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Distribution Network Connection Maximum Demand Forecast

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CONTACT

Not applicable.

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Appendix 1: Schedule 5.7 of the current version of the NER

EXECUTIVE SUMMARY

This 10 year load forecast has been compiled by Aurora Energy Pty Ltd (Aurora) in its capacity as Distribution Network Service provider (DNSP) to meet distribution network demand planning needs, Transend Networks Pty Ltd (Transend) transmission network demand planning needs and support the Office of the Tasmanian Economic Regulator (OTTER) annual reporting requirements. The base demand data has been drawn from Transend terminal substation metering data (ex Transend NOCS and Historian systems and Aurora's Feeder Load Reporting System - FLRS).

The load on the Aurora's distribution network reached a peak Coincident Maximum Demand (CMD) during the winter period at ~8:30 am on Thursday 8 July 2010. The total actual load on the connection points to the transmission network at this time was 1022 MW. Using the temperature sensitivity coefficient for each connection point to adjust to the long run average temperature, the temperature corrected peak demand was **1,095 MW**. With an estimated 10 MW of embedded generation operating, the estimated total actual load on the distribution network at that time was 1032 MW (temperature corrected, 1,105 MW).

The load on the Aurora's distribution network reached a peak Coincident Maximum Demand (CMD) during the summer period at ~9:00 am on Tuesday 1 December 2009. The total actual load on the connection points to the transmission network at this time was 698 MW. Using the temperature sensitivity coefficient for each connection point to adjust to the long run average temperature, the temperature corrected peak demand was **717 MW**. With an estimated 8 MW of embedded generation operating, the estimated total actual load on the distribution network at that time was 706 MW (temperature corrected 725 MW).

The following Transend substations provide connection to both 'transmission system direct connected customers' and to the distribution network. As such the total distribution network load only recognises the distribution-connected component.

Arthurs Lake	Port Latta	Newton
Emu Bay	Savage River	Rosebery 44 kV

The following table sets out the actual and forecast system wide demand for summer and winter periods. Summer being December, January and February in the relevant financial year, and winter being June, July and August in the relevant calendar year.

	Winter (MW)		**Summer (MW)**	
	50 % POE	**10% POE**	**50% POE**	**10% POE**
2010 Actual	1022		698	
2010 Temp Corrected	1095		717	
2015 Reconciled	1189	1211	764	786
2020 Reconciled	1287	1311	834	857

The following table sets out the forecast system wide demand growth rates for summer and winter periods.

	Winter		**Summer**	
	50 % POE	**10% POE**	**50% POE**	**10% POE**
5 year growth	8.59%	7.87%	6.60%	8.33%
5 year growth (p.a.)	1.66%	1.53%	1.29%	1.61%
10 year growth	17.58%	16.77%	16.29%	18.08%
10 year growth (p.a.)	1.63%	1.56%	1.52%	1.68%

1 INTRODUCTION

1.1 PURPOSE

The purpose of this report is to provide a forecast of demand at the connection points to the transmission network. The report has been compiled by Aurora Energy Pty Ltd in its capacity as Distribution Network Service provider (DNSP). This report uses 10% and 50% Probability of Exceedance (PoE) to define the forecasts and due to the connection point being the load side of the individual distribution feeder circuit breaker at each Transend substation, distribution feeder loads are aggregated for each substation (connection site).

1.2 KEY REQUIREMENT

This report provides forecast information for each connection site to the transmission network in accordance with the requirements of schedule 5.7 of the NER.

Schedule 5.7 of the current version of the NER is included in Appendix 1.

The requirements of OTTER are, as stated in Chapter 8 of the Tasmanian Electricity Code, that the *Distribution Network Service Provider* must submit to the *Regulator* an annual report called the Distribution System Planning Report including (among many things) the historical and forecast demand from each *transmission connection site.*

2 METHODOLOGY

2.1 OVERVIEW

The underlying approach is to project load growth forward at each connection site at a rate that is consistent with recent history. These spatial forecasts are then aggregated together, using diversity factors, to a system level forecast (bottom-up). This is then compared to, and reconciled with, a forecast at the system level (top-down). Transend who had it prepared independently by the National Institute of Economic and Industry Research (NIEIR) provided the system level forecast. Spatial forecasts, in MWs, are prepared for the individual connection sites.

Demand forecasts are prepared for both summer (Dec-Feb) and winter (June-Aug) periods.

2.2 DATA MANAGEMENT

Production of the forecasts requires data series that are quite specific. Aurora undertakes data 'cleaning' in the context that:

a) Adjustment for loads that have been permanently switched from one point to another; and

b) Validation to ensure that the data is reasonably free of problems like missing observations and other errors.

For the purposes of the modelling Aurora utilises, where possible, a daily time series for the summer and winter periods for each of the connection sites, going back a minimum of five years (denoted in MWs).

Aurora also details of any permanent transfers between substations both historically and for the forecast period. These are required to correct for any past and expected discontinuities in the dataset, which if not accounted for, may result in biased forecasts. Past details of major block loads and details of forecast block loads that will cause a discontinuity in the time series are also required.

The actual peaks are adjusted by any permanent transfers and block loads before any forecasts are derived. In addition to block loads and permanent transfers and block loads, details of any demand side management (DSM) and irrigation loads which will affect the peak in each historical and also forecast period are also accounted for and adjustments made to the underlying time series before any time trend

regressions or growth factors are applied.

Embedded generation is another factor that is accounted for. Aurora believes that the best approach is to include embedded generation in the original daily time series for each substation (which is used for weather correction) but to adjust the contribution of any embedded generation from the peak in each season before extrapolating into the forecast period if it is outside its normal operational mode.

2.3 WEATHER CORRECTION

Aurora weather corrects the data to the 10% and 50% Probability of Exceedence levels (POE).

2.3.1 Weather correction in demand forecasting

The random nature of weather means that any comparison of historical electricity loads over time requires these loads to be adjusted to standardise weather conditions. Typically, actual demand is standardised to either, or both, of 10% and 50% POE. The 50% (10%) POE demand level is the annual maximum level that, on average, would be met or exceeded 50% (10%) of the time. It can be thought of as the maximum demand that would be observed or exceeded once every two (ten) years on average.

As the intent of load forecasting is to forecast maximum demand at a given POE level, any trend relationships of spatial maximum demand that are based on non-weather normalised data could be susceptible to bias, particularly if the historical data contains a number of extreme seasons. It is imperative that any demand forecasting methodology incorporates an appropriate form of weather normalisation or correction. This is true at all levels of the network, from the feeder level all the way up to the system.

2.3.2 Aurora's approach to weather correction

Aurora's approach to weather correction involves estimating a regression model between the daily MD and a selection of weather variables from a suitable weather station.

Those substations that tend to peak in the morning will have coefficients that are weighted more towards the daily minimum, whereas those that peak in the afternoons will have a higher temperature sensitivity for the daily maximum.

The temperature sensitivities are calculated for each year in the time series. So for example, to temperature correct five winter peaks from 2006, we will estimate five separate regressions between the daily MD and temperature/weather variables for each winter season from 2006 onwards.

Individual temperature sensitivities are calculated for each of the connection sites. Before estimating the temperature sensitivity coefficients, it is important to note that we remove weekends from the time series, as these almost never correspond to seasonal peaks. In the case of summer, in addition to removing the weekends, we remove the Christmas/New Year period, which usually corresponds to lower demand.

The actual season peak is then adjusted along the regression line towards a long run weighted average temperature which corresponds to the 10% POE and 50% POE weighted average temperature. The weights are determined by the coefficients on the daily maximum and daily minimum temperature variables from the temperature sensitivity regressions.

2.4 ADJUSTING FOR SIGNIFICANT BLOCK LOADS, PERMANENT TRANSFERS AND OTHER FACTORS

Before applying any form of regression analysis or growth factor to historical weather corrected peak demands, these are adjusted for transfers to and from the substation as well as significant block loads that comprise a large proportion of the loads at the specific connection site. The effects of transfers and large block loads are removed from the historical data series before any trends are fitted or growth rates are determined. These are later added back to the forecasts.

Forecasts are also adjusted for predicted transfers and large block loads expected to arise during the

forecast period.

Expected block loads are added to the forecast only if they stand out as unusual or significant when compared to the history of the connection site in question. If they are not unusual, the underlying trend growth estimated by fitting linear trend through the historical data will incorporate these types of loads.

As a general rule, only loads that are greater than 5% of the total load at a connection site are added onto the forecast. Loads smaller than the threshold are assumed to be captured by the underlying trend in the time series.

If unusual or significant block loads are expected, their size and the likelihood that they will materialise is estimated and the product of these two things are added to the forecast at the appropriate time.

Size of spot loads is estimated in terms of contribution to load at the time of connection site peak demand. Some types of load may be at full demand when the system peaks, others may not.

The same approach is used for expected reduction in load as a result of any demand side management projects (treated as negative loads).

In addition to adjustments for block loads and permanent transfers, it is also necessary to make adjustments for irrigation loads and the effect of any embedded generation operating at the time of peak demand for each connection site.

2.5 DEVELOPING THE FORECASTS

Once data has been temperature/weather corrected and adjusted for large block loads and permanent transfers, demand forecasts are produced.

The basic approach is to extrapolate from recent history using linear time trends (over varying time frames) or applying growth rates based on historical behaviour to the most recent temperature corrected observation.

This is applied to non-coincident peak demands for each substation. Diversity factors are applied to the aggregated forecasts to derive an overall system demand for each season in the forecast period.

2.5.1 Reconciliation with system level forecasts (top-down)

The forecasts are then be reconciled with the medium economic growth scenario of the independently produced system level forecast (NIEIR) by applying a proportional adjustment to each of the individual substations so that the sum of the coincident demands corresponds to the independent system demand forecast in each year of the forecast period.

The adjusted coincident substation forecasts are converted back to non-coincident peaks using the same diversity factor as applied previously. The diversity factors applied during the forecast period will be related to historical behaviour, most probably an average of the last three or five years.

Reconciliation with an independently produced system level forecast has the advantage of allowing the methodology to incorporate the impacts of broader macroeconomic and demographic aggregates, as well as the impacts of new policy initiatives, which are better modelled at the system level. System level data is also smoother and more amenable to the fitting of econometric models that can be used to generate more accurate system level forecasts.

2.5.2 Internal review of forecasts

The derived forecasts are reviewed by an Aurora person with experience of the relevant connection site. This person makes sure that the forecast ‘fits’ with the site in question and uses judgement to make adjustments where it does not. In particular, the use of old data creates a tendency for forecasts to ‘miss’ changes in growth rates. For example:

a) The forecasts may be too low in areas which are about to become (or have recently become)

high growth areas

b) Conversely, the forecasts may be too high in areas that have recently reached 'maturity'

c) Growth in industrial load will likely reflect growth in Tasmania's GSP. If GSP is expected to accelerate (decelerate) over the forecast period, the forecasts will tend to under (over) estimate actual growth.

Any changes that are made through this process are recorded with supporting evidence. These records form part of the documentation of the forecasts.

2.6 TRANSEND SYSTEM LEVEL FORECAST

The 2010 forecasts of summer and winter maximum demands for Tasmania were developed By NIEIR for Transend using econometric regression equations based on Transend metering data. In broad terms, these relationships (equations) relate the ratio of maximum demands to energy to average temperature at system maximum demand (MD).

MD forecast is linked to the energy forecast to ensures consistency between the energy and the demand projections.

The energy projections for Tasmania reflect the sectoral composition of gross state product growth as well as the impact of changes in real electricity prices and other policy drives of the energy projections. The load factor equation effectively means the forecast MDs for Tasmania indirectly reflect the impact of GSP and real electricity price changes.

The MD equation also includes Tasmanian GSP as an independent explanatory variable. Its sign suggests that the faster the growth in GSP, the faster the growth in the ratio of the winter MD to total energy.

System Maximum Demand is the maximum half hour average Tasmanian system requirement at generator terminals. This demand for the relevant half hour, expressed as an average power comprises:

- total Tasmanian end-use sales;
- power used in power stations;
- transmission and distribution losses; and

excluding:

- buyback (supplying sales) from cogeneration/generation embedded in the distribution network; and
- own use supplying load directly from cogeneration/generation embedded in the distribution network (i.e. not drawn from network and not sales).

A detailed analysis of ambient temperature data for Tasmania is undertaken by NIEIR in order to estimate the ranges of future winter and summer temperatures. For each medium, high and low forecast, the following three temperature based forecasts are developed:

- 10th percentile: temperature met once in every ten years (10% POE5);
- 50th percentile: temperature met once in every two years (50% POE);
- 90th percentile: temperature met nine out of ten years (90% POE).

Considering the variations in the input variables of the forecast and the temperature variations, NIEIR produces nine different generation forecasts (i.e. 10%, 50%, and 90% POE values for each of high, medium, and low economic growth scenarios).

The relationships between Tasmanian MDs, energy and weather conditions were estimated excluding the impact of the major industrial customers that are assumed to be weather/temperature insensitive.

The major industrial customers and other customers (ie retail and minor industrial customers) are examined separately. The major industrial customers that are directly connected to the transmission network are excluded from the system level forecast applied to the distribution network.

3 TASMANIA DISTRIBUTION NETWORK

Aurora's distribution network supplies electricity to mainland Tasmania only. Aurora is not responsible for the distribution network on the Bass Strait Islands. There are a number of major customers, which connect directly to Transend's network, who are not Aurora's supply responsibility.

Aurora has 278,838 customers in a supply area of 68,000 square kilometres.

The primary distribution voltage is delivered from 363 feeders at 11 or 22 kV. These feeders are supplied from either:

- 16 zone substations (Aurora Energy);
- 43 transmission substations (Transend Networks); and
- 2 Hydro Tasmania connections.

In addition there are 23 sub-transmission feeders (44 and 33 kV) that supply the 16 Zone Aurora Energy zone substations.

Aurora's distribution network is connected to 40 Transend and 3 Hydro Tasmania connection sites across Tasmania.

At the Transend sites, the voltage is reduced from 110 kV to 44, 33, 22 and 11 kV.

At the Hydro Tasmania sites, the voltage is taken at either 11 or 22 kV. Connection is taken at the Hydro Tasmania sites due to historical infrastructure design and the remoteness of the distribution assets.

Similar contractual and physical connection arrangements exist at connection sites for both Hydro Tasmania and Transend.

The distribution connection sites, and the asset boundaries between the distribution and generation or transmission networks, are on the load side of the Transend or the Hydro Tasmania' owned feeder circuit breaker. The table 4-1, below, summarises all of Aurora's Connection Points with Hydro Tasmania or Transend Networks.

Table 3-1 Aurora Connection Sites

Connect Point Substation		Connection Company	Connection Voltage kV	No. Of Connection Points	Type
Arthurs Lake	AL	Transend Networks	6.6/22	1	Distribution
Derwent	DF	Transend Networks	22	1	Distribution
Gordon	GO	Hydro Tasmania	22	1	Distribution
Meadowbank	MB	Transend Networks	22	3	Distribution
New Norfolk	NN	Transend Networks	22	6	Distribution & Subtransmission
Tungatinah	TU	Transend Networks	22	4	Distribution
Waddamana	WA	Transend Networks	22	1	Distribution
Wayatinah	WY	Hydro Tasmania	11	2	Distribution
Avoca	AV	Transend Networks	22	4	Distribution

St Marys	SM	Transend Networks	22	4	Distribution
Triabunna	TB	Transend Networks	22	3	Distribution
Bridgewater	BW	Transend Networks	11	10	Distribution
Chapel St	CS	Transend Networks	11	17	Distribution
Creek Rd	CR	Transend Networks	33	8	Subtransmission
Lindisfarne	LF	Transend Networks	33	6	Distribution
North Hobart	NH	Transend Networks	11	22	Distribution
Risdon	RI	Transend Networks	33	7	Subtransmission
Rokeby	RK	Transend Networks	11	10	Distribution
Devonport	DP	Transend Networks	22	11	Distribution
Emu Bay	EB	Transend Networks	22	4	Distribution
Railton	RA	Transend Networks	22	8	Distribution
Ulverstone	UL	Transend Networks	22	8	Distribution
Wesley Vale	WV	Transend Networks	11	1	Distribution
Derby	DE	Transend Networks	22	3	Distribution
Scottsdale	SC	Transend Networks	22	5	Distribution
Burnie	BU	Transend Networks	22	12	Distribution
Port Latta	PL	Transend Networks	22	2	Distribution
Smithton	ST	Transend Networks	22	5	Distribution
Sorell	SO	Transend Networks	22	8	Distribution
Electrona	EL	Transend Networks	11	8	Distribution
Kermandie	KE	Transend Networks	11	4	Distribution
Kingston	KI	Transend Networks	11	12	Distribution
Knights Rd	KR	Transend Networks	11	6	Distribution
George Town	GT	Transend Networks	22	10	Distribution
Mowbray	MO	Transend Networks	22	10	Distribution
Norwood	NW	Transend Networks	22	8	Distribution
Palmerston	PM	Transend Networks	22	3	Distribution
Trevallyn	TR	Transend Networks	22	17	Distribution
Hadspen	HA	Transend Networks	22	8	Distribution
Newton	NT	Transend Networks	22	1	Distribution
Queenstown	QT	Transend Networks	22	4	Distribution
Rosebery	RB	Transend Networks	44	2	Distribution & Subtransmission
Rosebery	RB	Transend Networks	22	3	Distribution
Savage River	SR	Transend Networks	22	1	Distribution

There are at present ten distributed generation units connected to the distribution system. Furthermore, there are in excess of 1800 Photo-Voltaic (PV) grid-connected units, directly connected to the distribution network.

Aurora manages the planning of its distribution network in three categories:

1. Zone substations and sub-transmission feeders or Transend Networks substations.
2. High voltage distribution feeders.

3. Distribution substations and low voltage feeders.

These categories are shown in table 4-2 below.

Table 3-2 Aurora Main Infrastructure

Infrastructure	
Connection points sites	43
Connection points feeders	274
Zone Substations (total)	16
Major Zone Substations	10
Subtransmission circuits	23
Minor Zone Substations	6
Distributed subtransmssion circuits	6
High Voltage Feeders (total)	386*
Distribution Substations	30,262

*Includes connected but not commissioned feeders

The low and high voltage lines associated with distribution voltages are shown in table 4-3 below.

Table 3-3 General Assets

General Assets *	
High Voltage Overhead (km)	15,010
High Voltage Underground (km)	1,077
Low Voltage Overhead (km) **	5,078**
Low Voltage Underground (km) **	1,101
Poles	221,906

* Data provided from Aurora Energy spatial database on 03/06/2010

** Excludes customer service lines

3.1 ZONE SUBSTATIONS AND SUB-TRANSMISSION FEEDERS

Within Aurora's distribution network there are 16 zone substations, nine in the greater Hobart area and another seven in various rural locations. Zone substations reduce the voltage from 44, 33 or 22 kV to either 22 or 11 kV. The rural zone substations are generally small, simple and incorporating transformers of less than 2.5 MVA.

3.2 HIGH VOLTAGE OR DISTRIBUTION FEEDERS

Aurora's high voltage (HV) network distributes electricity via 386 distribution feeders and 30,262 distribution substations.

Aurora takes supply from the transmission network, at the connection point on the load side of the distribution feeder circuit breakers. Consequently the transmission system has ownership of the circuit breaker and controls the majority of Aurora's feeders.

The distribution substations reduce the voltage to a nominal 230/400 volts to supply the majority of

distribution network connections. There are also a small number of HV network connections with their own private distribution substations that take electricity supply directly at 44, 22 and 11 kV.

Aurora Energy has 274 Connection Points with either Transend or Hydro Tasmania. The majority of Connection points are for 11 and 22 kV feeders. However, 23 Connection Points are for the sub-transmission system. The 274 Connection Points are unevenly distributed across the 43 connection substations. The substations that supply the Connection Points are owned either by Hydro Tasmania or Transend.

The HV distribution network comprises predominantly overhead lines in rural areas and underground cable reticulation within central business districts, various subdivisions and urban/suburban commercial centres. Rural feeders generally tend to be long, between 50 and 500 km. Rural feeders tend to be of a radial nature with limited ability to interconnect with adjacent feeders. The majority of the rural feeders are 22 kV and have a significant route length and as a consequence high exposure to external influences.

Due to these varying conditions, rural feeders tend to have longer interruptions, with less flexibility in restoration capability again impacting on the performance levels

The majority of urban feeders are 11 kV in Hobart and there are number of 22 kV feeders in Launceston, Devonport and Burnie. These tend to have high interconnections with other urban feeder circuits.

Network connection numbers and density in urban areas are high. Conversely network customer connections and density in rural areas is low.

3.3 DISTRIBUTION SUBSTATIONS AND LOW VOLTAGE FEEDERS

The vast majority of customers served by Aurora take supply at 230/400 volts. To enable adequate voltage and capacity to its customer base requires a moderate fleet of 30,262 distribution substations.

These substations are a mix of overhead and ground mounted units. Pole mounted substations range in size from 5 to 500 kVA. Ground mounted substations range in size from mainly 300 to 3,000 kVA.

4 FORECAST RESULTS

This forecast is based on a medium economic growth scenario with a 50 % and 10% POE.

4.1 DEMAND SIDE MANAGEMENT

Aurora is proposing a range of demand management programs in its submission to the Australian Energy Regulator (AER) for the next regulatory reset period.

As Aurora is yet to finalise its submission and subsequently gain approval from the AER, the impact of those programs has **not** been included in this forecast.

4.2 EMBEDDED GENERATION

As noted in the methodology, the demand forecast includes embedded generation operating in its normal mode at the time of peak demand.

Currently there are ten individual embedded generators (greater than 500 kW rating) connected to the distribution system with a total generation capacity of approximately 24 MW. Under normal operation, the total generation into the distribution system at time of summer and winter maximum demand is in the order of 10 MW.

In addition there are approximately 1,800 photo voltaic (PV) systems connected to the distribution network, with an average rating of 1.1 kW. Due to the nature of operation of these units (only generate during hours of daylight) and their dispersion around the distribution network, they do not have a material effect on the winter peak demand, and only limited effect on the summer peak demand.

4.3 SYSTEM WIDE FORECAST

Figures 4-1 and 4-2 present the 10-year distribution system wide forecast of maximum demand for the summer and winter periods.

Figure 4-1 Forecast of System Coincident Maximum Demand for Summer

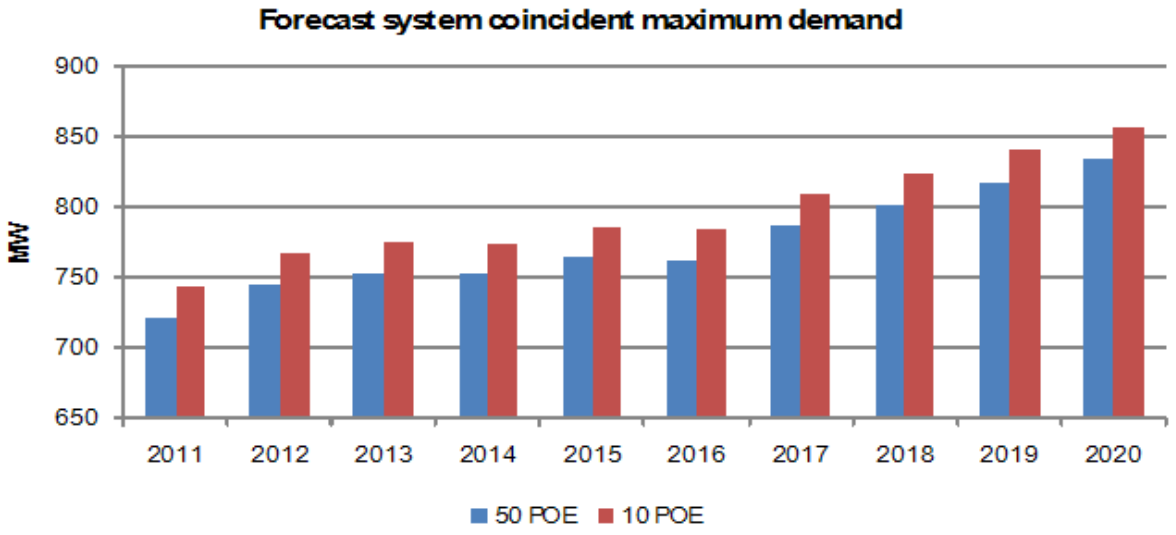
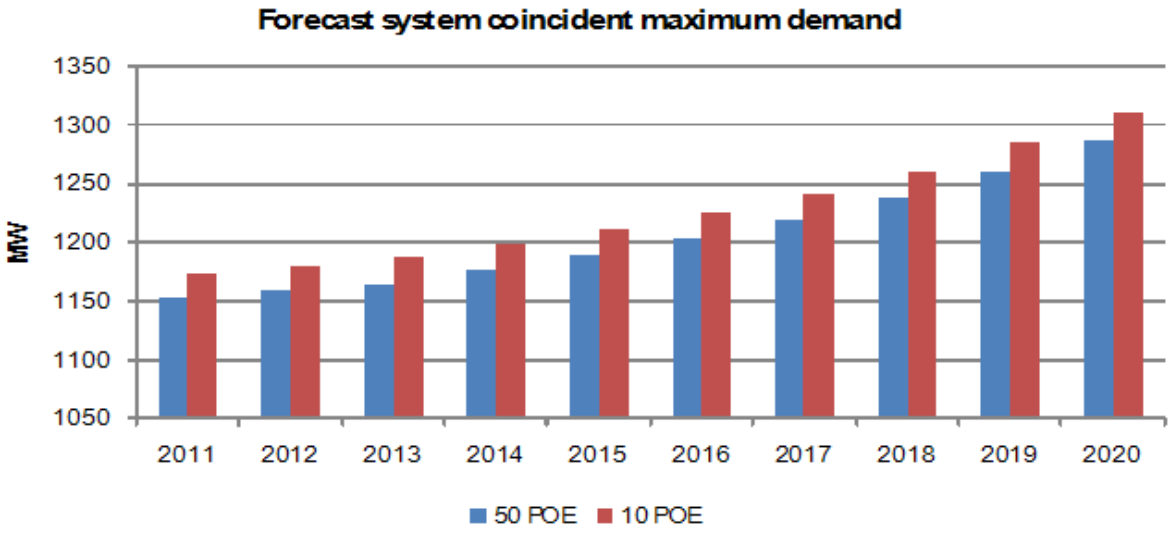


Figure 4-2 Forecast of System Coincident Maximum Demand for Winter



4.4 SUMMARY OF SUBSTATIONS FORECAST

Tables 4-1 to 4-20 present the five and ten year growth and demand forecast for summer and winter at 50% and 10% POE, in MW and MVA, for each of the transmission connection sites.

Table 4-1 5 & 10 Year Forecast of Summer Load Growth in MW at 50% POE & 10% POE

		50 POE	MW			10 POE	MW		
Terminal stations	Connection voltage (kV)	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth
Arthurs Lake	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Derwent Bridge	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gordon	22	-0.70%	-0.26%	-3.43%	-2.54%	0.06%	0.12%	0.31%	1.25%
Meadowbank	22	0.56%	0.97%	2.83%	10.10%	0.91%	1.14%	4.61%	12.02%
New Norfolk	22	0.32%	0.74%	1.62%	7.66%	0.67%	0.91%	3.38%	9.53%
Tungatinah	22	-1.12%	-0.69%	-5.47%	-6.66%	-0.20%	-0.22%	-0.97%	-2.14%
Waddamana	22	8.02%	7.14%	47.06%	99.39%	8.43%	7.34%	49.88%	103.14%
Wayatinah	11	-0.70%	-0.26%	-3.43%	-2.54%	-0.35%	-0.08%	-1.74%	-0.82%
Avoca	22	2.80%	3.00%	14.83%	34.33%	3.29%	3.23%	17.59%	37.44%
St Marys	22	1.16%	1.53%	5.96%	16.43%	1.51%	1.71%	7.80%	18.45%
Triabunna	22	2.64%	2.85%	13.90%	32.44%	3.17%	3.11%	16.89%	35.78%
Lindisfarne	33	-0.70%	-0.26%	-3.43%	-2.54%	0.14%	0.16%	0.68%	1.62%
Rokeby	11	4.55%	4.46%	24.93%	54.71%	5.38%	4.83%	29.97%	60.30%
Bridgewater	11	4.70%	4.28%	25.79%	51.99%	5.30%	4.56%	29.45%	56.13%
Chapel St	22	0.12%	0.55%	0.60%	5.59%	1.00%	0.98%	5.11%	10.22%
Creek Rd	33	0.68%	1.08%	3.46%	11.37%	1.46%	1.46%	7.53%	15.62%
North Hobart	11	0.86%	1.25%	4.39%	13.26%	1.50%	1.56%	7.73%	16.78%
Risdon	33	1.15%	1.52%	5.88%	16.26%	1.66%	1.77%	8.61%	19.18%
Devonport	22	2.04%	2.32%	10.62%	25.83%	2.44%	2.52%	12.82%	28.31%
Railton	22	-0.72%	-0.28%	-3.54%	-2.75%	-0.38%	-0.11%	-1.87%	-1.06%
Ulverstone	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.19%	0.00%	-0.93%	0.00%
Wesley Vale	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.35%	-0.08%	-1.76%	-0.84%
Derby	22	6.37%	4.90%	36.14%	61.37%	6.73%	5.08%	38.50%	64.18%
Scottsdale	22	0.71%	1.10%	3.58%	11.61%	1.05%	1.28%	5.37%	13.55%
Burnie	22	0.85%	1.24%	4.34%	13.15%	1.59%	1.60%	8.21%	17.21%
Emu Bay Retail	11	-0.54%	-0.10%	-2.69%	-1.04%	-0.20%	0.07%	-1.00%	0.68%
Port Latta	22	5.94%	5.56%	33.42%	71.85%	6.61%	5.87%	37.69%	76.82%
Smithton	22	1.14%	1.51%	5.81%	16.12%	1.48%	1.68%	7.65%	18.15%
Sorell	22	1.42%	1.76%	7.29%	19.10%	1.98%	2.04%	10.30%	22.34%
Electrona	11	1.68%	2.00%	8.67%	21.89%	2.07%	2.20%	10.80%	24.27%
Kermandie	11	0.81%	1.20%	4.13%	12.72%	1.34%	1.47%	6.90%	15.67%
Kingston	11	4.02%	2.61%	21.76%	29.37%	5.09%	3.12%	28.19%	35.99%
Knights Rd	11	2.52%	2.75%	13.24%	31.11%	3.01%	2.98%	15.97%	34.17%
George Town	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.19%	0.00%	-0.97%	-0.04%
Hadspen	22	2.73%	1.82%	14.41%	19.82%	3.21%	2.06%	17.09%	22.61%
Mowbray	22	0.92%	0.60%	4.68%	6.13%	1.34%	0.81%	6.89%	8.38%
Norwood	22	2.01%	2.30%	10.44%	25.47%	2.44%	2.51%	12.80%	28.11%
Palmerston	22	9.42%	8.16%	56.84%	119.13%	9.80%	8.35%	59.56%	122.95%
Trevallyn	22	0.25%	1.02%	1.27%	10.67%	0.60%	1.19%	3.02%	12.60%
Newton (Henty Gold)	11	1.35%	1.71%	6.95%	18.42%	1.80%	1.93%	9.35%	21.04%
Queenstown 22kV	22	-0.70%	-0.26%	-3.43%	-2.54%	0.09%	0.14%	0.43%	1.36%
Rosebery 44kV	44	0.65%	1.05%	3.27%	10.99%	1.10%	1.27%	5.63%	13.50%
Rosebery 22kV	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.08%	0.05%	-0.39%	0.55%
Savage River	22	-0.70%	-0.26%	-3.43%	-2.54%	0.00%	0.09%	-0.01%	0.92%

Table 4-2 5 & 10 Year Forecast of Summer Load Growth in MVA at 50% POE & 10% POE

		50 POE	MVA			10 POE	MVA		
Terminal stations	Connection voltage (kV)	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth
Arthurs Lake	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Derwent Bridge	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gordon	22	-0.70%	-0.26%	-3.43%	-2.54%	0.06%	0.12%	0.31%	1.25%
Meadowbank	22	0.56%	0.97%	2.83%	10.10%	0.91%	1.14%	4.61%	12.02%
New Norfolk	22	0.32%	0.74%	1.62%	7.66%	0.67%	0.91%	3.38%	9.53%
Tungatinah	22	-1.12%	-0.69%	-5.47%	-6.66%	-0.20%	-0.22%	-0.97%	-2.14%
Waddamana	22	8.02%	7.14%	47.06%	99.39%	8.43%	7.34%	49.88%	103.14%
Wayatinah	11	-0.70%	-0.26%	-3.43%	-2.54%	-0.35%	-0.08%	-1.74%	-0.82%
Avoca	22	2.80%	3.00%	14.83%	34.33%	3.29%	3.23%	17.59%	37.44%
St Marys	22	1.16%	1.53%	5.96%	16.43%	1.51%	1.71%	7.80%	18.45%
Triabunna	22	2.64%	2.85%	13.90%	32.44%	3.17%	3.11%	16.89%	35.78%
Lindisfarne	33	-0.70%	-0.26%	-3.43%	-2.54%	0.14%	0.16%	0.68%	1.62%
Rokeby	11	4.55%	4.46%	24.93%	54.71%	5.38%	4.83%	29.97%	60.30%
Bridgewater	11	4.70%	4.28%	25.79%	51.99%	5.30%	4.56%	29.45%	56.13%
Chapel St	22	0.12%	0.55%	0.60%	5.59%	1.00%	0.98%	5.11%	10.22%
Creek Rd	33	0.68%	1.08%	3.46%	11.37%	1.46%	1.46%	7.53%	15.62%
North Hobart	11	0.86%	1.25%	4.39%	13.26%	1.50%	1.56%	7.73%	16.78%
Risdon	33	1.15%	1.52%	5.88%	16.26%	1.66%	1.77%	8.61%	19.18%
Devonport	22	2.04%	2.32%	10.62%	25.83%	2.44%	2.52%	12.82%	28.31%
Railton	22	-0.72%	-0.28%	-3.54%	-2.75%	-0.38%	-0.11%	-1.87%	-1.06%
Ulverstone	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.19%	0.00%	-0.93%	0.00%
Wesley Vale	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.35%	-0.08%	-1.76%	-0.84%
Derby	22	6.37%	4.90%	36.14%	61.37%	6.73%	5.08%	38.50%	64.18%
Scottsdale	22	0.71%	1.10%	3.58%	11.61%	1.05%	1.28%	5.37%	13.55%
Burnie	22	0.85%	1.24%	4.34%	13.15%	1.59%	1.60%	8.21%	17.21%
Emu Bay Retail	11	-0.54%	-0.10%	-2.69%	-1.04%	-0.20%	0.07%	-1.00%	0.68%
Port Latta	22	5.94%	5.56%	33.42%	71.85%	6.61%	5.87%	37.69%	76.82%
Smithton	22	1.14%	1.51%	5.81%	16.12%	1.48%	1.68%	7.65%	18.15%
Sorell	22	1.42%	1.76%	7.29%	19.10%	1.98%	2.04%	10.30%	22.34%
Electrona	11	1.68%	2.00%	8.67%	21.89%	2.07%	2.20%	10.80%	24.27%
Kermandie	11	0.81%	1.20%	4.13%	12.72%	1.34%	1.47%	6.90%	15.67%
Kingston	11	4.02%	2.61%	21.76%	29.37%	5.09%	3.12%	28.19%	35.99%
Knights Rd	11	2.52%	2.75%	13.24%	31.11%	3.01%	2.98%	15.97%	34.17%
George Town	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.19%	0.00%	-0.97%	-0.04%
Hadspen	22	2.73%	1.82%	14.41%	19.82%	3.21%	2.06%	17.09%	22.61%
Mowbray	22	0.92%	0.60%	4.68%	6.13%	1.34%	0.81%	6.89%	8.38%
Norwood	22	2.01%	2.30%	10.44%	25.47%	2.44%	2.51%	12.80%	28.11%
Palmerston	22	9.42%	8.16%	56.84%	119.13%	9.80%	8.35%	59.56%	122.95%
Trevallyn	22	0.25%	1.02%	1.27%	10.67%	0.60%	1.19%	3.02%	12.60%
Newton (Henty Gold)	11	1.35%	1.71%	6.95%	18.42%	1.80%	1.93%	9.35%	21.04%
Queenstown 22kV	22	-0.70%	-0.26%	-3.43%	-2.54%	0.09%	0.14%	0.43%	1.36%
Rosebery 44kV	44	0.65%	1.05%	3.27%	10.99%	1.10%	1.27%	5.63%	13.50%
Rosebery 22kV	22	-0.70%	-0.26%	-3.43%	-2.54%	-0.08%	0.05%	-0.39%	0.55%
Savage River	22	-0.70%	-0.26%	-3.43%	-2.54%	0.00%	0.09%	-0.01%	0.92%

Table 4-3 5 & 10 Year Forecast of Winter Load Growth in MW at 50% POE & 10 % POE

		50 POE MW				10 POE MW			
Terminal stations	Connection voltage (kV)	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth
Arthurs Lake	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Derwent Bridge	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gordon	22	0.37%	0.46%	1.86%	4.65%	0.40%	0.48%	1.99%	4.87%
Meadowbank	22	3.67%	3.52%	19.72%	41.35%	3.90%	3.62%	21.07%	42.76%
New Norfolk	22	2.14%	2.16%	11.17%	23.77%	3.04%	2.57%	16.14%	28.94%
Tungatinah	22	3.16%	3.08%	16.83%	35.41%	3.29%	3.14%	17.55%	36.19%
Waddamana	22	4.06%	3.86%	21.99%	46.01%	4.16%	3.90%	22.61%	46.66%
Wayatinah	11	0.37%	0.46%	1.86%	4.65%	0.95%	0.75%	4.85%	7.81%
Avoca	22	2.90%	2.85%	15.38%	32.42%	2.88%	2.84%	15.25%	32.33%
St Marys	22	2.94%	2.88%	15.57%	32.82%	3.15%	2.98%	16.76%	34.08%
Triabunna	22	1.35%	1.41%	6.94%	15.08%	1.49%	1.49%	7.67%	15.90%
Lindisfarne	33	0.31%	0.39%	1.55%	4.02%	0.80%	0.65%	4.06%	6.68%
Rokeby	11	4.76%	4.45%	26.15%	54.56%	5.13%	4.61%	28.44%	56.92%
Bridgewater	11	3.34%	3.02%	17.84%	34.68%	3.46%	3.08%	18.56%	35.46%
Chapel St	22	1.26%	1.32%	6.45%	14.07%	1.65%	1.52%	8.51%	16.27%
Creek Rd	33	0.04%	0.12%	0.20%	1.23%	0.51%	0.37%	2.55%	3.74%
North Hobart	11	1.19%	1.26%	6.10%	13.35%	1.60%	1.47%	8.28%	15.67%
Risdon	33	0.39%	0.48%	1.99%	4.90%	0.74%	0.66%	3.75%	6.81%
Devonport	22	3.60%	3.47%	19.36%	40.61%	3.74%	3.53%	20.14%	41.43%
Railton	22	-0.32%	-0.25%	-1.61%	-2.48%	-0.24%	-0.20%	-1.21%	-1.97%
Ulverstone	22	0.49%	0.58%	2.49%	5.95%	0.60%	0.64%	3.02%	6.57%
Wesley Vale	22	3.93%	3.75%	21.27%	44.52%	3.83%	3.71%	20.65%	43.90%
Derby	22	7.32%	3.87%	42.34%	46.24%	8.14%	4.28%	47.92%	52.10%
Scottsdale	22	2.26%	2.27%	11.85%	25.17%	3.11%	2.66%	16.55%	30.06%
Burnie	22	0.98%	1.06%	4.99%	11.08%	1.17%	1.15%	5.97%	12.16%
Emu Bay Retail	11	0.05%	0.13%	0.25%	1.35%	1.12%	0.69%	5.74%	7.08%
Port Latta	22	1.50%	1.55%	7.71%	16.66%	1.39%	1.51%	7.16%	16.16%
Smithton	22	1.18%	1.25%	6.05%	13.27%	1.12%	1.23%	5.71%	12.98%
Sorell	22	2.81%	2.77%	14.88%	31.39%	3.11%	2.90%	16.55%	33.15%
Electrona	11	3.66%	3.51%	19.66%	41.23%	3.94%	3.64%	21.30%	42.93%
Kermandie	11	1.05%	1.12%	5.34%	11.81%	1.34%	1.27%	6.86%	13.44%
Kingston	11	2.76%	1.95%	14.60%	21.25%	3.14%	2.13%	16.71%	23.50%
Knights Rd	11	1.68%	1.72%	8.66%	18.63%	1.95%	1.86%	10.15%	20.22%
George Town	22	0.37%	0.46%	1.86%	4.65%	0.71%	0.63%	3.59%	6.52%
Hadspen	22	3.35%	2.57%	17.94%	28.93%	3.91%	2.84%	21.12%	32.26%
Mowbray	22	1.25%	1.97%	6.42%	21.53%	1.86%	2.25%	9.65%	24.89%
Norwood	22	1.63%	1.68%	8.41%	18.11%	2.00%	1.86%	10.39%	20.21%
Palmerston	22	0.37%	0.46%	1.86%	4.65%	0.38%	0.47%	1.90%	4.78%
Trevallyn	22	2.45%	2.08%	12.84%	22.83%	3.18%	2.43%	16.93%	27.10%
Newton (Henty Gold)	11	-0.18%	-0.11%	-0.91%	-1.05%	-0.13%	-0.07%	-0.66%	-0.70%
Queenstown 22kV	22	0.37%	0.46%	1.86%	4.65%	0.80%	0.68%	4.04%	6.98%
Rosebery 44kV	44	3.21%	3.12%	17.09%	35.95%	3.10%	3.07%	16.50%	35.37%
Rosebery 22kV	22	-1.11%	-1.08%	-5.42%	-10.31%	-0.84%	-0.93%	-4.14%	-8.88%
Savage River	22	0.37%	0.46%	1.86%	4.65%	0.53%	0.54%	2.68%	5.58%

Table 4-4 5 & 10 Year Forecast of Winter Load Growth in MVA at 50% POE & 10% POE

		50 POE	MVA			10 POE	MVA		
Terminal stations	Connection voltage (kV)	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth	5 year growth (p.a.)	10 year growth (p.a.)	5 year growth	10 year growth
Arthurs Lake	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Derwent Bridge	22	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Gordon	22	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%
Meadowbank	22	3.71%	3.56%	19.98%	41.92%	3.63%	3.54%	19.53%	41.64%
New Norfolk	22	2.18%	2.20%	11.40%	24.27%	2.37%	2.42%	12.44%	27.04%
Tungatinah	22	3.20%	3.12%	17.08%	35.96%	3.18%	3.14%	16.92%	36.28%
Waddamana	22	4.10%	3.90%	22.25%	46.60%	4.05%	3.90%	21.94%	46.62%
Wayatinah	11	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%
Avoca	22	2.95%	2.89%	15.62%	32.96%	2.92%	2.91%	15.45%	33.25%
St Marys	22	2.98%	2.92%	15.82%	33.35%	2.91%	2.90%	15.41%	33.15%
Triabunna	22	1.39%	1.46%	7.17%	15.55%	0.98%	1.12%	5.02%	11.76%
Lindisfarne	33	0.35%	0.44%	1.77%	4.44%	0.15%	0.29%	0.76%	2.98%
Rokeby	11	4.80%	4.49%	26.42%	55.19%	4.71%	4.46%	25.86%	54.70%
Bridgewater	11	3.38%	3.06%	18.09%	35.23%	3.27%	3.01%	17.43%	34.58%
Chapel St	22	1.30%	1.37%	6.67%	14.53%	1.05%	1.18%	5.36%	12.46%
Creek Rd	33	0.08%	0.16%	0.41%	1.64%	0.16%	0.30%	0.78%	3.02%
North Hobart	11	1.23%	1.30%	6.32%	13.81%	1.05%	1.18%	5.34%	12.43%
Risdon	33	0.44%	0.52%	2.20%	5.33%	0.65%	0.79%	3.30%	8.21%
Devonport	22	3.65%	3.51%	19.62%	41.18%	3.44%	3.38%	18.45%	39.42%
Railton	22	-0.28%	-0.21%	-1.40%	-2.08%	-0.30%	-0.16%	-1.48%	-1.63%
Ulverstone	22	0.54%	0.62%	2.71%	6.38%	0.44%	0.58%	2.21%	5.98%
Wesley Vale	22	3.98%	3.79%	21.52%	45.11%	3.72%	3.62%	20.04%	42.69%
Derby	22	7.36%	3.92%	42.64%	46.83%	6.89%	3.69%	39.52%	43.71%
Scottsdale	22	2.31%	2.31%	12.09%	25.68%	2.29%	2.34%	11.97%	26.08%
Burnie	22	1.02%	1.10%	5.21%	11.53%	0.92%	1.06%	4.71%	11.11%
Emu Bay Retail	11	0.09%	0.17%	0.47%	1.76%	-0.05%	0.09%	-0.25%	0.91%
Port Latta	22	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%
Smithton	22	1.23%	1.29%	6.28%	13.73%	1.10%	1.23%	5.60%	12.96%
Sorell	22	2.86%	2.81%	15.12%	31.92%	2.83%	2.84%	14.98%	32.28%
Electrona	11	3.70%	3.55%	19.92%	41.80%	3.60%	3.52%	19.36%	41.30%
Kermandie	11	1.09%	1.16%	5.57%	12.26%	0.92%	1.06%	4.68%	11.07%
Kingston	11	2.81%	1.99%	14.85%	21.74%	2.73%	1.99%	14.40%	21.76%
Knights Rd	11	1.72%	1.76%	8.90%	19.11%	1.72%	1.82%	8.91%	19.78%
George Town	22	-1.33%	-1.33%	-6.46%	-12.51%	-3.44%	-3.74%	-16.07%	-31.68%
Hadspen	22	3.40%	2.61%	18.19%	29.45%	3.30%	2.60%	17.60%	29.23%
Mowbray	22	1.30%	2.01%	6.65%	22.03%	1.86%	2.54%	9.63%	28.50%
Norwood	22	1.67%	1.72%	8.64%	18.59%	1.26%	1.38%	6.46%	14.73%
Palmerston	22	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%
Trevallyn	22	2.49%	2.12%	13.08%	23.33%	2.11%	1.83%	11.01%	19.92%
Newton (Henty Gold)	11	-0.14%	-0.07%	-0.70%	-0.65%	-0.20%	-0.06%	-0.98%	-0.60%
Queenstown 22kV	22	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%
Rosebery 44kV	44	3.25%	3.16%	17.34%	36.50%	3.31%	3.26%	17.66%	37.80%
Rosebery 22kV	22	-1.07%	-1.04%	-5.22%	-9.95%	-1.19%	-1.11%	-5.80%	-10.54%
Savage River	22	0.41%	0.50%	2.08%	5.08%	0.31%	0.45%	1.54%	4.59%

Table 4-5 System Non Coincident Demand for Summer in MW at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gordon	22	0.31	0.36	0.34	0.25	0.30	0.39	0.38	0.38	0.38	0.38	0.38	0.37
Meadowbank	22	5.65	4.26	5.76	4.87	5.94	5.30	5.27	5.39	5.42	5.39	5.45	5.41
New Norfolk	22	7.15	7.66	7.98	7.59	7.78	7.73	7.65	7.81	7.84	7.78	7.85	7.77
Tungatinah	22	0.72	0.66	0.98	0.74	0.84	0.64	0.63	0.63	0.62	0.61	0.61	0.59
Waddamana	22	0.37	0.50	0.44	0.40	0.78	0.79	0.86	0.95	1.02	1.09	1.16	1.22
Wayatinah	11	0.70	1.49	0.76	0.06	0.02	0.40	0.39	0.39	0.39	0.38	0.38	0.38
Avoca	22	5.76	6.57	6.85	6.40	7.78	6.98	7.10	7.43	7.64	7.76	8.01	8.10
St Marys	22	11.52	9.90	9.48	9.98	10.94	10.16	10.16	10.46	10.58	10.59	10.77	10.74
Triabunna	22	6.25	8.08	11.76	11.26	11.45	5.77	5.86	6.13	6.29	6.38	6.57	6.64
Lindisfarne	33			37.33	37.90	38.06	37.94	37.20	37.59	37.32	36.67	36.64	35.92
Rokeby	11	19.83	19.92	25.15	24.93	24.86	21.92	22.76	24.27	25.36	26.17	27.38	28.06
Bridgewater	11	17.17	17.56	16.71	22.64	21.15	21.41	23.04	24.37	25.28	25.90	26.94	27.45
Chapel St	22	25.63	28.90	23.25	24.49	23.66	24.20	23.93	24.38	24.40	24.17	24.34	24.06
Creek Rd	33	51.42	55.19	60.66	61.73	62.81	64.25	63.90	65.48	65.91	65.66	66.47	66.03
North Hobart	11	36.43	37.31	37.97	35.11	36.16	33.49	33.37	34.26	34.55	34.47	34.96	34.79
Risdon	33	29.56	25.86	43.94	45.48	51.14	47.73	47.70	49.11	49.67	49.70	50.53	50.41
Devonport	22	35.98	35.03	43.34	41.05	43.61	39.29	39.65	41.20	42.03	42.40	43.46	43.69
Railton	22	44.09	44.11	49.52	43.27	44.55	45.01	44.12	44.57	44.24	43.47	43.41	42.55
Ulverstone	22	25.90	25.59	28.45	26.87	26.18	25.58	25.09	25.35	25.17	24.73	24.70	24.22
Wesley Vale	22				2.02	1.94	1.74	1.71	1.72	1.71	1.68	1.68	1.65
Derby	22	6.63	4.84	5.27	5.70	5.80	6.10	7.26	7.63	7.87	8.02	8.30	8.43
Scottsdale	22	12.91		16.39	13.33	11.10	13.10	13.04	13.36	13.45	13.40	13.57	13.48
Burnie	22	39.92	41.10	45.82	43.91	45.30	42.58	42.43	43.55	43.91	43.82	44.43	44.21
Emu Bay Retail	11	17.47	17.83	19.13	18.48	18.23	17.55	17.24	17.45	17.35	17.07	17.08	16.77
Port Latta	22		6.57	8.79	8.97	11.72	10.55	11.14	12.05	12.76	13.32	14.08	14.57
Smithton	22	21.33	21.17	22.76	22.41	23.50	23.10	23.08	23.76	24.03	24.04	24.44	24.38
Sorell	22	18.80	19.50	21.93	21.40	20.93	21.37	21.43	22.12	22.43	22.50	22.93	22.93
Electrona	11	8.27	8.00	9.24	9.30	9.41	10.20	10.25	10.61	10.79	10.85	11.09	11.11
Kermandie	11	4.80	4.82	4.96	5.04	5.29	5.06	5.04	5.17	5.21	5.19	5.26	5.24
Kingston	11	29.94	21.81	21.48	24.53	26.44	27.93	29.19	31.82	33.92	33.69	34.01	33.69
Knights Rd	11	9.92	10.99	10.68	11.33	12.04	12.08	12.25	12.79	13.11	13.29	13.68	13.80
George Town	22	28.44	23.13	16.27	22.38	22.03	19.74	19.36	19.56	19.42	19.08	19.06	18.69
Hadspen	22			26.69	29.36	28.58	27.38	30.90	31.44	31.45	31.13	31.32	30.93
Mowbray	22			26.73	26.49	30.97	25.32	25.84	27.12	26.95	26.51	26.51	26.01
Norwood	22	39.07	42.00	32.72	34.90	38.69	38.83	39.18	40.69	41.50	41.86	42.89	43.10
Palmerston	22			10.92	12.33	9.97	13.20	14.56	16.35	17.85	19.14	20.71	21.86
Trevallyn	22	83.87	84.63	51.70	51.95	59.18	52.32	51.22	51.66	52.19	52.16	52.98	52.80
Newton (Henty Gold)	11	3.52	4.42	3.66	4.35	3.38	3.45	3.46	3.57	3.62	3.62	3.69	3.69
Queenstown 22kV	22				5.99	5.42	4.65	4.56	4.61	4.58	4.50	4.50	4.41
Rosebery 44kV	44	11.12	3.98	3.50	5.18	15.59	11.98	11.91	12.20	12.27	12.22	12.37	12.28
Rosebery 22kV	22	2.09	2.18	2.36	2.08	2.15	1.66	1.63	1.64	1.63	1.60	1.60	1.57
Savage River	22			1.93	0.81	2.03	1.01	0.99	1.00	1.00	0.98	0.98	0.96

Table 4-6 System Non Coincident Demand for Summer in MVA at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gordon	22	0.32	0.37	0.35	0.26	0.30	0.40	0.39	0.39	0.39	0.38	0.38	0.38
Meadowbank	22	6.16	4.67	6.37	5.32	6.25	5.70	5.66	5.79	5.83	5.80	5.86	5.82
New Norfolk	22	7.30	7.81	8.14	7.74	7.94	7.88	7.81	7.97	8.00	7.94	8.01	7.93
Tungatinah	22	0.72	0.67	20.52	0.77	0.86	0.64	0.63	0.63	0.62	0.61	0.61	0.59
Waddamana	22	0.37	0.50	0.44	0.40	0.78	0.79	0.86	0.95	1.02	1.09	1.16	1.22
Wayatinah	11	0.78	1.52	0.76	0.06	0.02	0.43	0.42	0.42	0.42	0.41	0.41	0.40
Avoca	22	5.91	7.26	7.57	6.97	8.60	7.38	7.51	7.87	8.09	8.22	8.48	8.58
St Marys	22	12.03	10.75	9.84	10.26	11.13	10.28	10.27	10.58	10.70	10.71	10.89	10.87
Triabunna	22	6.74	8.53	11.77	15.88	11.59	5.80	5.89	6.16	6.32	6.41	6.60	6.67
Lindisfarne	33			37.69	38.05	38.19	37.95	37.21	37.60	37.33	36.69	36.65	35.93
Rokeby	11	20.05	20.18	25.39	25.17	25.03	22.03	22.87	24.39	25.49	26.30	27.52	28.21
Bridgewater	11	17.76	18.24	16.85	23.12	21.54	21.82	23.48	24.83	25.76	26.39	27.45	27.97
Chapel St	22	26.41	29.88	24.04	25.06	24.13	24.63	24.35	24.81	24.84	24.60	24.78	24.48
Creek Rd	33	55.84	59.88	65.58	65.06	66.26	65.81	65.46	67.07	67.52	67.25	68.09	67.64
North Hobart	11	37.97	39.59	40.01	36.38	37.80	34.77	34.65	35.56	35.86	35.79	36.29	36.11
Risdon	33			47.94	48.83	55.80	51.05	51.03	52.53	53.13	53.16	54.05	53.92
Devonport	22	49.44	48.74	43.81	41.33	43.83	39.51	39.87	41.42	42.26	42.64	43.70	43.93
Railton	22	48.18	47.84	53.34	47.53	49.07	45.57	44.67	45.13	44.80	44.01	43.95	43.08
Ulverstone	22	28.43	27.40	29.92	28.14	26.99	26.48	25.96	26.23	26.05	25.60	25.57	25.07
Wesley Vale	22				2.18	2.23	1.85	1.81	1.83	1.82	1.79	1.79	1.75
Derby	22	7.02	5.46	5.39	6.04	6.17	6.39	7.60	7.99	8.24	8.40	8.70	8.82
Scottsdale	22			17.81	14.48	11.91	14.18	14.11	14.46	14.56	14.51	14.69	14.60
Burnie	22	41.45	43.29	47.43	45.39	46.47	43.61	43.45	44.60	44.97	44.87	45.50	45.27
Emu Bay Retail	11	17.83	18.19	19.52	18.86	18.60	17.91	17.59	17.80	17.70	17.42	17.43	17.11
Port Latta	22		7.13	9.47	9.70	15.29	11.47	12.11	13.10	13.87	14.47	15.30	15.83
Smithton	22	22.21	22.93	24.68	24.71	25.87	24.62	24.60	25.33	25.61	25.62	26.05	25.98
Sorell	22	19.15	19.92	22.16	21.62	21.12	21.49	21.54	22.24	22.55	22.62	23.05	23.05
Electrona	11	8.60	8.29	9.47	9.53	9.62	10.21	10.27	10.63	10.80	10.86	11.10	11.12
Kermandie	11	5.27	4.91	5.33	5.26	5.56	5.30	5.28	5.42	5.46	5.45	5.52	5.49
Kingston	11	30.84	22.83	21.70	24.80	26.76	28.18	29.45	32.10	34.22	33.99	34.31	33.99
Knights Rd	11	11.07	12.11	11.41	11.89	12.08	12.79	12.97	13.55	13.88	14.07	14.48	14.62
George Town	22	29.13	23.78	16.48	23.42	22.43	20.26	19.87	20.08	19.93	19.59	19.57	19.18
Hadspen	22			27.37	29.67	28.58	27.68	31.24	31.79	31.79	31.47	31.67	31.28
Mowbray	22			33.95	33.95	40.84	31.57	32.21	33.81	33.60	33.05	33.04	32.43
Norwood	22	41.27	44.05	33.89	35.79	39.52	38.83	39.18	40.69	41.50	41.86	42.89	43.10
Palmerston	22			11.94	13.43	11.00	14.66	16.17	18.15	19.82	21.25	22.99	24.27
Trevallyn	22	87.83	88.93	55.83	54.54	68.67	59.69	58.43	58.93	59.53	59.51	60.44	60.24
Newton (Henty Gold)	11	3.59	4.51	3.74	4.44	3.45	3.52	3.53	3.64	3.69	3.70	3.77	3.77
Queenstown 22kV	22				6.07	5.53	4.72	4.63	4.68	4.65	4.57	4.56	4.47
Rosebery 44kV	44	11.35	4.06	3.57	5.29	15.91	12.22	12.15	12.44	12.52	12.47	12.62	12.53
Rosebery 22kV	22	2.13	2.23	2.41	2.12	2.19	1.69	1.66	1.68	1.67	1.64	1.64	1.60
Savage River	22			4.01	0.81	2.63	1.01	0.99	1.00	1.00	0.98	0.98	0.96

Table 4-7 System Non Coincident Demand for Winter in MW at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.40	0.47	0.41	0.35	0.46	0.31	0.32	0.32	0.31	0.31	0.31	0.31
Meadowbank	22	4.30	3.25	4.27	6.07	5.44	3.47	3.72	3.82	3.92	4.04	4.16	4.29
New Norfolk	22	8.67	9.65	9.68	10.01	9.50	9.97	10.50	10.63	10.74	10.91	11.09	11.29
Tungatinah	22	0.88	1.01	1.17	1.15	1.09	1.06	1.12	1.15	1.17	1.20	1.23	1.27
Waddamana	22	0.50	0.69	0.66	0.57	0.69	0.72	0.77	0.79	0.82	0.84	0.87	0.90
Wayatinah	11	1.58	1.03	0.89	0.63	0.39	0.45	0.47	0.46	0.46	0.46	0.46	0.46
Avoca	22	6.26	6.27	6.82	8.05	8.03	6.09	6.46	6.59	6.71	6.87	7.03	7.20
St Marys	22	12.34	15.66	16.06	14.32	15.87	15.48	16.43	16.77	17.07	17.48	17.89	18.34
Triabunna	22	7.25	9.18	8.81	7.40	7.86	8.94	9.34	9.38	9.40	9.48	9.56	9.67
Lindisfarne	33		57.06	59.24	59.80	61.53	61.72	63.78	63.39	62.87	62.79	62.68	62.74
Rokeby	11	35.87	41.07	40.87	45.78	41.34	42.52	46.06	47.90	49.60	51.64	53.64	55.80
Bridgewater	11	30.84	31.39	31.13	34.88	31.37	36.67	39.92	40.68	41.35	42.29	43.21	44.26
Chapel St	22	53.37	57.62	44.46	47.49	47.03	45.99	47.98	48.15	48.20	48.59	48.96	49.46
Creek Rd	33	102.09	100.47	101.43	102.46	102.52	105.20	108.42	107.48	106.31	105.88	105.41	105.23
North Hobart	11	64.56	67.05	57.98	58.06	56.25	60.26	62.82	62.99	63.03	63.49	63.93	64.54
Risdon	33	44.97	45.92	70.93	70.89	74.98	67.66	69.97	69.61	69.10	69.07	69.00	69.13
Devonport	22	58.70	62.99	64.66	78.95	72.21	66.25	70.85	72.81	74.58	76.85	79.08	81.53
Railton	22	49.22	52.55	49.31	50.96	47.68	49.46	50.79	50.17	49.44	49.07	48.67	48.40
Ulverstone	22	37.24	36.62	38.79	39.57	36.39	37.55	38.87	38.71	38.46	38.48	38.48	38.59
Wesley Vale	22				2.87	1.76	1.83	1.97	2.03	2.08	2.15	2.22	2.30
Derby	22	3.04	6.54	6.08	4.83	2.60	2.52	3.64	3.62	3.59	3.59	3.58	3.59
Scottsdale	22			16.63	15.34	13.55	13.82	14.57	14.77	14.94	15.20	15.46	15.76
Burnie	22	60.97	62.80	62.66	69.18	61.41	63.22	65.76	65.81	65.71	66.06	66.37	66.88
Emu Bay Retail	11	22.54	23.03	23.30	23.62	21.67	22.79	23.49	23.29	23.04	22.95	22.85	22.81
Port Latta	22		4.94	4.77	4.77	5.94	4.62	4.83	4.86	4.88	4.93	4.98	5.04
Smithton	22	21.48	21.07	22.22	22.72	23.16	21.36	22.27	22.33	22.34	22.50	22.65	22.87
Sorell	22	27.58	33.04	30.08	31.66	32.52	33.58	35.61	36.30	36.90	37.75	38.58	39.52
Electrona	11	12.72	13.52	14.42	12.79	14.48	19.15	20.49	21.07	21.60	22.26	22.92	23.64
Kermandie	11	6.23	7.98	6.81	7.11	7.21	6.96	7.25	7.26	7.25	7.29	7.33	7.39
Kingston	11	38.80	38.08	40.67	42.48	39.42	37.15	40.18	40.19	42.15	42.37	42.57	42.89
Knights Rd	11	16.20	16.49	16.72	16.49	17.35	17.35	18.18	18.32	18.42	18.64	18.86	19.12
George Town	22	31.07	26.51	28.33	29.01	27.07	28.07	29.03	28.87	28.65	28.63	28.60	28.64
Hadspen	22		29.84	41.04	43.61	45.43	47.79	54.28	54.72	55.02	55.71	56.36	57.18
Mowbray	22		45.21	49.61	45.74	51.58	55.72	55.85	55.85	56.75	58.04	59.29	60.71
Norwood	22	75.41	76.42	67.67	68.79	71.14	67.64	70.84	71.35	71.69	72.53	73.33	74.34
Palmerston	22			11.16	8.89	7.43	6.09	6.29	6.26	6.21	6.21	6.20	6.21
Trevallyn	22	151.60	95.91	97.21	97.59	104.03	95.46	103.10	104.87	105.35	106.56	107.72	109.18
Newton (Henty Gold)	11	3.82	3.75	3.83	3.84	3.31	3.93	4.05	4.00	3.95	3.92	3.90	3.88
Queenstown 22kV	22	7.13	7.39	7.46	7.40	7.04	6.55	6.77	6.73	6.68	6.68	6.67	6.68
Rosebery 44kV	44	11.12	5.31	6.68	21.68	10.07	13.48	14.36	14.70	15.00	15.40	15.79	16.23
Rosebery 22kV	22	3.04	2.89	3.04	3.41	2.86	2.71	2.76	2.71	2.65	2.61	2.56	2.53
Savage River	22		1.17	1.31	1.43	2.43	1.35	1.39	1.38	1.37	1.37	1.37	1.37

