2	23.6	19.0	22.1	21.3	**22.9**	24.0	24.1	23.9	23.8	24.1	24.1	24.5	24.8	25.2	25.4
10% POE actual MD	21.2	22.9	23.6	23.5	23.0	23.0	23.3										
Load transfers (MW)																	
Extra new load (MW)			0.1	0.5	0.8	0.5	**0.6**	0.2	0.0	0.0	0.0	0.0					
% growth (MW)		17.8%	6.2%	-19.2%	16.1%	-3.7%	**7.4%**	5.1%	0.2%	-0.6%	-0.4%	1.1%	0.2%	1.4%	1.4%	1.3%	1.1%
Feeder summation reactive demand (MVAr)	3.5	3.2	3.4	2.2	1.6	1.4	**2.1**	2.5	2.5	2.4	2.4	2.5	2.5	2.6	2.7	2.9	3.0
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	5.4	5.4	5.4	6.3	6.3	6.3	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Reactive load on transformers (MVAr)	3.5	3.2	3.4	2.2	1.6	1.4	**2.1**	2.5	2.5	2.4	2.4	2.5	2.5	2.6	2.7	2.9	3.0
Feeder summation power factor	0.98	0.99	0.99	0.99	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.98	0.99	0.99	0.99	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	19.2	22.4	23.8	19.2	22.2	21.3	**23.0**	24.2	24.2	24.1	24.0	24.2	24.3	24.6	25.0	25.3	25.6
(N-1) Cyclic Rating (MVA)	24.3	24.3	24.3	24.3	24.3	24.3	**24.3**	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
(N-1) Limited Cyclic Rating (MVA)	25.4	25.4	25.4	25.4	25.4	25.4	**25.4**	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
(N-1) 2 Hour Emergency Rating (MVA)	25.4	25.4	25.4	25.4	25.4	25.4	**25.4**	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
(N-1) 10 Minute Emergency Rating (MVA)	25.4	25.4	25.4	25.4	25.4	25.4	**25.4**	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4	25.4
(N) Cyclic Rating (MVA)	36.4	36.4	36.4	25.4	36.4	36.4	**36.4**	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1	38.1

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
BW 21	0	0	0	0	0
BW 22	0	0	0	0	0
BW 23	0	0	0	0	0
BW 32	0	0	0	0	0
BW 33	0	0	0	0	0
BW 34	0	0	0	0	0
BW 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
BW 21	290	290	84%	86%	87%	191	225	246	194	237	211	**242**	250	253	255	256	259	40 A	0.8 MVA	1.3%	
BW 22	300	300	49%	53%	54%	156	186	167	164	126	158	**146**	159	161	163	165	167	141 A	2.8 MVA	2.9%	
BW 23	300	300	44%	45%	46%	125	162	179	142	155	160	**132**	136	138	139	140	141	164 A	3.2 MVA	1.3%	
BW 32	265	265	51%	53%	53%	111	128	134	103	125	118	**135**	139	142	144	145	147	126 A	2.5 MVA	1.7%	
BW 33	295	295	64%	66%	67%	171	184	202	152	178	171	**188**	194	197	198	199	201	101 A	2 MVA	1.3%	
BW 34	350	350	57%	59%	60%	158	181	189	148	177	171	**199**	206	208	210	211	213	144 A	2.8 MVA	1.3%	
BW 35	350	350	74%	77%	78%	210	219	241	189	223	225	**260**	270	273	276	276	279	80 A	1.6 MVA	1.5%	
Average	307	307	61%	63%	63%	160	184	194	156	175	173	**186**	193	196	198	199	201	114 A	2.2 MVA	1.6%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
BW 21	0	0	0	0	0
BW 22	8	0	1	1	1
BW 23	0	0	0	0	0
BW 32	0	1	1	1	0
BW 33	0	0	0	0	0
BW 34	0	0	0	0	0
BW 35	2	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
   on 40deg C ambient temperature.

2. Line Capacitors
   Installed 4.5MVAr in 2000.
   Install 1.8MVAr in 2002.

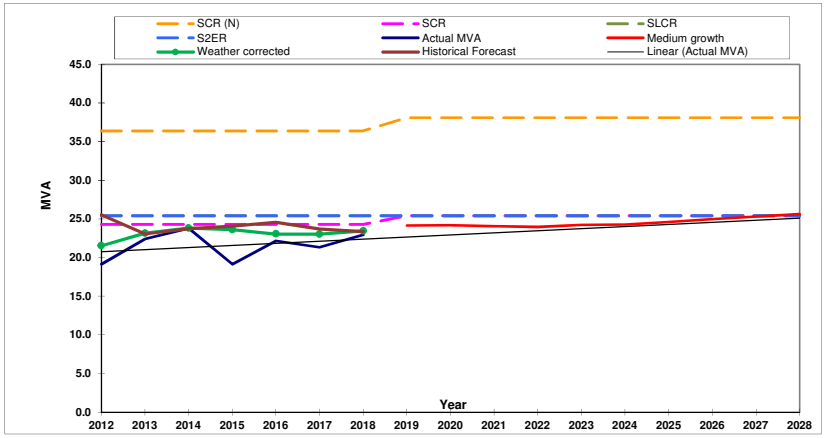
3. New Loads:
   15 Huntingdale road 0.7MW increase-2013

4. Load Transfers:

5. BW conversion (BW4 and BW8) from 6.6kV to 11kV during 2010.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

CLARINDA **CDA** — Load / Next / Save / Previous

Voltage 22.59 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	22.7	24.4	32.4	27.1	33.8	33.5	**35.4**	34.7	35.7	36.4	36.9	37.4	37.5	38.2	39.0	39.6	39.8
10% POE actual MD	26.5	27.4	32.4	32.4	35.5	36.5	36.8										
Load transfers (MW)		2.5						-4.0									
Extra new load (MW)		0.9	0.4	0.8	1.2	1.7	**1.3**	1.2	1.2	1.1	0.8						
% growth (MW)		7.7%	32.3%	-16.4%	24.8%	-0.8%	**5.6%**	-1.8%	2.7%	2.0%	1.5%	1.3%	0.1%	2.1%	1.9%	1.7%	0.4%
Feeder summation reactive demand (MVAr)	5.9	3.4	7.7	1.8	4.8	2.3	**4.7**	4.5	4.8	5.1	5.3	5.5	5.5	5.9	6.1	6.4	6.5
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	8.1	8.1	8.1	9.0	9.0	9.0	**9.0**	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Reactive load on transformers (MVAr)	5.9	3.4	7.7	1.8	4.8	2.3	**4.7**	4.5	4.8	5.1	5.3	5.5	5.5	5.9	6.1	6.4	6.5
Feeder summation power factor	0.97	0.99	0.97	1.00	0.99	1.00	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.97	0.99	0.97	1.00	0.99	1.00	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	23.5	24.7	33.3	27.1	34.1	33.6	**35.7**	35.0	36.0	36.7	37.3	37.8	37.9	38.7	39.4	40.1	40.3
(N-1) Cyclic Rating (MVA)		25.8	25.8	25.8	25.8	25.8	**25.8**	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8	25.8
(N-1) Limited Cyclic Rating (MVA)		26.1	26.1	26.1	26.1	26.1	**26.1**	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1	26.1
(N-1) 2 Hour Emergency Rating (MVA)		29.1	29.1	29.1	29.1	29.1	**29.1**	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
(N-1) 10 Minute Emergency Rating (MVA)		29.1	31.5	31.5	31.5	31.5	**31.5**	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5	31.5
(N) Cyclic Rating (MVA)	46.7	72.5	59.4	31.5	59.4	59.4	**59.4**	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4	59.4

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
CDA 11	0	0	0	0	0
CDA 12	0	0	0	0	0
CDA 21	0	0	0	0	0
CDA 22	0	0	0	0	0
CDA 23	-105	0	0	0	0
CDA 24	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
CDA 11	350	350	35%	42%	46%		255	299	220	272	131	**122**	147	160	163	164	166	203 A	8 MVA	7.1%	
CDA 12	0	0																0 A	0 MVA		
CDA 21	350	350	14%	16%	17%	53	57	59	48	55	45	**50**	57	60	61	62	62	293 A	11.5 MVA	5.2%	
CDA 22	400	400	55%	62%	66%	159	158	182	173	236	208	**221**	248	264	278	285	288	152 A	6 MVA	6.1%	
CDA 23	350	350	81%	56%	59%	233	90	98	83	91	247	**282**	197	205	220	232	235	153 A	6 MVA	-3.4%	
CDA 24	365	365	75%	80%	81%	216	274	297	238	268	220	**273**	291	295	301	307	310	74 A	2.9 MVA	2.7%	
Average	303	303	52%	52%	52%	110	139	156	127	154	142	**158**	156	164	171	175	177	146 A	5.7 MVA	2.4%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
CDA 11	17	13	2	1	0
CDA 12	0	0	0	0	0
CDA 21	4	3	1	0	0
CDA 22	15	15	13	5	0
CDA 23	4	7	15	11	0
CDA 24	2	3	6	4	0

Zone Substation Comments

1. Establish CDA with one 20/33MVA 66/22kV transformer in 2002.

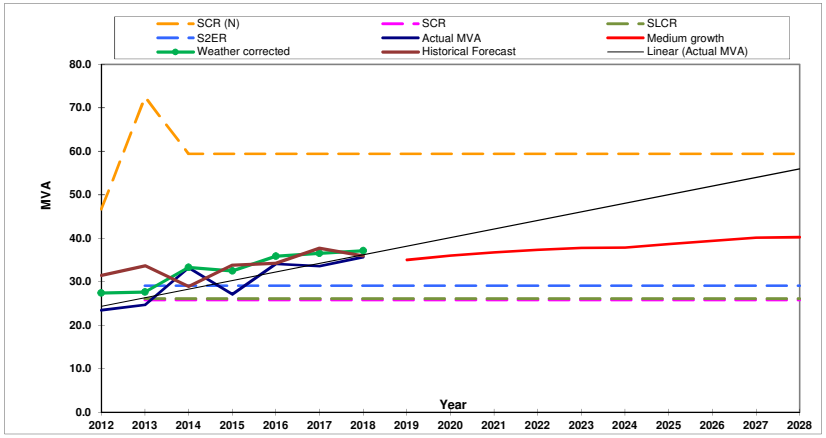
2. Relocate the Mobile Transformer from DVY to CDA in 2011.
   install 3rd Tx at DVY in 2011 for summer 2012.
   install mobile Tx at CDA in 2012 for summer 2013.

3. Load Transfers to CDA
   2.5MW from NO to CDA for summer 2013.

4. New load:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

CAULFIELD **CFD** — Load / Next / Save / Previous

Voltage 11.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	35.8	45.1	46.4	35.2	41.4	43.9	**47.8**	52.9	54.5	55.5	55.9	56.5	56.7	57.8	58.5	59.1	59.6
10% POE actual MD	39.0	47.0	46.5	46.5	46.5	50.5	50.9										
Load transfers (MW)	3.0					3.3		0.5									
Extra new load (MW)			0.1	1.1	3.0	2.7	**1.9**	0.3	1.9	1.7	0.7	0.2					
% growth (MW)		25.8%	3.1%	-24.2%	17.6%	6.0%	**8.9%**	10.7%	2.9%	1.9%	0.7%	1.1%	0.3%	1.9%	1.2%	1.1%	0.7%
Feeder summation reactive demand (MVAr)	5.6	8.5	10.9	0.3	2.9	1.5	**4.3**	6.2	6.8	7.2	7.4	7.6	7.7	8.1	8.4	8.6	8.8
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	12.3	12.3	12.3	8.7	8.7	8.7	**12.9**	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9	12.9
Reactive load on transformers (MVAr)	5.6	8.5	10.9	0.3	2.9	1.5	**4.3**	6.2	6.8	7.2	7.4	7.6	7.7	8.1	8.4	8.6	8.8
Feeder summation power factor	0.99	0.98	0.97	1.00	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.99	0.98	0.97	1.00	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	36.3	45.9	47.7	35.2	41.5	43.9	**48.0**	53.3	54.9	56.0	56.4	57.1	57.2	58.3	59.1	59.8	60.2
(N-1) Cyclic Rating (MVA)	42.1	42.1	42.1	42.1	42.1	42.1	**42.1**	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1	42.1
(N-1) Limited Cyclic Rating (MVA)	43.1	43.1	43.1	43.1	43.1	43.1	**43.1**	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1	43.1
(N-1) 2 Hour Emergency Rating (MVA)	49.0	49.0	49.0	49.0	49.0	49.0	**49.0**	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
(N-1) 10 Minute Emergency Rating (MVA)	49.0	49.0	49.0	49.0	49.0	49.0	**49.0**	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0	49.0
(N) Cyclic Rating (MVA)	84.2	84.2	84.2	49.0	84.2	84.2	**84.2**	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
CFD 11	0	0	0	0	0
CFD 12	0	0	0	0	0
CFD 13	29	0	0	0	0
CFD 14	0	0	0	0	0
CFD 15	0	0	0	0	0
CFD 16	0	0	0	0	0
CFD 21	0	0	0	0	0
CFD 22	0	0	0	0	0
CFD 23	0	0	0	0	0
CFD 24	0	0	0	0	0
CFD 25	0	0	0	0	0
CFD 26	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
CFD 11	300	300	59%	64%	66%	180	223	242	161	156	173	**176**	193	198	200	200	202	107 A	2.1 MVA	3.0%	
CFD 12	350	350	70%	76%	78%	215	249	246	220	249	231	**244**	267	275	283	291	299	83 A	1.7 MVA	4.5%	
CFD 13	350	350	68%	81%	82%	203	236	211	187	209	209	**236**	284	287	288	290	294	66 A	1.3 MVA	4.9%	
CFD 14	630	630	71%	77%	80%	150	424	441	330	413	394	**445**	488	502	511	514	520	142 A	2.8 MVA	3.4%	
CFD 15	280	280	68%	76%	80%	163	168	206	148	169	162	**190**	213	224	233	236	238	67 A	1.3 MVA	5.1%	
CFD 16	510	510	43%	51%	59%	71	19	15	10	13	256	**218**	258	299	347	373	377	252 A	5 MVA	14.5%	
CFD 21	350	350	12%	19%	22%	14	14	15	12	16	30	**41**	65	77	79	81	81	285 A	5.7 MVA	19.8%	
CFD 22	300	300	58%	67%	73%	238	290	307	208	199	148	**174**	200	218	232	233	235	100 A	2 MVA	7.1%	
CFD 23	350	350	84%	90%	91%	258	282	321	211	255	247	**294**	317	320	322	325	330	33 A	0.7 MVA	2.4%	
CFD 24	350	350	57%	62%	62%	200	344	203	168	189	183	**200**	216	218	218	219	221	134 A	2.7 MVA	2.1%	
CFD 25	300	300	54%	60%	62%	126	144	150	111	140	135	**161**	180	185	185	186	188	120 A	2.4 MVA	3.4%	
CFD 26	300	300	75%	86%	89%	168	196	214	165	192	184	**226**	257	268	274	276	280	43 A	0.9 MVA	4.7%	
Average	364	364	60%	67%	67%	166	216	214	161	183	196	**217**	245	256	264	269	272	119 A	2.4 MVA	5.1%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
CFD 11	3	3	1	0	0
CFD 12	4	6	7	7	5
CFD 13	0	0	1	1	1
CFD 14	9	10	7	1	1
CFD 15	9	9	8	2	0
CFD 16	23	39	47	25	0
CFD 21	21	11	2	1	0
CFD 22	12	17	13	0	0
CFD 23	0	0	1	2	1
CFD 24	0	0	0	0	0
CFD 25	7	3	0	0	0
CFD 26	13	9	5	1	1

Zone Substation Comments

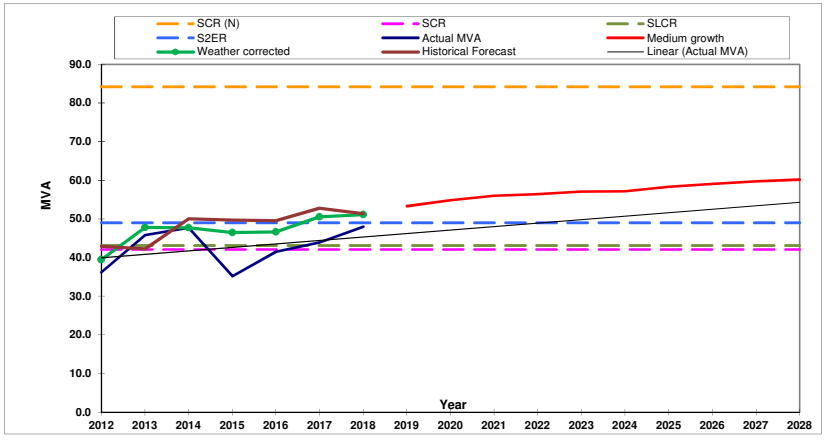
1. CFD zone substation was previously T and was rebuilt in 2007 and 2008 for summer 2009.

2. Load Transfers:
   - 1MW from K10 to CFD22 (T69) prior to summer 2009
   - 2MW from K6 to CFD22 (T69) prior to summer 2009
   - 2MW from BT to CFD for summer 2009.
   - 15.1MW from T to CFD for summer 2009.
   - 1.3MW from K to CFD for summer 2012.
   - 1.7MW from EM to CFD for summer 2012.

3. New Loads:
   - 1MVA in 2008 and 1.3MVA in 2009 for shopping centre along Koornang Rd, Carnegie on CFD12.
   - 1.2MVA in 2009 for Caulfield racecourse on CFD11.
   - 5.1MVA for Monash Uni redevelopment to replace Dandenong-Derby S/S, to be completed in 2010.
   - 5.5MVA Caulfield Village Development - 2014 -2015 (CFD21-4 MVA, CFD16- 1.5 MVA)

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

CHELTENHAM **CM**

Voltage 11.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	26.1	25.4	26.3	23.9	25.0	23.3	**23.8**	27.6	28.2	28.5	28.9	29.7	30.6	31.8	32.5	32.9	33.0
10% POE actual MD	27.6	26.5	26.6	26.5	26.7	26.3	26.1										
Load transfers (MW)																	
Extra new load (MW)			0.1	0.5	1.0	1.0	**1.0**	0.8	0.8	0.7	0.5	0.8	0.9	0.9			
% growth (MW)		-2.7%	3.7%	-9.1%	4.3%	-6.8%	**2.4%**	15.7%	2.3%	1.3%	1.2%	3.0%	3.0%	3.7%	2.5%	1.1%	0.2%
Feeder summation reactive demand (MVAr)	8.4	7.4	7.6	3.4	3.3	3.0	**3.1**	4.6	4.9	5.0	5.2	5.5	5.9	6.4	6.7	6.9	6.9
Zone substation capacitor bank (MVAr)	4.0	4.0	4.0	4.0	4.0	4.0	**4.0**	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Feeder line capacitors (MVAr)	6.3	6.3	6.3	6.3	6.3	6.3	**6.3**	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Reactive load on transformers (MVAr)	4.1	3.1	3.3	-1.0	-1.0	-1.4	**-1.3**	0.3	0.6	0.7	0.8	1.2	1.6	2.1	2.4	2.5	2.6
Feeder summation power factor	0.95	0.96	0.96	0.99	0.99	0.99	**0.99**	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.99	0.99	0.99	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	26.4	25.6	26.5	24.0	25.0	23.3	**23.9**	27.6	28.2	28.5	28.9	29.8	30.7	31.8	32.6	33.0	33.1
(N-1) Cyclic Rating (MVA)	30.9	30.9	30.9	30.9	30.9	30.9	**30.9**	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9	30.9
(N-1) Limited Cyclic Rating (MVA)	33.2	33.2	33.2	33.2	33.2	33.2	**33.2**	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2	33.2
(N-1) 2 Hour Emergency Rating (MVA)	33.9	33.9	33.9	33.9	33.9	33.9	**33.9**	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9
(N-1) 10 Minute Emergency Rating (MVA)	33.9	33.9	33.9	33.9	33.9	33.9	**33.9**	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9	33.9
(N) Cyclic Rating (MVA)	61.8	61.8	61.8	33.9	61.8	61.8	**61.8**	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8	61.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
CM 11	0	0	0	0	0
CM 12	0	0	0	0	0
CM 13	0	0	0	0	0
CM 14	0	0	0	0	0
CM 15	0	0	0	0	0
CM 21	0	0	0	0	0
CM 22	0	0	0	0	0
CM 23	0	0	0	0	0
CM 24	0	0	0	0	0
CM 25	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
CM 11	315	315	37%	43%	45%	132	135	147	127	153	109	**116**	136	142	142	143	144	179 A	3.6 MVA	4.8%	
CM 12	300	300	70%	78%	80%	152	153	251	220	221	207	**210**	235	240	251	259	262	65 A	1.3 MVA	4.9%	
CM 13	335	335	42%	52%	55%	125	123	134	112	139	132	**141**	174	183	183	184	186	161 A	3.2 MVA	6.4%	
CM 14	300	300	40%	44%	45%	142	133	124	136	113	119	**120**	133	134	134	135	136	167 A	3.3 MVA	2.6%	
CM 15	300	300	25%	29%	30%	118	110	86	82	97	81	**74**	87	91	91	91	92	213 A	4.2 MVA	4.8%	
CM 21	330	330	56%	63%	64%	200	219	221	197	176	161	**186**	207	212	217	220	222	123 A	2.4 MVA	3.9%	
CM 22	315	315	22%	26%	29%	60	66	70	59	70	67	**68**	81	91	99	99	100	234 A	4.7 MVA	9.4%	
CM 23	335	335	34%	38%	38%	178	156	103	123	121	120	**115**	127	128	128	128	130	208 A	4.1 MVA	2.6%	
CM 24	315	315	48%	53%	53%	213	205	166	140	160	151	**151**	167	168	168	172	180	148 A	3 MVA	3.9%	
CM 25	315	315	52%	59%	63%	168	182	213	160	158	143	**163**	186	198	213	241	290	129 A	2.6 MVA	15.5%	
Average	316	316	43%	49%	49%	149	148	152	136	141	129	**134**	153	159	163	167	174	163 A	3.2 MVA	5.9%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

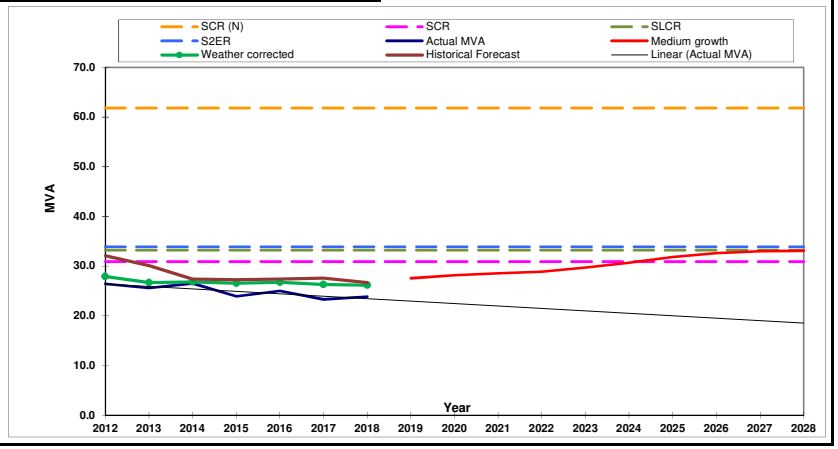
Feeder	2019	2020	2021	2022	2023
CM 11	7	5	0	0	0
CM 12	2	5	10	7	0
CM 13	19	8	0	0	0
CM 14	0	0	0	0	0
CM 15	5	4	0	0	0
CM 21	2	4	4	2	0
CM 22	5	10	8	0	0
CM 23	0	0	0	0	0
CM 24	0	0	0	3	7
CM 25	6	11	15	27	46

Zone Substation Comments

1. Due to space limitation, existing site is suitable for 2 transformers only.
2. Zone Substation ratings were reviewed in 2001. Post 2001 ratings shown are based on 40deg C ambient temperature.
3. Line Capacitors:
   6.3MVAr line capacitors installed in 1998.
4. Load Transfers:
5. New loads:
   New load for summer 2002 :- CM 06 Loreal 0.4MW.
   New load for summer 2003 :- CM 07 industrial load 0.4MW.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

CARRUM CRM

Voltage 22.3 kV

Load | Next | Save | Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	66.1	81.0	77.6	71.1	74.8	77.2	**73.5**	88.2	88.7	88.6	88.8	89.9	90.4	92.1	93.9	95.6	97.0
10% POE actual MD	71.4	81.8	82.4	82.3	81.6	84.5	85.2										
Load transfers (MW)																	
Extra new load (MW)		6.4	1.0	0.8	0.9	0.8	**0.8**	0.5	0.7	0.6	0.7	0.4					
% growth (MW)		22.4%	-4.1%	-8.4%	5.1%	3.3%	**-4.8%**	20.0%	0.6%	-0.2%	0.3%	1.2%	0.6%	1.9%	1.9%	1.8%	1.5%
Feeder summation reactive demand (MVAr)	16.0	20.1	16.3	13.7	12.2	12.8	**11.9**	16.5	16.6	16.6	16.7	17.0	17.2	17.7	18.3	18.8	19.2
Zone substation capacitor bank (MVAr)	10.8	10.8	10.8	10.8	10.8	10.8	**10.8**	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Feeder line capacitors (MVAr)	9.0	10.8	10.8	10.8	10.8	10.8	**10.8**	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
Reactive load on transformers (MVAr)	4.9	9.0	5.2	2.6	1.1	1.7	**0.8**	5.4	5.5	5.5	5.6	5.9	6.1	6.6	7.2	7.7	8.1
Feeder summation power factor	0.97	0.97	0.98	0.98	0.99	0.99	**0.99**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	1.00	0.99	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	66.3	81.4	77.8	71.2	74.8	77.2	**73.5**	88.3	88.9	88.7	89.0	90.1	90.6	92.3	94.1	95.9	97.3
(N-1) Cyclic Rating (MVA)	73.9	73.9	73.9	73.9	73.9	73.9	**73.9**	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9	73.9
(N-1) Limited Cyclic Rating (MVA)	80.9	80.9	80.9	80.9	80.9	80.9	**80.9**	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9
(N-1) 2 Hour Emergency Rating (MVA)	82.8	82.8	82.8	82.8	82.8	82.8	**82.8**	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8
(N-1) 10 Minute Emergency Rating (MVA)	82.8	82.8	82.8	82.8	82.8	82.8	**82.8**	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8	82.8
(N) Cyclic Rating (MVA)	110.8	110.8	110.8	82.8	110.8	110.8	**110.8**	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8	110.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
CRM 11	0	0	0	0	0
CRM 12	55	0	0	0	0
CRM 13	0	0	0	0	0
CRM 14	0	0	0	0	0
CRM 21	0	0	0	0	0
CRM 22	-55	0	0	0	0
CRM 24	0	0	0	0	0
CRM 31	0	0	0	0	0
CRM 32	0	0	0	0	0
CRM 33	0	0	0	0	0
CRM 34	0	0	0	0	0
CRM 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
CRM 11	390	390	94%	94%	94%	407	406	340	335	298	345	**367**	368	368	369	369	369	22 A	0.9 MVA	0.1%	
CRM 12	310	310	56%	84%	86%	163	170	180	165	177	173	**175**	261	266	269	271	274	49 A	1.9 MVA	11.4%	
CRM 13	295	295	64%	76%	78%	232	223	202	216	250	199	**189**	225	229	232	234	237	70 A	2.7 MVA	5.1%	
CRM 14	315	315	82%	97%	99%	224	252	266	239	256	241	**258**	304	310	316	323	329	11 A	0.4 MVA	5.5%	
CRM 21	300	300	86%	99%	103%	154	320	234	223	205	219	**258**	298	308	317	329	340	2 A	0.1 MVA	6.4%	
CRM 22	350	350	91%	92%	93%	223	285	257	224	237	233	**319**	321	327	331	333	337	29 A	1.1 MVA	1.1%	
CRM 24	280	280	43%	51%	52%	117	127	127	108	120	107	**121**	142	145	147	148	149	138 A	5.3 MVA	4.8%	
CRM 31	0	0																0 A	0 MVA		
CRM 32	390	390	56%	56%	56%	314	196	198	248	176	212	**218**	219	219	219	219	219	171 A	6.6 MVA	0.1%	
CRM 33	290	290	57%	68%	69%	158	211	229	190	164	182	**166**	196	200	202	204	206	94 A	3.6 MVA	4.8%	
CRM 34	320	320	59%	73%	78%	249	120	149	164	181	173	**190**	233	250	263	270	274	87 A	3.4 MVA	8.9%	
CRM 35	350	350	78%	91%	93%	290	298	310	277	297	262	**271**	320	326	330	333	336	30 A	1.2 MVA	4.8%	
Average	299	299	71%	80%	80%	211	217	208	199	197	196	**211**	241	246	250	253	256	59 A	2.3 MVA	4.3%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
CRM 11	0	0	0	0	0
CRM 12	0	0	0	0	0
CRM 13	3	0	0	0	0
CRM 14	0	1	2	4	3
CRM 21	1	4	6	10	7
CRM 22	0	0	0	0	0
CRM 24	0	0	0	0	0
CRM 31	0	0	0	0	0
CRM 32	0	0	0	0	0
CRM 33	0	0	0	0	0
CRM 34	9	13	10	4	1
CRM 35	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
   ambient temperature.

2. Line Capacitors
   6MVAr line capacitors installed in 1998.
   6.3MVAr of line capacitors to be installed in 2000 for summer 2001.
3. Replace PCB capacitors in 2003 : #2 - 12MVAr.

4. Load transfers:
   Transfer 2.9MW from MC, DVY to CRM prior to summer 2010.
   CRM13 - 5.0MVA from FTN12 and 2.0MVA from FTN23 (2011/12)

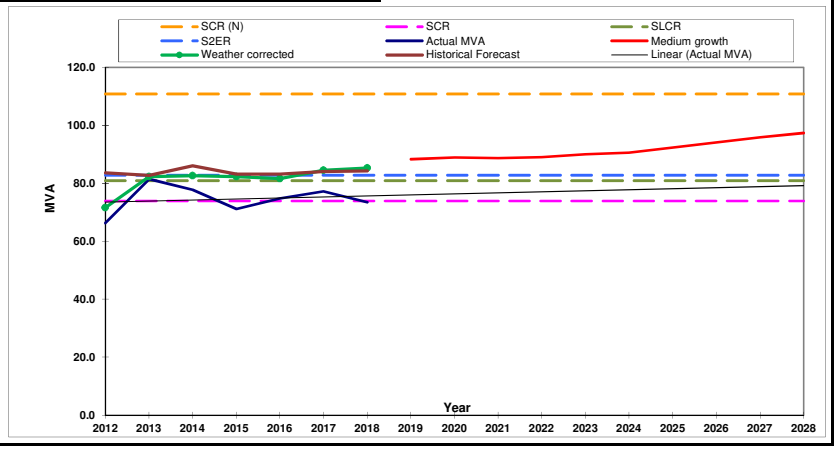
5. New Loads
   1.0MVA on CRM32 (2014)
   4.5MW on CRM21 over next 3 years from 2007 for Eastlink Business Estate
   9.5MW on CRM32 from ETP in 2013

6. New 66/22kV Transformer
   Install & commission 3rd transformer at CRM in 2009 prior to summer 2010.

Reserve Capacity Requirements

Network Support Agreements

1. GreenSync, 1MVA on CRM35 for 2 years from 2014/15



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

DONCASTER **DC**
Voltage 22.7 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	67.4	79.0	86.0	68.3	79.2	75.7	**81.5**	93.9	95.1	96.1	97.3	99.3	100.2	101.9	103.4	104.7	105.1
10% POE actual MD	73.1	81.8	86.0	86.7	86.2	85.7	89.6										
Load transfers (MW)																	
Extra new load (MW)			1.5	2.7	5.8	4.0	**4.2**	2.1	1.8	1.8	1.6	1.5	0.6				
% growth (MW)		17.2%	8.8%	-20.6%	16.0%	-4.4%	**7.7%**	15.2%	1.3%	1.0%	1.3%	2.1%	0.9%	1.7%	1.5%	1.3%	0.4%
Feeder summation reactive demand (MVAr)	16.1	12.9	16.0	8.4	5.4	3.9	**3.6**	7.1	7.5	7.8	8.1	8.7	8.9	9.4	9.8	10.2	10.3
Zone substation capacitor bank (MVAr)	9.1	9.1	9.1	9.1	9.1	9.1	**9.1**	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1	9.1
Feeder line capacitors (MVAr)	15.6	18.3	18.3	19.8	19.8	19.8	**18.3**	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3	18.3
Reactive load on transformers (MVAr)	6.4	3.2	6.3	-1.3	-4.3	-5.8	**-6.1**	-2.6	-2.2	-1.9	-1.6	-1.0	-0.8	-0.3	0.1	0.5	0.6
Feeder summation power factor	0.97	0.99	0.98	0.99	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	67.7	79.1	86.2	68.3	79.3	75.9	**81.7**	93.9	95.2	96.1	97.3	99.3	100.2	101.9	103.4	104.7	105.1
(N-1) Cyclic Rating (MVA)	73.6	73.6	73.6	73.6	73.6	73.6	**73.6**	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6	73.6
(N-1) Limited Cyclic Rating (MVA)	78.6	78.6	78.6	78.6	78.6	78.6	**78.6**	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6
(N-1) 2 Hour Emergency Rating (MVA)	82.3	81.4	81.4	81.4	81.4	81.4	**81.4**	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4
(N-1) 10 Minute Emergency Rating (MVA)	82.3	81.4	81.4	81.4	81.4	81.4	**81.4**	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4	81.4
(N) Cyclic Rating (MVA)	110.4	110.4	110.4	81.4	110.4	110.4	**110.4**	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4	110.4

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
DC 1	0	0	0	0	0
DC 2	0	0	0	0	0
DC 3	0	0	0	0	0
DC 4	0	0	0	0	0
DC 5	0	0	0	0	0
DC 6	0	0	0	0	0
DC 7	0	0	0	0	0
DC 8	0	0	0	0	0
DC 10	0	0	0	0	0
DC 12	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
DC 1	350	350	66%	77%	77%	249	256	266	222	245	235	**231**	268	271	272	273	276	82 A	3.2 MVA	3.8%	
DC 2	350	350	85%	89%	90%	247	270	295	233	270	252	**297**	313	315	317	320	325	37 A	1.5 MVA	1.9%	
DC 3	350	350	80%	85%	86%	238	264	287	218	255	233	**279**	296	301	309	315	318	54 A	2.1 MVA	2.8%	
DC 4	350	350	62%	74%	79%	178	217	235	178	212	197	**218**	258	275	289	290	293	92 A	3.6 MVA	6.9%	
DC 5	350	350	78%	88%	90%	213	280	296	232	278	258	**273**	307	314	318	322	326	43 A	1.7 MVA	3.9%	
DC 6	350	350	63%	90%	93%	124	150	167	203	218	159	**221**	316	325	332	340	351	34 A	1.3 MVA	11.8%	
DC 7	265	265	52%	59%	64%	152	169	176	150	144	138	**137**	158	168	180	187	190	107 A	4.2 MVA	7.7%	
DC 8	265	265	58%	64%	65%	134	147	164	127	156	166	**154**	171	172	174	176	178	94 A	3.7 MVA	3.1%	
DC 10	330	330	71%	79%	80%	192	211	230	180	202	201	**235**	261	263	265	267	270	69 A	2.7 MVA	3.0%	
DC 12	350	350	62%	76%	77%	192	180	178	171	158	203	**216**	265	270	283	307	338	85 A	3.3 MVA	11.3%	
Average	331	331	68%	79%	79%	192	214	230	191	214	204	**226**	261	267	274	280	286	70 A	2.7 MVA	5.3%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
DC 1	3	2	0	0	0
DC 2	1	1	0	1	2
DC 3	4	4	6	5	0
DC 4	17	16	12	0	0
DC 5	6	5	2	2	1
DC 6	20	8	5	7	8
DC 7	6	10	11	6	1
DC 8	0	1	1	1	0
DC 10	1	1	1	1	0
DC 12	0	4	12	23	28

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
   2-hour rating is limited by transformer #2 cable.

2. Line Capacitors
   Installed 8.1MVAr prior to summer 1999.
   Installed 5.7MVAr prior to summer 2000.
   Install 2.7MVAr in 2000 for summer 2001.

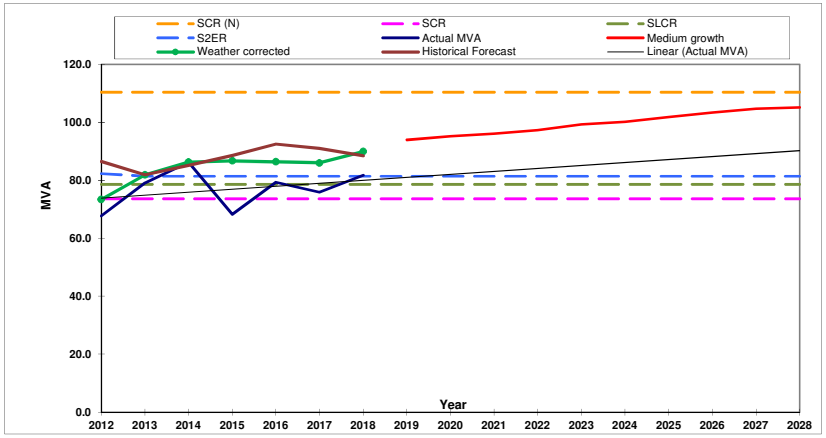
3. Load Transfers:
   2.0MW to BH prior to summer 2009.
   0.4MW to NW prior to summer 2009.

4. New Loads
   1.0MVA new s/s on DC12, the corner of Arnold st and Spring st Box Hill, Melways p47 C8. in 2009
   BH New Hospital-Addl Load 6 MVA - 2013 -DC12 & DC6 (DC8 previously)

Reserve Capacity Requirements

1. Manningham City Council.
   DC04 (preferred)
   DC01 (reserve) - 0.65MVA (17A) reserve.
2. The Pines.
   DC02 (preferred)
   DC03 (reserve) - 0.6MW (16A).
   The contract no longer exist.
3. Box Hill Hospital Reserve capacity agreement
   DC12 (1 MVA)
   DC06 (2 MVA)
   The contract to be signed in 2016.

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

DROMANA **DMA** Load Next Save Previous

Voltage 22.22 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	34.7	37.6	34.8	32.7	39.1	37.4	**40.4**	46.4	46.9	47.2	47.7	48.8	49.6	51.0	52.4	53.7	54.5
10% POE actual MD	36.7	39.4	41.1	40.4	42.0	43.4	44.5										
Load transfers (MW)																	
Extra new load (MW)			0.1	0.3	0.5	0.3	**0.4**	0.1	0.1	0.1							
% growth (MW)		8.4%	-7.4%	-6.1%	19.7%	-4.6%	**8.2%**	14.8%	1.0%	0.6%	1.0%	2.3%	1.7%	2.8%	2.7%	2.5%	1.5%
Feeder summation reactive demand (MVAr)	5.0	5.1	4.8	4.4	3.7	2.8	**3.2**	4.6	4.7	4.8	4.9	5.2	5.4	5.7	6.0	6.3	6.5
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	4.5	5.4	5.4	5.1	5.1	5.1	**6.3**	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Reactive load on transformers (MVAr)	5.0	5.1	4.8	4.4	3.7	2.8	**3.2**	4.6	4.7	4.8	4.9	5.2	5.4	5.7	6.0	6.3	6.5
Feeder summation power factor	0.99	0.99	0.99	0.99	1.00	1.00	**1.00**	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.99	0.99	0.99	0.99	1.00	1.00	**1.00**	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	35.1	38.0	35.2	33.0	39.3	37.5	**40.6**	46.6	47.1	47.4	47.9	49.0	49.9	51.3	52.7	54.0	54.9
(N-1) Cyclic Rating (MVA)						44.8	**44.8**	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8	44.8
(N-1) Limited Cyclic Rating (MVA)						48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N-1) 2 Hour Emergency Rating (MVA)						48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N-1) 10 Minute Emergency Rating (MVA)						48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N) Cyclic Rating (MVA)	44.8	44.8	44.8		44.8	89.6	**89.6**	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6	89.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
DMA 11					
DMA 12	0	0	0	0	0
DMA 13	0	0	0	0	0
DMA 14	0	0	0	0	0
DMA 15	0	0	0	0	0
DMA 21	0	0	0	0	0
DMA 22	0	0	0	0	0
DMA 23	0	0	0	0	0
DMA 24	0	0	0	0	0
DMA 25	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
DMA 11	0	0				156	145	154	146												
DMA 12	315	315	47%	52%	53%	307	321	286	265	201	120	**147**	164	167	171	174	178	151 A	5.8 MVA	4.3%	
DMA 13	350	350	37%	42%	43%	186	185	173	187	114	113	**130**	147	149	152	155	159	203 A	7.8 MVA	4.4%	
DMA 14	315	315	74%	84%	86%	152	184	187	180	219	224	**234**	265	271	276	281	287	50 A	1.9 MVA	4.6%	
DMA 15	310	310	25%	28%	29%	110	137	135	126	81	80	**78**	88	89	91	93	95	222 A	8.6 MVA	4.3%	
DMA 21	260	260	70%	79%	81%					195	181	**183**	206	211	217	221	226	54 A	2.1 MVA	4.7%	
DMA 22	0	0																0 A	0 MVA		
DMA 23	275	275	65%	73%	75%					173	174	**179**	201	205	209	213	218	74 A	2.8 MVA	4.3%	
DMA 24	320	320	54%	61%	62%					144	151	**173**	194	197	201	205	210	126 A	4.9 MVA	4.3%	
DMA 25	0	0																0 A	0 MVA		
Average	215	215	75%	59%	65%	182	194	187	113	161	149	**160**	140	143	146	149	152	74 A	2.9 MVA	-1.0%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
DMA 11	0	0	0	0	0
DMA 12	0	0	0	0	0
DMA 13	1	0	0	0	0
DMA 14	3	1	0	0	0
DMA 15	0	0	0	0	0
DMA 21	1	2	1	0	0
DMA 22	0	0	0	0	0
DMA 23	0	0	0	0	0
DMA 24	0	0	0	0	0
DMA 25	0	0	0	0	0

Zone Substation Comments

1. New zone substation constructed in 2006 for summer 2007 with a single 20/33MVA transformer.
   Second transformer to be installed in 2016.

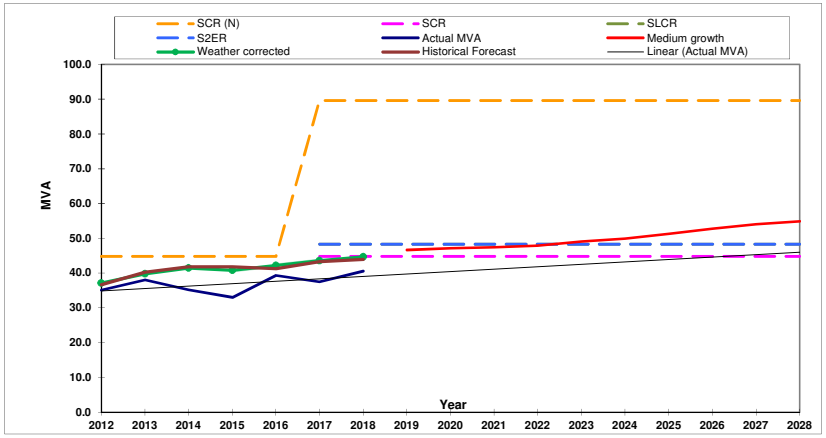
2. Line capacitors: DMA 11 - Cap Bayview Outlook, Cap Nepean Verdon, Cap Nepean Eddystone.
   DMA 12 - none.
   DMA 13 - Cap MTN Flind Harrison.
   DMA 14 - Cap Marine Nepean.
   DMA 15 - Cap Bittern MTN Flind.
   All 900kVAr fixed except Cap Nepean Eddystone which is unknown.

3. Load transfer
   0.5MW from RBD to DMA before summer 2009
   Feeder network reconfiguration in 2015.

4. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

DANDENONG **DN**
Voltage 22.33 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	70.6	70.5	83.2	75.3	75.3	75.8	**73.4**	89.0	89.2	88.7	88.4	89.4	89.7	91.5	93.2	94.9	96.0
10% POE actual MD	77.3	80.0	83.1	86.3	84.2	85.9	85.7										
Load transfers (MW)				3.4													
Extra new load (MW)		0.9	4.2	1.8	2.1	2.6	**2.2**	1.4	1.0	0.5	0.4	0.1					
% growth (MW)		-0.1%	18.1%	-9.5%	0.0%	0.6%	**-3.1%**	21.1%	0.3%	-0.6%	-0.3%	1.1%	0.4%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	3.6	7.7	28.6	20.2	9.3	9.8	**3.5**	6.7	6.7	6.6	6.6	6.8	6.8	7.2	7.6	7.9	8.1
Zone substation capacitor bank (MVAr)	17.8	17.8	17.8	17.8	17.8	17.8	**17.8**	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Feeder line capacitors (MVAr)	11.4	11.4	11.4	11.4	11.4	11.4	**11.4**	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
Reactive load on transformers (MVAr)	-14.6	-10.6	10.3	1.9	-9.0	-8.5	**-14.8**	-11.6	-11.6	-11.7	-11.7	-11.5	-11.4	-11.1	-10.7	-10.4	-10.2
Feeder summation power factor	1.00	0.99	0.95	0.97	0.99	0.99	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	0.98	0.99	0.99	1.00	0.99	0.99	**0.98**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)	6.0	5.1	1.4	4.6	2.4	0.0	**5.6**	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Overall demand on transformers (MVA)	66.2	66.2	82.4	70.7	73.5	76.3	**69.4**	85.2	85.5	85.0	84.7	85.7	86.0	87.7	89.4	91.0	92.0
(N-1) Cyclic Rating (MVA)	86.7	84.2	84.2	84.2	84.2	84.2	**84.2**	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2	84.2
(N-1) Limited Cyclic Rating (MVA)	90.2	87.6	87.6	87.6	87.6	87.6	**87.6**	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6	87.6
(N-1) 2 Hour Emergency Rating (MVA)	92.7	92.5	92.5	92.5	92.5	92.5	**92.5**	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
(N-1) 10 Minute Emergency Rating (MVA)	92.7	92.5	92.5	92.5	92.5	92.5	**92.5**	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5	92.5
(N) Cyclic Rating (MVA)	130.0	126.2	126.2	92.5	126.2	126.2	**126.2**	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2	126.2

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
DN 2	0	0	0	0	0
DN 4	0	0	0	0	0
DN 6	0	0	0	0	0
DN 7	0	0	0	0	0
DN 8	0	0	0	0	0
DN 9	0	0	0	0	0
DN 10	0	0	0	0	0
DN 11	0	0	0	0	0
DN 13	0	0	0	0	0
DN 21	0	0	0	0	0
DN 22	0	0	0	0	0
DN 23	0	0	0	0	0
DN 24	0	0	0	0	0
DN 25	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
DN 2	340	340	53%	63%	64%	244	283	239	235	185	186	**181**	214	217	219	219	222	126 A	4.9 MVA	4.5%	
DN 4	260	260	45%	54%	54%	180	177	136	127	137	121	**117**	139	141	142	143	144	121 A	4.7 MVA	4.7%	
DN 6	350	350	38%	46%	48%	144	155	137	128	135	147	**135**	161	167	174	181	186	189 A	7.3 MVA	7.6%	
DN 7	350	350	64%	77%	79%	250	254	272	231	241	231	**225**	270	276	280	283	286	80 A	3.1 MVA	5.3%	
DN 8	350	350	35%	42%	42%	67	159	187	167	149	154	**122**	146	148	149	149	151	204 A	7.9 MVA	4.8%	
DN 9	260	260	75%	93%	96%	174	180	183	184	186	187	**195**	241	251	253	253	256	19 A	0.7 MVA	6.2%	
DN 10	260	260	57%	67%	68%	140	146	159	138	147	136	**148**	175	177	179	179	181	85 A	3.3 MVA	4.5%	
DN 11	265	265	78%	92%	93%	213	237	205	176	182	203	**205**	243	246	248	249	252	22 A	0.8 MVA	4.5%	
DN 13	350	350	74%	89%	91%	185	217	263	215	246	255	**260**	312	319	322	323	326	38 A	1.5 MVA	5.1%	
DN 21	260	260	67%	79%	80%	202	211	190	159	179	177	**173**	205	208	209	210	212	55 A	2.1 MVA	4.5%	
DN 22	350	350	68%	81%	82%	202	256	279	216	240	242	**239**	283	287	289	290	293	67 A	2.6 MVA	4.5%	
DN 23	400	400	15%	21%	22%				34	35	31	**62**	83	89	89	90	91	317 A	12.3 MVA	9.5%	
DN 24	300	300	50%	78%	81%	158	169	152	141	149	154	**151**	234	242	248	248	250	66 A	2.6 MVA	13.1%	
DN 25	360	360	47%	57%	58%	174	177	209	268	171	155	**169**	204	208	212	214	217	156 A	6 MVA	5.6%	
Average	318	318	53%	65%	65%	179	202	201	173	170	170	**170**	208	213	215	217	219	110 A	4.3 MVA	5.7%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
DN 2	0	0	0	0	0
DN 4	1	0	0	0	0
DN 6	2	4	6	7	2
DN 7	3	3	2	2	0
DN 8	2	0	0	0	0
DN 9	9	7	0	0	0
DN 10	0	0	0	0	0
DN 11	0	0	0	0	0
DN 13	4	3	0	0	0
DN 21	0	0	0	0	0
DN 22	0	0	0	0	0
DN 23	10	5	0	0	0
DN 24	3	6	4	0	0
DN 25	4	2	2	2	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Dandenong Hosp. Co-gen. - 5MW, 0MVAr, 7AM - 11PM, Mon - Frid.
   CoGent generation - 2MW, 0MVAr, 7AM-10PM, Mon-Fri
3. Line Caps: Install 1.8MVAr line caps on DN01 for summer 2001.
4. PCB Cap Bank Replacement 1998: #3 - 9MVAr
5. Load Transfers:
   DN4 - 1.4MVA to DN8 and 1.1MVA to DN21 (2012/13)
   DN21 - 2.5MVA to DN8 (2012/13)
   DN13 - 1.7MVA from LD2 (2012/13)

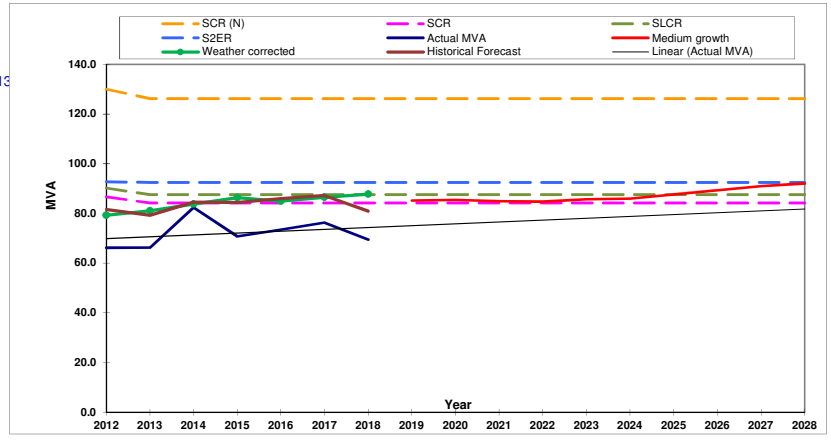
6. New Loads:
   - 2MVA on DN8, Estate One (2012)
   - 1.5MW by Hallam industrial development on DN21 over 2009-2011.
   - proposed approx 30 MVA over 20 yrs for the Dandenong revitilisation project by 2030.
   - new feeder DN23 was created in 2015 to supply Estate One demand.

7. New Transformer - Third transformer at DN in 2007 for summer 2008.
   No 3 transformer was replaced on 30 Sep 2013

Reserve Capacity Requirements

1. Pilkington Glass Greens Rd Dandenong.
   DSH22 (preferred)
   DN24 (reserve) - 2MVA (52A) _ Changed from 7MVA in 2013
2. Dandenong Hospital
   DN11 (preferred)
   LD4 (reserve) - 1.8MVA (47A)
3. Aurora
   DN11 (preferred)
   LD4 (reserve) - 1.15MVA (30A)
   The reserve constract is for 1.8MVA (Aurora inclusive)

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

DANDENONG SOUTH DSH (Load / Next / Save / Previous)
Voltage 22.3 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	60.4	59.6	61.8	56.7	56.7	56.9	**62.4**	68.5	69.1	68.8	68.6	69.4	69.6	71.0	72.3	73.7	74.5
10% POE actual MD	63.5	61.4	64.7	59.9	60.7	60.8	64.8										
Load transfers (MW)			-9.5														
Extra new load (MW)		3.8	4.1	2.0	4.9	3.2	**3.4**	2.4	1.3	0.5	0.4	0.1					
% growth (MW)		-1.3%	3.6%	-8.2%	0.0%	0.4%	**9.6%**	9.8%	0.9%	-0.5%	-0.3%	1.1%	0.4%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	19.4	17.9	21.9	-4.1	5.5	18.6	**19.9**	23.4	23.8	23.6	23.5	23.9	24.1	24.8	25.6	26.4	26.8
Zone substation capacitor bank (MVAr)	12.4	12.4	12.4	12.4	12.4	12.4	**12.4**	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
Feeder line capacitors (MVAr)	19.2	19.2	19.2	21.0	21.0	21.0	**15.3**	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
Reactive load on transformers (MVAr)	6.7	5.2	9.2	-16.8	-7.2	5.9	**7.2**	10.7	11.1	10.9	10.8	11.2	11.4	12.1	12.9	13.7	14.1
Feeder summation power factor	0.95	0.96	0.94	1.00	1.00	0.95	**0.95**	0.95	0.95	0.95	0.95	0.95	0.95	0.94	0.94	0.94	0.94
Transformation summation power factor	0.99	1.00	0.99	0.96	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	60.8	59.9	62.4	59.1	57.2	57.2	**62.8**	69.4	70.0	69.7	69.5	70.3	70.6	72.0	73.5	74.9	75.8
(N-1) Cyclic Rating (MVA)	62.8	61.3	61.3	61.3	61.3	61.3	**61.3**	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
(N-1) Limited Cyclic Rating (MVA)	67.5	65.8	65.8	65.8	65.8	65.8	**65.8**	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
(N-1) 2 Hour Emergency Rating (MVA)	67.5	67.5	67.5	67.5	67.5	67.5	**67.5**	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6	96.6
(N-1) 10 Minute Emergency Rating (MVA)	67.5	67.5	69.0	69.0	69.0	69.0	**69.0**	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0	69.0
(N) Cyclic Rating (MVA)	94.2	91.9	91.9	69.0	91.9	91.9	**91.9**	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8	144.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
DSH 13	0	0	0	0	0
DSH 14	0	0	0	0	0
DSH 21	0	0	0	0	0
DSH 22	0	0	0	0	0
DSH 23	0	0	0	0	0
DSH 24	0	0	0	0	0
DSH 31	0	0	0	0	0
DSH 32	0	0	0	0	0
DSH 33	0	0	0	0	0
DSH 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
DSH 13	344	344	89%	89%	89%	323	296	310	336	325	332	**307**	307	307	308	308	308	37 A	1.4 MVA	0.1%	
DSH 14	350	350	60%	65%	67%	164	165	152	148	158	155	**211**	228	234	236	237	239	122 A	4.7 MVA	2.7%	
DSH 21	350	350	83%	87%	89%	252	266	278	260	244	262	**289**	306	310	313	314	317	44 A	1.7 MVA	1.9%	
DSH 22	345	345	43%	45%	46%	150	157	173	176	167	154	**148**	157	159	160	161	162	188 A	7.3 MVA	1.9%	
DSH 23	335	335	21%	22%	23%	86	88	87	74	79	71	**70**	74	75	77	78	79	261 A	10.1 MVA	2.5%	
DSH 24	350	350	21%	27%	30%	148	194	198	10	39	58	**73**	94	104	106	107	110	256 A	9.9 MVA	10.2%	
DSH 31	350	350	55%	58%	59%	162	143	169	156	144	177	**191**	203	206	208	208	210	147 A	5.7 MVA	2.0%	
DSH 32	325	325	52%	57%	58%	190	211	215	207	197	211	**170**	184	189	190	191	193	141 A	5.5 MVA	2.6%	
DSH 33	550	550	58%	65%	67%	367	376	325	345	383	372	**317**	358	367	370	371	375	192 A	7.4 MVA	3.7%	
DSH 34	325	325	40%	47%	52%	90	79	113	117	106	112	**129**	152	170	185	194	196	173 A	6.7 MVA	10.4%	
Average	362	362	53%	57%	57%	193	198	202	183	184	190	**190**	206	212	215	217	219	156 A	6 MVA	3.0%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
DSH 13	0	0	0	0	0
DSH 14	5	4	0	0	0
DSH 21	0	0	0	0	0
DSH 22	0	0	0	0	0
DSH 23	0	0	1	1	0
DSH 24	17	9	1	1	1
DSH 31	1	0	0	0	0
DSH 32	3	2	0	0	0
DSH 33	24	4	0	0	0
DSH 34	15	17	13	8	1

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors:
   33.9MVAr of line capacitors were installed in late 1997. 10.8MVAr transferred to DVY in Dec 1999.

3. PCB Cap Bank Replacement - 1998: # 2 - 7MVAr; #3 - 5MVAr

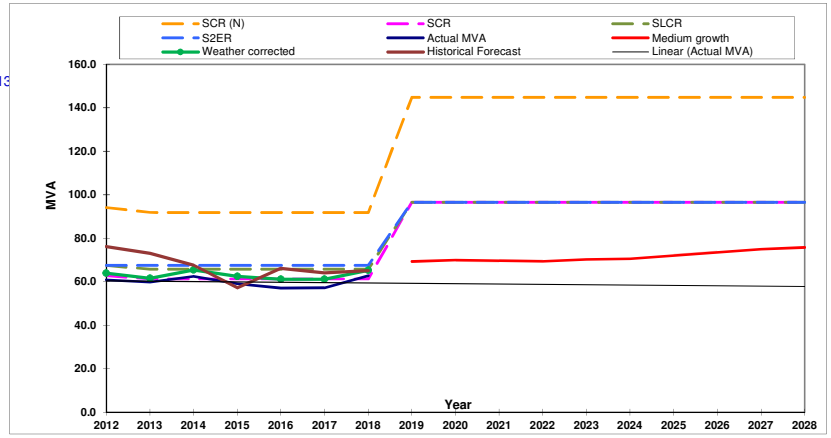
4. Load Transfers:
   Transfer 4MW from DVY31 and DVY34 to DSH33 for summer 2009.
   Transfer 7MVA from DSH24 to KBH33 for summer 2015.

5. New Loads:
   5MVA for Aluminium Profiles on DSH33 (2016) - HV Customer

Reserve Capacity Requirements

1. Pilkingtons, Greens Rd, Dandenong
   DSH22 (preferred)
   DN24 (reserve) - 2MVA (52A) _ Changed from 7MVA in 2013

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

DANDENONG VALLEY DVY (Load / Next / Save / Previous)
Voltage 22.59 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	62.9	70.3	71.2	70.9	73.8	76.4	**76.3**	82.6	83.5	84.1	85.1	86.5	86.8	88.5	90.2	91.9	92.9
10% POE actual MD	65.9	72.4	73.4	73.2	74.2	78.9	78.8										
Load transfers (MW)																	
Extra new load (MW)		1.6	2.3	1.5	4.4	2.8	**3.0**	2.0	1.6	1.5	1.5	1.1	0.1				
% growth (MW)		11.7%	1.3%	-0.4%	4.2%	3.5%	**-0.2%**	8.3%	1.1%	0.7%	1.2%	1.7%	0.4%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	25.9	28.5	28.0	24.9	26.1	24.5	**22.1**	25.6	26.1	26.4	27.0	27.8	27.9	28.9	29.8	30.7	31.3
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	16.2	18.9	18.9	21.6	21.6	21.6	**18.9**	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
Reactive load on transformers (MVAr)	25.9	28.5	28.0	24.9	26.1	24.5	**22.1**	25.6	26.1	26.4	27.0	27.8	27.9	28.9	29.8	30.7	31.3
Feeder summation power factor	0.92	0.93	0.93	0.94	0.94	0.95	**0.96**	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Transformation summation power factor	0.92	0.93	0.93	0.94	0.94	0.95	**0.96**	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	68.0	75.8	76.5	75.1	78.3	80.3	**79.4**	86.5	87.5	88.2	89.3	90.9	91.2	93.1	95.0	96.9	98.0
(N-1) Cyclic Rating (MVA)	87.8	87.8	87.8	87.8	87.8	87.8	**87.8**	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8	87.8
(N-1) Limited Cyclic Rating (MVA)	94.3	93.7	93.7	93.7	93.7	93.7	**93.7**	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7	93.7
(N-1) 2 Hour Emergency Rating (MVA)	101.0	94.7	94.7	94.7	94.7	94.7	**94.7**	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7
(N-1) 10 Minute Emergency Rating (MVA)	101.0	94.7	94.7	94.7	94.7	94.7	**94.7**	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7	94.7
(N) Cyclic Rating (MVA)	133.7	131.6	131.6	94.7	131.6	131.6	**131.6**	131.6	131.6	131.6	131.6	131.6	131.6	131.6	131.6	131.6	131.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
DVY 11	0	0	0	0	0
DVY 12	0	0	0	0	0
DVY 13	0	0	0	0	0
DVY 14	0	0	0	0	0
DVY 21	0	0	0	0	0
DVY 22	0	0	0	0	0
DVY 23	0	0	0	0	0
DVY 24	0	0	0	0	0
DVY 31	0	0	0	0	0
DVY 32	0	0	0	0	0
DVY 33	0	0	0	0	0
DVY 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
DVY 11	350	350	37%	77%	78%					140	137	**130**	268	273	276	277	278	82 A	3.2 MVA	22.8%	
DVY 12	0	0																0 A	0 MVA		
DVY 13	350	350	64%	67%	69%	266	264	262	262	248	221	**223**	235	240	246	254	261	115 A	4.5 MVA	3.4%	
DVY 14	350	350	55%	59%	60%	210	239	228	202	184	176	**193**	206	208	210	211	213	144 A	5.6 MVA	2.0%	
DVY 21	350	350	69%	76%	77%	264	269	268	248	246	243	**242**	265	269	272	274	277	85 A	3.3 MVA	2.9%	
DVY 22	300	300	55%	58%	59%	239	247	230	219	212	166	**165**	173	176	177	178	180	127 A	5 MVA	1.8%	
DVY 23	330	330	65%	68%	69%			117	155	240	219	**213**	226	229	230	231	234	104 A	4.1 MVA	1.9%	
DVY 24	305	305	66%	78%	86%	70	233	234	204	242	186	**200**	238	263	282	294	304	67 A	2.6 MVA	10.4%	
DVY 31	310	310	67%	71%	73%	156	286	232	224	192	200	**207**	221	227	232	234	237	89 A	3.5 MVA	2.9%	
DVY 32	260	260	65%	69%	70%	142	172	164	154	171	174	**170**	179	181	182	183	185	81 A	3.2 MVA	1.8%	
DVY 33	330	330	47%	51%	53%	232	235	191	188	169	166	**155**	168	174	175	176	177	162 A	6.3 MVA	2.9%	
DVY 34	340	340	90%	97%	101%	304	255	243	255	271	271	**307**	329	342	358	383	406	11 A	0.4 MVA	6.5%	
Average	298	298	62%	70%	70%	157	183	181	176	193	180	**184**	209	215	220	225	229	89 A	3.5 MVA	5.0%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
DVY 11	1	3	2	0	0
DVY 12	0	0	0	0	0
DVY 13	0	2	4	7	4
DVY 14	2	0	0	0	0
DVY 21	10	1	1	1	0
DVY 22	0	0	0	0	0
DVY 23	1	0	0	0	0
DVY 24	28	22	17	11	7
DVY 31	3	3	3	1	0
DVY 32	0	0	0	0	0
DVY 33	5	4	0	0	0
DVY 34	7	9	13	23	19

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors - 4.5MVAr for summer 2001.

3. Load Transfers:
   Transfer 7.5MW from DVY to DSH and DN prior to summer 2009.
   Transfer 2.5MW from DVY to FTN prior to summer 2009.
   Transfer 7MW from DVY to CRM prior to summer 2010.

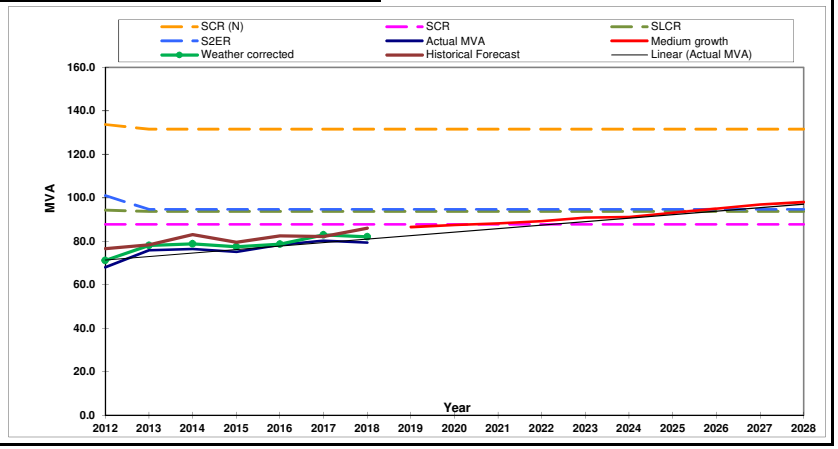
4. New Loads:
   3MVA for Genfac on DVY21 (2016) - HV Customer
   8MVA for Nexus Estate on DVY24 (2017-18) - HV Customer

5. New Transformer:
   Install 2nd 20/33MVA transformer in 2003 for summer 2004.
   Install 3rd 20/33MVA transformer in 2011 for summer 2012. Relocate mobile Tx to CDA.

Reserve Capacity Requirements

1. Woolworths DC, Dandenong South.
   DVY11 (5MVA for 2016 and 17, 4MVA for 2018)

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

EAST BURWOOD EB
Voltage 22.51 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	51.3	59.0	61.9	51.5	58.4	54.4	**57.4**	63.5	64.5	65.4	66.4	68.3	69.3	70.3	71.6	72.8	73.1
10% POE actual MD	58.3	61.9	61.9	60.8	60.1	61.0	61.0										
Load transfers (MW)																	
Extra new load (MW)		0.6	0.3	0.3	2.4	1.3	**2.1**	1.2	1.7	1.7	1.5	1.8	1.1				
% growth (MW)		14.9%	4.9%	-16.7%	13.4%	-6.8%	**5.5%**	10.5%	1.6%	1.4%	1.4%	2.9%	1.6%	1.4%	1.9%	1.7%	0.4%
Feeder summation reactive demand (MVAr)	15.3	15.6	15.4	10.1	14.3	12.5	**11.7**	13.6	13.9	14.2	14.4	15.0	15.4	15.7	16.1	16.4	16.5
Zone substation capacitor bank (MVAr)	13.9	13.9	13.9	13.9	13.9	13.9	**13.9**	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9	13.9
Feeder line capacitors (MVAr)	5.7	5.7	5.7	6.0	6.0	6.0	**5.7**	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7	5.7
Reactive load on transformers (MVAr)	0.7	1.0	0.8	-4.5	-0.3	-2.1	**-2.8**	-1.0	-0.7	-0.4	-0.1	0.5	0.8	1.1	1.5	1.9	2.0
Feeder summation power factor	0.96	0.97	0.97	0.98	0.97	0.97	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	51.3	59.0	61.9	51.7	58.4	54.5	**57.5**	63.5	64.5	65.4	66.4	68.3	69.3	70.3	71.6	72.8	73.1
(N-1) Cyclic Rating (MVA)	67.8	67.8	67.8	67.8	67.8	67.8	**67.8**	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8	67.8
(N-1) Limited Cyclic Rating (MVA)	72.5	72.5	72.5	72.5	72.5	72.5	**72.5**	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5	72.5
(N-1) 2 Hour Emergency Rating (MVA)	80.9	80.9	80.9	80.9	80.9	80.9	**80.9**	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9
(N-1) 10 Minute Emergency Rating (MVA)	80.9	80.9	80.9	80.9	80.9	80.9	**80.9**	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9	80.9
(N) Cyclic Rating (MVA)	101.8	101.8	101.8	80.9	101.8	101.8	**101.8**	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8	101.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
EB 11	0	0	0	0	0
EB 12	0	0	0	0	0
EB 13	0	0	0	0	0
EB 14	0	0	0	0	0
EB 21	0	0	0	0	0
EB 22	0	0	0	0	0
EB 23	0	0	0	0	0
EB 24	0	0	0	0	0
EB 31	0	0	0	0	0
EB 32	0	0	0	0	0
EB 33	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
EB 11	350	350	58%	65%	69%	162	206	208	187	218	205	**201**	227	240	247	249	252	123 A	4.8 MVA	5.1%	
EB 12	260	260	41%	45%	47%	91	100	108	77	96	81	**107**	118	121	122	122	124	142 A	5.5 MVA	3.1%	
EB 13	270	330	37%	57%	57%	127	141	110	101	107	98	**101**	187	188	192	200	218	143 A	5.6 MVA	23.3%	
EB 14	280	280	44%	48%	50%	90	105	115	91	106	96	**122**	134	140	152	166	179	146 A	5.7 MVA	9.5%	
EB 21	270	270	38%	44%	50%	87	106	109	93	104	108	**102**	120	135	144	144	145	150 A	5.8 MVA	8.5%	
EB 22	270	270	57%	62%	62%	162	193	204	154	169	149	**154**	166	167	168	168	170	104 A	4 MVA	2.0%	
EB 23	270	330	59%	76%	76%	190	195	202	170	180	161	**159**	250	251	251	251	253	80 A	3.1 MVA	11.8%	
EB 24	350	350	20%	22%	23%	52	65	69	53	64	57	**70**	79	81	85	93	109	271 A	10.6 MVA	11.2%	
EB 31	350	350	47%	51%	53%	161	173	182	158	168	160	**164**	178	185	194	203	213	172 A	6.7 MVA	6.1%	
EB 32	290	290	82%	89%	90%	195	212	233	178	215	189	**238**	258	262	264	265	268	32 A	1.3 MVA	2.5%	
EB 33	265	265	73%	79%	80%	162	200	201	167	195	159	**193**	210	213	215	216	219	55 A	2.1 MVA	2.6%	
Average	293	304	50%	57%	58%	134	154	158	130	148	133	**146**	175	180	185	189	195	118 A	5 MVA	6.7%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
EB 11	10	12	7	2	0
EB 12	3	3	1	0	0
EB 13	1	0	4	8	16
EB 14	3	5	12	13	12
EB 21	10	14	8	0	0
EB 22	0	0	0	0	0
EB 23	0	0	0	0	0
EB 24	3	2	4	8	15
EB 31	2	6	8	10	7
EB 32	1	3	2	0	0
EB 33	1	2	2	1	0

Zone Substation Comments

2. Line Capacitors - Installed 6.0MVAr prior to summer 2000.
3. PCB Capacitors Replacement - March 1999 : #1 - 8MVAr

4. Load Transfers:
   4.0MW from GW to EB before summer 2009.
   3.0MW from RWT to EB before summer 2009.

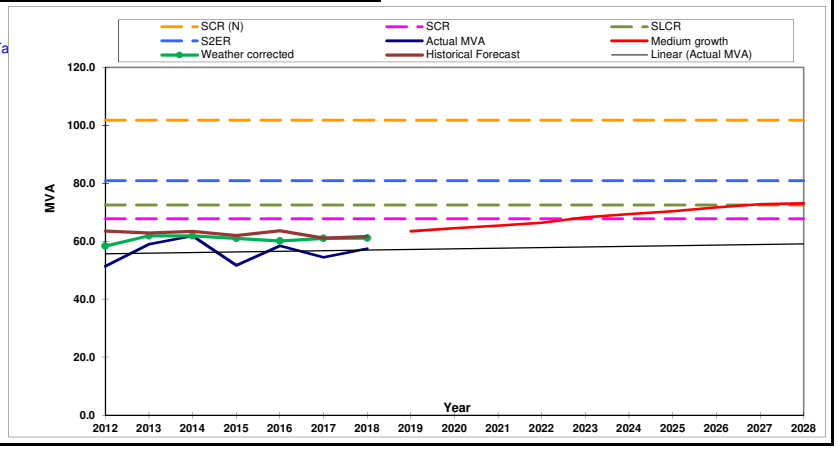
5. New Load:
   HP data centre on EB03/EB07: 2.8MVA in 2005 + 1.1MVA in 2006 + 2.5MVA in 2008 (EB13).
   0.5MW on EB8 in 2008 by RSPCA
   New residential and commercial development between 2007-2010 on Middleborough Rd near Burwood Highway. Total load of 10MW. (still to be confirmed)
??? EB13 extra 2MW over unknown period. Substation "Preb Church" upgrade from 750kVA to 2MVA at 18 Vision Drv (Crossway Baptis Church).
   Deakin Uni Burwood Campus new 4MVA s/s for new auditorium on EB11 -2013/14

6. New 66/22kV Transformer - 3rd Transformer at EB for summer 2008.

Reserve Capacity Requirements

1. Insurance Australia Group, 23 Lakeside Drive, Burwood in Ta
   EB13 (preferred)
   EB23 (reserve) - 1.6MVA (42A)
2. Hewlett Packard, 4 Wesley Court, Tally Ho Business Park.
   6MVA (157A) over two feeders
   EB13 and EB23. Assume 3MVA each.