Table 4-8 System Non Coincident Demand for Winter in MVA at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.41	0.48	0.42	0.36	0.47	0.31	0.32	0.32	0.32	0.32	0.32	0.32
Meadowbank	22	4.33	4.05	4.28	7.37	7.05	3.52	3.77	3.87	3.97	4.09	4.22	4.35
New Norfolk	22	8.85	9.85	9.88	10.22	9.69	10.18	10.71	10.85	10.96	11.14	11.31	11.52
Tungatinah	22	0.90	1.03	1.18	1.16	10.18	1.09	1.16	1.19	1.21	1.24	1.27	1.31
Waddamana	22	0.50	0.69	0.66	0.57	0.69	0.72	0.77	0.79	0.82	0.85	0.87	0.90
Wayatinah	11	1.58	1.45	0.89	0.63	0.39	0.50	0.51	0.51	0.51	0.51	0.51	0.51
Avoca	22	6.48	6.53	7.08	8.37	8.44	6.14	6.52	6.65	6.77	6.93	7.09	7.26
St Marys	22	12.89	16.40	16.67	16.61	16.08	15.50	16.46	16.80	17.10	17.51	17.92	18.37
Triabunna	22	7.51	9.20	8.89	7.43	7.90	8.99	9.38	9.43	9.45	9.53	9.61	9.72
Lindisfarne	33		57.31	61.71	62.05	61.58	61.75	63.81	63.43	62.91	62.83	62.72	62.78
Rokeby	11	36.39	41.70	41.43	46.36	41.78	42.87	46.44	48.29	50.01	52.06	54.08	56.25
Bridgewater	11	31.59	32.14	31.75	35.25	31.69	36.85	40.11	40.88	41.54	42.49	43.42	44.46
Chapel St	22	54.66	59.23	45.56	47.71	47.09	46.68	48.70	48.87	48.93	49.32	49.69	50.20
Creek Rd	33	109.97	107.61	110.12	109.55	109.50	108.00	111.30	110.33	109.13	108.70	108.21	108.02
North Hobart	11	66.35	68.86	59.70	59.83	57.75	61.59	64.21	64.39	64.42	64.90	65.34	65.97
Risdon	33	47.55	49.18	75.33	75.16	79.33	71.97	74.43	74.05	73.51	73.47	73.40	73.54
Devonport	22	60.57	64.84	64.91	79.15	73.33	67.63	72.33	74.33	76.14	78.46	80.73	83.23
Railton	22	51.53	54.98	51.73	53.52	49.84	49.55	50.88	50.26	49.54	49.16	48.76	48.49
Ulverstone	22	38.41	37.70	39.84	40.40	36.92	37.82	39.16	38.99	38.74	38.76	38.77	38.88
Wesley Vale	22				2.92	1.85	1.98	2.12	2.19	2.25	2.33	2.40	2.48
Derby	22	3.04	7.38	6.78	5.98	2.62	2.55	3.69	3.67	3.64	3.64	3.63	3.64
Scottsdale	22			17.25	15.84	13.86	14.01	14.77	14.97	15.14	15.41	15.67	15.97
Burnie	22	62.18	64.07	63.64	70.18	62.13	63.86	66.43	66.48	66.37	66.73	67.05	67.55
Emu Bay Retail	11	23.00	23.50	23.78	24.10	22.11	23.26	23.97	23.77	23.51	23.42	23.32	23.28
Port Latta	22		4.99	4.81	4.78	5.98	4.65	4.86	4.89	4.91	4.96	5.00	5.07
Smithton	22	22.41	21.87	23.24	24.00	24.07	22.22	23.17	23.23	23.24	23.41	23.57	23.79
Sorell	22	27.98	33.82	30.47	31.93	32.82	33.76	35.79	36.49	37.09	37.94	38.78	39.72
Electrona	11	13.01	13.83	14.75	13.06	14.72	19.43	20.80	21.38	21.91	22.59	23.26	23.99
Kermandie	11	6.48	8.12	7.04	7.34	7.48	7.11	7.41	7.42	7.41	7.45	7.49	7.56
Kingston	11	39.62	38.65	41.43	43.08	39.82	37.97	41.07	41.08	43.08	43.31	43.51	43.84
Knights Rd	11	17.10	17.36	17.34	17.05	17.46	17.87	18.73	18.87	18.97	19.20	19.42	19.70
George Town	22	31.92	27.52	28.58	29.32	27.34	28.38	29.35	29.19	28.97	28.95	28.91	28.96
Hadspen	22		30.10	41.22	43.82	45.43	47.97	54.48	54.92	55.23	55.91	56.57	57.39
Mowbray	22		49.13	53.62	48.37	55.87	59.96	60.10	60.11	61.08	62.46	63.81	65.34
Norwood	22	77.68	78.60	69.02	70.03	72.38	68.11	71.33	71.84	72.19	73.03	73.84	74.85
Palmerston	22			11.70	9.79	7.68	6.12	6.33	6.29	6.25	6.24	6.23	6.24
Trevallyn	22	156.11	100.00	100.48	100.60	107.18	99.88	107.88	109.72	110.23	111.50	112.71	114.23
Newton (Henty Gold)	11	3.90	3.83	3.91	3.92	3.38	4.01	4.13	4.08	4.03	4.00	3.98	3.96
Queenstown 22kV	22	7.22	7.47	7.52	7.50	7.14	6.60	6.82	6.79	6.74	6.73	6.72	6.73
Rosebery 44kV	44	11.34	5.42	6.82	22.12	10.27	13.76	14.65	15.00	15.30	15.71	16.11	16.56
Rosebery 22kV	22	3.10	2.95	3.10	3.48	2.92	2.77	2.82	2.76	2.70	2.66	2.62	2.58
Savage River	22		1.17	1.31	1.43	2.81	1.35	1.39	1.38	1.37	1.37	1.37	1.37

Table 4-9 System Non Coincident Demand for Summer in MW at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.3	0.3	0.3	0.3	0.3	0.3
Gordon	22	0.3	0.4	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Meadowbank	22	5.7	4.3	5.8	4.9	5.9	5.3	5.4	5.5	5.5	5.5	5.5	5.5
New Norfolk	22	7.2	7.7	8.0	7.6	7.8	7.7	7.8	8.0	8.0	7.9	8.0	7.9
Tungatinah	22	0.7	0.7	1.0	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.6	0.6
Waddamana	22	0.4	0.5	0.4	0.4	0.8	0.8	0.9	1.0	1.0	1.1	1.2	1.2
Wayatinah	11	0.7	1.5	0.8	0.1	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Avoca	22	5.8	6.6	6.8	6.4	7.8	7.0	7.3	7.6	7.8	7.9	8.2	8.3
St Marys	22	11.5	9.9	9.5	10.0	10.9	10.2	10.3	10.6	10.8	10.8	11.0	10.9
Triabunna	22	6.2	8.1	11.8	11.3	11.5	5.8	6.0	6.3	6.5	6.5	6.7	6.8
Lindisfarne	33			37.3	37.9	38.1	37.9	38.8	39.2	39.0	38.2	38.2	37.5
Rokeby	11	19.8	19.9	25.1	24.9	24.9	21.9	23.8	25.3	26.5	27.2	28.5	29.2
Bridgewater	11	17.2	17.6	16.7	22.6	21.1	21.4	23.8	25.1	26.1	26.7	27.7	28.3
Chapel St	22	25.6	28.9	23.2	24.5	23.7	24.2	25.0	25.5	25.5	25.3	25.4	25.2
Creek Rd	33	51.4	55.2	60.7	61.7	62.8	64.2	66.5	68.2	68.6	68.2	69.1	68.7
North Hobart	11	36.4	37.3	38.0	35.1	36.2	33.5	34.5	35.4	35.7	35.6	36.1	35.9
Risdon	33	29.6	25.9	43.9	45.5	51.1	47.7	49.0	50.4	51.0	51.0	51.8	51.8
Devonport	22	36.0	35.0	43.3	41.1	43.6	39.3	40.5	42.0	42.9	43.2	44.3	44.6
Railton	22	44.1	44.1	49.5	43.3	44.6	45.0	44.9	45.4	45.1	44.2	44.2	43.3
Ulverstone	22	25.9	25.6	28.4	26.9	26.2	25.6	25.7	26.0	25.8	25.4	25.3	24.9
Wesley Vale	22				2.0	1.9	1.7	1.7	1.8	1.7	1.7	1.7	1.7
Derby	22	6.6	4.8	5.3	5.7	5.8	6.1	7.4	7.8	8.0	8.2	8.4	8.6
Scottsdale	22	12.9		16.4	13.3	11.1	13.1	13.3	13.6	13.7	13.6	13.8	13.7
Burnie	22	39.9	41.1	45.8	43.9	45.3	42.6	44.1	45.2	45.6	45.4	46.1	45.9
Emu Bay Retail	11	17.5	17.8	19.1	18.5	18.2	17.6	17.5	17.8	17.7	17.4	17.4	17.1
Port Latta	22		6.6	8.8	9.0	11.7	10.6	11.5	12.5	13.2	13.8	14.5	15.0
Smithton	22	21.3	21.2	22.8	22.4	23.5	23.1	23.5	24.2	24.5	24.4	24.9	24.8
Sorell	22	18.8	19.5	21.9	21.4	20.9	21.4	22.0	22.8	23.1	23.1	23.6	23.6
Electrona	11	8.3	8.0	9.2	9.3	9.4	10.2	10.5	10.8	11.0	11.1	11.3	11.3
Kermandie	11	4.8	4.8	5.0	5.0	5.3	5.1	5.2	5.3	5.4	5.3	5.4	5.4
Kingston	11	29.9	21.8	21.5	24.5	26.4	27.9	30.9	33.6	35.8	35.5	35.8	35.5
Knights Rd	11	9.9	11.0	10.7	11.3	12.0	12.1	12.6	13.1	13.4	13.6	14.0	14.2
George Town	22	28.4	23.1	16.3	22.4	22.0	19.7	19.9	20.1	19.9	19.6	19.5	19.2
Hadspen	22			26.7	29.4	28.6	27.4	31.6	32.2	32.2	31.9	32.1	31.7
Mowbray	22			26.7	26.5	31.0	25.3	26.4	27.7	27.5	27.1	27.1	26.6
Norwood	22	39.1	42.0	32.7	34.9	38.7	38.8	40.0	41.6	42.4	42.7	43.8	44.1
Palmerston	22			10.9	12.3	10.0	13.2	14.8	16.6	18.2	19.5	21.1	22.3
Trevallyn	22	83.9	84.6	51.7	51.9	59.2	52.3	52.1	52.6	53.1	53.1	53.9	53.8
Newton (Henty Gold)	11	3.5	4.4	3.7	4.3	3.4	3.5	3.5	3.7	3.7	3.7	3.8	3.8
Queenstown 22kV	22				6.0	5.4	4.7	4.7	4.8	4.8	4.7	4.7	4.6
Rosebery 44kV	44	11.1	4.0	3.5	5.2	15.6	12.0	12.2	12.5	12.6	12.5	12.7	12.6
Rosebery 22kV	22	2.1	2.2	2.4	2.1	2.1	1.7	1.7	1.7	1.7	1.7	1.7	1.6
Savage River	22			1.9	0.8	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Table 4-10 System Non Coincident Demand for Summer in MVA at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.3	0.3	0.3	0.3	0.3	0.3
Gordon	22	0.32	0.37	0.35	0.26	0.30	0.40	0.40	0.41	0.41	0.40	0.40	0.39
Meadowbank	22	6.16	4.67	6.37	5.32	6.25	5.70	5.76	5.90	5.93	5.90	5.96	5.93
New Norfolk	22	7.30	7.81	8.14	7.74	7.94	7.88	7.95	8.12	8.15	8.07	8.15	8.08
Tungatinah	22	0.72	0.67	20.52	0.77	0.86	0.64	0.66	0.66	0.65	0.64	0.64	0.62
Waddamana	22	0.37	0.50	0.44	0.40	0.78	0.79	0.87	0.97	1.04	1.11	1.19	1.24
Wayatinah	11	0.78	1.52	0.76	0.06	0.02	0.43	0.42	0.43	0.43	0.42	0.42	0.41
Avoca	22	5.91	7.26	7.57	6.97	8.60	7.38	7.70	8.07	8.29	8.41	8.68	8.79
St Marys	22	12.03	10.75	9.84	10.26	11.13	10.28	10.45	10.77	10.90	10.89	11.08	11.07
Triabunna	22	6.74	8.53	11.77	15.88	11.59	5.80	6.05	6.33	6.49	6.58	6.78	6.85
Lindisfarne	33			37.69	38.05	38.19	37.95	38.80	39.22	38.96	38.24	38.21	37.50
Rokeby	11	20.05	20.18	25.39	25.17	25.03	22.03	23.91	25.48	26.61	27.39	28.63	29.35
Bridgewater	11	17.76	18.24	16.85	23.12	21.54	21.82	24.22	25.61	26.56	27.17	28.25	28.81
Chapel St	22	26.41	29.88	24.04	25.06	24.13	24.63	25.47	25.95	25.99	25.71	25.89	25.61
Creek Rd	33	55.84	59.88	65.58	65.06	66.26	65.81	68.12	69.81	70.29	69.91	70.77	70.37
North Hobart	11	37.97	39.59	40.01	36.38	37.80	34.77	35.79	36.75	37.07	36.93	37.45	37.31
Risdon	33			47.94	48.83	55.80	51.05	52.37	53.94	54.57	54.52	55.44	55.37
Devonport	22	49.44	48.74	43.81	41.33	43.83	39.51	40.68	42.28	43.15	43.48	44.57	44.86
Railton	22	48.18	47.84	53.34	47.53	49.07	45.57	45.45	45.94	45.62	44.76	44.72	43.88
Ulverstone	22	28.43	27.40	29.92	28.14	26.99	26.48	26.64	26.93	26.75	26.25	26.23	25.75
Wesley Vale	22				2.18	2.23	1.85	1.84	1.87	1.85	1.82	1.82	1.78
Derby	22	7.02	5.46	5.39	6.04	6.17	6.39	7.73	8.13	8.39	8.55	8.85	8.99
Scottsdale	22	14.34		17.81	14.48	11.91	14.18	14.36	14.72	14.83	14.76	14.95	14.87
Burnie	22	41.45	43.29	47.43	45.39	46.47	43.61	45.12	46.32	46.71	46.54	47.19	47.00
Emu Bay Retail	11	17.83	18.19	19.52	18.86	18.60	17.91	17.90	18.12	18.03	17.72	17.73	17.43
Port Latta	22		7.13	9.47	9.70	15.29	11.47	12.54	13.56	14.35	14.94	15.79	16.35
Smithton	22	22.21	22.93	24.68	24.71	25.87	24.62	25.03	25.78	26.08	26.06	26.50	26.47
Sorell	22	19.15	19.92	22.16	21.62	21.12	21.49	22.16	22.89	23.21	23.25	23.70	23.72
Electrona	11	8.60	8.29	9.47	9.53	9.62	10.21	10.47	10.84	11.03	11.07	11.32	11.36
Kermandie	11	5.27	4.91	5.33	5.26	5.56	5.30	5.43	5.57	5.62	5.59	5.67	5.65
Kingston	11	30.84	22.83	21.70	24.80	26.76	28.18	31.20	33.92	36.09	35.79	36.13	35.82
Knights Rd	11	11.07	12.11	11.41	11.89	12.08	12.79	13.30	13.89	14.24	14.41	14.83	14.98
George Town	22	29.13	23.78	16.48	23.42	22.43	20.26	20.38	20.60	20.46	20.08	20.07	19.70
Hadspen	22			27.37	29.67	28.58	27.68	31.98	32.56	32.58	32.20	32.41	32.05
Mowbray	22			33.95	33.95	40.84	31.57	32.90	34.54	34.35	33.74	33.74	33.15
Norwood	22	41.27	44.05	33.89	35.79	39.52	38.83	40.03	41.59	42.44	42.74	43.81	44.08
Palmerston	22			11.94	13.43	11.00	14.66	16.45	18.47	20.18	21.61	23.39	24.72
Trevallyn	22	87.83	88.93	55.83	54.54	68.67	59.69	59.44	59.99	60.63	60.52	61.49	61.36
Newton (Henty Gold)	11	3.59	4.51	3.74	4.44	3.45	3.52	3.61	3.73	3.78	3.78	3.85	3.85
Queenstown 22kV	22				6.07	5.53	4.72	4.82	4.87	4.84	4.75	4.74	4.66
Rosebery 44kV	44	11.35	4.06	3.57	5.29	15.91	12.22	12.43	12.74	12.82	12.75	12.91	12.83
Rosebery 22kV	22	2.13	2.23	2.41	2.12	2.19	1.69	1.71	1.73	1.72	1.69	1.69	1.66
Savage River	22			4.01	0.81	2.63	1.01	1.03	1.04	1.03	1.01	1.01	0.99

Table 4-11 System Non Coincident Demand for Winter in MW at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.4	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Meadowbank	22	4.3	3.2	4.3	6.1	5.4	3.5	3.8	3.9	4.0	4.1	4.2	4.3
New Norfolk	22	8.7	9.7	9.7	10.0	9.5	10.0	11.0	11.1	11.2	11.4	11.6	11.8
Tungatinah	22	0.9	1.0	1.2	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.3
Waddamana	22	0.5	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9
Wayatinah	11	1.6	1.0	0.9	0.6	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5
Avoca	22	6.3	6.3	6.8	8.1	8.0	6.1	6.4	6.6	6.7	6.9	7.0	7.2
St Marys	22	12.3	15.7	16.1	14.3	15.9	15.5	16.6	16.9	17.3	17.7	18.1	18.5
Triabunna	22	7.2	9.2	8.8	7.4	7.9	8.9	9.4	9.4	9.5	9.5	9.6	9.7
Lindisfarne	33		57.1	59.2	59.8	61.5	61.7	65.2	64.9	64.4	64.3	64.2	64.3
Rokeby	11	35.9	41.1	40.9	45.8	41.3	42.5	47.0	48.8	50.6	52.6	54.6	56.7
Bridgewater	11	30.8	31.4	31.1	34.9	31.4	36.7	40.1	40.9	41.6	42.5	43.5	44.5
Chapel St	22	53.4	57.6	44.5	47.5	47.0	46.0	48.9	49.0	49.1	49.5	49.9	50.4
Creek Rd	33	102.1	100.5	101.4	102.5	102.5	105.2	110.8	109.8	108.7	108.3	107.9	107.7
North Hobart	11	64.6	67.1	58.0	58.1	56.2	60.3	64.1	64.2	64.3	64.8	65.2	65.8
Risdon	33	45.0	45.9	70.9	70.9	75.0	67.7	71.1	70.7	70.3	70.2	70.2	70.3
Devonport	22	58.7	63.0	64.7	79.0	72.2	66.2	71.3	73.3	75.1	77.3	79.6	82.0
Railton	22	49.2	52.6	49.3	51.0	47.7	49.5	50.9	50.3	49.6	49.2	48.9	48.6
Ulverstone	22	37.2	36.6	38.8	39.6	36.4	37.5	39.0	38.9	38.6	38.6	38.7	38.8
Wesley Vale	22				2.9	1.8	1.8	2.0	2.0	2.1	2.1	2.2	2.3
Derby	22	3.0	6.5	6.1	4.8	2.6	2.5	3.8	3.8	3.7	3.7	3.7	3.7
Scottsdale	22			16.6	15.3	13.6	13.8	15.2	15.4	15.6	15.8	16.1	16.4
Burnie	22	61.0	62.8	62.7	69.2	61.4	63.2	66.3	66.4	66.3	66.6	67.0	67.5
Emu Bay Retail	11	22.5	23.0	23.3	23.6	21.7	22.8	24.7	24.5	24.3	24.2	24.1	24.1
Port Latta	22		4.9	4.8	4.8	5.9	4.6	4.8	4.8	4.9	4.9	5.0	5.0
Smithton	22	21.5	21.1	22.2	22.7	23.2	21.4	22.2	22.2	22.3	22.4	22.6	22.8
Sorell	22	27.6	33.0	30.1	31.7	32.5	33.6	36.1	36.8	37.5	38.3	39.1	40.1
Electrona	11	12.7	13.5	14.4	12.8	14.5	19.2	20.8	21.4	21.9	22.6	23.2	23.9
Kermandie	11	6.2	8.0	6.8	7.1	7.2	7.0	7.3	7.4	7.4	7.4	7.4	7.5
Kingston	11	38.8	38.1	40.7	42.5	39.4	37.1	40.9	40.9	42.9	43.1	43.4	43.7
Knights Rd	11	16.2	16.5	16.7	16.5	17.4	17.4	18.4	18.6	18.7	18.9	19.1	19.4
George Town	22	31.1	26.5	28.3	29.0	27.1	28.1	29.5	29.3	29.1	29.1	29.1	29.1
Hadspen	22		29.8	41.0	43.6	45.4	47.8	55.8	56.2	56.5	57.2	57.9	58.7
Mowbray	22		45.2	49.6	45.7	51.6	55.7	57.6	57.6	58.5	59.8	61.1	62.5
Norwood	22	75.4	76.4	67.7	68.8	71.1	67.6	72.1	72.6	73.0	73.8	74.7	75.7
Palmerston	22			11.2	8.9	7.4	6.1	6.3	6.3	6.2	6.2	6.2	6.2
Trevallyn	22	151.6	95.9	97.2	97.6	104.0	95.5	106.9	108.7	109.2	110.4	111.6	113.1
Newton (Henty Gold)	11	3.8	3.8	3.8	3.8	3.3	3.9	4.0	4.0	4.0	3.9	3.9	3.9
Queenstown 22kV	22	7.1	7.4	7.5	7.4	7.0	6.5	6.9	6.9	6.8	6.8	6.8	6.8
Rosebery 44kV	44	11.1	5.3	6.7	21.7	10.1	13.5	14.3	14.6	14.9	15.3	15.7	16.1
Rosebery 22kV	22	3.0	2.9	3.0	3.4	2.9	2.7	2.8	2.7	2.7	2.6	2.6	2.6
Savage River	22		1.2	1.3	1.4	2.4	1.3	1.4	1.4	1.4	1.4	1.4	1.4

Table 4-12 System Non Coincident Demand for Winter in MVA at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.4	0.5	0.4	0.4	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Meadowbank	22	4.3	4.0	4.3	7.4	7.1	3.5	3.8	3.9	4.0	4.1	4.3	4.4
New Norfolk	22	8.8	9.8	9.9	10.2	9.7	10.2	11.2	11.3	11.5	11.6	11.8	12.0
Tungatinah	22	0.9	1.0	1.2	1.2	10.2	1.1	1.2	1.2	1.2	1.2	1.3	1.3
Waddamana	22	0.5	0.7	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.9	0.9
Wayatinah	11	1.6	1.5	0.9	0.6	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Avoca	22	6.5	6.5	7.1	8.4	8.4	6.1	6.5	6.6	6.8	6.9	7.1	7.3
St Marys	22	12.9	16.4	16.7	16.6	16.1	15.5	16.6	17.0	17.3	17.7	18.1	18.6
Triabunna	22	7.5	9.2	8.9	7.4	7.9	9.0	9.4	9.5	9.5	9.6	9.7	9.8
Lindisfarne	33		57.3	61.7	62.0	61.6	61.8	65.3	64.9	64.4	64.3	64.3	64.3
Rokeby	11	36.4	41.7	41.4	46.4	41.8	42.9	47.4	49.2	51.0	53.0	55.1	57.2
Bridgewater	11	31.6	32.1	31.7	35.2	31.7	36.8	40.3	41.1	41.8	42.7	43.7	44.7
Chapel St	22	54.7	59.2	45.6	47.7	47.1	46.7	49.6	49.8	49.9	50.3	50.7	51.2
Creek Rd	33	110.0	107.6	110.1	109.5	109.5	108.0	113.7	112.7	111.6	111.2	110.8	110.6
North Hobart	11	66.3	68.9	59.7	59.8	57.7	61.6	65.5	65.7	65.7	66.2	66.7	67.3
Risdon	33	47.6	49.2	75.3	75.2	79.3	72.0	75.6	75.2	74.7	74.7	74.7	74.8
Devonport	22	60.6	64.8	64.9	79.2	73.3	67.6	72.8	74.8	76.7	78.9	81.3	83.7
Railton	22	51.5	55.0	51.7	53.5	49.8	49.6	51.0	50.4	49.7	49.3	49.0	48.7
Ulverstone	22	38.4	37.7	39.8	40.4	36.9	37.8	39.3	39.1	38.9	38.9	39.0	39.1
Wesley Vale	22				2.9	1.9	2.0	2.1	2.2	2.2	2.3	2.4	2.5
Derby	22	3.0	7.4	6.8	6.0	2.6	2.6	3.8	3.8	3.8	3.8	3.8	3.8
Scottsdale	22			17.3	15.8	13.9	14.0	15.4	15.6	15.8	16.1	16.3	16.6
Burnie	22	62.2	64.1	63.6	70.2	62.1	63.9	67.0	67.0	67.0	67.3	67.7	68.2
Emu Bay Retail	11	23.0	23.5	23.8	24.1	22.1	23.3	25.2	25.0	24.8	24.7	24.6	24.6
Port Latta	22		5.0	4.8	4.8	6.0	4.6	4.8	4.9	4.9	4.9	5.0	5.0
Smithton	22	22.4	21.9	23.2	24.0	24.1	22.2	23.1	23.1	23.2	23.3	23.5	23.7
Sorell	22	28.0	33.8	30.5	31.9	32.8	33.8	36.3	37.0	37.6	38.5	39.3	40.3
Electrona	11	13.0	13.8	14.8	13.1	14.7	19.4	21.1	21.7	22.2	22.9	23.6	24.3
Kermandie	11	6.5	8.1	7.0	7.3	7.5	7.1	7.5	7.5	7.5	7.6	7.6	7.7
Kingston	11	39.6	38.6	41.4	43.1	39.8	38.0	41.8	41.8	43.9	44.1	44.3	44.6
Knights Rd	11	17.1	17.4	17.3	17.0	17.5	17.9	19.0	19.1	19.2	19.5	19.7	20.0
George Town	22	31.9	27.5	28.6	29.3	27.3	28.4	29.8	29.6	29.4	29.4	29.4	29.4
Hadspen	22		30.1	41.2	43.8	45.4	48.0	56.0	56.4	56.7	57.4	58.1	58.9
Mowbray	22		49.1	53.6	48.4	55.9	60.0	62.0	62.0	63.0	64.3	65.7	67.3
Norwood	22	77.7	78.6	69.0	70.0	72.4	68.1	72.6	73.1	73.5	74.3	75.2	76.2
Palmerston	22			11.7	9.8	7.7	6.1	6.3	6.3	6.2	6.2	6.2	6.2
Trevallyn	22	156.1	100.0	100.5	100.6	107.2	99.9	111.9	113.7	114.3	115.5	116.8	118.3
Newton (Henty Gold)	11	3.9	3.8	3.9	3.9	3.4	4.0	4.1	4.1	4.0	4.0	4.0	4.0
Queenstown 22kV	22	7.2	7.5	7.5	7.5	7.1	6.6	7.0	6.9	6.9	6.9	6.9	6.9
Rosebery 44kV	44	11.3	5.4	6.8	22.1	10.3	13.8	14.6	14.9	15.2	15.6	16.0	16.5
Rosebery 22kV	22	3.1	2.9	3.1	3.5	2.9	2.8	2.8	2.8	2.7	2.7	2.7	2.6
Savage River	22		1.2	1.3	1.4	2.8	1.3	1.4	1.4	1.4	1.4	1.4	1.4

Table 4-13 System Coincident Demand for Summer in MW at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gordon	22	0.27	0.26	0.26	0.23	0.19	0.23	0.22	0.23	0.23	0.22	0.22	0.22
Meadowbank	22	4.09	3.01	5.60	3.76	3.20	2.29	2.28	2.33	2.34	2.33	2.36	2.34
New Norfolk	22	6.58	7.11	7.35	7.16	6.67	5.43	5.38	5.49	5.51	5.47	5.51	5.46
Tungatinah	22	0.57	0.39	0.59	0.50	0.63	0.64	0.63	0.63	0.62	0.61	0.61	0.59
Waddamana	22	0.26	0.25	0.27	0.34	0.32	0.37	0.40	0.44	0.47	0.50	0.54	0.56
Wayatinah	11	0.64	0.61	0.61	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Avoca	22	5.73	5.73	6.58	4.94	5.14	5.87	5.98	6.26	6.43	6.54	6.75	6.82
St Marys	22	7.52	7.62	7.60	9.98	8.38	8.71	8.70	8.96	9.06	9.07	9.23	9.20
Triabunna	22	4.45	4.55	5.42	5.40	5.43	5.34	5.43	5.67	5.82	5.91	6.08	6.15
Lindisfarne	33			34.07	37.90	38.06	37.94	37.20	37.59	37.32	36.67	36.64	35.92
Rokeby	11	19.83	19.92	19.43	24.93	24.86	21.92	22.76	24.27	25.36	26.17	27.38	28.06
Bridgewater	11	17.17	17.56	15.42	22.64	20.42	21.41	23.04	24.37	25.28	25.90	26.94	27.45
Chapel St	22	25.63	28.08	20.40	24.49	23.66	24.20	23.93	24.38	24.40	24.17	24.34	24.06
Creek Rd	33	51.42	52.08	60.46	61.73	62.81	64.25	63.90	65.48	65.91	65.66	66.47	66.03
North Hobart	11	36.43	37.31	32.49	35.11	35.58	33.49	33.37	34.26	34.55	34.47	34.96	34.79
Risdon	33	25.76	22.35	36.75	45.48	46.68	47.73	47.70	49.11	49.67	49.70	50.53	50.41
Devonport	22	35.98	35.03	38.38	41.05	39.20	35.59	35.91	37.31	38.06	38.41	39.36	39.57
Railton	22	35.39	42.17	48.49	36.30	41.59	38.29	37.54	37.92	37.64	36.98	36.93	36.20
Ulverstone	22	23.60	24.97	27.46	26.87	25.41	21.96	21.53	21.75	21.60	21.23	21.20	20.79
Wesley Vale	22				1.72	1.57	1.61	1.58	1.60	1.59	1.56	1.56	1.53
Derby	22	4.90	4.82	4.21	3.60	2.30	1.80	2.14	2.25	2.32	2.37	2.45	2.49
Scottsdale	22	9.71	0.00	13.51	12.13	9.73	9.24	9.19	9.42	9.48	9.45	9.57	9.51
Burnie	22	39.92	40.90	41.73	43.91	43.76	38.10	37.96	38.96	39.29	39.20	39.75	39.55
Emu Bay Retail	11	15.15	16.00	14.94	15.09	14.56	14.55	14.29	14.46	14.38	14.15	14.16	13.90
Port Latta	22		6.52	8.43	7.41	3.72	3.81	4.02	4.35	4.61	4.81	5.08	5.26
Smithton	22	19.57	19.94	20.95	21.55	19.64	20.60	20.59	21.19	21.43	21.44	21.80	21.74
Sorell	22	17.34	18.04	17.64	21.40	20.47	19.46	19.50	20.13	20.41	20.48	20.87	20.87
Electrona	11	6.16	7.72	7.73	9.30	9.41	8.79	8.83	9.14	9.29	9.34	9.55	9.57
Kermandie	11	4.53	4.40	4.70	5.04	5.29	5.01	4.99	5.12	5.16	5.14	5.21	5.18
Kingston	11	29.94	19.99	20.08	24.53	26.44	27.93	29.19	31.82	33.92	33.69	34.01	33.69
Knights Rd	11	9.68	9.82	10.12	11.33	12.04	11.35	11.51	12.02	12.32	12.49	12.85	12.97
George Town	22	28.44	17.66	15.21	20.61	19.02	18.12	17.76	17.95	17.82	17.51	17.49	17.15
Hadspen	22			25.87	29.36	27.33	27.38	30.90	31.44	31.45	31.13	31.32	30.93
Mowbray	22			24.13	24.61	25.47	23.36	23.83	25.02	24.86	24.45	24.45	23.99
Norwood	22	39.07	37.90	30.90	34.90	36.78	36.08	36.39	37.80	38.55	38.88	39.84	40.04
Palmerston	22			10.92	7.86	8.45	5.47	6.04	6.78	7.40	7.93	8.59	9.06
Trevallyn	22	83.87	80.13	48.02	51.95	55.59	49.26	48.23	48.64	49.14	49.11	49.89	49.72
Newton (Henty Gold)	11	3.08	3.22	3.23	3.33	3.23	2.90	2.90	3.00	3.03	3.04	3.10	3.10
Queenstown 22kV	22			0.00	5.99	5.42	3.64	3.57	3.61	3.58	3.52	3.51	3.45
Rosebery 44kV	44	8.92	3.75	2.79	4.11	8.61	10.94	10.88	11.14	11.21	11.16	11.30	11.22
Rosebery 22kV	22	1.85	1.79	1.95	2.08	2.07	1.21	1.19	1.20	1.19	1.17	1.17	1.15
Savage River	22			0.64	0.78	0.87	0.63	0.62	0.62	0.62	0.61	0.61	0.60

Table 4-14 System Coincident Demand for Summer in MVA at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gordon	22	0.27	0.26	0.27	0.24	0.19	0.23	0.23	0.23	0.23	0.23	0.23	0.22
Meadowbank	22	4.45	3.30	6.20	4.10	3.37	2.46	2.45	2.50	2.52	2.51	2.53	2.51
New Norfolk	22	6.71	7.26	7.50	7.31	6.80	5.54	5.49	5.60	5.62	5.58	5.63	5.57
Tungatinah	22	0.58	0.40	12.22	0.52	0.65	0.64	0.63	0.63	0.62	0.61	0.61	0.59
Waddamana	22	0.26	0.25	0.27	0.34	0.32	0.37	0.40	0.44	0.47	0.50	0.54	0.56
Wayatinah	11	0.72	0.63	0.61	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Avoca	22	5.87	6.33	7.28	5.37	5.68	6.22	6.33	6.63	6.81	6.92	7.14	7.22
St Marys	22	7.86	8.28	7.89	10.26	8.53	8.81	8.80	9.07	9.17	9.18	9.33	9.31
Triabunna	22	4.80	4.81	5.43	7.61	5.50	5.37	5.45	5.70	5.85	5.93	6.11	6.17
Lindisfarne	33			34.40	38.05	38.19	37.95	37.21	37.60	37.33	36.69	36.65	35.93
Rokeby	11	20.05	20.18	19.62	25.17	25.03	22.03	22.87	24.39	25.49	26.30	27.52	28.21
Bridgewater	11	17.76	18.24	15.54	23.12	20.80	21.82	23.48	24.83	25.76	26.39	27.45	27.97
Chapel St	22	26.41	29.03	21.09	25.06	24.13	24.63	24.35	24.81	24.84	24.60	24.78	24.48
Creek Rd	33	55.84	56.51	65.37	65.06	66.26	65.81	65.46	67.07	67.52	67.25	68.09	67.64
North Hobart	11	37.97	39.59	34.24	36.38	37.19	34.77	34.65	35.56	35.86	35.79	36.29	36.11
Risdon	33			40.09	48.83	50.94	51.05	51.03	52.53	53.13	53.16	54.05	53.92
Devonport	22	49.44	48.74	38.80	41.33	39.40	35.78	36.11	37.52	38.27	38.62	39.58	39.79
Railton	22	38.67	45.74	52.23	39.88	45.81	38.77	38.01	38.39	38.11	37.44	37.39	36.65
Ulverstone	22	25.91	26.74	28.88	28.14	26.20	22.73	22.28	22.52	22.36	21.97	21.94	21.51
Wesley Vale	22				1.86	1.80	1.72	1.68	1.70	1.69	1.66	1.66	1.62
Derby	22	5.18	5.44	4.31	3.82	2.45	1.89	2.24	2.36	2.43	2.48	2.57	2.60
Scottsdale	22			14.67	13.18	10.44	10.00	9.95	10.20	10.27	10.23	10.36	10.29
Burnie	22	41.45	43.08	43.20	45.39	44.90	39.01	38.87	39.90	40.23	40.14	40.70	40.50
Emu Bay Retail	11	15.46	16.32	15.25	15.40	14.85	14.84	14.58	14.75	14.67	14.44	14.45	14.18
Port Latta	22		7.08	9.08	8.02	4.85	4.14	4.37	4.73	5.01	5.23	5.53	5.72
Smithton	22	20.39	21.60	22.72	23.76	21.62	21.96	21.94	22.59	22.84	22.85	23.23	23.18
Sorell	22	17.66	18.43	17.82	21.62	20.67	19.56	19.61	20.24	20.52	20.59	20.99	20.98
Electrona	11	6.40	8.01	7.92	9.53	9.62	8.80	8.84	9.15	9.30	9.36	9.56	9.58
Kermandie	11	4.97	4.48	5.05	5.26	5.56	5.25	5.23	5.37	5.41	5.39	5.47	5.44
Kingston	11	30.84	20.92	20.29	24.80	26.76	28.18	29.45	32.10	34.22	33.99	34.31	33.99
Knights Rd	11	10.81	10.81	10.80	11.89	12.08	12.02	12.19	12.73	13.05	13.22	13.61	13.73
George Town	22	29.13	18.15	15.41	21.57	19.37	18.60	18.24	18.43	18.29	17.98	17.96	17.60
Hadspen	22			26.53	29.67	27.33	27.68	31.24	31.79	31.79	31.47	31.67	31.28
Mowbray	22			30.65	31.55	33.59	29.12	29.71	31.19	31.00	30.49	30.48	29.91
Norwood	22	41.27	39.75	32.01	35.79	37.58	36.08	36.39	37.80	38.55	38.88	39.84	40.04
Palmerston	22			11.94	8.55	9.32	6.08	6.70	7.53	8.22	8.81	9.53	10.06
Trevallyn	22	87.83	84.21	51.86	54.54	64.50	56.20	55.01	55.49	56.05	56.03	56.91	56.72
Newton (Henty Gold)	11	3.14	3.29	3.30	3.40	3.30	2.96	2.96	3.06	3.10	3.10	3.16	3.16
Queenstown 22kV	22			0.00	6.07	5.53	3.69	3.62	3.66	3.63	3.57	3.57	3.50
Rosebery 44kV	44	9.10	3.82	2.84	4.20	8.79	11.16	11.10	11.37	11.44	11.39	11.53	11.45
Rosebery 22kV	22	1.89	1.82	1.99	2.12	2.11	1.23	1.21	1.22	1.21	1.19	1.19	1.17
Savage River	22			1.34	0.78	1.13	0.63	0.62	0.62	0.62	0.61	0.61	0.60

Table 4-15 System Coincident Demand for Winter in MW at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.35	0.39	0.32	0.32	0.28	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Meadowbank	22	4.29	2.75	2.77	2.89	3.35	2.58	2.76	2.84	2.91	3.00	3.09	3.19
New Norfolk	22	8.55	8.90	8.95	9.49	9.10	8.90	9.37	9.49	9.58	9.74	9.89	10.08
Tungatinah	22	0.70	0.77	0.84	0.92	0.72	0.67	0.71	0.73	0.75	0.76	0.78	0.81
Waddamana	22	0.27	0.36	0.40	0.40	0.44	0.36	0.39	0.40	0.41	0.43	0.44	0.45
Wayatinah	11	0.74	0.02	0.01	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avoca	22	5.71	5.48	6.61	7.84	8.03	6.09	6.46	6.59	6.71	6.87	7.03	7.20
St Marys	22	11.13	11.03	12.79	12.56	14.48	12.54	13.32	13.59	13.83	14.17	14.49	14.86
Triabunna	22	6.74	7.91	7.99	7.34	7.16	6.74	7.03	7.06	7.08	7.14	7.20	7.28
Lindisfarne	33		54.33	53.99	59.80	61.51	56.68	58.57	58.22	57.74	57.67	57.57	57.62
Rokeby	11	31.97	36.41	38.55	45.78	39.26	36.42	39.45	41.02	42.48	44.22	45.94	47.78
Bridgewater	11	30.84	30.05	28.18	34.88	31.37	32.67	35.56	36.24	36.83	37.67	38.49	39.42
Chapel St	22	47.05	54.85	40.93	47.49	45.56	37.74	39.37	39.51	39.55	39.87	40.17	40.58
Creek Rd	33	97.61	100.47	100.80	102.46	102.52	98.56	101.57	100.69	99.59	99.20	98.75	98.58
North Hobart	11	64.56	57.16	55.62	56.21	56.25	54.92	57.25	57.41	57.44	57.87	58.26	58.82
Risdon	33	41.09	19.03	67.63	70.89	74.08	59.96	62.01	61.69	61.24	61.21	61.15	61.26
Devonport	22	58.23	61.14	64.66	67.04	59.31	64.80	69.30	71.21	72.95	75.17	77.35	79.74
Railton	22	49.10	43.99	48.70	50.31	47.52	48.70	50.01	49.40	48.69	48.31	47.92	47.66
Ulverstone	22	34.90	36.25	38.78	39.57	34.28	34.15	35.36	35.21	34.98	35.00	35.00	35.10
Wesley Vale	22				1.64	1.31	0.80	0.86	0.88	0.91	0.94	0.97	1.00
Derby	22	1.87	4.85	6.08	2.10	1.10	2.52	3.64	3.62	3.59	3.59	3.58	3.59
Scottsdale	22			15.99	13.04	13.55	13.46	14.19	14.38	14.54	14.80	15.05	15.35
Burnie	22	53.89	61.15	62.06	69.18	55.46	58.81	61.18	61.22	61.12	61.45	61.74	62.21
Emu Bay Retail	11	21.33	22.68	22.55	23.62	21.59	21.30	21.95	21.76	21.53	21.44	21.35	21.32
Port Latta	22		4.49	4.72	4.77	4.67	3.14	3.28	3.30	3.32	3.35	3.38	3.42
Smithton	22	18.69	21.07	21.55	18.24	21.09	20.04	20.89	20.95	20.96	21.11	21.25	21.45
Sorell	22	25.05	29.37	29.80	31.66	32.32	30.20	32.02	32.64	33.18	33.95	34.69	35.53
Electrona	11	11.28	12.63	13.46	11.85	14.47	16.50	17.66	18.15	18.60	19.18	19.74	20.36
Kermandie	11	6.10	6.38	6.02	7.11	7.15	6.43	6.69	6.70	6.69	6.73	6.77	6.82
Kingston	11	35.69	35.80	40.67	42.48	39.42	34.48	37.30	37.31	39.12	39.33	39.52	39.81
Knights Rd	11	15.61	15.75	15.44	16.49	17.21	16.42	17.20	17.33	17.43	17.64	17.84	18.09
George Town	22	26.63	26.04	26.48	27.73	25.91	27.50	28.43	28.28	28.07	28.05	28.01	28.06
Hadspen	22		29.06	41.04	43.03	42.37	46.41	52.72	53.14	53.44	54.10	54.74	55.53
Mowbray	22		45.21	43.89	41.20	47.82	47.29	47.40	47.40	48.17	49.26	50.33	51.53
Norwood	22	73.61	72.47	65.55	64.50	70.28	64.66	67.72	68.21	68.54	69.34	70.10	71.06
Palmerston	22			10.80	7.03	7.43	5.65	5.84	5.81	5.76	5.76	5.75	5.76
Trevallyn	22	151.60	94.66	96.70	89.55	92.48	89.89	97.08	98.75	99.21	100.34	101.43	102.80
Newton (Henty Gold)	11	3.40	3.68	3.83	3.44	2.80	3.65	3.75	3.71	3.66	3.64	3.62	3.60
Queenstown 22kV	22	6.8	7.3	6.9	7.4	7.0	6.4	6.6	6.5	6.5	6.5	6.5	6.5
Rosebery 44kV	44	10.24	3.53	4.46	16.48	8.89	12.74	13.57	13.88	14.17	14.55	14.92	15.33
Rosebery 22kV	22	3.01	2.85	3.00	3.41	2.83	2.59	2.64	2.58	2.53	2.49	2.45	2.41
Savage River	22		1.07	1.10	1.43	1.24	1.18	1.22	1.21	1.20	1.20	1.20	1.20

Table 4-16 System Coincident Demand for Winter in MVA at 50% POE

Terminal stations	Connection voltage (kV)	50 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Gordon	22	0.36	0.39	0.33	0.33	0.29	0.20	0.21	0.21	0.20	0.20	0.20	0.20
Meadowbank	22	4.33	3.42	2.78	3.51	4.34	2.62	2.80	2.88	2.95	3.05	3.14	3.23
New Norfolk	22	8.73	9.08	9.13	9.69	9.29	9.08	9.56	9.68	9.78	9.94	10.10	10.28
Tungatinah	22	0.72	0.78	0.84	0.93	6.68	0.69	0.74	0.75	0.77	0.79	0.81	0.83
Waddamana	22	0.27	0.36	0.40	0.40	0.44	0.36	0.39	0.40	0.41	0.43	0.44	0.45
Wayatinah	11	0.74	0.03	0.01	0.01	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Avoca	22	5.91	5.70	6.86	8.15	8.44	6.14	6.52	6.65	6.77	6.93	7.09	7.26
St Marys	22	11.62	11.56	13.27	14.57	14.67	12.56	13.34	13.61	13.86	14.19	14.52	14.89
Triabunna	22	6.99	7.93	8.07	7.38	7.19	6.77	7.07	7.10	7.11	7.18	7.24	7.32
Lindisfarne	33		54.57	56.25	62.05	61.56	56.72	58.60	58.25	57.78	57.70	57.60	57.65
Rokeby	11	32.43	36.97	39.08	46.36	39.68	36.71	39.77	41.35	42.83	44.58	46.31	48.18
Bridgewater	11	31.59	30.77	28.74	35.25	31.69	32.82	35.73	36.41	37.01	37.85	38.67	39.61
Chapel St	22	48.20	56.38	41.94	47.71	45.62	38.31	39.96	40.10	40.15	40.47	40.77	41.19
Creek Rd	33	105.14	107.61	109.43	109.55	109.50	101.18	104.27	103.36	102.24	101.83	101.38	101.20
North Hobart	11	66.35	58.71	57.26	57.92	57.75	56.13	58.52	58.68	58.71	59.15	59.55	60.12
Risdon	33	43.45	20.37	71.83	75.16	78.38	63.79	65.97	65.62	65.14	65.11	65.05	65.17
Devonport	22	60.08	62.93	64.91	67.20	60.23	66.15	70.75	72.70	74.47	76.74	78.96	81.41
Railton	22	51.40	46.02	51.09	52.83	49.68	48.79	50.10	49.49	48.78	48.40	48.01	47.75
Ulverstone	22	35.99	37.33	39.83	40.40	34.78	34.40	35.61	35.47	35.24	35.26	35.26	35.36
Wesley Vale	22				1.67	1.38	0.86	0.93	0.95	0.98	1.01	1.05	1.08
Derby	22	1.87	5.48	6.78	2.60	1.11	2.55	3.69	3.67	3.64	3.64	3.63	3.64
Scottsdale	22			16.58	13.46	13.85	13.64	14.38	14.58	14.74	15.00	15.26	15.55
Burnie	22	54.96	62.39	63.02	70.18	56.11	59.41	61.80	61.84	61.74	62.07	62.37	62.84
Emu Bay Retail	11	21.76	23.15	23.01	24.10	22.03	21.73	22.40	22.21	21.97	21.88	21.79	21.75
Port Latta	22		4.53	4.76	4.78	4.70	3.16	3.30	3.32	3.33	3.37	3.40	3.44
Smithton	22	19.50	21.87	22.54	19.27	21.92	20.85	21.74	21.80	21.81	21.97	22.11	22.32
Sorell	22	25.40	30.06	30.19	31.93	32.62	30.36	32.19	32.81	33.35	34.12	34.87	35.72
Electrona	11	11.54	12.92	13.77	12.10	14.71	16.74	17.92	18.42	18.88	19.46	20.03	20.66
Kermandie	11	6.34	6.50	6.23	7.34	7.42	6.57	6.84	6.85	6.84	6.88	6.92	6.97
Kingston	11	36.45	36.34	41.43	43.08	39.82	35.25	38.13	38.13	39.99	40.20	40.39	40.70
Knights Rd	11	16.47	16.59	16.01	17.05	17.32	16.91	17.72	17.85	17.95	18.17	18.37	18.63
George Town	22	27.35	27.04	26.71	28.02	26.17	27.81	28.75	28.59	28.38	28.36	28.32	28.37
Hadspen	22		29.31	41.22	43.23	42.37	46.59	52.91	53.34	53.64	54.30	54.94	55.73
Mowbray	22		49.13	47.44	43.57	51.81	50.89	51.01	51.01	51.84	53.01	54.16	55.45
Norwood	22	75.83	74.54	66.86	65.66	71.50	65.11	68.19	68.68	69.01	69.82	70.59	71.56
Palmerston	22			11.33	7.74	7.68	5.68	5.87	5.84	5.80	5.79	5.78	5.79
Trevallyn	22	156.11	98.70	99.96	92.32	95.27	94.05	101.58	103.32	103.80	104.99	106.13	107.56
Newton (Henty Gold)	11	3.47	3.76	3.91	3.51	2.85	3.72	3.83	3.79	3.74	3.71	3.69	3.67
Queenstown 22kV	22	6.9	7.4	6.9	7.5	7.1	6.4	6.6	6.6	6.5	6.5	6.5	6.5
Rosebery 44kV	44	10.45	3.60	4.55	16.81	9.08	13.00	13.84	14.17	14.46	14.84	15.22	15.64
Rosebery 22kV	22	3.07	2.91	3.06	3.48	2.89	2.64	2.69	2.64	2.58	2.54	2.50	2.46
Savage River	22		1.07	1.11	1.43	1.43	1.18	1.22	1.21	1.20	1.20	1.20	1.20

Table 4-17 System Coincident Demand for Summer in MW at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Gordon	22	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Meadowbank	22	4.1	3.0	5.7	3.8	3.2	2.3	2.3	2.4	2.4	2.4	2.4	2.4
New Norfolk	22	6.6	7.1	7.4	7.2	6.7	5.4	5.5	5.6	5.6	5.6	5.6	5.6
Tungatinah	22	0.6	0.4	0.6	0.5	0.6	0.7	0.7	0.7	0.7	0.6	0.6	0.6
Waddamana	22	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.5	0.5	0.5	0.6
Wayatinah	11	0.7	0.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avoca	22	5.7	5.7	6.6	5.0	5.2	5.9	6.1	6.4	6.6	6.7	6.9	7.0
St Marys	22	7.6	7.6	7.6	10.1	8.4	8.7	8.9	9.1	9.2	9.2	9.4	9.4
Triabunna	22	4.4	4.6	5.6	5.4	5.4	5.4	5.6	5.8	6.0	6.1	6.2	6.3
Lindisfarne	33			34.5	38.7	38.9	38.9	38.8	39.2	39.0	38.2	38.2	37.5
Rokeby	11	20.1	20.2	19.8	25.6	25.6	22.6	23.8	25.3	26.5	27.2	28.5	29.2
Bridgewater	11	17.2	17.7	15.6	23.0	20.8	21.7	23.8	25.1	26.1	26.7	27.7	28.3
Chapel St	22	25.9	28.4	20.7	25.1	24.3	24.9	25.0	25.5	25.5	25.3	25.4	25.2
Creek Rd	33	51.7	52.5	61.3	62.7	64.0	65.7	66.5	68.2	68.6	68.2	69.1	68.7
North Hobart	11	36.6	37.6	32.5	35.5	36.2	34.0	34.5	35.4	35.7	35.6	36.1	35.9
Risdon	33	25.9	22.4	36.7	45.7	46.8	48.2	49.0	50.4	51.0	51.0	51.8	51.8
Devonport	22	36.0	35.0	38.4	41.6	39.3	35.7	36.6	38.1	38.9	39.2	40.1	40.4
Railton	22	35.4	42.2	50.5	36.3	41.7	38.3	38.2	38.6	38.3	37.6	37.6	36.9
Ulverstone	22	23.6	25.1	27.8	27.1	25.4	22.1	22.1	22.3	22.2	21.8	21.8	21.4
Wesley Vale	22				1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Derby	22	4.9	4.8	4.2	3.6	2.3	1.8	2.2	2.3	2.4	2.4	2.5	2.5
Scottsdale	22	9.7	0.0	13.5	12.2	9.7	9.2	9.4	9.6	9.7	9.6	9.7	9.7
Burnie	22	40.4	40.9	42.7	44.6	44.5	38.9	39.4	40.5	40.8	40.7	41.2	41.1
Emu Bay Retail	11	15.2	16.0	14.9	15.1	14.6	14.5	14.5	14.7	14.6	14.4	14.4	14.2
Port Latta	22		6.6	8.5	7.4	3.7	3.9	4.2	4.5	4.8	5.0	5.2	5.4
Smithton	22	19.6	19.9	21.0	21.6	19.6	20.6	20.9	21.6	21.8	21.8	22.2	22.1
Sorell	22	17.5	18.2	17.9	21.7	20.9	19.7	20.1	20.7	21.0	21.1	21.5	21.5
Electrona	11	6.2	7.8	7.8	9.5	9.6	8.8	9.0	9.3	9.5	9.5	9.7	9.8
Kermandie	11	4.6	4.4	4.7	5.1	5.4	5.1	5.1	5.3	5.3	5.3	5.4	5.3
Kingston	11	30.4	20.2	20.4	25.1	27.0	29.2	30.9	33.6	35.8	35.5	35.8	35.5
Knights Rd	11	9.8	9.9	10.2	11.5	12.2	11.4	11.8	12.3	12.6	12.8	13.2	13.3
George Town	22	28.6	17.7	15.2	20.9	19.2	18.3	18.2	18.4	18.3	18.0	17.9	17.6
Hadspen	22			26.0	29.9	27.8	27.6	31.6	32.2	32.2	31.9	32.1	31.7
Mowbray	22			24.1	24.8	25.5	23.5	24.3	25.6	25.4	25.0	25.0	24.5
Norwood	22	39.2	38.3	31.0	35.6	37.5	36.2	37.2	38.6	39.4	39.7	40.7	40.9
Palmerston	22			11.0	7.9	8.5	5.5	6.1	6.9	7.5	8.1	8.7	9.2
Trevallyn	22	83.9	80.3	48.0	52.4	56.2	49.3	49.1	49.5	50.0	50.0	50.8	50.6
Newton (Henty Gold)	11	3.1	3.2	3.2	3.3	3.3	2.9	3.0	3.1	3.1	3.1	3.2	3.2
Queenstown 22kV	22			0.0	6.1	5.6	3.7	3.7	3.8	3.7	3.7	3.7	3.6
Rosebery 44kV	44	8.9	3.8	2.8	4.1	8.6	11.0	11.1	11.4	11.5	11.4	11.6	11.5
Rosebery 22kV	22	1.9	1.8	2.0	2.1	2.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Savage River	22			0.7	0.8	0.9	0.6	0.6	0.6	0.6	0.6	0.6	0.6

Table 4-18 System Coincident Demand for Summer in MVA at 10%POE

Terminal stations	Connection voltage (kV)	10 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.20	0.20	0.20	0.20	0.20	0.20
Derwent Bridge	22	0.10	0.20	0.20	0.20	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
Gordon	22	0.28	0.27	0.28	0.24	0.20	0.24	0.24	0.24	0.24	0.23	0.23	0.23
Meadowbank	22	4.45	3.30	6.29	4.10	3.37	2.46	2.49	2.55	2.56	2.55	2.58	2.56
New Norfolk	22	6.71	7.28	7.56	7.31	6.80	5.54	5.58	5.70	5.72	5.67	5.72	5.68
Tungatinah	22	0.60	0.40	12.35	0.52	0.67	0.66	0.66	0.66	0.65	0.64	0.64	0.62
Waddamana	22	0.27	0.26	0.27	0.34	0.32	0.37	0.40	0.45	0.48	0.51	0.55	0.57
Wayatinah	11	0.73	0.63	0.61	0.06	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Avoca	22	5.87	6.33	7.31	5.40	5.72	6.27	6.49	6.79	6.98	7.09	7.31	7.40
St Marys	22	7.95	8.28	7.89	10.37	8.53	8.81	8.96	9.23	9.34	9.33	9.49	9.48
Triabunna	22	4.80	4.83	5.59	7.61	5.50	5.42	5.60	5.86	6.01	6.09	6.27	6.34
Lindisfarne	33			34.85	38.89	39.04	38.89	38.80	39.22	38.96	38.24	38.21	37.50
Rokeby	11	20.33	20.43	20.03	25.83	25.75	22.68	23.91	25.48	26.61	27.39	28.63	29.35
Bridgewater	11	17.83	18.42	15.74	23.51	21.14	22.15	24.22	25.61	26.56	27.17	28.25	28.81
Chapel St	22	26.68	29.41	21.42	25.64	24.78	25.32	25.47	25.95	25.99	25.71	25.89	25.61
Creek Rd	33	56.15	56.93	66.25	66.10	67.52	67.34	68.12	69.81	70.29	69.91	70.77	70.37
North Hobart	11	38.17	39.90	34.29	36.79	37.79	35.31	35.79	36.75	37.07	36.93	37.45	37.31
Risdon	33			40.09	49.03	51.11	51.51	52.37	53.94	54.57	54.52	55.44	55.37
Devonport	22	49.44	48.74	38.84	41.85	39.54	35.89	36.84	38.29	39.08	39.38	40.37	40.63
Railton	22	38.67	45.74	54.41	39.88	45.94	38.77	38.67	39.08	38.81	38.08	38.04	37.33
Ulverstone	22	25.91	26.92	29.21	28.40	26.20	22.92	22.86	23.11	22.96	22.53	22.51	22.10
Wesley Vale	22				1.87	1.80	1.72	1.71	1.73	1.72	1.69	1.68	1.65
Derby	22	5.18	5.44	4.31	3.82	2.45	1.89	2.28	2.40	2.48	2.52	2.61	2.65
Scottsdale	22	10.78		14.67	13.23	10.44	10.00	10.12	10.38	10.46	10.40	10.54	10.48
Burnie	22	41.92	43.08	44.19	46.13	45.67	39.83	40.36	41.44	41.79	41.63	42.21	42.04
Emu Bay Retail	11	15.46	16.32	15.25	15.40	14.85	14.84	14.83	15.02	14.94	14.69	14.70	14.45
Port Latta	22		7.16	9.15	8.02	4.85	4.22	4.53	4.90	5.18	5.40	5.70	5.90
Smithton	22	20.39	21.60	22.72	23.76	21.62	21.96	22.33	22.99	23.26	23.24	23.64	23.61
Sorell	22	17.82	18.59	18.08	21.95	21.07	19.79	20.17	20.83	21.13	21.16	21.57	21.60
Electrona	11	6.40	8.09	8.04	9.72	9.82	8.82	9.02	9.34	9.50	9.54	9.75	9.78
Kermandie	11	5.01	4.48	5.10	5.32	5.65	5.30	5.37	5.52	5.56	5.54	5.61	5.59
Kingston	11	31.31	21.14	20.63	25.40	27.30	29.42	31.20	33.92	36.09	35.79	36.13	35.82
Knights Rd	11	10.88	10.92	10.94	12.05	12.25	12.11	12.50	13.05	13.38	13.54	13.94	14.08
George Town	22	29.31	18.15	15.41	21.82	19.57	18.75	18.70	18.91	18.78	18.43	18.42	18.08
Hadspen	22			26.68	30.24	27.78	27.88	31.98	32.56	32.58	32.20	32.41	32.05
Mowbray	22			30.65	31.78	33.59	29.24	30.34	31.87	31.68	31.12	31.13	30.58
Norwood	22	41.46	40.14	32.09	36.48	38.35	36.24	37.19	38.64	39.42	39.71	40.69	40.94
Palmerston	22			12.02	8.55	9.32	6.08	6.82	7.66	8.37	8.96	9.70	10.25
Trevallyn	22	87.83	84.36	51.86	54.97	65.18	56.20	55.97	56.48	57.09	56.99	57.90	57.77
Newton (Henty Gold)	11	3.14	3.29	3.31	3.40	3.32	2.97	3.03	3.13	3.17	3.17	3.23	3.24
Queenstown 22kV	22			0.00	6.21	5.70	3.78	3.77	3.81	3.78	3.71	3.71	3.64
Rosebery 44kV	44	9.10	3.85	2.85	4.21	8.79	11.23	11.36	11.64	11.71	11.65	11.79	11.72
Rosebery 22kV	22	1.92	1.85	2.01	2.16	2.17	1.25	1.25	1.26	1.25	1.23	1.23	1.21
Savage River	22			1.36	0.79	1.14	0.64	0.64	0.65	0.64	0.63	0.63	0.62