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

ELSTERNWICK **EL**
Voltage 11.3 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	25.3	30.1	32.0	25.4	28.9	30.0	**30.6**	34.9	35.3	35.5	35.8	36.2	36.3	37.0	37.7	38.6	38.8
10% POE actual MD	29.2	32.0	32.9	32.9	32.6	34.7	33.2										
Load transfers (MW)																	
Extra new load (MW)		0.2	0.2	0.8	2.0	1.8	**1.3**	0.9	0.7	0.6	0.4	0.0					
% growth (MW)		19.1%	6.5%	-20.7%	13.8%	3.8%	**1.9%**	14.1%	1.3%	0.7%	0.7%	1.1%	0.3%	1.9%	1.9%	2.2%	0.7%
Feeder summation reactive demand (MVAr)	5.3	7.7	8.3	4.2	5.5	5.1	**3.8**	5.2	5.3	5.4	5.5	5.6	5.6	5.8	6.1	6.3	6.4
Zone substation capacitor bank (MVAr)	6.1	6.1	6.1	6.1	6.1	6.1	**6.1**	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Feeder line capacitors (MVAr)	5.4	5.4	5.4	6.3	6.3	6.3	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Reactive load on transformers (MVAr)	-1.2	1.2	1.8	-2.3	-1.0	-1.4	**-2.7**	-1.3	-1.2	-1.1	-1.0	-0.9	-0.9	-0.6	-0.4	-0.2	-0.1
Feeder summation power factor	0.98	0.97	0.97	0.99	0.98	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	25.3	30.1	32.1	25.5	28.9	30.0	**30.7**	34.9	35.3	35.6	35.8	36.2	36.3	37.0	37.7	38.6	38.8
(N-1) Cyclic Rating (MVA)	28.5	33.4	33.4	33.4	33.4	33.4	**33.4**	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4	33.4
(N-1) Limited Cyclic Rating (MVA)	30.6	35.8	35.8	35.8	35.8	35.8	**35.8**	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8	35.8
(N-1) 2 Hour Emergency Rating (MVA)	32.0	38.4	38.4	38.4	38.4	38.4	**38.4**	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
(N-1) 10 Minute Emergency Rating (MVA)	32.0	38.4	38.4	38.4	38.4	38.4	**38.4**	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4	38.4
(N) Cyclic Rating (MVA)	57.0	66.9	66.9	38.4	66.9	66.9	**66.9**	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9	66.9

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
EL 5	0	0	0	0	0
EL 6	0	0	0	0	0
EL 7	0	0	0	0	0
EL 8	0	0	0	0	0
EL 9	0	0	0	0	0
EL 10	0	0	0	0	0
EL 11	0	0	0	0	0
EL 12	0	0	0	0	0
EL 13	0	0	0	0	0
EL 14	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
EL 5	265	265	56%	64%	67%	137	128	139	110	134	138	**147**	169	177	179	182	185	96 A	1.9 MVA	5.1%	
EL 6	285	285	74%	81%	81%	165	184	203	160	181	176	**210**	230	232	233	234	237	55 A	1.1 MVA	2.6%	
EL 7	275	275	48%	56%	59%	103	107	126	81	106	118	**132**	155	163	165	167	169	120 A	2.4 MVA	5.5%	
EL 8	350	350	63%	70%	71%	152	173	178	141	175	198	**221**	245	248	251	254	257	105 A	2.1 MVA	3.2%	
EL 9	350	350	49%	54%	55%	153	186	211	145	171	156	**171**	190	193	194	195	197	160 A	3.1 MVA	3.0%	
EL 10	350	350	41%	51%	57%	185	191	197	161	182	163	**143**	180	198	224	244	247	170 A	3.3 MVA	14.6%	
EL 11	350	350	67%	74%	74%	217	222	239	182	213	194	**234**	257	260	261	262	265	93 A	1.8 MVA	2.6%	
EL 12	260	260	59%	65%	65%	124	149	142	138	149	151	**153**	168	170	171	171	173	92 A	1.8 MVA	2.6%	
EL 13	260	260	62%	69%	70%	142	170	183	154	161	168	**160**	179	183	183	184	186	81 A	1.6 MVA	3.2%	
EL 14	285	285	50%	56%	57%	166	193	193	157	162	155	**143**	158	161	163	164	166	127 A	2.5 MVA	3.1%	
Average	303	303	57%	64%	64%	154	170	181	143	163	162	**172**	193	198	202	206	208	110 A	2.1 MVA	4.2%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
EL 5	8	6	1	2	1
EL 6	0	0	0	0	0
EL 7	9	7	1	1	0
EL 8	2	1	2	2	0
EL 9	2	1	0	0	0
EL 10	24	16	25	19	0
EL 11	0	0	0	0	0
EL 12	0	0	0	0	0
EL 13	3	2	0	0	0
EL 14	1	2	1	0	0

Zone Substation Comments

1. Transformer no.3 rating is limited by cable rating. Transformer ratings are limited by O/V on tap.

2. Line Capacitors:
   Installed 1.8MVAr prior to summer 2001.
   Install 4.5MVAr prior to summer 2003.

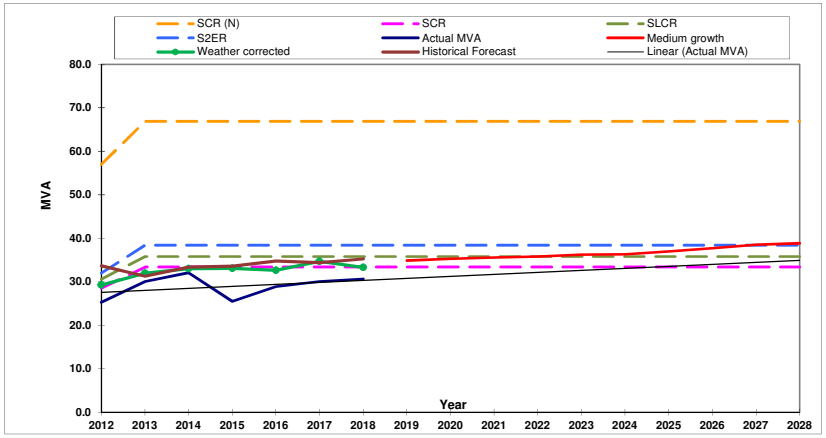
3. PCB capacitor replacement
   2003 : Replace 100kVAr cans (4MVAr)

4. Load Transfers:

5. New Load:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load / Next / Save / Previous

EAST MALVERN EM
Voltage 11.36 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	27.6	33.8	34.3	27.6	33.3	29.4	**31.0**	34.9	36.0	37.1	38.1	38.5	38.6	39.4	40.1	41.0	41.3
10% POE actual MD	31.0	35.8	34.4	34.0	35.7	35.7	34.0										
Load transfers (MW)	-1.7						-2.0	-0.2									
Extra new load (MW)			0.3	0.4	0.5	0.8	**0.9**	0.5	1.4	1.6	1.3	0.4					
% growth (MW)		22.4%	1.6%	-19.8%	20.9%	-11.7%	**5.3%**	12.8%	3.0%	3.2%	2.6%	1.2%	0.3%	1.9%	1.9%	2.2%	0.7%
Feeder summation reactive demand (MVAr)	6.9	6.8	5.0	1.9	3.3	2.3	**2.1**	3.2	3.5	3.8	4.1	4.2	4.3	4.5	4.7	5.0	5.0
Zone substation capacitor bank (MVAr)	6.1	6.1	6.1	6.1	6.1	6.1	**6.1**	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Feeder line capacitors (MVAr)	4.5	6.3	6.3	6.9	6.9	6.9	**6.3**	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Reactive load on transformers (MVAr)	0.4	0.3	-1.5	-4.5	-3.2	-4.2	**-4.4**	-3.3	-3.0	-2.7	-2.4	-2.2	-2.2	-2.0	-1.8	-1.5	-1.5
Feeder summation power factor	0.97	0.98	0.99	1.00	1.00	1.00	**1.00**	1.00	1.00	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	0.99	1.00	0.99	**0.99**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	27.6	33.8	34.4	27.9	33.5	29.7	**31.3**	35.1	36.1	37.2	38.2	38.6	38.7	39.4	40.2	41.1	41.3
(N-1) Cyclic Rating (MVA)	31.9	31.9	31.9	31.9	31.9	31.9	**31.9**	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9	31.9
(N-1) Limited Cyclic Rating (MVA)	35.4	35.4	35.4	35.4	35.4	35.4	**35.4**	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
(N-1) 2 Hour Emergency Rating (MVA)	38.0	38.0	38.0	38.0	38.0	38.0	**38.0**	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
(N-1) 10 Minute Emergency Rating (MVA)	38.0	38.0	38.0	38.0	38.0	38.0	**38.0**	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.0
(N) Cyclic Rating (MVA)	63.9	63.9	63.9	38.0	63.9	63.9	**63.9**	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9	63.9

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
EM 1	0	0	0	0	0
EM 2	0	0	0	0	0
EM 3	94	0	0	0	0
EM 5	21	0	0	0	0
EM 6	0	0	0	0	0
EM 7	0	0	0	0	0
EM 8	-50	0	0	0	0
EM 9	0	0	0	0	0
EM 10	0	0	0	0	0
EM 11	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
EM 1	265	265	29%	37%	48%	134	151	170	148	179	178	**76**	98	129	183	223	225	167 A	3.3 MVA	39.5%	
EM 2	305	305	57%	63%	63%	244	249	263	189	122	179	**173**	192	194	194	195	197	113 A	2.2 MVA	2.8%	
EM 3	325	325	41%	75%	76%	194	202	206	190	199	165	**134**	244	248	249	250	252	81 A	1.6 MVA	17.8%	
EM 5	350	350	75%	89%	90%	152	188	199	229	267	188	**262**	312	316	317	318	322	38 A	0.7 MVA	4.6%	
EM 6	255	255	81%	91%	93%	195	241	145	113	144	147	**206**	232	236	240	244	248	23 A	0.5 MVA	4.1%	
EM 7	285	285	71%	79%	81%	156	195	214	172	199	198	**203**	226	231	238	253	265	59 A	1.2 MVA	6.1%	
EM 8	265	265	94%	87%	90%	173	204	244	177	227	222	**250**	232	238	240	245	250	33 A	0.7 MVA	0.0%	
EM 9	255	255	61%	71%	75%	164	154	157	110	136	125	**156**	181	191	197	204	210	74 A	1.5 MVA	6.8%	
EM 10	315	315	62%	75%	84%	162	176	245	157	159	158	**197**	237	266	286	294	301	78 A	1.5 MVA	10.6%	
EM 11	285	285	49%	55%	55%	133	156	146	124	138	135	**140**	156	157	158	158	160	129 A	2.5 MVA	2.8%	
Average	291	291	62%	73%	73%	171	192	199	161	177	170	**180**	211	221	230	238	243	79 A	1.6 MVA	7.1%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
EM 1	15	29	54	39	0
EM 2	0	0	0	0	0
EM 3	2	2	0	0	0
EM 5	1	1	0	0	0
EM 6	4	2	2	3	2
EM 7	0	3	7	13	10
EM 8	5	4	2	4	3
EM 9	8	9	5	5	4
EM 10	19	27	19	8	4
EM 11	0	0	0	0	0

Zone Substation Comments

1. Station summer capability is limited by thermal rating of transformers and their 11kV cables.

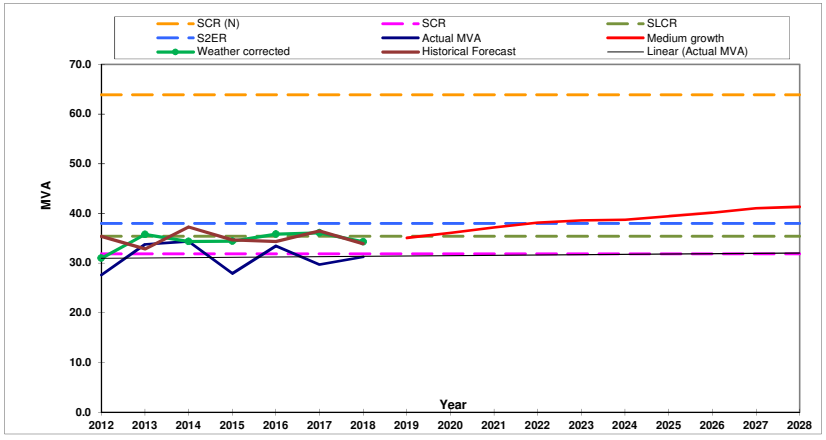
2. Line Capacitors:
   Installed 5.4MVAr in 1998.

3. Load Transfers:
   4.0MW from EM to K prior to summer 2011 as part of the third transformer project.
   1.0MW from EM to OAK prior to summer 2010 for Chadstone shopping load.
   0.4MW from EM to K for summer 2010.
   1.7MW from EM to CFD for summer 2012.

4. New load
   CHADMYER 6 (a new transformer No.4) - 1300kVA on EM3 before summer 2009/10.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

ELWOOD **EW** — Load / Next / Save / Previous

Voltage 11.35 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	19.9	21.8	22.8	18.0	20.2	20.3	**24.8**	26.4	26.5	26.5	26.5	26.8	26.9	27.5	28.0	28.5	28.8
10% POE actual MD	22.3	23.5	22.9	23.0	24.0	24.7	25.5										
Load transfers (MW)																	
Extra new load (MW)		0.2	0.5	0.7	0.8	0.6	**0.6**	0.3	0.3	0.3	0.2	0.1	0.1				
% growth (MW)		9.9%	4.6%	-21.4%	12.7%	0.3%	**22.0%**	6.5%	0.3%	0.1%	0.1%	1.1%	0.5%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	3.1	3.2	5.0	1.1	1.4	1.1	**2.0**	2.3	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.8	2.9
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	3.6	3.6	3.6	3.6	3.6	3.6	**3.6**	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
Reactive load on transformers (MVAr)	3.1	3.2	5.0	1.1	1.4	1.1	**2.0**	2.3	2.4	2.4	2.4	2.4	2.5	2.6	2.7	2.8	2.9
Feeder summation power factor	0.99	0.99	0.98	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Transformation summation power factor	0.99	0.99	0.98	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	20.1	22.1	23.4	18.0	20.3	20.3	**24.9**	26.5	26.6	26.6	26.6	26.9	27.1	27.6	28.1	28.7	29.0
(N-1) Cyclic Rating (MVA)	29.4	29.4	29.4	29.4	29.4	29.4	**29.4**	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4	29.4
(N-1) Limited Cyclic Rating (MVA)	32.0	32.0	32.0	32.0	32.0	32.0	**32.0**	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
(N-1) 2 Hour Emergency Rating (MVA)	32.0	32.0	32.0	32.0	32.0	32.0	**32.0**	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
(N-1) 10 Minute Emergency Rating (MVA)	32.0	32.0	32.0	32.0	32.0	32.0	**32.0**	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
(N) Cyclic Rating (MVA)	58.8	58.8	58.8	32.0	58.8	58.8	**58.8**	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8	58.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
EW 1	0	0	0	0	0
EW 2	20	0	0	0	0
EW 3	0	0	0	0	0
EW 8	0	0	0	0	0
EW 9	0	0	0	0	0
EW 12	0	0	0	0	0
EW 14	-20	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
EW 1	350	350	69%	72%	73%	218	228	246	191	208	203	**240**	251	257	262	264	266	99 A	1.9 MVA	2.2%	
EW 2	270	270	64%	75%	76%	145	184	166	130	143	138	**174**	201	205	206	207	209	69 A	1.4 MVA	4.0%	
EW 3	250	250	46%	50%	52%	119	126	125	96	110	99	**115**	124	131	135	136	138	126 A	2.5 MVA	3.9%	
EW 8	265	265	40%	41%	42%	72	95	93	66	87	85	**106**	110	111	113	117	126	155 A	3.1 MVA	3.8%	
EW 9	270	270	72%	76%	76%	158	173	198	140	166	157	**193**	204	206	207	208	210	66 A	1.3 MVA	1.7%	
EW 12	265	265	85%	89%	92%	182	204	203	164	188	187	**226**	237	243	250	254	256	28 A	0.6 MVA	2.7%	
EW 14	295	295	94%	93%	95%	200	234	229	188	221	222	**276**	273	279	282	284	287	22 A	0.4 MVA	0.8%	
Average	281	281	68%	71%	71%	156	178	180	139	160	156	**190**	200	205	208	210	213	81 A	1.6 MVA	2.4%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
EW 1	2	3	3	1	0
EW 2	1	1	1	0	0
EW 3	4	5	3	1	0
EW 8	0	0	2	4	7
EW 9	3	0	0	0	0
EW 12	2	4	6	3	0
EW 14	6	3	1	1	0

Zone Substation Comments

1. Station summer rating is limited by overvoltage on tap. With the installation of line capacitors in 2002, station summer rating is assessed at:
   SCR = 30.0MVA limited by transformer cable.
   SLCR = 33.0MVA limited by transformer cable.

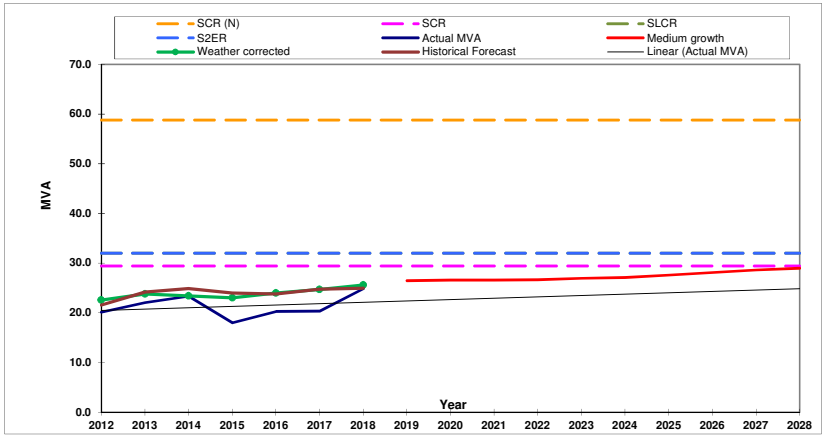
2. Line Capacitors:
   Install 3.6MVAr prior to summer 2003.

3. Load Transfer:
   2.0MW from NB to EW before summer 2010.

4. New Loads:
   0.5MW on EW3 at 221 Glenhuntly Rd -2013

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

FRANKSTON SOUTH FSH — Voltage 22.7 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	54.3	62.1	66.8	58.0	62.6	59.4	**66.3**	73.9	74.0	73.6	73.4	73.8	74.1	75.1	76.2	77.2	78.0
10% POE actual MD	59.9	67.4	70.6	68.7	70.0	71.5	71.7										
Load transfers (MW)				-1.0													
Extra new load (MW)			1.0	0.7	1.2	0.7	**0.8**	0.4	0.2	0.2	0.1						
% growth (MW)		14.4%	7.6%	-13.2%	8.0%	-5.1%	**11.6%**	11.4%	0.1%	-0.6%	-0.3%	0.6%	0.3%	1.4%	1.4%	1.3%	1.0%
Feeder summation reactive demand (MVAr)	10.6	7.7	15.1	11.8	9.3	5.9	**4.9**	6.3	6.3	6.2	6.2	6.3	6.3	6.5	6.7	6.9	7.1
Zone substation capacitor bank (MVAr)	15.0	15.0	15.0	15.0	15.0	15.0	**15.0**	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Feeder line capacitors (MVAr)	7.2	8.1	8.1	8.1	8.1	8.1	**7.2**	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
Reactive load on transformers (MVAr)	-5.4	-8.3	-0.9	-4.2	-6.7	-10.1	**-11.1**	-9.7	-9.7	-9.8	-9.8	-9.7	-9.7	-9.5	-9.3	-9.1	-9.0
Feeder summation power factor	0.98	0.99	0.98	0.98	0.99	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	1.00	0.99	1.00	1.00	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	54.5	62.6	66.8	58.1	63.0	60.3	**67.3**	74.5	74.6	74.2	74.0	74.5	74.7	75.7	76.8	77.8	78.5
(N-1) Cyclic Rating (MVA)	62.0	62.0	62.0	62.0	62.0	62.0	**62.0**	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.0
(N-1) Limited Cyclic Rating (MVA)	66.6	66.6	66.6	66.6	66.6	66.6	**66.6**	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6	66.6
(N-1) 2 Hour Emergency Rating (MVA)	70.2	70.2	70.2	70.2	70.2	70.2	**70.2**	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2
(N-1) 10 Minute Emergency Rating (MVA)	70.2	70.2	70.2	70.2	70.2	70.2	**70.2**	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2	70.2
(N) Cyclic Rating (MVA)	93.0	93.0	93.0	70.2	93.0	93.0	**93.0**	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0	93.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
FSH 11	0	0	0	0	0
FSH 12	0	0	0	0	0
FSH 13	0	0	0	0	0
FSH 21	0	0	0	0	0
FSH 22	0	0	0	0	0
FSH 23	0	0	0	0	0
FSH 31	0	0	0	0	0
FSH 32	0	0	0	0	0
FSH 33	0	0	0	0	0
FSH 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
FSH 11	350	350	48%	53%	54%	174	217	233	143	250	174	**170**	187	189	190	191	192	163 A	6.4 MVA	2.7%	
FSH 12	260	260	78%	86%	87%	146	230	144	153	180	163	**203**	225	227	229	230	231	35 A	1.4 MVA	2.8%	
FSH 13	335	335	80%	87%	89%	213	226	241	208	218	207	**268**	293	297	299	300	302	42 A	1.7 MVA	2.5%	
FSH 21	350	350	41%	45%	46%	110	115	124	111	126	116	**142**	158	161	162	163	163	192 A	7.6 MVA	2.9%	
FSH 22	365	365	61%	67%	68%	194	219	223	204	223	199	**224**	245	248	250	251	252	120 A	4.7 MVA	2.5%	
FSH 23	260	260	35%	39%	39%	222	225	239	239	86	87	**92**	100	102	102	103	103	160 A	6.3 MVA	2.5%	
FSH 31	260	260	87%	96%	99%	181	208	219	192	205	194	**226**	249	257	265	269	271	11 A	0.4 MVA	3.9%	
FSH 32	335	335	63%	70%	71%	81	87	99	90	215	223	**211**	234	237	238	240	241	101 A	4 MVA	2.8%	
FSH 33	310	310	88%	96%	97%	222	270	294	227	246	227	**273**	298	302	304	306	307	12 A	0.5 MVA	2.5%	
FSH 34	350	350	47%	51%	52%	159	168	182	161	147	132	**163**	178	181	182	183	184	172 A	6.8 MVA	2.5%	
Average	318	318	62%	68%	68%	170	196	200	173	190	172	**197**	217	220	222	224	225	101 A	4 MVA	2.8%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
FSH 11	1	0	0	0	0
FSH 12	3	0	0	0	0
FSH 13	0	0	0	0	0
FSH 21	2	1	0	0	0
FSH 22	0	0	0	0	0
FSH 23	0	0	0	0	0
FSH 31	2	5	6	3	0
FSH 32	3	0	0	0	0
FSH 33	0	0	0	0	0
FSH 34	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

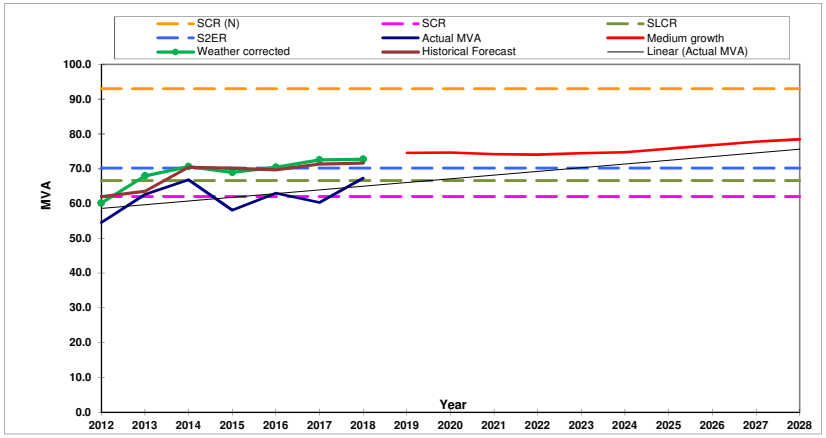
2. Line Capacitors
   - 5.4MVAr for summer 2000.
   - 6.3MVAr for summer 2001.
   - 3.0MW from FSH to HGS prior to summer 2009.
3. PCB Capacitor Bank Replacement
   - Replaced & upgraded cap bank #1 with 7MVAr unit in 2000.

4. Load Transfers:
   - 3.0MW from FSH to HGS prior to summer 2009.
   - 0.8MW from FSH to MTN prior to summer 2009.
   - 0.5MW from FSH to FTN prior to summer 2009.
   - 20.0MW from FSH to LWN prior to summer 2010.
   - 1.0MW from HGS to FSH prior to summer 2010.
   - 1.2MVA from FSH to LWN in 2014 after LWN 2nd Tx (FSH22 to LWN24)

5. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

FRANKSTON **FTN** — Load / Next / Save / Previous

Voltage 22.57 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	40.4	48.2	52.1	46.5	51.3	47.9	**51.8**	57.0	57.4	56.9	56.6	56.9	57.0	57.8	58.6	59.4	60.3
10% POE actual MD	45.0	53.0	53.3	52.9	54.2	54.8	55.1										
Load transfers (MW)																	
Extra new load (MW)		0.5	0.4	0.8	1.2	1.0	**0.9**	0.6	0.4	0.1	0.1	0.0					
% growth (MW)		19.3%	8.2%	-10.9%	10.4%	-6.6%	**8.1%**	10.1%	0.6%	-0.9%	-0.6%	0.6%	0.2%	1.4%	1.4%	1.3%	1.5%
Feeder summation reactive demand (MVAr)	7.2	11.4	11.9	4.7	3.6	9.4	**8.2**	10.0	10.1	10.0	9.9	10.0	10.0	10.3	10.6	10.8	11.1
Zone substation capacitor bank (MVAr)	5.4	5.4	5.4	5.4	5.4	5.4	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Feeder line capacitors (MVAr)	10.8	10.8	10.8	10.8	10.8	10.8	**9.3**	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Reactive load on transformers (MVAr)	1.6	5.7	6.3	-0.9	-2.1	3.8	**2.5**	4.4	4.5	4.3	4.2	4.3	4.4	4.6	4.9	5.2	5.5
Feeder summation power factor	0.98	0.97	0.97	0.99	1.00	0.98	**0.99**	0.98	0.98	0.99	0.99	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	1.00	0.99	0.99	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	40.4	48.5	52.5	46.5	51.3	48.1	**51.9**	57.2	57.6	57.1	56.7	57.1	57.2	58.0	58.8	59.7	60.5
(N-1) Cyclic Rating (MVA)	45.6	45.6	45.6	45.6	45.6	45.6	**45.6**	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6
(N-1) Limited Cyclic Rating (MVA)	48.7	48.7	48.7	48.7	48.7	48.7	**48.7**	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
(N-1) 2 Hour Emergency Rating (MVA)	48.7	48.7	48.7	48.7	48.7	48.7	**48.7**	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
(N-1) 10 Minute Emergency Rating (MVA)	48.7	48.7	48.7	48.7	48.7	48.7	**48.7**	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7
(N) Cyclic Rating (MVA)	91.2	91.2	91.2	48.7	91.2	91.2	**91.2**	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2	91.2

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
FTN 11	0	0	0	0	0
FTN 12	0	0	0	0	0
FTN 13	0	0	0	0	0
FTN 14	0	0	0	0	0
FTN 21	0	0	0	0	0
FTN 22	0	0	0	0	0
FTN 23	0	0	0	0	0
FTN 24	0	0	0	0	0
FTN 25	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
FTN 11	350	350	60%	67%	69%	155	174	176	149	152	150	**211**	235	243	244	245	246	115 A	4.5 MVA	3.3%	
FTN 12	350	350	42%	45%	46%	160	169	190	132	144	135	**146**	158	161	162	163	163	192 A	7.5 MVA	2.4%	
FTN 13	260	260	38%	41%	42%	82	86	94	83	89	85	**100**	108	110	110	111	111	152 A	6 MVA	2.3%	
FTN 14	260	260	50%	54%	55%	146	171	182	151	178	160	**129**	139	142	143	143	144	121 A	4.7 MVA	2.3%	
FTN 21	260	260	44%	48%	50%	88	92	89	79	89	89	**115**	125	131	136	139	141	135 A	5.3 MVA	4.6%	
FTN 22	350	350	57%	62%	63%	227	236	229	213	214	198	**201**	217	221	222	223	224	133 A	5.2 MVA	2.3%	
FTN 23	260	260	70%	78%	81%	179	180	228	191	216	191	**181**	203	209	211	211	212	57 A	2.2 MVA	3.5%	
FTN 24	260	260	78%	85%	87%	144	142	159	135	158	148	**204**	221	225	226	227	228	39 A	1.5 MVA	2.4%	
FTN 25	260	260	87%	94%	96%	125	139	189	171	180	198	**225**	245	249	250	251	252	15 A	0.6 MVA	2.4%	
Average	290	290	58%	63%	63%	145	154	171	145	158	151	**168**	183	188	189	190	191	107 A	4.2 MVA	2.8%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
FTN 11	6	4	0	0	0
FTN 12	1	0	0	0	0
FTN 13	0	0	0	0	0
FTN 14	0	0	0	0	0
FTN 21	1	3	4	3	1
FTN 22	0	0	0	0	0
FTN 23	7	3	0	0	0
FTN 24	1	0	0	0	0
FTN 25	1	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors
   8.1MVAr line capacitors were installed in 1997
3. PCB capacitors replaced at FTN in 1999 : #1 - 5MVAr, #3 - 6MVAr

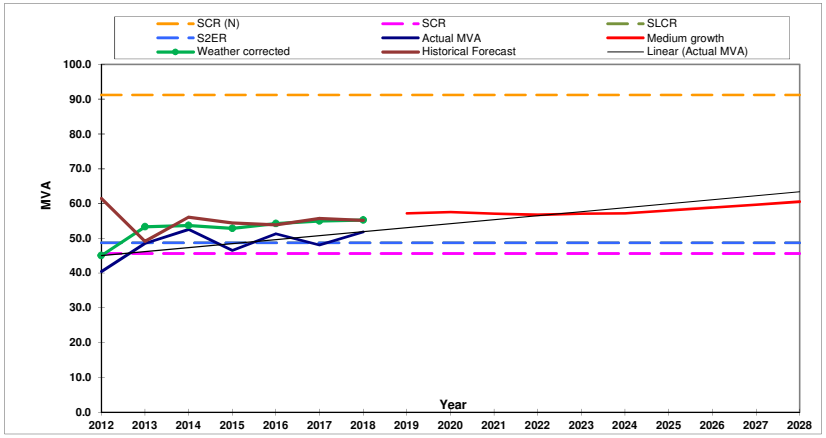
4. Load Transfers:
   0.5MW from FSH to FTN prior to summer 2009.
   2.5MW from DVY to FTN prior to summer 2009.
   14.0MW from FTN to LWN for summer 2010.
   0.7MW from FTN to CRM for summer 2010.
   FTN12 - 5.0MVA to CRM13 (2011/12)
   FTN23 - 2.0MVA to CRM13 (2011/12)

5. New loads:

6. Replace transformers #2 & #3 with a 20/33MVA unit & re-construct as a fully switched station in 2004 for summer 2005.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

GLEN WAVERLEY GW — Load / Next / Save / Previous

Voltage 22.35 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	56.4	65.2	66.6	55.8	62.6	62.5	**63.5**	71.2	72.8	73.6	74.0	74.9	75.1	76.7	78.1	79.4	79.7
10% POE actual MD	71.5	68.7	68.5	67.4	68.9	70.0	69.0										
Load transfers (MW)								-1.9									
Extra new load (MW)		1.5	0.5	0.5	1.5	1.8	**1.7**	2.4	2.0	1.5	0.7						
% growth (MW)		15.5%	2.1%	-16.1%	12.1%	-0.1%	**1.4%**	12.2%	2.2%	1.2%	0.5%	1.3%	0.3%	2.1%	1.9%	1.7%	0.4%
Feeder summation reactive demand (MVAr)	10.6	12.0	13.8	4.6	7.6	8.2	**6.2**	9.1	9.6	9.9	10.1	10.4	10.5	11.0	11.6	12.0	12.1
Zone substation capacitor bank (MVAr)	13.7	13.7	13.7	13.7	8.4	8.4	**8.4**	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4
Feeder line capacitors (MVAr)	14.1	14.1	14.1	15.6	18.3	18.3	**16.2**	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
Reactive load on transformers (MVAr)	-3.6	-2.2	-0.4	-9.6	-1.0	-0.5	**-2.4**	0.4	0.9	1.3	1.4	1.7	1.8	2.4	2.9	3.4	3.5
Feeder summation power factor	0.98	0.98	0.98	1.00	0.99	0.99	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	0.99	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	56.6	65.2	66.6	56.6	62.6	62.5	**63.5**	71.2	72.8	73.6	74.0	74.9	75.2	76.7	78.2	79.5	79.8
(N-1) Cyclic Rating (MVA)	68.9	68.9	68.9	68.9	68.9	68.9	**68.9**	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9	68.9
(N-1) Limited Cyclic Rating (MVA)	73.8	73.8	73.8	73.8	73.8	73.8	**73.8**	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8	73.8
(N-1) 2 Hour Emergency Rating (MVA)	79.0	78.6	78.6	78.6	78.6	78.6	**78.6**	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6
(N-1) 10 Minute Emergency Rating (MVA)	79.0	78.6	78.6	78.6	78.6	78.6	**78.6**	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6	78.6
(N) Cyclic Rating (MVA)	103.4	103.4	103.4	78.6	103.4	103.4	**103.4**	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4	103.4

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
GW 1	0	0	0	0	0
GW 2	0	0	0	0	0
GW 3	0	0	0	0	0
GW 4	0	0	0	0	0
GW 5	-100	0	0	0	0
GW 6	0	0	0	0	0
GW 7	0	0	0	0	0
GW 8	0	0	0	0	0
GW 10	0	0	0	0	0
GW 11	0	0	0	0	0
GW 12	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
GW 1	350	350	51%	68%	76%	228	265	224	244	198	165	**179**	240	266	295	315	318	110 A	4.3 MVA	15.5%	
GW 2	290	290	64%	80%	81%	158	196	211	203	209	171	**186**	231	235	236	238	240	59 A	2.3 MVA	5.8%	
GW 3	335	335	44%	54%	54%	127	150	162	125	147	132	**148**	180	181	182	183	185	155 A	6 MVA	5.0%	
GW 4	345	345	46%	57%	57%	166	183	186	166	172	170	**159**	196	197	198	199	201	149 A	5.8 MVA	5.3%	
GW 5	260	260	80%	66%	69%	94	115	183	95	163	209	**209**	171	180	181	181	184	89 A	3.4 MVA	-2.4%	
GW 6	350	350	51%	63%	63%	173	175	193	169	219	189	**180**	220	221	222	223	226	130 A	5 MVA	5.0%	
GW 7	280	280	48%	59%	59%	137	146	161	119	129	128	**135**	165	166	167	168	170	115 A	4.4 MVA	5.0%	
GW 8	260	260	48%	58%	59%	118	132	144	103	126	114	**124**	152	152	153	154	156	108 A	4.2 MVA	5.0%	
GW 10	350	350	25%	86%	86%	129	156	89	63	75	81	**86**	300	301	301	302	303	50 A	1.9 MVA	50.3%	
GW 11	335	335	56%	71%	77%	207	217	220	170	187	192	**186**	238	258	274	275	278	97 A	3.8 MVA	9.9%	
GW 12	345	345	46%	57%	57%	145	171	195	140	152	143	**160**	195	196	197	198	200	150 A	5.8 MVA	5.0%	
Average	318	318	50%	65%	65%	153	173	179	145	162	154	**159**	208	214	219	221	224	110 A	4.3 MVA	8.1%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
GW 1	21	25	28	18	0
GW 2	4	3	0	0	0
GW 3	0	0	0	0	0
GW 4	2	0	0	0	0
GW 5	17	8	0	0	0
GW 6	0	0	0	0	0
GW 7	0	0	0	0	0
GW 8	0	0	0	0	0
GW 10	0	0	0	0	0
GW 11	10	19	14	0	0
GW 12	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010. Post 2010 ratings are based on 40deg C ambient temp. 22kV transformer #2 cables were upgraded in 1998.

2 Line Capaciotrs: Installed 13.8MVAr prior to summer 2000.

3. Load Transfers:
   - 2.0MW from GW to MGE before summer 2004.
   - 4.0MW from GW to EB before summer 2009.
   - 1.7MW from MGE to GW before summer 2010.

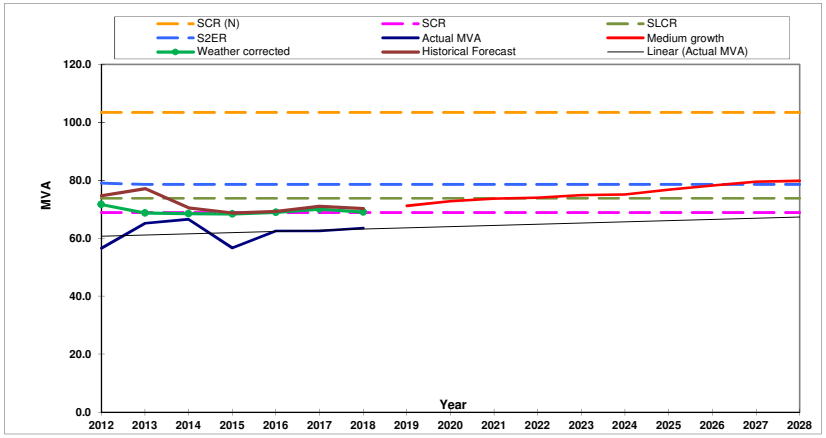
4. New Loads:
   - 0.5MW on GW1 -Kingsway Hub -2013
   - 1.5 MW on GW5 - Smith & Nephew site -2013/14

Reserve Capacity Requirements

1. ANZ, Forster Rd, Mt Waverley.
   NO 03 (preferred)
   NO 08 (preferred) from 1 May 2016
   GW 03 (reserve) - 1.7MVA (45A);
   - 2.3MVA (60A) from 1 Nov 2002;
   - 3.0MVA (80A) from 1 Jan 2003.
   - 4.0MVA (80A) from 1 Jun 2014.

   GW 10 (reserve) - 8.0MVA (210A) from 1 May 2016

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

HASTINGS HGS — Voltage 22.58 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	44.4	44.9	47.0	41.0	46.9	41.5	**47.5**	50.5	50.5	50.3	50.4	50.9	51.0	51.7	52.5	53.2	53.7
10% POE actual MD	47.8	47.9	49.9	48.0	49.5	49.8	49.0										
Load transfers (MW)							-2.6										
Extra new load (MW)			0.5	0.2	0.3	0.3	**0.3**	0.3	0.3	0.3	0.4	0.3					
% growth (MW)		1.1%	4.7%	-12.9%	14.5%	-11.4%	**14.4%**	6.2%	0.1%	-0.5%	0.3%	1.0%	0.2%	1.4%	1.4%	1.3%	1.0%
Feeder summation reactive demand (MVAr)	13.5	13.6	12.8	9.5	10.0	6.7	**8.3**	9.1	9.2	9.1	9.1	9.3	9.3	9.5	9.7	9.9	10.0
Zone substation capacitor bank (MVAr)	8.0	8.0	8.0	8.0	8.0	8.0	**8.0**	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Feeder line capacitors (MVAr)	3.6	4.5	4.5	4.5	4.5	4.5	**4.5**	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Reactive load on transformers (MVAr)	5.0	5.2	4.4	1.1	1.6	-1.8	**-0.1**	0.7	0.7	0.7	0.7	0.9	0.9	1.1	1.3	1.5	1.6
Feeder summation power factor	0.96	0.96	0.96	0.97	0.98	0.99	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.99	0.99	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	44.7	45.2	47.2	41.0	46.9	41.6	**47.5**	50.5	50.5	50.3	50.4	50.9	51.0	51.7	52.5	53.2	53.7
(N-1) Cyclic Rating (MVA)	39.9	39.9	39.9	39.9	39.9	39.9	**39.9**	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
(N-1) Limited Cyclic Rating (MVA)	42.4	42.4	42.4	42.4	42.4	42.4	**42.4**	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4	42.4
(N-1) 2 Hour Emergency Rating (MVA)	46.9	46.9	46.9	46.9	46.9	46.9	**46.9**	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9	46.9
(N-1) 10 Minute Emergency Rating (MVA)	46.9	46.9	46.9	46.9	47.6	47.6	**47.6**	47.6	47.6	47.6	47.6	47.6	47.6	47.6	47.6	47.6	47.6
(N) Cyclic Rating (MVA)	79.8	79.8	79.8	46.9	79.8	79.8	**79.8**	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
HGS 21	0	0	0	0	0
HGS 22	0	0	0	0	0
HGS 23	0	0	0	0	0
HGS 24	0	0	0	0	0
HGS 31	0	0	0	0	0
HGS 32	0	0	0	0	0
HGS 33	-30	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
HGS 21	600	600	40%	41%	42%	94	102	119	90	102	100	**237**	247	251	254	258	261	353 A	13.8 MVA	2.0%	
HGS 22	260	260	82%	85%	86%	195	211	187	177	199	185	**213**	222	224	226	226	227	38 A	1.5 MVA	1.4%	
HGS 23	350	350	37%	39%	40%	319	301	313	287	274	258	**129**	136	139	140	140	141	214 A	8.4 MVA	1.8%	
HGS 24	0	0																0 A	0 MVA		
HGS 31	260	260	64%	68%	70%	135	149	152	124	150	126	**166**	176	181	186	195	202	84 A	3.3 MVA	4.3%	
HGS 32	425	425	49%	69%	70%	236	254	278	250	265	235	**209**	293	295	297	297	298	132 A	5.2 MVA	8.6%	
HGS 33	350	350	97%	93%	96%	253	267	284	246	269	280	**338**	327	335	339	341	343	23 A	0.9 MVA	0.3%	
Average	321	321	67%	62%	62%	205	214	222	196	210	197	**215**	200	204	206	208	210	121 A	4.7 MVA	-0.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
HGS 21	0	1	1	3	2
HGS 22	0	0	0	0	0
HGS 23	2	1	0	0	0
HGS 24	0	0	0	0	0
HGS 31	3	3	4	8	6
HGS 32	0	0	0	0	0
HGS 33	4	4	2	1	1

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors:
   Installed 3.6 MVAr for summer 2002.
3. PCB Cap Bank Replacement; 8MVAr in Oct 2001

4. Load transfers:
   3.0MW from FSH to HGS prior to summer 2009.
   1.0MW from HGS to FSH prior to summer 2010.

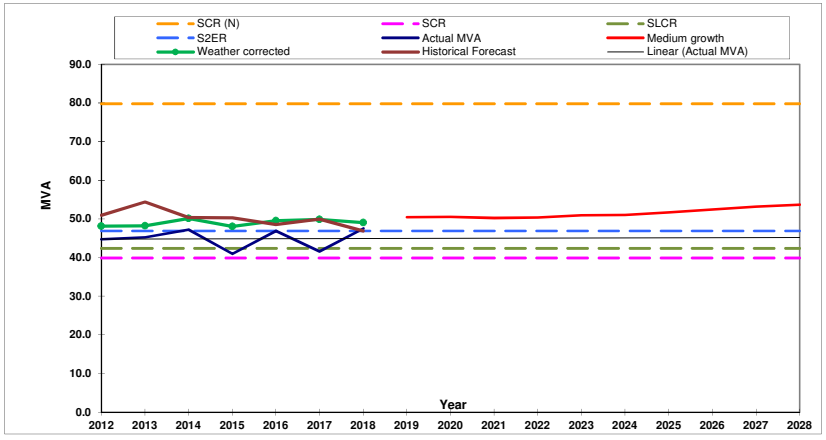
5. New loads:

6. Establish a package zone substation with one 20/33MVA transformer in Dromana (DMA) in 2005 for summer 2006 and transfer 5MW to DMA.

Reserve Capacity Requirements

1. Esso, Long Island Dve Hastings.
   HGS21 (preferred)
   HGS32 (reserve) - 2.8MVA (75A) reserve.

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load / Next / Save / Previous

HEATHERTON HT
Voltage 22.6 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	48.1	55.1	49.2	44.3	50.2	49.4	**45.5**	52.5	53.8	55.1	55.8	56.2	56.3	57.5	58.6	59.6	59.7
10% POE actual MD	54.8	59.3	56.2	53.4	54.1	53.9	49.8										
Load transfers (MW)																	
Extra new load (MW)		1.2	0.8	0.5	3.5	2.9	**2.5**	1.5	1.7	1.8	1.0	0.1					
% growth (MW)		14.6%	-10.7%	-10.1%	13.4%	-1.6%	**-8.0%**	15.4%	2.6%	2.4%	1.3%	0.7%	0.2%	2.1%	1.9%	1.8%	0.2%
Feeder summation reactive demand (MVAr)	12.4	8.1	11.1	5.9	5.0	-1.0	**6.9**	11.1	11.9	12.7	13.1	13.4	13.4	14.1	14.8	15.4	15.5
Zone substation capacitor bank (MVAr)	18.5	12.0	12.0	12.0	12.0	12.0	**12.0**	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Feeder line capacitors (MVAr)	19.5	19.5	19.5	24.0	24.0	24.0	**19.5**	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5	19.5
Reactive load on transformers (MVAr)	-7.1	-4.6	-1.6	-6.8	-7.6	-13.7	**-5.8**	-1.6	-0.8	0.0	0.5	0.7	0.8	1.5	2.1	2.8	2.8
Feeder summation power factor	0.97	0.99	0.98	0.99	0.99	1.00	**0.99**	0.98	0.98	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Transformation summation power factor	0.99	1.00	1.00	0.99	0.99	0.96	**0.99**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	48.6	55.3	49.2	44.8	50.8	51.2	**45.8**	52.5	53.8	55.1	55.8	56.2	56.3	57.5	58.6	59.7	59.8
(N-1) Cyclic Rating (MVA)	61.9	61.9	61.9	61.9	61.9	61.9	**61.9**	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9	61.9
(N-1) Limited Cyclic Rating (MVA)	66.2	66.2	66.2	66.2	66.2	66.2	**66.2**	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2	66.2
(N-1) 2 Hour Emergency Rating (MVA)	71.8	71.8	71.8	71.8	71.8	71.8	**71.8**	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8
(N-1) 10 Minute Emergency Rating (MVA)	71.8	71.8	71.8	71.8	71.8	71.8	**71.8**	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8	71.8
(N) Cyclic Rating (MVA)	94.8	92.8	92.8	71.8	92.8	92.8	**92.8**	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8	92.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
HT 1	0	0	0	0	0
HT 2	0	0	0	0	0
HT 3	0	0	0	0	0
HT 4	0	0	0	0	0
HT 6	0	0	0	0	0
HT 7	0	0	0	0	0
HT 8	0	0	0	0	0
HT 9	0	0	0	0	0
HT 10	0	0	0	0	0
HT 11	0	0	0	0	0
HT 12	0	0	0	0	0
HT 13	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
HT 1	325	325	50%	58%	60%	150	161	173	140	159	135	**164**	188	195	199	203	204	137 A	5.4 MVA	4.9%	
HT 2	290	290	49%	56%	59%	139	146	116	110	126	121	**142**	161	171	188	201	202	129 A	5 MVA	8.5%	
HT 3	300	300	25%	28%	29%	118	116	106	93	89	78	**76**	85	86	86	86	87	215 A	8.4 MVA	2.8%	
HT 4	315	315	10%	11%	11%	28	28	29	26	34	29	**30**	33	33	33	34	34	282 A	11 MVA	2.5%	
HT 6	255	255	65%	73%	75%	147	150	145	140	154	142	**165**	186	190	195	200	205	69 A	2.7 MVA	4.8%	
HT 7	280	280	33%	39%	39%	116	116	107	96	105	96	**92**	108	110	110	111	111	172 A	6.7 MVA	4.1%	
HT 8	325	325	35%	40%	42%	158	155	149	122	176	134	**114**	130	136	148	156	157	195 A	7.6 MVA	7.5%	
HT 9	420	420	54%	62%	65%	187	201	215	219	214	206	**226**	260	273	282	283	284	160 A	6.3 MVA	5.1%	
HT 10	335	335	26%	28%	29%	84	89	89	79	81	123	**86**	95	96	96	96	97	240 A	9.4 MVA	2.5%	
HT 11	275	275	62%	70%	71%	142	164	184	152	177	161	**172**	192	195	197	199	200	83 A	3.3 MVA	3.3%	
HT 12	0	0																0 A	0 MVA		
HT 13	320	320	32%	36%	36%	157	163	145	103	102	108	**104**	115	116	116	116	117	205 A	8 MVA	2.5%	
Average	287	287	43%	45%	45%	130	135	133	116	129	121	**125**	129	133	138	140	142	157 A	6.2 MVA	2.7%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
HT 1	6	6	4	3	0
HT 2	4	9	17	12	0
HT 3	1	0	0	0	0
HT 4	0	0	0	0	0
HT 6	3	3	4	5	3
HT 7	6	1	0	0	0
HT 8	3	6	11	8	0
HT 9	9	12	7	0	0
HT 10	0	0	0	0	0
HT 11	1	2	2	1	0
HT 12	0	0	0	0	0
HT 13	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors:
   Installed 11.7MVAr prior to summer 1999.
   Installed 6 MVAr prior to summer 2000.
   Installed 14.4 MVAr prior to summer 2001.

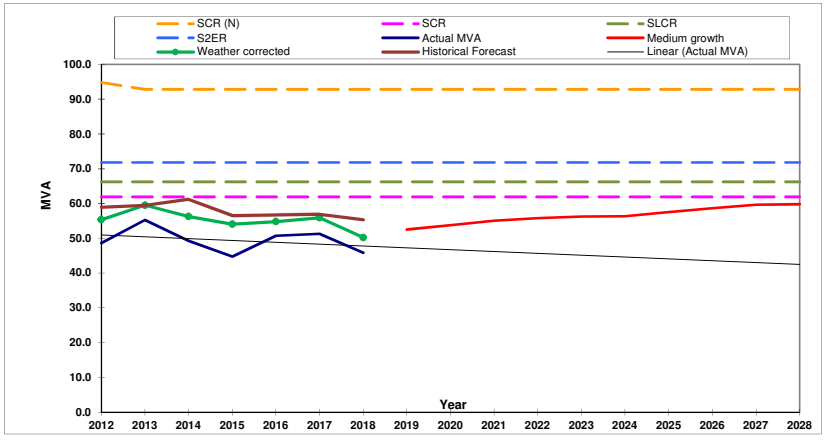
3. Load transfers:

4. New Loads:

5. New Zone Substation at CDA in Nov 2002:
   Transfer about 15 MW to CDA prior to summer 2003.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load / Next / Save / Previous

GARDINER **K**

Voltage 11.5 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	36.8	39.1	43.9	33.1	41.8	35.1	**36.1**	45.2	45.8	46.5	47.5	48.8	49.3	50.3	51.2	52.2	52.8
10% POE actual MD	43.6	42.2	45.4	44.6	45.8	43.7	42.4										
Load transfers (MW)	-1.3					-3.3		1.1									
Extra new load (MW)		0.1	0.2	0.2	0.9	0.5	**0.7**	0.5	0.7	0.9	1.0	0.8	0.2				
% growth (MW)		6.5%	12.2%	-24.8%	26.5%	-16.1%	**3.0%**	25.1%	1.3%	1.6%	2.2%	2.6%	1.2%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	6.7	7.3	11.9	4.8	6.6	2.6	**-2.2**	-0.7	-0.6	-0.5	-0.4	-0.2	-0.1	0.1	0.3	0.4	0.5
Zone substation capacitor bank (MVAr)	5.6	5.6	5.6	5.6	5.6	5.6	**5.6**	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
Feeder line capacitors (MVAr)	8.1	8.1	8.1	9.6	9.6	9.6	**7.5**	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
Reactive load on transformers (MVAr)	0.6	1.2	5.8	-1.4	0.4	-3.6	**-8.4**	-6.9	-6.8	-6.7	-6.5	-6.3	-6.2	-6.1	-5.9	-5.7	-5.6
Feeder summation power factor	0.98	0.98	0.97	0.99	0.99	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	1.00	1.00	0.99	1.00	1.00	0.99	**0.97**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	36.8	39.2	44.3	33.1	41.8	35.3	**37.1**	45.7	46.3	47.0	48.0	49.2	49.7	50.6	51.6	52.5	53.1
(N-1) Cyclic Rating (MVA)	26.1	36.8	36.8	36.8	36.8	36.8	**36.8**	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8
(N-1) Limited Cyclic Rating (MVA)	27.1	40.4	40.4	40.4	40.4	40.4	**40.4**	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4	40.4
(N-1) 2 Hour Emergency Rating (MVA)	27.1	43.7	43.7	43.7	43.7	43.7	**43.7**	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
(N-1) 10 Minute Emergency Rating (MVA)	27.1	43.7	43.7	43.7	45.6	45.6	**45.6**	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6	45.6
(N) Cyclic Rating (MVA)	52.2	73.5	73.5	43.7	73.5	73.5	**73.5**	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5	73.5

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
K 2	0	0	0	0	0
K 3	0	0	0	0	0
K 4	0	0	0	0	0
K 5	0	0	0	0	0
K 6	0	0	0	0	0
K 7	0	0	0	0	0
K 8	0	0	0	0	0
K 9	0	0	0	0	0
K 10	0	0	0	0	0
K 11	0	0	0	0	0
K 12	0	0	0	0	0
K 13	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
K 2	300	300	59%	65%	70%	206	173	196	133	171	181	**178**	195	210	227	244	256	105 A	2.1 MVA	8.7%	
K 3	265	265	78%	95%	96%	162	187	208	146	169	184	**207**	251	255	258	260	262	14 A	0.3 MVA	5.3%	
K 4	270	270	70%	75%	76%	158	178	195	145	175	161	**188**	202	205	208	210	212	68 A	1.4 MVA	2.5%	
K 5	270	270	63%	67%	68%	218	201	219	164	174	158	**170**	182	184	189	198	213	88 A	1.8 MVA	5.1%	
K 6	345	345	79%	86%	87%	240	210	331	253	324	219	**274**	295	301	308	314	321	50 A	1 MVA	3.4%	
K 7	325	325	57%	62%	65%	154	292	205	168	194	174	**185**	201	210	220	234	245	124 A	2.5 MVA	6.6%	
K 8	245	245	78%	83%	84%	178	177	183	139	174	171	**190**	204	206	208	210	211	41 A	0.8 MVA	2.2%	
K 9	350	350	33%	35%	36%	102	115	137	106	130	120	**114**	124	125	127	128	129	226 A	4.5 MVA	2.6%	
K 10	245	245	58%	63%	66%	188	197	234	174	220	128	**142**	155	161	166	172	174	90 A	1.8 MVA	4.4%	
K 11	270	270	69%	73%	74%	179	202	200	170	194	178	**185**	198	200	202	204	206	72 A	1.4 MVA	2.2%	
K 12	245	245	56%	62%	65%	157	178	234	155	172	112	**137**	152	159	171	180	182	93 A	1.9 MVA	6.5%	
K 13	260	260	64%	69%	71%	145	85	203	137	180	162	**166**	179	184	191	199	206	81 A	1.6 MVA	4.8%	
Average	283	283	63%	69%	69%	174	183	212	158	190	162	**178**	195	200	206	213	218	88 A	1.7 MVA	4.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
K 2	5	13	15	15	10
K 3	1	1	1	0	0
K 4	1	1	1	0	0
K 5	0	0	4	7	14
K 6	3	2	4	4	4
K 7	4	7	8	12	9
K 8	0	0	0	0	0
K 9	2	0	0	0	0
K 10	3	4	4	4	1
K 11	0	0	0	0	0
K 12	5	5	11	8	0
K 13	2	3	5	7	5

Zone Substation Comments

1. Station rating is limited by 11kV transformer cables.
   Uprate transformer cables in 2011.

2. Line Capacitors: Installed 5.1MVAr prior to summer 1999.
   Installed 3.6MVAr prior to summer 2000.

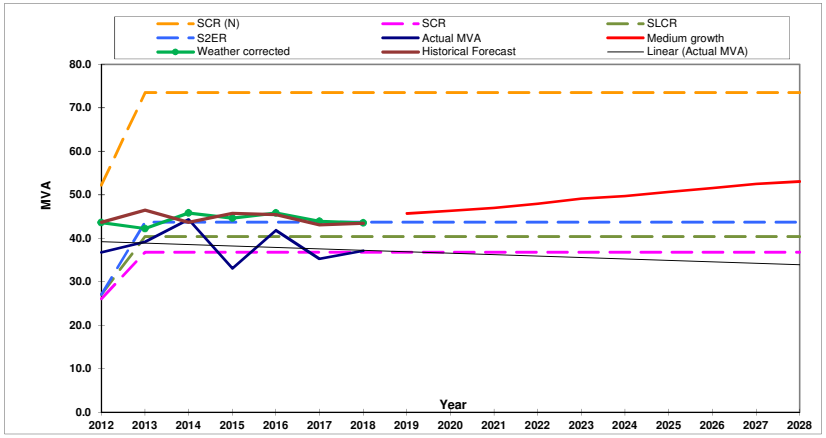
3. Load Transfers:
   1MW from K10 to CFD22 (T69) prior to summer 2009
   2MW from K6 to CFD22 (T69) prior to summer 2009
   0.4MW from EM to K for summer 2010.
   1.3MW from K to CFD for summer 2012.

4. New Loads:
   0.8MW on K7 (Eliz N14 Mountview s/s) in 2010.
   4.0MW on K9 over three years by Tooronga Village starting in 2010.
   ?? 550kW and 150kW on K12 in 2010, trasnfer approx 700kVA to K7

Reserve Capacity Requirements

1. PTC, Malvern Rd Malvern.
   K12 (preferred)
   K3 (reserve) - 0.7MVA (37A) reserve on each feeder.

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

KEYSBOROUGH **KBH** — Load / Next / Save / Previous

Voltage 22.5 kV

	Actual				Forecast												
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	0.0	0.0	0.0	20.3	26.1	28.7	**26.1**	34.6	36.4	37.6	38.5	39.4	40.1	41.0	42.0	43.0	43.7
10% POE actual MD	0.0	0.0	0.0	26.4	29.3	32.1	32.0										
Load transfers (MW)				27.1													
Extra new load (MW)					0.3	0.7	**0.7**	1.2	1.3	0.9	0.5	0.0					
% growth (MW)					28.7%	10.0%	**-9.0%**	32.7%	4.9%	3.4%	2.4%	2.3%	1.9%	2.4%	2.3%	2.2%	1.7%
Feeder summation reactive demand (MVAr)	0.0	0.0	0.0	6.0	3.2	6.9	**2.9**	7.1	7.9	8.5	9.0	9.4	9.8	10.2	10.7	11.2	11.5
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	0.0	0.0	0.0	9.0	9.0	9.0	**9.5**	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Reactive load on transformers (MVAr)	0.0	0.0	0.0	6.0	3.2	6.9	**2.9**	7.1	7.9	8.5	9.0	9.4	9.8	10.2	10.7	11.2	11.5
Feeder summation power factor				0.96	0.99	0.97	**0.99**	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Transformation summation power factor				0.96	0.99	0.97	**0.99**	0.98	0.98	0.98	0.97	0.97	0.97	0.97	0.97	0.97	0.97
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	0.0	0.0	0.0	21.2	26.3	29.5	**26.3**	35.4	37.2	38.5	39.5	40.5	41.3	42.3	43.4	44.4	45.2
(N-1) Cyclic Rating (MVA)																	
(N-1) Limited Cyclic Rating (MVA)																	
(N-1) 2 Hour Emergency Rating (MVA)																	
(N-1) 10 Minute Emergency Rating (MVA)																	
(N) Cyclic Rating (MVA)					46.7	46.7	**46.7**	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
KBH 31	0	0	0	0	0
KBH 32	0	0	0	0	0
KBH 33	0	0	0	0	0
KBH 34	0	0	0	0	0
KBH 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
KBH 31	330	330	47%	60%	64%				123	179	172	**155**	200	211	228	241	246	130 A	5.1 MVA	11.7%	
KBH 32	265	265	70%	91%	97%				138	184	175	**185**	242	256	264	270	275	23 A	0.9 MVA	9.8%	
KBH 33	340	340	13%	16%	17%				135	128	133	**44**	55	56	58	59	60	285 A	11.1 MVA	7.6%	
KBH 34	350	350	61%	83%	88%				205	212	179	**215**	289	308	318	327	335	61 A	2.4 MVA	11.2%	
KBH 35	260	260	70%	90%	95%				62	142	181	**181**	233	247	261	268	274	27 A	1 MVA	10.2%	
Average	309	309	51%	66%	66%		0	0	133	169	168	**156**	204	216	226	233	238	105 A	4.1 MVA	10.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
KBH 31	3	7	12	8	0
KBH 32	9	8	2	0	0
KBH 33	0	0	0	0	0
KBH 34	17	12	3	3	1
KBH 35	4	8	8	2	0

Zone Substation Comments

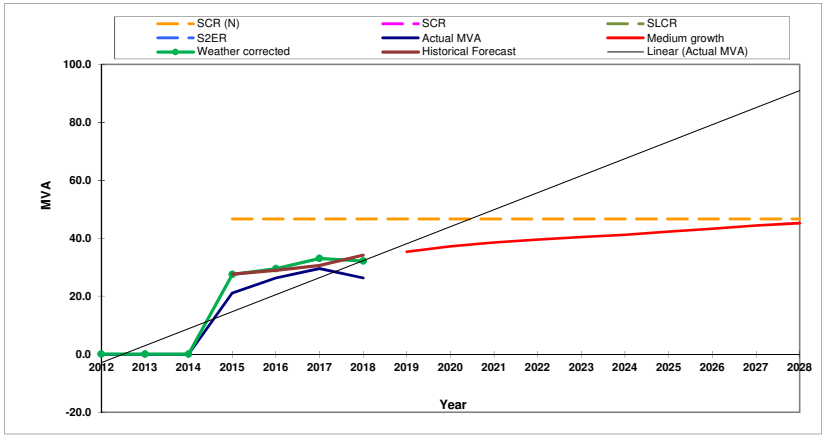
1. Commissioned on 15 Dec 2014 as a single transformer station

2. Line capacitors: Transferred 4.5MVAr from NP in 2015
   Transferred 4.5MVAr from DSH in 2015

3. Load transfers:
   Transferred 15MW from NP (2015).
   Transferred 7MW from DSH (2015).
   Transferred 4MW from MC (2015).

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

LYNDALE LD — Load / Next / Save / Previous

Voltage 22.5 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	40.4	47.7	56.3	46.2	51.9	45.8	**48.0**	58.3	58.4	58.1	57.8	58.1	58.5	59.3	60.2	61.0	61.6
10% POE actual MD	50.1	55.0	56.3	55.4	57.6	55.5	56.4										
Load transfers (MW)			8.4														
Extra new load (MW)			0.3	0.3	0.2	0.3	**0.2**	0.2	0.2	0.1	0.0						
% growth (MW)		18.1%	18.1%	-18.0%	12.4%	-11.7%	**4.8%**	21.5%	0.1%	-0.6%	-0.5%	0.6%	0.7%	1.4%	1.4%	1.3%	1.1%
Feeder summation reactive demand (MVAr)	11.1	13.6	13.6	12.2	10.0	6.6	**7.7**	10.7	10.7	10.6	10.5	10.6	10.8	11.0	11.3	11.5	11.7
Zone substation capacitor bank (MVAr)	14.5	14.5	14.5	14.5	14.5	14.5	**14.5**	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5	14.5
Feeder line capacitors (MVAr)	5.4	5.4	5.4	5.4	5.4	5.4	**6.3**	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Reactive load on transformers (MVAr)	-4.1	-1.6	-1.6	-3.0	-5.2	-8.6	**-7.6**	-4.5	-4.5	-4.6	-4.7	-4.6	-4.4	-4.2	-4.0	-3.7	-3.5
Feeder summation power factor	0.96	0.96	0.97	0.97	0.98	0.99	**0.99**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.99	1.00	1.00	1.00	1.00	0.98	**0.99**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	40.6	47.7	56.3	46.3	52.2	46.6	**48.6**	58.5	58.6	58.2	57.9	58.3	58.7	59.5	60.3	61.1	61.7
(N-1) Cyclic Rating (MVA)	33.7	67.4	67.4	67.4	67.4	67.4	**67.4**	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4	67.4
(N-1) Limited Cyclic Rating (MVA)	36.1	72.3	72.3	72.3	72.3	72.3	**72.3**	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3	72.3
(N-1) 2 Hour Emergency Rating (MVA)	38.6	77.3	77.3	77.3	77.3	77.3	**77.3**	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
(N-1) 10 Minute Emergency Rating (MVA)	38.6	77.3	77.3	77.3	77.3	77.3	**77.3**	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3	77.3
(N) Cyclic Rating (MVA)	67.4	101.1	101.1	77.3	101.1	101.1	**101.1**	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1	101.1

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
LD 1	0	0	0	0	0
LD 2	0	0	0	0	0
LD 3	0	0	0	0	0
LD 4	0	0	0	0	0
LD 5	0	0	0	0	0
LD 6	0	0	0	0	0
LD 7	0	0	0	0	0
LD 31	0	0	0	0	0
LD 32	0	0	0	0	0
LD 33	0	0	0	0	0
LD 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
LD 1	260	260	30%	36%	36%	169	177	99	96	88	75	**78**	93	94	95	95	95	167 A	6.5 MVA	4.6%	
LD 2	270	270	67%	79%	80%	221	245	221	183	196	180	**180**	214	217	219	219	221	56 A	2.2 MVA	4.6%	
LD 3	300	300	34%	40%	41%	89	90	104	86	105	97	**101**	121	122	123	123	124	179 A	7 MVA	4.6%	
LD 4	330	330	58%	84%	86%	176	208	230	182	207	206	**191**	278	282	285	286	287	52 A	2 MVA	10.0%	
LD 5	350	350	68%	82%	83%	185	195	271	278	264	241	**239**	286	289	291	292	294	64 A	2.5 MVA	4.6%	
LD 6	290	290	87%	98%	99%	246	257	204	209	242	233	**251**	284	288	290	291	292	6 A	0.2 MVA	3.2%	
LD 7	260	260	53%	63%	64%	149	159	174	149	138	142	**138**	164	167	169	170	171	96 A	3.7 MVA	4.9%	
LD 31	0	0																0 A	0 MVA		
LD 32	260	260	21%	26%	27%		80	64	48	54	74	**54**	68	71	72	72	72	192 A	7.5 MVA	6.7%	
LD 33	290	290	73%	87%	88%		258	286	184	199	195	**210**	251	254	256	257	258	39 A	1.5 MVA	4.6%	
LD 34	0	0																0 A	0 MVA		
Average	237	237	68%	67%	67%	137	186	184	157	166	160	**160**	160	162	164	164	165	77 A	3 MVA	0.6%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
LD 1	0	0	0	0	0
LD 2	0	0	0	0	0
LD 3	0	0	0	0	0
LD 4	2	2	1	0	0
LD 5	0	0	0	0	0
LD 6	0	0	0	0	0
LD 7	0	0	1	1	0
LD 31	0	0	0	0	0
LD 32	3	2	0	0	0
LD 33	0	0	0	0	0
LD 34	0	0	0	0	0

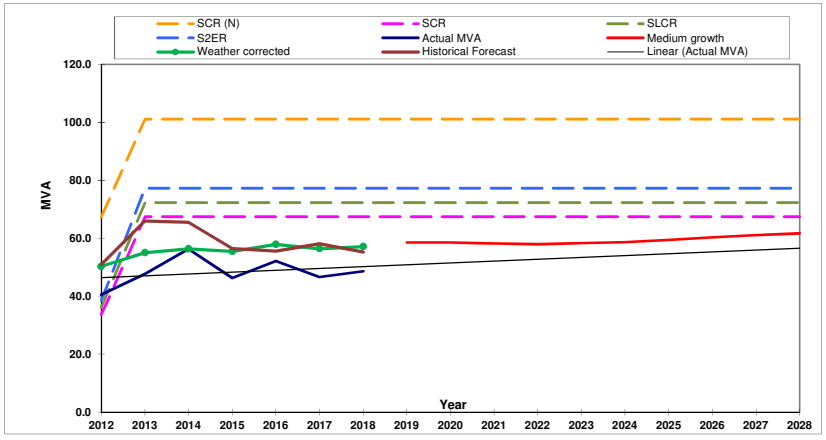
Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
   Third transformer was commissioned in 09/01/2013
2. Line Capacitors:
   4.5MVAr of Line capacitors were installed in 1998.
3. PCB capacitors replaced at LD in 2000 : #1 - 8MVAr, #2 - 8MVAr.
4. Load Transfers:
   2.3MW from DN to LD prior to summer 2010.
   7.4MW from MGE to LD prior to summer 2013.
   4.3MW from NP to LD prior to summer 2013.
5. New Loads:
   2MW by Fujitsu Data Centre on LD05 in 2010.
   2MW by Fujitsu Data Centre on LD05 in 2012.