Table 4-19 System Coincident Demand for Winter in MW at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MW	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Gordon	22	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Meadowbank	22	4.4	2.8	2.8	2.9	3.4	2.6	2.8	2.9	2.9	3.0	3.1	3.2
New Norfolk	22	8.8	9.1	9.2	9.8	9.4	9.4	9.8	9.9	10.0	10.2	10.3	10.5
Tungatinah	22	0.7	0.8	0.8	1.0	0.7	0.7	0.7	0.7	0.7	0.8	0.8	0.8
Waddamana	22	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Wayatinah	11	0.7	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avoca	22	5.7	5.5	6.7	7.9	8.2	6.1	6.4	6.6	6.7	6.9	7.0	7.2
St Marys	22	11.3	11.1	13.1	12.7	14.7	12.8	13.5	13.7	14.0	14.3	14.6	15.0
Triabunna	22	6.9	8.4	8.1	7.4	7.4	6.8	7.1	7.1	7.1	7.2	7.3	7.3
Lindisfarne	33		56.4	55.5	61.9	63.3	58.4	59.9	59.6	59.1	59.0	59.0	59.0
Rokeby	11	32.8	37.2	39.7	47.2	40.4	37.5	40.3	41.8	43.3	45.0	46.8	48.6
Bridgewater	11	31.2	30.5	28.5	35.5	31.8	33.1	35.8	36.4	37.1	37.9	38.7	39.6
Chapel St	22	48.3	56.4	42.1	49.0	46.6	38.7	40.1	40.2	40.3	40.6	41.0	41.4
Creek Rd	33	100.1	102.7	104.0	105.5	106.0	101.3	103.8	102.9	101.9	101.4	101.1	100.9
North Hobart	11	66.2	58.8	57.2	58.0	58.0	56.4	58.4	58.6	58.6	59.0	59.5	60.0
Risdon	33	41.8	19.3	69.6	72.8	76.1	61.3	63.0	62.7	62.3	62.2	62.2	62.3
Devonport	22	59.2	62.5	65.7	67.9	60.1	65.7	69.8	71.7	73.4	75.6	77.8	80.2
Railton	22	49.6	44.3	49.2	50.9	48.3	49.1	50.1	49.5	48.9	48.5	48.1	47.8
Ulverstone	22	35.3	36.7	39.3	40.1	34.8	34.5	35.5	35.3	35.1	35.2	35.2	35.3
Wesley Vale	22				1.7	1.3	0.8	0.9	0.9	0.9	0.9	1.0	1.0
Derby	22	1.9	5.5	7.0	2.1	1.1	2.7	3.8	3.8	3.7	3.7	3.7	3.7
Scottsdale	22			16.9	13.8	14.2	14.2	14.8	15.0	15.2	15.4	15.7	16.0
Burnie	22	54.7	61.9	63.0	70.2	56.3	59.7	61.7	61.7	61.7	62.0	62.3	62.8
Emu Bay Retail	11	23.0	23.8	23.8	25.4	23.1	22.6	23.1	22.9	22.7	22.6	22.5	22.5
Port Latta	22		4.5	4.7	4.8	4.7	3.1	3.3	3.3	3.3	3.3	3.4	3.4
Smithton	22	18.8	21.1	21.6	18.3	21.1	20.1	20.8	20.9	20.9	21.0	21.2	21.4
Sorell	22	25.6	29.7	30.6	32.4	33.1	30.9	32.5	33.1	33.7	34.4	35.2	36.0
Electrona	11	11.5	12.9	13.8	12.0	14.7	16.9	17.9	18.4	18.9	19.4	20.0	20.6
Kermandie	11	6.3	6.5	6.1	7.2	7.3	6.6	6.8	6.8	6.8	6.8	6.9	6.9
Kingston	11	36.4	36.6	41.6	43.6	40.4	35.4	38.0	38.0	39.8	40.0	40.2	40.5
Knights Rd	11	15.8	16.1	15.8	16.9	17.6	16.7	17.4	17.6	17.7	17.9	18.1	18.3
George Town	22	27.0	26.6	27.1	28.4	26.6	28.1	28.9	28.7	28.5	28.5	28.5	28.5
Hadspen	22		30.1	43.1	43.4	44.0	48.1	54.1	54.6	54.9	55.5	56.2	57.0
Mowbray	22		45.2	45.5	43.5	49.5	49.0	48.9	48.9	49.7	50.8	51.8	53.0
Norwood	22	76.6	75.3	68.3	67.8	73.0	66.3	68.9	69.4	69.8	70.6	71.4	72.3
Palmerston	22			10.8	7.1	7.5	5.7	5.8	5.8	5.8	5.8	5.8	5.8
Trevallyn	22	157.6	98.1	100.8	94.0	95.7	94.0	100.7	102.3	102.9	103.9	105.1	106.5
Newton (Henty Gold)	11	3.4	3.7	3.8	3.4	2.8	3.7	3.8	3.7	3.7	3.6	3.6	3.6
Queenstown 22kV	22	6.9	7.5	7.0	7.6	7.3	6.5	6.7	6.7	6.6	6.6	6.6	6.6
Rosebery 44kV	44	10.3	3.5	4.5	17.3	8.9	12.7	13.5	13.8	14.1	14.5	14.8	15.2
Rosebery 22kV	22	3.1	2.9	3.1	3.5	2.9	2.6	2.7	2.6	2.6	2.5	2.5	2.4
Savage River	22		1.1	1.1	1.5	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2

Table 4-20 System Coincident Demand for Winter in MVA at 10% POE

Terminal stations	Connection voltage (kV)	10 POE	MVA	Historical				Forecast					
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Arthurs Lake	22							0.2	0.2	0.2	0.2	0.2	0.2
Derwent Bridge	22	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Gordon	22	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Meadowbank	22	4.4	3.5	2.8	3.5	4.4	2.7	2.8	2.9	3.0	3.1	3.2	3.3
New Norfolk	22	9.0	9.3	9.4	10.0	9.6	9.6	10.0	10.1	10.2	10.4	10.5	10.7
Tungatinah	22	0.7	0.8	0.9	1.0	6.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8
Waddamana	22	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5
Wayatinah	11	0.7	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Avoca	22	5.9	5.7	6.9	8.2	8.6	6.2	6.5	6.6	6.8	6.9	7.1	7.3
St Marys	22	11.8	11.6	13.6	14.7	14.9	12.8	13.5	13.8	14.0	14.3	14.7	15.0
Triabunna	22	7.1	8.4	8.1	7.5	7.4	6.9	7.1	7.1	7.2	7.2	7.3	7.4
Lindisfarne	33		56.7	57.9	64.2	63.3	58.4	60.0	59.6	59.2	59.1	59.0	59.1
Rokeby	11	33.3	37.8	40.3	47.8	40.8	37.8	40.6	42.2	43.7	45.4	47.2	49.0
Bridgewater	11	32.0	31.2	29.1	35.9	32.1	33.2	35.9	36.6	37.2	38.1	38.9	39.8
Chapel St	22	49.4	58.0	43.1	49.2	46.6	39.3	40.7	40.9	40.9	41.2	41.6	42.0
Creek Rd	33	107.8	110.0	112.9	112.8	113.3	104.0	106.5	105.6	104.6	104.1	103.8	103.6
North Hobart	11	68.0	60.4	58.9	59.8	59.5	57.6	59.7	59.8	59.9	60.3	60.8	61.3
Risdon	33	44.2	20.6	73.9	77.2	80.5	65.2	67.0	66.7	66.2	66.2	66.2	66.3
Devonport	22	61.0	64.3	66.0	68.1	61.1	67.1	71.2	73.2	75.0	77.2	79.5	81.9
Railton	22	51.9	46.3	51.6	53.4	50.5	49.2	50.2	49.6	48.9	48.6	48.2	47.9
Ulverstone	22	36.4	37.8	40.3	40.9	35.3	34.8	35.7	35.6	35.4	35.4	35.4	35.5
Wesley Vale	22				1.7	1.4	0.9	0.9	0.9	1.0	1.0	1.0	1.1
Derby	22	1.9	6.2	7.8	2.6	1.1	2.7	3.8	3.8	3.8	3.8	3.8	3.8
Scottsdale	22			17.5	14.3	14.6	14.3	15.0	15.2	15.4	15.6	15.9	16.2
Burnie	22	55.8	63.1	64.0	71.3	56.9	60.3	62.3	62.4	62.3	62.6	63.0	63.4
Emu Bay Retail	11	23.5	24.3	24.2	25.9	23.6	23.0	23.6	23.4	23.1	23.1	23.0	22.9
Port Latta	22		4.5	4.8	4.8	4.7	3.2	3.3	3.3	3.3	3.3	3.4	3.4
Smithton	22	19.6	21.9	22.6	19.3	22.0	20.9	21.6	21.7	21.7	21.9	22.0	22.2
Sorell	22	26.0	30.4	31.0	32.7	33.4	31.0	32.7	33.3	33.9	34.6	35.4	36.2
Electrona	11	11.8	13.2	14.1	12.2	15.0	17.1	18.2	18.7	19.1	19.7	20.3	20.9
Kermandie	11	6.5	6.6	6.3	7.5	7.5	6.7	6.9	6.9	6.9	7.0	7.0	7.1
Kingston	11	37.2	37.2	42.4	44.3	40.8	36.2	38.8	38.8	40.7	40.9	41.1	41.4
Knights Rd	11	16.7	16.9	16.4	17.5	17.7	17.3	18.0	18.1	18.2	18.4	18.6	18.9
George Town	22	27.8	27.6	27.3	28.7	26.9	28.4	29.2	29.0	28.8	28.8	28.8	28.8
Hadspen	22		30.4	43.3	43.6	44.0	48.3	54.4	54.8	55.1	55.7	56.4	57.2
Mowbray	22		49.1	49.1	46.0	53.7	52.8	52.6	52.6	53.5	54.6	55.8	57.1
Norwood	22	78.9	77.5	69.7	69.0	74.3	66.7	69.4	69.9	70.3	71.1	71.9	72.8
Palmerston	22			11.3	7.8	7.8	5.7	5.9	5.8	5.8	5.8	5.8	5.8
Trevallyn	22	162.3	102.3	104.2	96.9	98.6	98.4	105.4	107.1	107.6	108.8	110.0	111.4
Newton (Henty Gold)	11	3.5	3.8	3.9	3.5	2.9	3.8	3.8	3.8	3.7	3.7	3.7	3.7
Queenstown 22kV	22	7.0	7.6	7.1	7.7	7.3	6.6	6.8	6.7	6.7	6.7	6.7	6.7
Rosebery 44kV	44	10.5	3.6	4.6	17.6	9.1	13.0	13.8	14.1	14.4	14.8	15.1	15.6
Rosebery 22kV	22	3.1	3.0	3.1	3.6	2.9	2.7	2.7	2.7	2.6	2.6	2.5	2.5
Savage River	22		1.1	1.1	1.5	1.4	1.2	1.2	1.2	1.2	1.2	1.2	1.2

4.5 INDIVIDUAL SUBSTATION FORECASTS

All demand data is temperature corrected according to the forecast methodology.

For forecasting purposes the individual distribution connection points (feeders) at each substation are aggregated to give a connection site (substation) forecast.

4.5.1 Arthurs Lake

Description:

The Substation is located on the land adjacent to Arthurs Lake and is known as "Arthurs Lake Substation". The substation is owned by Transend.

Table 4-21 Arthurs Lake Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	6.6	1	12	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-22 Arthurs Lake Site Winter load forecast

Arthurs Lake	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2012	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2013	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2014	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2015	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2016	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2017	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2018	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2019	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2020	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

Table 4-23 Arthurs Lake Site Summer load forecast

Arthurs Lake	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2006	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2007	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2008	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2009	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2010	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2011	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2012	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2013	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2014	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2015	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2016	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2017	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2018	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2019	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2020	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

Load Profiles:

No load profile data available for Arthurs Lake connection site.

4.5.2 Avoca

Description:

The Substation located at Avoca and is known as “Avoca Substation”. The substation is owned by Transend.

Table 4-24 Avoca Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	4	10	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-25 Avoca Site Winter load forecast

Avoca	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	6.26	6.48	5.71	5.91	6.26	6.48	5.74	5.94
2006	6.27	6.53	5.48	5.70	6.27	6.53	5.51	5.73
2007	6.82	7.08	6.61	6.86	6.82	7.08	6.67	6.92
2008	8.05	8.37	7.84	8.15	8.05	8.37	7.89	8.20
2009	8.03	8.44	8.03	8.44	8.03	8.44	8.15	8.57
2010	6.09	6.14	6.09	6.14	6.09	6.14	6.12	6.17
2011	6.46	6.52	6.46	6.52	6.45	6.50	6.45	6.50
2012	6.59	6.65	6.59	6.65	6.58	6.64	6.58	6.64
2013	6.71	6.77	6.71	6.77	6.70	6.76	6.70	6.76
2014	6.87	6.93	6.87	6.93	6.86	6.91	6.86	6.91
2015	7.03	7.09	7.03	7.09	7.02	7.08	7.02	7.08
2016	7.20	7.26	7.20	7.26	7.19	7.25	7.19	7.25
2017	7.38	7.44	7.38	7.44	7.37	7.43	7.37	7.43
2018	7.58	7.65	7.58	7.65	7.57	7.64	7.57	7.64
2019	7.81	7.88	7.81	7.88	7.81	7.88	7.81	7.88
2020	8.06	8.13	8.06	8.13	8.06	8.13	8.06	8.13

Table 4-26 Avoca Site Summer load forecast

Avoca	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	5.76	5.91	5.73	5.87	5.76	5.91	5.73	5.87
2006	6.57	7.26	5.73	6.33	6.57	7.26	5.73	6.33
2007	6.85	7.57	6.58	7.28	6.85	7.57	6.61	7.31
2008	6.40	6.97	4.94	5.37	6.40	6.97	4.96	5.40
2009	7.78	8.60	5.14	5.68	7.78	8.60	5.17	5.72
2010	6.98	7.38	5.87	6.22	6.98	7.38	5.92	6.27
2011	7.10	7.51	5.98	6.33	7.28	7.70	6.13	6.49
2012	7.43	7.87	6.26	6.63	7.62	8.07	6.42	6.79
2013	7.64	8.09	6.43	6.81	7.84	8.29	6.60	6.98
2014	7.76	8.22	6.54	6.92	7.95	8.41	6.69	7.09
2015	8.01	8.48	6.75	7.14	8.20	8.68	6.91	7.31
2016	8.10	8.58	6.82	7.22	8.31	8.79	6.99	7.40
2017	8.50	9.00	7.16	7.58	8.70	9.21	7.33	7.76
2018	8.78	9.29	7.39	7.83	8.99	9.52	7.57	8.02
2019	9.06	9.59	7.63	8.08	9.28	9.82	7.81	8.27
2020	9.37	9.92	7.89	8.35	9.59	10.15	8.07	8.55

Figure 4-3 Avoca Site Summer Load Forecast at 50% and 10% POE

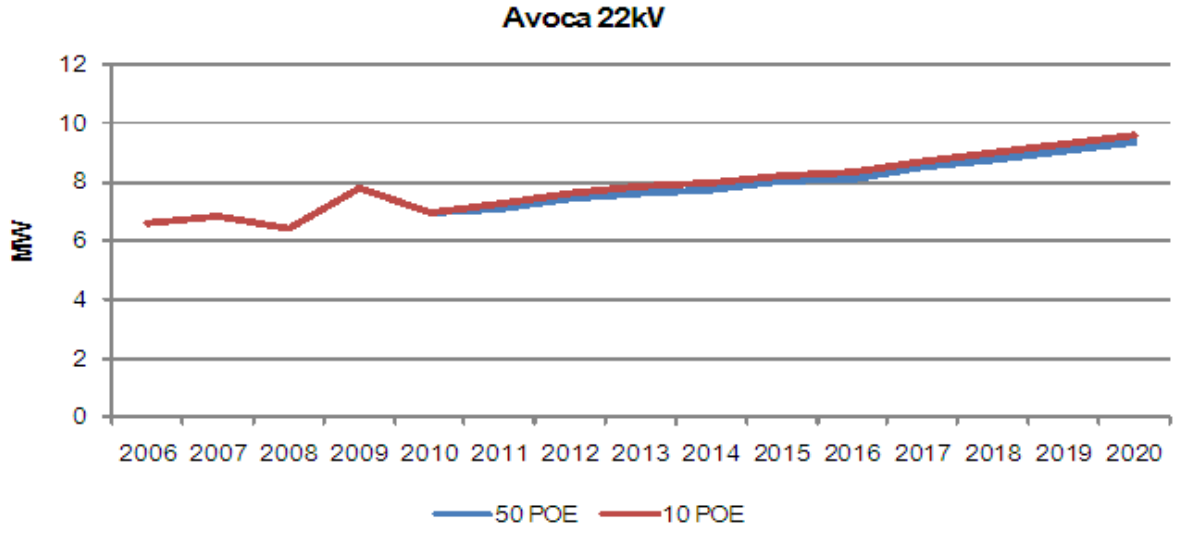
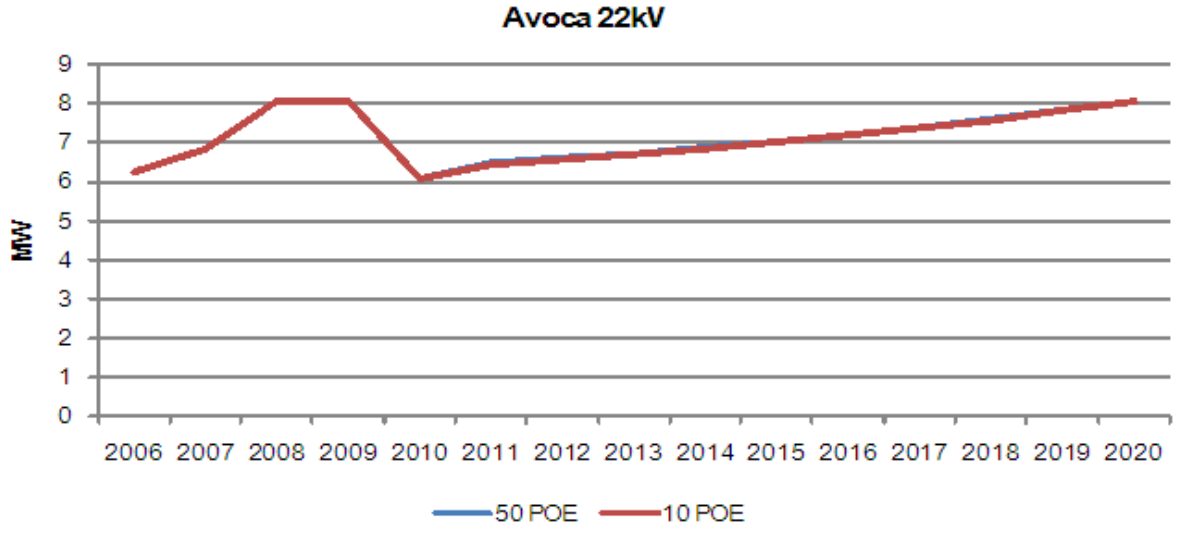
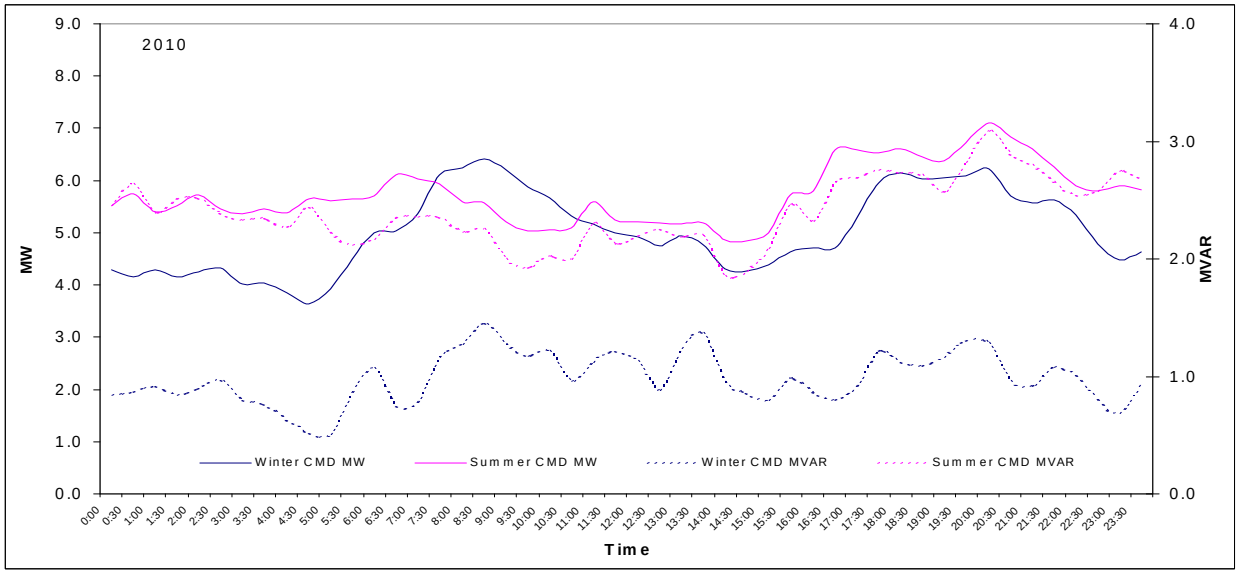


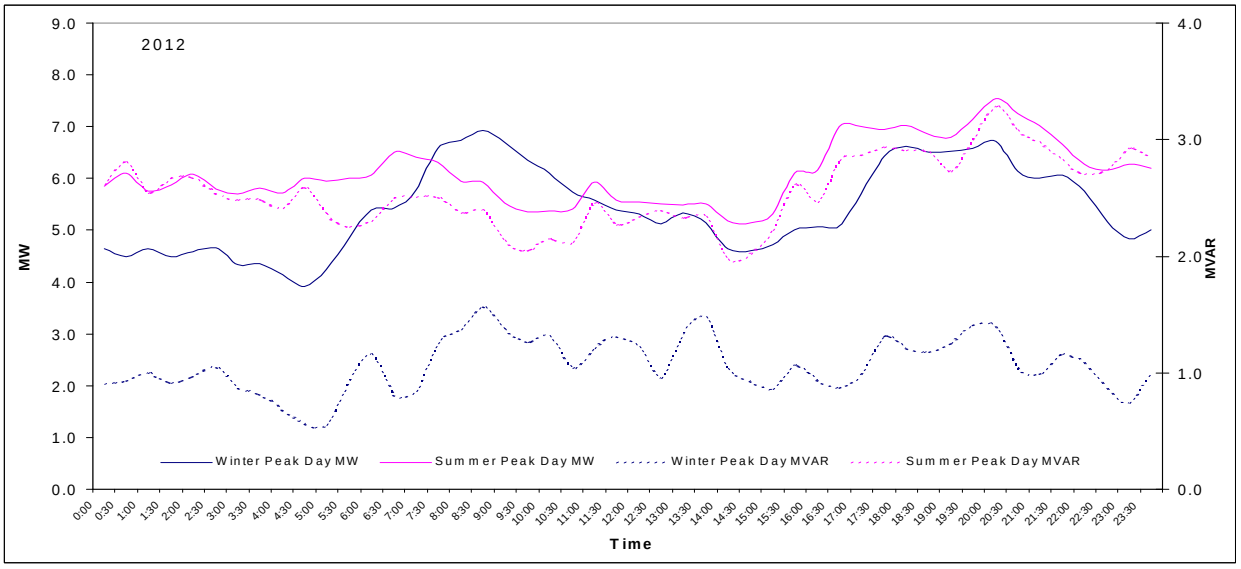
Figure 4-4 Avoca Site Winter Load Forecast at 50% and 10% POE



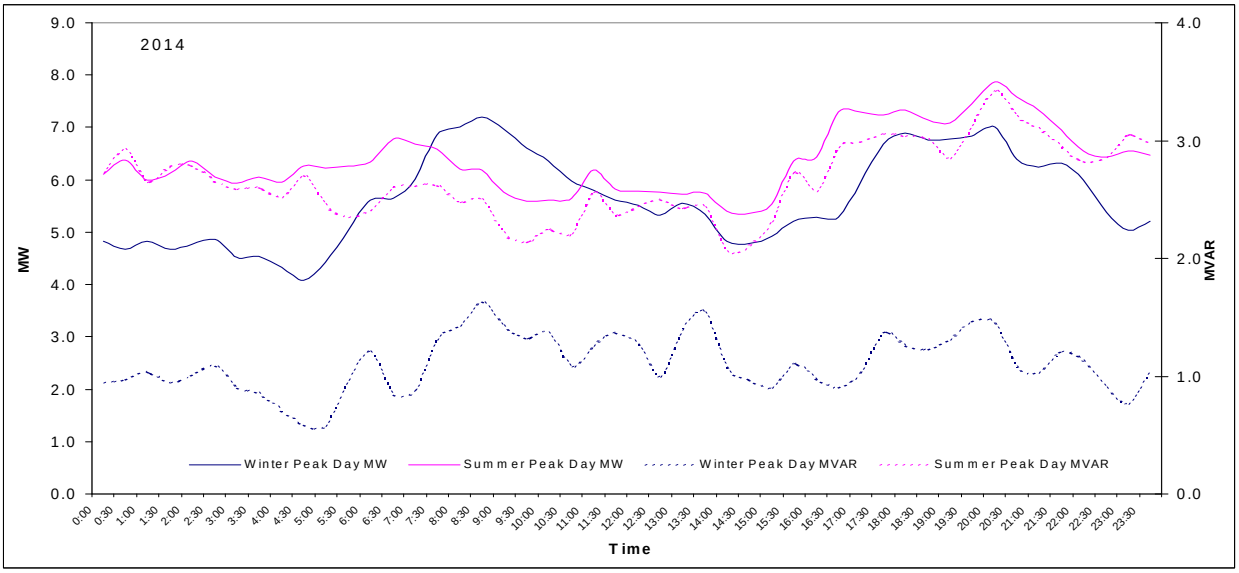
Load Profiles:

Figure 4-5 Load Profiles: Avoca Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

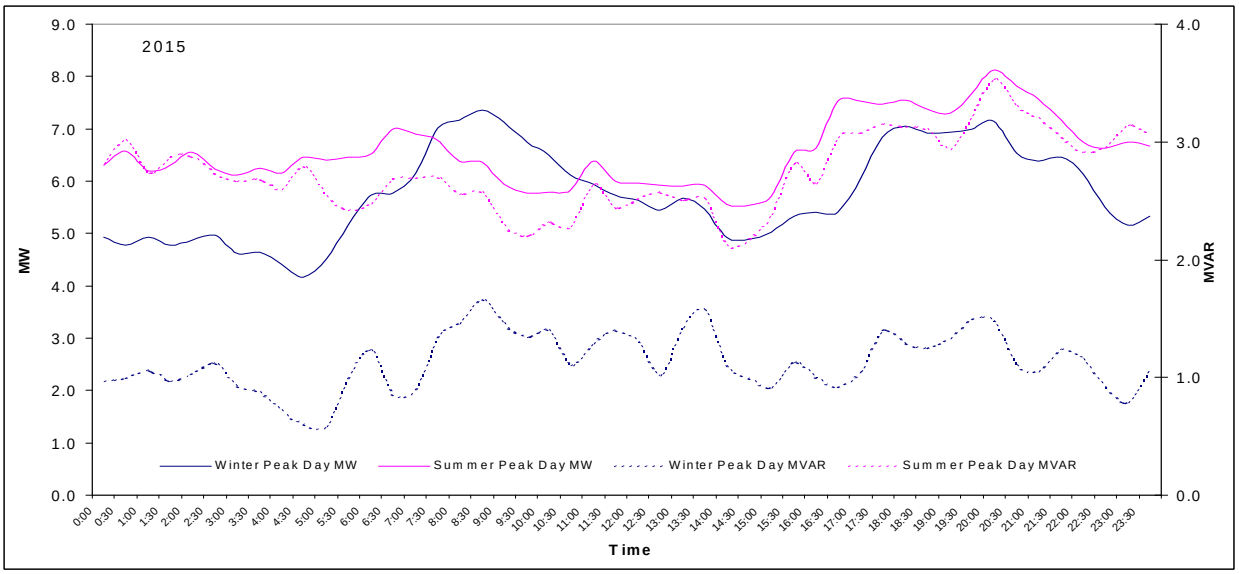
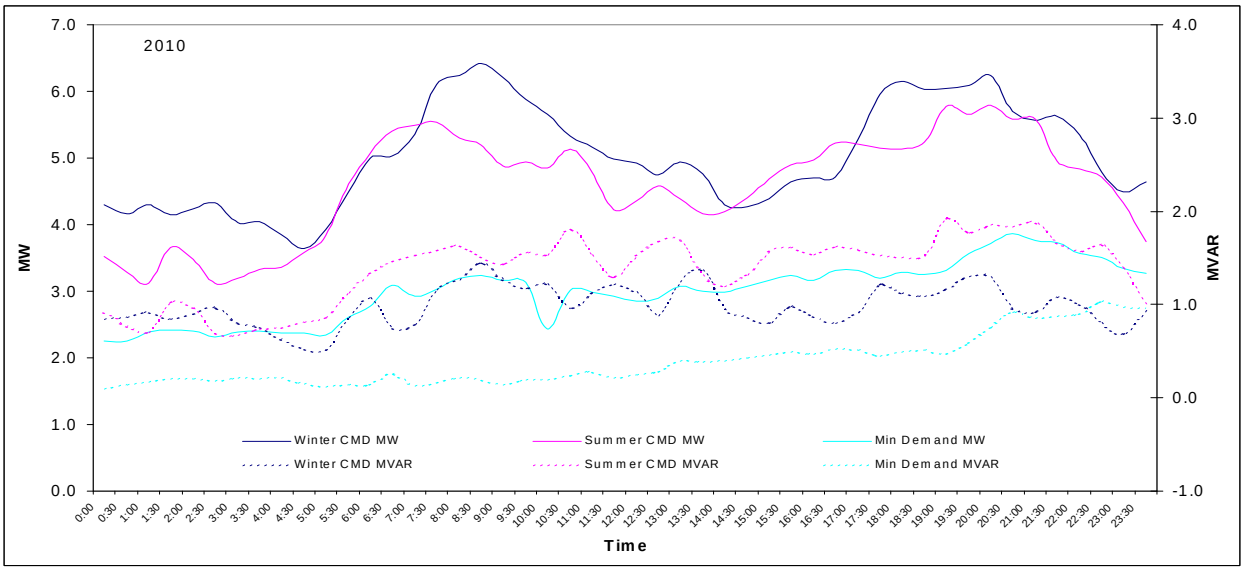
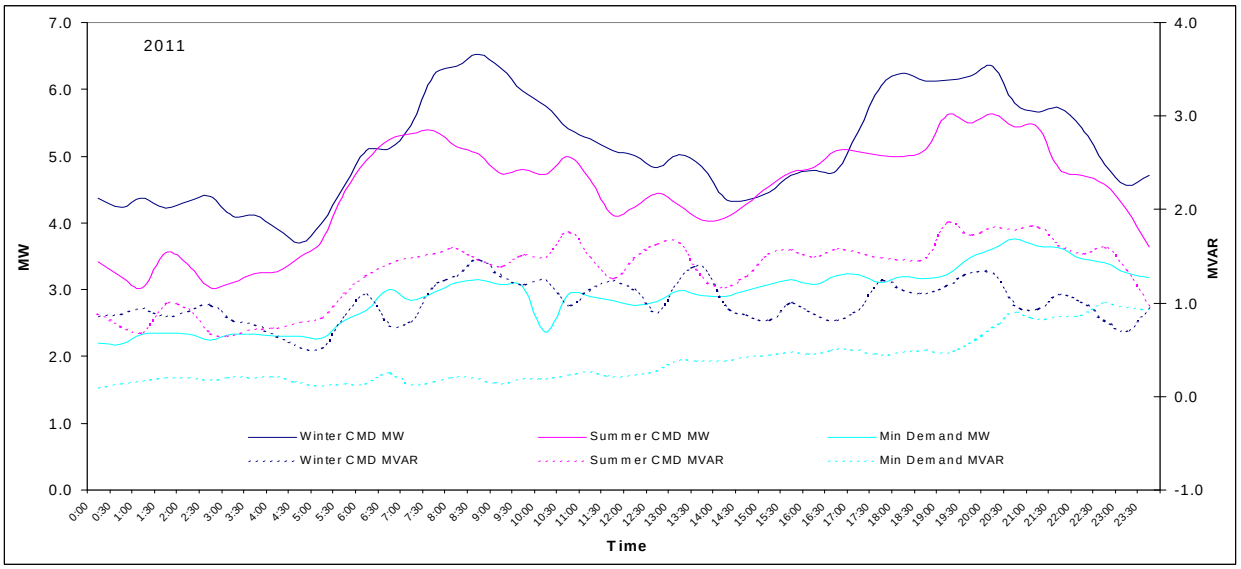
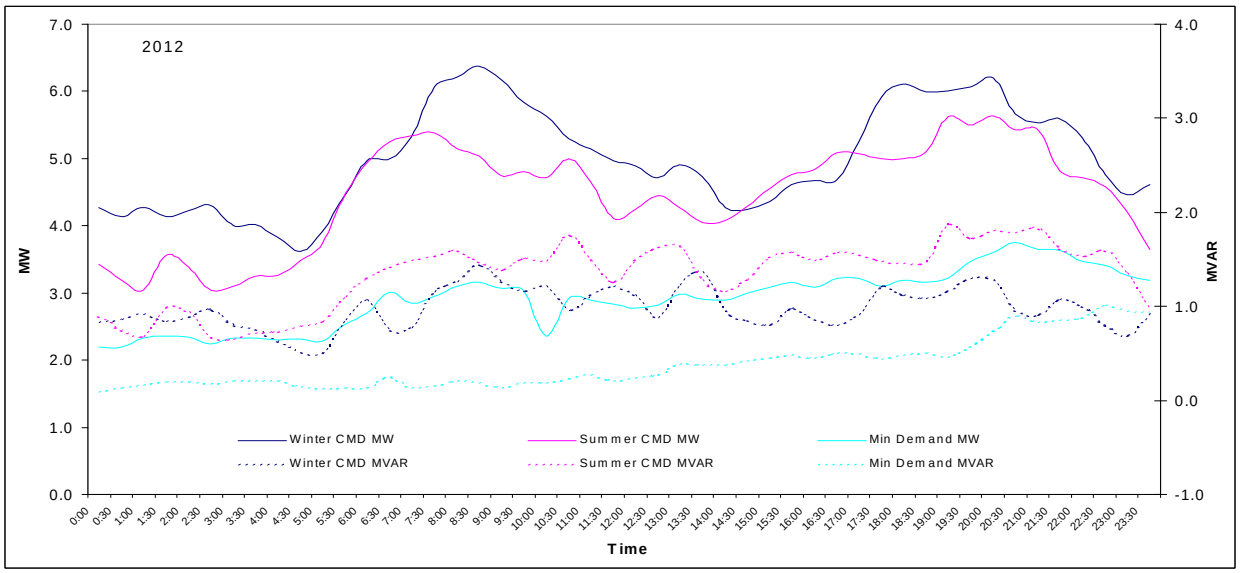
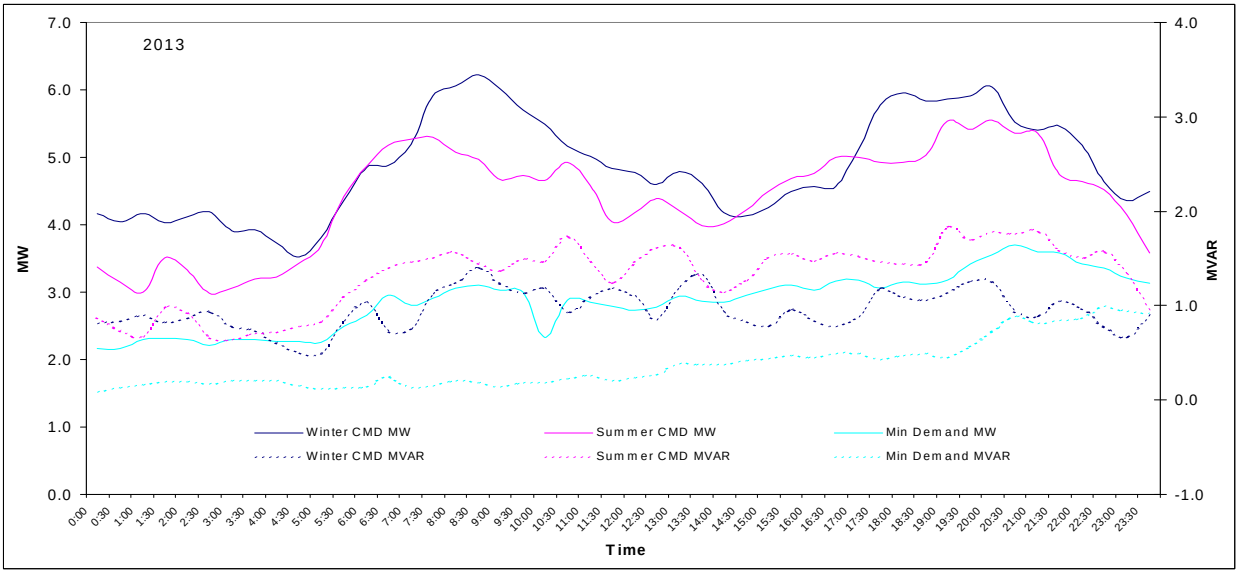

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

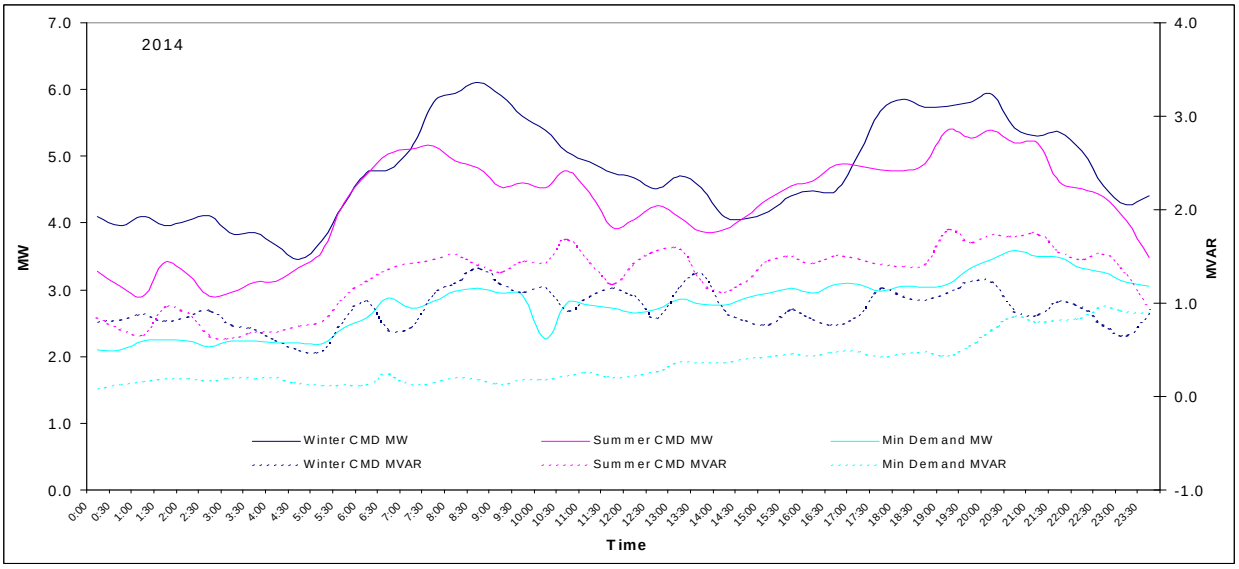
Figure 4-6 Load Profiles: Avoca Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

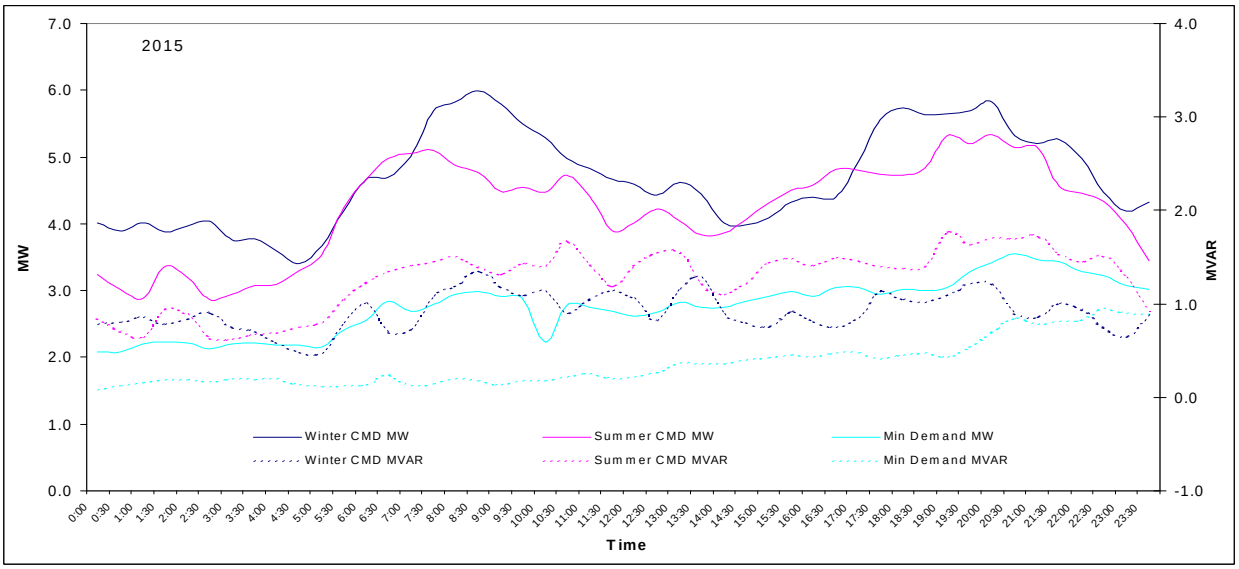
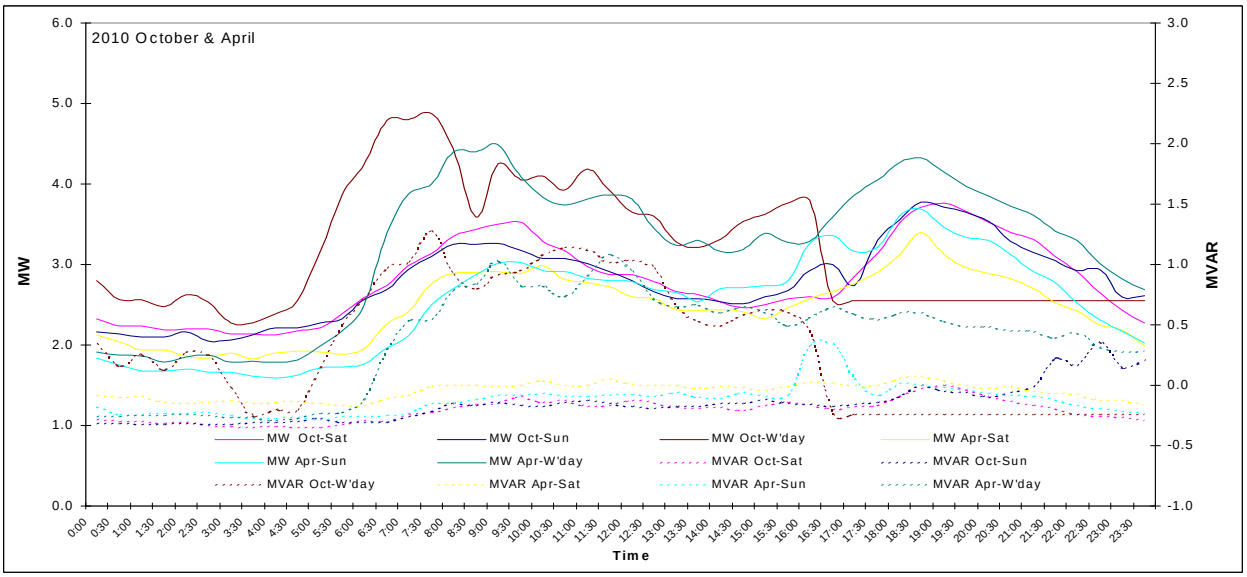
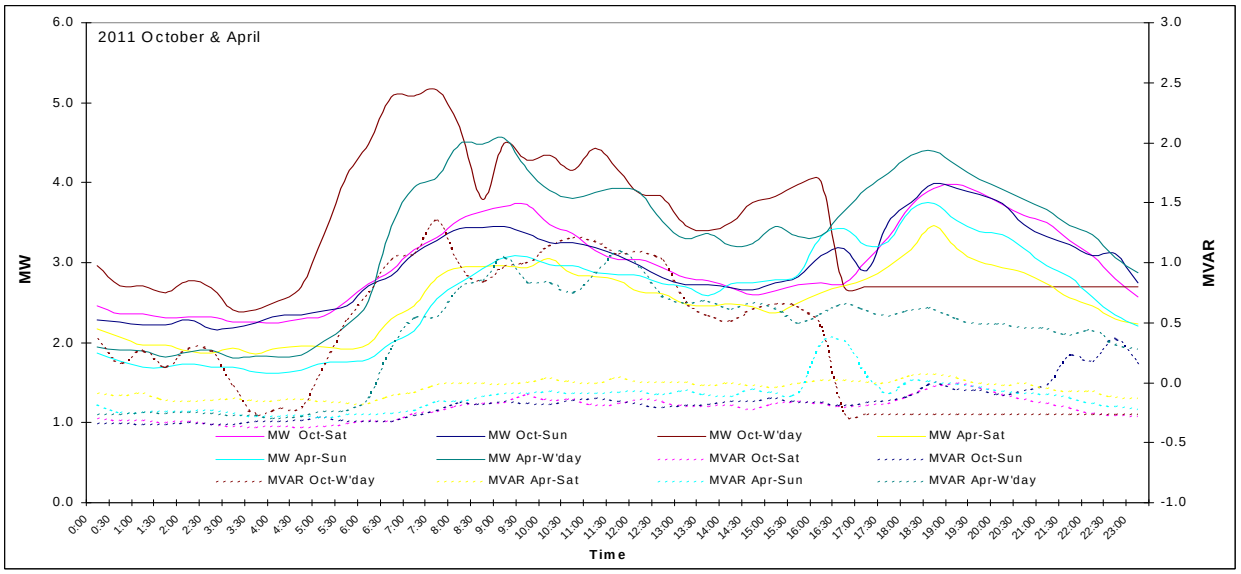
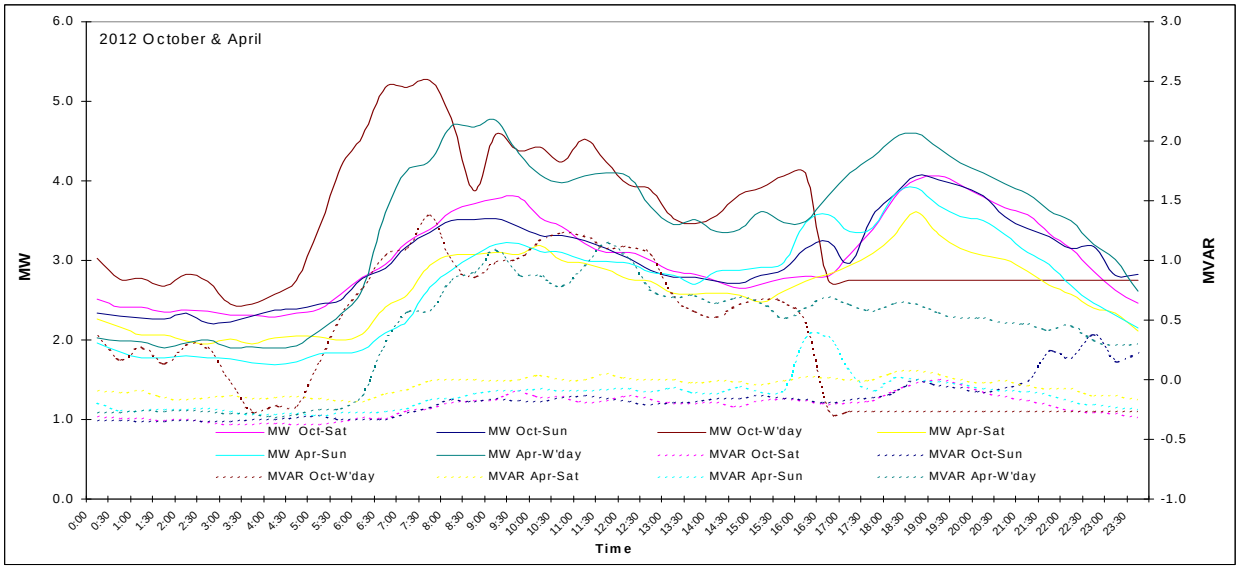
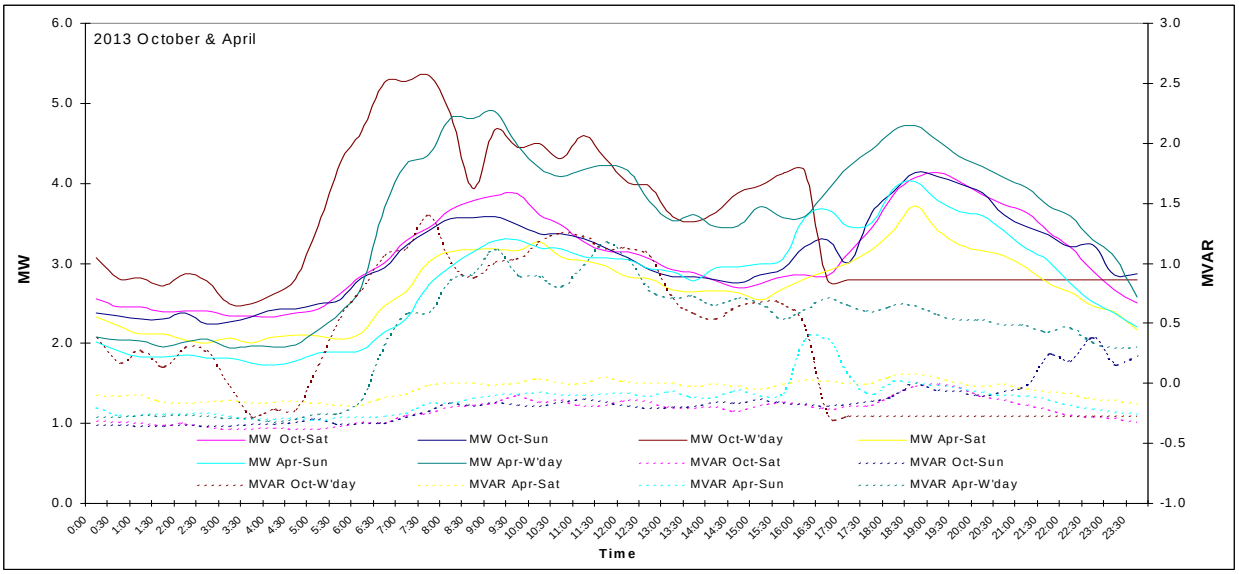

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

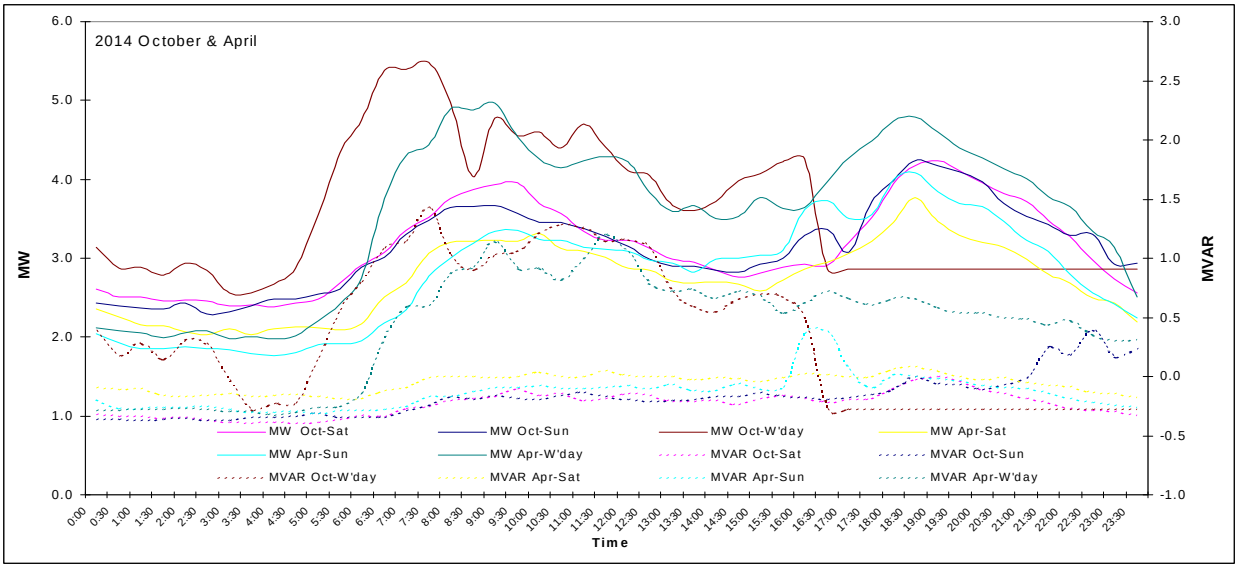
Figure 4-7 Load Profiles: Weekday, Saturday, Sunday for October & April











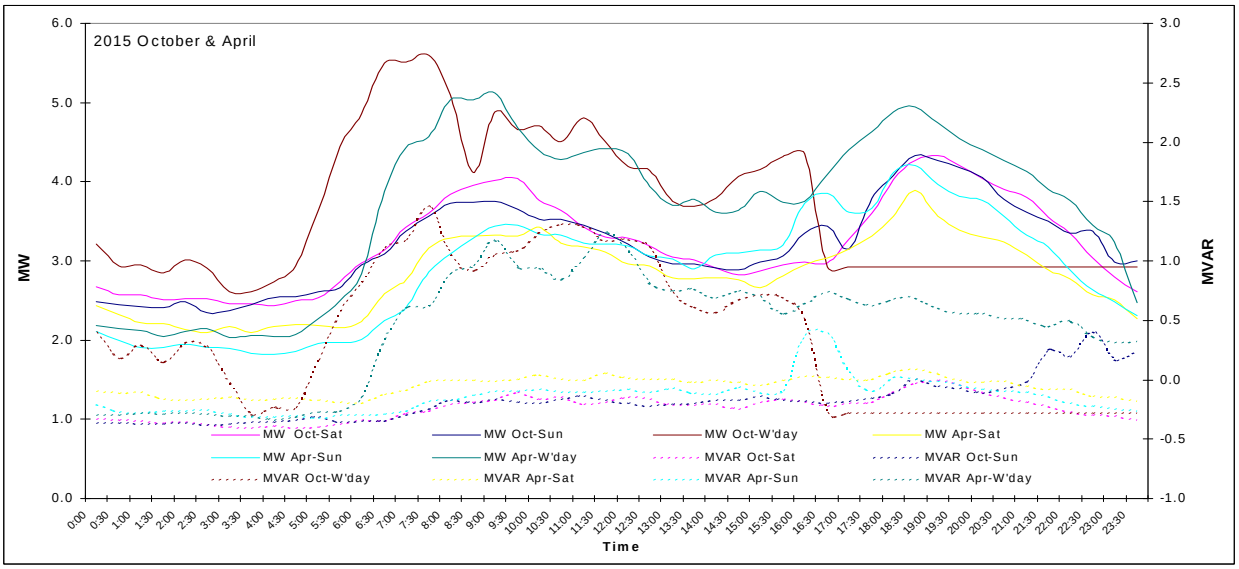
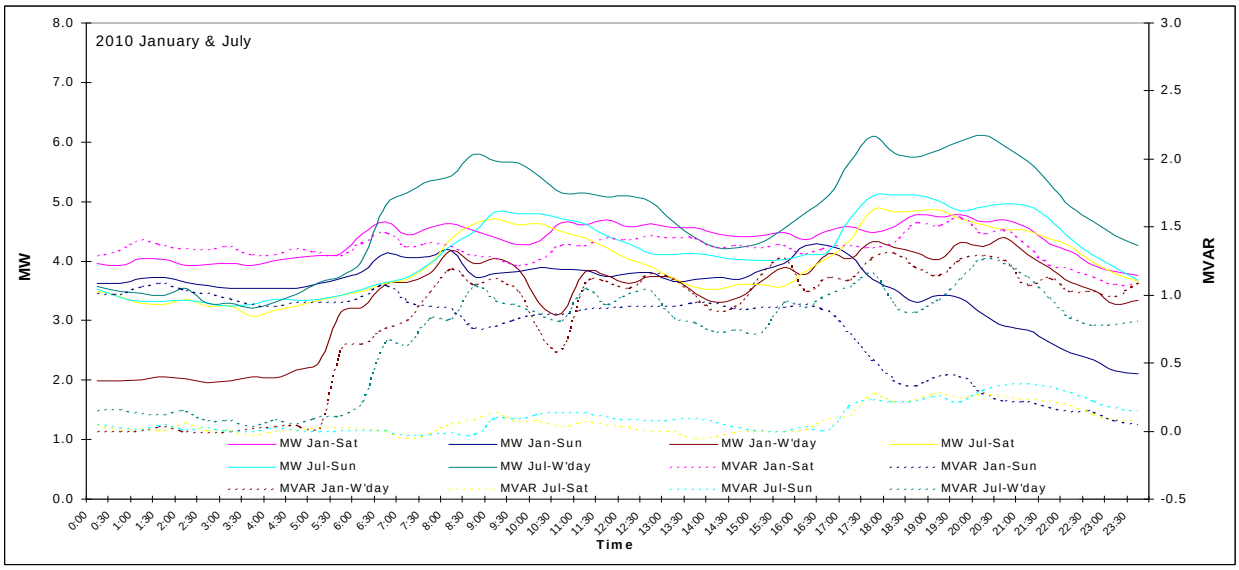
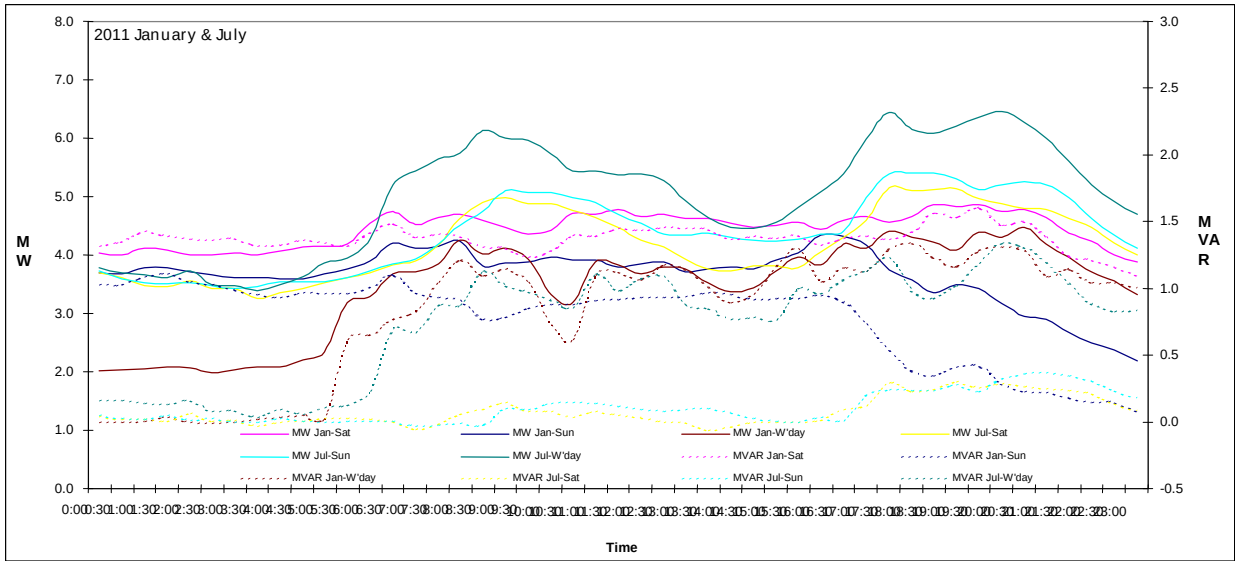
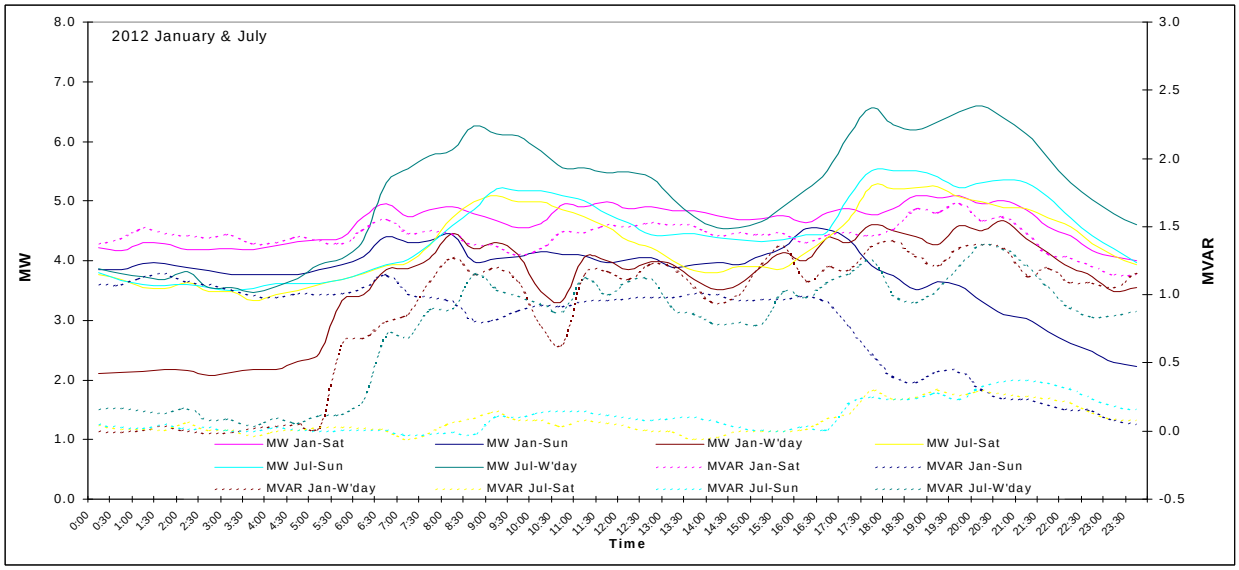
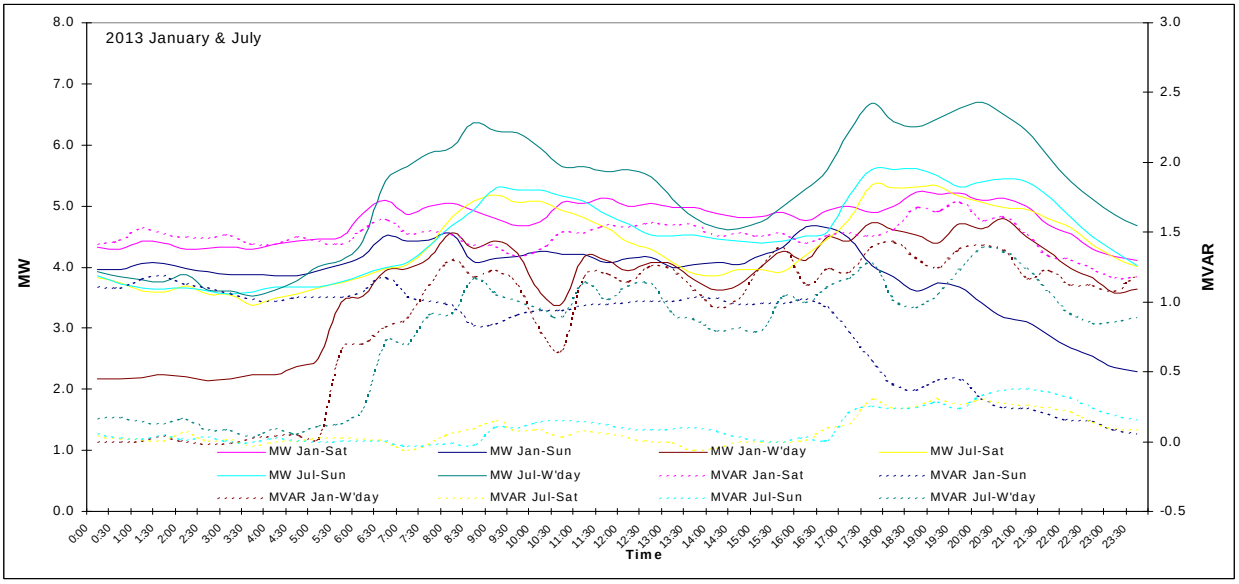


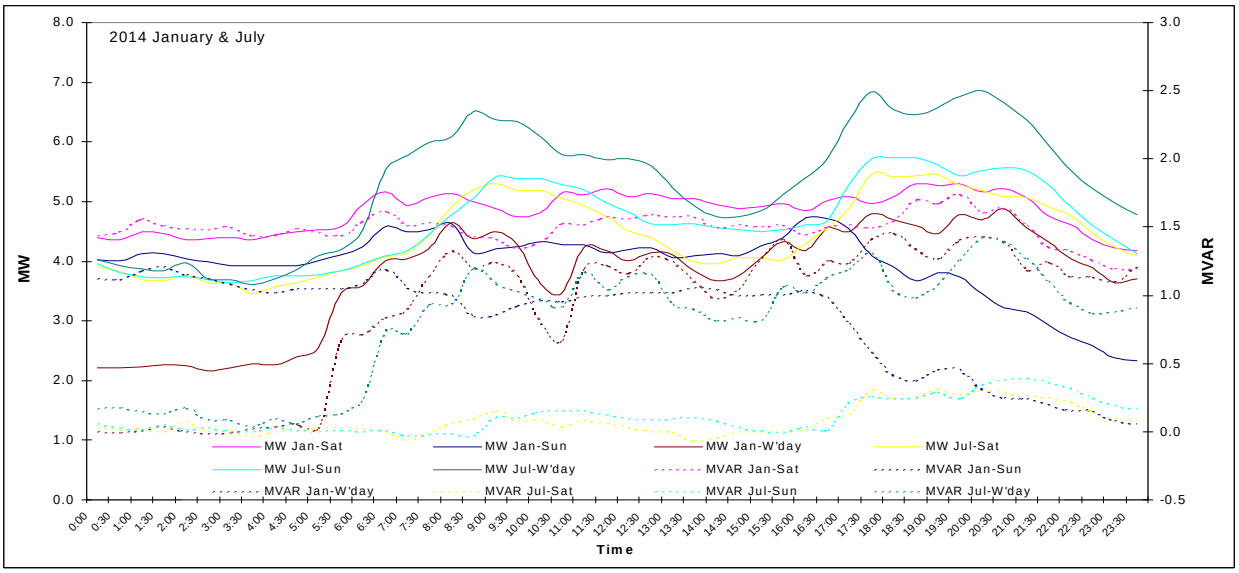
Figure 4-8 Load Profiles: Weekday, Saturday, Sunday for January & July

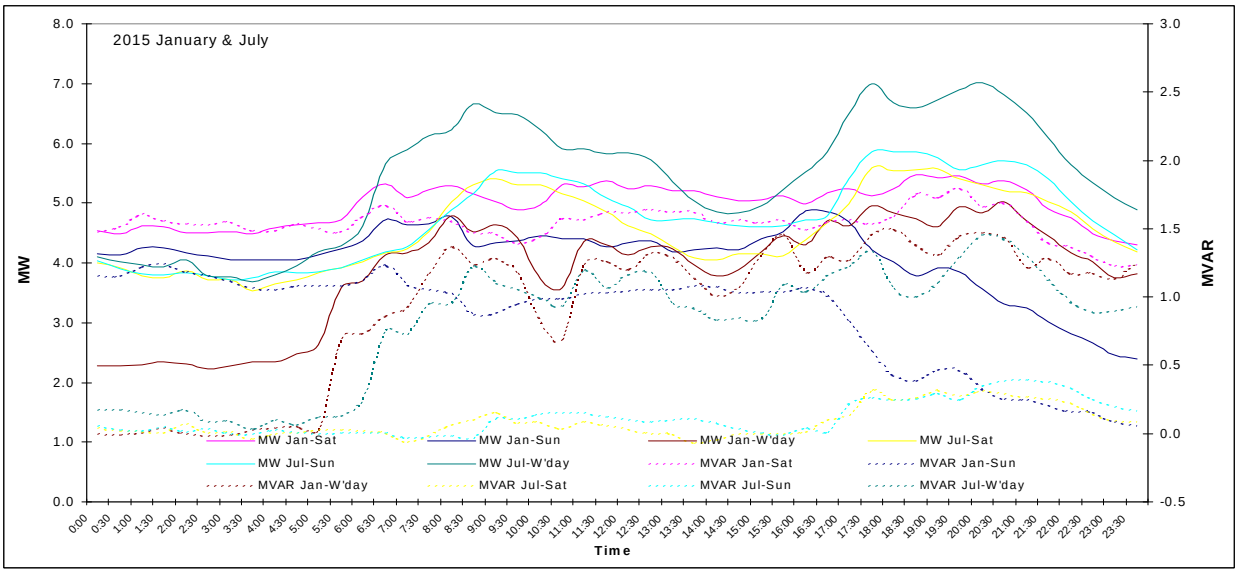







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.3 Bridgewater

Description:

The Substation is located at Bridgewater and is known as “Bridgewater Substation”. The substation is owned by Transend.