Reserve Capacity Requirements

1. Fujitsu Data Centre
   LD5 (preferrred)
   SVW55 (reserve) - 2MVA (52A) reserve
2. Dandenong Hospital
   DN11 (preferred)
   LD4 (reserve) - 1.8MVA (47A)
3. Aurora
   DN11 (preferred)
   LD4 (reserve) - 1.15MVA (30A)
   The reserve contract is for 1.8MVA (inclusive of Aurora)
4. SP Ausnet Datacentre
   LD33 1MVA reserve
   MGE32 1MVA reserve
   No reserve contracts are in place

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

LANGWARRIN **LWN** Load Next Save Previous

Voltage 22.1 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	39.7	39.4	40.7	39.4	41.8	39.4	**45.2**	47.2	47.2	46.8	46.7	47.0	47.1	47.8	48.5	49.1	49.9
10% POE actual MD	44.1	44.7	44.5	44.6	46.1	45.8	46.1										
Load transfers (MW)				1.0													
Extra new load (MW)			0.3		0.3	0.2	**0.2**	0.0	0.0	0.0	0.0	0.0					
% growth (MW)		-0.7%	3.4%	-3.2%	6.0%	-5.7%	**14.9%**	4.5%	-0.1%	-0.8%	-0.3%	0.7%	0.4%	1.4%	1.4%	1.3%	1.5%
Feeder summation reactive demand (MVAr)	6.4	6.7	7.6	6.2	6.9	6.3	**6.8**	7.5	7.5	7.3	7.3	7.4	7.5	7.7	7.9	8.1	8.3
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	6.9	6.9	6.9	6.9	6.9	6.9	**7.8**	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
Reactive load on transformers (MVAr)	6.4	6.7	7.6	6.2	6.9	6.3	**6.8**	7.5	7.5	7.3	7.3	7.4	7.5	7.7	7.9	8.1	8.3
Feeder summation power factor	0.99	0.99	0.98	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.99	0.99	0.98	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	40.2	39.9	41.4	39.9	42.3	39.9	**45.7**	47.8	47.8	47.4	47.2	47.6	47.7	48.4	49.1	49.8	50.5
(N-1) Cyclic Rating (MVA)				45.4	45.4	45.4	**45.4**	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
(N-1) Limited Cyclic Rating (MVA)				48.3	48.3	48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N-1) 2 Hour Emergency Rating (MVA)				48.3	48.3	48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N-1) 10 Minute Emergency Rating (MVA)				48.3	48.3	48.3	**48.3**	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3	48.3
(N) Cyclic Rating (MVA)	45.4	45.4	45.4	48.3	90.8	90.8	**90.8**	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
LWN 21	0	0	0	0	0
LWN 23	0	0	0	0	0
LWN 24	0	0	0	0	0
LWN 31					
LWN 32	0	0	0	0	0
LWN 33	0	0	0	0	0
LWN 34	0	0	0	0	0
LWN 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
LWN 21	350	350	87%	89%	90%				256	268	259	**304**	312	315	317	318	320	38 A	1.5 MVA	1.0%	
LWN 23	335	335	55%	57%	57%				163	173	165	**185**	189	192	193	195	197	146 A	5.6 MVA	1.3%	
LWN 24	260	260	56%	58%	59%				88	133	128	**147**	151	152	153	154	154	109 A	4.2 MVA	1.0%	
LWN 31	0	0				200	229	255													
LWN 32	325	325	32%	32%	33%	255	265	276	90	95	86	**103**	105	107	107	108	108	220 A	8.4 MVA	1.0%	
LWN 33	280	280	61%	62%	63%	155	157	175	156	166	155	**170**	174	176	177	178	179	106 A	4 MVA	1.1%	
LWN 34	350	350	42%	43%	43%	265	277	299	176	151	141	**146**	149	151	152	152	153	201 A	7.7 MVA	1.0%	
LWN 35	285	285	62%	64%	65%	156	146	104	166	181	164	**178**	183	184	185	186	187	102 A	3.9 MVA	1.0%	
Average	273	273	64%	58%	66%	206	215	222	156	167	157	**176**	181	182	183	185	186	93 A	3.5 MVA	1.1%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
LWN 21	0	0	0	0	0
LWN 23	0	0	1	1	1
LWN 24	0	0	0	0	0
LWN 31	0	0	0	0	0
LWN 32	0	0	0	0	0
LWN 33	1	0	0	0	0
LWN 34	0	0	0	0	0
LWN 35	0	0	0	0	0

Zone Substation Comments

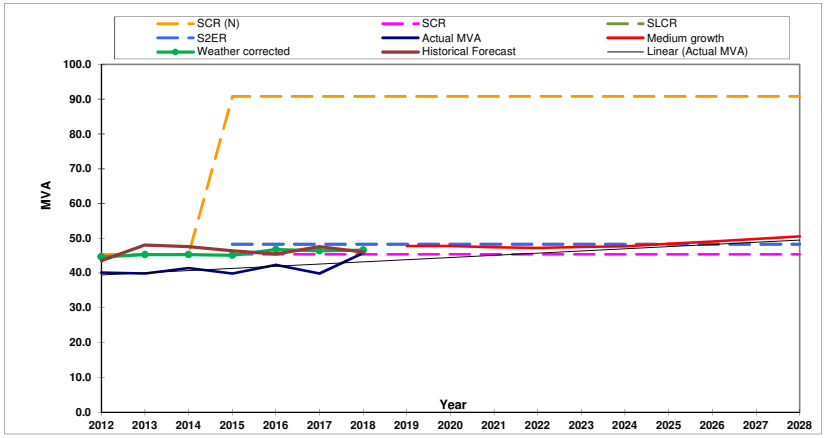
1. New single transformer zone substation to be built near FTS in 2008/09.
   Second transformer was commissioned on 30 Oct 2014

2. Load Transfers:
   - 20.0MW from FSH to LWN prior to summer 2010. Assumed power factor of 0.9
   - 14.0MW from FTN to LWN for summer 2010. Assumed power factor of 0.9
   - 1.2MVA from FSH to LWN in 2014 after LWN 2nd Tx.
   - LWN24 - 3.7MVA from LWN34 and 2.7MVA from FSH22 (2014/15)
   - LWN34 - 1.5MVA to FSH22 (2014/15)

3. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

MENTONE **M** (Load / Next / Save / Previous)

Voltage 11.15 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	28.1	33.6	36.0	30.8	35.4	33.5	**34.7**	41.8	42.1	41.8	41.7	42.1	42.2	43.1	43.9	44.7	45.0
10% POE actual MD	33.0	36.9	37.5	36.5	39.1	40.1	40.1										
Load transfers (MW)																	
Extra new load (MW)		1.8	0.4	0.9	1.6	1.5	**1.4**	0.9	0.6	0.2	0.2	0.1					
% growth (MW)		19.8%	7.0%	-14.5%	15.1%	-5.5%	**3.7%**	20.5%	0.6%	-0.7%	-0.2%	1.0%	0.2%	2.1%	1.9%	1.8%	0.9%
Feeder summation reactive demand (MVAr)	6.5	8.3	10.2	5.7	8.0	8.3	**6.2**	8.3	8.4	8.3	8.2	8.4	8.4	8.6	8.9	9.1	9.2
Zone substation capacitor bank (MVAr)	12.2	12.2	12.2	12.2	12.2	12.2	**12.2**	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
Feeder line capacitors (MVAr)	3.9	3.9	3.9	4.8	4.8	4.8	**3.9**	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Reactive load on transformers (MVAr)	-6.0	-4.2	-2.3	-6.8	-4.5	-4.2	**-6.3**	-4.2	-4.1	-4.2	-4.3	-4.1	-4.1	-3.9	-3.6	-3.4	-3.3
Feeder summation power factor	0.97	0.97	0.96	0.98	0.98	0.97	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.98	0.99	1.00	0.98	0.99	0.99	**0.98**	0.99	1.00	0.99	0.99	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	28.7	33.9	36.1	31.5	35.7	33.7	**35.3**	42.1	42.3	42.0	41.9	42.3	42.4	43.2	44.0	44.8	45.2
(N-1) Cyclic Rating (MVA)	27.2	54.4	54.4	54.4	54.4	54.4	**54.4**	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4	54.4
(N-1) Limited Cyclic Rating (MVA)	29.9	59.8	59.8	59.8	59.8	59.8	**59.8**	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8
(N-1) 2 Hour Emergency Rating (MVA)	29.9	59.8	59.8	59.8	59.8	59.8	**59.8**	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8
(N-1) 10 Minute Emergency Rating (MVA)	29.9	59.8	59.8	59.8	59.8	59.8	**59.8**	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8	59.8
(N) Cyclic Rating (MVA)	54.4	81.6	81.6	59.8	81.6	81.6	**81.6**	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6	81.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
M 11	0	0	0	0	0
M 12	0	0	0	0	0
M 13	0	0	0	0	0
M 14	0	0	0	0	0
M 15					
M 16					
M 21	0	0	0	0	0
M 22	0	0	0	0	0
M 23	10	0	0	0	0
M 24					
M 25	0	0	0	0	0
M 31	0	0	0	0	0
M 32	-10	0	0	0	0
M 33	0	0	0	0	0
M 34	0	0	0	0	0
M 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
M 11	335	335	60%	75%	77%	177	206	224	175	198	169	**203**	250	259	260	260	263	85 A	1.6 MVA	5.9%	
M 12	300	300	57%	67%	68%		168	175	221	157	149	**170**	201	205	205	206	208	99 A	1.9 MVA	4.5%	
M 13	340	340	72%	87%	91%		234	245	207	237	226	**243**	296	311	316	319	323	44 A	0.8 MVA	6.6%	
M 14	0	0																0 A	0 MVA		
M 15	0	0																			
M 16	0	0																			
M 21	340	340	46%	54%	54%	219	234	159	147	154	147	**158**	183	184	184	185	187	157 A	3 MVA	3.7%	
M 22	285	285	52%	61%	61%	158	53	132	110	121	129	**149**	174	174	175	175	177	111 A	2.2 MVA	3.7%	
M 23	285	285	59%	73%	74%	221	254	132	144	163	145	**169**	208	211	213	214	216	77 A	1.5 MVA	5.7%	
M 24	0	0																			
M 25	285	285	62%	72%	72%	181	192	164	131	152	148	**175**	204	205	205	206	208	81 A	1.6 MVA	3.7%	
M 31	285	285	60%	72%	73%	20	43	119	109	153	150	**170**	206	208	212	218	224	79 A	1.5 MVA	6.3%	
M 32	215	215	87%	99%	101%	165	164	216	145	161	162	**188**	213	218	219	219	221	2 A	0 MVA	3.6%	
M 33	300	300	60%	70%	70%	274	234	221	189	176	186	**180**	209	210	212	213	216	91 A	1.8 MVA	4.0%	
M 34	300	300	43%	50%	50%	157	234	109	104	117	119	**129**	150	151	151	152	153	150 A	2.9 MVA	3.7%	
M 35	285	285	50%	58%	58%	153	188	155	124	149	141	**143**	166	167	167	168	169	119 A	2.3 MVA	3.7%	
Average	222	222	78%	69%	85%	144	184	171	150	162	156	**173**	189	193	194	195	197	33 A	0.6 MVA	2.8%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
M 11	14	8	0	0	0
M 12	4	3	0	0	0
M 13	14	13	4	2	1
M 14	0	0	0	0	0
M 15	0	0	0	0	0
M 16	0	0	0	0	0
M 21	0	0	0	0	0
M 22	0	0	0	0	0
M 23	2	2	1	1	0
M 24	0	0	0	0	0
M 25	0	0	0	0	0
M 31	8	1	3	5	4
M 32	5	4	0	0	0
M 33	0	0	1	1	1
M 34	0	0	0	0	0
M 35	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings are limited by 11kV transformer cables. Uprate cables in 2001 for summer 2002. Post 2001 ratings are based on 40deg C ambient temperature. Third transformer was commissioned on 18 Jan 2013

2. Line Capacitors:
   Installed 3MVAr prior to summer 2000.

3. Convert part 11kV to 22kV in 2010 and 2011 and transfer load to MC.

4. Nylex load to drop to zero by June-06.

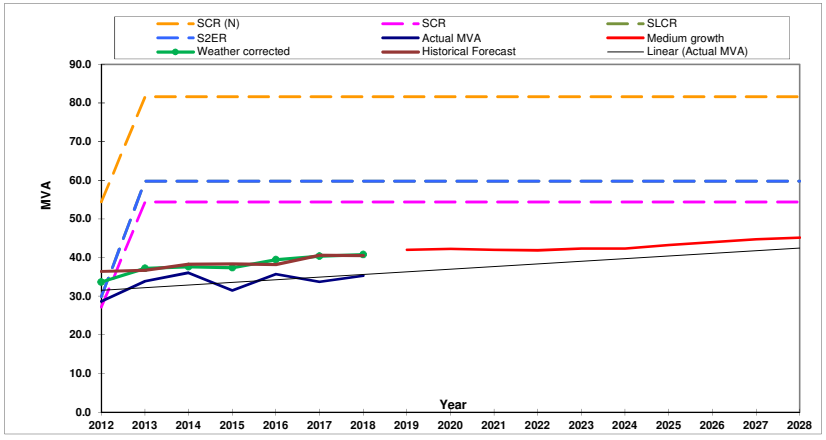
5. Load Transfers:
   Transferred 1.0MW from M to MC for summer 2007.

6. New Load:
   1.0MW in 2009 by Southern-Hella 4.
   1.5MW in 2009 by Voltri N75 Shearson S/S (factory) on M17.
   4.0MVA on new feeder M33 by old Nylex site (2012)
   2.0MVA on M17 by Moorabbin Airport (2014)

Reserve Capacity Requirements

1. Nylex, Nepean Hwy:
   M13 (preferred)
   M 11 (reserve) - 3.0MVA (160A) reserve.
Nylex reserve capacity will expire 1/6/06 and shall not be renewed.

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

MORDIALLOC **MC**

Voltage 22.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	55.8	62.8	60.0	47.7	52.6	57.0	**58.2**	63.5	63.6	63.4	63.4	64.0	64.1	65.4	66.7	67.9	68.0
10% POE actual MD	63.0	68.0	65.9	59.3	57.7	61.8	61.2										
Load transfers (MW)				-3.1													
Extra new load (MW)		1.0	1.8	0.9	1.6	1.1	**1.2**	1.0	0.6	0.4	0.3	0.2					
% growth (MW)		12.6%	-4.4%	-20.5%	10.3%	8.4%	**2.1%**	9.2%	0.2%	-0.4%	-0.1%	1.0%	0.2%	2.1%	1.9%	1.8%	0.2%
Feeder summation reactive demand (MVAr)	12.6	17.0	16.5	8.6	10.0	6.6	**6.0**	8.2	8.3	8.2	8.1	8.4	8.5	9.0	9.5	10.0	10.1
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	19.5	20.4	20.4	22.0	22.0	22.0	**17.7**	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7	17.7
Reactive load on transformers (MVAr)	12.6	17.0	16.5	8.6	10.0	6.6	**6.0**	8.2	8.3	8.2	8.1	8.4	8.5	9.0	9.5	10.0	10.1
Feeder summation power factor	0.98	0.97	0.96	0.98	0.98	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.98	0.97	0.96	0.98	0.98	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	57.2	65.0	62.2	48.5	53.5	57.4	**58.5**	64.1	64.2	63.9	63.9	64.6	64.7	66.1	67.4	68.6	68.7
(N-1) Cyclic Rating (MVA)	55.4	55.4	55.4	55.4	55.4	55.4	**55.4**	55.4	55.4	55.4	55.4	55.4	55.4	55.4	55.4	55.4	55.4
(N-1) Limited Cyclic Rating (MVA)	59.6	59.6	59.6	59.6	59.6	59.6	**59.6**	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6	59.6
(N-1) 2 Hour Emergency Rating (MVA)	60.0	60.0	60.0	60.0	60.0	60.0	**60.0**	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0	60.0
(N-1) 10 Minute Emergency Rating (MVA)	60.0	60.0	60.0	60.0	67.6	67.6	**67.6**	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6	67.6
(N) Cyclic Rating (MVA)	83.1	83.1	83.1	60.0	83.1	83.1	**83.1**	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1	83.1

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
MC 1	0	0	0	0	0
MC 2	0	0	0	0	0
MC 3	0	0	0	0	0
MC 4	0	0	0	0	0
MC 5	0	0	0	0	0
MC 6	0	0	0	0	0
MC 7	0	0	0	0	0
MC 8	0	0	0	0	0
MC 9	0	0	0	0	0
MC 10	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
MC 1	265	265	53%	56%	56%	130	138	145	131	131	135	**139**	147	148	148	149	150	118 A	4.6 MVA	1.6%	
MC 2	265	265	56%	60%	61%	176	222	251	151	117	132	**148**	158	162	164	165	166	107 A	4.2 MVA	2.5%	
MC 3	265	265	73%	78%	78%	128	150	156	124	143	135	**194**	206	207	208	208	210	59 A	2.3 MVA	1.7%	
MC 4	325	325	78%	85%	86%	226	230	269	276	276	245	**255**	276	281	283	284	287	49 A	1.9 MVA	2.5%	
MC 5	305	305	65%	70%	70%	216	223	249	173	179	185	**199**	213	215	216	218	221	92 A	3.6 MVA	2.2%	
MC 6	330	330	66%	71%	73%	198	245	233	212	228	216	**219**	236	240	244	248	254	94 A	3.7 MVA	3.2%	
MC 7	265	265	59%	66%	68%	111	165	218	140	165	201	**157**	175	180	185	190	193	90 A	3.5 MVA	4.6%	
MC 8	0	0																0 A	0 MVA		
MC 9	365	365	55%	59%	60%	208	215	153	191	174	170	**201**	215	217	218	219	221	150 A	5.8 MVA	1.9%	
MC 10	330	330	67%	71%	72%	282	284	161	143	144	148	**221**	235	237	238	239	241	95 A	3.7 MVA	1.8%	
Average	272	272	71%	69%	69%	186	208	204	171	173	174	**193**	186	189	190	192	194	85 A	3.3 MVA	0.2%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
MC 1	0	0	0	0	0
MC 2	1	3	2	0	0
MC 3	1	0	0	0	0
MC 4	6	4	1	0	0
MC 5	3	0	1	1	1
MC 6	4	3	4	4	3
MC 7	9	4	4	4	1
MC 8	0	0	0	0	0
MC 9	2	1	0	0	0
MC 10	2	1	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 20101.

2. New Loads:
   - 1MW on MC5 in 2007.
   - 1MW on MC7 in 2007.
   - 2MW on MC10 over next 4 years from 2007.
   - 1.5MVA on MC7 (2012)
   - 1.0MVA on MC9 (2012)

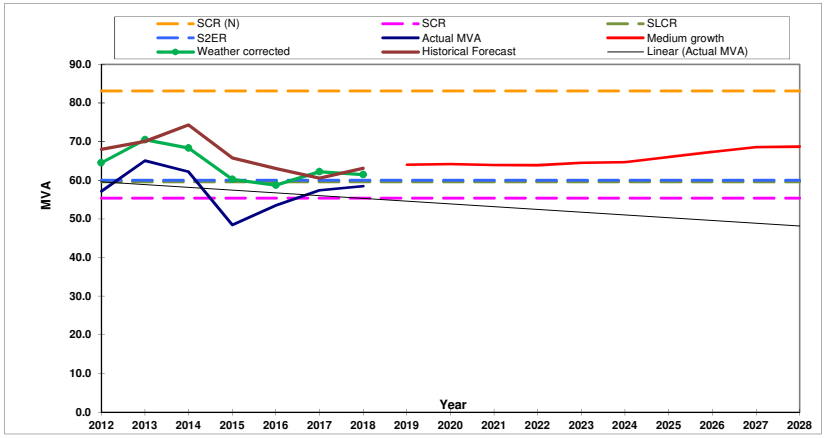
3. Load Transfers:
   - Transferred 1.0MW from M to MC for summer 2007.
   - Transferred 1.5MW from MC to CRM for summer 2008.
   - Transferred 2.2MW from MC to CRM for summer 2010.
   - MC7 - 3.0MVA from MC2 and 2.1MVA to NP15 (2014/15)
   - MC9 - 2.5MVA from MC4 and 1.0MVA to NP14 (2014/15)

4. Line Capacitors: Installed 12MVAr in 1997 and 2.7MVAr in 1999.
5. New 66/22kV Transformer - Installed 3rd transformer at MC & 2 feeder exits (MC09 & MC10) prior to summer 2002. Third feeder (MC07) commissioned in winter 2002.

6. Established Keysborough zone substation (KBH) for summer 2015 to off-load NP, MC & DSH.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

MULGRAVE MGE — Voltage 22.2 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	69.1	75.2	82.3	68.7	73.2	74.9	**73.4**	84.3	84.4	83.9	84.0	85.0	85.1	86.7	88.4	90.0	91.0
10% POE actual MD	77.2	81.3	82.3	82.1	78.9	81.4	79.6										
Load transfers (MW)			-5.3					1.9									
Extra new load (MW)		0.2	1.0			2.1	**1.9**	0.7	0.6	0.6	0.7	0.4					
% growth (MW)		8.8%	9.5%	-16.5%	6.5%	2.3%	**-2.0%**	14.8%	0.1%	-0.5%	0.1%	1.1%	0.2%	1.9%	1.9%	1.8%	1.1%
Feeder summation reactive demand (MVAr)	15.1	15.2	15.1	8.4	10.3	11.2	**8.1**	11.8	11.8	11.7	11.7	12.0	12.0	12.6	13.1	13.7	14.0
Zone substation capacitor bank (MVAr)	8.0	8.0	8.0	8.0	8.0	8.0	**8.0**	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Feeder line capacitors (MVAr)	15.3	15.3	15.3	16.2	16.2	16.2	**16.2**	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
Reactive load on transformers (MVAr)	6.9	7.0	6.9	0.3	2.1	3.0	**-0.1**	3.6	3.6	3.5	3.5	3.8	3.8	4.4	5.0	5.5	5.8
Feeder summation power factor	0.98	0.98	0.98	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	69.5	75.5	82.6	68.7	73.2	75.0	**73.4**	84.4	84.4	84.0	84.1	85.0	85.2	86.8	88.5	90.2	91.2
(N-1) Cyclic Rating (MVA)	74.4	74.4	74.4	74.4	74.4	74.4	**74.4**	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4	74.4
(N-1) Limited Cyclic Rating (MVA)	79.0	79.0	79.0	79.0	79.0	79.0	**79.0**	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0
(N-1) 2 Hour Emergency Rating (MVA)	86.3	86.3	86.3	86.3	86.3	86.3	**86.3**	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
(N-1) 10 Minute Emergency Rating (MVA)	86.3	86.3	86.3	86.3	86.3	86.3	**86.3**	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3	86.3
(N) Cyclic Rating (MVA)	111.6	111.6	111.6	86.3	111.6	111.6	**111.6**	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6	111.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
MGE 11	0	0	0	0	0
MGE 12	0	0	0	0	0
MGE 13	0	0	0	0	0
MGE 14	100	0	0	0	0
MGE 21	0	0	0	0	0
MGE 22	0	0	0	0	0
MGE 23	0	0	0	0	0
MGE 24	0	0	0	0	0
MGE 31	0	0	0	0	0
MGE 32	0	0	0	0	0
MGE 33	0	0	0	0	0
MGE 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
MGE 11	350	350	25%	27%	28%	67	80	90	68	81	75	**87**	96	97	97	97	98	254 A	9.8 MVA	2.7%	
MGE 12	260	260	81%	93%	96%	175	191	202	171	197	208	**211**	243	249	250	250	253	17 A	0.7 MVA	4.0%	
MGE 13	320	320	77%	85%	86%	254	254	257	227	239	244	**246**	271	275	277	279	282	49 A	1.9 MVA	2.9%	
MGE 14	325	325	39%	73%	74%	184	193	197	170	157	115	**126**	239	242	243	243	246	86 A	3.3 MVA	19.0%	
MGE 21	315	315	66%	73%	74%	181	205	220	184	203	210	**208**	230	234	237	244	250	85 A	3.3 MVA	4.1%	
MGE 22	260	260	62%	70%	72%	167	184	204	162	156	172	**160**	181	188	193	196	198	79 A	3 MVA	4.7%	
MGE 23	260	260	68%	75%	76%	153	171	178	135	177	155	**177**	195	197	198	198	200	65 A	2.5 MVA	2.7%	
MGE 24	295	295	73%	81%	82%	228	244	261	225	234	218	**216**	238	241	242	243	245	57 A	2.2 MVA	2.7%	
MGE 31	295	295	68%	75%	76%	199	214	237	203	206	178	**201**	221	224	225	225	228	74 A	2.8 MVA	2.7%	
MGE 32	295	295	49%	55%	57%	217	225	246	115	129	134	**144**	162	169	176	180	181	133 A	5.1 MVA	5.2%	
MGE 33	320	320	48%	53%	54%	216	213	80	154	154	230	**154**	169	172	172	173	174	151 A	5.8 MVA	2.7%	
MGE 34	265	265	59%	65%	67%	144	153	174	130	153	138	**157**	173	177	181	189	197	92 A	3.6 MVA	5.1%	
Average	297	297	59%	68%	68%	182	194	195	162	174	173	**174**	202	205	207	210	213	95 A	3.7 MVA	4.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
MGE 11	0	0	0	0	0
MGE 12	10	3	0	0	0
MGE 13	0	1	1	1	0
MGE 14	0	0	0	0	0
MGE 21	0	1	3	6	4
MGE 22	5	5	4	3	0
MGE 23	0	0	0	0	0
MGE 24	0	0	0	0	0
MGE 31	0	0	0	0	0
MGE 32	4	4	6	3	0
MGE 33	0	0	0	0	0
MGE 34	0	2	4	8	6

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors
   9.0MVAr prior to summer 1999.
   4.5MVAr prior to summer 2002.

3. Load Transfers:
   1.7MW from MGE to GW for summer 2010.
   7.4MW from MGE to LD prior to summer 2013.

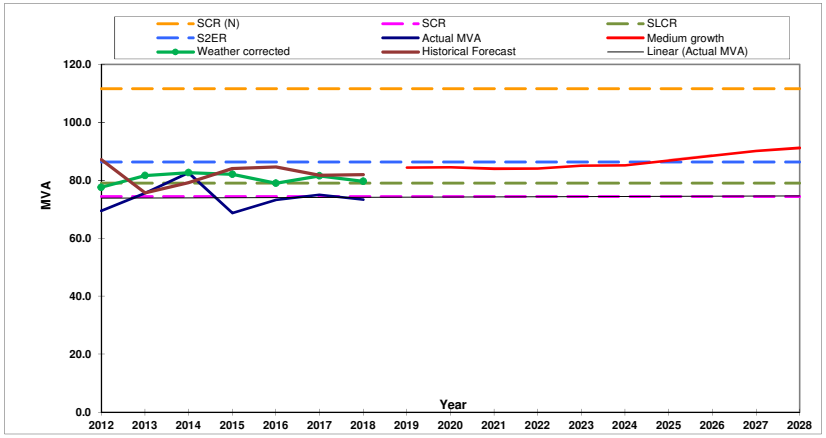
4. New Loads

Reserve Capacity Requirements

1. SP Ausnet Datacentre
   LD33 1MVA reserve
   MGE32 1MVA reserve
   No reserve contracts are in place.

Network Support Agreements

1. GreenSync - 800kVA reduction for 2015/16 (1 year)



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

MOORABBIN **MR** — Load / Next / Save / Previous

Voltage 11.4 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	32.3	38.9	44.0	32.7	43.4	45.5	**46.8**	50.1	50.3	50.4	50.5	51.0	51.1	52.1	53.1	54.1	54.2
10% POE actual MD	37.0	42.8	44.5	44.0	46.0	49.7	48.1										
Load transfers (MW)						3.5											
Extra new load (MW)		0.2	0.3	0.6	1.8	1.2	**1.3**	0.9	0.7	0.6	0.4	0.2					
% growth (MW)		20.4%	13.1%	-25.7%	32.8%	4.8%	**2.8%**	7.0%	0.5%	0.1%	0.2%	1.0%	0.1%	2.1%	1.9%	1.8%	0.2%
Feeder summation reactive demand (MVAr)	7.2	8.6	9.2	3.7	7.0	7.9	**7.0**	8.0	8.1	8.2	8.2	8.4	8.4	8.7	9.1	9.4	9.4
Zone substation capacitor bank (MVAr)	6.1	6.1	6.1	6.1	6.1	6.1	**6.1**	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Feeder line capacitors (MVAr)	6.3	6.3	6.3	6.3	6.3	6.3	**8.1**	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1	8.1
Reactive load on transformers (MVAr)	0.7	2.1	2.6	-2.8	0.5	1.3	**0.4**	1.5	1.6	1.6	1.7	1.8	1.9	2.2	2.6	2.9	2.9
Feeder summation power factor	0.98	0.98	0.98	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	32.3	39.0	44.1	32.8	43.4	45.5	**46.8**	50.1	50.4	50.4	50.5	51.1	51.1	52.2	53.2	54.2	54.3
(N-1) Cyclic Rating (MVA)	45.0	45.0	48.0	48.0	48.0	39.9	**39.9**	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
(N-1) Limited Cyclic Rating (MVA)	48.0	48.0	48.0	48.0	48.0	39.9	**39.9**	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
(N-1) 2 Hour Emergency Rating (MVA)	59.0	59.0	59.0	59.0	59.0	39.9	**39.9**	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
(N-1) 10 Minute Emergency Rating (MVA)	59.0	59.0	59.0	59.0	59.0	39.9	**39.9**	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9	39.9
(N) Cyclic Rating (MVA)	90.0	90.0	72.0	59.0	72.0	72.0	**72.0**	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8	79.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
MR 11	0	0	0	0	0
MR 12	0	0	0	0	0
MR 13	0	0	0	0	0
MR 14	0	0	0	0	0
MR 15	0	0	0	0	0
MR 21	0	0	0	0	0
MR 22	0	0	0	0	0
MR 23	0	0	0	0	0
MR 24	0	0	0	0	0
MR 31	0	0	0	0	0
MR 32	0	0	0	0	0
MR 33	0	0	0	0	0
MR 34	0	0	0	0	0
MR 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
MR 11	335	335	42%	44%	44%	134	137	148	133	147	132	**142**	148	149	149	150	151	187 A	3.7 MVA	1.3%	
MR 12	350	350	68%	71%	72%	122	145	155	130	149	174	**239**	249	253	260	266	268	101 A	2 MVA	2.4%	
MR 13	350	350	66%	68%	69%	188	230	344	95	235	225	**232**	240	241	241	242	244	110 A	2.2 MVA	1.1%	
MR 14	300	300	75%	79%	81%	243	285	302	203	236	197	**225**	238	242	243	244	246	62 A	1.2 MVA	1.8%	
MR 15	350	350	89%	97%	99%	237	353	324	270	266	269	**310**	338	345	350	352	356	12 A	0.2 MVA	2.9%	
MR 21	335	335	56%	58%	59%	268	292	204	163	194	181	**189**	195	196	197	197	199	140 A	2.8 MVA	1.1%	
MR 22	330	330	80%	83%	84%	204	234	275	228	229	246	**265**	275	278	280	281	283	55 A	1.1 MVA	1.4%	
MR 23	320	320	73%	78%	80%	179	199	201	166	175	226	**233**	250	256	268	284	296	70 A	1.4 MVA	5.4%	
MR 24	265	265	69%	72%	74%	190	207	224	186	207	176	**182**	191	197	202	202	204	74 A	1.5 MVA	2.5%	
MR 31	320	320	60%	63%	64%	178	200	199	127	181	180	**193**	202	206	209	210	212	118 A	2.3 MVA	1.9%	
MR 32	350	350	73%	77%	79%			254	183	216	230	**256**	270	277	279	281	283	80 A	1.6 MVA	2.1%	
MR 33	350	350	73%	74%	75%						281	**255**	259	263	267	269	272	91 A	1.8 MVA	1.3%	
MR 34	0	0																0 A	0 MVA		
MR 35	335	335		0%	0%													335 A	6.6 MVA		
Average	306	306	74%	67%	67%	162	190	219	157	186	210	**227**	204	207	210	213	215	103 A	2 MVA	-1.0%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
MR 11	1	0	0	0	0
MR 12	2	3	6	5	0
MR 13	0	0	0	0	0
MR 14	5	4	0	0	0
MR 15	19	5	4	1	0
MR 21	0	0	0	0	0
MR 22	1	2	2	0	0
MR 23	10	5	10	15	9
MR 24	3	6	4	0	0
MR 31	2	4	3	0	0
MR 32	6	5	1	1	0
MR 33	3	3	3	2	0
MR 34	0	0	0	0	0
MR 35	0	0	0	0	0

Zone Substation Comments

1. Station rating is limited by 11kV transformer cables.
   The ultimate rating of the station is estimated at (N-1) SCR = 32MVA.
   Uprate 11kV transformer cables in 2006 for summer 2007.

2. Line Capacitors:
   Installed 4.8MVAr prior to summer 2000.

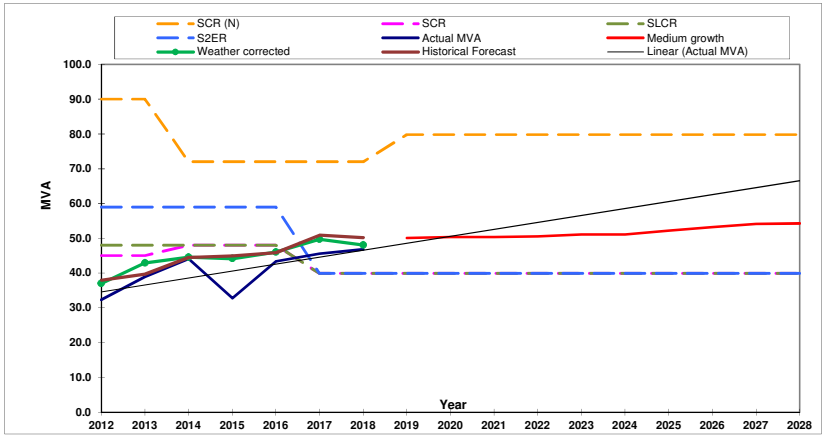
3. New Loads:

4. Load Transfers:
   2.6MW from MR to NB for summer 2009 - due to MR Tx derated
   1.5MW from MR to SR for summer 2009 - due to MR Tx derated
   1.5MW from BT, NB, SR to MR for summer 2011

5. 3rd transformer at MR in 2009 for summer 2010. Tx no3 to be retired in 2009.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

MORNINGTON MTN — Voltage 22.6 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	45.5	44.3	56.6	51.0	54.2	50.8	**63.1**	66.8	66.9	66.7	67.2	68.7	69.4	71.4	73.4	75.2	75.9
10% POE actual MD	49.2	48.9	57.7	56.5	58.2	59.8	64.9										
Load transfers (MW)							2.6										
Extra new load (MW)		2.7	1.1	0.2	0.4	0.2	**0.3**	0.3	0.4	0.4	0.1						
% growth (MW)		-2.8%	27.9%	-9.9%	6.2%	-6.3%	**24.3%**	5.9%	0.1%	-0.3%	0.6%	2.3%	1.0%	2.8%	2.7%	2.5%	1.0%
Feeder summation reactive demand (MVAr)	6.7	8.3	12.5	8.2	9.6	6.2	**7.8**	8.6	8.6	8.6	8.7	9.0	9.2	9.6	10.0	10.4	10.6
Zone substation capacitor bank (MVAr)	6.8	6.8	6.8	6.8	6.8	6.8	**6.8**	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Feeder line capacitors (MVAr)	5.4	5.4	5.4	5.4	5.4	5.4	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Reactive load on transformers (MVAr)	-0.5	1.1	5.4	1.0	2.4	-1.0	**0.7**	1.5	1.5	1.4	1.5	1.9	2.0	2.4	2.9	3.2	3.4
Feeder summation power factor	0.99	0.98	0.98	0.99	0.98	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	45.5	44.3	56.8	51.0	54.2	50.8	**63.1**	66.8	66.9	66.8	67.2	68.8	69.5	71.5	73.4	75.2	76.0
(N-1) Cyclic Rating (MVA)	41.8	46.4	46.4	46.4	46.4	46.4	**46.4**	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
(N-1) Limited Cyclic Rating (MVA)	45.1	48.9	48.9	48.9	48.9	48.9	**48.9**	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9
(N-1) 2 Hour Emergency Rating (MVA)	45.1	48.9	48.9	48.9	48.9	48.9	**48.9**	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9
(N-1) 10 Minute Emergency Rating (MVA)	45.1	48.9	48.9	48.9	48.9	48.9	**48.9**	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9	48.9
(N) Cyclic Rating (MVA)	65.8	92.9	92.9	48.9	92.9	92.9	**92.9**	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9	92.9

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
MTN 21	0	0	0	0	0
MTN 22	0	0	0	0	0
MTN 23	0	0	0	0	0
MTN 24	0	0	0	0	0
MTN 31	0	0	0	0	0
MTN 32	30	0	0	0	0
MTN 33	0	0	0	0	0
MTN 34	0	0	0	0	0
MTN 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
MTN 21	350	350	66%	69%	72%	236	262	249	173	257	206	**230**	243	253	263	270	276	107 A	4.2 MVA	4.0%	
MTN 22	325	325	85%	89%	90%	243	78	135	239	259	240	**278**	289	293	297	302	309	36 A	1.4 MVA	2.2%	
MTN 23	260	260	63%	65%	66%		211	234	144	152	145	**164**	170	172	174	177	181	90 A	3.5 MVA	2.1%	
MTN 24	260	260	87%	91%	92%	103	70	151	189	202	197	**227**	235	238	241	245	250	25 A	1 MVA	2.1%	
MTN 31	320	320	91%	94%	95%	283	291	328	232	254	242	**290**	301	305	308	313	320	19 A	0.7 MVA	2.1%	
MTN 32	260	260	62%	76%	77%		28	57	77	88	70	**160**	198	200	202	205	210	62 A	2.4 MVA	6.3%	
MTN 33	0	0																0 A	0 MVA		
MTN 34	265	265	85%	90%	91%	174	187	237	216	200	185	**226**	237	242	244	248	254	28 A	1.1 MVA	2.4%	
MTN 35	260	260	81%	84%	85%	199	224	268	162	179	176	**211**	219	222	225	228	233	41 A	1.6 MVA	2.1%	
Average	256	256	87%	82%	82%	155	169	207	179	199	183	**223**	210	214	217	221	226	45 A	1.8 MVA	0.2%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
MTN 21	4	8	8	2	0
MTN 22	0	0	1	1	0
MTN 23	0	0	0	0	0
MTN 24	0	0	0	0	0
MTN 31	0	0	0	0	0
MTN 32	2	0	0	0	0
MTN 33	0	0	0	0	0
MTN 34	2	2	0	0	0
MTN 35	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors
   3.6MVAr prior to summer 2001.
   1.8MVAr prior to summer 2002.
3. Replace PCB capacitors at MTN in 2003 : #1 - 8MVAr

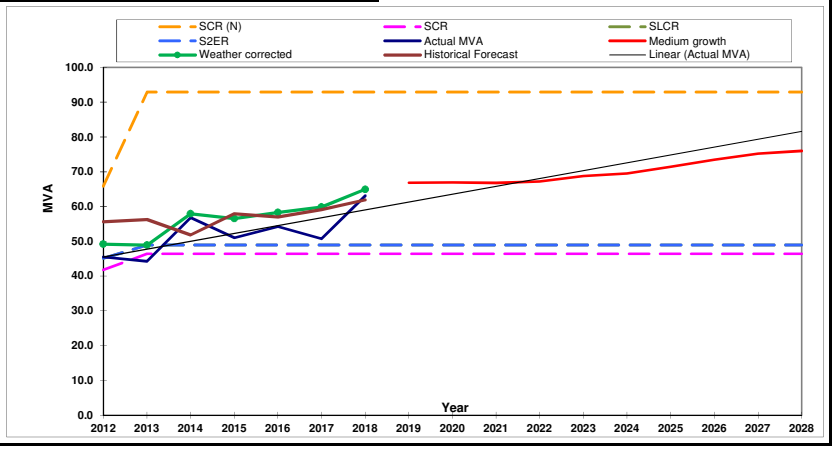
4. Load Transfers:
   0.8MW from FSH to MTN prior to summer 2009.
   MTN21 - 2.1MVA from MTN34
   MTN23 - 1.8MVA from MTN31, 7.0MVA to MTN22, 0.9MVA to MTN34 and 0.8MVA to MTN35
   MTN32 - 1.9MVA to MTN24, 2.8MVA to MTN31 and 0.6MVA to MTN34

5. New Loads
   1.0MW on MTN8 (Racecourse Rd) in early 2009.
   1MVA at Safeway (2012)
   2 MVA at Mt Martha TTP (2012)
   1.8MVA at Watts Rd Industrial Estate (2012)
   1MVA at Bungrower Rd retirement village (2012)

6. New 20/33MVA Tx in 2008 for summer 2008/09
   Replace the remaining 3x10MVA Txs with 1x20/33MVA Tx in 2012/13

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

NORTH BRIGHTON **NB** — Load / Next / Save / Previous

Voltage 11.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	38.2	44.0	45.3	36.7	43.2	41.4	**45.7**	49.7	49.8	49.5	49.5	50.0	50.1	51.1	52.1	53.0	53.1
10% POE actual MD	45.8	47.8	49.0	48.4	50.1	50.0	48.0										
Load transfers (MW)																	
Extra new load (MW)		0.1	0.7	1.5	1.6	1.4	**1.2**	0.6	0.4	0.3	0.3	0.2					
% growth (MW)		15.4%	2.9%	-19.1%	17.9%	-4.2%	**10.3%**	8.8%	0.1%	-0.5%	0.0%	1.0%	0.1%	2.1%	1.9%	1.8%	0.2%
Feeder summation reactive demand (MVAr)	8.0	7.4	9.1	5.0	7.6	5.2	**8.2**	9.9	9.9	9.8	9.8	10.0	10.0	10.5	10.9	11.2	11.3
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	7.5	9.3	9.3	10.2	10.2	10.2	**9.6**	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Reactive load on transformers (MVAr)	8.0	7.4	9.1	5.0	7.6	5.2	**8.2**	9.9	9.9	9.8	9.8	10.0	10.0	10.5	10.9	11.2	11.3
Feeder summation power factor	0.98	0.99	0.98	0.99	0.99	0.99	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.98	0.99	0.98	0.99	0.99	0.99	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	39.0	44.7	46.3	37.0	43.9	41.8	**46.4**	50.7	50.8	50.5	50.5	51.0	51.1	52.2	53.2	54.2	54.3
(N-1) Cyclic Rating (MVA)	33.2	39.8	39.8	39.8	39.8	39.8	**45.4**	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4	45.4
(N-1) Limited Cyclic Rating (MVA)	36.2	39.8	39.8	39.8	39.8	39.8	**49.7**	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7
(N-1) 2 Hour Emergency Rating (MVA)	38.5	39.8	39.8	39.8	39.8	39.8	**49.7**	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7
(N-1) 10 Minute Emergency Rating (MVA)	38.5	39.8	39.8	39.8	39.8	39.8	**49.7**	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7	49.7
(N) Cyclic Rating (MVA)	66.4	79.7	79.7	39.8	79.7	79.7	**90.8**	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8	90.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
NB 11	0	0	0	0	0
NB 12	0	0	0	0	0
NB 13	0	0	0	0	0
NB 14	0	0	0	0	0
NB 15	0	0	0	0	0
NB 21	0	0	0	0	0
NB 22	0	0	0	0	0
NB 23	0	0	0	0	0
NB 24	0	0	0	0	0
NB 25	0	0	0	0	0
NB 26	0	0	0	0	0
NB 31	0	0	0	0	0
NB 32	0	0	0	0	0
NB 33	0	0	0	0	0
NB 34	0	0	0	0	0
NB 35	0	0	0	0	0
NB 36	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
NB 11	0	0				117	133	119	129	125											
NB 12	0	0				248	273	331	226	263											
NB 13	0	0				141	155	152	118	148											
NB 14	0	0				195	232	244	211	241											
NB 15	0	0				350	290	226	235	188											
NB 21	0	0				188	224	234	187	220											
NB 22	300	300	53%	57%	58%	275	301	282	220	255	156	**159**	172	174	177	179	180	128 A	2.5 MVA	2.7%	
NB 23	330	330	63%	69%	71%	270	304	319	252	293	251	**208**	229	235	236	237	239	101 A	2 MVA	3.0%	
NB 24	350	350	45%	47%	48%	243	272	248	194	237	156	**156**	165	167	172	180	188	185 A	3.7 MVA	4.1%	
NB 25	350	350	89%	94%	95%	216	233	233	235	264	271	**312**	330	331	333	334	337	20 A	0.4 MVA	1.6%	
NB 26	330	330	44%	47%	47%						120	**146**	154	155	155	156	157	176 A	3.5 MVA	1.6%	
NB 31	330	330	67%	72%	72%							**222**	236	239	241	242	244	94 A	1.9 MVA	2.0%	
NB 32	300	300	75%	83%	85%						214	**226**	248	255	256	256	259	52 A	1 MVA	2.9%	
NB 33	300	300	78%	82%	83%						220	**233**	247	249	251	253	255	53 A	1.1 MVA	1.9%	
NB 34	350	350	62%	68%	69%						191	**218**	236	240	243	245	247	114 A	2.3 MVA	2.7%	
NB 35	350	350	86%	92%	93%						364	**301**	321	325	330	338	346	29 A	0.6 MVA	3.0%	
NB 36	350	350	77%	83%	83%						221	**270**	289	292	293	294	297	61 A	1.2 MVA	1.9%	
Average	214	214	104%	72%	112%	224	242	239	201	223	197	**223**	239	242	244	247	250	0 A	0 MVA	2.4%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
NB 11	0	0	0	0	0
NB 12	0	0	0	0	0
NB 13	0	0	0	0	0
NB 14	0	0	0	0	0
NB 15	0	0	0	0	0
NB 21	0	0	0	0	0
NB 22	4	1	2	2	0
NB 23	9	6	0	0	0
NB 24	0	2	4	8	6
NB 25	0	0	0	0	0
NB 26	0	0	0	0	0
NB 31	2	2	1	0	0
NB 32	9	6	0	0	0
NB 33	0	1	1	1	0
NB 34	6	3	2	1	0
NB 35	2	3	4	6	5
NB 36	3	2	0	0	0

Zone Substation Comments

1. Due to space limitation, existing site is suitable for 2 transformers only.
   Tx #2 to be replaced in 2011 as part of asset replacement
   Tx #1 to be replaced in 2012 as part of asset replacement. As a result, N and (N-1) ratings increases.

2. Station summer capability is limited by thermal rating of transformers and their 11kV cables.

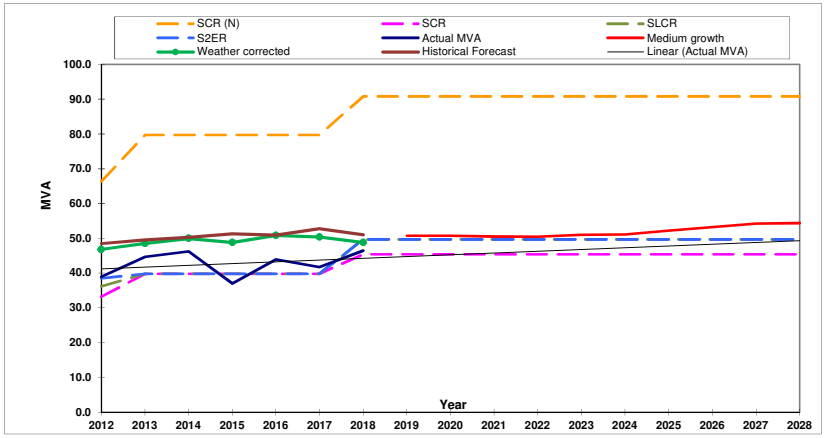
3. Line Capacitors:
   Installed 8.1MVAr prior to summer 2000.

4. Load Transfers:
   1.0MW from NB to BT for summer 2009.
   2.6MW from MR to NB for summer 2009 - due to derated Tx at MR.
   0.5MW from BT to NB for summer 2009 - due to derated Tx at MR.
   2.0MW from NB to EW for summer 2010
   0.2MW from NB to MR for summer 2011

5. New Load:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

NOTTING HILL NO — Voltage 22.3 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	38.7	43.3	43.9	40.7	43.0	43.5	**47.1**	57.3	58.2	59.1	60.4	61.7	63.5	65.2	66.4	67.5	68.0
10% POE actual MD	44.8	45.9	45.8	46.2	46.0	47.6	49.4										
Load transfers (MW)		-2.5					1.3	4.0									
Extra new load (MW)			1.2	1.9	2.8	5.8	**4.2**	2.4	1.0	1.2	1.3	0.8	1.4	1.0			
% growth (MW)		11.9%	1.5%	-7.4%	5.6%	1.3%	**8.3%**	21.7%	1.5%	1.6%	2.2%	2.2%	2.8%	2.8%	1.9%	1.7%	0.6%
Feeder summation reactive demand (MVAr)	8.1	7.9	7.1	5.6	5.7	5.0	**-5.8**	-3.9	-3.7	-3.6	-3.3	-3.1	-2.8	-2.4	-2.2	-2.0	-1.9
Zone substation capacitor bank (MVAr)	15.1	15.1	15.1	15.1	15.1	15.1	**15.1**	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1	15.1
Feeder line capacitors (MVAr)	12.6	13.5	13.5	13.5	13.5	13.5	**14.1**	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
Reactive load on transformers (MVAr)	-7.4	-7.6	-8.4	-9.9	-9.8	-10.5	**-21.3**	-19.4	-19.2	-19.1	-18.8	-18.6	-18.3	-17.9	-17.7	-17.5	-17.4
Feeder summation power factor	0.98	0.98	0.99	0.99	0.99	0.99	**0.99**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	0.98	0.98	0.98	0.97	0.97	0.97	**0.91**	0.95	0.95	0.95	0.95	0.96	0.96	0.96	0.97	0.97	0.97
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	39.4	43.9	44.7	41.9	44.1	44.7	**51.7**	60.5	61.3	62.1	63.3	64.5	66.0	67.7	68.8	69.8	70.2
(N-1) Cyclic Rating (MVA)	37.0	37.0	37.0	37.0	37.0	37.0	**74.0**	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0	74.0
(N-1) Limited Cyclic Rating (MVA)	39.7	39.7	39.7	39.7	39.7	39.7	**79.4**	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4	79.4
(N-1) 2 Hour Emergency Rating (MVA)	42.4	42.4	42.4	42.4	42.4	42.4	**84.9**	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9	84.9
(N-1) 10 Minute Emergency Rating (MVA)	42.4	42.4	47.3	47.3	47.3	47.3	**94.6**	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6	94.6
(N) Cyclic Rating (MVA)	74.0	74.0	74.0	47.3	74.0	74.0	**111.0**	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0	111.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
NO 1	0	0	0	0	0
NO 2	0	0	0	0	0
NO 3	0	0	0	0	0
NO 4	0	0	0	0	0
NO 5	0	0	0	0	0
NO 6	0	0	0	0	0
NO 7	35	0	0	0	0
NO 8	0	0	0	0	0
NO 9	0	0	0	0	0
NO 31	70	0	0	0	0
NO 32	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
NO 1	295	295	16%	19%	24%						50	**47**	56	72	104	129	130	239 A	9.2 MVA	34.8%	
NO 2	350	350	57%	76%	76%	76	232	172	235	233	208	**200**	265	267	271	277	282	85 A	3.3 MVA	8.1%	
NO 3	425	425	29%	31%	32%	350	270	259	254	265	242	**123**	132	134	135	137	138	293 A	11.3 MVA	2.5%	
NO 4	350	350	41%	47%	49%	185	196	226	206	197	219	**142**	163	173	174	176	178	187 A	7.2 MVA	5.0%	
NO 5	350	350	25%	27%	27%	165	274	254	171	193	191	**88**	95	96	97	97	98	255 A	9.8 MVA	2.3%	
NO 6	350	350	33%	65%	65%	143	153	111	104	116	106	**116**	228	229	230	231	233	122 A	4.7 MVA	20.0%	
NO 7	260	260	58%	75%	76%	172	175	163	139	137	141	**150**	195	197	199	200	202	65 A	2.5 MVA	7.0%	
NO 8	300	300	35%	35%	35%							**105**	105	105	105	106	107	195 A	7.5 MVA	0.4%	
NO 9	295	295	0%	71%	71%								210	210	210	210	210	85 A	3.3 MVA		
NO 31	290	290	12%	64%	64%							**36**	186	187	188	199	219	104 A	4 MVA	102.3%	
NO 32	265	265	53%	56%	57%							**141**	150	151	152	153	155	115 A	4.5 MVA	2.0%	
Average	321	321	33%	51%	51%	182	217	198	185	104	105	**104**	162	166	170	174	177	159 A	6.1 MVA	14.0%	
	1	2	3	4	5	6	18	19	20	21										

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
NO 1	8	16	32	24	0
NO 2	0	1	2	4	3
NO 3	2	1	0	0	0
NO 4	12	9	0	0	0
NO 5	1	0	0	0	0
NO 6	1	0	0	0	0
NO 7	1	1	0	0	0
NO 8	0	0	0	0	0
NO 9	0	0	0	0	0
NO 31	0	0	0	10	19
NO 32	0	0	0	0	0

Zone Substation Comments

1. Ratings were reviewed in 2010.

2. Line Capacitors:
   Installed 8.1MVAr prior to summer 1999.
   Installed 4.5MVAr prior to summer 2000.

3. Load Transfers:
   Transfer 3MW to CDA prior to summer 2003.
   Transfer 12MW to SV and SVW prior to summer 2008.
   2.5MW from NO to CDA for summer 2013.
   90A from NO3 -->NO2 -2012
   70A from NO7 -->CDA11 - 2012

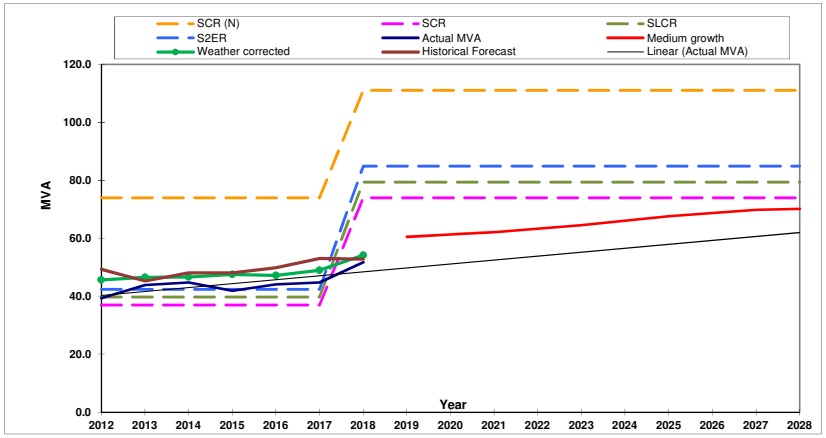
4. New Loads:
   1.5MW on NO5 in 2008 and 2009.
   1.0MW on NO5 in 2008 by customer at 680 Blackburn Rd, Notting Hill.
   0.8MW on NO4 in 2009 by Fonterra.
   0.9MW on NO3 in 2014 by ANZ Data Centre
   1.1MW on NO2 in 2013 by Goodmans site
   0.8MW on NO2 in 2013 at 660 BBurn Rd

Reserve Capacity Requirements

1. ANZ, Forster Rd, Mt Waverley.
   NO 03 (preferred)
   NO 08 (preferred) from 1 May 2016
   GW 03 (reserve) - 1.7MVA (45A);
   2.3MVA (60A) from 1 Nov 2002;
   3.0MVA (80A) from 1 Jan 2003.
   3.5MVA (91A) from 12 Jul 2012
   4.0MVA (80A) from 1 Jun 2014.
   GW 10 (reserve) - 8.0MVA (~210A) from 1 May 2016
2. Monash University (Clayton):
   SVW51 = 2MVA
   NO6 = 4MVA
   NO2 = 2MVA
3. Telstra (New Data Centre)
   NO 01 (Duty) from 1 Jan 2016
   SV31 (Reserve) - 8MVA (210A) from 1 Jan 2016
4. Telstra (Old Data Centre)
   SVW43 (Duty) from 1 Jan 2016
   NO 09 (Reserve) - 8MVA (210A) from 1 Jan 2016

Network Support Agreements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

NOBLE PARK **NP** — Load / Next / Save / Previous

Voltage 22.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	65.3	64.3	77.8	54.3	58.5	55.1	**56.0**	63.9	63.5	63.0	62.7	63.5	63.5	64.8	66.0	67.1	67.2
10% POE actual MD	80.4	68.9	77.9	57.3	61.6	61.5	61.8										
Load transfers (MW)		-4.3		-17.9													
Extra new load (MW)			1.5		1.8	1.2	**1.2**	0.6	0.5	0.6	0.4	0.1					
% growth (MW)		-1.4%	21.0%	-30.3%	7.8%	-5.9%	**1.6%**	14.2%	-0.6%	-0.7%	-0.6%	1.3%	0.1%	2.1%	1.9%	1.7%	0.1%
Feeder summation reactive demand (MVAr)	15.6	18.0	16.2	7.1	11.1	9.0	**8.7**	12.2	12.1	11.9	11.7	12.0	12.1	12.7	13.2	13.7	13.7
Zone substation capacitor bank (MVAr)	11.1	11.1	11.1	11.1	11.1	11.1	**11.1**	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Feeder line capacitors (MVAr)	18.0	19.8	19.8	11.7	11.7	11.7	**15.3**	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3	15.3
Reactive load on transformers (MVAr)	4.0	6.4	4.6	-4.5	-0.5	-2.5	**-2.9**	0.7	0.5	0.3	0.1	0.5	0.5	1.1	1.6	2.1	2.1
Feeder summation power factor	0.97	0.96	0.98	0.99	0.98	0.99	**0.99**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	65.4	64.7	78.0	54.5	58.5	55.1	**56.0**	63.9	63.5	63.0	62.7	63.5	63.5	64.9	66.1	67.2	67.2
(N-1) Cyclic Rating (MVA)	72.0	72.0	72.0	72.0	72.0	72.0	**72.0**	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0
(N-1) Limited Cyclic Rating (MVA)	73.0	73.0	73.0	73.0	73.0	73.0	**73.0**	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0	73.0
(N-1) 2 Hour Emergency Rating (MVA)	81.8	81.8	81.8	81.8	81.8	81.8	**81.8**	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8
(N-1) 10 Minute Emergency Rating (MVA)	81.8	81.8	81.8	81.8	81.8	81.8	**81.8**	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8	81.8
(N) Cyclic Rating (MVA)	108.0	108.0	108.0	81.8	108.0	108.0	**108.0**	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0	108.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
NP 11	0	0	0	0	0
NP 12	0	0	0	0	0
NP 13	0	0	0	0	0
NP 14	0	0	0	0	0
NP 16	0	0	0	0	0
NP 23	0	0	0	0	0
NP 24	0	0	0	0	0
NP 25	0	0	0	0	0
NP 31	0	0	0	0	0
NP 33	0	0	0	0	0
NP 34	0	0	0	0	0
NP 36	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
NP 11	350	350	40%	45%	45%	242	251	258	128	137	137	**139**	157	158	158	158	160	193 A	7.5 MVA	3.0%	
NP 12	285	285	53%	60%	61%	160		173	149	154	133	**152**	172	175	179	182	184	113 A	4.4 MVA	4.2%	
NP 13	0	0																0 A	0 MVA		
NP 14	260	260	50%	59%	59%	135	210	240	117	133	127	**130**	152	154	157	159	161	108 A	4.2 MVA	4.7%	
NP 16	320	320	48%	54%	55%	186	94	230	196	208	170	**154**	174	175	176	177	179	146 A	5.7 MVA	3.2%	
NP 23	260	260	59%	67%	67%	182	271	203	133	146	125	**153**	173	174	174	174	177	87 A	3.4 MVA	3.1%	
NP 24	325	325	30%	34%	34%	208	220	205	89	94	109	**99**	111	112	112	112	114	214 A	8.3 MVA	3.0%	
NP 25	260	260	56%	64%	65%	208	96	169	136	103	160	**146**	166	168	171	173	176	94 A	3.7 MVA	4.1%	
NP 31	305	305	37%	42%	42%	200	212	210	125	119	114	**114**	128	129	129	129	131	177 A	6.9 MVA	3.0%	
NP 33	255	255	73%	82%	83%	168	217	206	167	170	174	**186**	210	212	215	216	219	45 A	1.8 MVA	3.6%	
NP 34	260	260	64%	74%	75%	135	142	143	139	167	163	**168**	192	196	198	201	204	68 A	2.6 MVA	4.3%	
NP 36	260	260	56%	64%	66%	208	173	204	194	155	108	**147**	167	172	176	176	178	93 A	3.6 MVA	4.3%	
Average	262	262	55%	57%	57%	185	172	204	143	144	138	**144**	150	152	154	155	157	111 A	4.3 MVA	1.7%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
NP 11	0	0	0	0	0
NP 12	1	2	4	3	0
NP 13	0	0	0	0	0
NP 14	6	1	3	2	0
NP 16	0	1	1	0	0
NP 23	1	0	0	0	0
NP 24	0	0	0	0	0
NP 25	2	1	2	2	1
NP 31	0	0	0	0	0
NP 33	1	1	2	1	0
NP 34	4	3	2	2	1
NP 36	2	4	3	0	0

Zone Substation Comments

1. Station rating limited by 22kV transformer cables. Transformer cables uprated in 2001.
   Zone Substation ratings were reviewed in 2001. Post 2001 ratings are based on 40deg C ambient temp.

2. Line Capacitors
   Install 1.8MVAr for summer 2001, and 19.8MVAr for summer 2002.
3. PCB Cap Bank Replacement; 11MVAr in Oct 2001

4. Load Transfers:
   Transfer 10MW from NP to SS in 2010.
   4.3MW from NP to LD prior to summer 2013.
   15MW from NP to KBH in 2015.

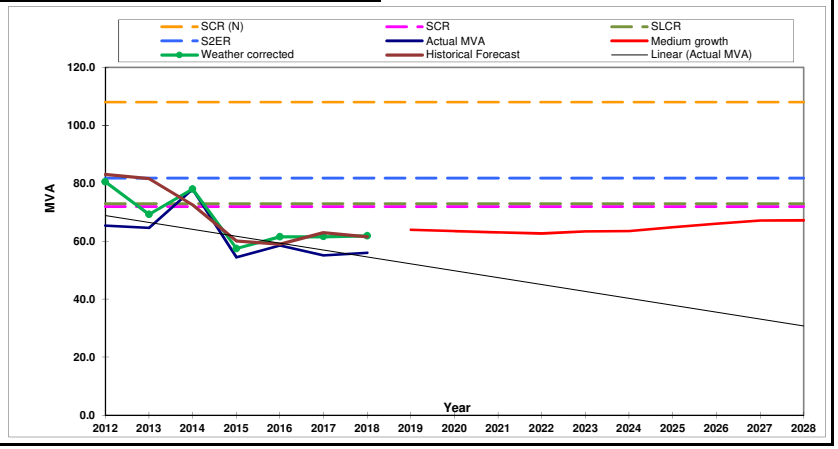
5. New Load:

6. Switchboard replacement in 2012/13: OLD/NEW Feeders = 11/36, 15/34, 2/33, 4/31, 18/25, 12/24, 9/23,

7. Established Keysborough zone substation (KBH) in 2014 for summer 2015.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

NUNAWADING **NW** (Load / Next / Save / Previous)

Voltage 22.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	52.4	61.3	66.2	53.2	60.3	59.0	**57.6**	66.2	66.5	66.4	66.5	67.3	67.4	68.9	70.2	71.3	71.5
10% POE actual MD	63.4	64.1	67.5	66.4	64.3	66.3	64.0										
Load transfers (MW)																	
Extra new load (MW)			0.4	0.4	0.7	0.7	**0.8**	0.8	0.8	0.7	0.4	0.2					
% growth (MW)		17.0%	8.0%	-19.7%	13.4%	-2.2%	**-2.3%**	14.9%	0.5%	-0.1%	0.1%	1.3%	0.1%	2.2%	1.9%	1.7%	0.1%
Feeder summation reactive demand (MVAr)	13.2	15.9	15.4	11.5	9.2	9.1	**4.3**	6.4	6.5	6.5	6.5	6.7	6.7	7.1	7.4	7.7	7.7
Zone substation capacitor bank (MVAr)	15.0	15.0	15.0	15.0	15.0	15.0	**15.0**	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Feeder line capacitors (MVAr)	9.3	9.3	9.3	7.8	7.8	7.8	**9.3**	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3	9.3
Reactive load on transformers (MVAr)	-2.5	0.2	-0.3	-4.2	-6.5	-6.6	**-11.4**	-9.3	-9.2	-9.2	-9.2	-9.0	-9.0	-8.6	-8.3	-8.0	-8.0
Feeder summation power factor	0.97	0.97	0.97	0.98	0.99	0.99	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	1.00	0.99	0.99	**0.98**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	52.5	61.3	66.2	53.3	60.6	59.3	**58.7**	66.8	67.1	67.1	67.1	67.9	68.0	69.4	70.7	71.8	71.9
(N-1) Cyclic Rating (MVA)	67.4	67.4	67.4	67.4	67.4	67.4	**89.0**	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0	89.0
(N-1) Limited Cyclic Rating (MVA)	72.3	72.3	72.3	72.3	72.3	72.3	**97.4**	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4
(N-1) 2 Hour Emergency Rating (MVA)	74.3	74.3	74.3	74.3	74.3	74.3	**97.4**	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4
(N-1) 10 Minute Emergency Rating (MVA)	74.3	74.3	74.3	74.3	74.3	74.3	**97.4**	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4	97.4
(N) Cyclic Rating (MVA)	101.1	101.1	101.1	74.3	101.1	101.1	**133.0**	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0	133.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
NW 11	0	0	0	0	0
NW 13	0	0	0	0	0
NW 14	0	0	0	0	0
NW 21	0	0	0	0	0
NW 22	0	0	0	0	0
NW 23	0	0	0	0	0
NW 31	0	0	0	0	0
NW 32	0	0	0	0	0
NW 33	0	0	0	0	0
NW 34	0	0	0	0	0
NW 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
NW 11	350	350	32%	37%	39%	99	119	133	110	119	120	**113**	131	138	142	143	146	219 A	8.5 MVA	5.8%	
NW 13	330	330	63%	71%	72%	190	212	227	182	217	187	**208**	235	238	239	240	243	95 A	3.7 MVA	3.3%	
NW 14	335	335	56%	66%	69%	184	204	220	201	202	254	**187**	220	232	240	247	253	115 A	4.5 MVA	7.1%	
NW 21	265	265	82%	93%	94%	194	231	238	195	225	224	**217**	246	249	254	256	259	19 A	0.7 MVA	3.8%	
NW 22	345	345	53%	72%	73%	149	181	157	122	165	155	**182**	250	251	252	252	255	95 A	3.7 MVA	8.0%	
NW 23	340	340	62%	70%	70%	162	192	209	171	196	194	**211**	237	239	241	242	245	103 A	4 MVA	3.2%	
NW 31	305	305	70%	79%	79%	177	193	207	179	215	188	**213**	240	242	244	244	247	65 A	2.5 MVA	3.2%	
NW 32	265	265	51%	58%	59%	153	154	153	147	147	140	**135**	153	156	158	160	162	112 A	4.3 MVA	4.0%	
NW 33	315	315	68%	77%	77%	195	220	283	260	225	215	**214**	241	244	247	249	252	74 A	2.9 MVA	3.5%	
NW 34	300	300	22%	33%	33%	69	52	53	45	66	64	**67**	98	99	99	99	100	202 A	7.9 MVA	9.9%	
NW 35	0	0																0 A	0 MVA		
Average	286	286	61%	65%	65%	157	176	188	161	178	174	**175**	187	190	192	194	197	100 A	3.9 MVA	2.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
NW 11	4	6	4	1	1
NW 13	1	1	0	0	0
NW 14	10	11	7	6	3
NW 21	2	2	3	2	0
NW 22	0	0	0	0	0
NW 23	1	0	1	0	0
NW 31	1	1	0	0	0
NW 32	2	1	1	1	1
NW 33	1	1	2	2	0
NW 34	0	0	0	0	0
NW 35	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors
   Installed 8.4MVAr prior to summer 1999.
3. Replace #1 PCB capacitor bank in 2002 : 8.0MVAr

4. Load Transfers:
   0.4MW from DC prior to summer 2009.

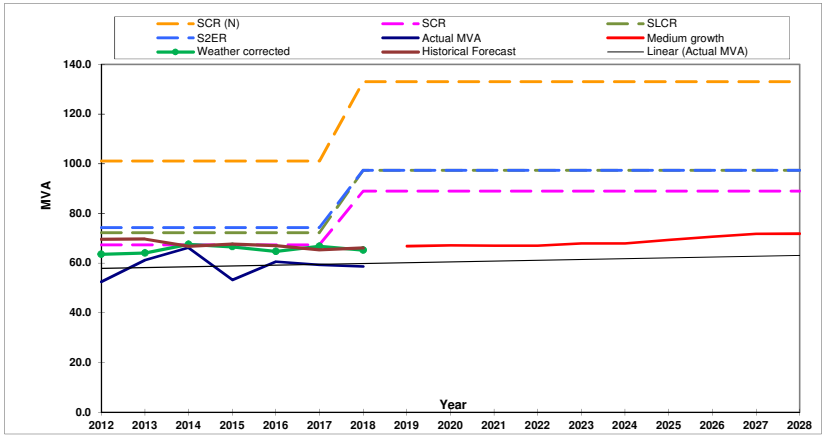
5. New Loads:

6. New 66/22kV Transformer:
   Install 3rd transformer in 2006 for summer 2007.

Reserve Capacity Requirements

1. Eastlink Tunnel
   Proposed reserve capacity. No contracts in place
2. EDC
   RWT12 (Duty)
   NW33 - 1.7MVA (45A) reserve
   Previously was on NW33 (Now NW22 with load transfers)
3. Eastlink Tunnel
   Shared NW34, RWT13
   NW34 - 0.9MVA (23A)
   RWT13 - 1.55MVA (40A)
   1-year agreement (expires 15/12/2017)

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

OAKLEIGH **OAK** Load Next Save Previous

Voltage 11.44 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	32.4	36.1	37.0	31.0	37.9	36.4	**38.9**	44.4	45.1	45.0	45.1	45.7	45.9	47.1	48.2	49.3	49.7
10% POE actual MD	35.4	37.9	37.0	36.8	40.1	41.1	42.1										
Load transfers (MW)																	
Extra new load (MW)		1.2	0.1	0.7	1.0	2.2	**1.7**	1.4	1.2	0.4	0.4	0.4	0.1				
% growth (MW)		11.3%	2.5%	-16.4%	22.3%	-3.9%	**7.1%**	14.0%	1.7%	-0.3%	0.2%	1.2%	0.5%	2.6%	2.5%	2.2%	0.7%
Feeder summation reactive demand (MVAr)	8.0	6.6	4.3	1.7	0.3	-0.2	**0.3**	2.0	2.3	2.2	2.3	2.4	2.5	2.9	3.2	3.6	3.7
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	9.3	11.1	11.1	11.1	11.1	11.1	**11.1**	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1	11.1
Reactive load on transformers (MVAr)	8.0	6.6	4.3	1.7	0.3	-0.2	**0.3**	2.0	2.3	2.2	2.3	2.4	2.5	2.9	3.2	3.6	3.7
Feeder summation power factor	0.97	0.98	0.99	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Transformation summation power factor	0.97	0.98	0.99	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	33.4	36.7	37.3	31.0	37.9	36.4	**38.9**	44.4	45.2	45.1	45.2	45.8	46.0	47.2	48.4	49.5	49.8
(N-1) Cyclic Rating (MVA)	43.6	43.6	43.6	43.6	43.6	43.6	**43.6**	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6	43.6
(N-1) Limited Cyclic Rating (MVA)	46.4	46.4	46.4	46.4	46.4	46.4	**46.4**	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
(N-1) 2 Hour Emergency Rating (MVA)	46.7	46.7	46.7	46.7	46.7	46.7	**46.7**	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
(N-1) 10 Minute Emergency Rating (MVA)	46.7	46.7	46.7	46.7	46.7	46.7	**46.7**	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7	46.7
(N) Cyclic Rating (MVA)	87.2	87.2	87.2	46.7	87.2	87.2	**87.2**	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2	87.2

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
OAK 21	0	0	0	0	0
OAK 22	0	0	0	0	0
OAK 23	0	0	0	0	0
OAK 24	0	0	0	0	0
OAK 25	0	0	0	0	0
OAK 26	0	0	0	0	0
OAK 30	0	0	0	0	0
OAK 31	0	0	0	0	0
OAK 32	0	0	0	0	0
OAK 33	0	0	0	0	0
OAK 34	0	0	0	0	0
OAK 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
OAK 21	315	315	83%	91%	93%	196	176	206	165	216	190	**262**	288	291	294	298	302	27 A	0.5 MVA	3.0%	
OAK 22	315	315	81%	90%	92%	266	225	250	210	229	247	**254**	285	289	290	290	292	30 A	0.6 MVA	3.0%	
OAK 23	350	350	58%	65%	67%	224	258	220	203	167	176	**202**	228	235	236	237	238	122 A	2.4 MVA	3.5%	
OAK 24	350	350	65%	77%	82%	153	145	141	135	106	208	**226**	269	287	288	289	290	81 A	1.6 MVA	5.6%	
OAK 25	350	350	41%	48%	51%	121	136	140	116	74	132	**143**	168	177	178	178	179	182 A	3.6 MVA	5.1%	
OAK 26	350	350	70%	77%	78%	84	217	241	189	216	217	**246**	269	271	272	273	274	81 A	1.6 MVA	2.2%	
OAK 30	350	350	17%	24%	28%						47	**59**	83	98	102	109	121	267 A	5.3 MVA	21.2%	
OAK 31	330	330	77%	84%	84%	151	209	222	151	355	224	**253**	276	279	280	280	282	54 A	1.1 MVA	2.2%	
OAK 32	300	300	25%	28%	28%	63	80	85	64	78	66	**74**	83	84	84	84	85	217 A	4.3 MVA	2.7%	
OAK 33	350	350	66%	72%	73%	267	215	242	193	219	206	**232**	253	255	256	257	258	97 A	1.9 MVA	2.2%	
OAK 34	350	350	57%	62%	64%	333	304	251	285	219	206	**200**	218	223	231	245	256	132 A	2.6 MVA	5.6%	
OAK 35	315	315	33%	36%	37%	106	125	124	102	112	115	**105**	115	116	116	116	117	200 A	4 MVA	2.2%	
Average	335	335	56%	63%	63%	179	190	193	165	166	170	**188**	211	217	219	221	224	124 A	2.5 MVA	3.9%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
OAK 21	2	1	2	3	2
OAK 22	7	2	0	0	0
OAK 23	7	5	0	0	0
OAK 24	22	16	0	0	0
OAK 25	12	8	0	0	0
OAK 26	0	0	0	0	0
OAK 30	19	15	3	7	11
OAK 31	0	0	0	0	0
OAK 32	2	0	0	0	0
OAK 33	0	0	0	0	0
OAK 34	0	3	7	14	10
OAK 35	0	0	0	0	0

Zone Substation Comments

1. Rebuild station in 2004 & 2005 as 66/11kV. Station capacity was derated in 2002 due to marked increase in hydro-carbon gases within No 3 transformer. 3rd transformer planned in 2013.

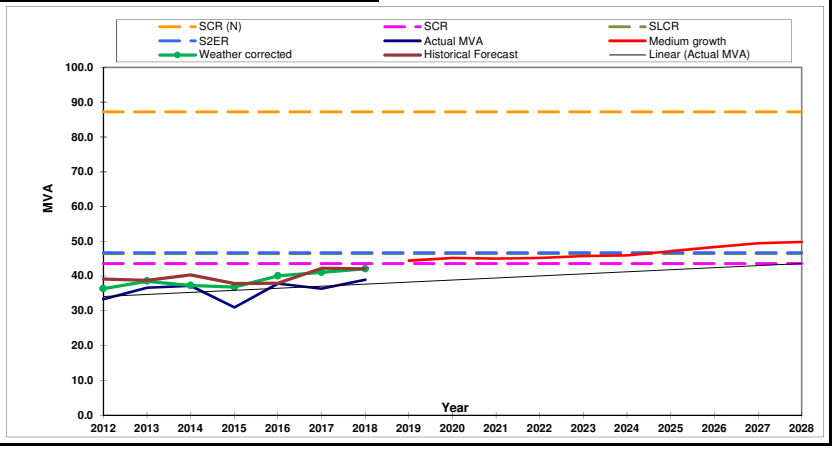
2. Load Transfers:
   1.0MW from EM to OAK for summer 2010.