Table 4-27 Bridgewater Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	12	70	35

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical point load movements have been included in the forecast for this connection site.

A new 1.0 MW committed point load, affecting both summer and winter demand, is to be connected prior to winter 2011 (Brighton Distribution Hub). This has been included in the forecast for this site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-28 Bridgewater Site Winter load forecast

Bridgewater	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	30.84	31.59	30.84	31.59	30.84	31.59	31.24	32.00
2006	31.39	32.14	30.05	30.77	31.39	32.14	30.52	31.25
2007	31.13	31.75	28.18	28.74	31.13	31.75	28.55	29.12
2008	34.88	35.25	34.88	35.25	34.88	35.25	35.48	35.85
2009	31.37	31.69	31.37	31.69	31.37	31.69	31.81	32.14
2010	36.67	36.85	32.67	32.82	36.67	36.85	33.09	33.25
2011	39.92	40.11	35.56	35.73	40.15	40.34	35.76	35.93
2012	40.68	40.88	36.24	36.41	40.91	41.10	36.44	36.61
2013	41.35	41.54	36.83	37.01	41.60	41.80	37.06	37.23
2014	42.29	42.49	37.67	37.85	42.53	42.73	37.88	38.06
2015	43.21	43.42	38.49	38.67	43.48	43.68	38.73	38.91
2016	44.26	44.46	39.42	39.61	44.51	44.72	39.64	39.83
2017	45.30	45.51	40.35	40.54	45.57	45.79	40.59	40.78
2018	46.53	46.75	41.44	41.64	46.78	47.00	41.67	41.87
2019	47.89	48.12	42.66	42.86	48.20	48.42	42.93	43.13
2020	49.39	49.62	44.00	44.20	49.68	49.91	44.25	44.46

Table 4-29 Bridgewater Site Summer load forecast

Bridgewater	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	17.17	17.76	17.17	17.76	17.17	17.76	17.23	17.83
2006	17.56	18.24	17.56	18.24	17.56	18.24	17.73	18.42
2007	16.71	16.85	15.42	15.54	16.71	16.85	15.61	15.74
2008	22.64	23.12	22.64	23.12	22.64	23.12	23.02	23.51
2009	21.15	21.54	20.42	20.80	21.15	21.54	20.75	21.14
2010	21.41	21.82	21.41	21.82	21.41	21.82	21.74	22.15
2011	23.04	23.48	23.04	23.48	23.77	24.22	23.77	24.22
2012	24.37	24.83	24.37	24.83	25.13	25.61	25.13	25.61
2013	25.28	25.76	25.28	25.76	26.07	26.56	26.07	26.56
2014	25.90	26.39	25.90	26.39	26.66	27.17	26.66	27.17
2015	26.94	27.45	26.94	27.45	27.72	28.25	27.72	28.25
2016	27.45	27.97	27.45	27.97	28.27	28.81	28.27	28.81
2017	29.00	29.55	29.00	29.55	29.83	30.39	29.83	30.39
2018	30.14	30.71	30.14	30.71	31.00	31.59	31.00	31.59
2019	31.31	31.90	31.31	31.90	32.18	32.79	32.18	32.79
2020	32.55	33.16	32.55	33.16	33.44	34.07	33.44	34.07

Figure 4-9 Bridgewater Site Summer Load Forecast at 50% and 10% POE

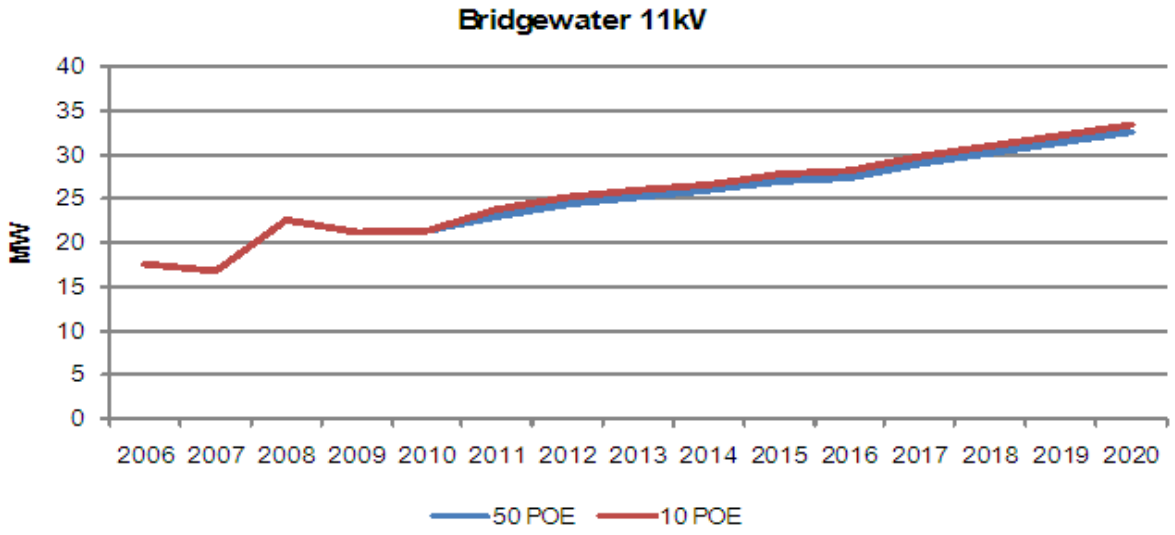
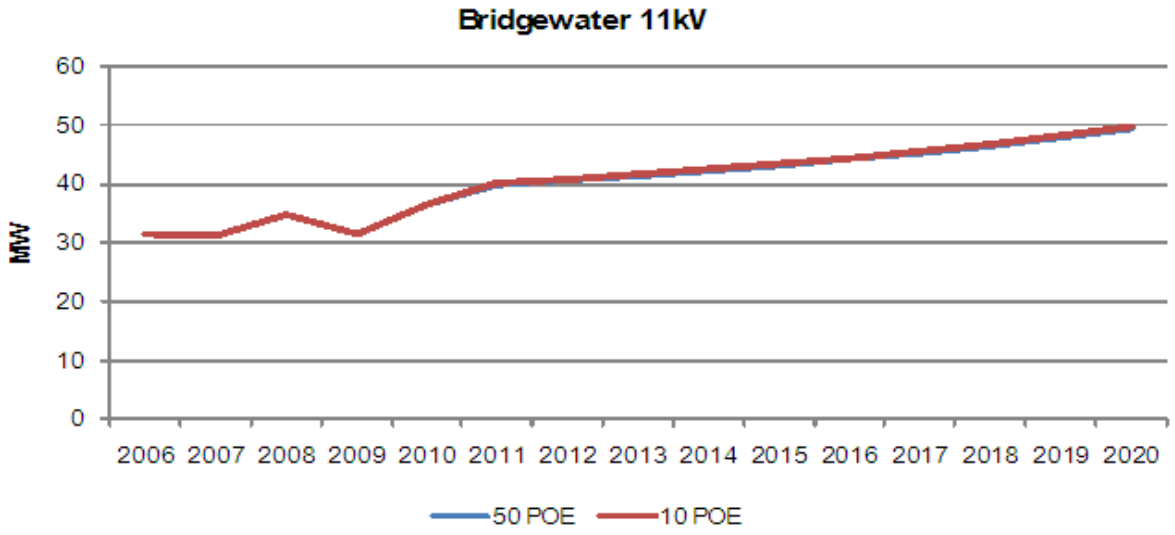
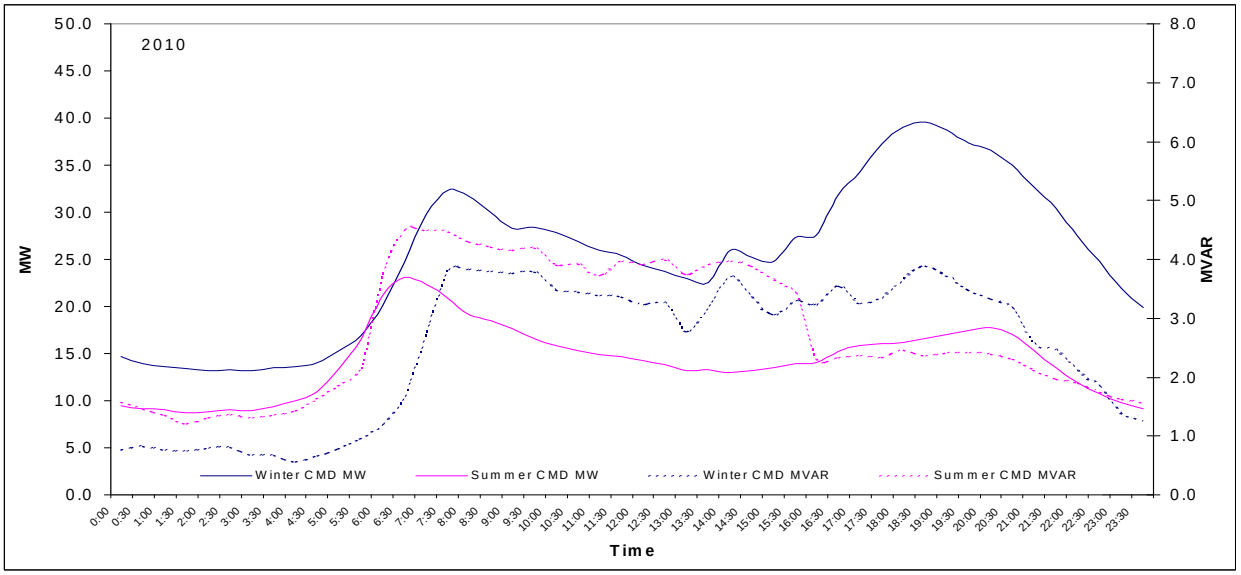


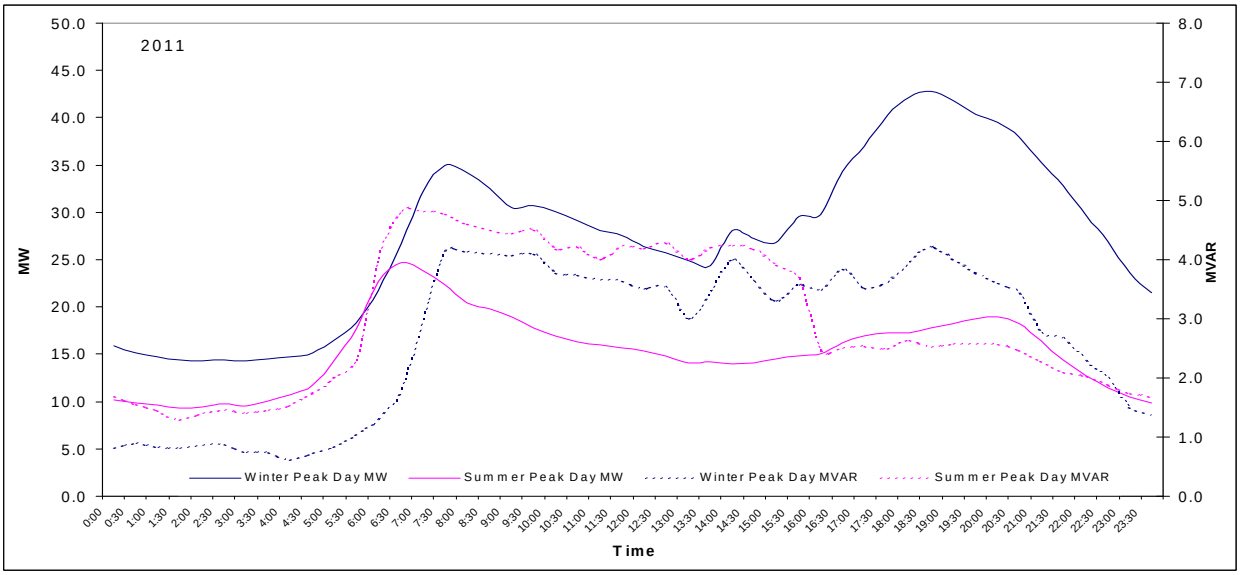
Figure 4-10 Bridgewater Site Winter Load Forecast at 50% and 10% POE.

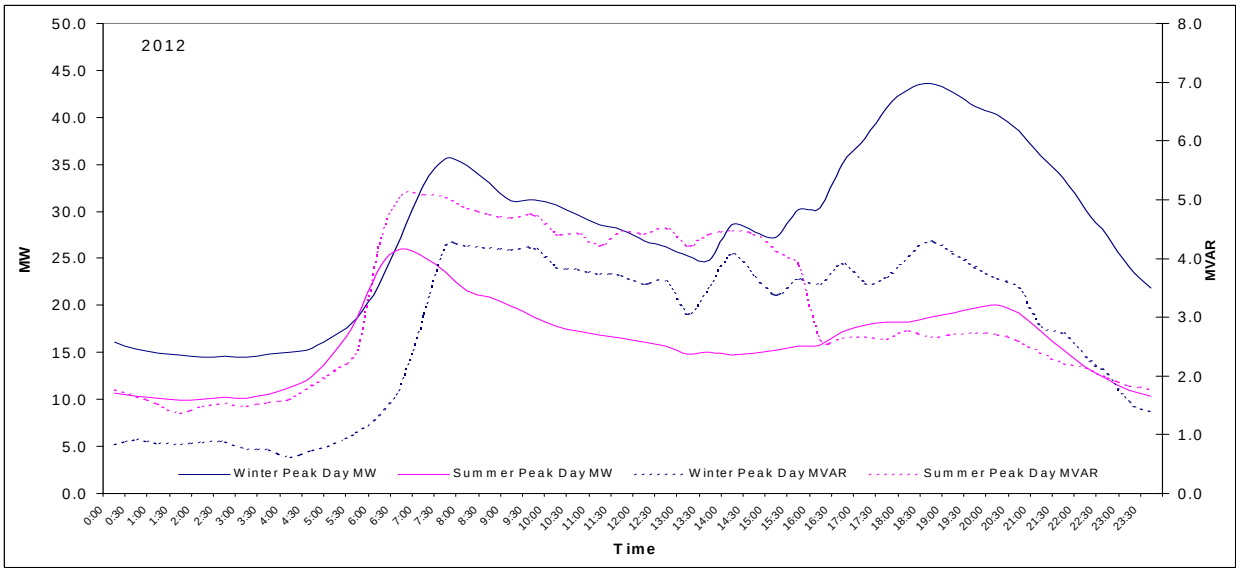


Load Profiles:

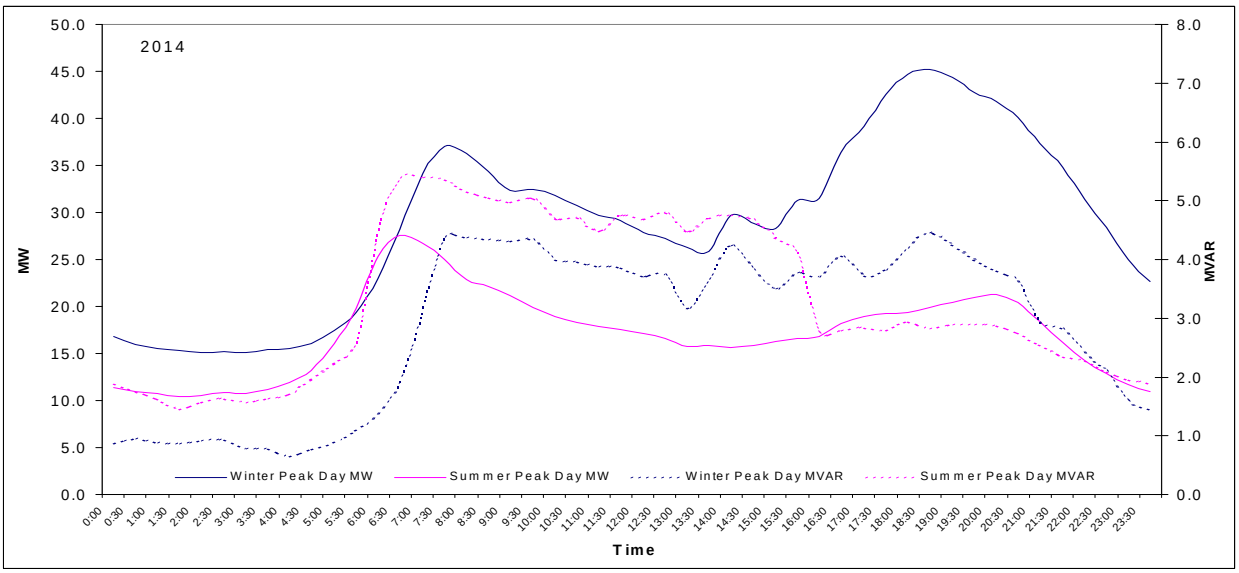
Figure 4-11 Load Profiles: Bridgewater Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

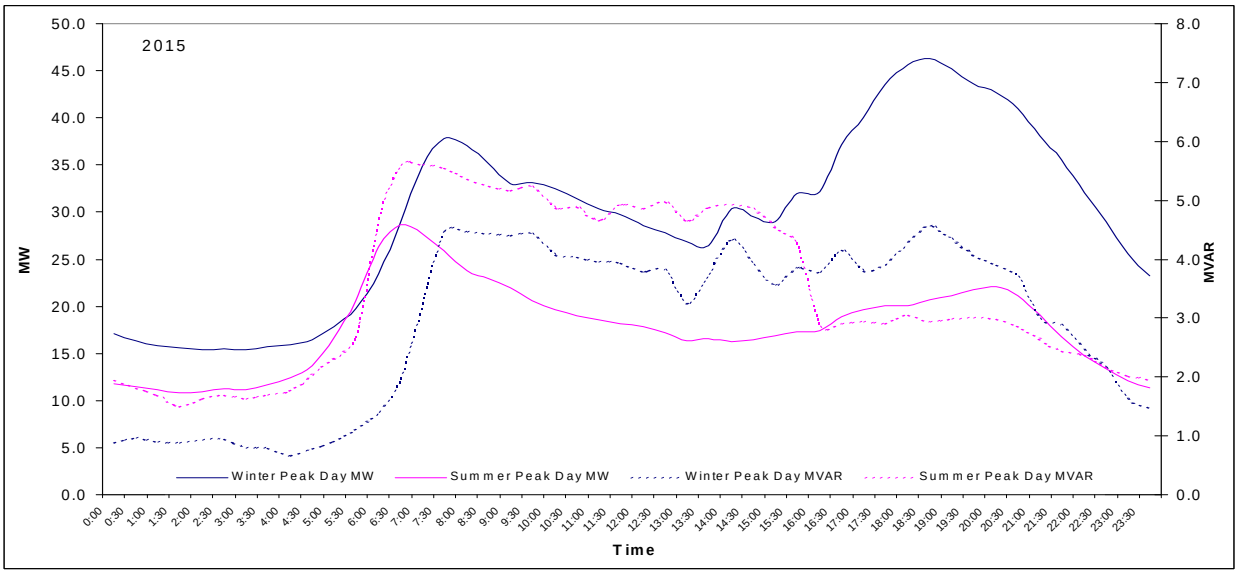
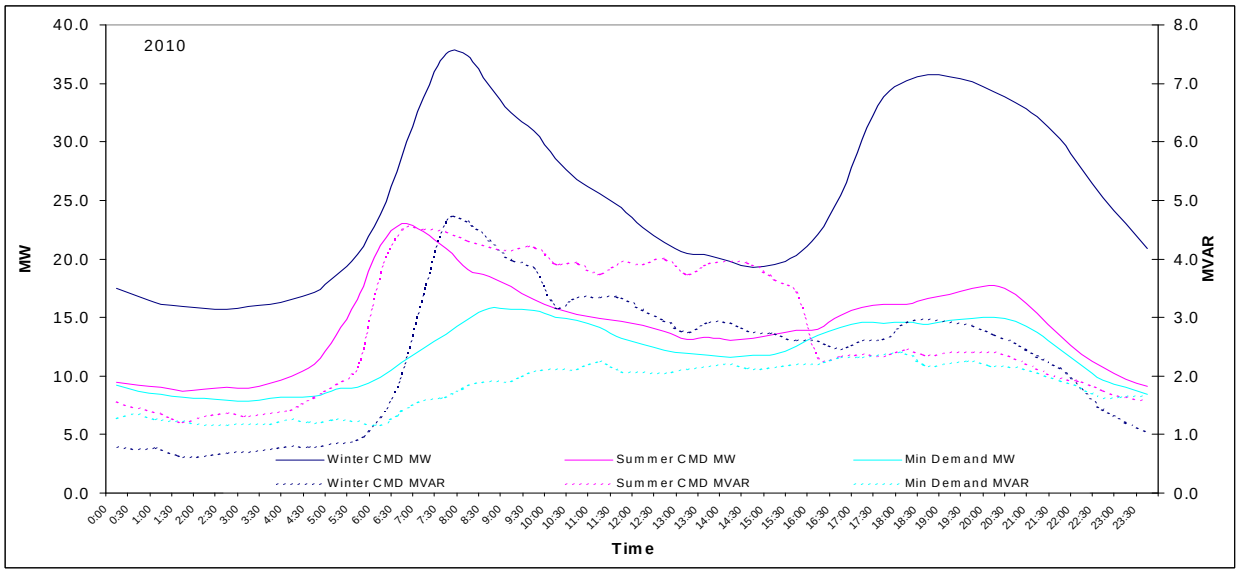
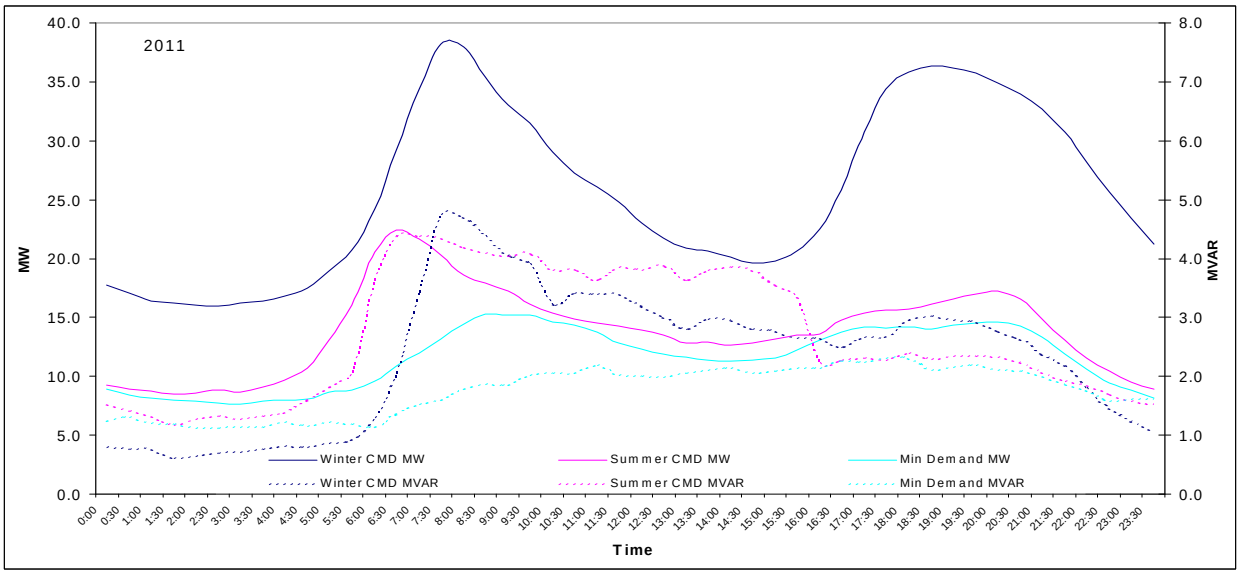
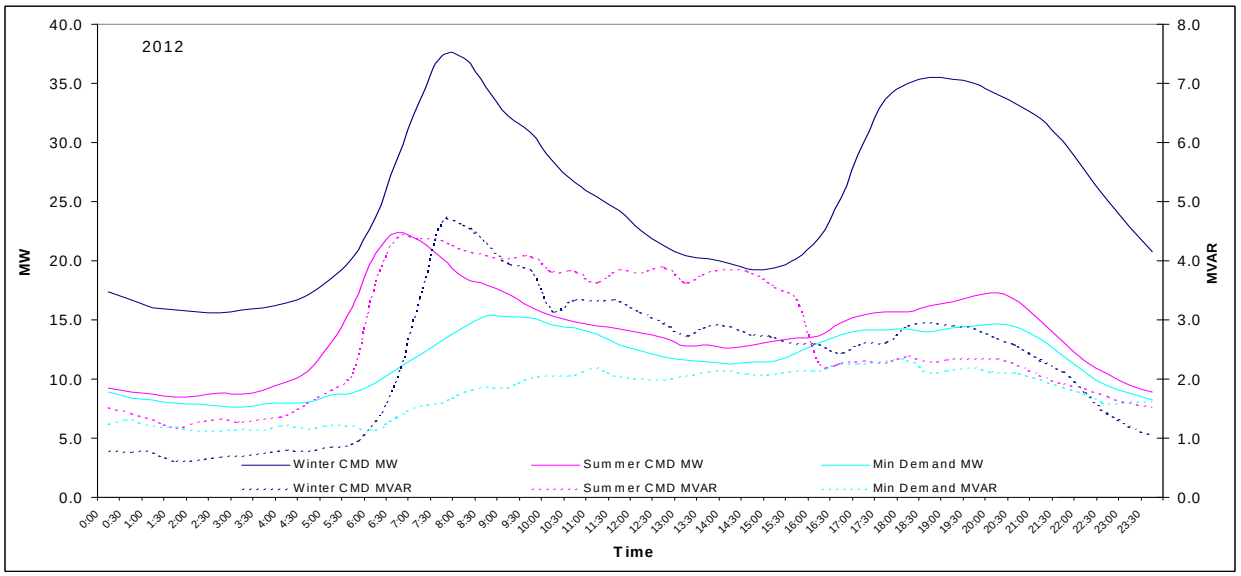
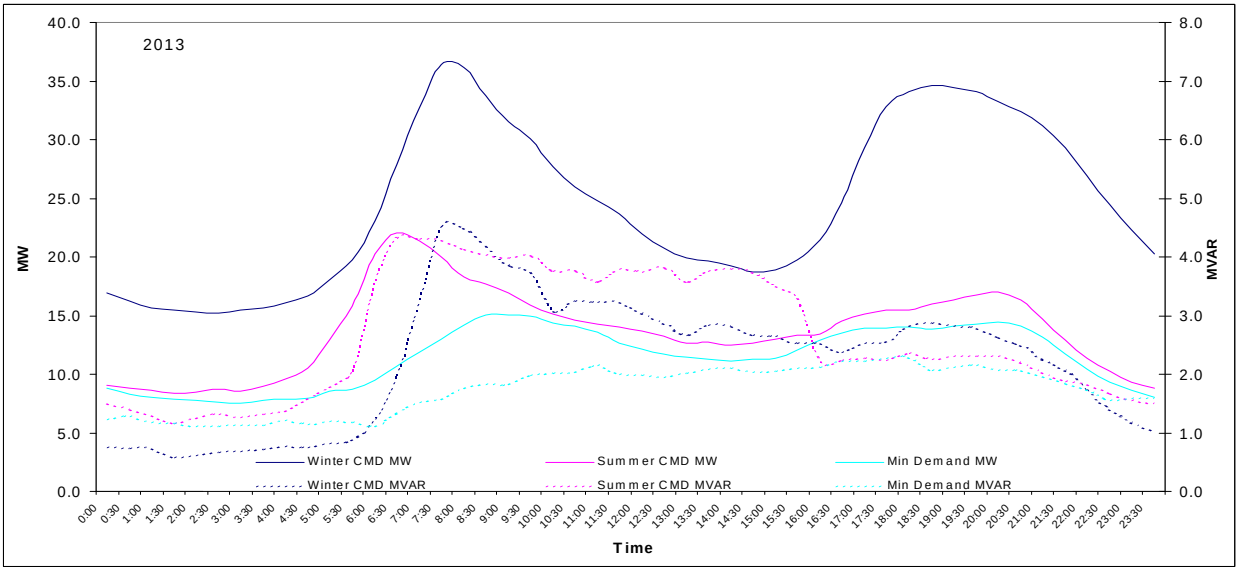

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

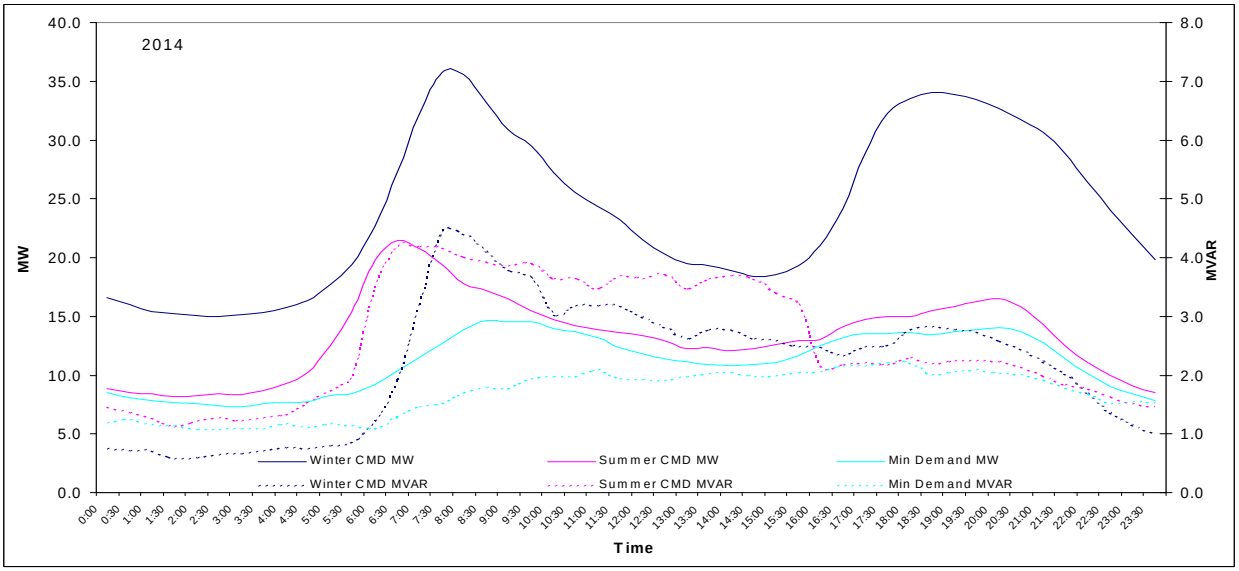
Figure 4-12 Load Profiles: Bridgewater Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

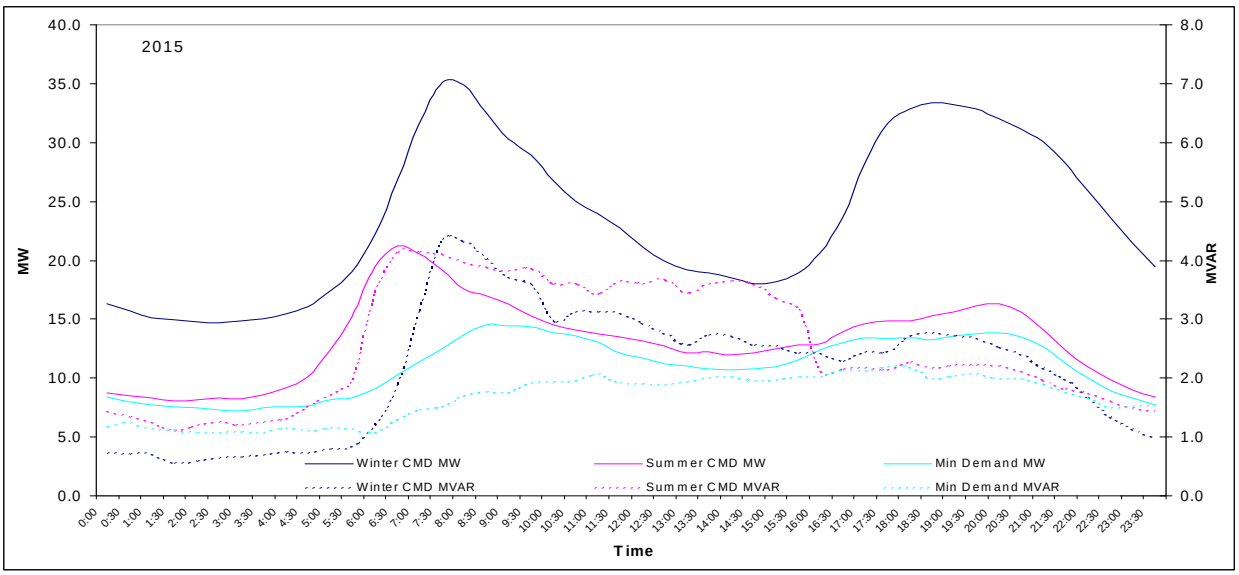
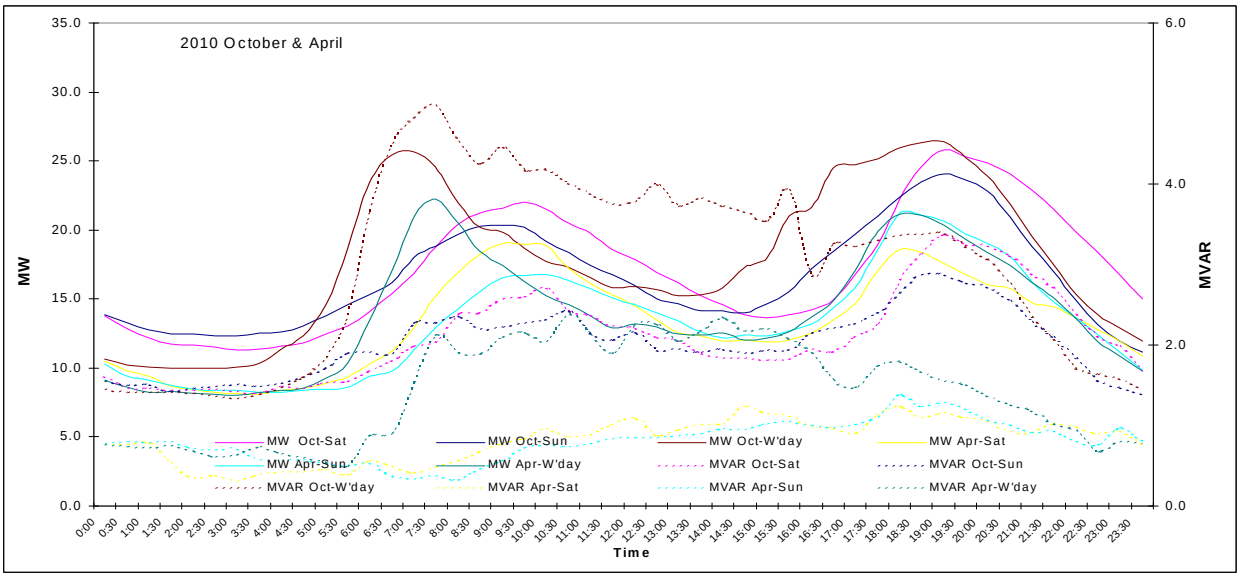
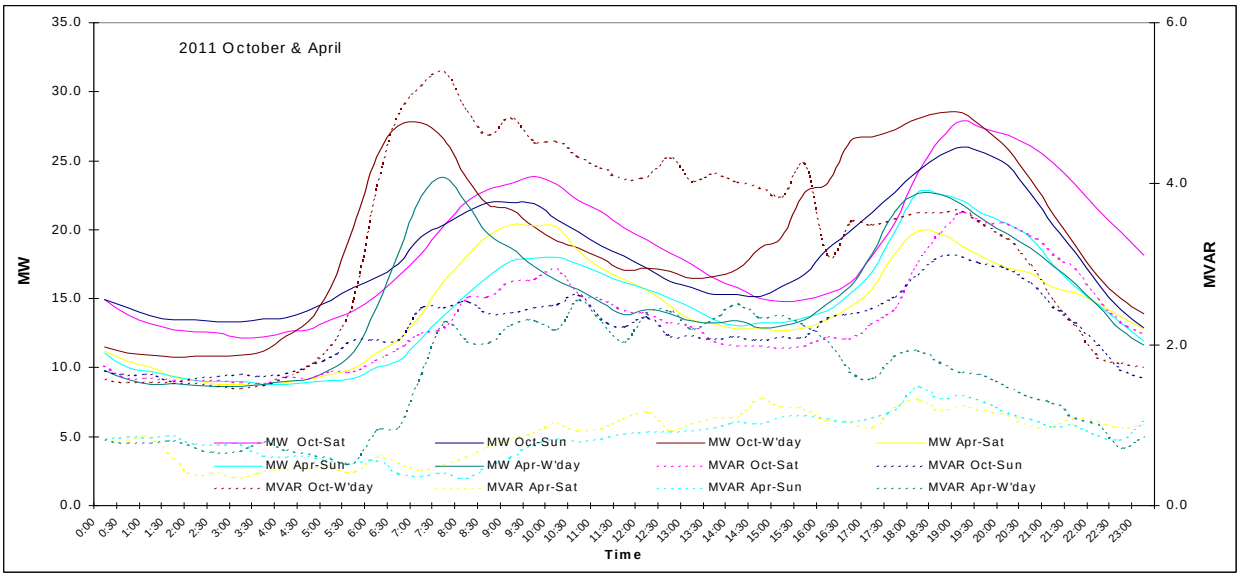
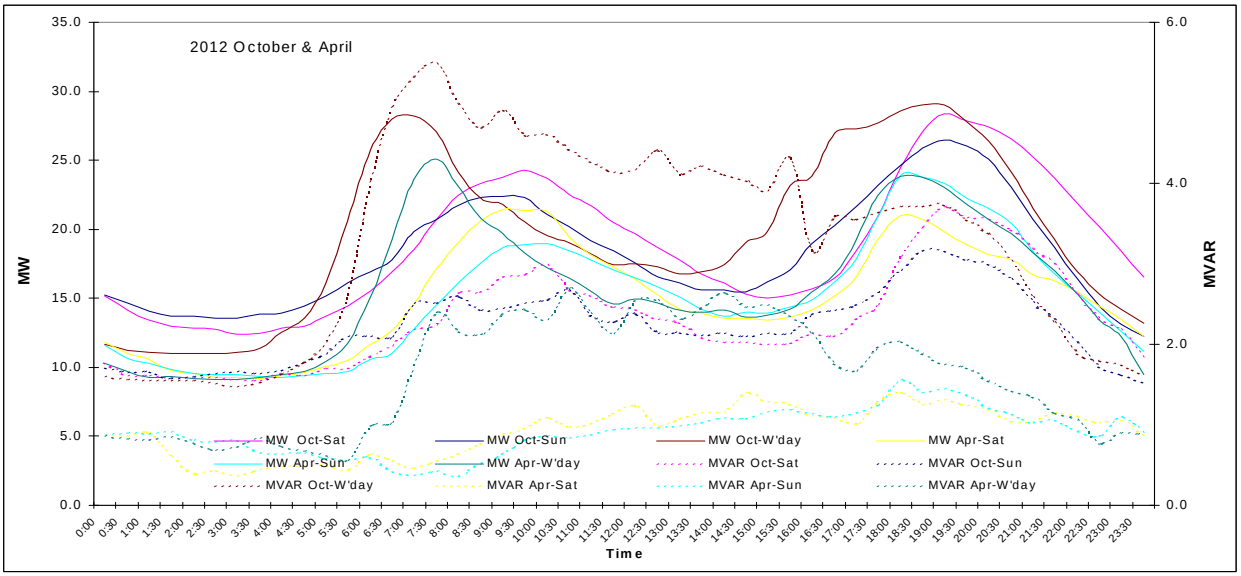
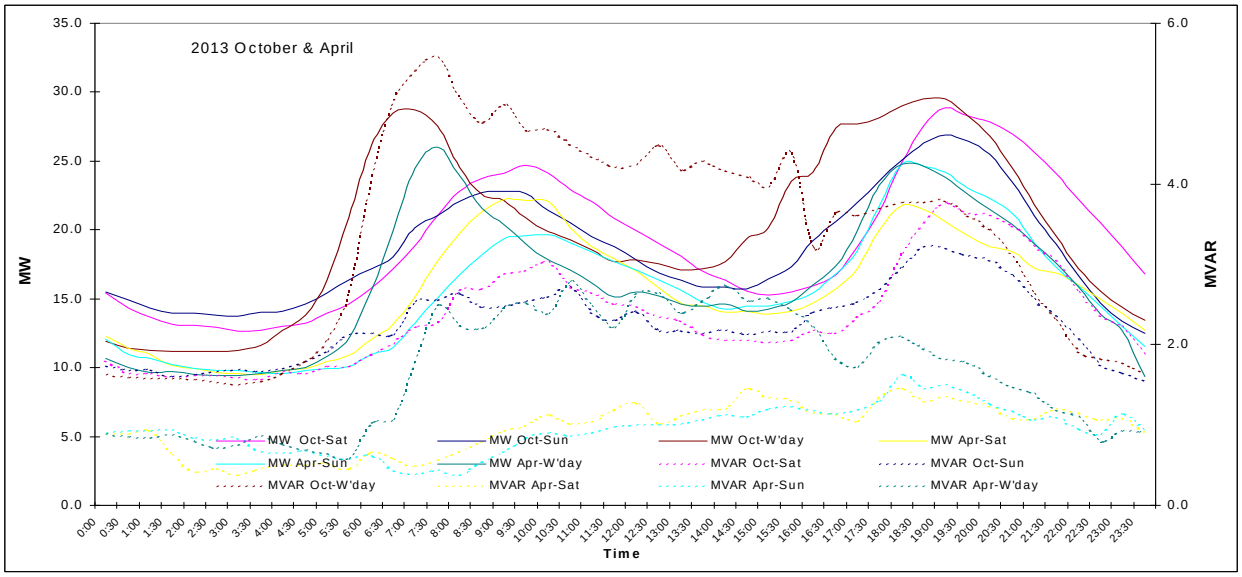

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

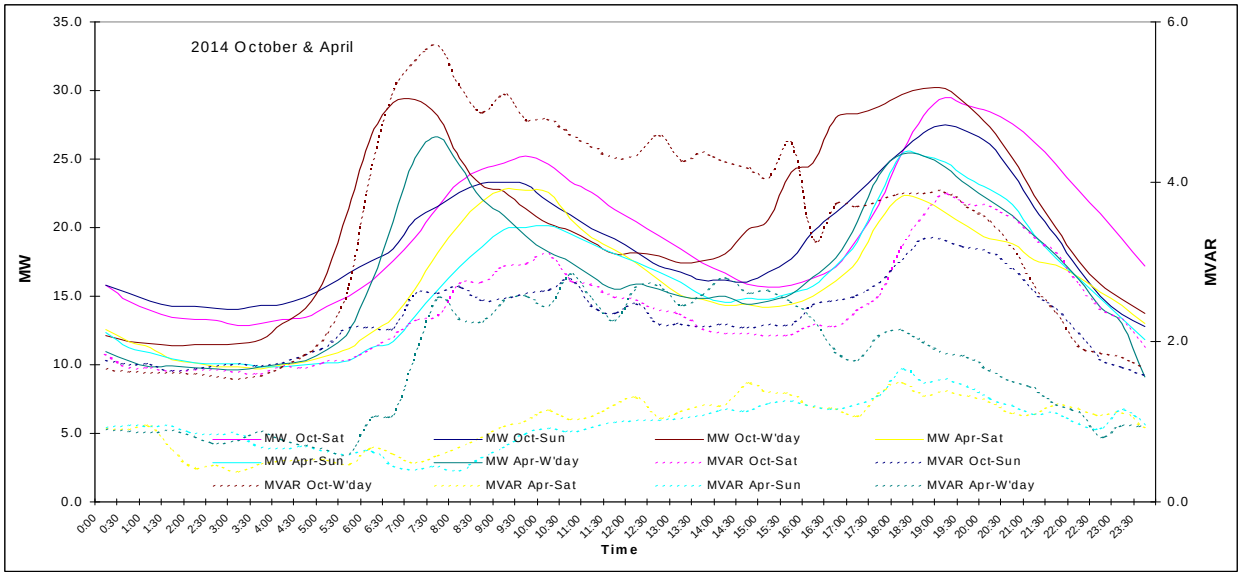
Figure 4-13 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

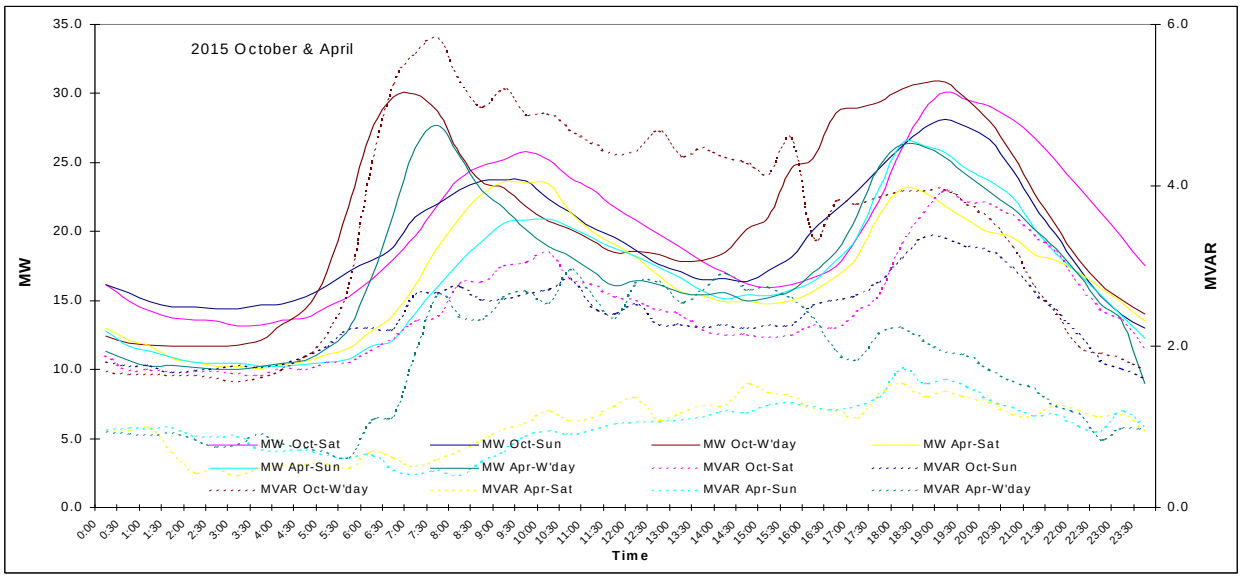
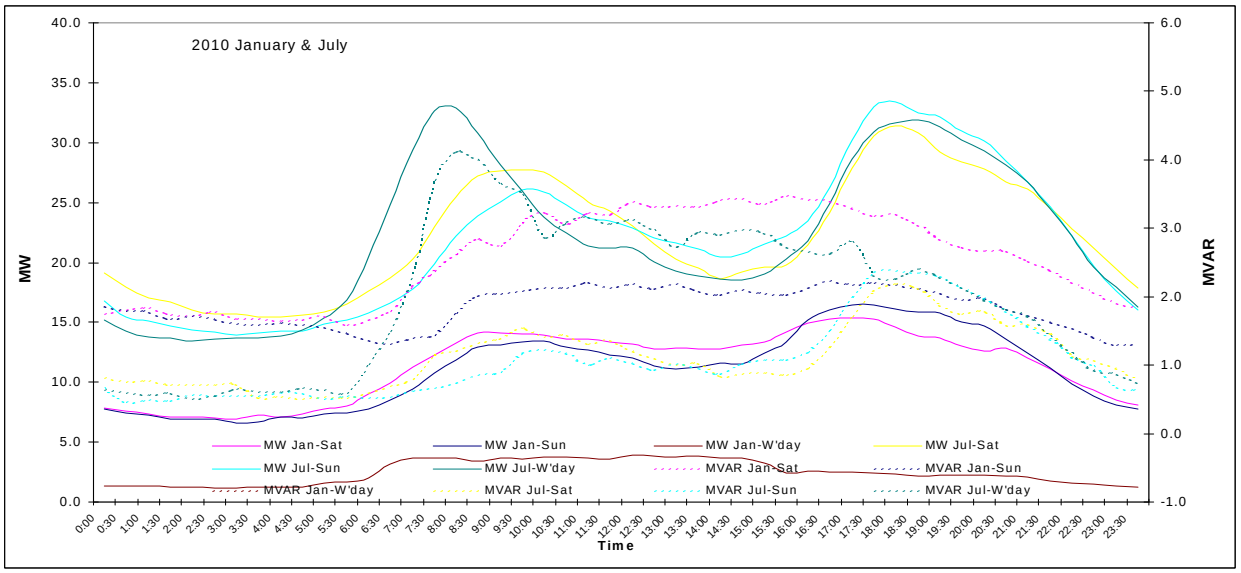
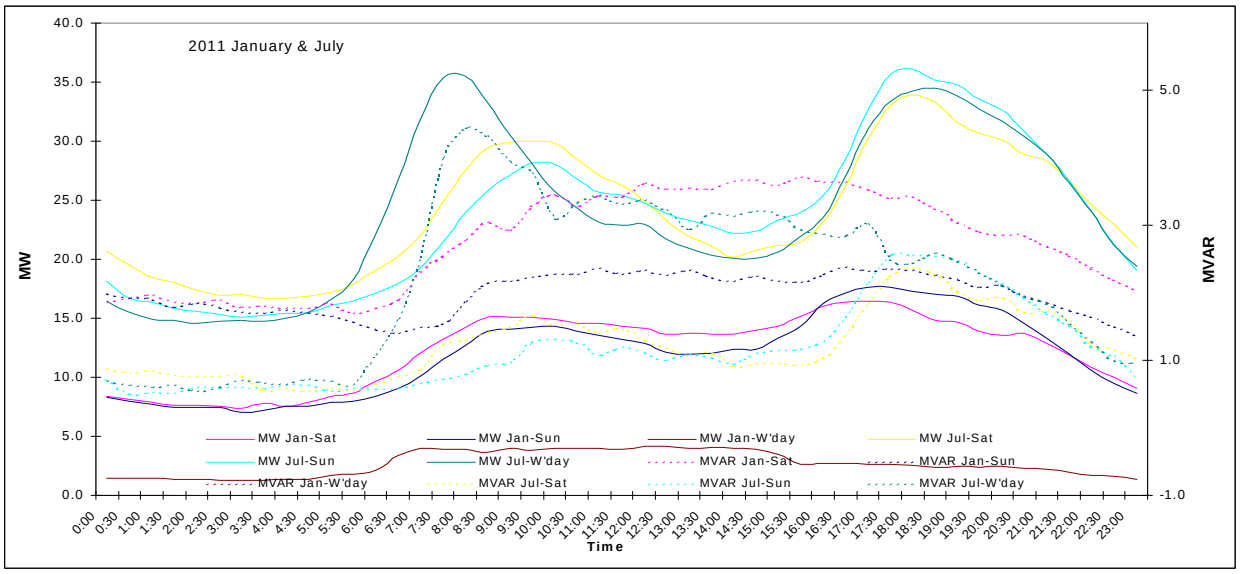
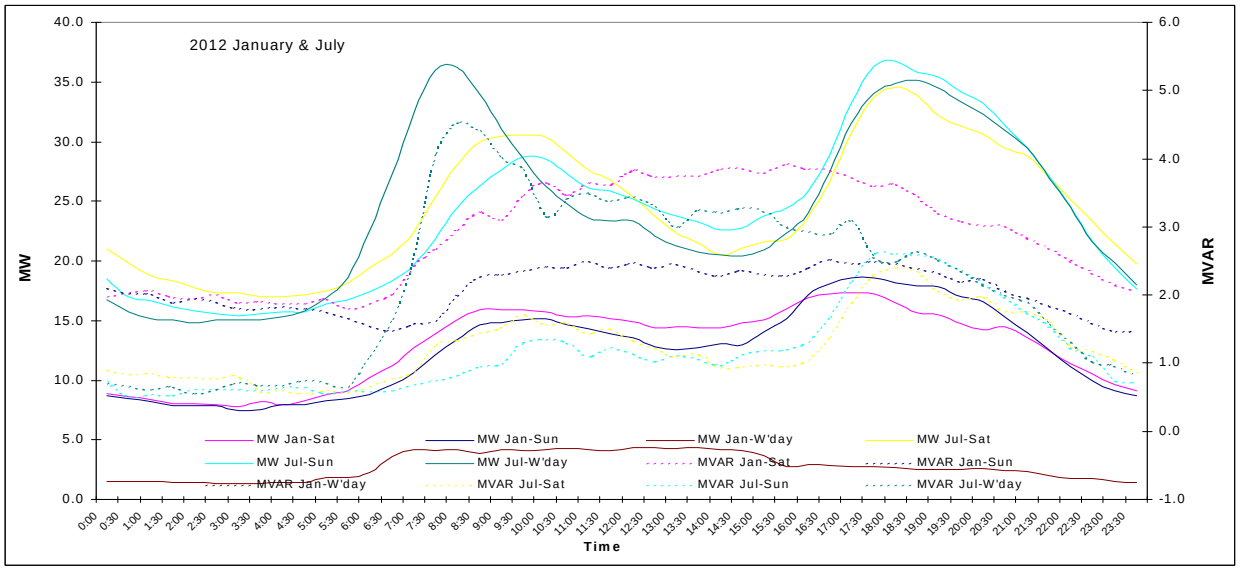
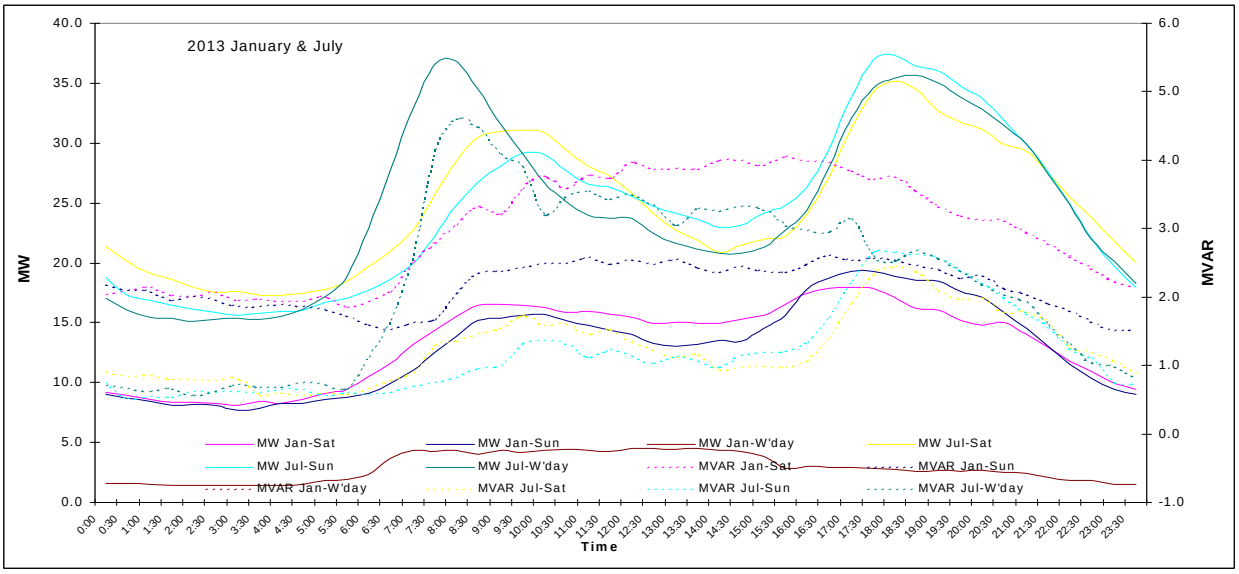

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

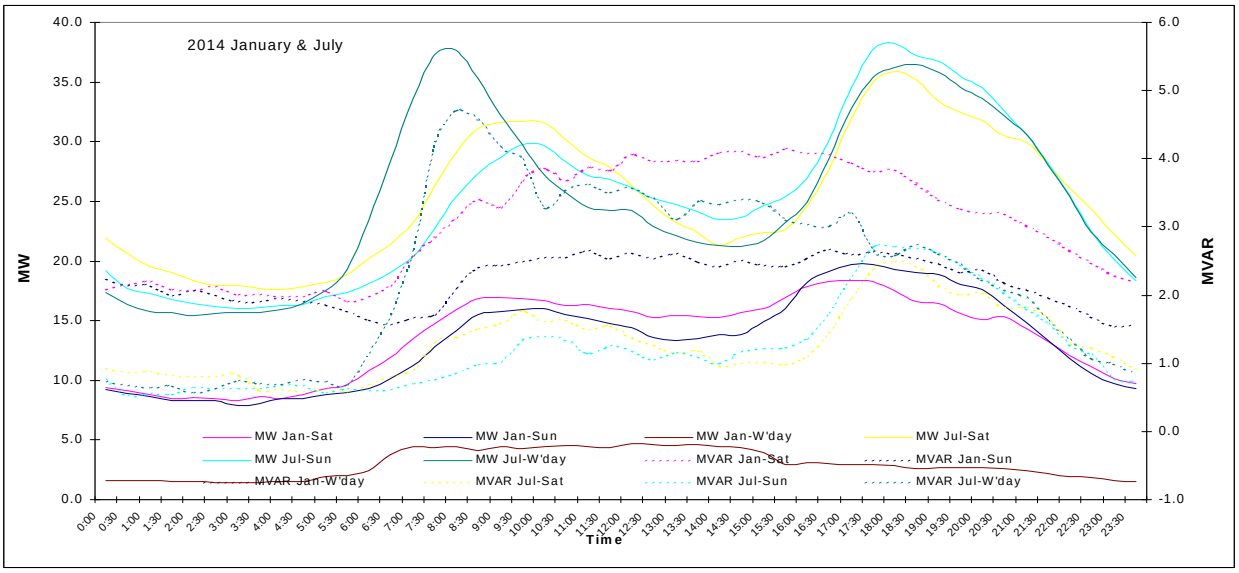
Figure 4-14 Load Profiles: Weekday, Saturday, Sunday for January & July

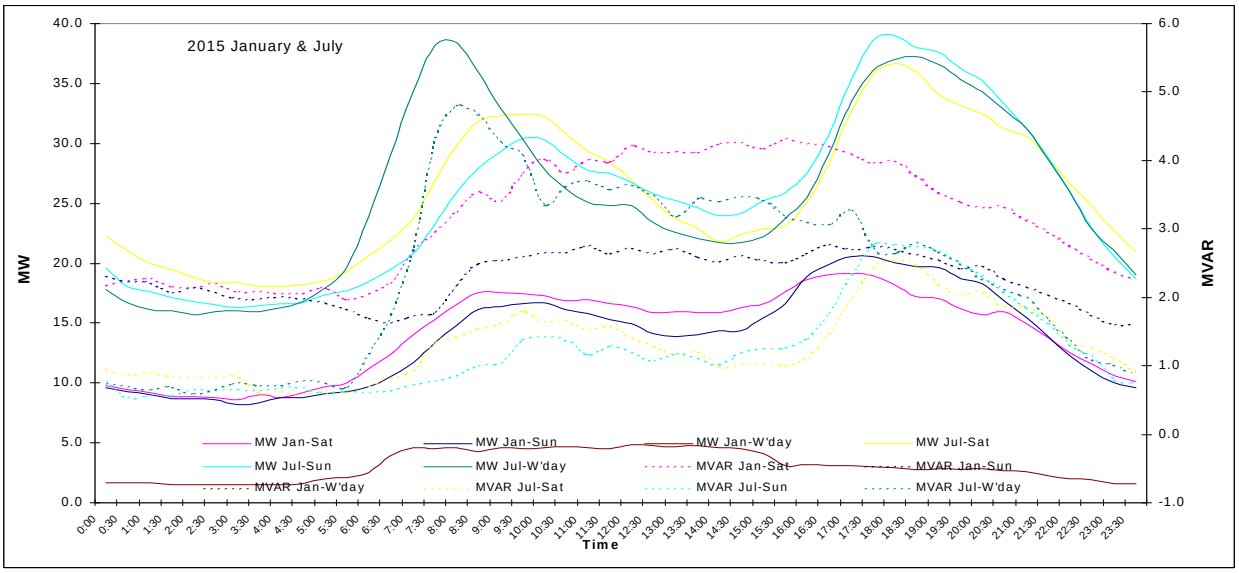







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.4 Burnie

Description:

The Substation is located at Burnie and is known as “Burnie Substation”. The substation is owned by Transend.