3. New Loads:
   2.0MW on OAK23 between OA8081 and "Colins-Batesford" - estimated in 2010. New OAK26 feeder to offload OAK23

4. No.1 zone sub cap bank was derated by 230kVAr in March 1999.
5. Line Capacitors
   Installed 5.7MVAr prior to summer 2000. Installed 3.6MVAr prior to summer 2001.
6. Rebuild O with two 20/33MVA 66/11kV transformers in 2004 & 2005.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

OAKLEIGH EAST **OE** — Load / Next / Save / Previous

Voltage 11.44 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	11.3	13.1	12.9	11.5	12.1	12.6	**13.7**	15.7	15.7	15.7	15.7	15.9	15.9	16.3	16.6	16.8	16.9
10% POE actual MD	13.2	14.4	12.9	12.8	12.6	13.2	15.3										
Load transfers (MW)							2.0										
Extra new load (MW)			0.2	0.2	0.1	0.1	**0.1**	0.1	0.1	0.3	0.2						
% growth (MW)		15.8%	-1.4%	-10.8%	5.0%	4.1%	**9.2%**	14.7%	-0.5%	0.2%	0.2%	1.3%	0.1%	2.1%	1.9%	1.7%	0.1%
Feeder summation reactive demand (MVAr)	5.6	5.8	6.1	5.2	4.8	5.0	**4.5**	5.2	5.2	5.2	5.2	5.3	5.3	5.4	5.5	5.6	5.6
Zone substation capacitor bank (MVAr)	10.1	10.1	10.1	10.1	10.1	10.1	**10.1**	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
Feeder line capacitors (MVAr)	0.0	0.0	0.0	0.9	0.9	0.9	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reactive load on transformers (MVAr)	-5.3	-5.1	-4.8	-5.7	-6.1	-5.9	**-6.4**	-5.7	-5.7	-5.7	-5.7	-5.6	-5.6	-5.5	-5.4	-5.3	-5.3
Feeder summation power factor	0.90	0.91	0.90	0.91	0.93	0.93	**0.95**	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Transformation summation power factor	0.91	0.93	0.94	0.89	0.89	0.90	**0.91**	0.94	0.94	0.94	0.94	0.94	0.94	0.95	0.95	0.95	0.95
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	12.5	14.0	13.7	12.8	13.5	13.9	**15.1**	16.7	16.7	16.7	16.7	16.9	16.9	17.2	17.4	17.7	17.7
(N-1) Cyclic Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N-1) Limited Cyclic Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N-1) 2 Hour Emergency Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N-1) 10 Minute Emergency Rating (MVA)	32.4	32.4	32.4	32.4	32.4	32.4	**32.4**	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4	32.4
(N) Cyclic Rating (MVA)	64.8	64.8	64.8	32.4	64.8	64.8	**64.8**	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8	64.8

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
OE 1	0	0	0	0	0
OE 2	0	0	0	0	0
OE 4	-157	0	0	0	0
OE 5	0	0	0	0	0
OE 6	0	0	0	0	0
OE 9	0	0	0	0	0
OE 10	0	0	0	0	0
OE 14	65	0	0	0	0
OE 15	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
OE 1	235	235	22%	25%	25%	65	64	61	53	51	52	**51**	58	58	58	58	59	177 A	3.5 MVA	2.9%	
OE 2	220	220	15%	17%	17%	28	32	31	28	31	27	**34**	38	38	38	38	39	182 A	3.6 MVA	2.9%	
OE 4	260	260	132%	90%	94%	115	172	306	146	173	202	**344**	234	243	260	272	275	26 A	0.5 MVA	-4.0%	
OE 5	250	250	44%	49%	49%	71	81	155	71	72	75	**109**	123	124	124	124	125	127 A	2.5 MVA	2.9%	
OE 6	265	265	33%	37%	37%	81	86	83	79	79	85	**87**	98	98	99	99	100	167 A	3.3 MVA	2.9%	
OE 9	260	260	27%	30%	30%	56	68	78	56	70	62	**69**	78	78	78	78	79	182 A	3.6 MVA	2.9%	
OE 10	260	260	21%	23%	23%	112	104	89	89	90	61	**54**	60	61	61	61	61	200 A	4 MVA	2.9%	
OE 14	265	265	41%	71%	71%	112	112	116	99	113	109	**109**	188	189	190	190	192	77 A	1.5 MVA	15.2%	
OE 15	300	300	30%	33%	33%	90	107	103	85	85	100	**89**	100	100	101	101	102	200 A	4 MVA	2.9%	
Average	257	257	41%	42%	42%	81	92	114	78	85	86	**105**	109	110	112	113	115	149 A	2.9 MVA	1.8%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
OE 1	0	0	0	0	0
OE 2	0	0	0	0	0
OE 4	4	8	16	12	0
OE 5	0	0	0	0	0
OE 6	0	0	0	0	0
OE 9	0	0	0	0	0
OE 10	0	0	0	0	0
OE 14	1	0	0	0	0
OE 15	0	0	0	0	0

Zone Substation Comments

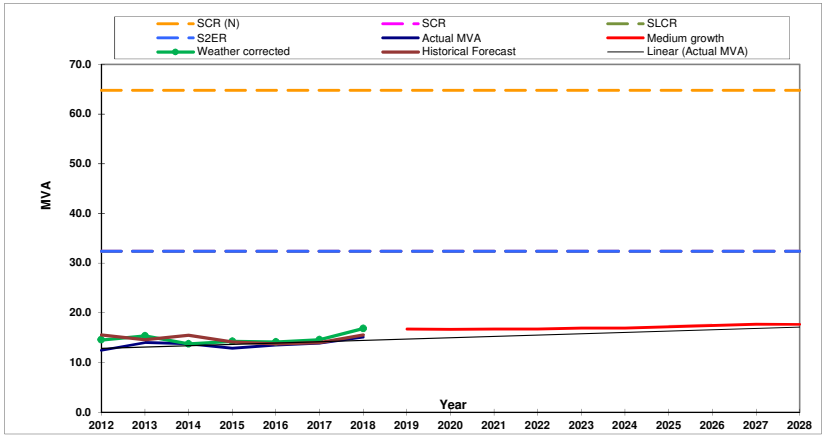
1. Zone Substation ratings were reviewed in 2010.

2. Load Transfers:

3. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

ORMOND OR — Load / Next / Save / Previous

Voltage 11.5 kV

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
	Actual							Forecast									
Load maximum demand actual / forecast (MW)	28.8	34.5	38.9	29.5	35.2	32.4	**35.0**	38.6	38.7	38.5	38.4	39.1	39.2	40.2	41.2	42.2	42.4
10% POE actual MD	34.1	37.1	39.0	38.1	38.4	37.9	37.4										
Load transfers (MW)						-1.3	-0.9										
Extra new load (MW)				0.1	0.3	0.8	**0.6**	0.4	0.4	0.3	0.2	0.1	0.0				
% growth (MW)		19.7%	12.9%	-24.2%	19.2%	-7.9%	**8.1%**	10.1%	0.2%	-0.4%	-0.1%	1.6%	0.5%	2.6%	2.5%	2.2%	0.7%
Feeder summation reactive demand (MVAr)	5.3	6.9	7.0	3.9	6.8	4.3	**4.9**	5.9	5.9	5.8	5.8	6.0	6.1	6.3	6.6	6.9	6.9
Zone substation capacitor bank (MVAr)	12.3	12.3	12.3	12.3	12.3	12.3	**12.3**	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Feeder line capacitors (MVAr)	3.6	3.6	3.6	4.5	4.5	4.5	**4.5**	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Reactive load on transformers (MVAr)	-8.1	-6.5	-6.4	-9.5	-6.7	-9.2	**-8.6**	-7.6	-7.6	-7.6	-7.6	-7.4	-7.4	-7.1	-6.8	-6.6	-6.5
Feeder summation power factor	0.98	0.98	0.98	0.99	0.98	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.96	0.98	0.99	0.95	0.98	0.96	**0.97**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	29.9	35.1	39.5	31.0	35.8	33.7	**36.1**	39.3	39.4	39.2	39.2	39.8	39.9	40.9	41.8	42.7	42.9
(N-1) Cyclic Rating (MVA)	32.3	32.3	32.3	32.3	32.3	32.3	**32.3**	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3	32.3
(N-1) Limited Cyclic Rating (MVA)	34.7	34.7	34.7	34.7	34.7	34.7	**34.7**	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7	34.7
(N-1) 2 Hour Emergency Rating (MVA)	34.9	34.9	34.9	34.9	34.9	34.9	**34.9**	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
(N-1) 10 Minute Emergency Rating (MVA)	34.9	34.9	34.9	34.9	34.9	34.9	**34.9**	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
(N) Cyclic Rating (MVA)	64.6	64.6	64.6	34.9	64.6	64.6	**64.6**	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6	64.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
OR 11					
OR 22	0	0	0	0	0
OR 23	0	0	0	0	0
OR 24	0	0	0	0	0
OR 25	-60	0	0	0	0
OR 31	0	0	0	0	0
OR 32	0	0	0	0	0
OR 33	60	0	0	0	0
OR 34	0	0	0	0	0
OR 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
OR 11	0	0				126	143	267													
OR 22	280	280	7%	10%	12%	106	109	101	102	87	64	**18**	28	34	34	34	35	252 A	5 MVA	18.1%	
OR 23	275	275	61%	65%	66%	219	233	255	201	197	188	**167**	180	182	182	183	185	95 A	1.9 MVA	2.2%	
OR 24	335	335	83%	91%	94%	205	259	292	230	271	215	**279**	306	315	324	332	343	29 A	0.6 MVA	4.6%	
OR 25	265	265	93%	76%	78%	203	207	230	185	213	194	**246**	202	207	207	208	211	63 A	1.2 MVA	-2.8%	
OR 31	270	270	28%	30%	31%	131	127	131	110	111	76	**76**	82	82	83	83	84	188 A	3.7 MVA	2.2%	
OR 32	260	260	86%	90%	91%	174	200	212	171	201	194	**222**	235	236	237	238	242	25 A	0.5 MVA	1.7%	
OR 33	595	595	66%	81%	82%	200	202	114	292	351	338	**391**	483	490	497	503	510	112 A	2.2 MVA	6.1%	
OR 34	280	280	75%	82%	84%	214	250	215	223	268	256	**210**	229	235	238	239	242	51 A	1 MVA	3.1%	
OR 35	335	335	89%	94%	95%	223	246	209	213	294	240	**299**	315	319	321	322	327	20 A	0.4 MVA	1.9%	
Average	290	290	66%	71%	79%	180	198	203	173	199	176	**191**	229	233	236	238	242	61 A	1.2 MVA	5.4%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
OR 11	0	0	0	0	0
OR 22	8	6	0	0	0
OR 23	0	0	0	0	0
OR 24	5	7	7	8	6
OR 25	4	2	0	0	0
OR 31	0	0	0	0	0
OR 32	1	0	0	0	0
OR 33	1	3	6	4	0
OR 34	3	4	2	0	0
OR 35	1	2	1	0	0

Zone Substation Comments

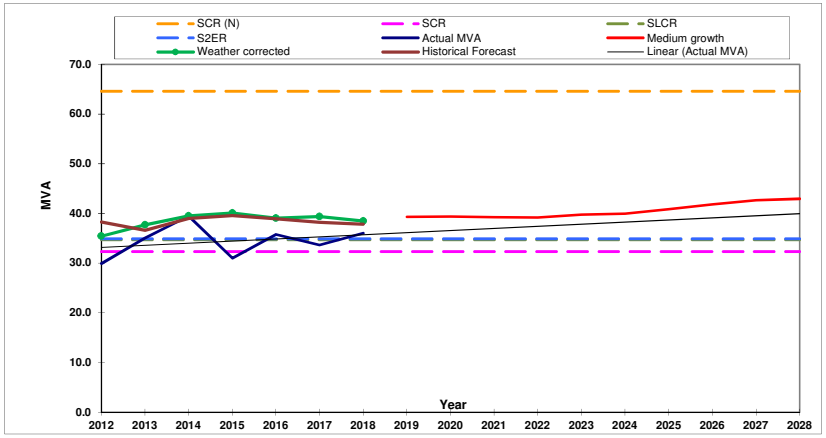
1. Zone Substation ratings were reviewed in 2010.

2. Load Transfers:

3. New Loads:

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

ROSEBUD **RBD**
Voltage 22.4 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	39.7	42.1	41.7	37.9	40.2	38.3	**40.3**	46.8	47.0	46.9	47.1	48.2	48.9	50.3	51.6	52.9	53.4
10% POE actual MD	42.5	44.6	45.7	44.9	44.0	46.8	45.2										
Load transfers (MW)																	
Extra new load (MW)			0.5	0.3	0.1	0.5	**0.3**	0.3	0.2	0.1	0.2	0.4	0.3				
% growth (MW)		6.1%	-0.8%	-9.1%	5.9%	-4.8%	**5.2%**	16.3%	0.3%	-0.2%	0.5%	2.3%	1.4%	2.8%	2.7%	2.5%	1.0%
Feeder summation reactive demand (MVAr)	6.6	8.1	7.5	7.0	8.5	7.8	**5.4**	7.4	7.4	7.4	7.5	7.8	8.0	8.5	8.9	9.3	9.4
Zone substation capacitor bank (MVAr)	7.0	7.0	7.0	7.0	7.0	7.0	**7.0**	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Feeder line capacitors (MVAr)	6.9	7.8	7.8	9.0	9.0	9.0	**6.9**	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
Reactive load on transformers (MVAr)	-0.7	0.8	0.3	-0.3	1.2	0.5	**-1.9**	0.1	0.2	0.2	0.2	0.6	0.8	1.2	1.6	2.0	2.2
Feeder summation power factor	0.99	0.98	0.98	0.98	0.98	0.98	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98
Transformation summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	39.7	42.1	41.7	37.9	40.2	38.3	**40.3**	46.8	47.0	46.9	47.1	48.2	48.9	50.3	51.7	52.9	53.5
(N-1) Cyclic Rating (MVA)	45.0	45.8	45.8	45.8	45.8	45.8	**45.8**	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8	45.8
(N-1) Limited Cyclic Rating (MVA)	47.6	48.5	48.5	48.5	48.5	48.5	**48.5**	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
(N-1) 2 Hour Emergency Rating (MVA)	47.6	48.5	48.5	48.5	48.5	48.5	**48.5**	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
(N-1) 10 Minute Emergency Rating (MVA)	47.6	48.5	48.5	48.5	48.5	48.5	**48.5**	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
(N) Cyclic Rating (MVA)	90.0	91.6	91.6	48.5	91.6	91.6	**91.6**	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6	91.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
RBD 11	0	0	0	0	0
RBD 12	0	0	0	0	0
RBD 13	0	0	0	0	0
RBD 14	0	0	0	0	0
RBD 21	0	0	0	0	0
RBD 22	0	0	0	0	0
RBD 23	0	0	0	0	0
RBD 24	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
RBD 11	265	265	34%	39%	39%			87	91	82	78	**91**	103	104	105	107	109	162 A	6.3 MVA	4.0%	
RBD 12	285	285	53%	60%	60%	127	135	136	122	127	118	**150**	170	172	177	184	199	115 A	4.5 MVA	6.6%	
RBD 13	355	355	55%	63%	64%	183	195	204	175	201	192	**196**	225	229	231	234	239	130 A	5.1 MVA	4.4%	
RBD 14	260	260	38%	43%	43%	109	112	96	96	104	101	**98**	111	113	114	115	117	149 A	5.8 MVA	4.0%	
RBD 21	260	260	54%	63%	66%	185	202	199	214	155	137	**140**	165	171	173	174	178	95 A	3.7 MVA	5.6%	
RBD 22	350	350	32%	36%	37%	93	102	125	140	153	103	**111**	127	128	129	131	134	223 A	8.7 MVA	4.0%	
RBD 23	265	265	64%	73%	74%	246	250	164	176	178	179	**171**	194	196	198	200	205	71 A	2.8 MVA	4.0%	
RBD 24	260	260	66%	75%	76%	154	160	169	146	161	160	**171**	194	197	199	201	205	66 A	2.6 MVA	4.0%	
Average	288	288	49%	56%	56%	157	165	148	145	145	133	**141**	161	164	166	168	173	126 A	4.9 MVA	4.6%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
RBD 11	0	0	0	0	0
RBD 12	0	0	3	5	11
RBD 13	2	1	0	0	0
RBD 14	0	0	0	0	0
RBD 21	6	4	0	0	0
RBD 22	0	0	0	0	0
RBD 23	0	0	0	0	0
RBD 24	0	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.

2. Line Capacitors: 6.3 MVAr for summer 2001.
   1.8 MVAr for summer 2002.
3. PCB Cap Bank Replacement
   Replaced & upgraded cap bank #3 (7.0MVAR) unit in 2000.

4. Load Transfers:
   Transfer 0.8MW from DMA to RBD for summer 2008
   Transfer 0.5MW from RBD to DMA for summer 2009

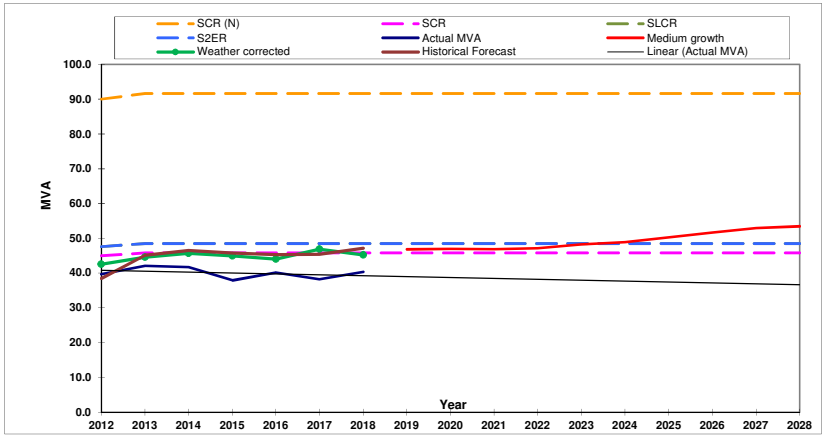
5. New Loads:
   2.5MVA on RBD21 by RACV resort, Cape Schanck (2016).

6. Established a package zone substation with one 20/33MVA transformer in Dromana (DMA) in 2005 for summer 2006 and transfer 16MW to DMA.

7. RBD replace 1 Tx in 2010 and rebuild complete in 2011

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

RINGWOOD **RWT** — Load / Next / Save / Previous

Voltage 22.7 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	26.2	31.4	32.9	26.5	32.6	31.0	**32.5**	38.5	38.5	38.1	37.9	38.5	38.6	39.4	40.2	40.9	41.0
10% POE actual MD	32.3	34.8	34.0	34.8	36.9	37.8	36.9										
Load transfers (MW)																	
Extra new load (MW)			0.4	0.6	1.6	1.1	**1.1**	0.7	0.3	0.1							
% growth (MW)		19.9%	4.9%	-19.4%	23.0%	-5.1%	**4.9%**	18.4%	0.0%	-0.9%	-0.6%	1.5%	0.3%	2.1%	2.0%	1.8%	0.3%
Feeder summation reactive demand (MVAr)	13.0	15.7	18.6	5.1	5.3	-1.0	**4.7**	6.5	6.5	6.4	6.3	6.5	6.6	6.8	7.1	7.3	7.3
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	5.1	5.1	5.1	6.0	6.0	6.0	**5.1**	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Reactive load on transformers (MVAr)	13.0	15.7	18.6	5.1	5.3	-1.0	**4.7**	6.5	6.5	6.4	6.3	6.5	6.6	6.8	7.1	7.3	7.3
Feeder summation power factor	0.90	0.89	0.87	0.98	0.99	1.00	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98
Transformation summation power factor	0.90	0.89	0.87	0.98	0.99	1.00	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98	0.98
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	29.2	35.1	37.8	27.0	33.1	31.0	**32.8**	39.0	39.0	38.7	38.4	39.0	39.1	40.0	40.8	41.6	41.7
(N-1) Cyclic Rating (MVA)																	
(N-1) Limited Cyclic Rating (MVA)																	
(N-1) 2 Hour Emergency Rating (MVA)																	
(N-1) 10 Minute Emergency Rating (MVA)																	
(N) Cyclic Rating (MVA)																	

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
RWT 12	0	0	0	0	0
RWT 13	0	0	0	0	0
RWT 23	0	0	0	0	0
RWT 24	0	0	0	0	0
RWT 34	0	0	0	0	0
RWT 35	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
RWT 12	265	265	44%	48%	49%	116	125	131	109	119	116	**117**	128	129	129	130	132	137 A	5.4 MVA	2.6%	
RWT 13	300	300	22%	37%	37%	63	37	53	29	39	65	**66**	112	112	113	113	114	188 A	7.4 MVA	14.8%	
RWT 23	350	350	54%	61%	62%	160	187	209	172	191	193	**191**	215	218	219	219	223	135 A	5.3 MVA	3.4%	
RWT 24	350	350	52%	58%	59%	152	193	206	155	195	181	**181**	203	208	210	210	213	147 A	5.8 MVA	3.5%	
RWT 34	350	350	83%	93%	94%	221	247	276	220	277	248	**290**	327	330	331	332	337	23 A	0.9 MVA	3.3%	
RWT 35	265	265	66%	74%	74%	140	156	171	140	159	145	**176**	196	197	197	198	201	69 A	2.7 MVA	2.8%	
Average	313	313	54%	63%	63%	142	158	174	138	163	158	**170**	197	199	200	200	203	117 A	4.6 MVA	3.9%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
RWT 12	0	0	0	0	0
RWT 13	0	0	0	0	0
RWT 23	5	2	0	0	0
RWT 24	3	4	2	0	0
RWT 34	8	2	0	0	0
RWT 35	3	0	0	0	0

Zone Substation Comments

1. RWT is SPI PowerNet asset supplying both UED and SPIE.

2. Metering errors: Prior to 18/1/06 SCADA metering on feeders RWT16, RWT18 and RWT28 all were reading of 75% of their actual value. The figuares above have been corrected.

3. Line Capacitors:

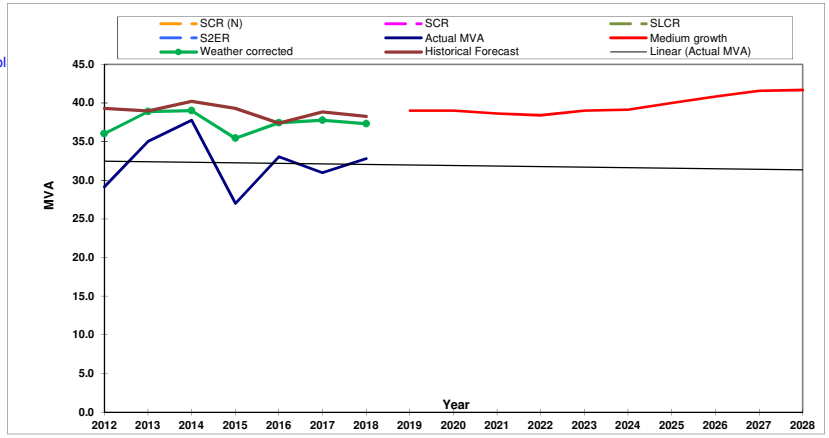
4. Load Transfers:
   - Transfer about 4.5MW to NW before summer 2007.
   - Transfer about 3.0MW to EB before summer 2009.

5. New load:
   - 1.1MW in 2006 for construction of the EastLink tunnel.
   - 1.4MW additional load in 2007 for the tunnel once construction is complete.
   - 1MW on RWT24 in 2007 for commercial offices.

Reserve Capacity Requirements

1. Eastlink
   Expected reserve capacity for the EastLink. No contract in pl
2. EDC (Data Centre)
   RWT12 (Duty)
   NW33 (Reserve) - 1.7MVA
3. Eastlink Tunnel
   Shared NW34, RWT13
   NW34 - 0.9MVA (23A)
   RWT13 - 1.55MVA (40A)
   1-year agreement (expires 15/12/2017)

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

SURREY HILLS **SH** — Load / Next / Save / Previous

Voltage 6.924 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	5.6	6.4	6.9	5.0	6.5	6.0	**7.2**	8.0	8.0	8.0	8.0	8.1	8.2	8.3	8.4	8.5	8.6
10% POE actual MD	6.0	6.9	7.4	7.6	7.7	7.8	7.8										
Load transfers (MW)																	
Extra new load (MW)				0.4	0.4	0.1	**0.3**	0.1	0.1	0.1							
% growth (MW)		14.0%	6.6%	-27.2%	31.1%	-7.9%	**19.2%**	11.1%	0.4%	-0.3%	0.2%	1.1%	1.1%	1.4%	1.4%	1.3%	1.1%
Feeder summation reactive demand (MVAr)	2.0	2.3	2.1	-0.9	1.8	1.4	**1.5**	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9
Zone substation capacitor bank (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feeder line capacitors (MVAr)	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reactive load on transformers (MVAr)	2.0	2.3	2.1	-0.9	1.8	1.4	**1.5**	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.9
Feeder summation power factor	0.94	0.94	0.96	0.98	0.97	0.97	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.94	0.94	0.96	0.98	0.97	0.97	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	6.0	6.8	7.2	5.1	6.8	6.2	**7.4**	8.2	8.2	8.2	8.2	8.3	8.4	8.5	8.6	8.7	8.8
(N-1) Cyclic Rating (MVA)	10.8	10.8	10.8	10.8	10.8	10.8	**10.8**	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
(N-1) Limited Cyclic Rating (MVA)	11.5	11.5	11.5	11.5	11.5	11.5	**11.5**	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5	11.5
(N-1) 2 Hour Emergency Rating (MVA)	12.0	12.0	12.0	12.0	12.0	12.0	**12.0**	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
(N-1) 10 Minute Emergency Rating (MVA)	12.0	12.0	12.0	12.0	12.0	12.0	**12.0**	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
(N) Cyclic Rating (MVA)	21.6	21.6	21.6	12.0	21.6	21.6	**21.6**	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
SH 21	0	0	0	0	0
SH 22	0	0	0	0	0
SH 24	0	0	0	0	0
SH 31	0	0	0	0	0
SH 32	0	0	0	0	0
SH 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
SH 21	265	265	0%	0%	0%	177	192	192										265 A	3.2 MVA		
SH 22	265	265	76%	83%	84%	145	178	188	144	187	163	**201**	219	222	224	226	229	46 A	0.5 MVA	2.7%	
SH 24	275	275	44%	50%	54%	94	107	111	80	102	93	**121**	136	147	155	157	158	139 A	1.7 MVA	6.2%	
SH 31	265	265	0%	0%	0%	145	178	188										265 A	3.2 MVA		
SH 32	265	265	39%	43%	45%	88	93	98	81	95	87	**103**	114	120	124	125	126	151 A	1.8 MVA	4.5%	
SH 34	265	265	71%	78%	79%	177	192	192	145	172	168	**189**	205	208	210	212	214	60 A	0.7 MVA	2.7%	
Average	267	267	38%	42%	42%	137	157	162	75	93	85	**102**	113	116	119	120	121	154 A	1.8 MVA	3.7%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
SH 21	0	0	0	0	0
SH 22	0	0	0	0	0
SH 24	5	9	7	0	0
SH 31	0	0	0	0	0
SH 32	2	4	3	0	0
SH 34	0	0	0	0	0

Zone Substation Comments

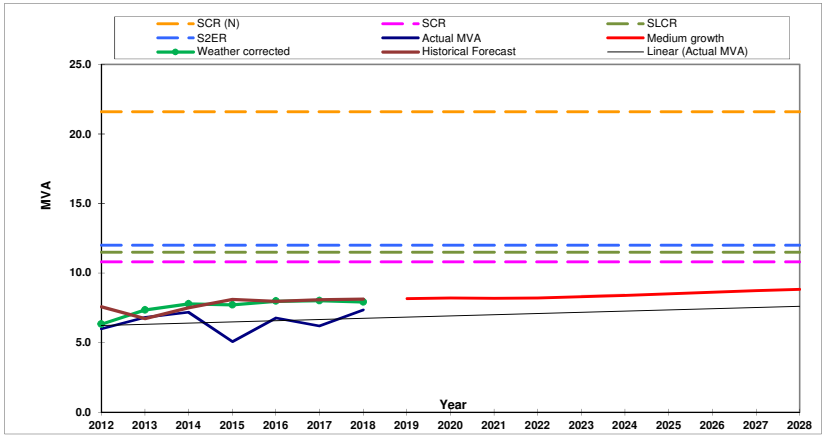
1. Zone Substation ratings were reviewed in 2010.

2. Retirement of SH 6.6kV Assets
   Transfer 0.8MW to DC in 2002 to release 6.6/0.415kV transformers as spares.
   Transfer load from SH onto BH in preparation for SH retirement starting from 2006/07.

3. Load Transfers
   2011 Transfer 5MW from 6.6kV to 22kV at EB
   2012 Transfer 4.5MW from 6.6kV to 22kV at BH
   2013 Transfer 4.5MW from BH
   2014 Transfer 5MW from EB

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

SANDRINGHAM **SR**
Voltage **11.6 kV**

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	28.0	34.1	33.9	29.9	32.0	28.6	**31.6**	35.1	35.2	35.3	35.4	35.7	35.8	36.6	37.3	37.9	38.0
10% POE actual MD	31.9	36.4	36.6	36.0	34.9	34.6	34.0										
Load transfers (MW)	-1.4					-0.5											
Extra new load (MW)			0.2	0.3	0.8	0.4	**0.4**	0.3	0.3	0.4	0.3						
% growth (MW)		21.8%	-0.6%	-11.9%	7.1%	-10.6%	**10.5%**	11.0%	0.3%	0.2%	0.3%	1.0%	0.3%	2.1%	1.9%	1.8%	0.3%
Feeder summation reactive demand (MVAr)	6.3	5.7	6.0	2.7	4.6	3.3	**4.7**	5.7	5.7	5.7	5.8	5.9	5.9	6.1	6.3	6.5	6.5
Zone substation capacitor bank (MVAr)	6.1	6.1	6.1	6.1	6.1	6.1	**6.1**	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
Feeder line capacitors (MVAr)	5.7	5.7	5.7	6.6	6.6	6.6	**3.9**	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
Reactive load on transformers (MVAr)	-0.4	-1.1	-0.8	-4.1	-2.2	-3.5	**-2.1**	-1.1	-1.1	-1.1	-1.0	-0.9	-0.9	-0.7	-0.5	-0.3	-0.3
Feeder summation power factor	0.98	0.99	0.98	1.00	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	1.00	1.00	1.00	0.99	1.00	0.99	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	28.0	34.1	33.9	30.1	32.1	28.8	**31.7**	35.1	35.2	35.3	35.4	35.7	35.8	36.6	37.3	37.9	38.0
(N-1) Cyclic Rating (MVA)	35.5	36.5	36.5	36.5	36.5	36.5	**36.5**	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
(N-1) Limited Cyclic Rating (MVA)	38.0	37.5	37.5	37.5	37.5	37.5	**37.5**	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
(N-1) 2 Hour Emergency Rating (MVA)	38.0	38.8	38.8	38.8	38.8	38.8	**38.8**	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
(N-1) 10 Minute Emergency Rating (MVA)	38.0	38.8	38.8	38.8	38.8	38.8	**38.8**	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8	38.8
(N) Cyclic Rating (MVA)	71.0	73.1	73.1	38.8	73.1	73.1	**73.1**	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
SR 11	0	0	0	0	0
SR 12	0	0	0	0	0
SR 13	0	0	0	0	0
SR 14	0	0	0	0	0
SR 15	0	0	0	0	0
SR 19	0	0	0	0	0
SR 20	0	0	0	0	0
SR 23	0	0	0	0	0
SR 24	0	0	0	0	0
SR 25	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity	2019 Spare capacity	2018-2023 Annual growth	2019 DM (A)
SR 11	255	255	71%	77%	78%	143	144	169	134	156	153	**182**	197	198	199	200	202	58 A	1.2 MVA	2.1%	
SR 12	260	260	30%	35%	37%	35	47	46	46	61	68	**78**	91	96	96	96	97	169 A	3.4 MVA	4.8%	
SR 13	350	350	68%	74%	75%	288	342	330	332	211	213	**239**	259	261	265	268	270	91 A	1.8 MVA	2.6%	
SR 14	260	260	37%	40%	41%	78	84	87	75	93	90	**96**	104	105	107	109	110	156 A	3.1 MVA	2.9%	
SR 15	285	285	90%	94%	95%	196	210	238	194	215	210	**256**	269	271	273	275	278	16 A	0.3 MVA	1.7%	
SR 19	245	245	65%	70%	71%	121	136	133	115	121	105	**158**	172	173	174	175	176	73 A	1.5 MVA	2.3%	
SR 20	250	250	75%	84%	85%	174	189	199	168	181	186	**188**	210	213	214	215	217	40 A	0.8 MVA	3.1%	
SR 23	300	300	54%	59%	59%	253	283	233	257	226	199	**162**	177	177	178	179	181	123 A	2.5 MVA	2.3%	
SR 24	260	260	66%	71%	71%	202	173	201	155	151	122	**171**	185	186	187	188	189	75 A	1.5 MVA	2.1%	
SR 25	280	280	39%	42%	43%	147	168	180	115	128	129	**110**	119	119	120	121	122	161 A	3.2 MVA	2.1%	
Average	275	275	60%	65%	65%	164	178	182	159	154	147	**164**	178	180	181	183	184	96 A	1.9 MVA	2.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
SR 11	0	0	0	0	0
SR 12	6	4	0	0	0
SR 13	1	1	2	2	0
SR 14	0	1	1	1	0
SR 15	0	0	1	1	0
SR 19	1	0	0	0	0
SR 20	7	2	0	0	0
SR 23	1	0	0	0	0
SR 24	0	0	0	0	0
SR 25	0	0	0	0	0

Zone Substation Comments

1. Station rating is limited by 11kV transformer cables.
   Upgraded transformer cables in 2011.

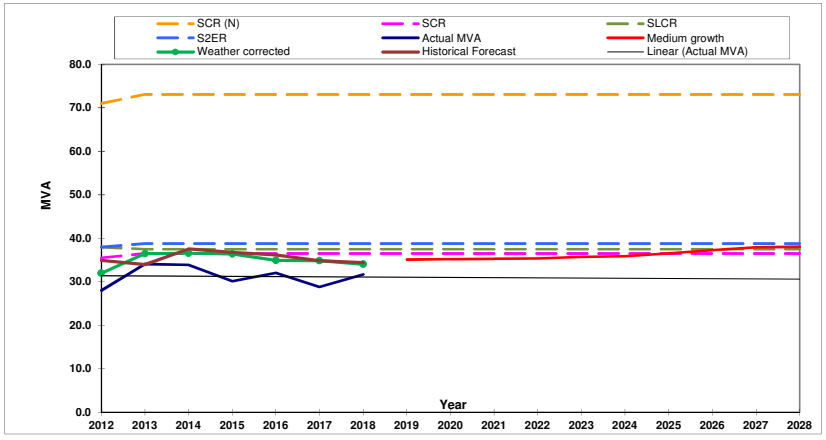
2. Line Capacitors
   Installed 5.7MVAr prior to summer 1999.