Table 4-30 Burnie Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	12	120	60

Embedded Generation:

There a single undispatched embedded generator was connected to this substation in the second half of 2010 calendar year, Final operational profile for this unit has not been confirmed, but is anticipated to be as per the following table. The effect of this unit on the peak summer demand has **not** been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	2.4	2.4	2.4	2.4	2.4
Output – Summer (MW)	2.1	2.1	2.1	2.1	2.1
Output – Winter (MW)	0	0	0	0	0
Operating characteristics	CHP unit associated with seasonal vegetable processing, 24 hour operation during summer peak period.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-31 Burnie Site Winter load forecast

Burnie	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	60.97	62.18	53.89	54.96	60.97	62.18	54.73	55.82
2006	62.80	64.07	61.15	62.39	62.80	64.07	61.89	63.14
2007	62.66	63.64	62.06	63.02	62.66	63.64	63.04	64.02
2008	69.18	70.18	69.18	70.18	69.18	70.18	70.25	71.26
2009	61.41	62.13	55.46	56.11	61.41	62.13	56.26	56.92
2010	63.22	63.86	58.81	59.41	63.22	63.86	59.69	60.29
2011	65.76	66.43	61.18	61.80	66.31	66.98	61.68	62.31
2012	65.81	66.48	61.22	61.84	66.35	67.03	61.72	62.35
2013	65.71	66.37	61.12	61.74	66.30	66.97	61.67	62.30
2014	66.06	66.73	61.45	62.07	66.63	67.30	61.98	62.61
2015	66.37	67.05	61.74	62.37	66.99	67.67	62.32	62.95
2016	66.88	67.55	62.21	62.84	67.48	68.17	62.77	63.41
2017	67.37	68.05	62.67	63.31	68.02	68.71	63.27	63.92
2018	68.14	68.83	63.39	64.03	68.76	69.46	63.97	64.62
2019	69.09	69.79	64.27	64.92	69.80	70.51	64.93	65.59
2020	70.22	70.93	65.32	65.99	70.91	71.63	65.96	66.63

Table 4-32 Burnie Site Summer load forecast

Burnie	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	39.92	41.45	39.92	41.45	39.92	41.45	40.37	41.92
2006	41.10	43.29	40.90	43.08	41.10	43.29	40.90	43.08
2007	45.82	47.43	41.73	43.20	45.82	47.43	42.69	44.19
2008	43.91	45.39	43.91	45.39	43.91	45.39	44.63	46.13
2009	45.30	46.47	43.76	44.90	45.30	46.47	44.51	45.67
2010	42.58	43.61	38.10	39.01	42.58	43.61	38.89	39.83
2011	42.43	43.45	37.96	38.87	44.06	45.12	39.41	40.36
2012	43.55	44.60	38.96	39.90	45.23	46.32	40.46	41.44
2013	43.91	44.97	39.29	40.23	45.62	46.71	40.81	41.79
2014	43.82	44.87	39.20	40.14	45.44	46.54	40.65	41.63
2015	44.43	45.50	39.75	40.70	46.08	47.19	41.22	42.21
2016	44.21	45.27	39.55	40.50	45.89	47.00	41.06	42.04
2017	45.66	46.76	40.85	41.83	47.34	48.48	42.35	43.37
2018	46.45	47.56	41.55	42.55	48.16	49.32	43.09	44.12
2019	47.27	48.40	42.29	43.30	48.99	50.16	43.82	44.88
2020	48.18	49.34	43.11	44.14	49.91	51.11	44.65	45.72

Figure 4-15 Burnie Site Summer Load Forecast at 50% and 10% POE

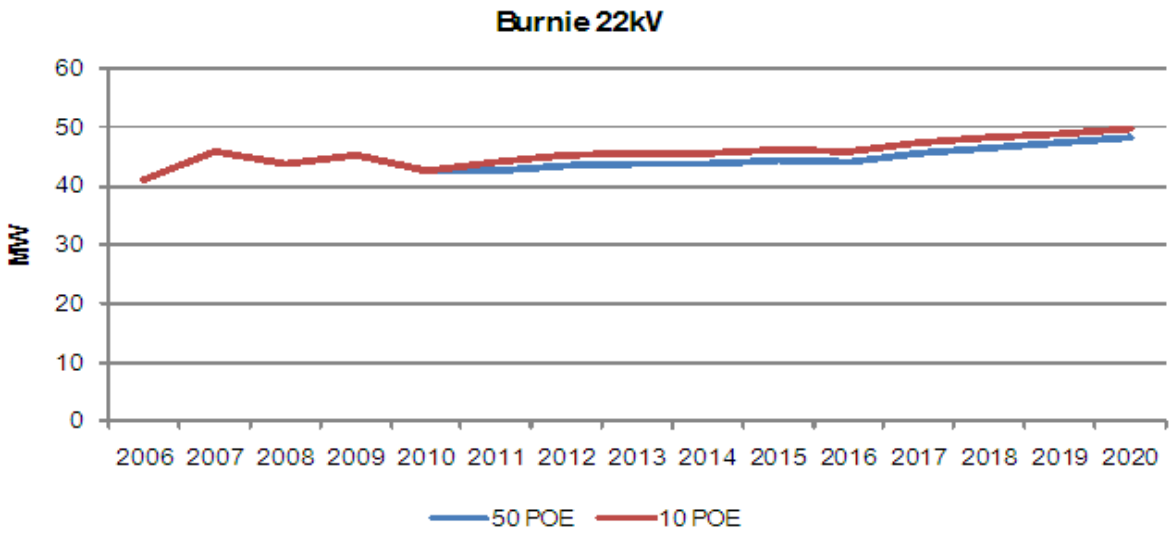
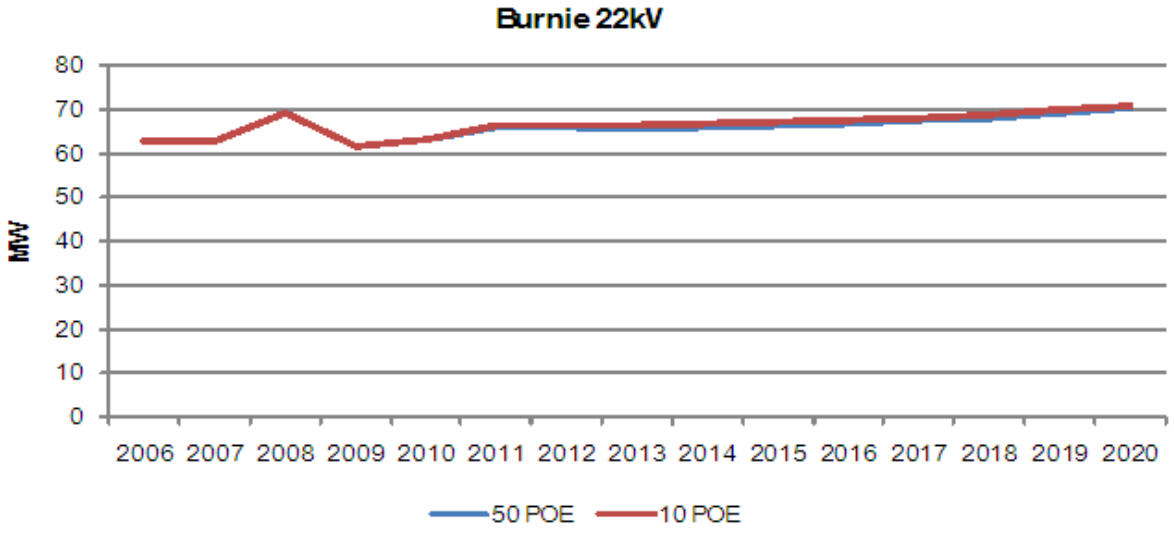
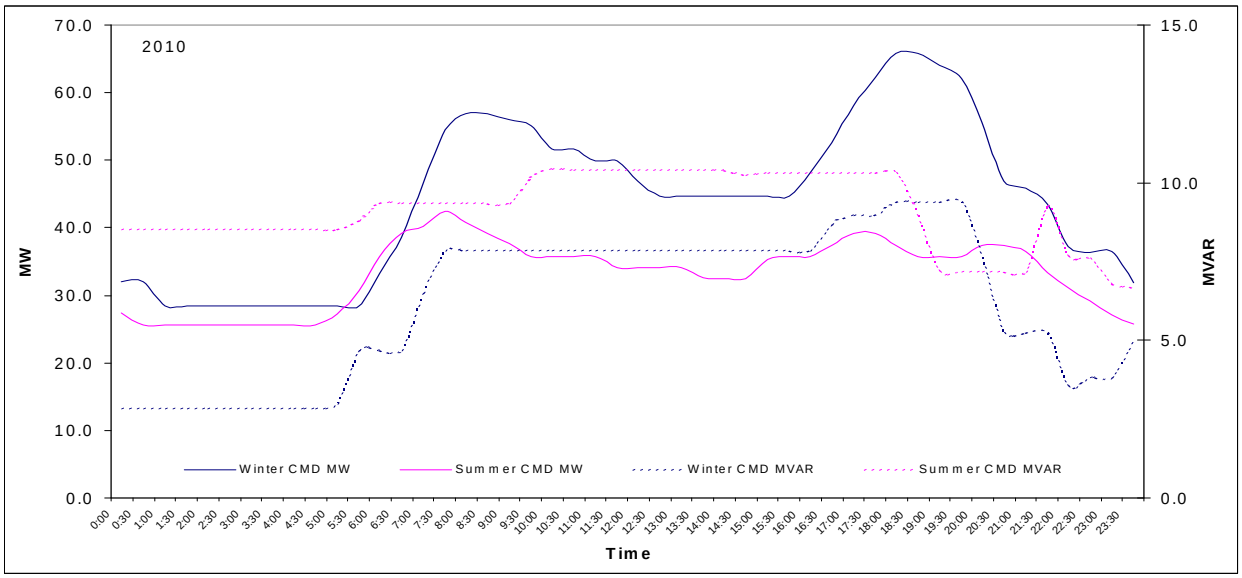


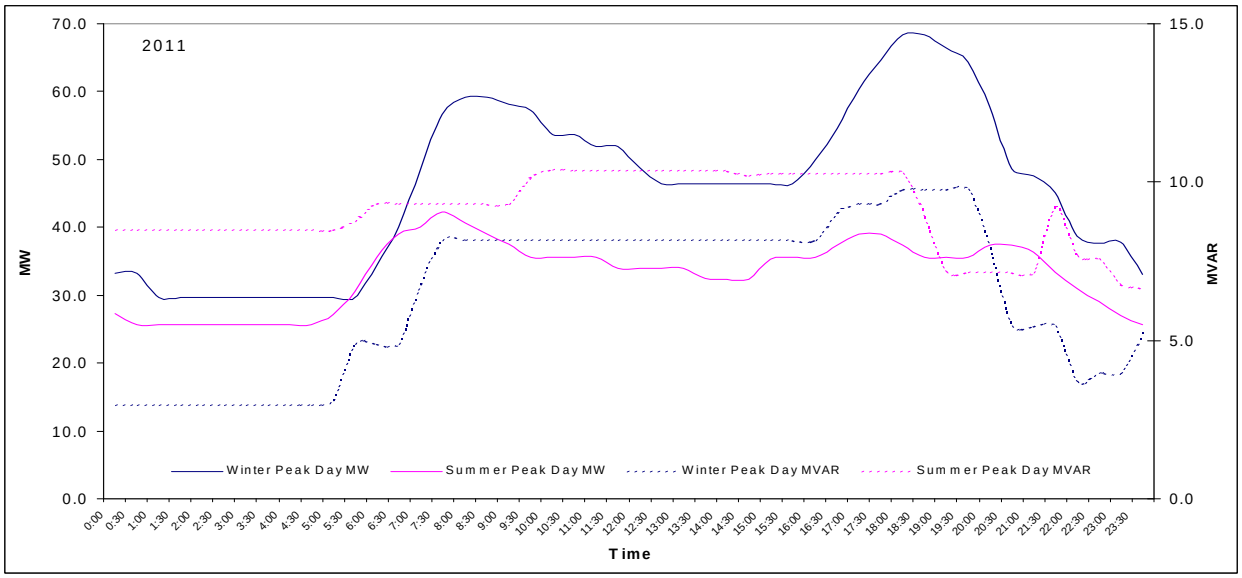
Figure 4-16 Burnie Site Winter Load Forecast at 50% and 10% POE

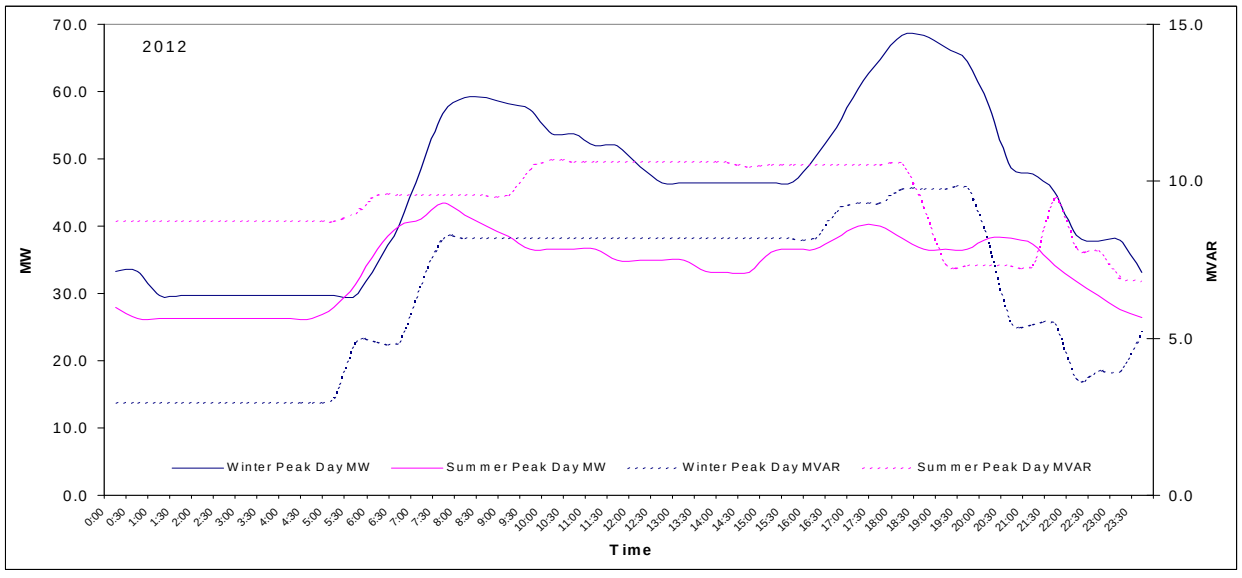


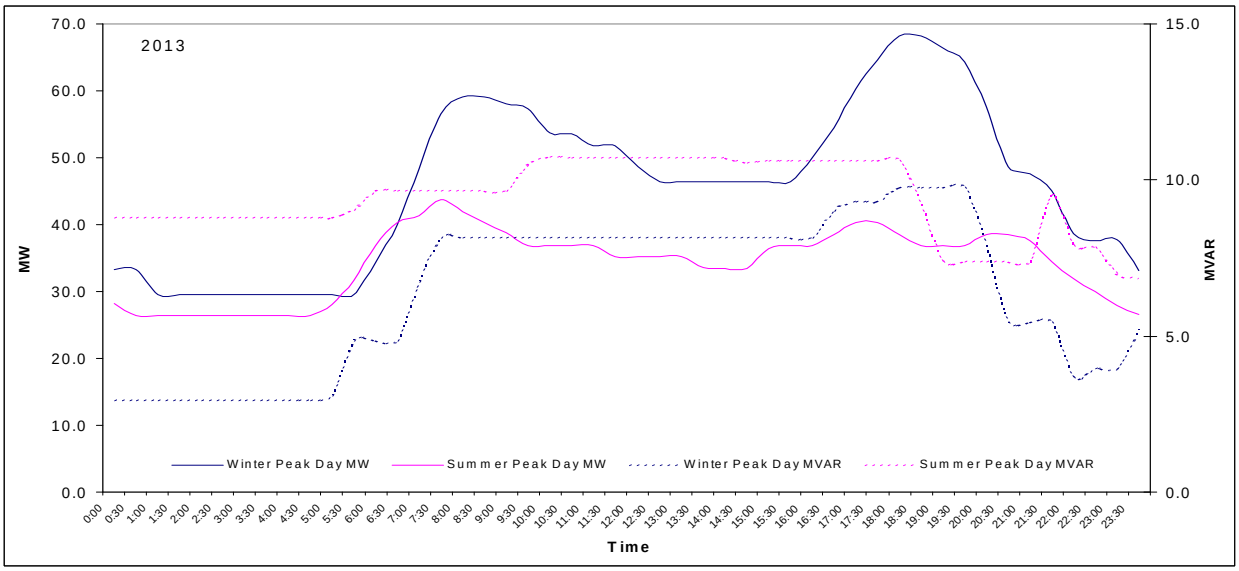
Load Profiles:

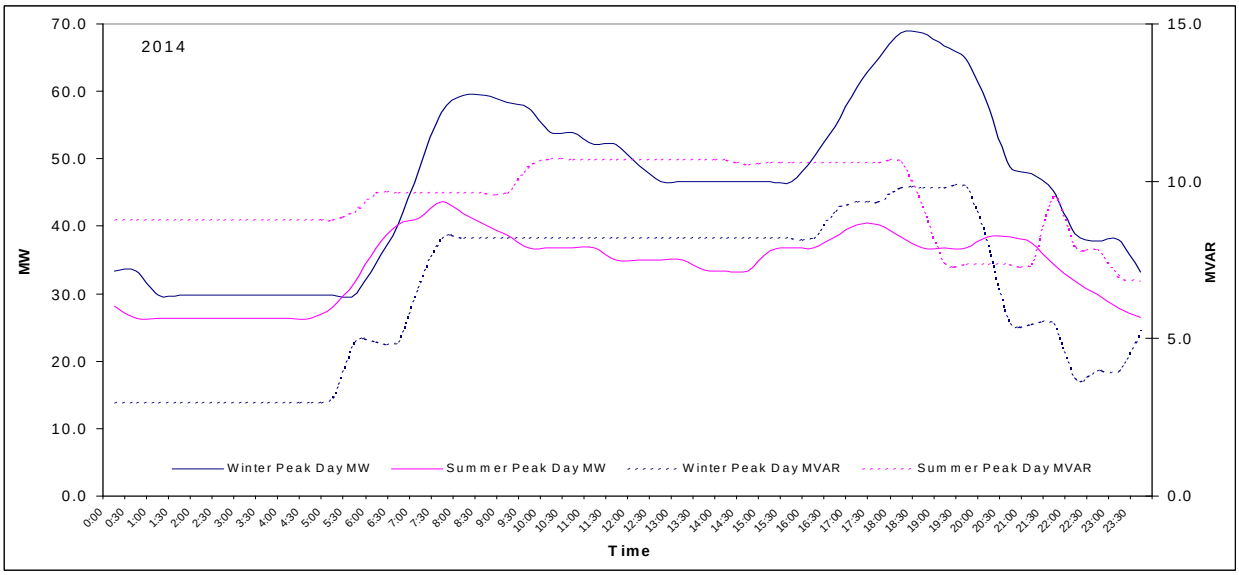
Figure 4-17 Load Profiles: Burnie Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

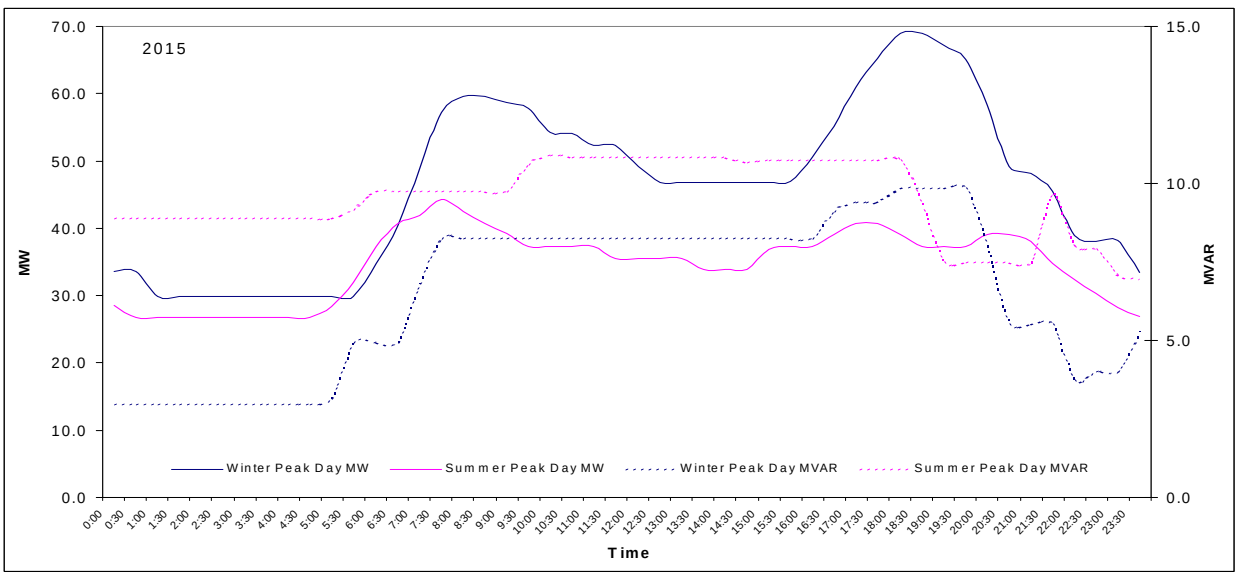
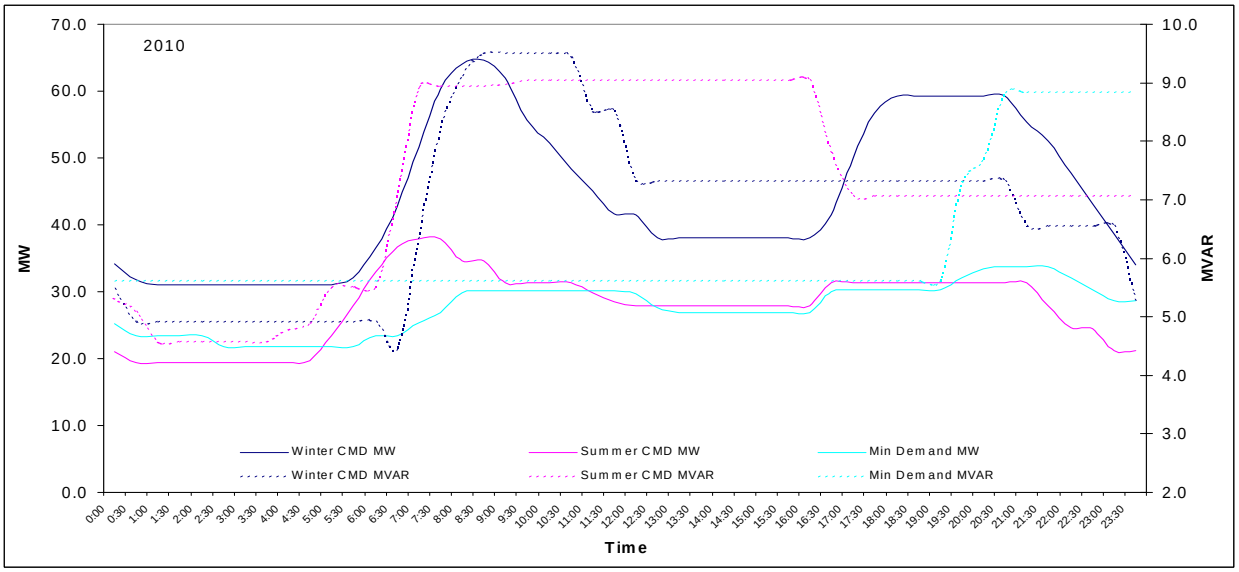
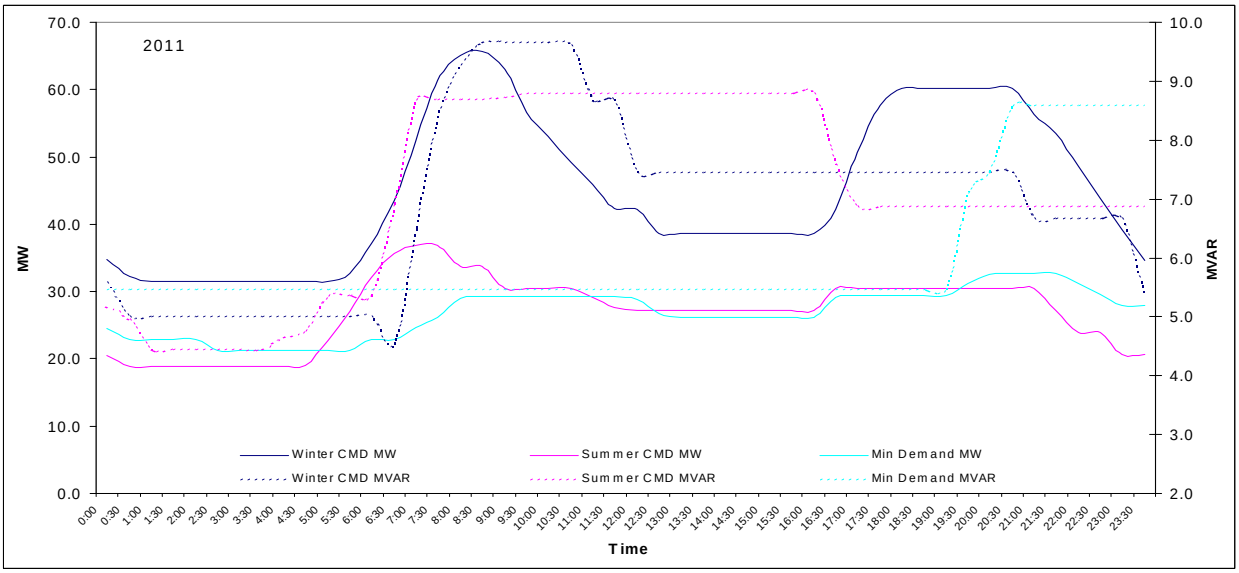
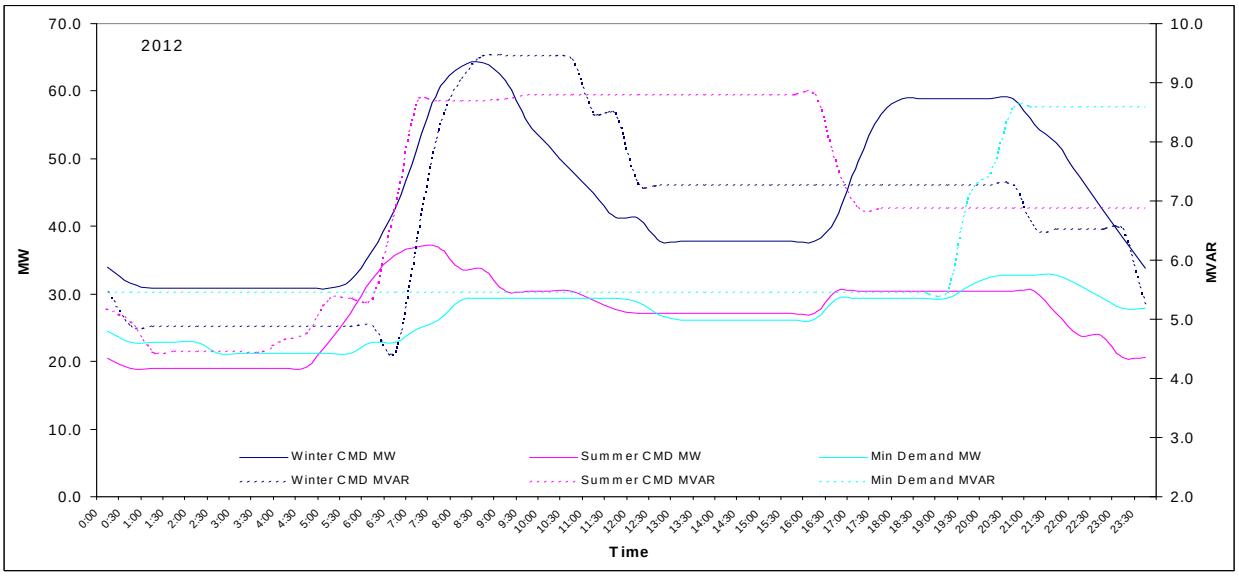
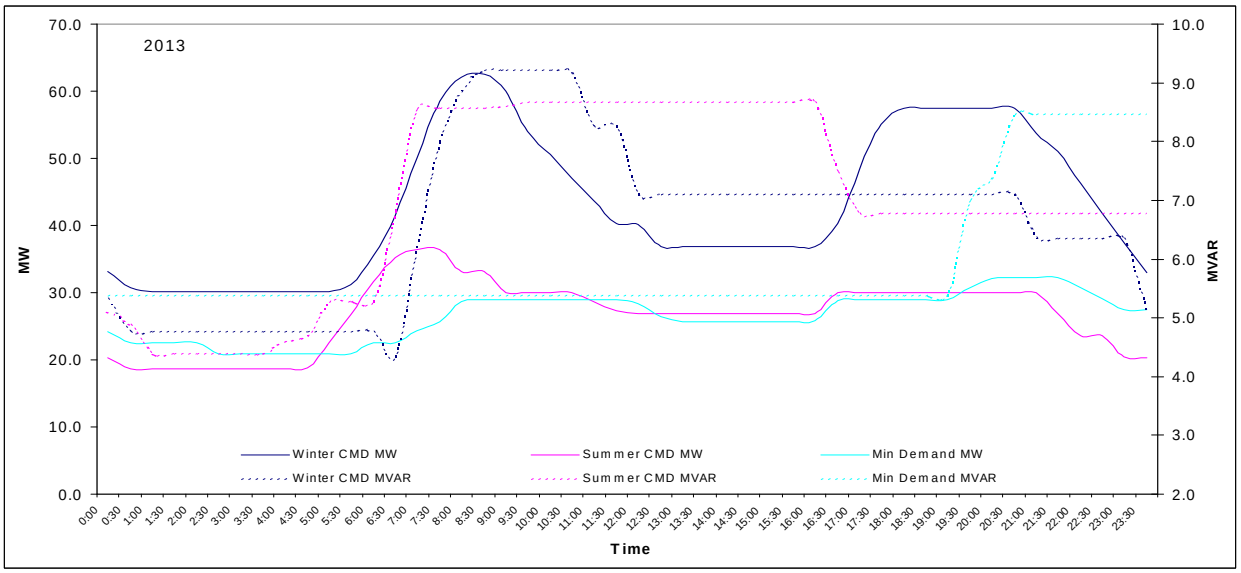

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

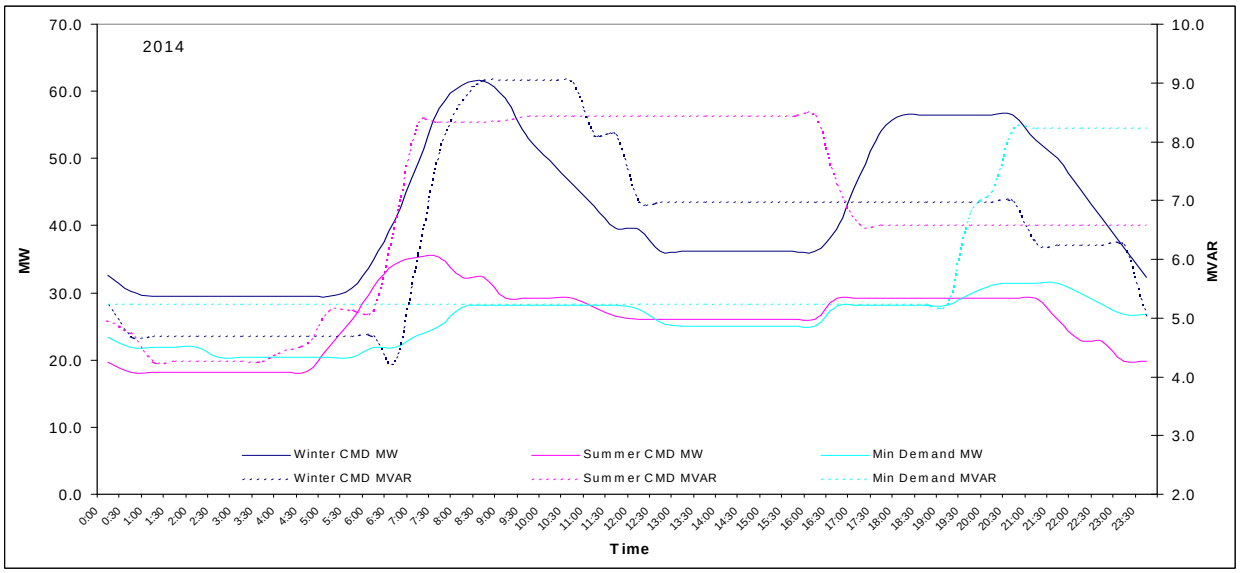
Figure 4-18 Load Profiles: Burnie Substation Day of Summer/Winter CMD, Peak & Min Demand











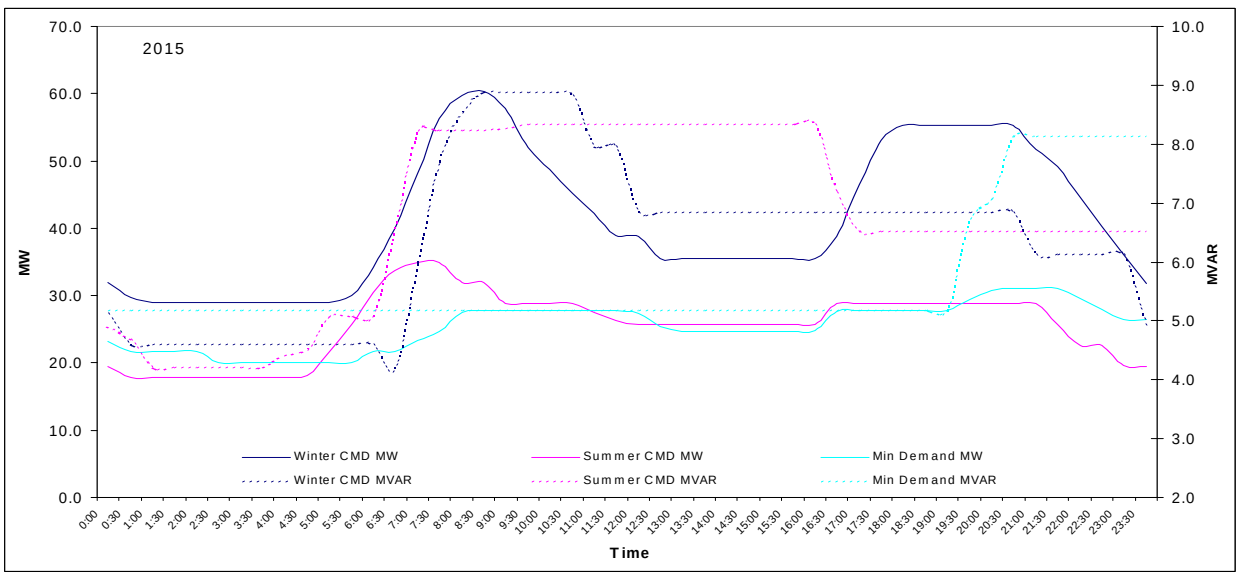
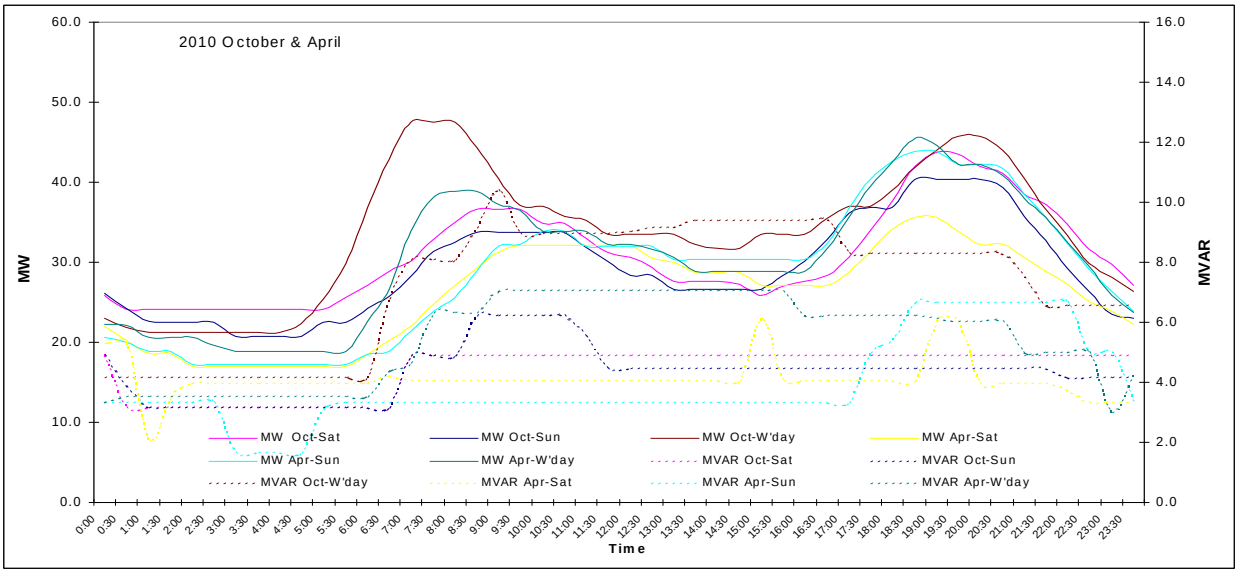
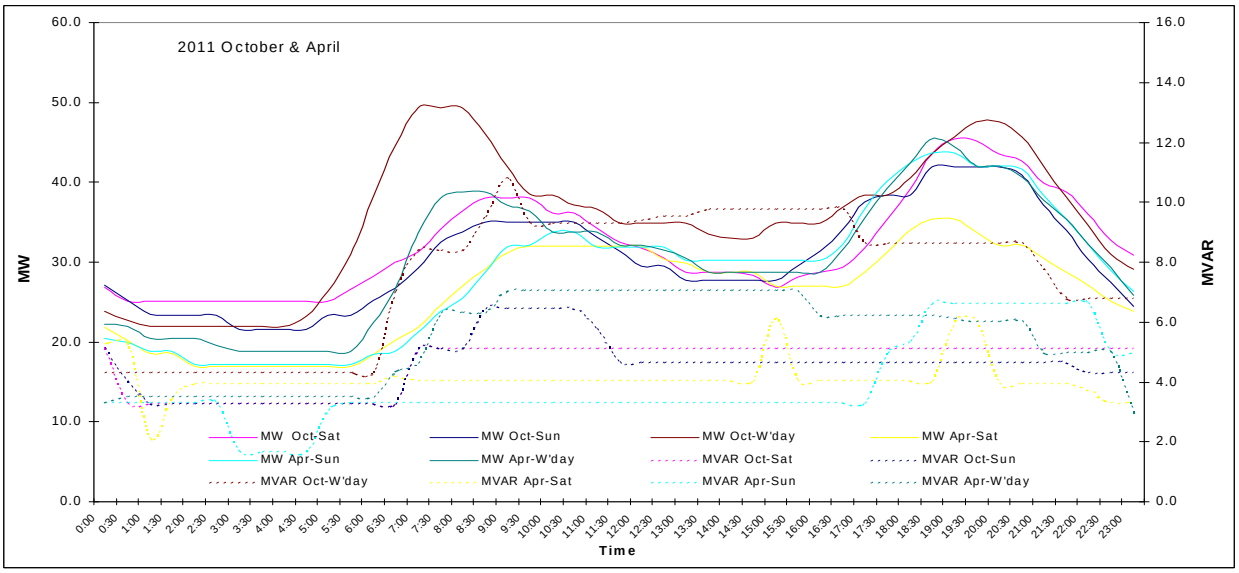
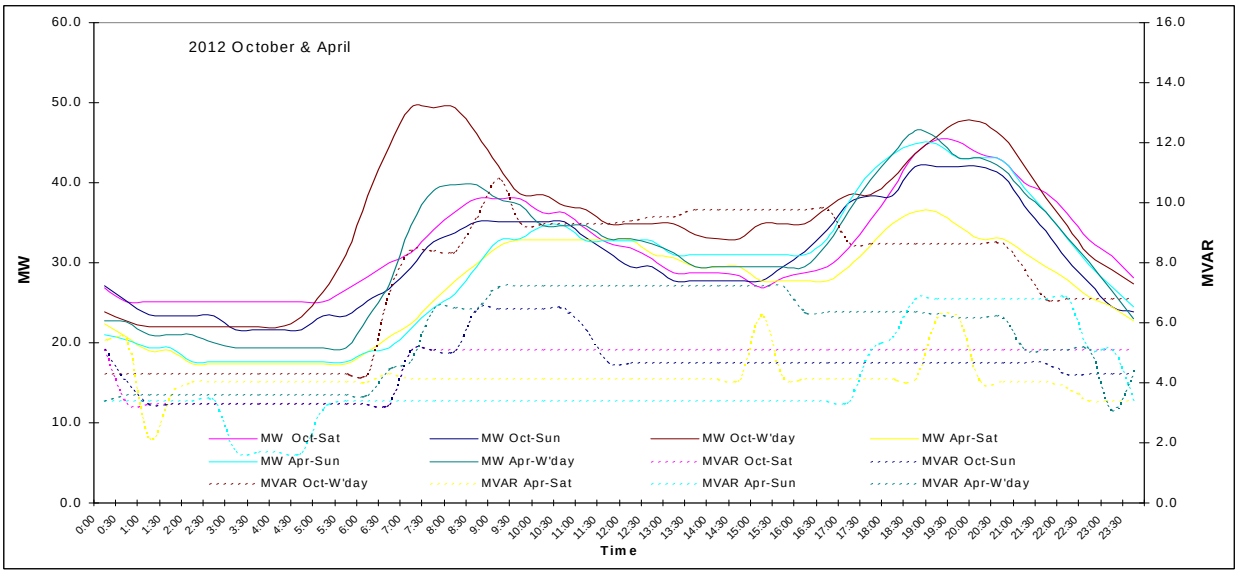
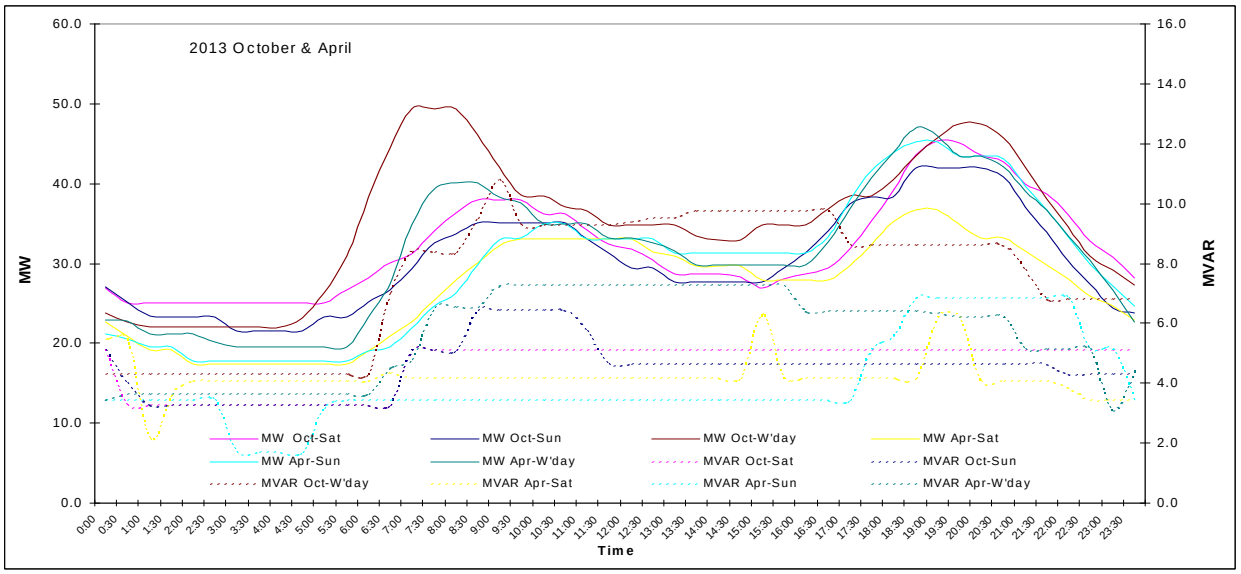


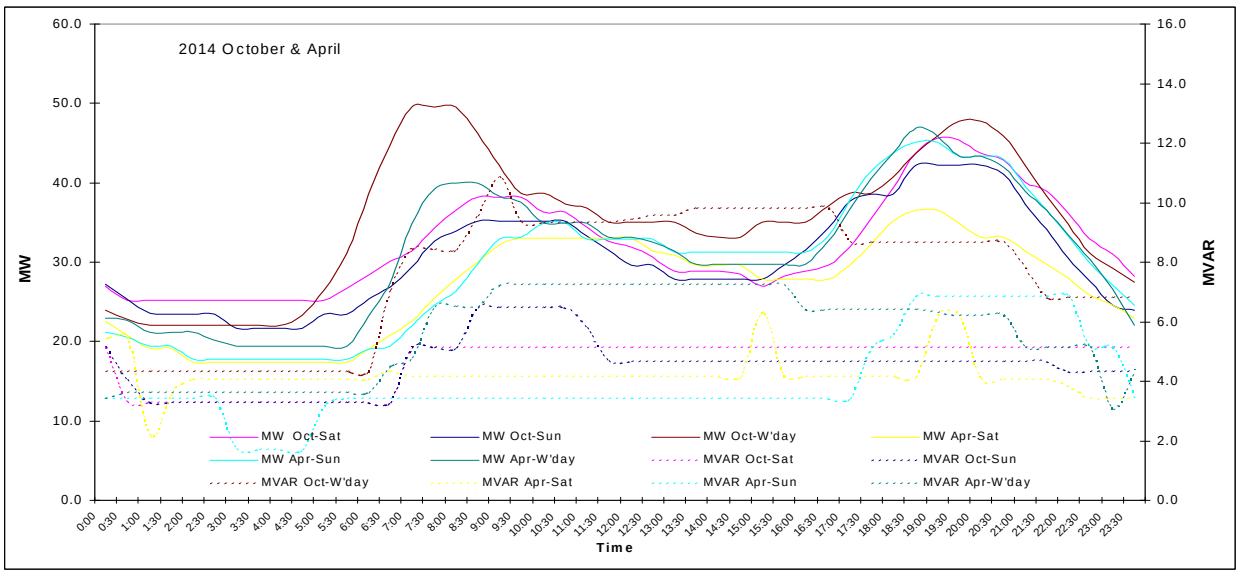
Figure 4-19 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

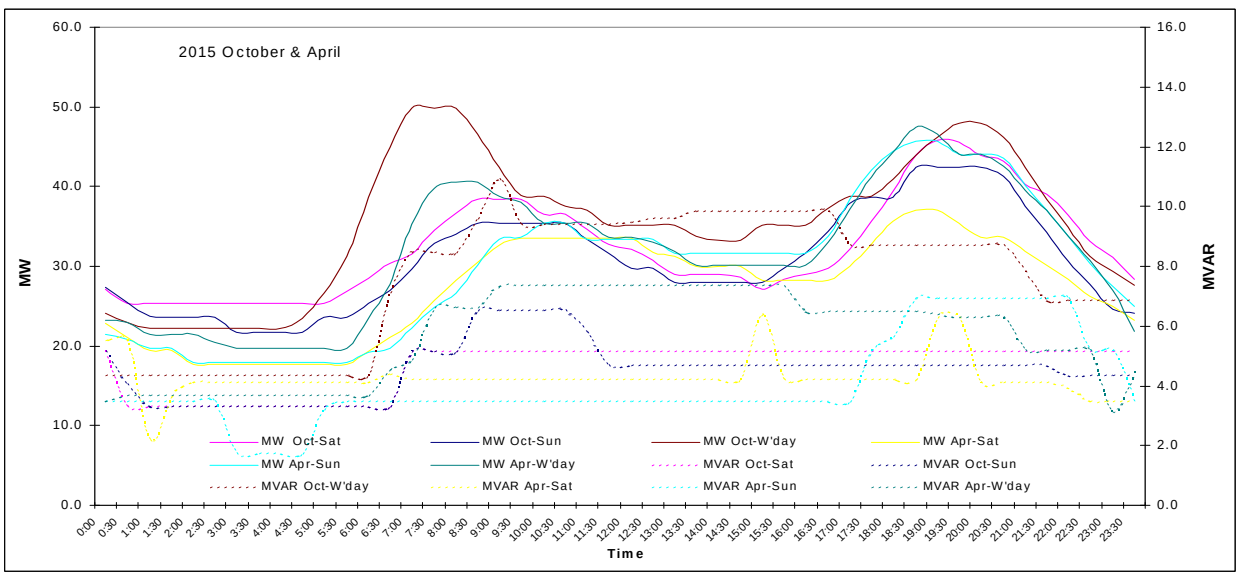
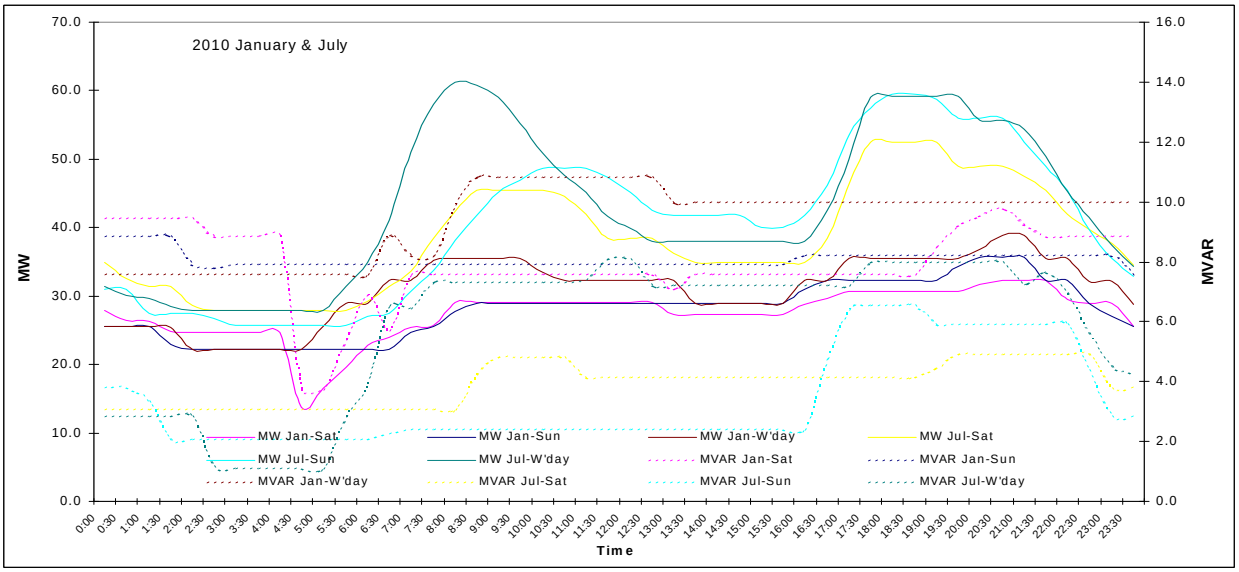
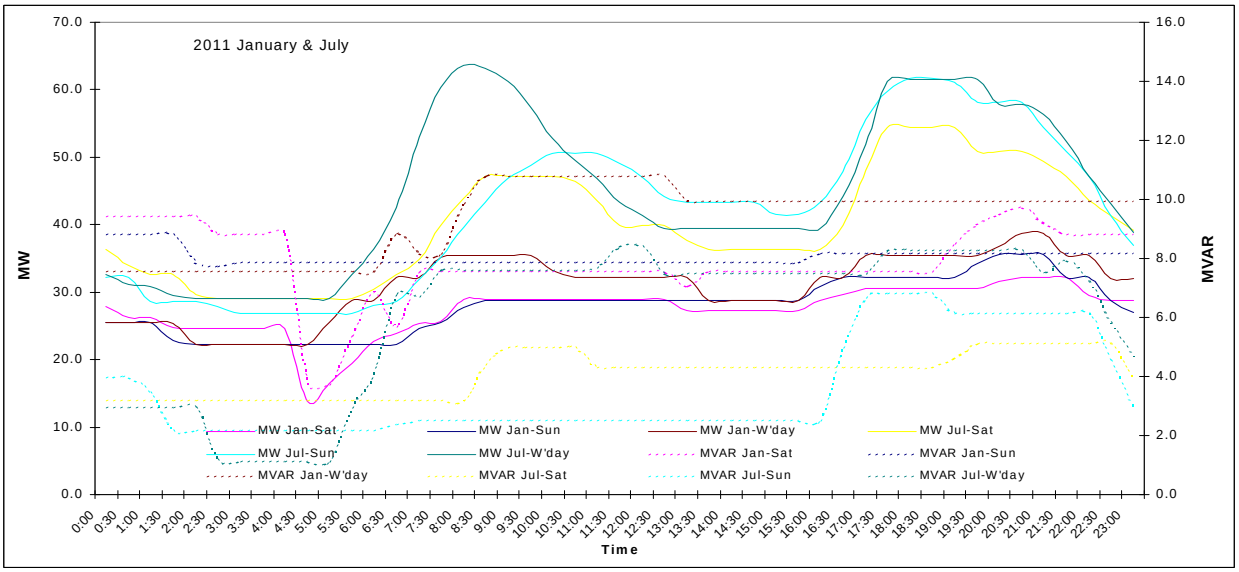
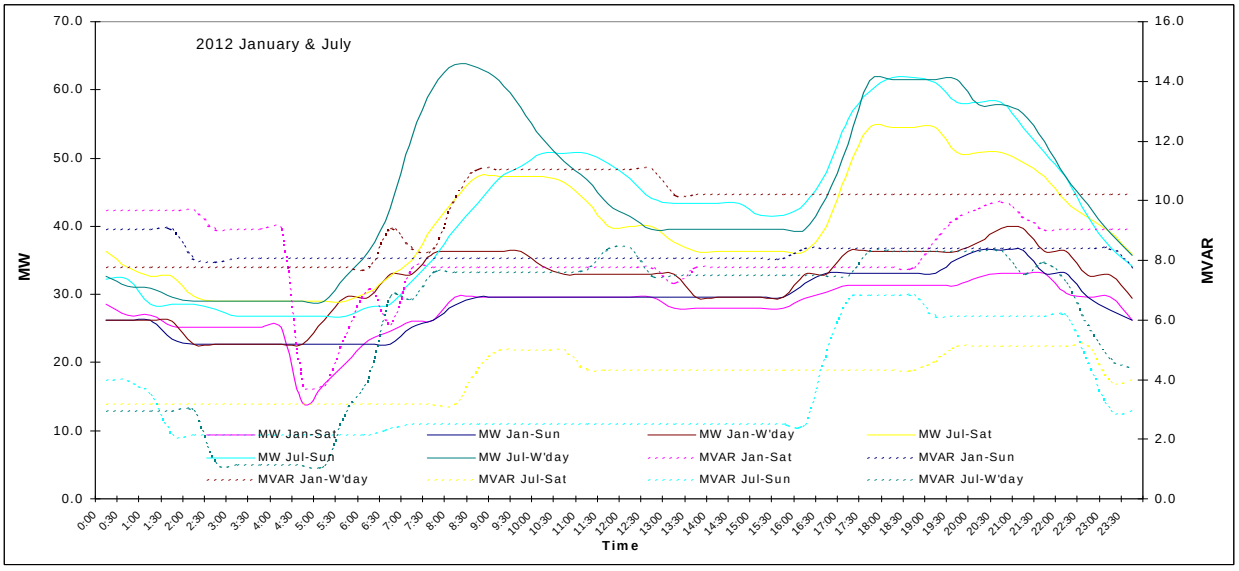
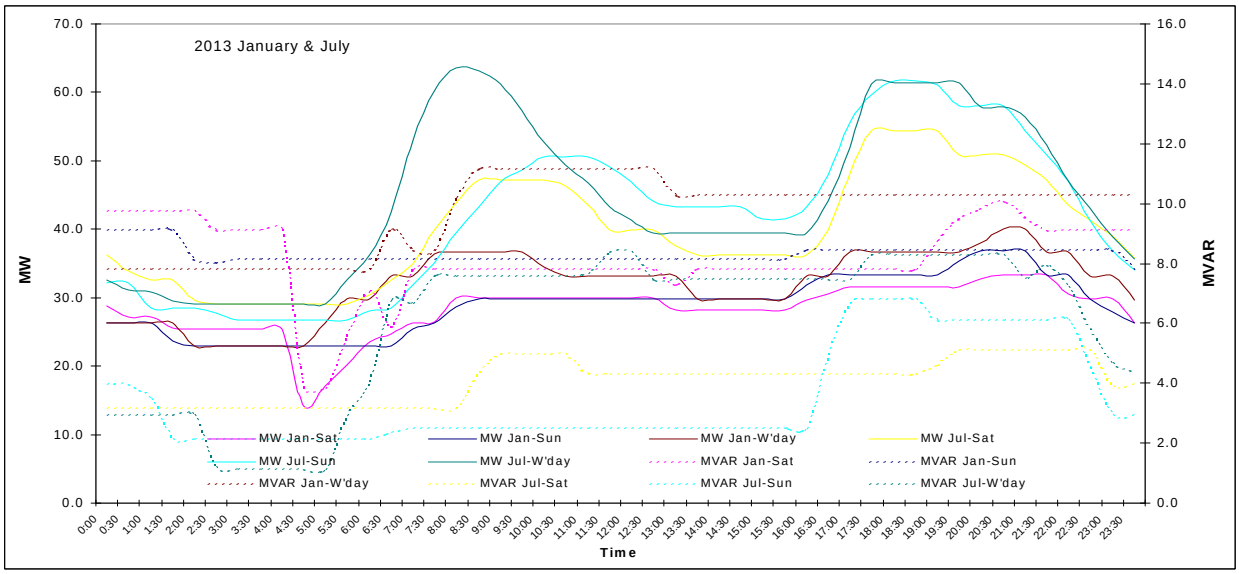

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

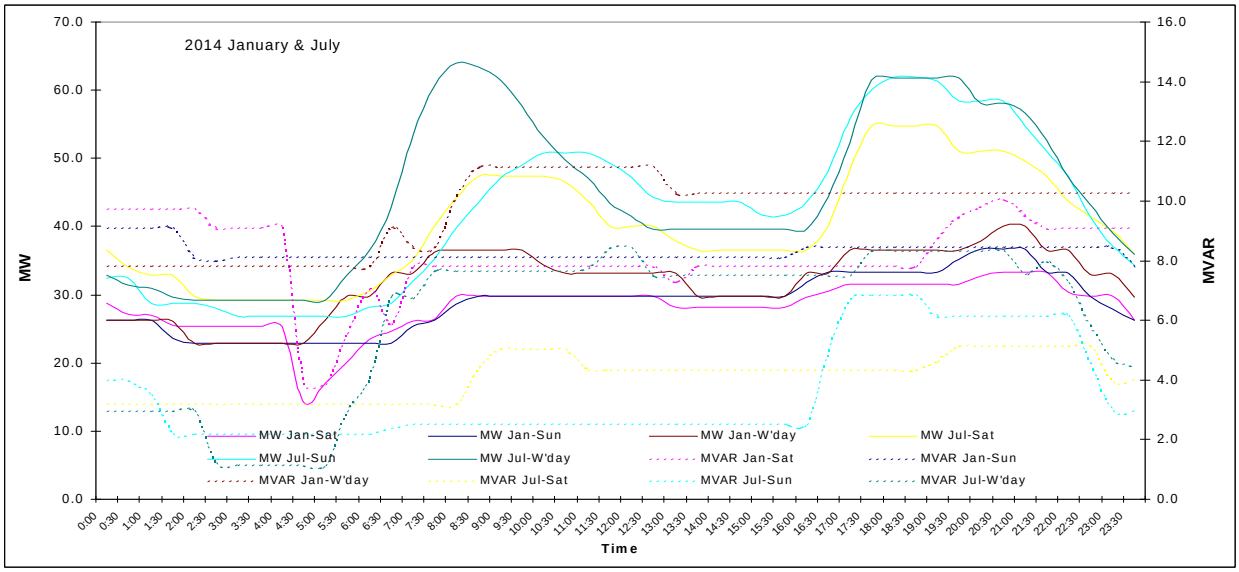
Figure 4-20 Load Profiles: Weekday, Saturday, Sunday for January & July

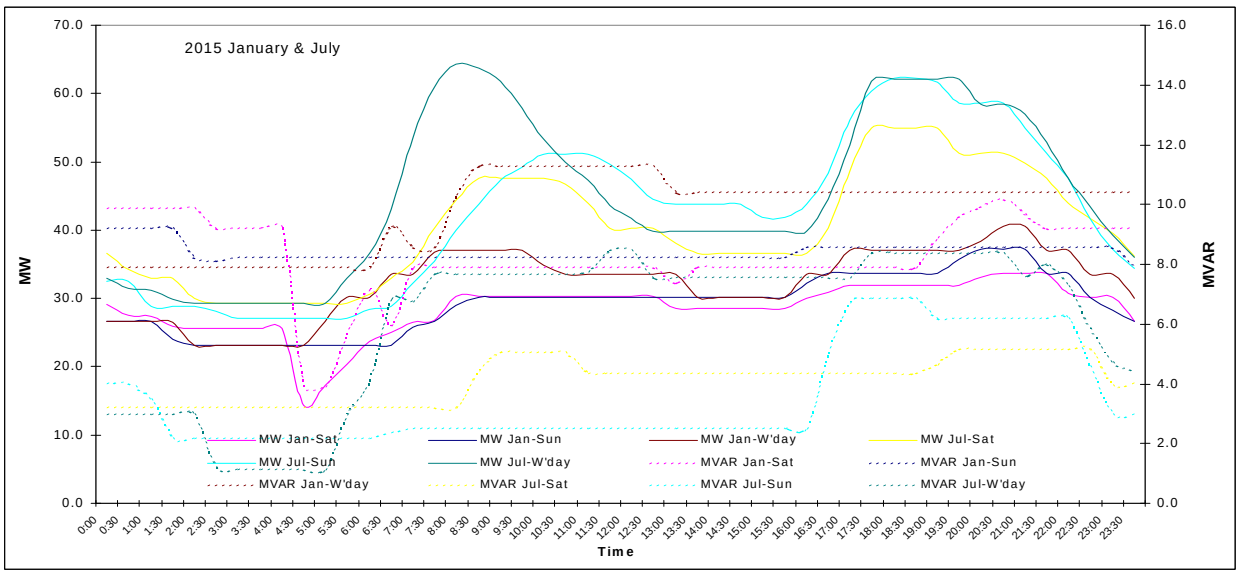







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.5 Chapel Street

Description:

The Substation is located at Glenorchy and is known as “Chapel Street Substation”. The substation is owned by Transend.

Table 4-33 Chapel Street Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	22	120	60

Embedded Generation:

Two undispatched embedded generators were connected to this substation in the first half of 2006 calendar year, Operational profile for these units are anticipated to be as per the following table. The effect of the units on the peak summer and winter demand has been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	1.06	1.06	1.06	1.06	1.06
Output – Summer (MW)	1.0	1.0	1.0	1.0	1.0
Output – Winter (MW)	1.0	1.0	1.0	1.0	1.0
Operating characteristics	Biomass unit associated with methane recovery from refuse site, 24 hour operation.				
Unit 2	**2011**	**2012**	**2013**	**2014**	**2015**
Rating (MW)	0.625	0.625	0.625	0.625	0.625
Output – Summer (MW)	0.5	0.5	0.5	0.5	0.5
Output – Winter (MW)	0.5	0.5	0.5	0.5	0.5
Operating characteristics	Biomass unit associated with methane recovery from refuse site, 24 hour operation.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-34 Chapel Street Site Winter load forecast

Chapel St	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	53.37	54.66	47.05	48.20	53.37	54.66	48.26	49.43
2006	57.62	59.23	54.85	56.38	57.62	59.23	56.44	58.01
2007	44.46	45.56	40.93	41.94	44.46	45.56	42.07	43.11
2008	47.49	47.71	47.49	47.71	47.49	47.71	48.96	49.17
2009	47.03	47.09	45.56	45.62	47.03	47.09	46.58	46.63
2010	45.99	46.68	37.74	38.31	45.99	46.68	38.71	39.29
2011	47.98	48.70	39.37	39.96	48.89	49.62	40.11	40.71
2012	48.15	48.87	39.51	40.10	49.05	49.79	40.24	40.85
2013	48.20	48.93	39.55	40.15	49.14	49.88	40.32	40.93
2014	48.59	49.32	39.87	40.47	49.51	50.25	40.62	41.23
2015	48.96	49.69	40.17	40.77	49.91	50.66	40.95	41.57
2016	49.46	50.20	40.58	41.19	50.40	51.16	41.35	41.97
2017	49.95	50.70	40.99	41.60	50.93	51.69	41.79	42.41
2018	50.65	51.42	41.56	42.19	51.61	52.39	42.35	42.98
2019	51.49	52.27	42.25	42.88	52.51	53.30	43.09	43.74
2020	52.46	53.25	43.05	43.69	53.47	54.28	43.88	44.54

Table 4-35 Chapel Street Site Summer load forecast

Chapel St	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	25.63	26.41	25.63	26.41	25.63	26.41	25.89	26.68
2006	28.90	29.88	28.08	29.03	28.90	29.88	28.44	29.41
2007	23.25	24.04	20.40	21.09	23.25	24.04	20.72	21.42
2008	24.49	25.06	24.49	25.06	24.49	25.06	25.06	25.64
2009	23.66	24.13	23.66	24.13	23.66	24.13	24.30	24.78
2010	24.20	24.63	24.20	24.63	24.20	24.63	24.88	25.32
2011	23.93	24.35	23.93	24.35	25.02	25.47	25.02	25.47
2012	24.38	24.81	24.38	24.81	25.50	25.95	25.50	25.95
2013	24.40	24.84	24.40	24.84	25.53	25.99	25.53	25.99
2014	24.17	24.60	24.17	24.60	25.26	25.71	25.26	25.71
2015	24.34	24.78	24.34	24.78	25.44	25.89	25.44	25.89
2016	24.06	24.48	24.06	24.48	25.16	25.61	25.16	25.61
2017	24.68	25.12	24.68	25.12	25.79	26.24	25.79	26.24
2018	24.94	25.39	24.94	25.39	26.06	26.53	26.06	26.53
2019	25.22	25.67	25.22	25.67	26.34	26.81	26.34	26.81
2020	25.55	26.01	25.55	26.01	26.67	27.15	26.67	27.15

Figure 4-21 Chapel Street Site Summer Load Forecast at 50% and 10% POE

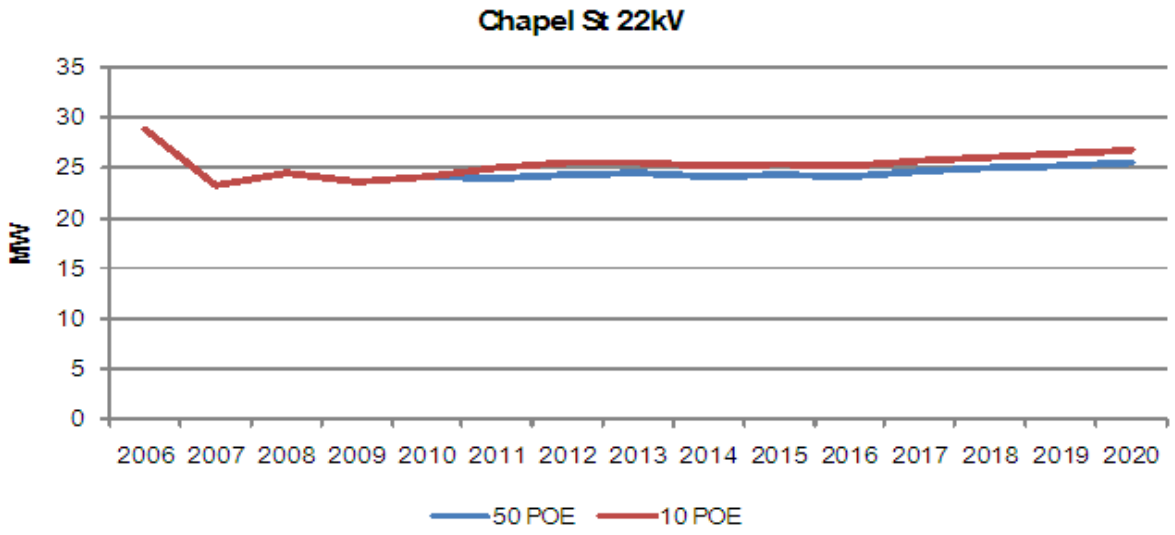
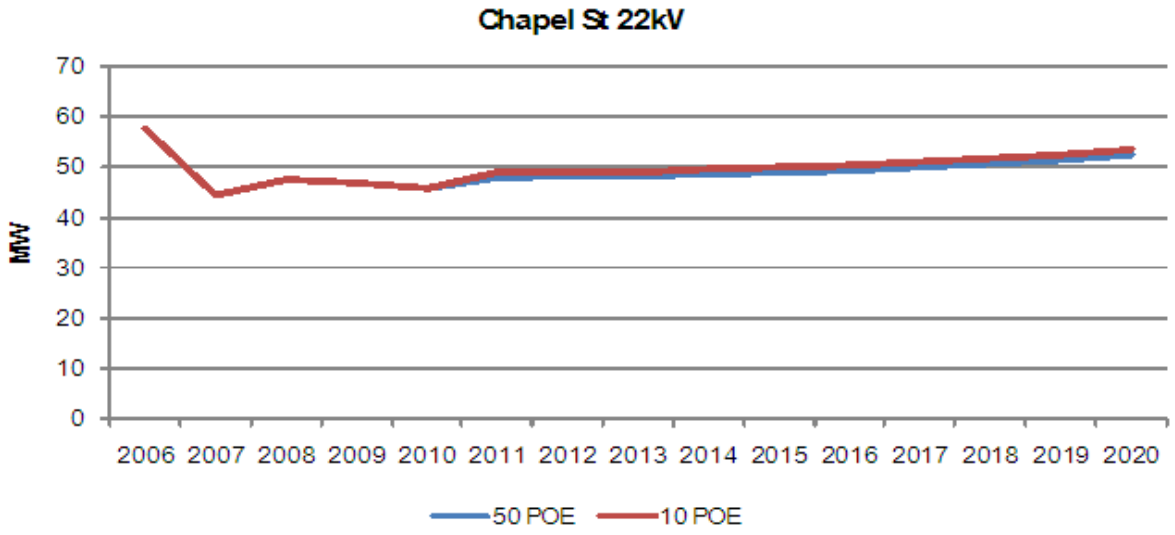
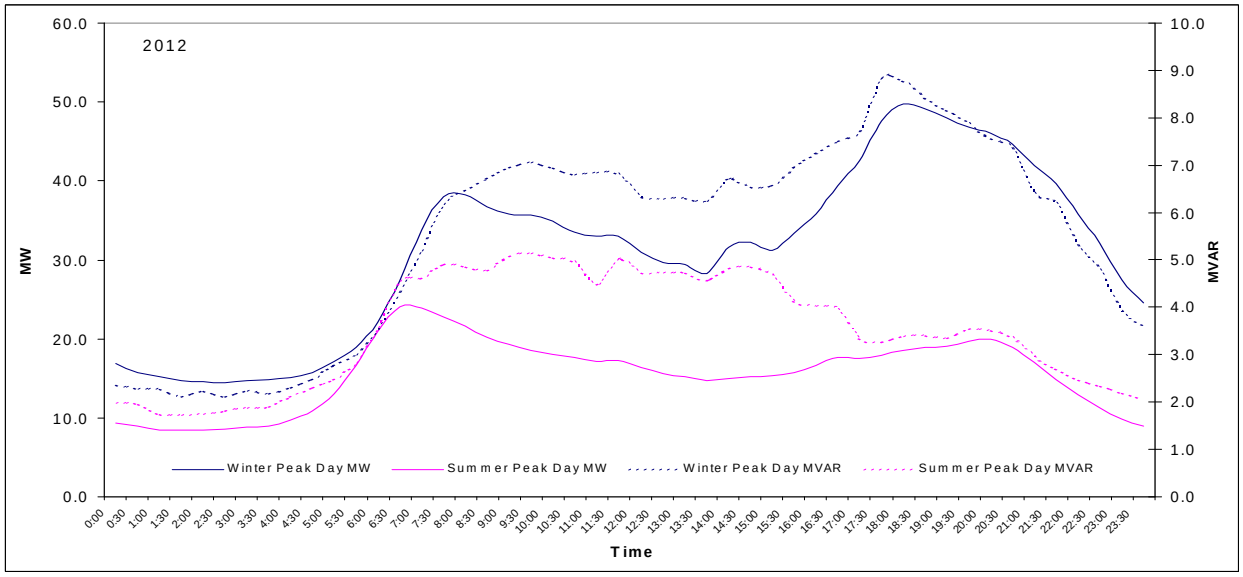


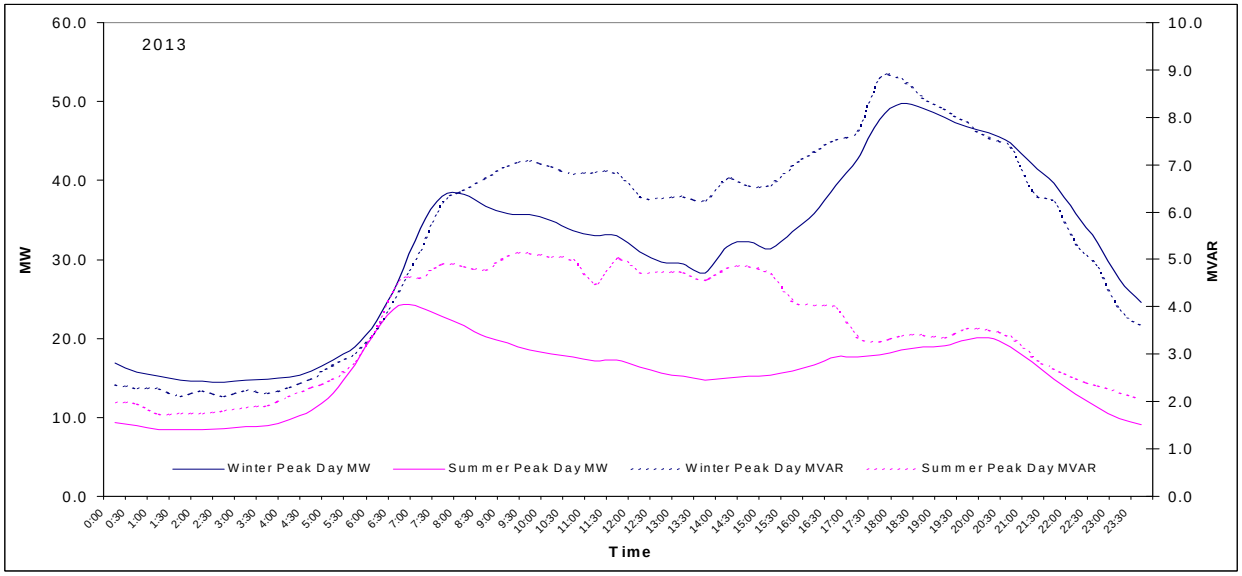
Figure 4-22 Chapel Street Site Winter Load Forecast at 50% and 10% POE

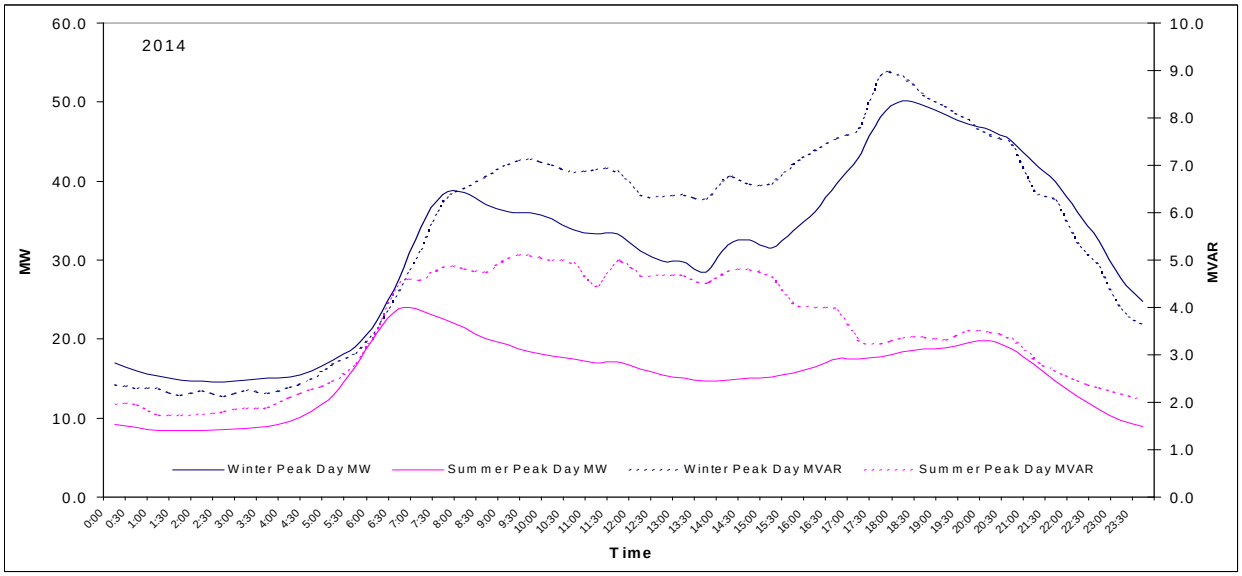


Load Profiles:

Figure 4-23 Load Profiles: Chapel Street Substation Day of Summer/Winter Peak Demand




2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

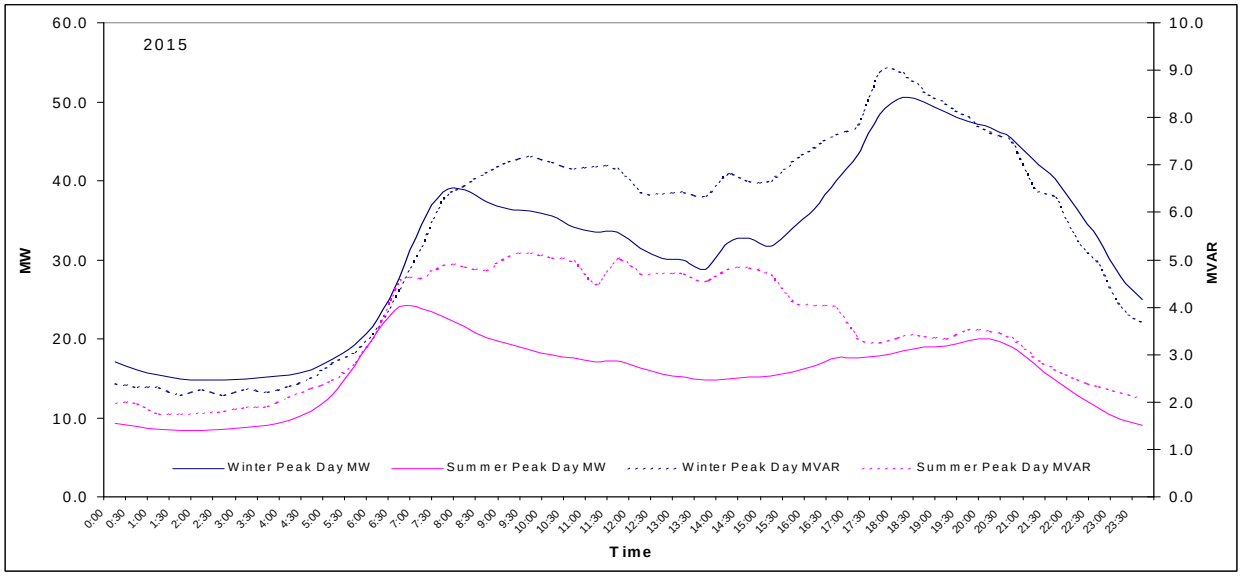
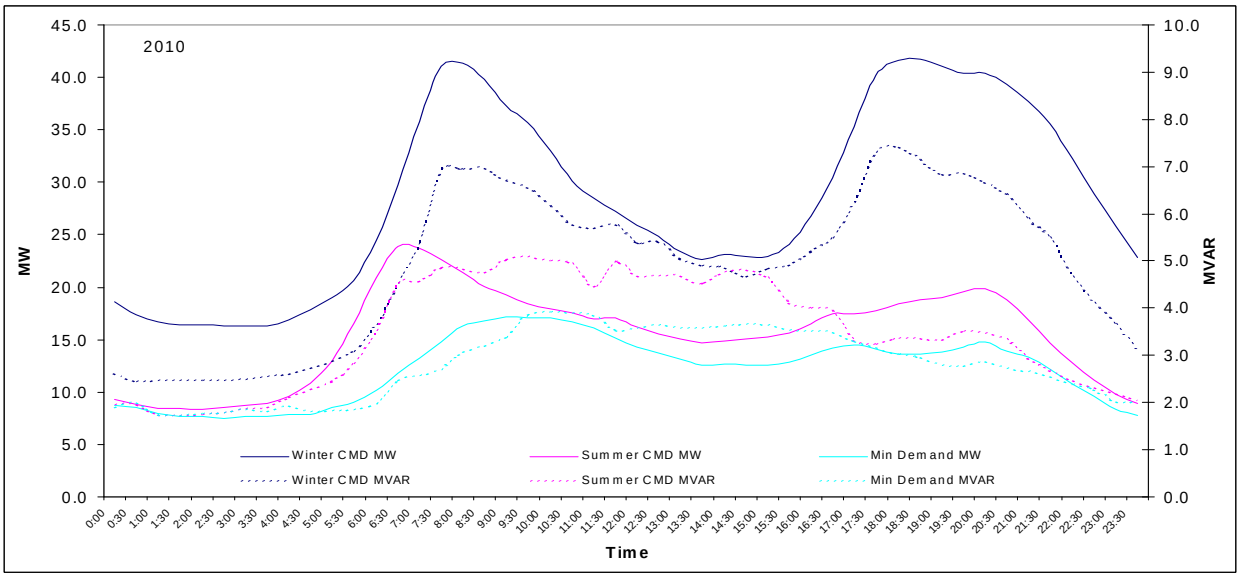
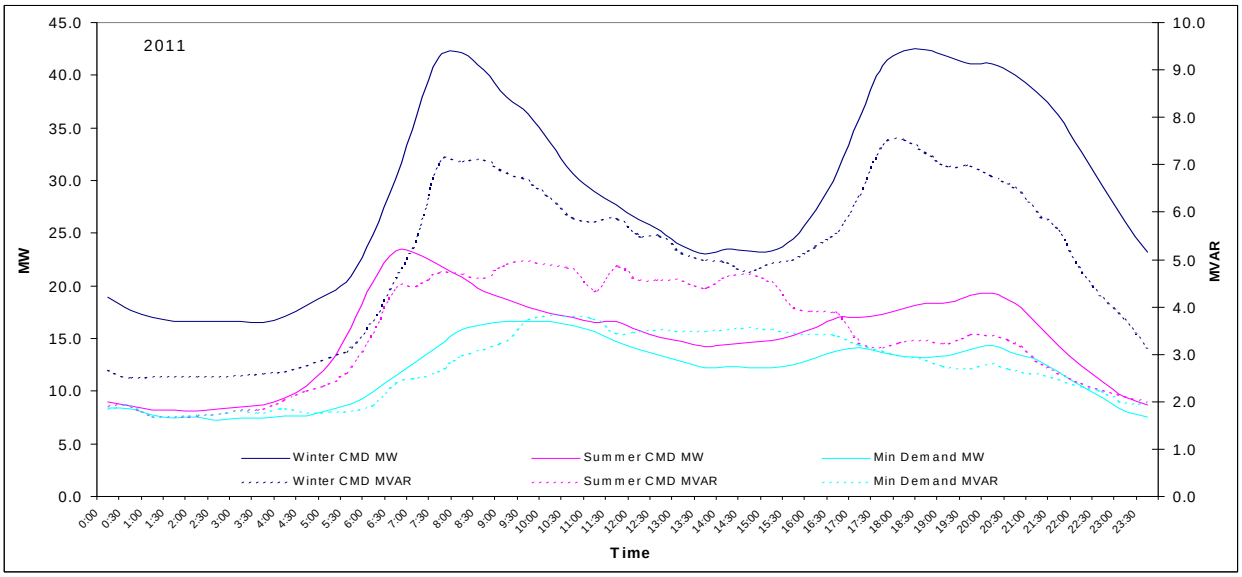
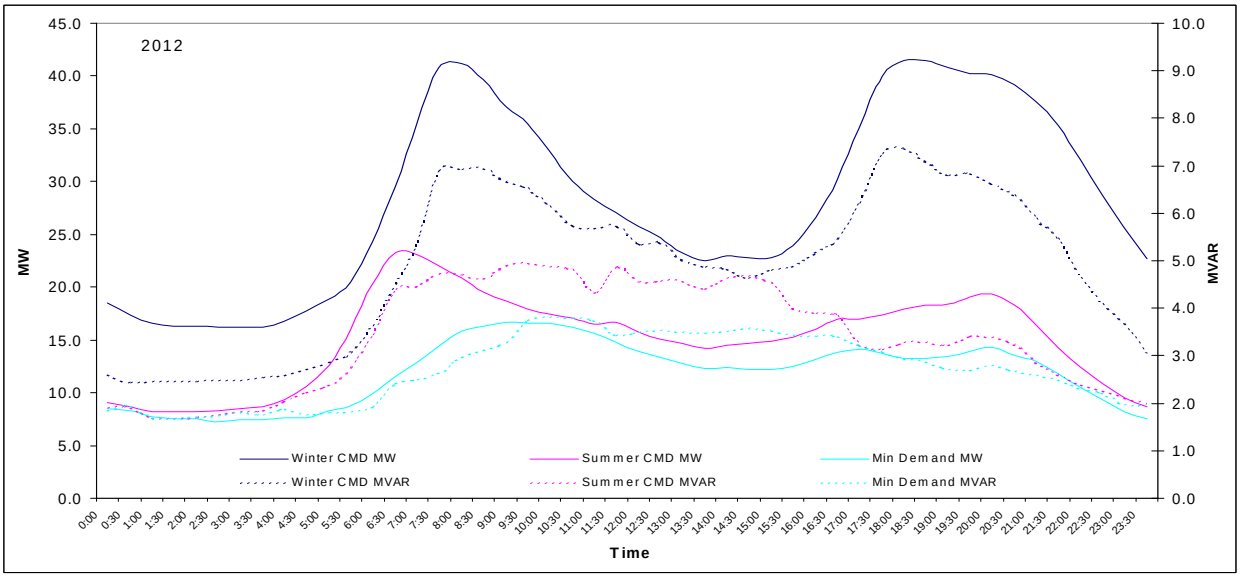
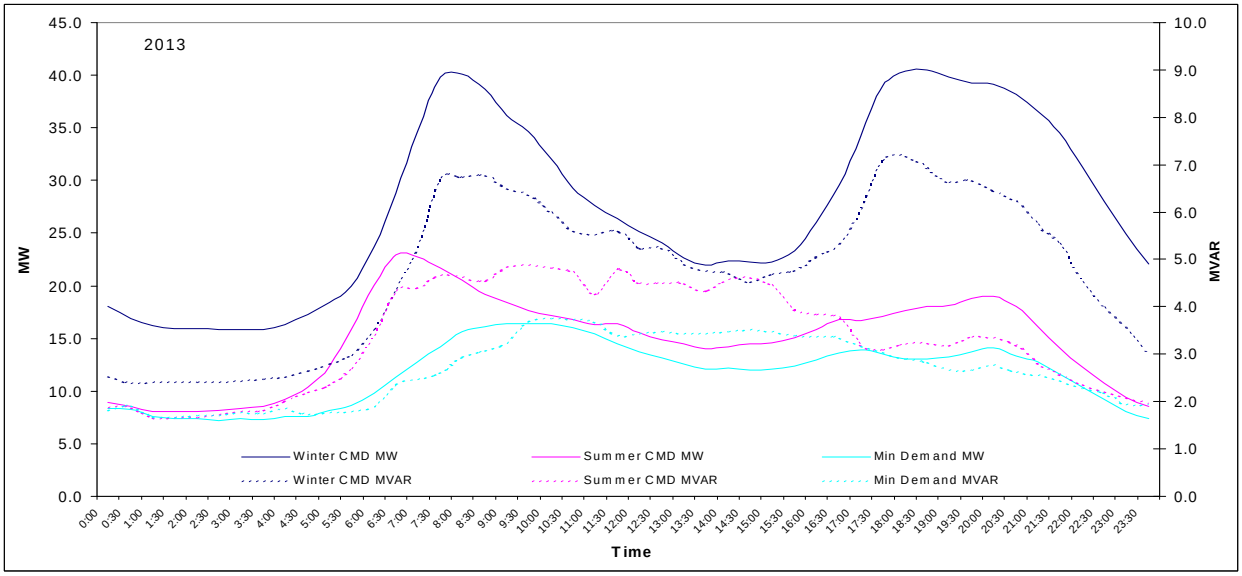

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

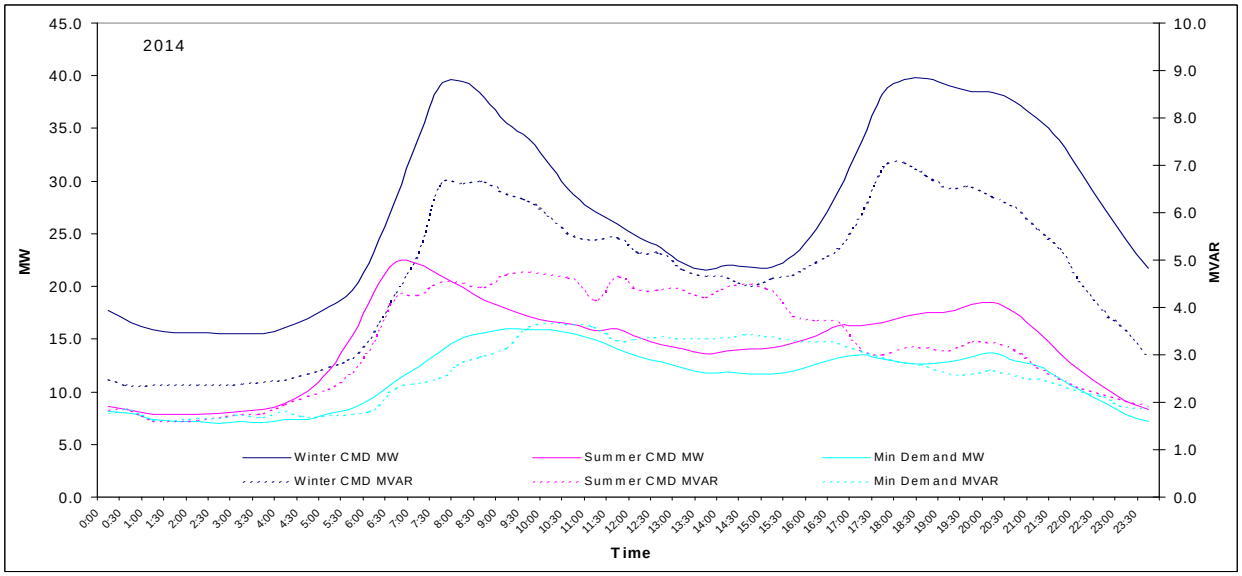
Figure 4-24 Load Profiles: Chapel Street Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

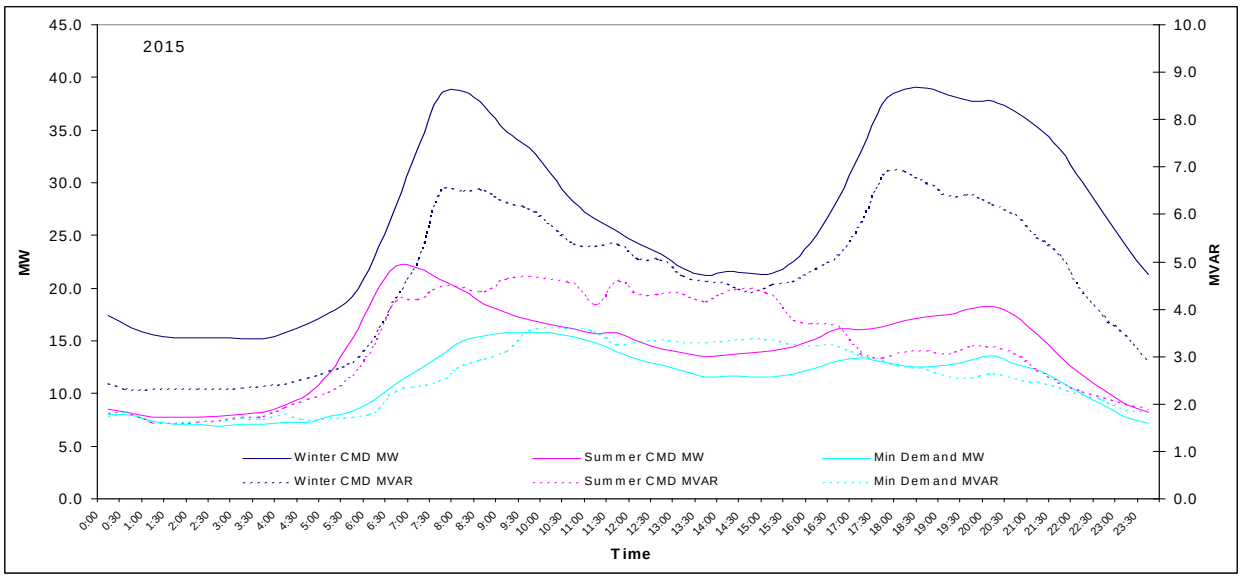
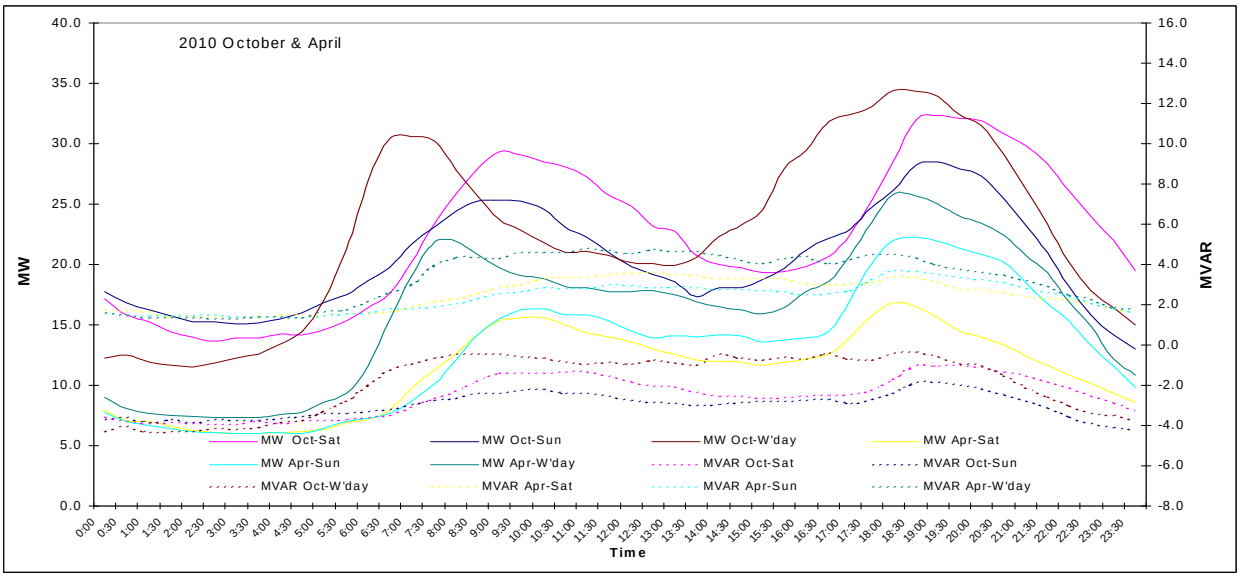
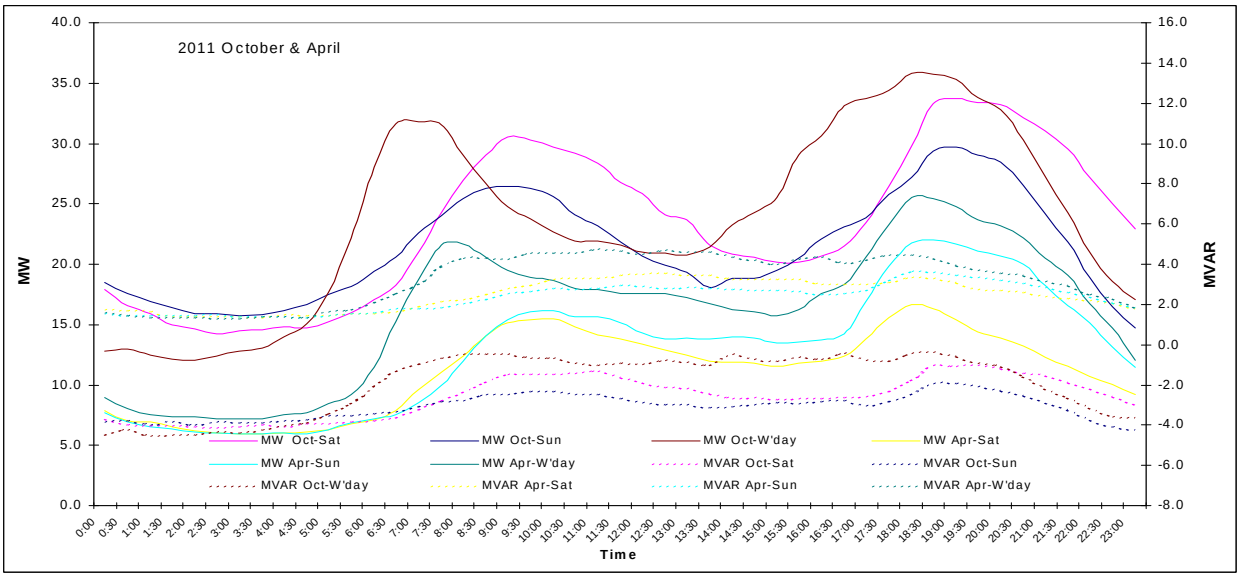
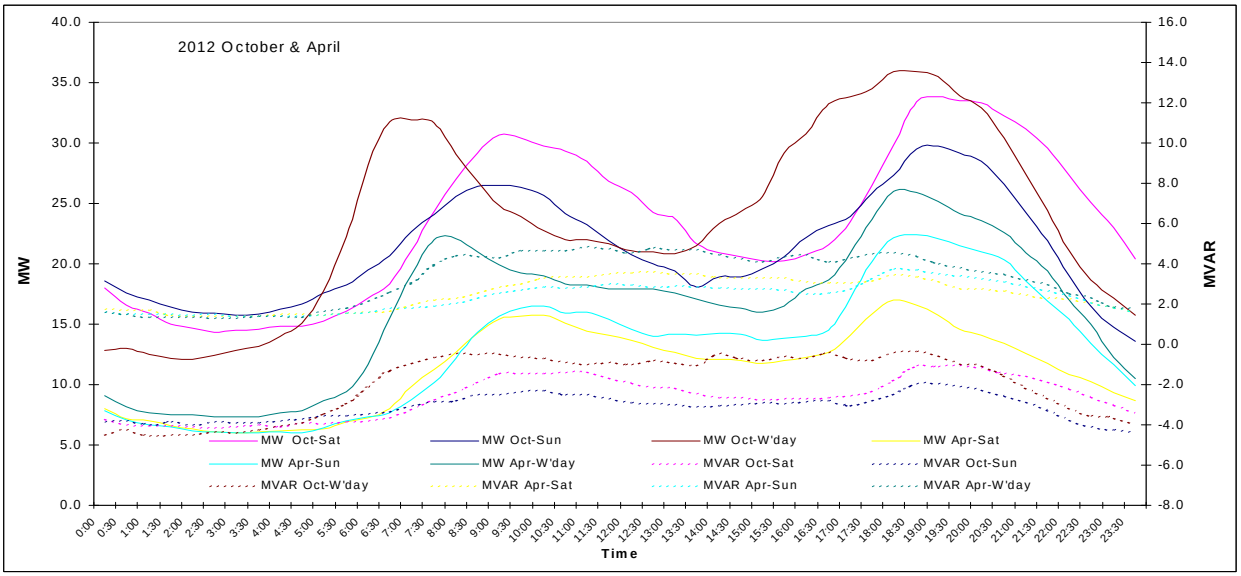
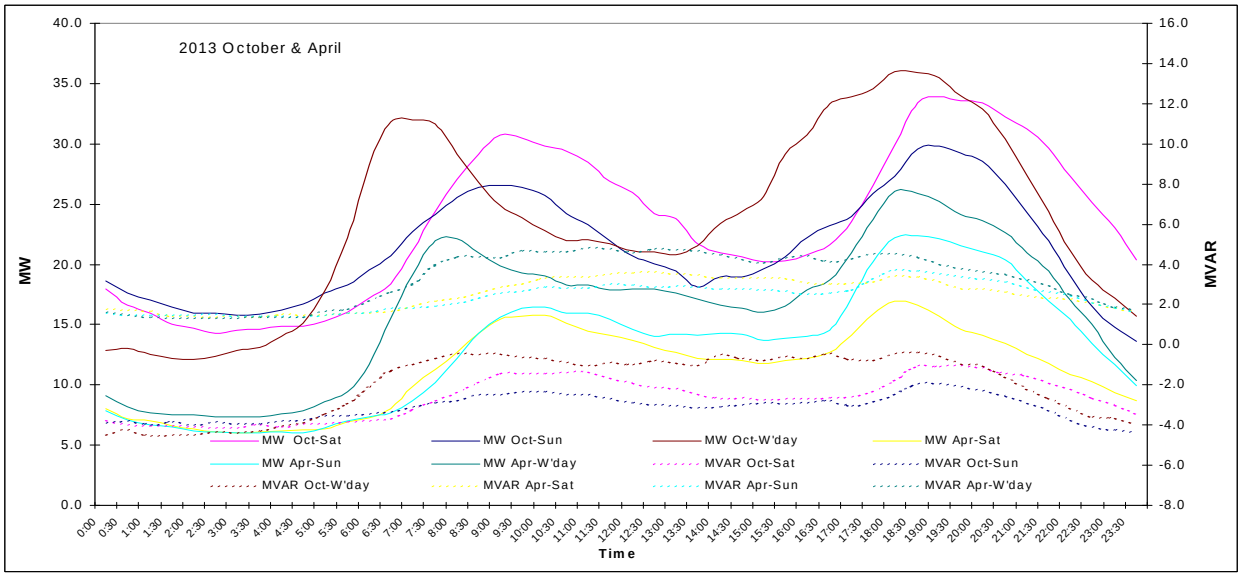

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

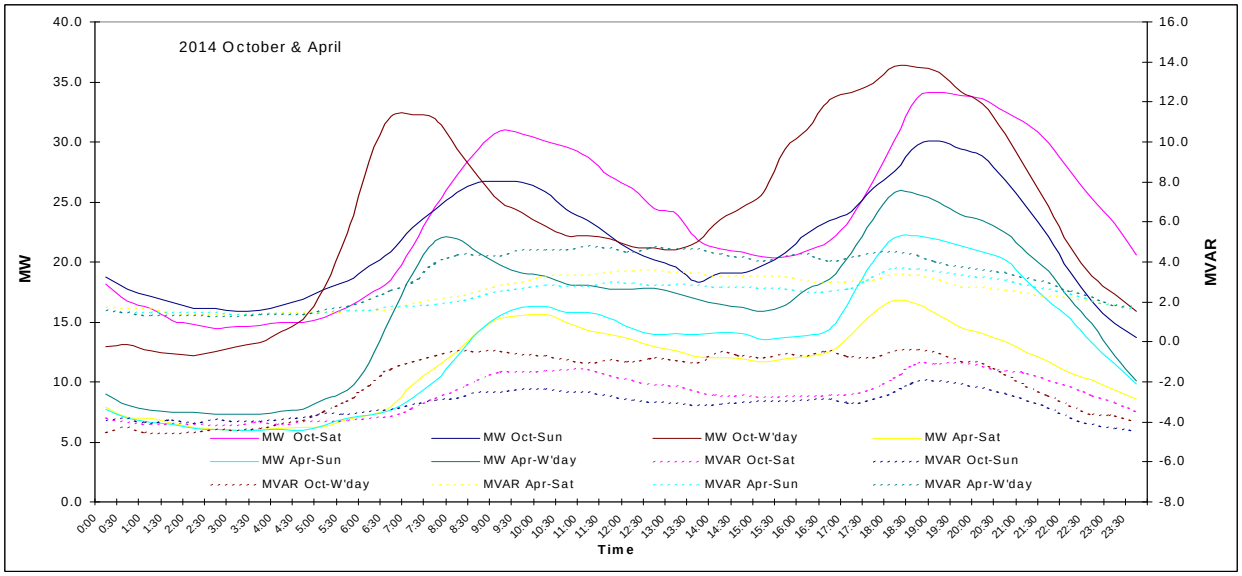
Figure 4-25 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

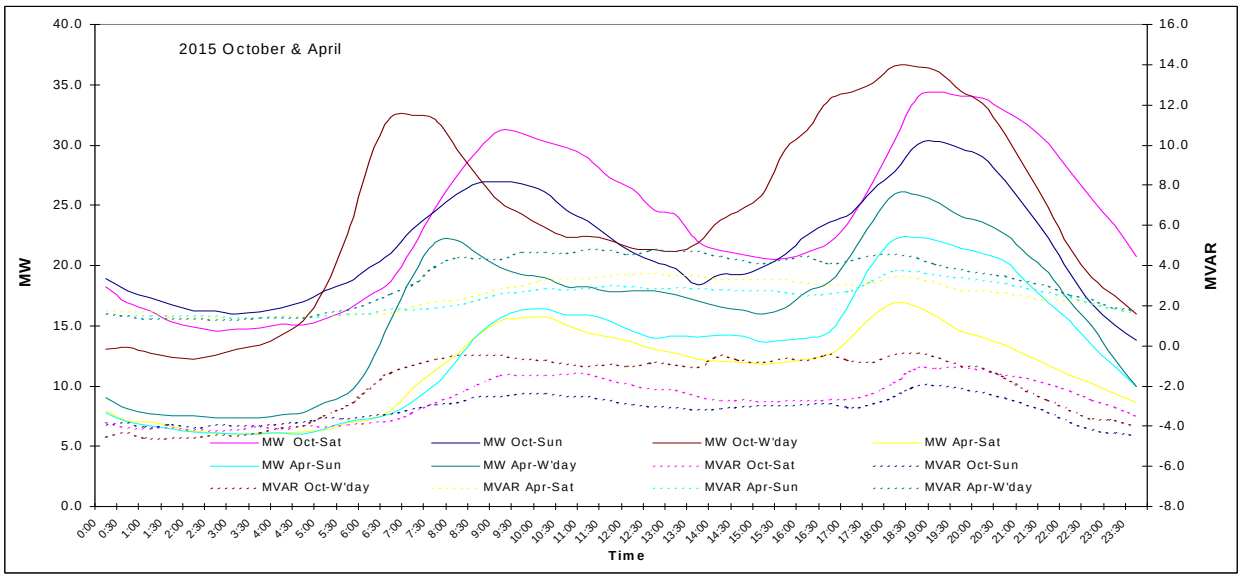
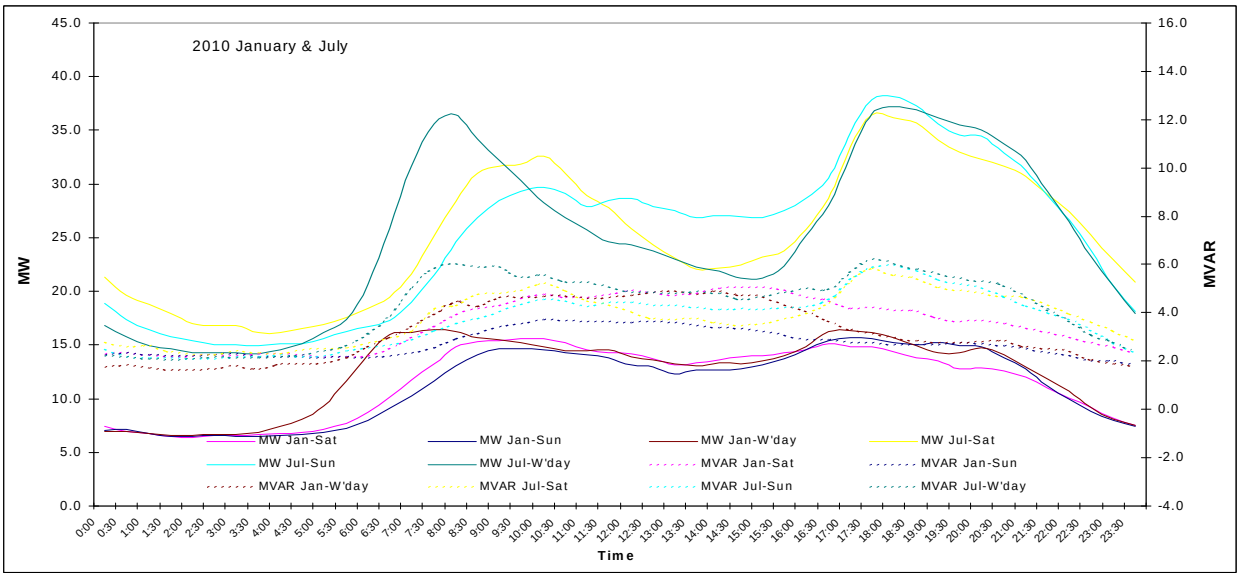
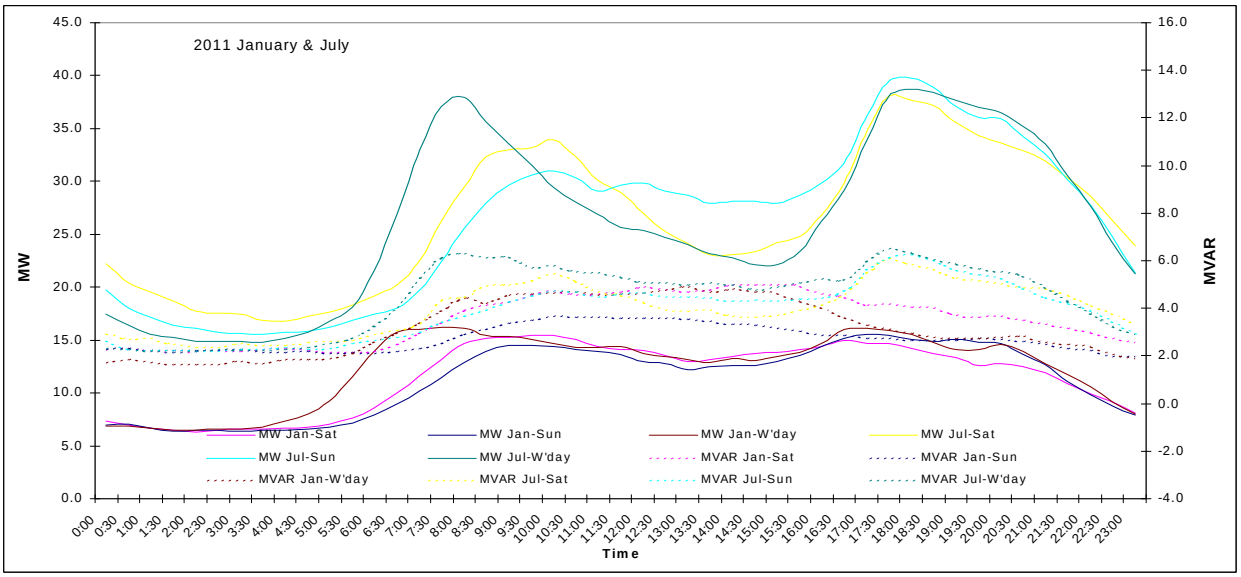
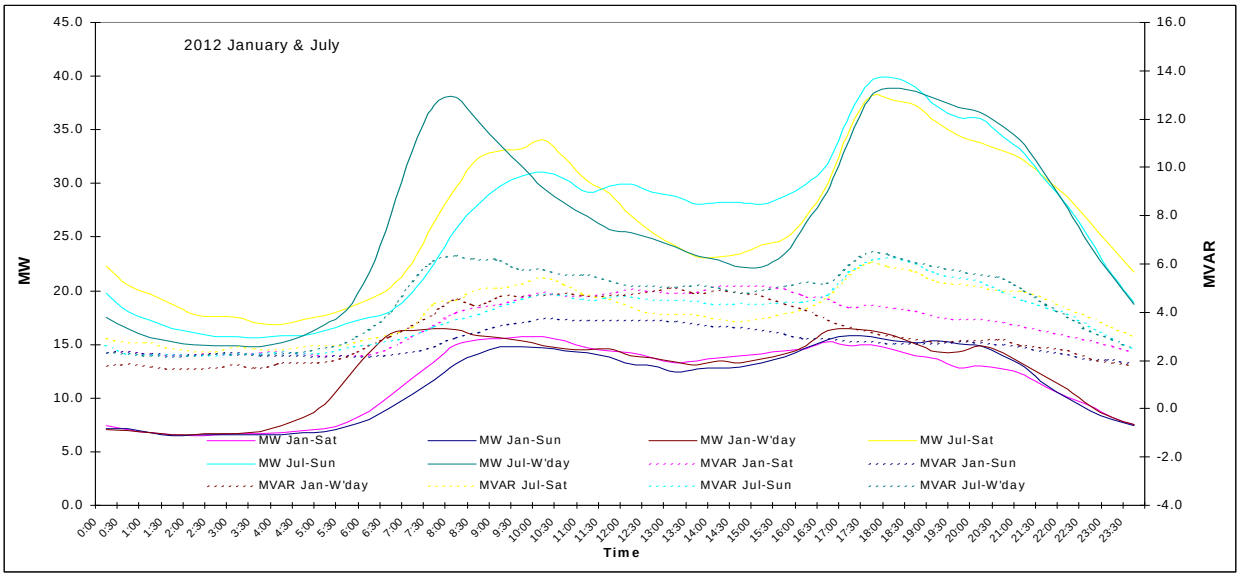
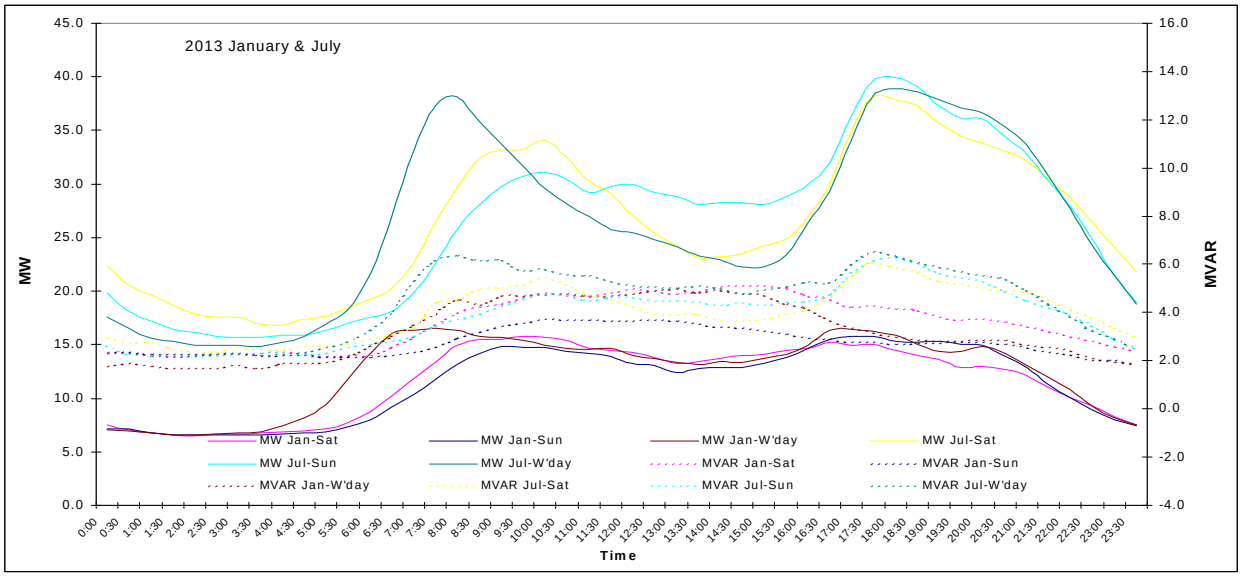

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

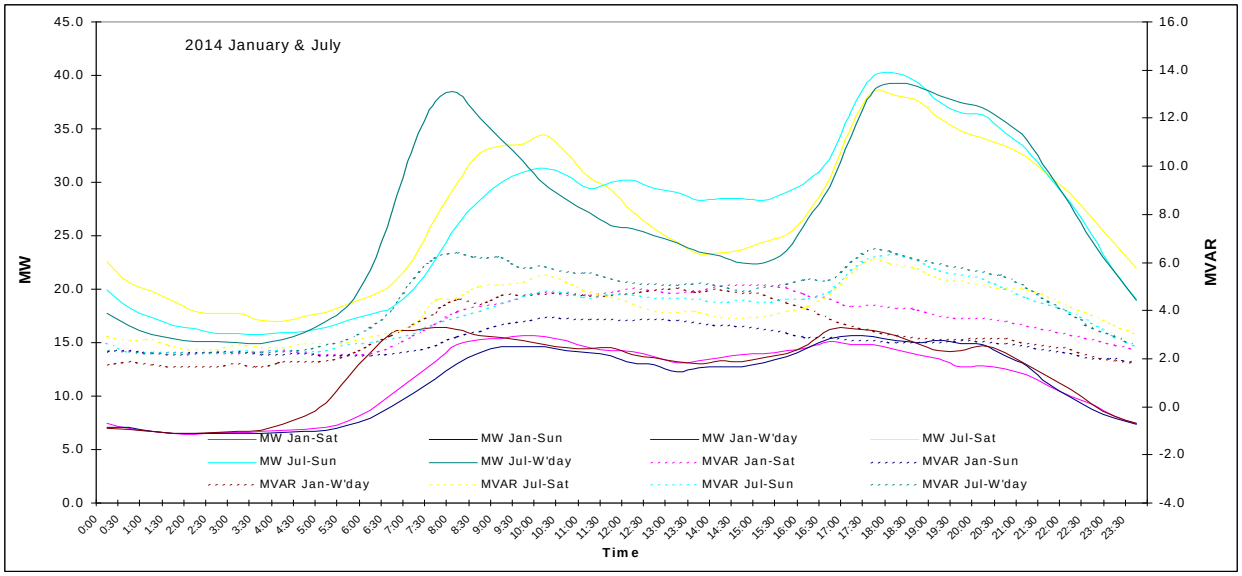
Figure 4-26 Load Profiles: Weekday, Saturday, Sunday for January & July

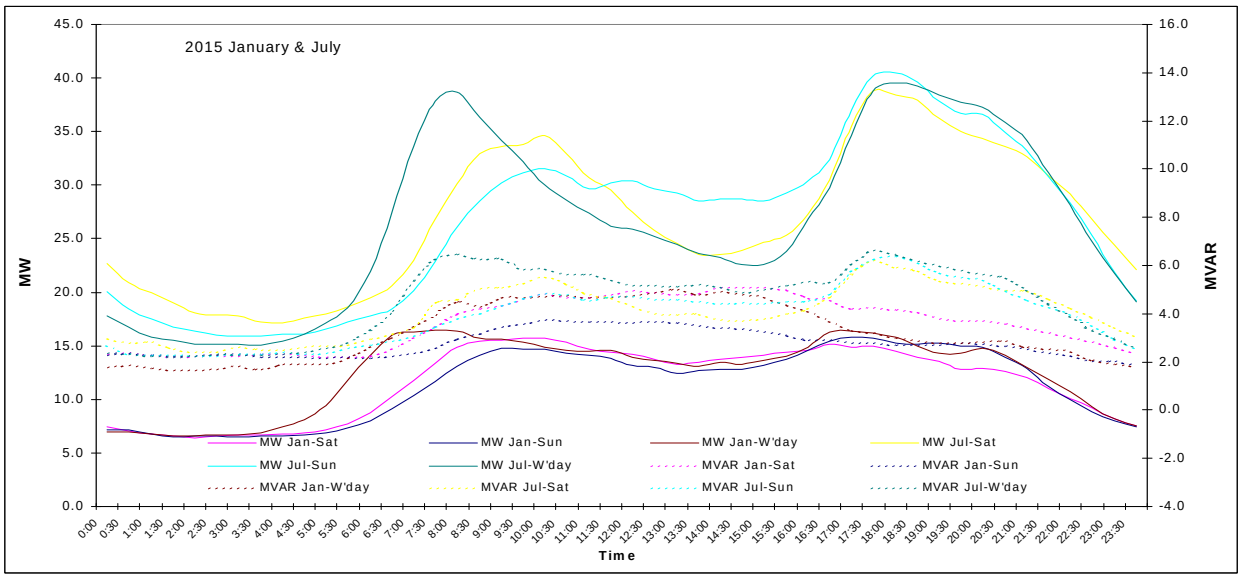







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.6 Creek Road

Description:

The Substation is located at Lenah Valley and is known as “Creek Road Substation”. The substation is owned by Transend.