3. Load Transfers
   1.5MW from MR to SR for summer 2009 - due to MR Tx derated
   Transfer 1.4MW from SR to MR prior to summer 2011

4. New load
   0.5MW for new indoor s/s in 2009 for new apartment/retail complex (SR20).
   1MVA for Sandringham Hospital on SR19, with reserve on BR10 - proposal for late 2009
   0.5 MW -Sandringham Hospital Supply Increase - 2013/14 - SR19

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

Load | Next | Save | Previous

SPRINGVALE SOUTH SS
Voltage 22.4 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	37.9	38.5	41.1	35.8	39.3	38.1	**36.3**	46.7	46.5	46.0	45.7	46.3	46.3	47.3	48.1	48.9	49.0
10% POE actual MD	43.7	43.4	43.7	43.0	45.5	45.9	45.3										
Load transfers (MW)																	
Extra new load (MW)				0.2	1.7	1.5	**1.4**	0.8	0.5	0.3	0.3	0.2					
% growth (MW)		1.6%	6.8%	-12.9%	9.9%	-3.2%	**-4.6%**	28.6%	-0.5%	-1.0%	-0.7%	1.3%	0.1%	2.1%	1.9%	1.7%	0.1%
Feeder summation reactive demand (MVAr)	2.9	1.4	-1.4	-0.4	0.1	2.7	**-1.6**	4.0	3.9	3.7	3.5	3.8	3.8	4.3	4.8	5.2	5.3
Zone substation capacitor bank (MVAr)	12.3	12.3	12.3	12.3	12.3	12.3	**12.3**	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Feeder line capacitors (MVAr)	20.7	21.6	21.6	20.7	20.7	20.7	**20.7**	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
Reactive load on transformers (MVAr)	-9.8	-11.4	-14.2	-13.2	-12.7	-10.1	**-14.4**	-8.7	-8.9	-9.1	-9.3	-9.0	-9.0	-8.4	-8.0	-7.5	-7.5
Feeder summation power factor	1.00	1.00	1.00	1.00	1.00	1.00	**1.00**	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99
Transformation summation power factor	0.94	0.92	0.92	0.90	0.94	0.94	**0.87**	0.98	0.98	0.97	0.97	0.97	0.97	0.98	0.98	0.98	0.98
EG and DM at peak demand (MW)	11.3	11.1	7.6	9.4	5.5	9.1	**10.6**	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
Overall demand on transformers (MVA)	28.4	29.7	36.4	29.5	36.1	30.6	**29.5**	40.7	40.5	40.1	39.8	40.3	40.3	41.1	41.9	42.6	42.6
(N-1) Cyclic Rating (MVA)	40.1	40.1	40.1	40.1	40.1	40.1	**40.1**	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1	40.1
(N-1) Limited Cyclic Rating (MVA)	42.6	42.6	42.6	42.6	42.6	42.6	**42.6**	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6	42.6
(N-1) 2 Hour Emergency Rating (MVA)	46.4	46.4	46.4	46.4	46.4	46.4	**46.4**	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4	46.4
(N-1) 10 Minute Emergency Rating (MVA)	46.4	46.4	48.5	48.5	48.5	48.5	**48.5**	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5	48.5
(N) Cyclic Rating (MVA)	80.2	80.2	80.2	48.5	80.2	80.2	**80.2**	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2	80.2

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
SS 11	0	0	0	0	0
SS 12	0	0	0	0	0
SS 13	0	0	0	0	0
SS 14	0	0	0	0	0
SS 21	0	0	0	0	0
SS 22	0	0	0	0	0
SS 23	0	0	0	0	0
SS 24	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
SS 11	260	260	58%	73%	75%	209	177	216	148	155	162	**152**	191	194	198	207	215	69 A	2.7 MVA	8.3%	
SS 12	260	260	44%	57%	58%	110	117	120	107	105	106	**115**	148	150	150	150	152	112 A	4.4 MVA	6.4%	
SS 13	270	270	48%	60%	60%	117	122	140	113	128	112	**128**	161	162	163	163	165	109 A	4.2 MVA	5.6%	
SS 14	260	260	42%	55%	57%	121	130	132	124	122	117	**110**	143	148	148	148	150	117 A	4.5 MVA	7.3%	
SS 21	265	265	46%	61%	63%	126	110	104	119	129	114	**123**	160	167	169	170	171	105 A	4.1 MVA	7.9%	
SS 22	280	280	42%	54%	54%	103	112	111	102	111	104	**119**	150	152	154	154	156	130 A	5 MVA	6.2%	
SS 23	300	300	80%	89%	89%	218	230	251	210	222	174	**240**	267	268	269	269	272	33 A	1.3 MVA	2.6%	
SS 24	330	330	54%	70%	70%	200	243	197	199	197	190	**179**	230	231	231	231	234	100 A	3.9 MVA	6.1%	
Average	278	278	52%	65%	65%	151	155	159	140	146	135	**146**	181	184	185	186	189	97 A	3.8 MVA	6.0%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

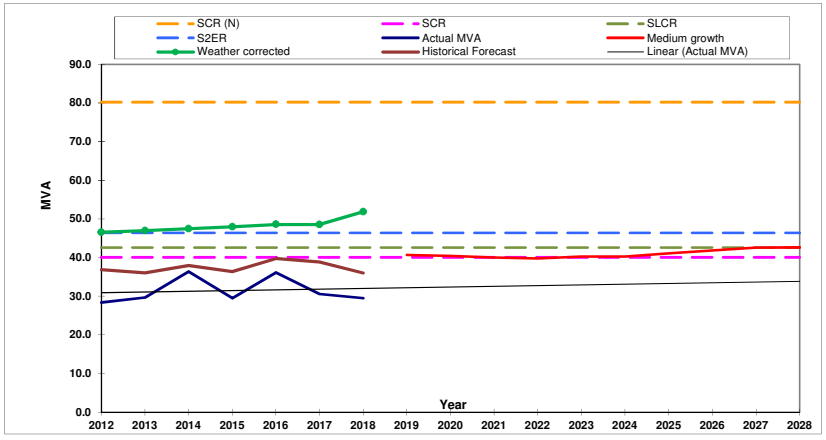
Feeder	2019	2020	2021	2022	2023
SS 11	0	2	4	8	6
SS 12	3	1	0	0	0
SS 13	0	0	0	0	0
SS 14	5	4	0	0	0
SS 21	6	6	2	0	0
SS 22	1	2	1	0	0
SS 23	3	0	0	0	0
SS 24	4	0	0	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
2. SERGASCO co-generation (18MW): The Station MD (MW) is actual customer load (not SS load).
3. Line Capacitors: Installed 3.6MVAr for summer 2000 & 18.9MVAr for summer 2001.
4. Load Transfers before summer of each year:
   For summer 2003: 4MW SS -> MC & 4MW SS -> CDA
   For summer 2004: 2MW SV -> SS
   Transfer 10MW from NP to SS in 2010.
5. New Loads:
6. Embedded generation are on SS11 and SS23

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

SORRENTO **STO** Load Next Save Previous

Voltage 22.1 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	37.4	38.3	34.6	35.3	41.3	40.0	**41.8**	47.2	47.3	47.1	47.2	48.3	48.8	50.2	51.5	52.8	53.3
10% POE actual MD	39.4	40.1	40.8	41.8	43.5	45.9	45.5										
Load transfers (MW)																	
Extra new load (MW)			0.4	0.8	0.4	0.3	**0.3**	0.3	0.2	0.0							
% growth (MW)		2.5%	-9.6%	2.0%	16.7%	-3.1%	**4.6%**	12.8%	0.2%	-0.3%	0.1%	2.3%	1.0%	2.8%	2.7%	2.5%	1.0%
Feeder summation reactive demand (MVAr)	4.3	4.5	8.1	6.9	7.8	6.0	**4.1**	5.2	5.2	5.2	5.2	5.4	5.5	5.8	6.1	6.3	6.4
Zone substation capacitor bank (MVAr)	12.0	12.0	12.0	12.0	12.0	12.0	**12.0**	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Feeder line capacitors (MVAr)	4.5	4.5	4.5	4.5	4.5	4.5	**4.5**	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Reactive load on transformers (MVAr)	-7.8	-7.6	-4.0	-5.2	-4.3	-6.1	**-8.0**	-6.9	-6.9	-6.9	-6.9	-6.7	-6.6	-6.3	-6.0	-5.8	-5.7
Feeder summation power factor	0.99	0.99	0.97	0.98	0.98	0.99	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Transformation summation power factor	0.98	0.98	0.99	0.99	0.99	0.99	**0.98**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)	0.5	0.5	0.5	0.5	0.5	0.5	**0.5**	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Overall demand on transformers (MVA)	37.7	38.6	34.4	35.2	41.0	39.9	**42.1**	47.2	47.3	47.1	47.2	48.2	48.7	50.1	51.4	52.6	53.1
(N-1) Cyclic Rating (MVA)	36.0	36.0	36.0	36.0	36.0	36.0	**36.0**	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0
(N-1) Limited Cyclic Rating (MVA)	45.9	45.9	45.9	45.9	45.9	45.9	**45.9**	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9	45.9
(N-1) 2 Hour Emergency Rating (MVA)	47.8	47.8	47.8	47.8	47.8	47.8	**47.8**	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
(N-1) 10 Minute Emergency Rating (MVA)	47.8	47.8	47.8	47.8	47.8	47.8	**47.8**	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8	47.8
(N) Cyclic Rating (MVA)	72.0	72.0	72.0	47.8	72.0	72.0	**72.0**	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0	72.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
STO 13	0	0	0	0	0
STO 14	0	0	0	0	0
STO 21	0	0	0	0	0
STO 22	0	0	0	0	0
STO 23	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
STO 13	350	350	75%	82%	83%	220	239	212	220	251	238	**262**	288	292	295	298	304	62 A	2.4 MVA	3.2%	
STO 14	350	350	77%	86%	87%	294	296	259	281	310	269	**271**	302	306	309	312	319	48 A	1.8 MVA	3.5%	
STO 21	350	350	64%	71%	72%	175	183	166	166	198	248	**224**	248	252	255	257	263	102 A	3.9 MVA	3.5%	
STO 22	350	350	49%	54%	54%	134	147	140	132	150	144	**171**	188	190	192	194	198	162 A	6.2 MVA	3.2%	
STO 23	350	350	51%	57%	58%	170	179	197	193	214	196	**177**	198	204	207	210	214	152 A	5.8 MVA	4.2%	
Average	350	350	63%	70%	70%	198	209	195	198	224	219	**221**	245	249	251	254	260	105 A	4 MVA	3.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
STO 13	0	0	0	0	0
STO 14	4	0	0	0	0
STO 21	2	1	0	0	0
STO 22	0	0	0	0	0
STO 23	3	3	1	0	0

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2010.
   Transformer summer ratings are limited by 66kV dropper resulting in an (N-1) rating of just 37MVA.

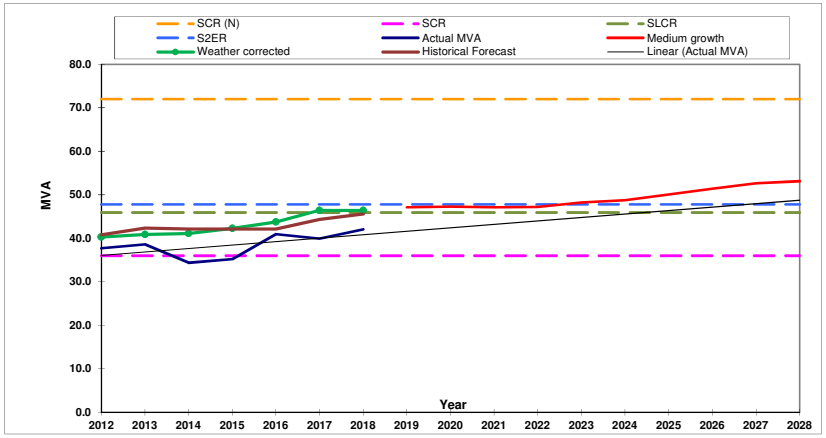
2. Embedded generation = 770kW on STO21.

3. Load Transfers:

4. New Loads:
   0.5MW in 2009 and 2MW in 2010 (on STO12) by SE water, sewerage treatment plant.

Reserve Capacity Requirements

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

SPRINGVALE SV — Load / Next / Save / Previous

Voltage 22.59 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	48.0	46.6	50.7	46.2	51.0	48.3	**49.8**	56.8	56.7	56.6	56.9	57.4	57.5	58.7	59.8	60.8	60.8
10% POE actual MD	54.5	51.1	52.4	52.2	54.3	54.2	54.9										
Load transfers (MW)							-2.0										
Extra new load (MW)				1.1		1.5	**1.2**	0.4	0.4	0.5	0.6	0.3					
% growth (MW)		-2.8%	8.8%	-8.8%	10.3%	-5.3%	**3.2%**	14.0%	-0.2%	-0.2%	0.5%	0.9%	0.1%	2.1%	1.9%	1.7%	0.1%
Feeder summation reactive demand (MVAr)	6.3	14.1	16.0	13.1	12.3	12.5	**12.5**	15.7	15.6	15.6	15.7	15.9	16.0	16.5	17.0	17.5	17.5
Zone substation capacitor bank (MVAr)	8.3	8.3	8.3	8.3	8.3	8.3	**8.3**	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
Feeder line capacitors (MVAr)	8.7	8.7	8.7	17.4	17.4	17.4	**9.6**	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
Reactive load on transformers (MVAr)	-2.5	5.3	7.3	4.4	3.6	3.7	**3.8**	6.9	6.9	6.8	7.0	7.2	7.2	7.8	8.3	8.7	8.8
Feeder summation power factor	0.99	0.96	0.95	0.96	0.97	0.97	**0.97**	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Transformation summation power factor	1.00	0.99	0.99	1.00	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	48.0	46.9	51.2	46.4	51.1	48.4	**50.0**	57.2	57.1	57.0	57.3	57.8	57.9	59.2	60.3	61.4	61.5
(N-1) Cyclic Rating (MVA)	80.8	80.8	80.0	80.0	80.0	80.0	**80.0**	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
(N-1) Limited Cyclic Rating (MVA)	86.6	86.6	86.6	86.6	86.6	86.6	**86.6**	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
(N-1) 2 Hour Emergency Rating (MVA)	94.0	94.0	94.0	94.0	94.0	94.0	**94.0**	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
(N-1) 10 Minute Emergency Rating (MVA)	94.0	94.0	94.0	94.0	94.0	94.0	**94.0**	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
(N) Cyclic Rating (MVA)	80.8	80.8	80.0	94.0	80.0	80.0	**80.0**	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
SV 11	0	0	0	0	0
SV 12	0	0	0	0	0
SV 13	0	0	0	0	0
SV 14	0	0	0	0	0
SV 15	0	0	0	0	0
SV 16	0	0	0	0	0
SV 17	0	0	0	0	0
SV 18	0	0	0	0	0
SV 19	0	0	0	0	0
SV 20	0	0	0	0	0
SV 21	0	0	0	0	0
SV 22	0	0	0	0	0
SV 23	0	0	0	0	0
SV 31	0	0	0	0	0
SV 32	0	0	0	0	0
SV 33	0	0	0	0	0
SV 34	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
SV 11	0	0																0 A	0 MVA		
SV 12	0	0																0 A	0 MVA		
SV 13	0	0																0 A	0 MVA		
SV 14	260	260	48%	53%	54%	125	127	133	151	131	126	**124**	139	139	140	140	141	121 A	4.7 MVA	2.8%	
SV 15	0	0																0 A	0 MVA		
SV 16	290	290	47%	53%	54%	225	157	171	153	153	164	**136**	154	156	158	159	160	136 A	5.3 MVA	3.5%	
SV 17	285	285	47%	53%	53%	51	79	118	74	160	90	**134**	151	152	152	152	153	134 A	5.2 MVA	2.8%	
SV 18	0	0																0 A	0 MVA		
SV 19	285	285	37%	42%	42%	80	109	3	3	3	105	**106**	119	120	120	121	121	166 A	6.5 MVA	2.8%	
SV 20	350	350	52%	58%	60%	188	173	169	171	168	163	**181**	205	209	216	222	223	145 A	5.7 MVA	4.7%	
SV 21	350	350	14%	56%	56%	159	169	181	165	138	142	**49**	195	195	195	196	196	155 A	6.1 MVA	60.0%	
SV 22	290	290	27%	31%	31%	71	85	86	75	76	79	**79**	89	90	90	90	91	201 A	7.9 MVA	2.8%	
SV 23	260	260	61%	70%	70%	189	190	189	160	175	152	**159**	182	182	183	184	185	78 A	3.1 MVA	3.2%	
SV 31	350	350	10%	71%	71%	69	76	86	92	108	74	**34**	248	248	248	248	248	102 A	4 MVA	127.5%	
SV 32	260	260	54%	60%	61%	167	239	166	175	153	143	**139**	157	158	159	159	160	103 A	4 MVA	2.9%	
SV 33	260	260	40%	47%	48%	156	144	151	144	135	135	**104**	121	124	125	126	126	139 A	5.4 MVA	4.4%	
SV 34	350	350	41%	84%	85%	82	52	53	48	137	140	**145**	292	296	302	313	322	58 A	2.3 MVA	24.5%	
Average	211	211	55%	57%	57%	130	133	125	117	128	126	**116**	121	122	123	124	125	90 A	3.5 MVA	1.6%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
SV 11	0	0	0	0	0
SV 12	0	0	0	0	0
SV 13	0	0	0	0	0
SV 14	0	0	0	0	0
SV 15	0	0	0	0	0
SV 16	1	2	1	1	0
SV 17	0	0	0	0	0
SV 18	0	0	0	0	0
SV 19	0	0	0	0	0
SV 20	2	3	7	5	0
SV 21	0	0	0	0	0
SV 22	0	0	0	0	0
SV 23	3	0	0	0	0
SV 31	0	0	0	0	0
SV 32	1	0	0	0	0
SV 33	5	2	1	0	0
SV 34	2	3	5	11	8

Zone Substation Comments

1. Zone Substation ratings were reviewed in 2001. Post 2001 based on 40deg C ambient temp.

2. Line Capacitors: 7.2MVAr for summer 1999, 17MVAr for summer 2000, 10MVAr for summer 2002.

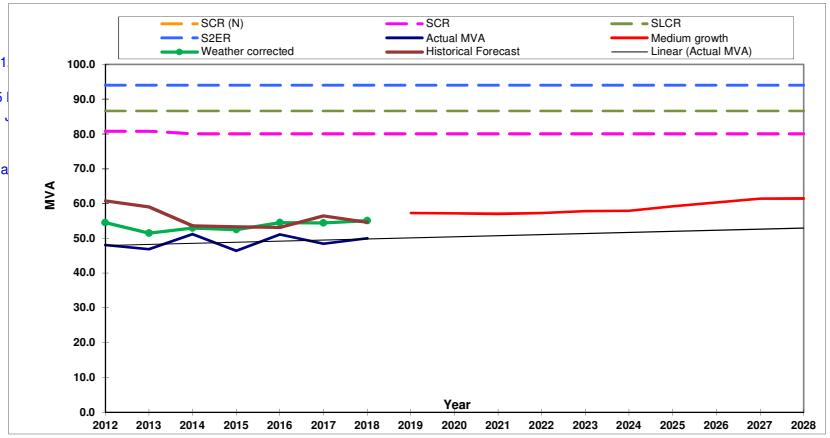
3. Load Transfers:

4. New Loads:
   1MVA by Telstra on SVW43 (with reserve on SV31) in 2009.
   2MVA by Telstra on SVW43 in 2011. Reserve capacity also increased.
   7.5MW at 917 Princes Hwy on SV14 and new feeder SV22 before summer 11/12.

Reserve Capacity Requirements

1. Monash Medical Centre, Clayton Rd Clayton:
   SVW54 (reserve) - 5MVA (128A); SV34 (reserve) - 5MVA (1
2. Telstra Clayton Energy Centre, Princes Hwy, Clayton:
   SVW43 (preferred); SV31 (reserve) - 8MVA (210A) from 15
   SVW43 (preferred); NO 09 (reserve) - 8MVA (210A) from 1
3. Telstra New Data Centre
   SVW42 (preferred) - 3 MVA;
   NO 01 (preferred); SV31 (reserve); 8MVA (210A) from 1 Ja
4. Bosch, Centre Rd Clayton:
   SVW52 (preferred); SV21 (reserve) - 5.4MVA (140A)
   With MM reconfiguration, SV21 (reserve) - 5.4MVA (140A)
5. Monash University (Clayton):
   SVW51 = 2MVA; NO6 = 4MVA; NO2 = 2MVA
6. Synchrotron
   SVW44 (Duty)
   SV19 (reserve) - 5MVA (130A)

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

SPRINGVALE WEST SVW — Voltage 22.59 kV — Load / Next / Save / Previous

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	54.4	53.5	53.3	50.8	50.9	52.6	**49.0**	57.2	58.7	60.1	61.1	62.5	63.4	64.7	65.9	67.0	67.2
10% POE actual MD	61.2	57.5	57.1	57.8	57.4	58.1	54.9										
Load transfers (MW)							2.0										
Extra new load (MW)			1.2	3.6	4.4	6.8	**5.7**	1.0	1.8	1.9	1.3	1.1	0.7	0.2			
% growth (MW)		-1.8%	-0.4%	-4.6%	0.1%	3.4%	**-6.8%**	16.7%	2.6%	2.4%	1.7%	2.3%	1.4%	2.1%	1.9%	1.7%	0.3%
Feeder summation reactive demand (MVAr)	17.8	15.6	17.1	12.6	10.1	11.3	**13.1**	17.4	18.2	18.9	19.4	20.2	20.6	21.3	22.0	22.5	22.6
Zone substation capacitor bank (MVAr)	10.0	10.0	10.0	10.0	10.0	10.0	**10.0**	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Feeder line capacitors (MVAr)	12.0	12.0	12.0	5.1	5.1	5.1	**12.0**	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Reactive load on transformers (MVAr)	7.3	5.0	6.6	2.0	-0.5	0.7	**2.6**	6.9	7.6	8.4	8.9	9.6	10.1	10.8	11.4	12.0	12.1
Feeder summation power factor	0.95	0.96	0.95	0.97	0.98	0.98	**0.97**	0.96	0.96	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Transformation summation power factor	0.99	1.00	0.99	1.00	1.00	1.00	**1.00**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.98	0.98
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	54.9	53.7	53.7	50.9	50.9	52.7	**49.1**	57.7	59.2	60.7	61.8	63.3	64.2	65.6	66.9	68.1	68.3
(N-1) Cyclic Rating (MVA)	80.8	80.8	80.0	80.0	80.0	80.0	**80.0**	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
(N-1) Limited Cyclic Rating (MVA)	86.6	86.6	86.6	86.6	86.6	86.6	**86.6**	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6	86.6
(N-1) 2 Hour Emergency Rating (MVA)	94.0	94.0	94.0	94.0	94.0	94.0	**94.0**	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
(N-1) 10 Minute Emergency Rating (MVA)	94.0	94.0	94.0	94.0	94.0	94.0	**94.0**	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0	94.0
(N) Cyclic Rating (MVA)	80.8	80.8	80.0	94.0	80.0	80.0	**80.0**	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
SVW 41	0	0	0	0	0
SVW 42	0	0	0	0	0
SVW 43	0	0	0	0	0
SVW 44	0	0	0	0	0
SVW 45	0	0	0	0	0
SVW 51	0	0	0	0	0
SVW 52	0	0	0	0	0
SVW 53	0	0	0	0	0
SVW 54	0	0	0	0	0
SVW 55	0	0	0	0	0
SVW 56	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
SVW 41	260	260	40%	49%	56%	121	108	138	97	102	105	**104**	128	146	160	161	162	132 A	5.2 MVA	11.2%	
SVW 42	355	355	66%	76%	77%	195	191	202	192	250	205	**236**	270	272	274	283	296	85 A	3.3 MVA	5.1%	
SVW 43	270	270	45%	53%	56%	139	133	116	109	118	140	**122**	143	151	167	179	180	127 A	5 MVA	9.6%	
SVW 44	315	315	2%	44%	44%	108	111	117	109	115		**7**	138	138	138	138	138	177 A	6.9 MVA	363.7%	
SVW 45	350	350	71%	82%	83%	276	274	269	248	226	230	**247**	286	290	291	292	294	64 A	2.5 MVA	3.8%	
SVW 51	370	370	50%	72%	72%	199	225	210	202	209	204	**186**	265	266	267	268	269	105 A	4.1 MVA	8.9%	
SVW 52	355	355	29%	33%	34%	152	122	112	107	109	85	**104**	119	119	120	120	121	236 A	9.3 MVA	3.3%	
SVW 53	265	265	62%	71%	71%	160	179	173	158	160	171	**164**	188	188	189	190	191	77 A	3 MVA	3.3%	
SVW 54	350	350	49%	90%	93%	82	90	92	87	102	108	**172**	314	325	334	335	336	36 A	1.4 MVA	19.2%	
SVW 55	280	280	39%	66%	69%	157	122	172	120	116	115	**110**	185	193	200	200	201	95 A	3.7 MVA	16.5%	
SVW 56	350	350		0%	1%									4	14	36	63	350 A	13.7 MVA		
Average	320	320	45%	58%	58%	159	155	160	143	151	136	**145**	185	190	196	200	205	135 A	5.3 MVA	8.2%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
SVW 41	9	18	13	0	0
SVW 42	0	1	1	7	12
SVW 43	4	8	15	11	0
SVW 44	0	0	0	0	0
SVW 45	3	2	0	0	0
SVW 51	0	0	0	0	0
SVW 52	0	0	0	0	0
SVW 53	0	0	0	0	0
SVW 54	5	11	8	0	0
SVW 55	4	8	6	0	0
SVW 56	0	4	11	22	27

Zone Substation Comments

1. New zone substation for summer 2006/2007.

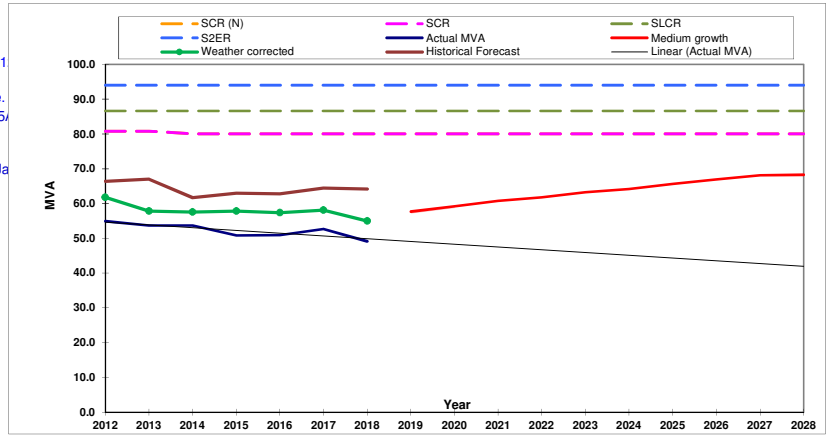
2. Load Transfers:

3. New Loads:
   - SVW41: Oct 2009 - 0.9MW (25A) with up to 0.95MVA + 2x2.5MVA ultimate timing unknown.
   - 1MVA by Telstra on SVW43 (with reserve on SV31) in 2009.
   - 2MVA by Telstra on SVW43 in 2011. Reserve capacity also increased.
   - 3MVA by Telstra on SVW42 in 2014 as a temporary connection.
   - 3MVA Monash Childrens Hosp-2016 (Shared between SVW54 & SV21)
   - 5MVA- Nova Centre 2015-2017 (Shared between SVW41 & SVW54)

Reserve Capacity Requirements

1. Monash Medical Centre, Clayton Rd Clayton:
   SVW54 (reserve) - 5MVA (128A); SV34 (reserve) - 5MVA (1
2. Telstra Clayton Energy Centre, Princes Hwy, Clayton:
   SVW43 (preferred); SV31 (reserve) - 8MVA (210A) reserve.
   SVW43 (preferred) - 10MVA; NO09 (reserve) - 10MVA (255
3. Telstra New Data Centre
   SVW42 (preferred) - 3MVA
   NO01 (preferred); SV31 (reserve) - 10MVA (355A) from 1 Ja
3. Monash University (Clayton):
   SVW51 = 2MVA; NO6 = 2MVA; NO2 = 2MVA
4. Synchrotron, Blackburn Rd Clayton:
   SVW44 (Duty)
   SV19 (reserve) - 5MVA (130A) reserve.
5. Fujitsu Data Centre
   LD5 (preferrred)
   SVW55 (reserve) - 2MVA (50A) reserve

Network Support Agreements



United Energy Load Forecast | **SUMMER MAXIMUM DEMAND** | **Base Case; 10% Weather Probability**

WEST DONCASTER **WD** — Load / Next / Save / Previous

Voltage 11.5 kV

	Actual							Forecast									
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Load maximum demand actual / forecast (MW)	43.4	47.4	51.9	42.5	48.1	44.1	**49.3**	54.5	54.4	54.1	53.9	54.5	54.7	55.6	56.5	57.2	57.4
10% POE actual MD	49.6	52.3	51.9	50.9	52.3	52.7	52.9										
Load transfers (MW)																	
Extra new load (MW)					0.2	0.6	**0.5**	0.5	0.5	0.3	0.3	0.4	0.2				
% growth (MW)		9.3%	9.5%	-18.2%	13.2%	-8.3%	**11.8%**	10.5%	-0.1%	-0.7%	-0.2%	1.1%	0.4%	1.7%	1.5%	1.3%	0.4%
Feeder summation reactive demand (MVAr)	8.9	9.7	12.0	8.6	10.0	8.6	**10.1**	11.7	11.7	11.6	11.6	11.7	11.8	12.1	12.4	12.6	12.7
Zone substation capacitor bank (MVAr)	2.9	2.9	2.9	2.9	2.9	2.9	**2.9**	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
Feeder line capacitors (MVAr)	5.4	5.4	5.4	5.4	5.4	5.4	**5.4**	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4
Reactive load on transformers (MVAr)	5.7	6.5	8.8	5.4	6.8	5.4	**6.8**	8.5	8.5	8.4	8.3	8.5	8.6	8.9	9.2	9.4	9.5
Feeder summation power factor	0.98	0.98	0.97	0.98	0.98	0.98	**0.98**	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Transformation summation power factor	0.99	0.99	0.99	0.99	0.99	0.99	**0.99**	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
EG and DM at peak demand (MW)																	
Overall demand on transformers (MVA)	43.8	47.9	52.7	42.8	48.6	44.4	**49.8**	55.2	55.1	54.7	54.6	55.2	55.4	56.3	57.2	58.0	58.2
(N-1) Cyclic Rating (MVA)	63.3	63.3	63.3	63.3	63.3	63.3	**63.3**	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3	63.3
(N-1) Limited Cyclic Rating (MVA)	66.9	66.4	66.4	66.4	66.4	66.4	**66.4**	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4	66.4
(N-1) 2 Hour Emergency Rating (MVA)	69.1	68.5	68.5	68.5	68.5	68.5	**68.5**	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5
(N-1) 10 Minute Emergency Rating (MVA)	69.1	68.5	68.5	68.5	68.5	68.5	**68.5**	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5	68.5
(N) Cyclic Rating (MVA)	94.9	94.9	94.9	68.5	94.9	94.9	**94.9**	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9	94.9

Load Transfers (Amps)

Feeder	2019	2020	2021	2022	2023
WD 11	0	0	0	0	0
WD 13	0	0	0	0	0
WD 14	0	0	0	0	0
WD 15	0	0	0	0	0
WD 16	0	0	0	0	0
WD 21	0	0	0	0	0
WD 22	0	0	0	0	0
WD 23	0	0	0	0	0
WD 24	0	0	0	0	0
WD 26	0	0	0	0	0
WD 31	0	0	0	0	0
WD 32	0	0	0	0	0
WD 33	0	0	0	0	0
WD 34	0	0	0	0	0
WD 36	0	0	0	0	0

Feeder	SCR (A) 2018	SCR (A) 2019	utilis (%) 2018	forecast utilis (%) 2019	forecast utilis (%) 2020	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2019 Spare capacity		2018-2023 Annual growth	2019 DM (A)
WD 11	295	295	73%	79%	79%	198	220	217	157	206	186	**217**	234	234	235	236	238	61 A	1.2 MVA	2.0%	
WD 13	285	285	98%	106%	106%	220	244	253	196	308	215	**279**	302	302	304	305	308	0 A	0 MVA	2.0%	
WD 14	315	315	67%	71%	73%	158	183	225	168	192	175	**213**	223	231	235	242	249	92 A	1.8 MVA	3.4%	
WD 15	350	350	43%	47%	48%	124	173	132	123	133	137	**150**	165	168	177	189	206	185 A	3.7 MVA	7.5%	
WD 16	160	160	53%	57%	57%	64	68	76	67	73	69	**84**	91	91	92	92	93	69 A	1.4 MVA	2.0%	
WD 21	285	285	51%	55%	55%	119	129	136	101	127	120	**144**	156	156	157	158	159	129 A	2.6 MVA	2.0%	
WD 22	295	295	89%	89%	90%	250	301	233	178	207	206	**261**	264	264	266	266	269	31 A	0.6 MVA	0.6%	
WD 23	350	350	57%	66%	71%	173	198	196	169	195	179	**200**	232	249	256	257	259	118 A	2.3 MVA	5.9%	
WD 24	355	355	51%	55%	55%	217	197	200	202	197	200	**182**	196	196	198	198	200	159 A	3.2 MVA	2.0%	
WD 26	165	165	49%	53%	53%	61	71	79	62	72	65	**81**	87	87	88	88	89	78 A	1.5 MVA	2.0%	
WD 31	300	300	96%	104%	104%	241	259	275	202	78	251	**289**	312	312	314	315	318	0 A	0 MVA	2.0%	
WD 32	295	295	82%	89%	89%			239	184	317	200	**242**	261	262	263	264	266	34 A	0.7 MVA	2.0%	
WD 33	370	370	68%	74%	74%	276	296	292	266	260	264	**253**	273	273	275	276	278	97 A	1.9 MVA	2.0%	
WD 34	350	350	39%	42%	42%	126	139	156	122	140	133	**136**	147	147	148	148	150	203 A	4 MVA	2.0%	
WD 36	290	290	80%	86%	86%	186	228	238	190	223	218	**231**	250	250	251	252	255	40 A	0.8 MVA	2.0%	
Average	297	297	66%	72%	72%	161	180	196	159	182	174	**198**	213	215	217	219	222	84 A	1.7 MVA	2.5%	
	1	2	3	4	5	6	18	19	20	21											

New Load / New Capacitors (Net Amps)

Feeder	2019	2020	2021	2022	2023
WD 11	0	0	0	0	0
WD 13	0	0	0	0	0
WD 14	8	8	3	6	5
WD 15	3	2	9	11	15
WD 16	0	0	0	0	0
WD 21	0	0	0	0	0
WD 22	0	0	0	0	0
WD 23	16	16	6	0	0
WD 24	0	0	0	0	0
WD 26	0	0	0	0	0
WD 31	0	0	0	0	0
WD 32	0	0	0	0	0
WD 33	0	0	0	0	0
WD 34	0	0	0	0	0
WD 36	0	0	0	0	0

Zone Substation Comments

1 Zone Substation ratings were reviewed in 2010.

2. Line Capacitors:
   Installed 5.4MVAr of line capacitors in 2000.

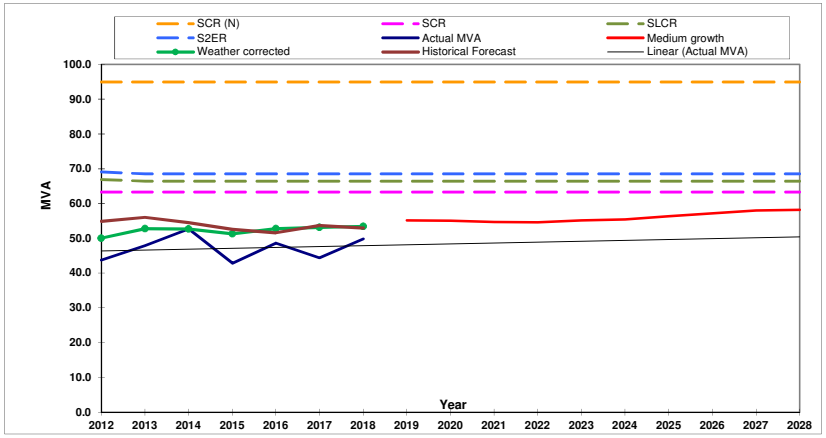
3. Load Transfers:

4. New Loads:
   7.0MW by Doncaster shoppingtown for summer 2009.

5. CP feeders:
   WD 11, WD 12, WD 21, WD 22, WD 31, WD 32

Reserve Capacity Requirements

Network Support Agreements



7. Cross-border feeders

Feeder	SCR (A) 2017	SCR (A) 2018	utilis (%) 2017	forecast utilis (%) 2018	forecast utilis (%) 2019	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2018 Spare capacity	2017-2022 Annual growth	2018 DM (A)
AR6	350	350	58%	61%	62%	224	217	222	194	203	197	203	215	217	218	219	221	135 A 2.6 MVA	1.8%	
AR12	255	255	98%	88%	89%	232	244	76	203	232	264	249	224	226	227	228	230	31 A 0.6 MVA	-1.5%	
BC11	255	255	47%	50%	51%	45	135	58	100	113	112	121	128	129	130	131	132	127 A 2.4 MVA	1.8%	
BC23	255	255	90%	96%	98%	259	270	104	231	244	226	230	245	249	252	257	263	10 A 0.2 MVA	2.9%	
RD04	255	255	109%	97%	99%	106	317	282	236	291	264	279	247	253	257	258	260	8 A 0.2 MVA	-1.3%	
RD10	255	255	67%	71%	72%		145	157	128	146	135	170	181	184	187	191	195	74 A 1.4 MVA	3.0%	

8. Definitions

TERM	DEFINITION
BH	Box Hill zone substation
BR	Beaumaris zone substation
BU	Bulleen zone substation
BW	Burwood zone substation
CDA	Clarinda zone substation
CFD	Caulfield zone substation
CM	Cheltenham zone substation
CRM	Carrum zone substation
DMA	Dromana zone substation
DC	Doncaster zone substation
DN	Dandenong zone substation
DSH	Dandenong South zone substation
DVY	Dandenong Valley zone substation
EB	East Burwood zone substation
EL	Elsternwick zone substation
EM	East Malvern zone substation
EW	Elwood zone substation
FSH	Frankston South zone substation
FTN	Frankston zone substation
GW	Glen Waverley zone substation
HGS	Hastings zone substation
HT	Heatherton zone substation
K	Gardiner zone substation
KBH	Keysborough zone substation
LD	Lyndale zone substation
LWN	Langwarrin zone substation
M	Mentone zone substation
MD	Maximum demand

TERM	DEFINITION
MC	Mordialloc zone substation
MGE	Mulgrave zone substation
MR	Moorabbin zone substation
MTN	Mornington zone substation
NIEIR	National Institute of Economic and Industry Research
NB	North Brighton zone substation
NO	Notting Hill zone substation
NP	Noble Park zone substation
NW	Nunawading zone substation
OAK	Oakleigh zone substation
OE	Oakleigh East zone substation
OR	Ormond zone substation
POE	Probability of exceedance
RBD	Rosebud zone substation
RD	Riversdale zone substation
RWT	Ringwood terminal station feeders
SH	Surrey Hills zone substation
SR	Sandringham zone substation
SS	Springvale South zone substation
STO	Sorrento zone substation
SV	Springvale zone substation
SVW	Springvale West zone substation
UE	United Energy
WD	West Doncaster zone substation