Table 4-36 Creek Road Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
3	33	8	180	120

Embedded Generation:

A single undispatched embedded generator was connected to this substation in the first half of 2006 calendar year. The operational profile for this unit is anticipated to be as per the following table. The effect of the unit on the peak summer and winter demand has been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	1.06	1.06	1.06	1.06	1.06
Output – Summer (MW)	1.0	1.0	1.0	1.0	1.0
Output – Winter (MW)	1.0	1.0	1.0	1.0	1.0
Operating characteristics	Biomass unit associated with methane recovery from refuse site, 24 hour operation.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-37 Creek Road Site Winter load forecast

Creek Rd	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	102.09	109.97	97.61	105.14	102.09	109.97	100.06	107.78
2006	100.47	107.61	100.47	107.61	100.47	107.61	102.69	109.99
2007	101.43	110.12	100.80	109.43	101.43	110.12	103.98	112.89
2008	102.46	109.55	102.46	109.55	102.46	109.55	105.53	112.83
2009	102.52	109.50	102.52	109.50	102.52	109.50	106.03	113.25
2010	105.20	108.00	98.56	101.18	105.20	108.00	101.35	104.04
2011	108.42	111.30	101.57	104.27	110.77	113.71	103.77	106.53
2012	107.48	110.33	100.69	103.36	109.83	112.75	102.89	105.62
2013	106.31	109.13	99.59	102.24	108.74	111.63	101.87	104.58
2014	105.88	108.70	99.20	101.83	108.28	111.16	101.44	104.13
2015	105.41	108.21	98.75	101.38	107.89	110.76	101.07	103.76
2016	105.23	108.02	98.58	101.20	107.69	110.55	100.89	103.57
2017	105.03	107.82	98.40	101.01	107.57	110.43	100.77	103.45
2018	105.26	108.06	98.61	101.23	107.77	110.63	100.96	103.64
2019	105.75	108.56	99.07	101.70	108.41	111.29	101.56	104.26
2020	106.50	109.32	99.77	102.42	109.14	112.04	102.25	104.96

Table 4-38 Creek Road Site Summer load forecast

Creek Rd	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	51.42	55.84	51.42	55.84	51.42	55.84	51.70	56.15
2006	55.19	59.88	52.08	56.51	55.19	59.88	52.47	56.93
2007	60.66	65.58	60.46	65.37	60.66	65.58	61.28	66.25
2008	61.73	65.06	61.73	65.06	61.73	65.06	62.70	66.10
2009	62.81	66.26	62.81	66.26	62.81	66.26	64.01	67.52
2010	64.25	65.81	64.25	65.81	64.25	65.81	65.74	67.34
2011	63.90	65.46	63.90	65.46	66.50	68.12	66.50	68.12
2012	65.48	67.07	65.48	67.07	68.15	69.81	68.15	69.81
2013	65.91	67.52	65.91	67.52	68.62	70.29	68.62	70.29
2014	65.66	67.25	65.66	67.25	68.24	69.91	68.24	69.91
2015	66.47	68.09	66.47	68.09	69.09	70.77	69.09	70.77
2016	66.03	67.64	66.03	67.64	68.70	70.37	68.70	70.37
2017	68.10	69.76	68.10	69.76	70.76	72.49	70.76	72.49
2018	69.17	70.85	69.17	70.85	71.89	73.64	71.89	73.64
2019	70.29	72.00	70.29	72.00	73.01	74.79	73.01	74.79
2020	71.56	73.30	71.56	73.30	74.28	76.09	74.28	76.09

Figure 4-27 Creek Road Site Summer Load Forecast at 50% and 10% POE

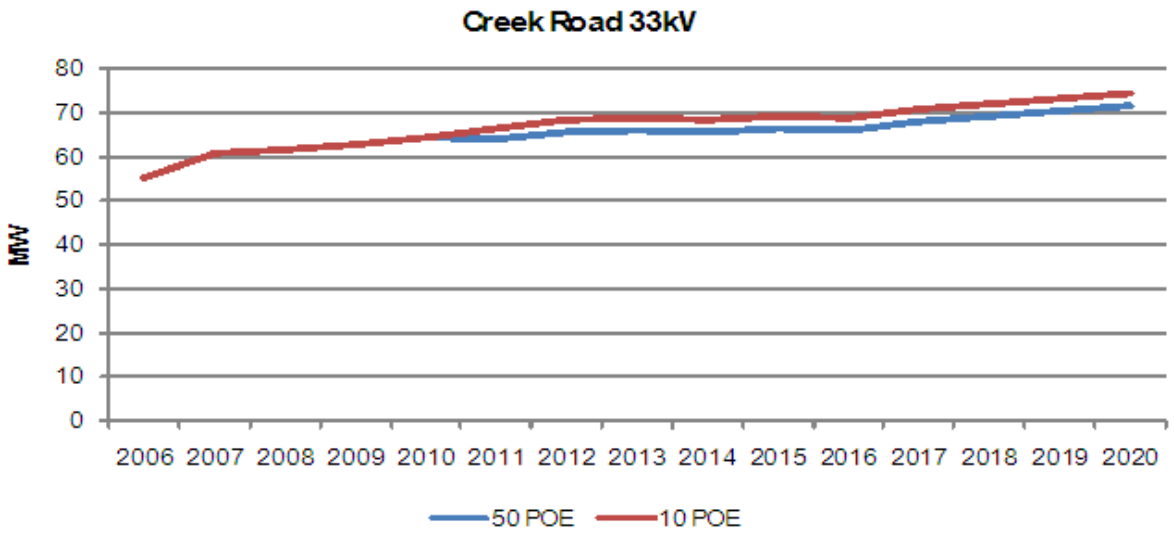
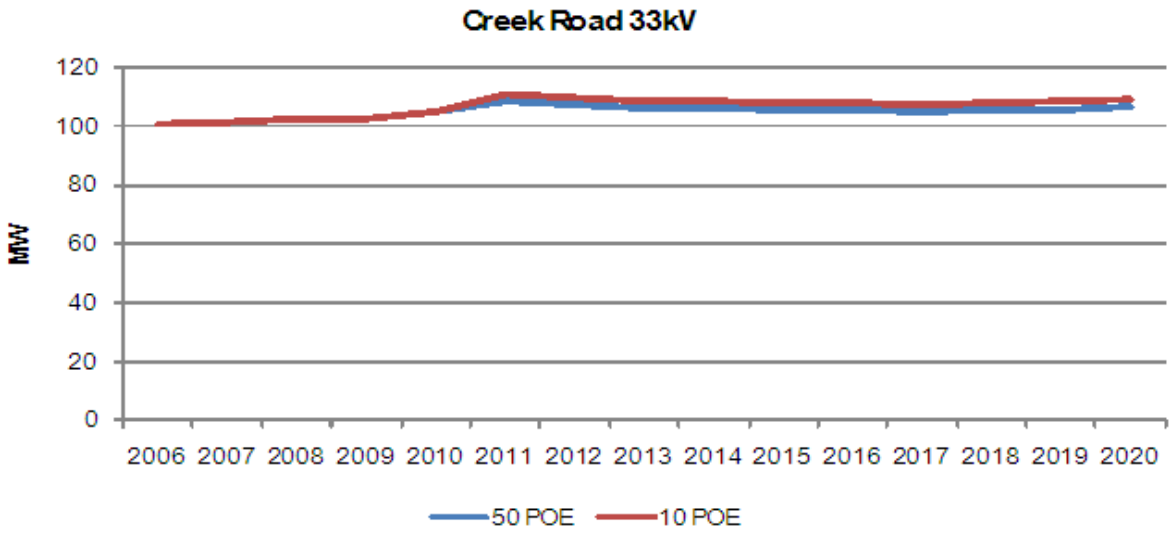
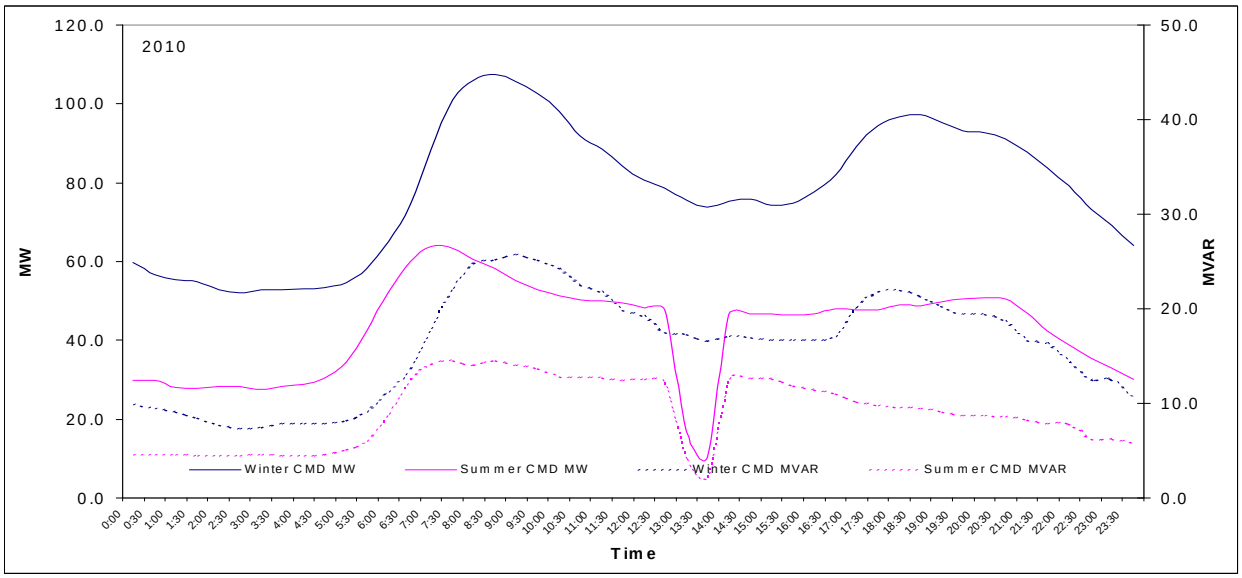


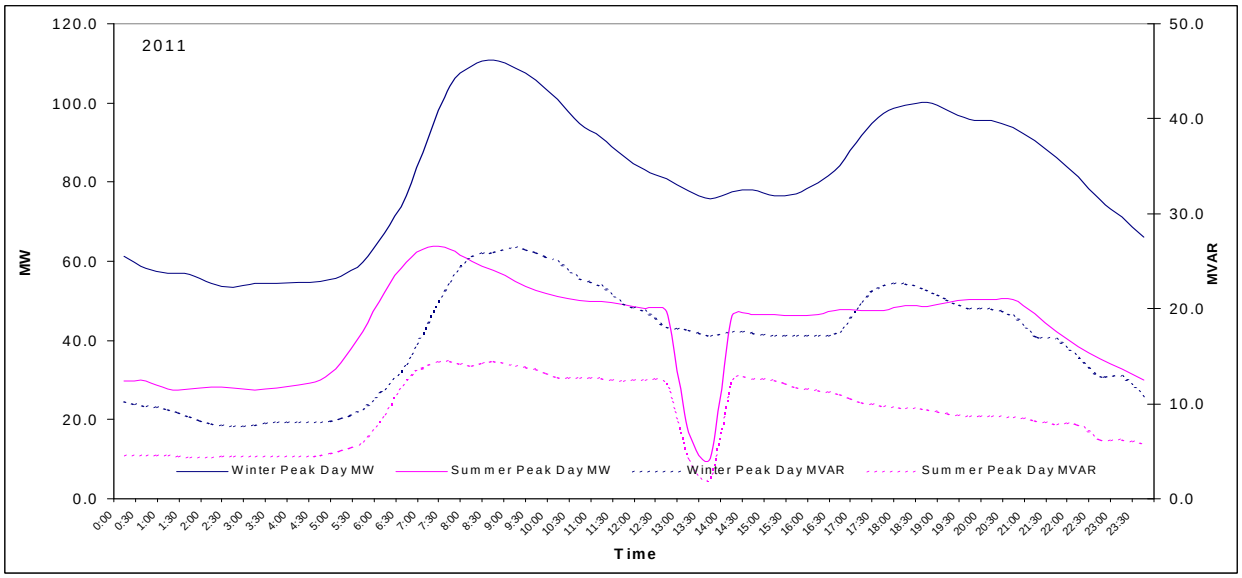
Figure 4-28 Creek Road Site Winter Load Forecast at 50% and 10% POE

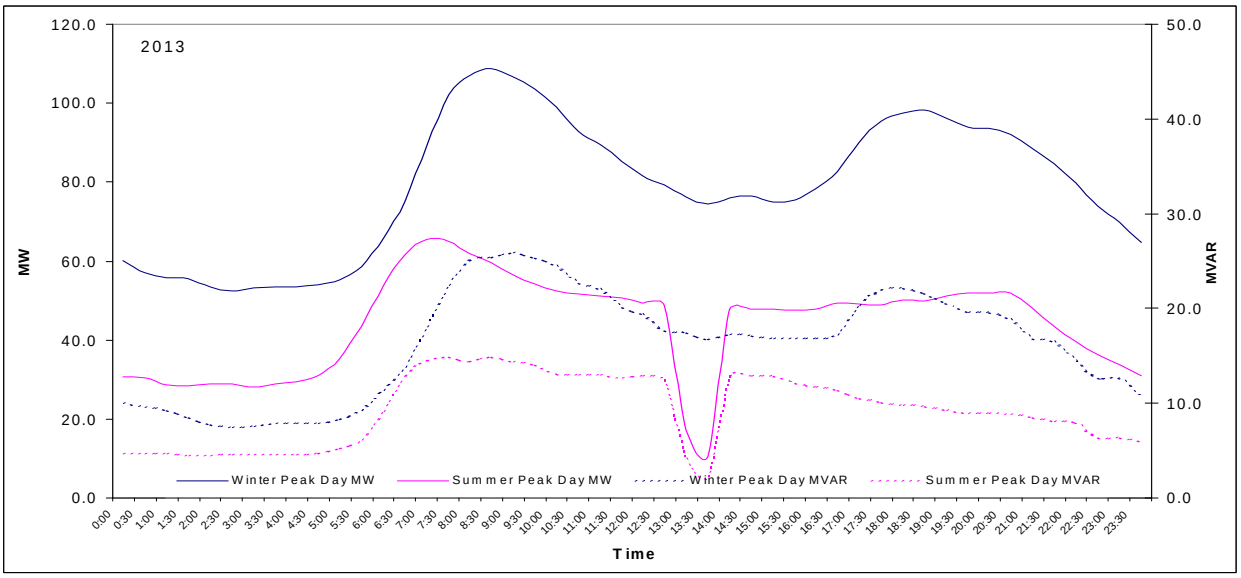


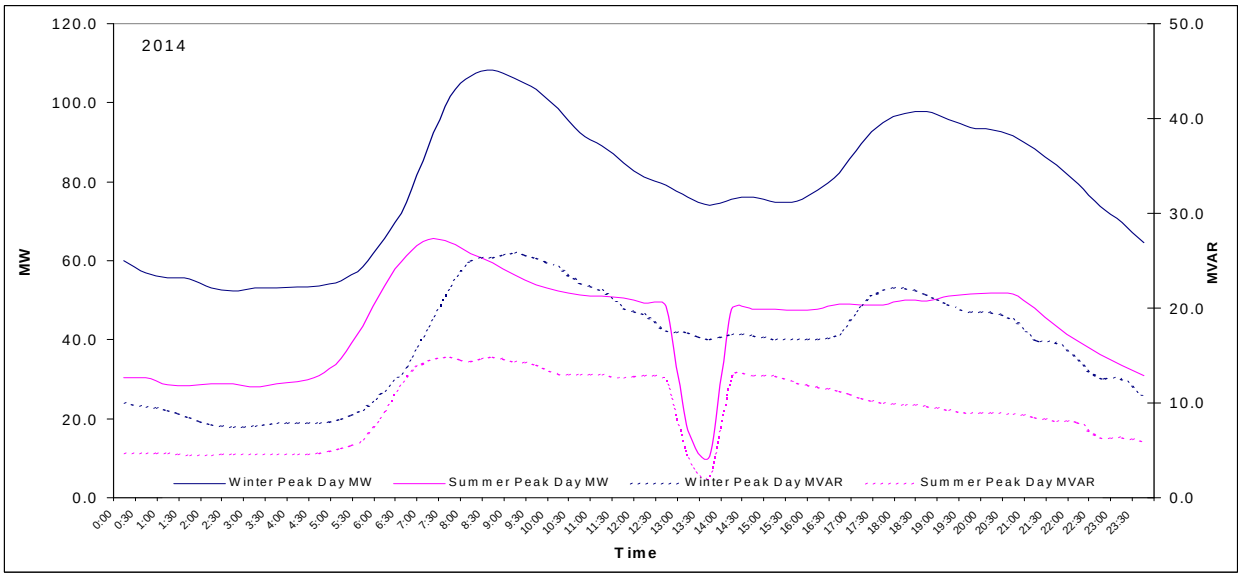
Load Profiles:

Figure 4-29 Load Profiles: Creek Road Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

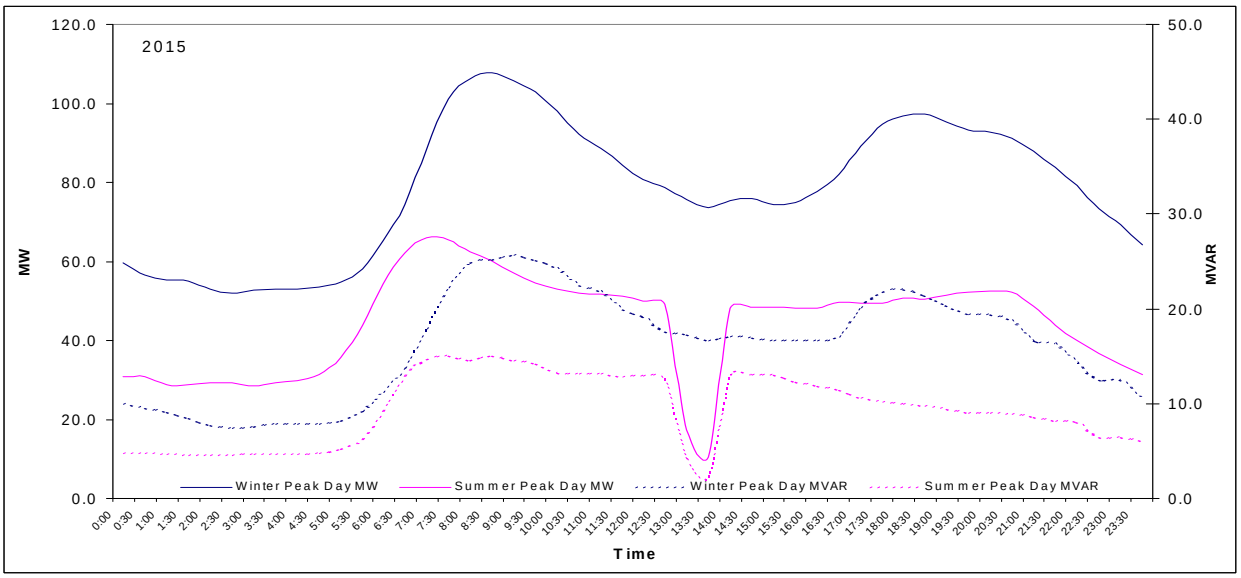
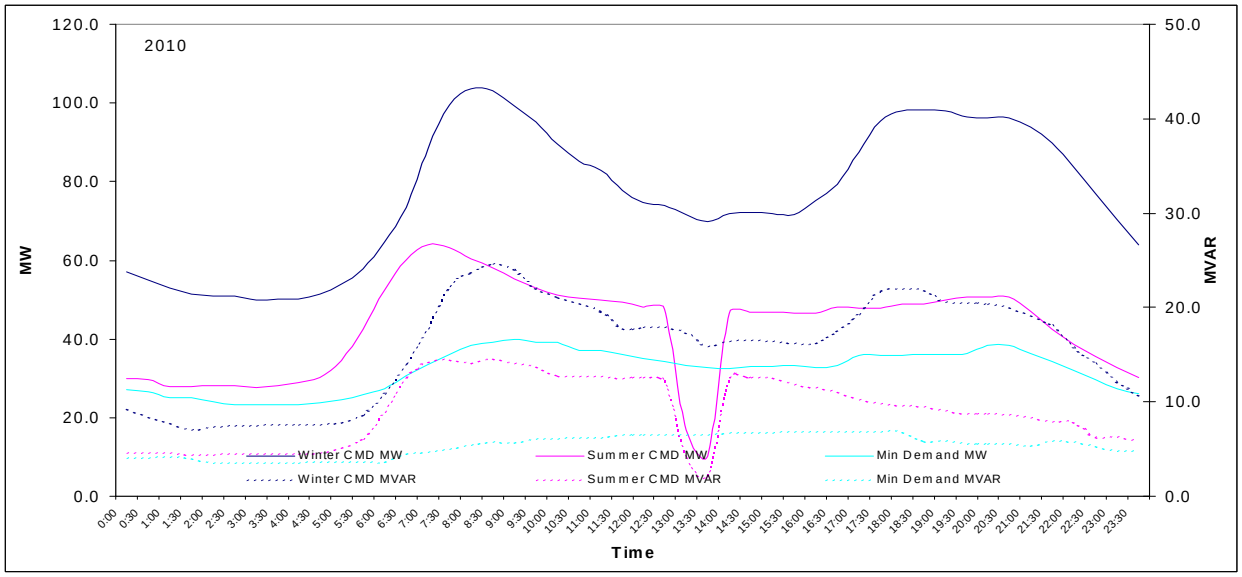
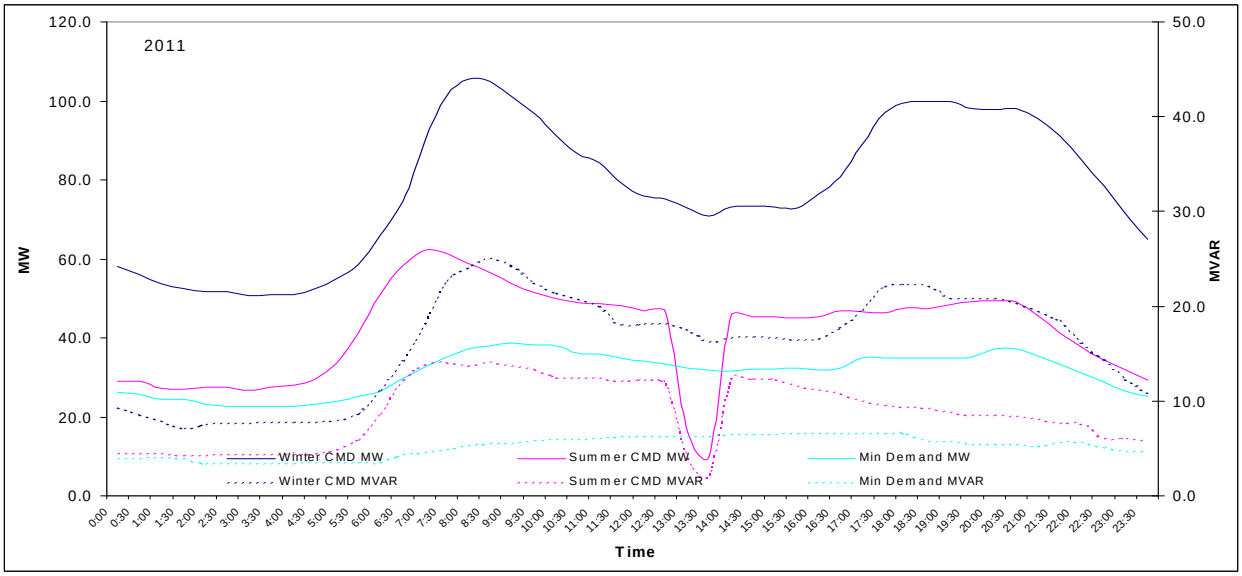
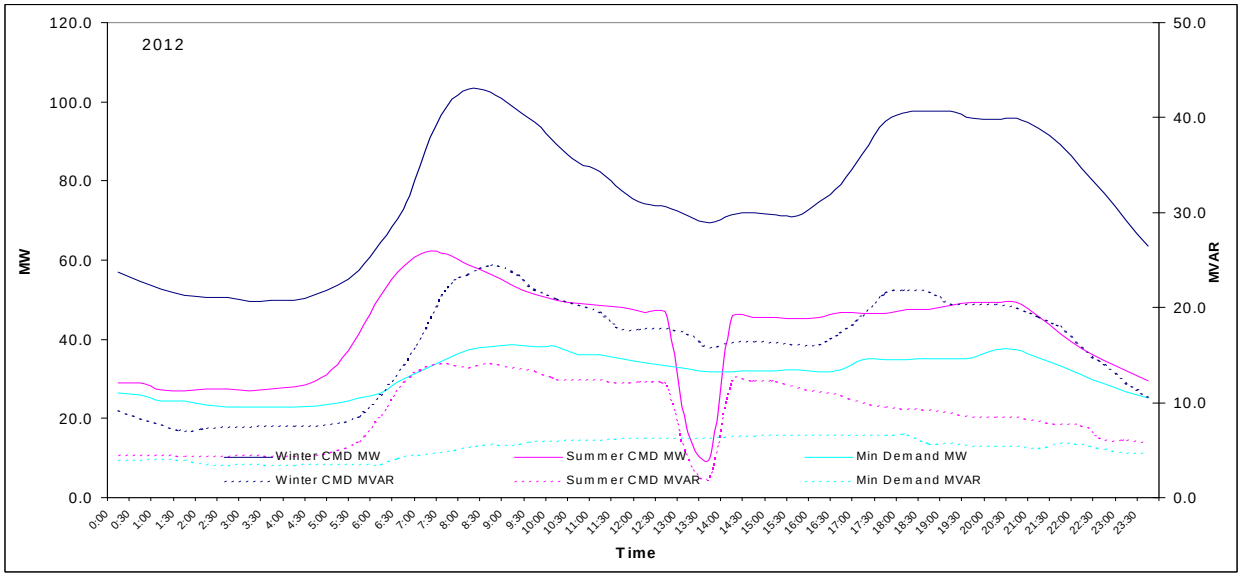
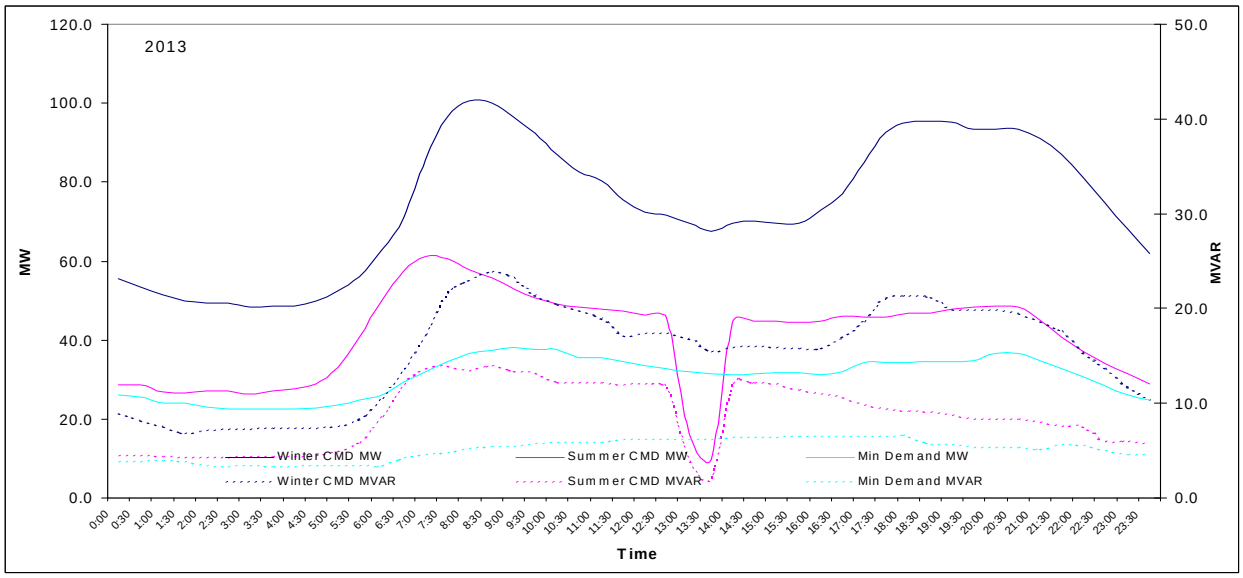

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

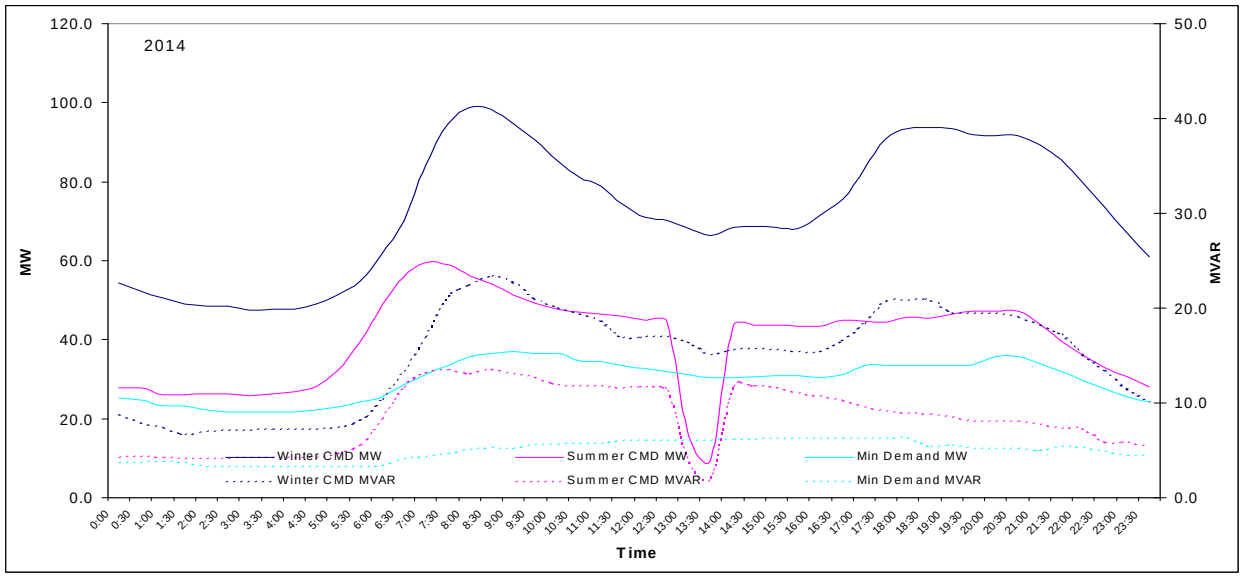
Figure 4-30 Load Profiles: Creek Road Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

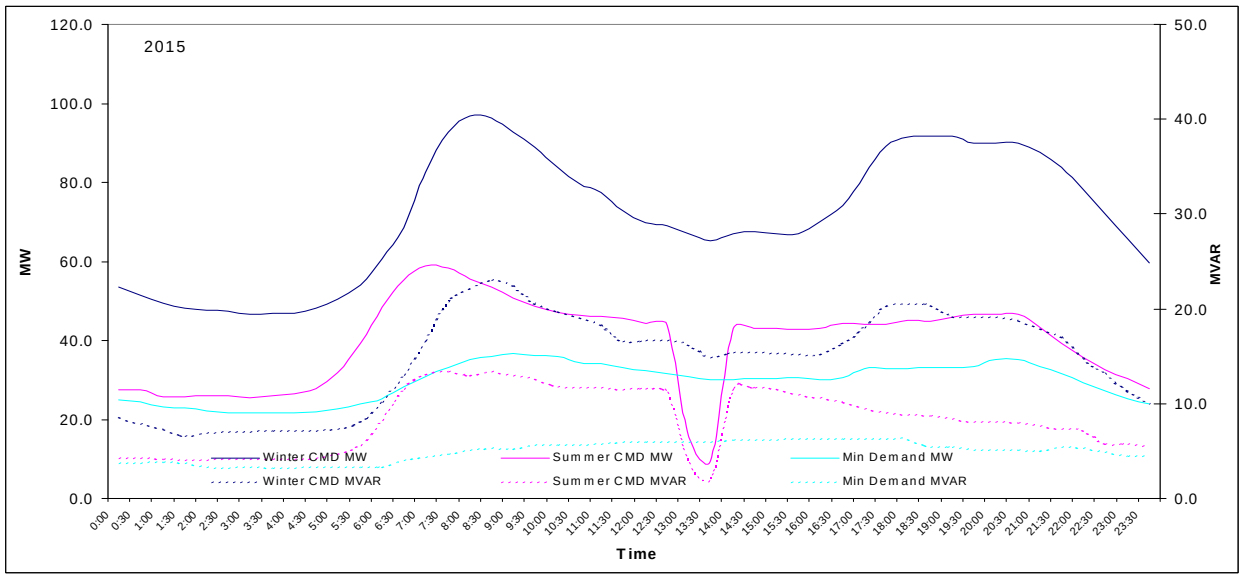
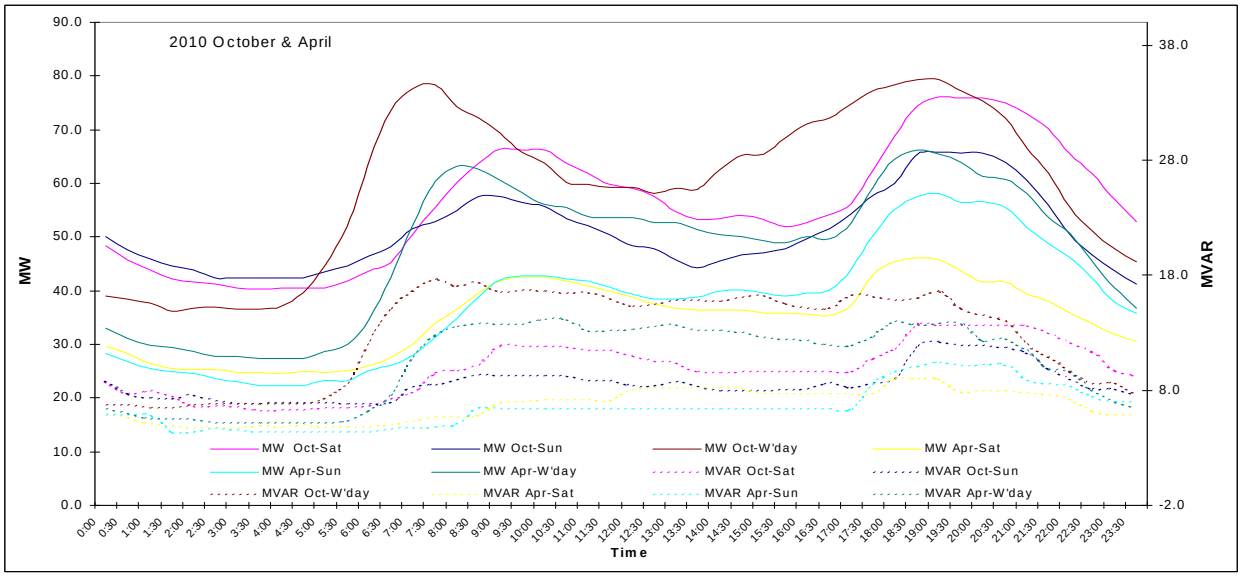
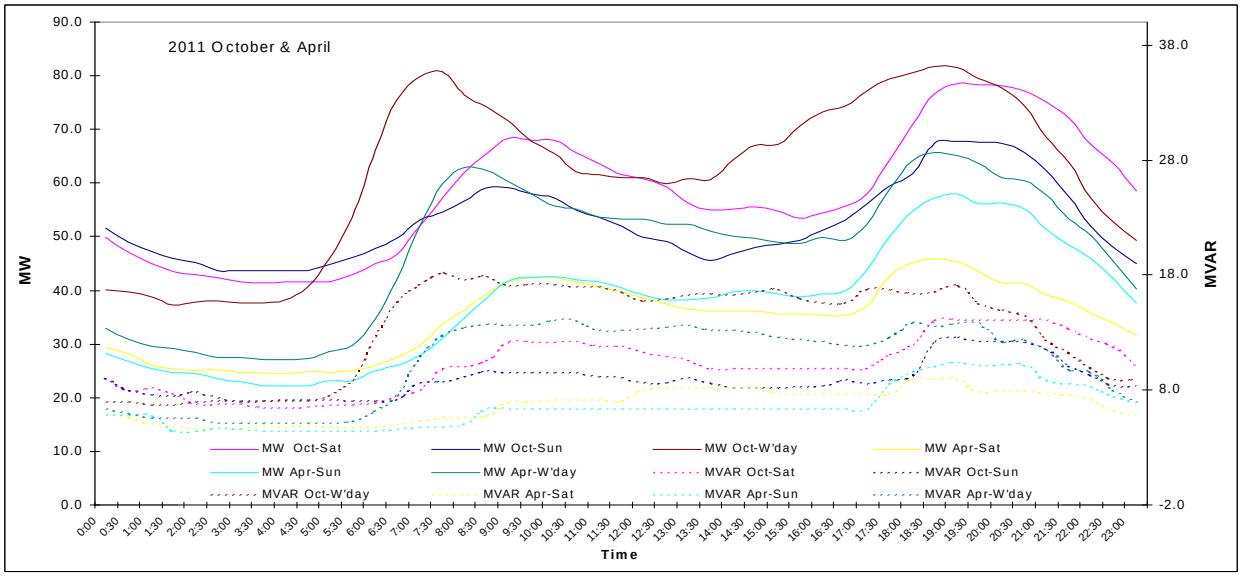
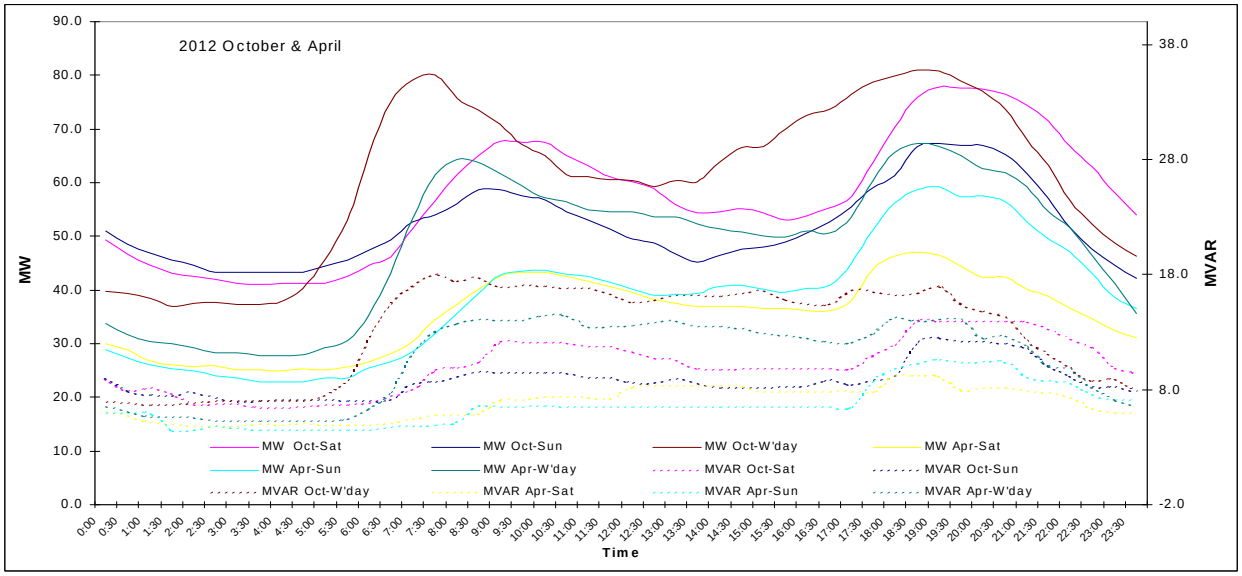
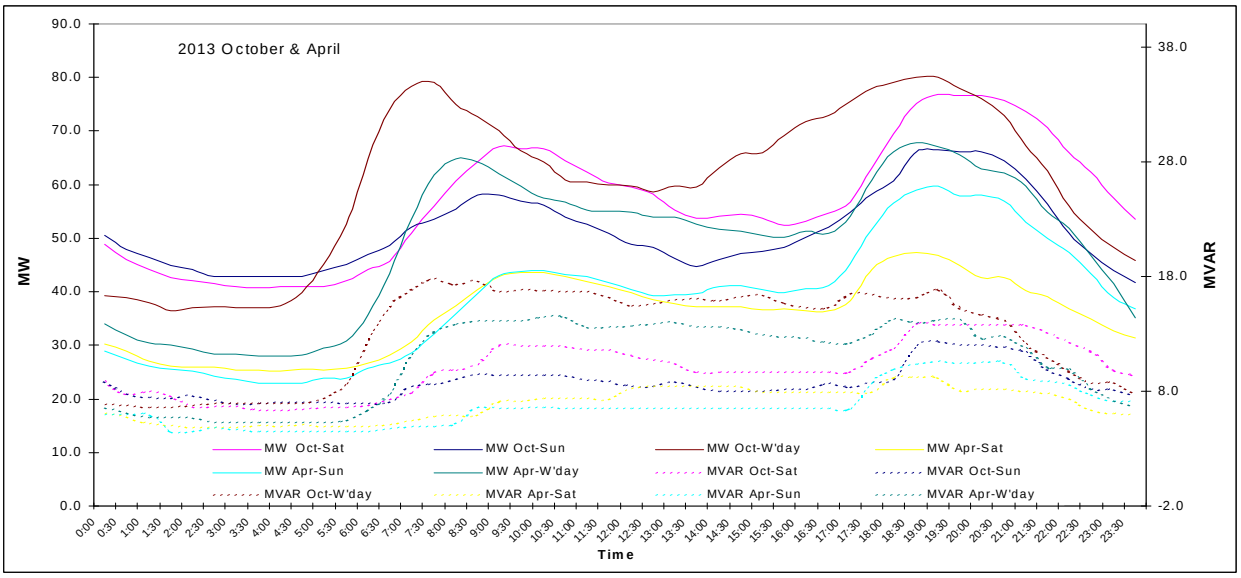

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

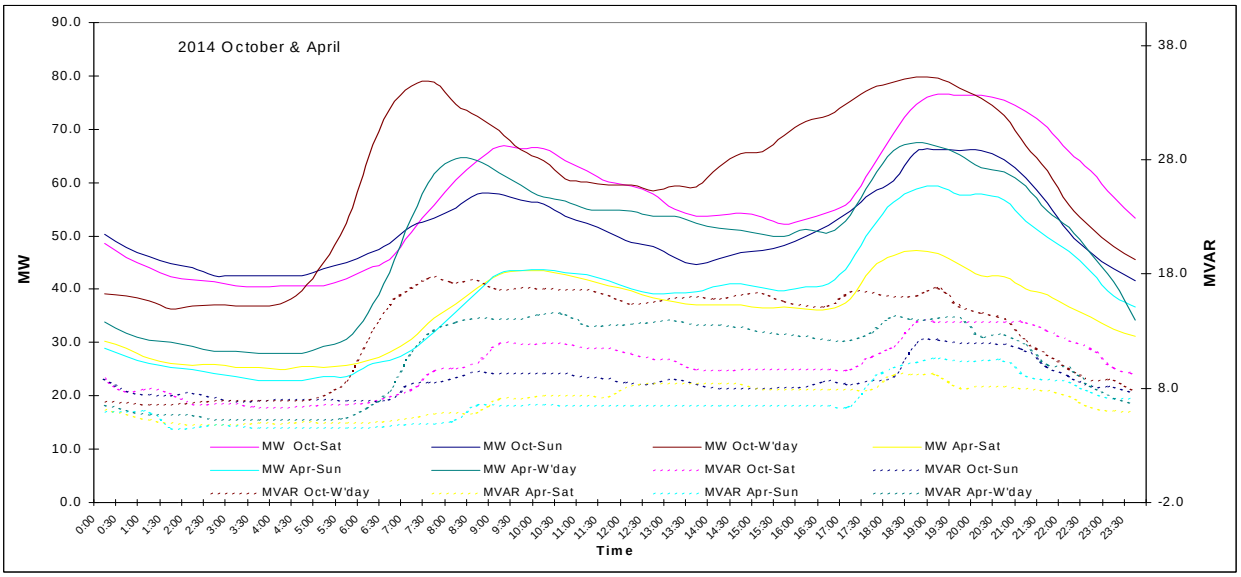
Figure 4-31 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

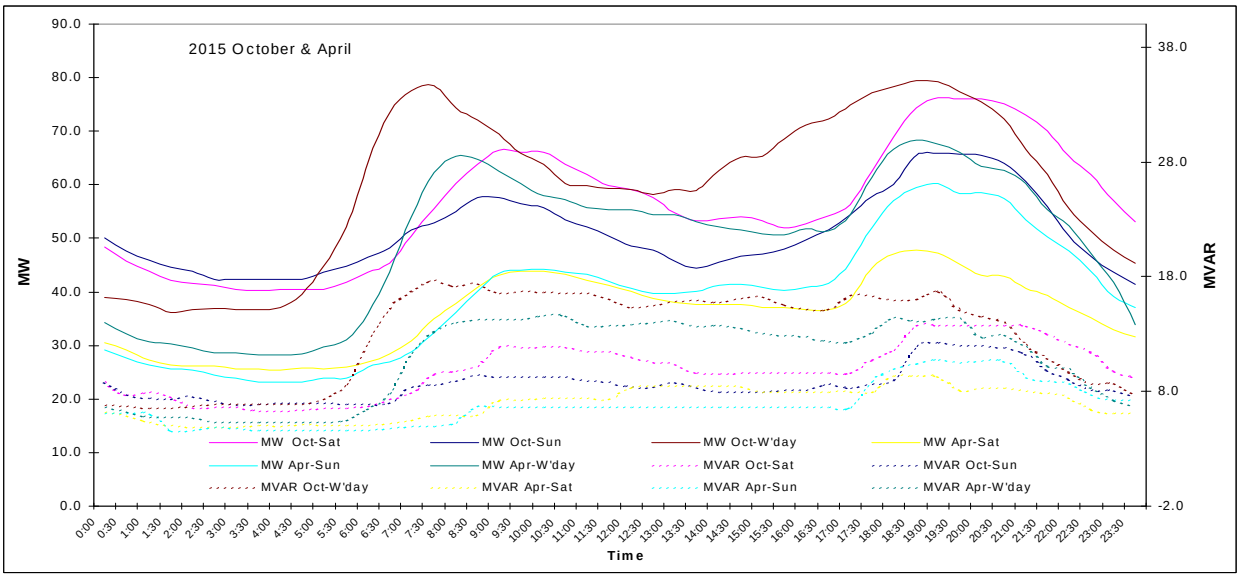
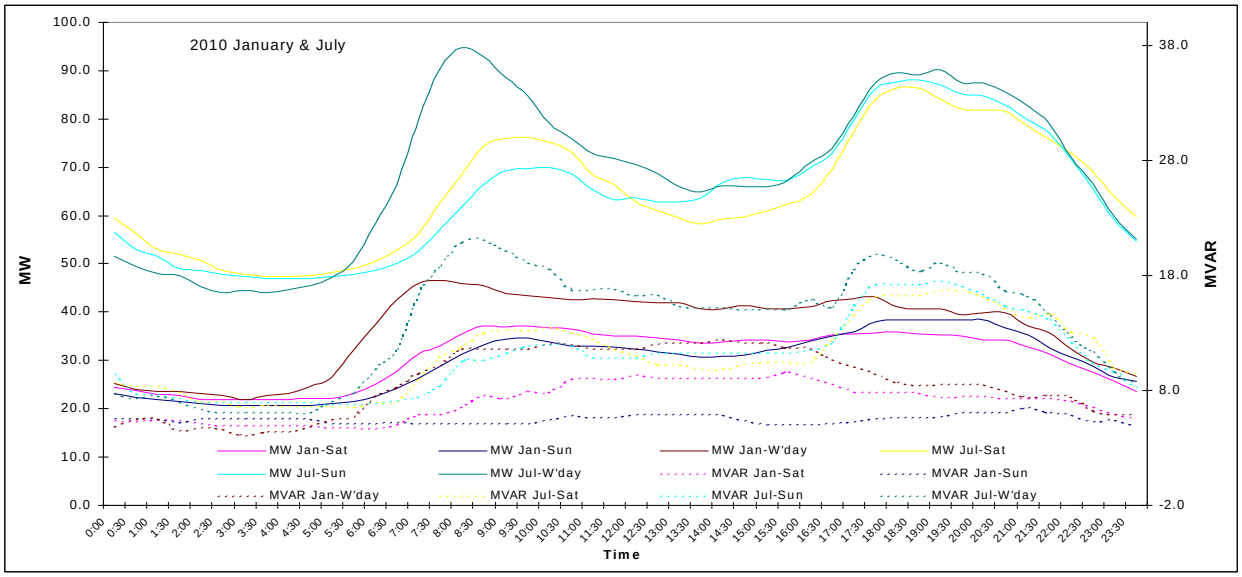
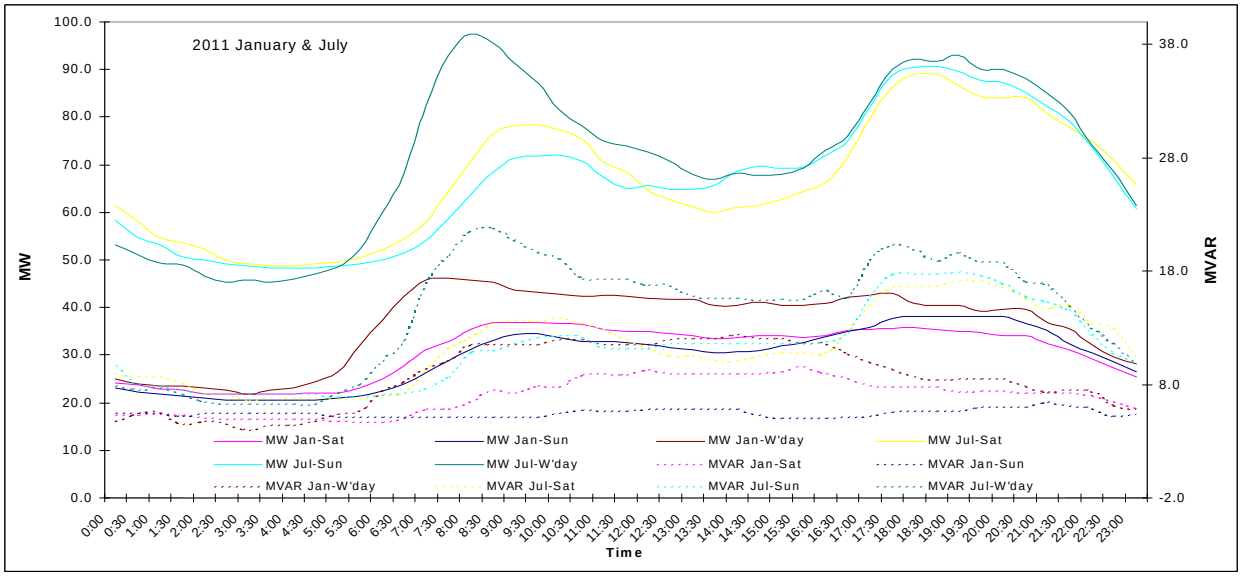
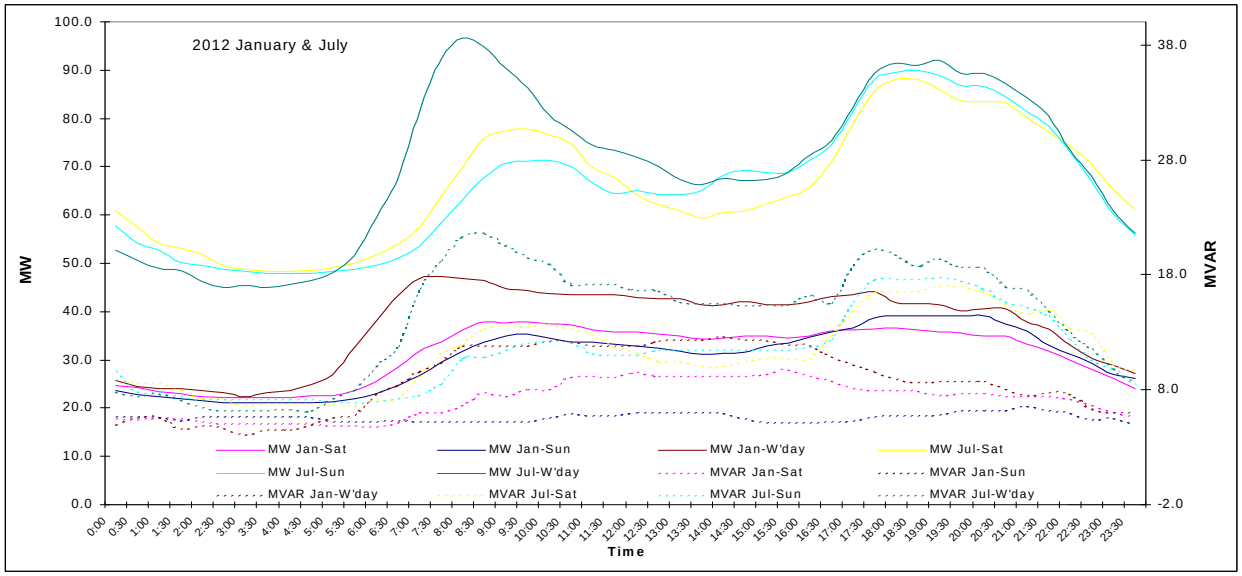
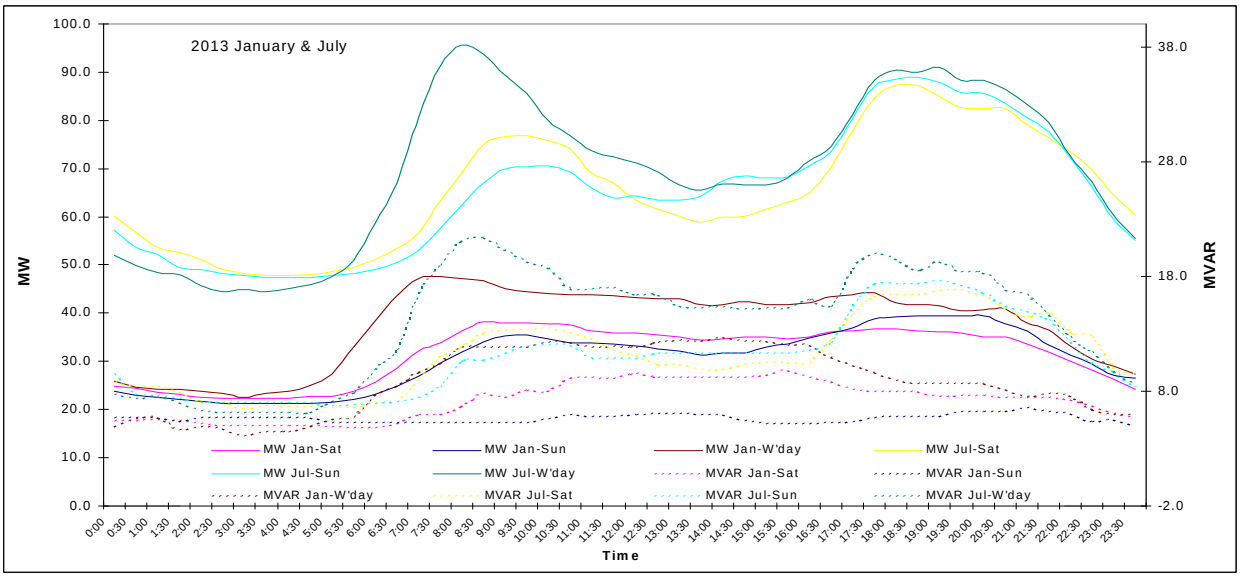

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

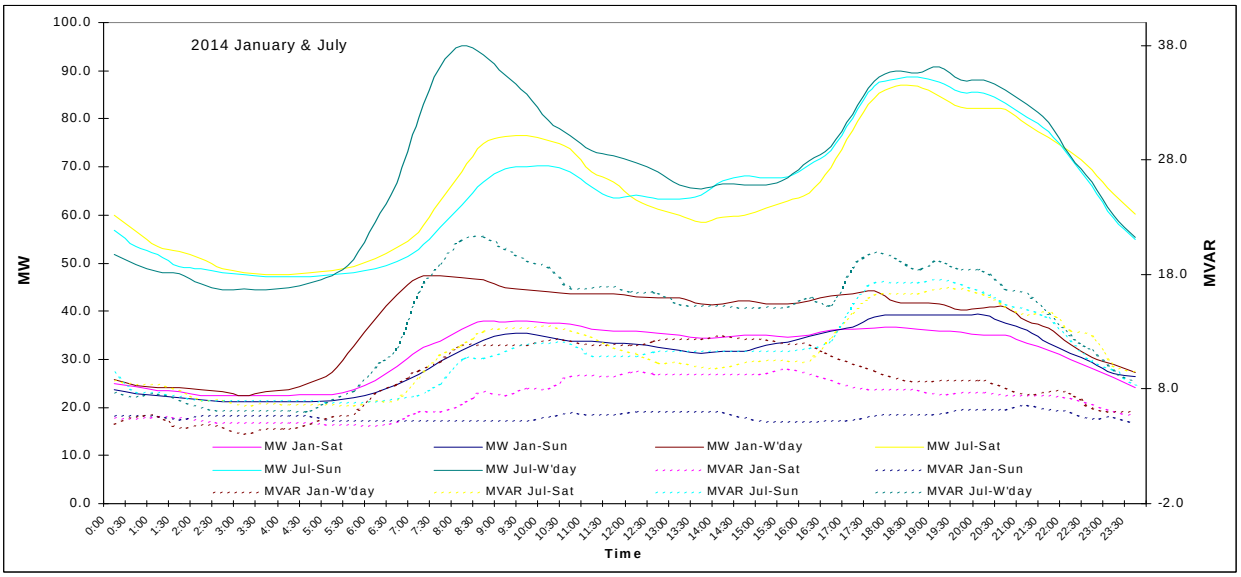
Figure 4-32 Load Profiles: Weekday, Saturday, Sunday for January & July

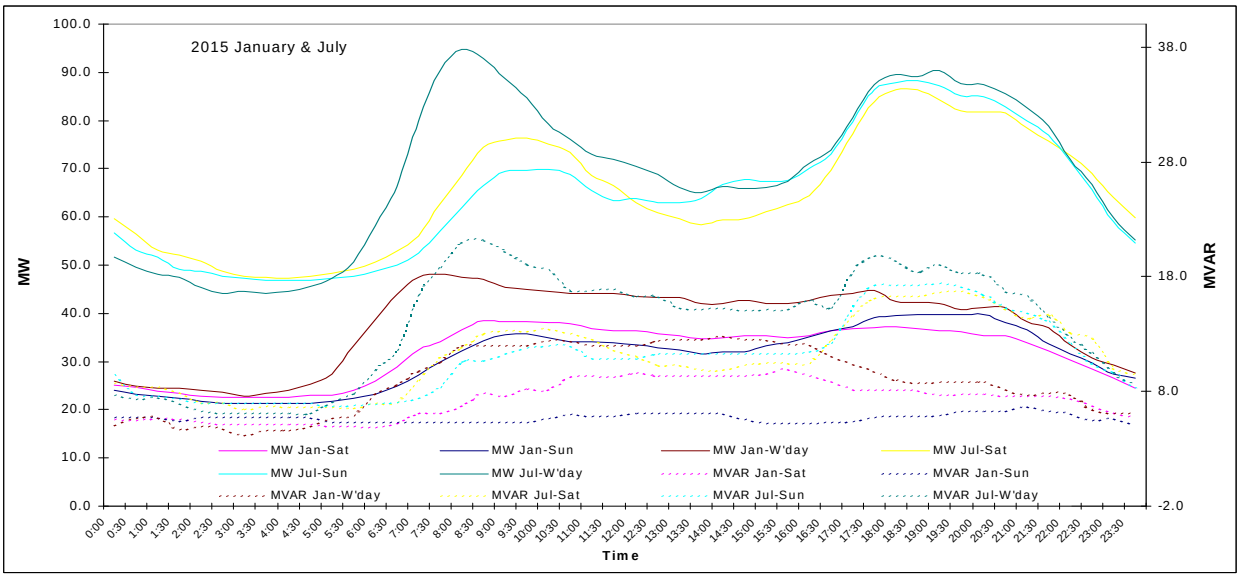







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.7 Derby

Description:

The Substation located at Derby in the North East of Tasmania and is known as “Derby Substation”. The substation is owned by Transend.

Table 4-39 Derby Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	6.6	1	12	0

Embedded Generation:

A single undispatched embedded generator was connected to this substation in the second half of 2008 calendar year. The operational profile for this unit is anticipated to be as per the following table. The effect of the unit on the peak summer and winter demand has been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	1.12	1.12	1.12	1.12	1.12
Output – Summer (MW)	1.0	1.0	1.0	1.0	1.0
Output – Winter (MW)	1.0	1.0	1.0	1.0	1.0
Operating characteristics	Water turbine unit associated with Winnaleah irrigation scheme, 24 hour operation.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-40 Derby Site Winter load forecast

Derby	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	3.04	3.04	1.87	1.87	3.04	3.04	1.87	1.87
2006	6.54	7.38	4.85	5.48	6.54	7.38	5.51	6.23
2007	6.08	6.78	6.08	6.78	6.08	6.78	7.00	7.80
2008	4.83	5.98	2.10	2.60	4.83	5.98	2.10	2.60
2009	2.60	2.62	1.10	1.11	2.60	2.62	1.10	1.11
2010	2.52	2.55	2.52	2.55	2.52	2.55	2.67	2.71
2011	3.64	3.69	3.64	3.69	3.77	3.83	3.77	3.83
2012	3.62	3.67	3.62	3.67	3.75	3.80	3.75	3.80
2013	3.59	3.64	3.59	3.64	3.73	3.78	3.73	3.78
2014	3.59	3.64	3.59	3.64	3.72	3.78	3.72	3.78
2015	3.58	3.63	3.58	3.63	3.72	3.77	3.72	3.77
2016	3.59	3.64	3.59	3.64	3.73	3.78	3.73	3.78
2017	3.59	3.64	3.59	3.64	3.74	3.79	3.74	3.79
2018	3.61	3.66	3.61	3.66	3.75	3.81	3.75	3.81
2019	3.64	3.69	3.64	3.69	3.79	3.84	3.79	3.84
2020	3.68	3.73	3.68	3.73	3.83	3.88	3.83	3.88

Table 4-41 Derby Site Summer load forecast

Derby	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	6.63	7.02	4.90	5.18	6.63	7.02	4.90	5.18
2006	4.84	5.46	4.82	5.44	4.84	5.46	4.82	5.44
2007	5.27	5.39	4.21	4.31	5.27	5.39	4.21	4.31
2008	5.70	6.04	3.60	3.82	5.70	6.04	3.60	3.82
2009	5.80	6.17	2.30	2.45	5.80	6.17	2.30	2.45
2010	6.10	6.39	1.80	1.89	6.10	6.39	1.80	1.89
2011	7.26	7.60	2.14	2.24	7.38	7.73	2.18	2.28
2012	7.63	7.99	2.25	2.36	7.77	8.13	2.29	2.40
2013	7.87	8.24	2.32	2.43	8.01	8.39	2.36	2.48
2014	8.02	8.40	2.37	2.48	8.16	8.55	2.41	2.52
2015	8.30	8.70	2.45	2.57	8.45	8.85	2.49	2.61
2016	8.43	8.82	2.49	2.60	8.58	8.99	2.53	2.65
2017	8.87	9.29	2.62	2.74	9.02	9.45	2.66	2.79
2018	9.18	9.61	2.71	2.84	9.35	9.79	2.76	2.89
2019	9.50	9.95	2.80	2.94	9.67	10.13	2.85	2.99
2020	9.84	10.31	2.90	3.04	10.02	10.49	2.96	3.10

Figure 4-33 Derby Site Summer Load Forecast at 50% and 10% POE

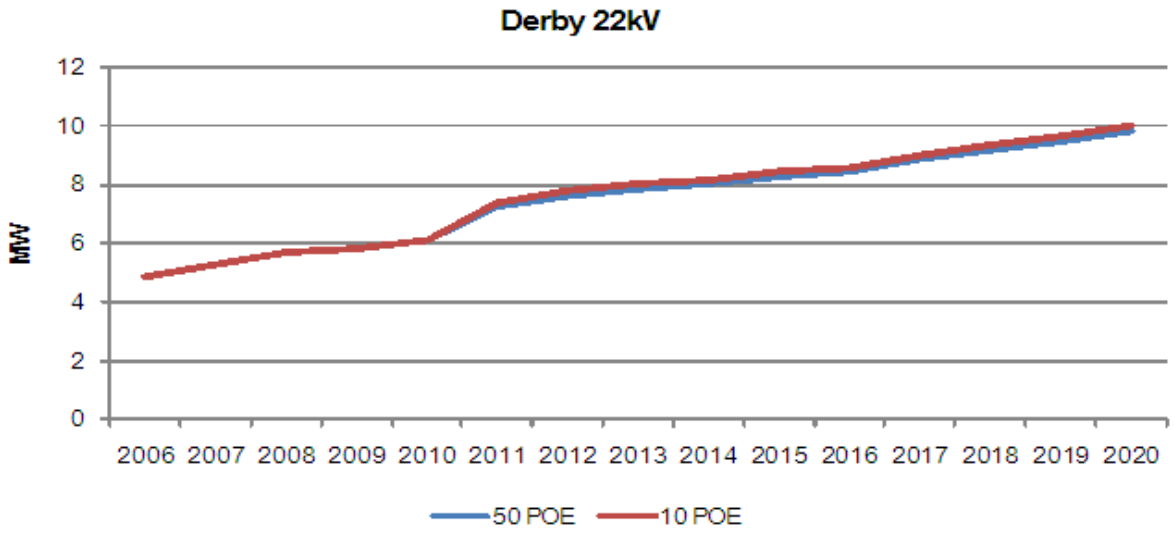
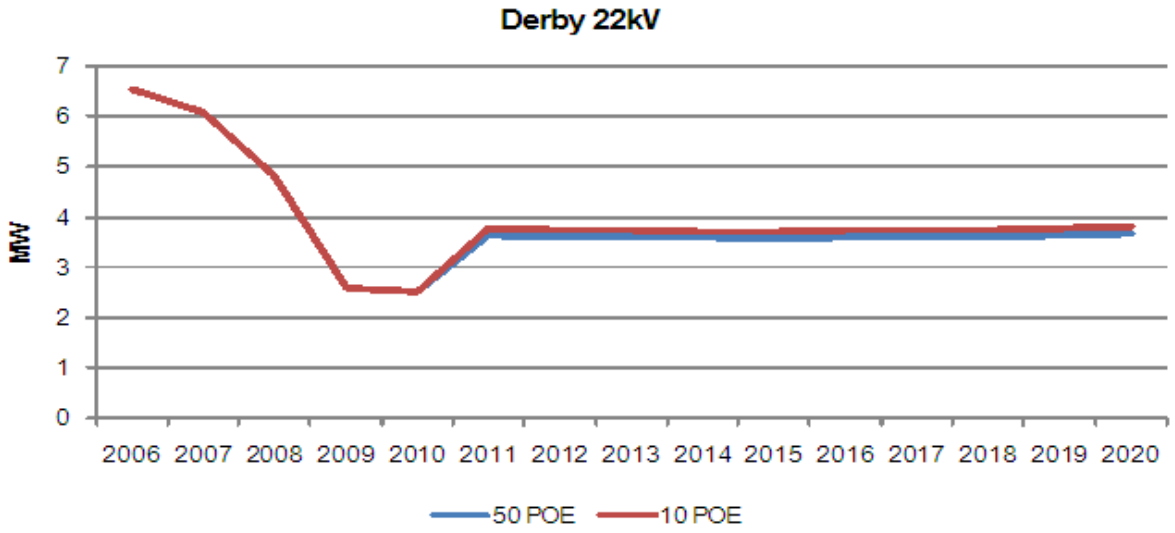
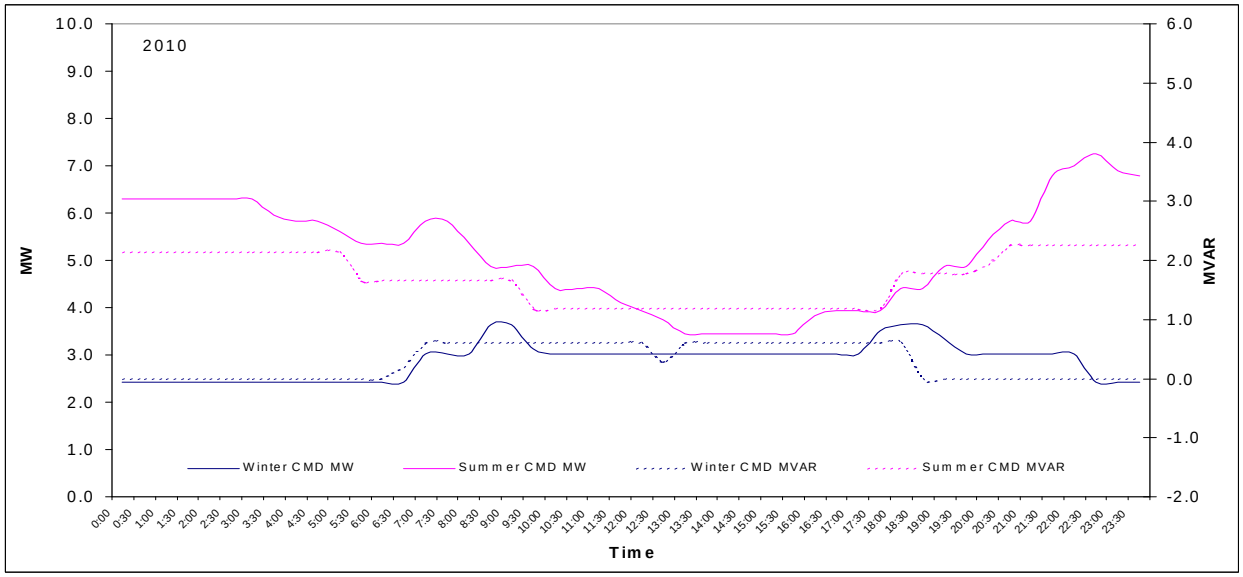


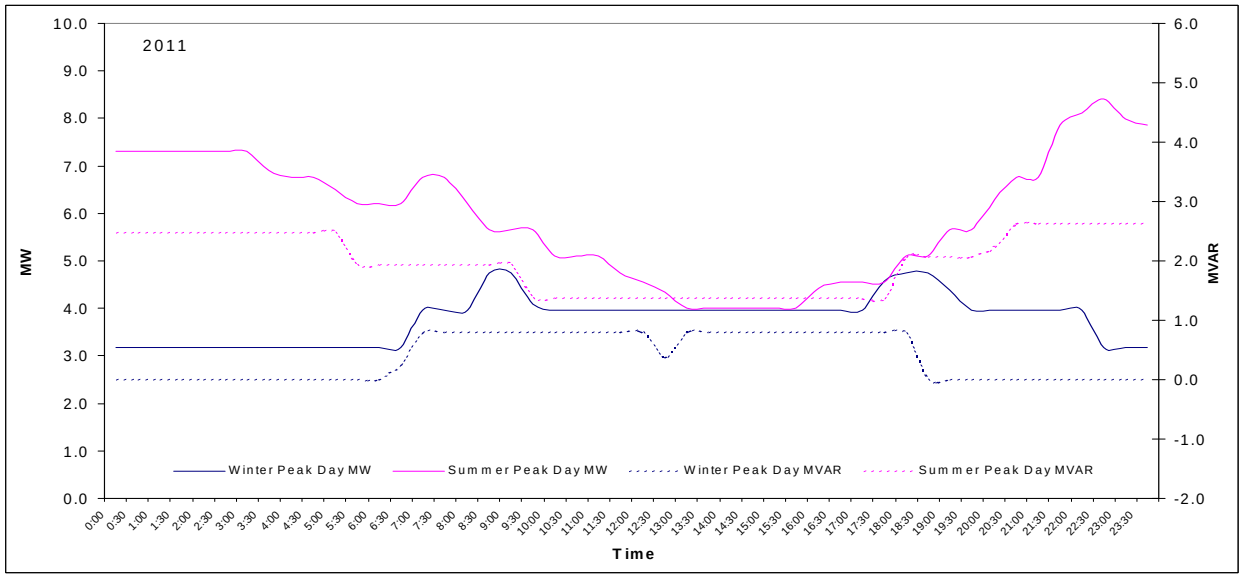
Figure 4-34 Derby Site Winter Load Forecast at 50% and 10% POE

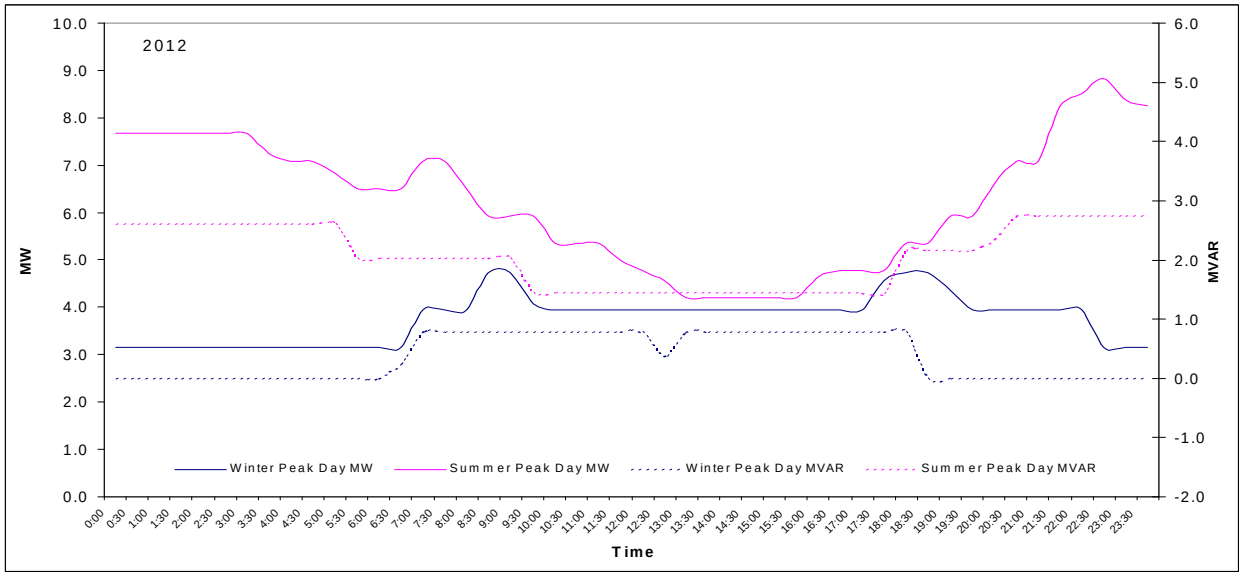


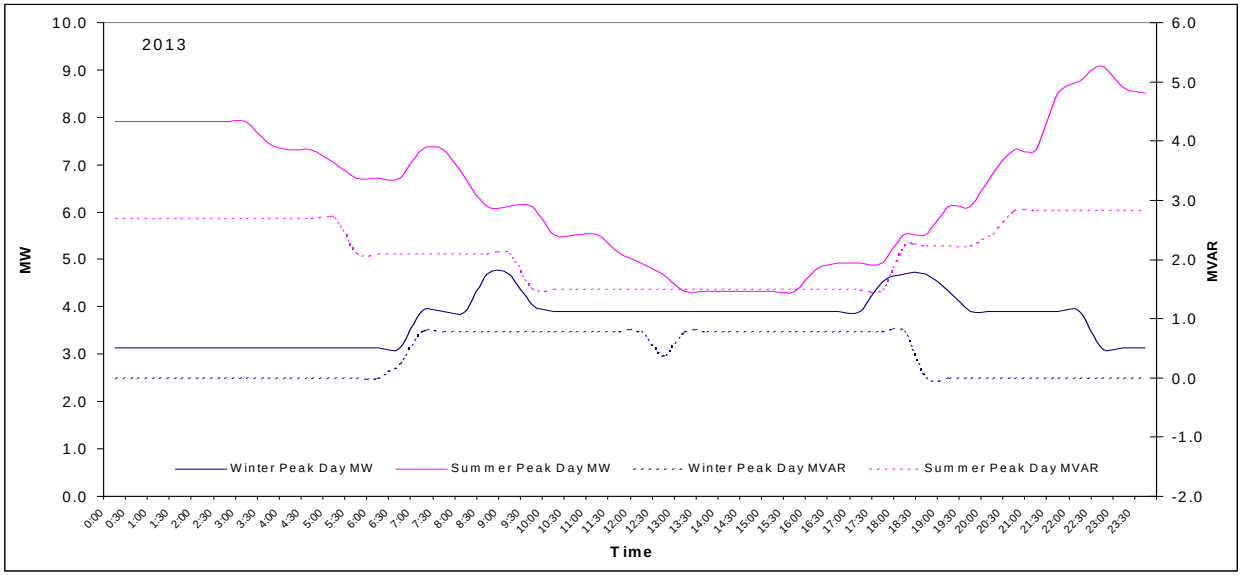
Load Profiles:

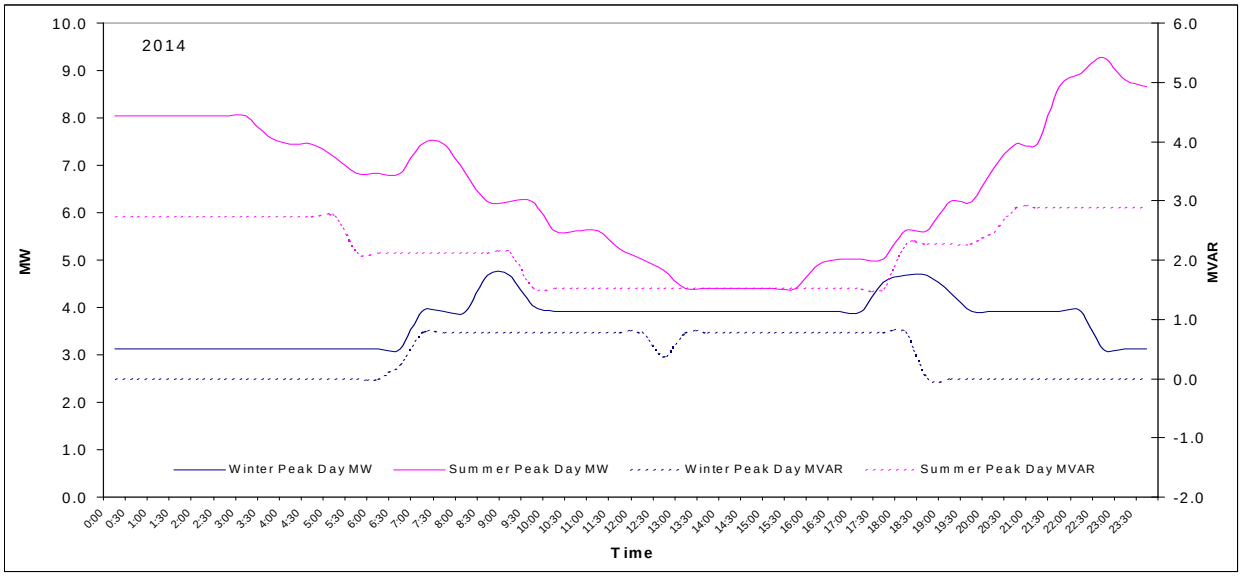
Figure 4-35 Load Profiles: Derby Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

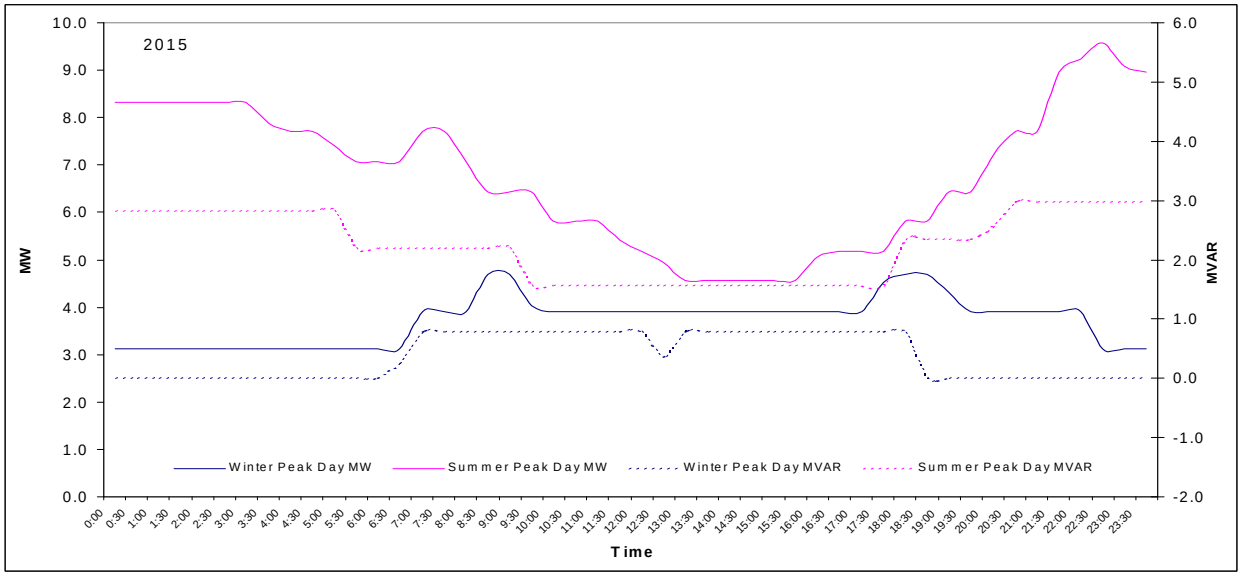
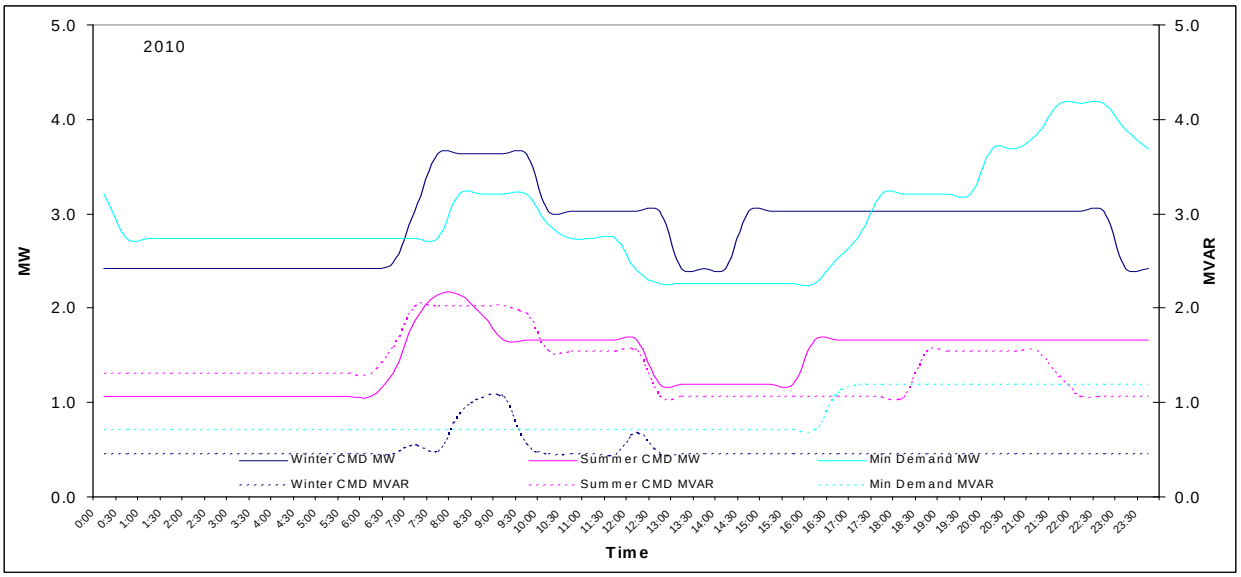
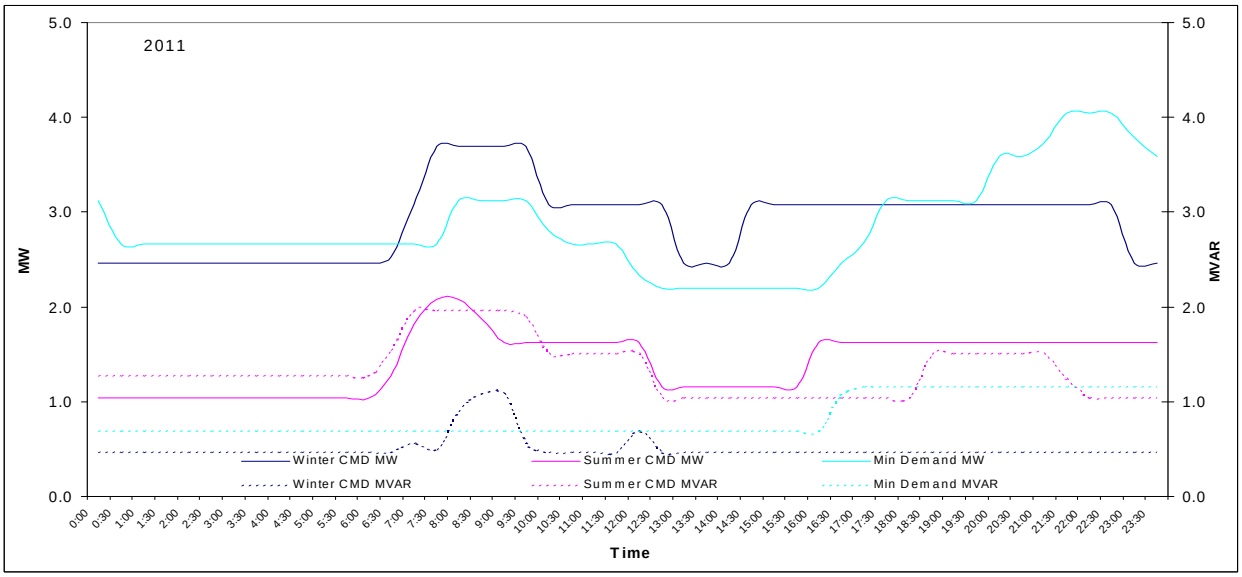
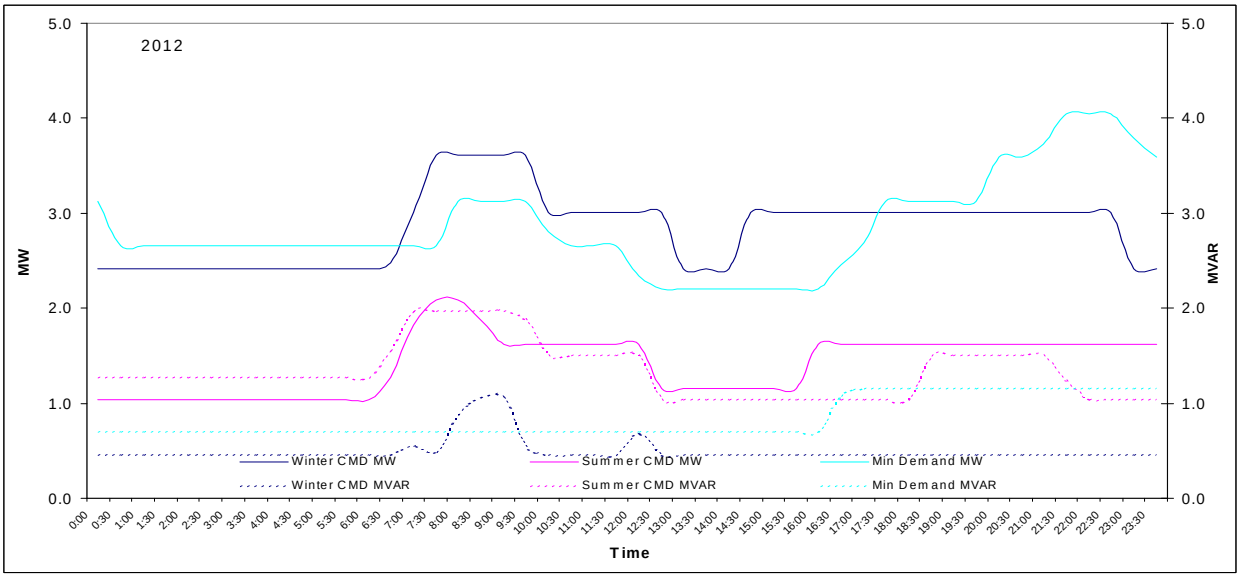
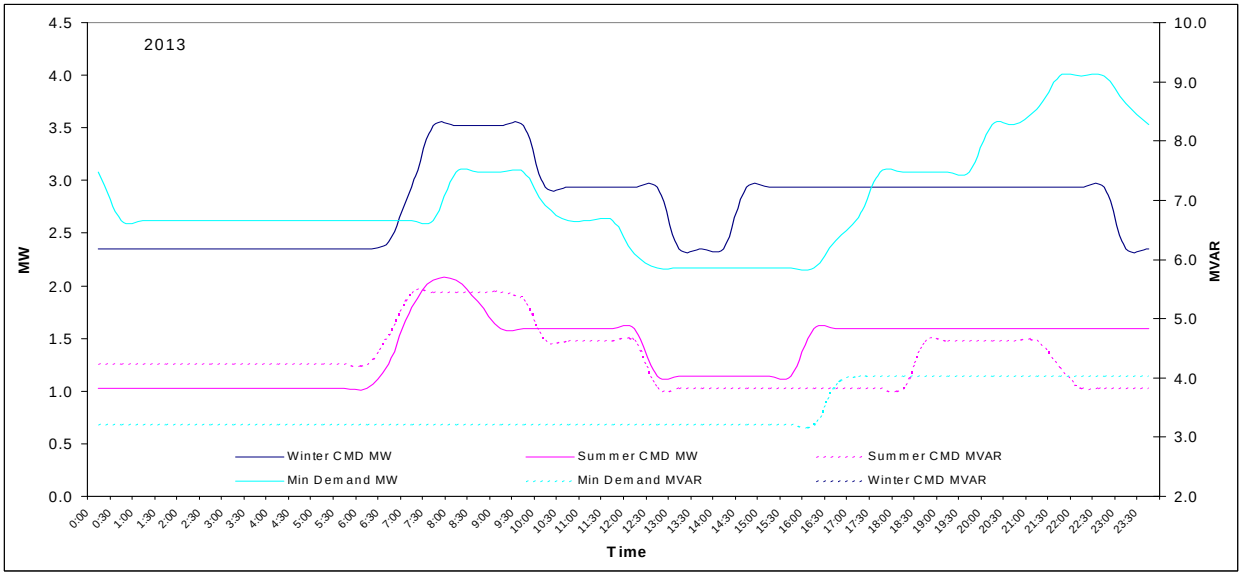

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

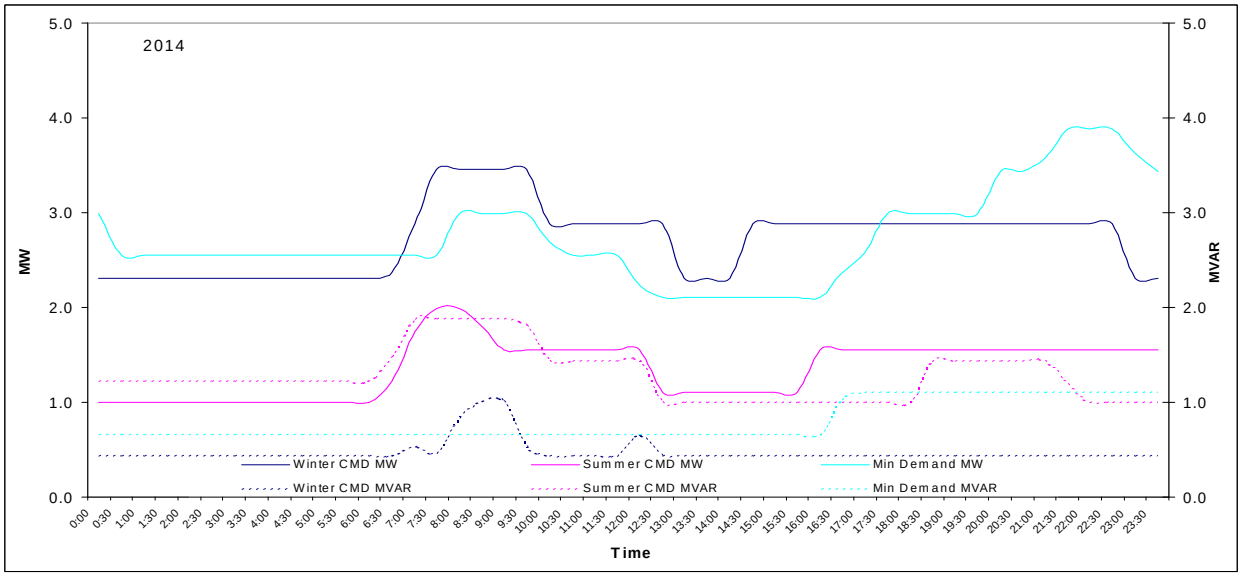
Figure 4-36 Load Profiles: Derby Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Summer CMD MVAR
Min Demand MW
Min Demand MVAR
Winter CMD MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

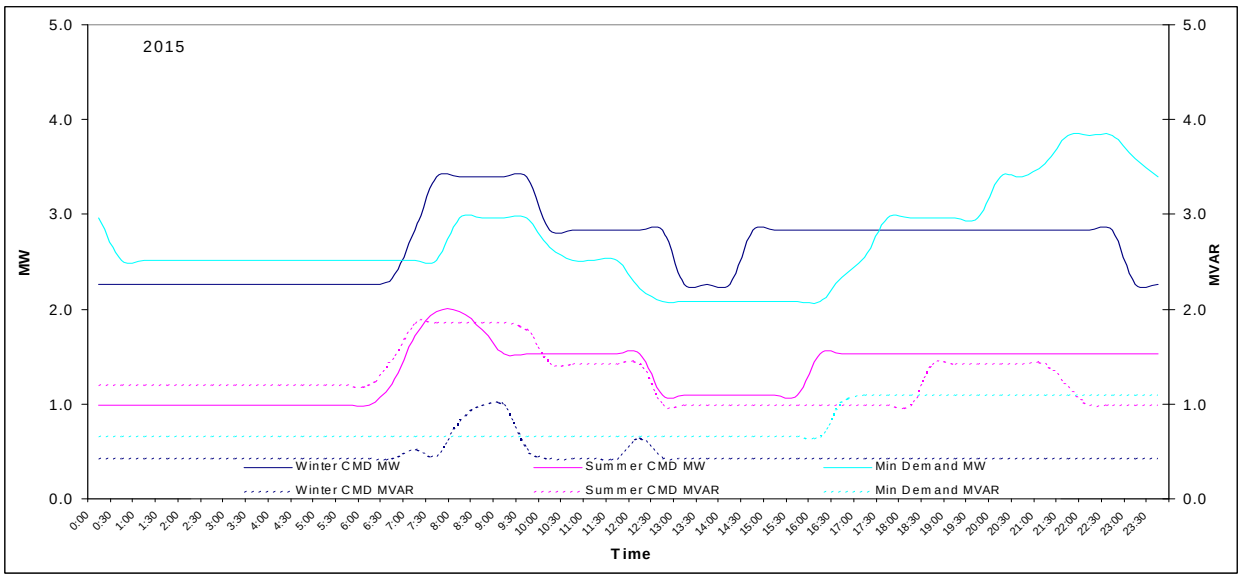
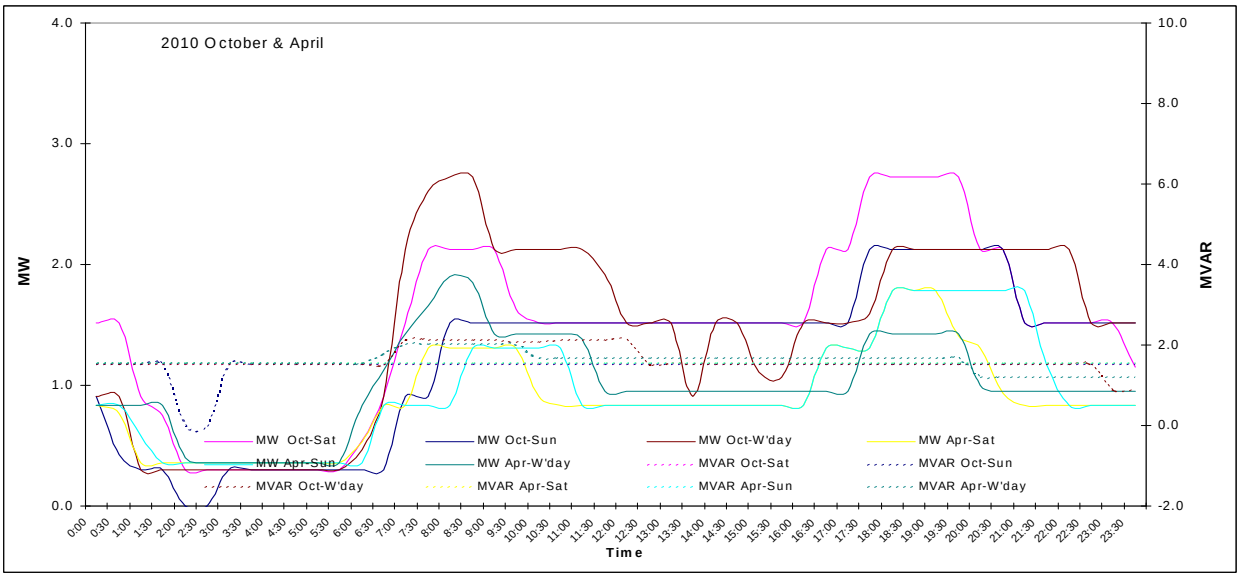
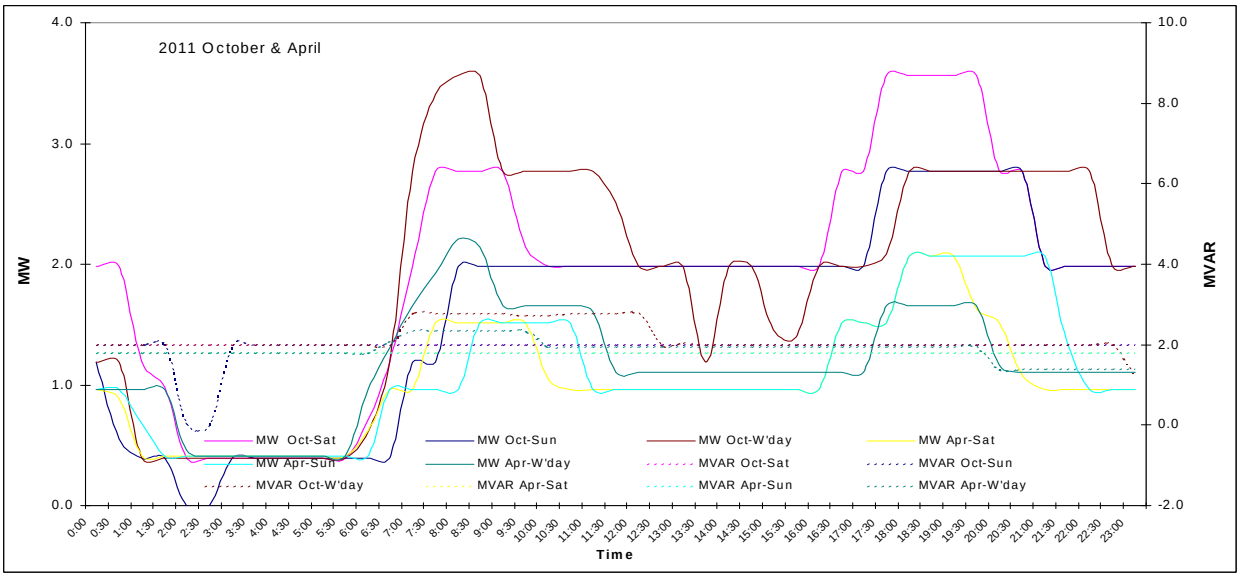
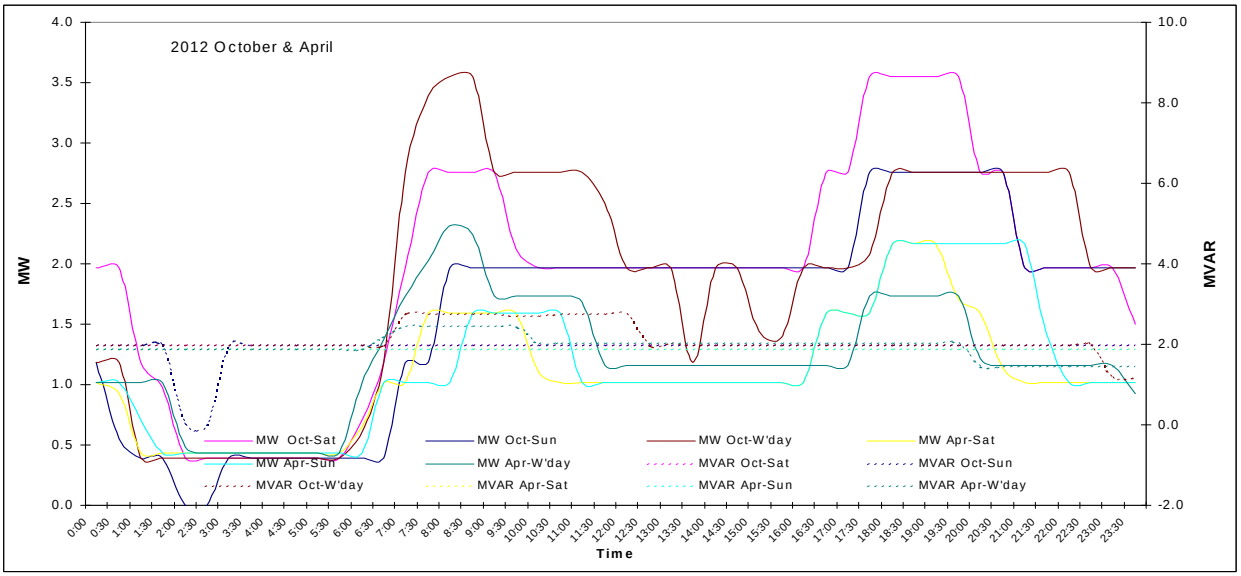
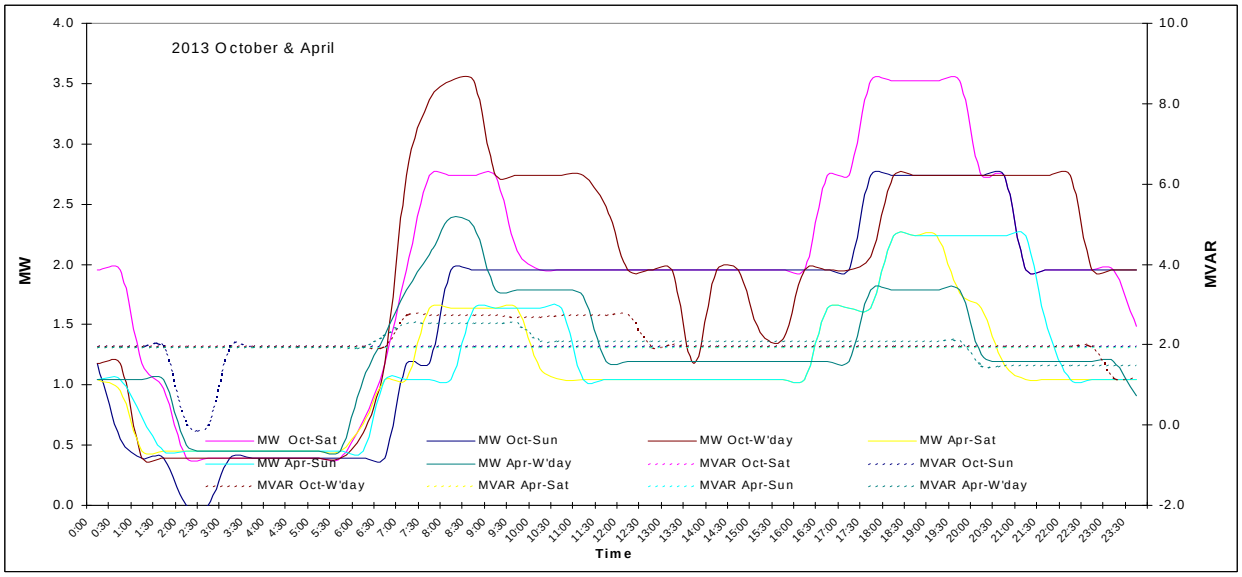

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

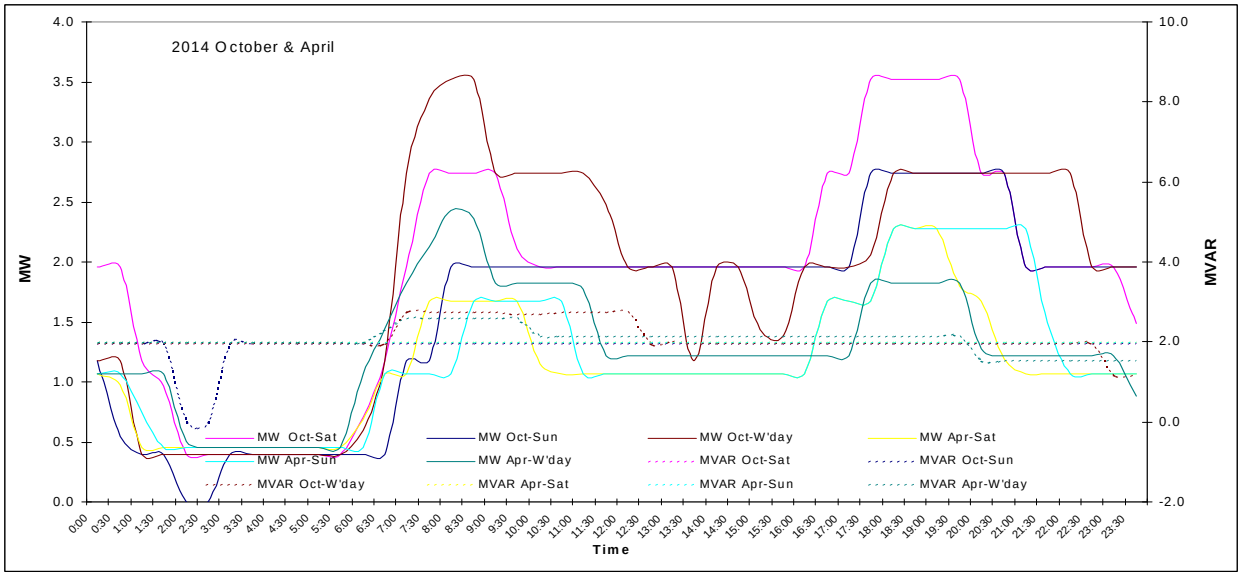
Figure 4-37 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

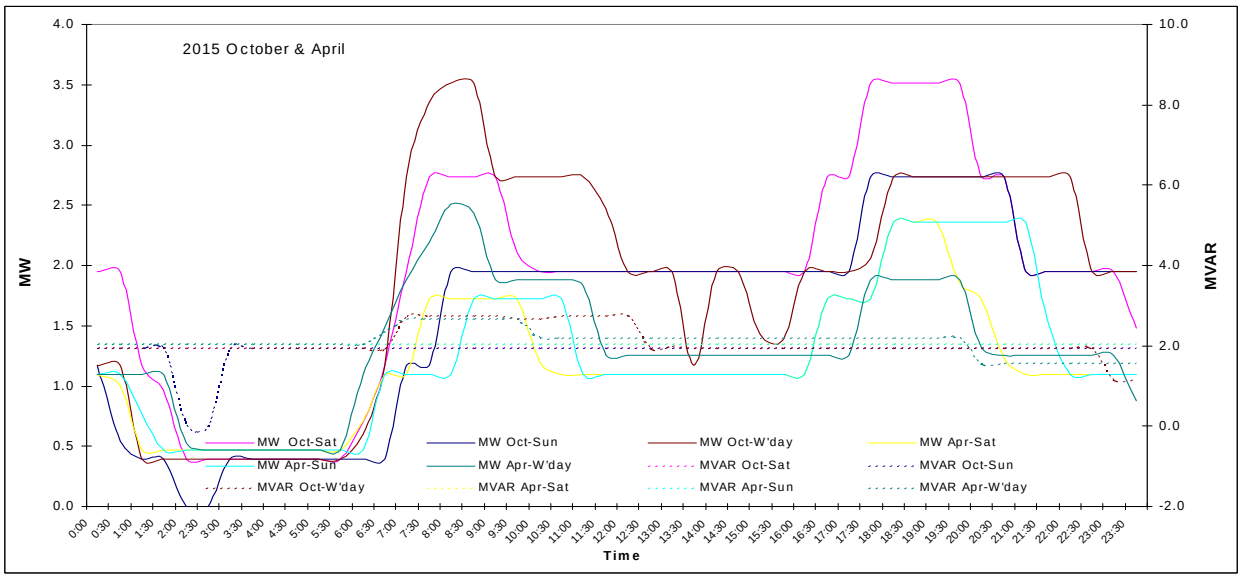
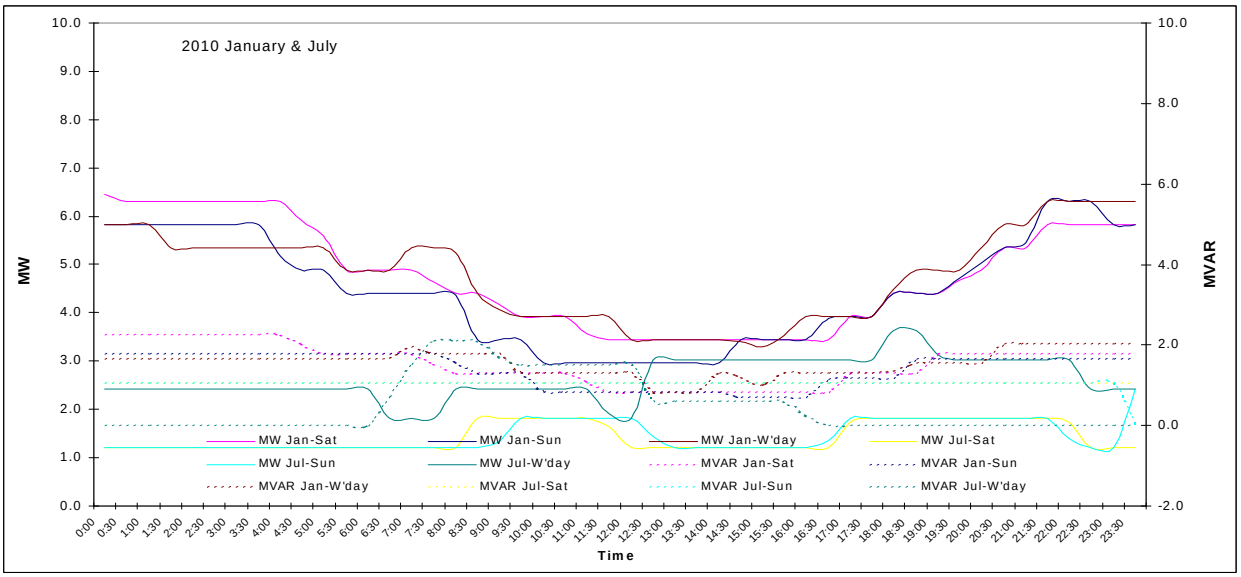
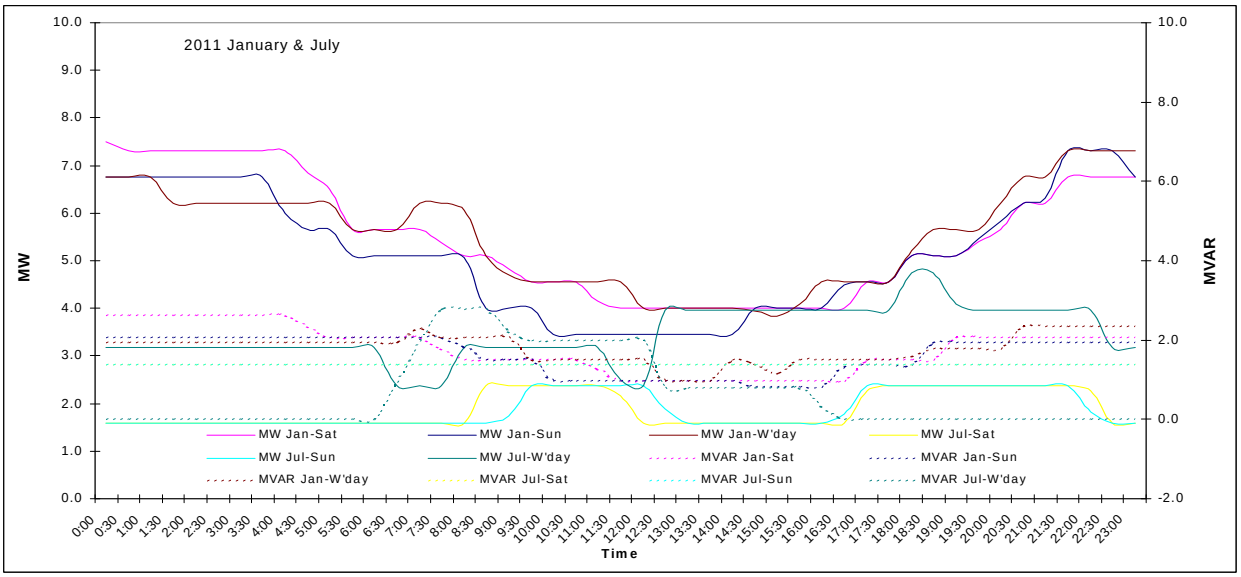
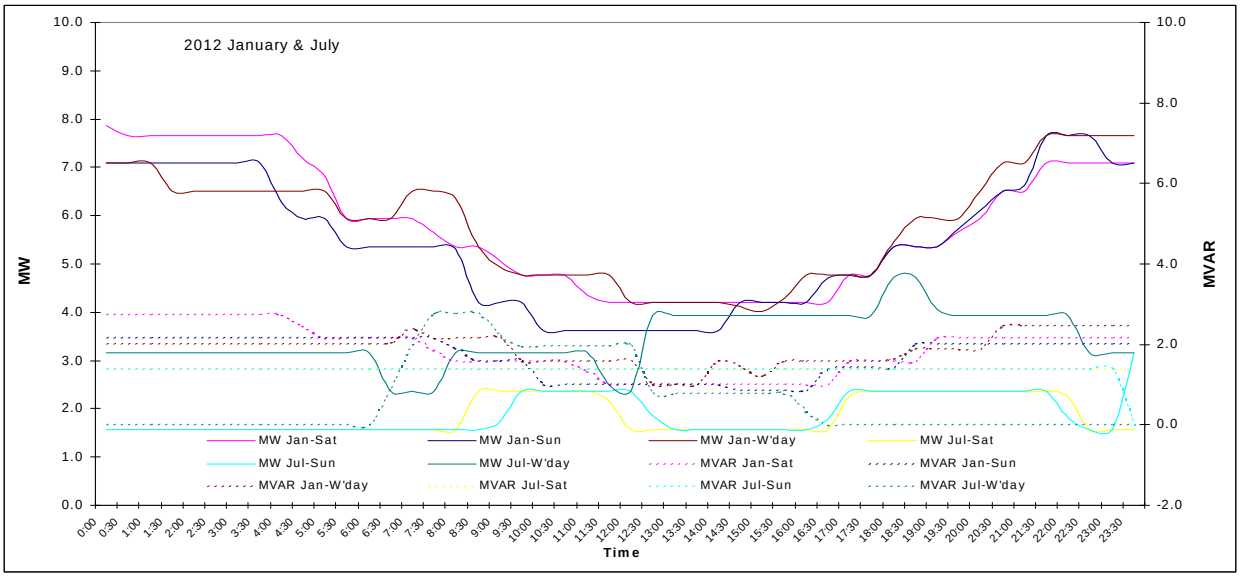
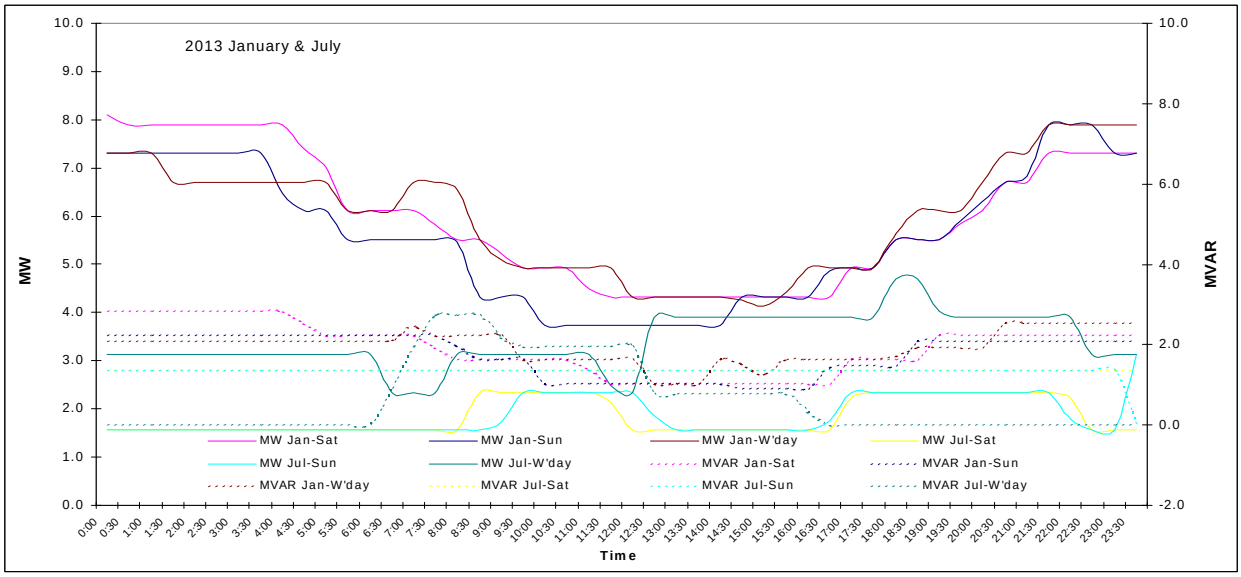

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

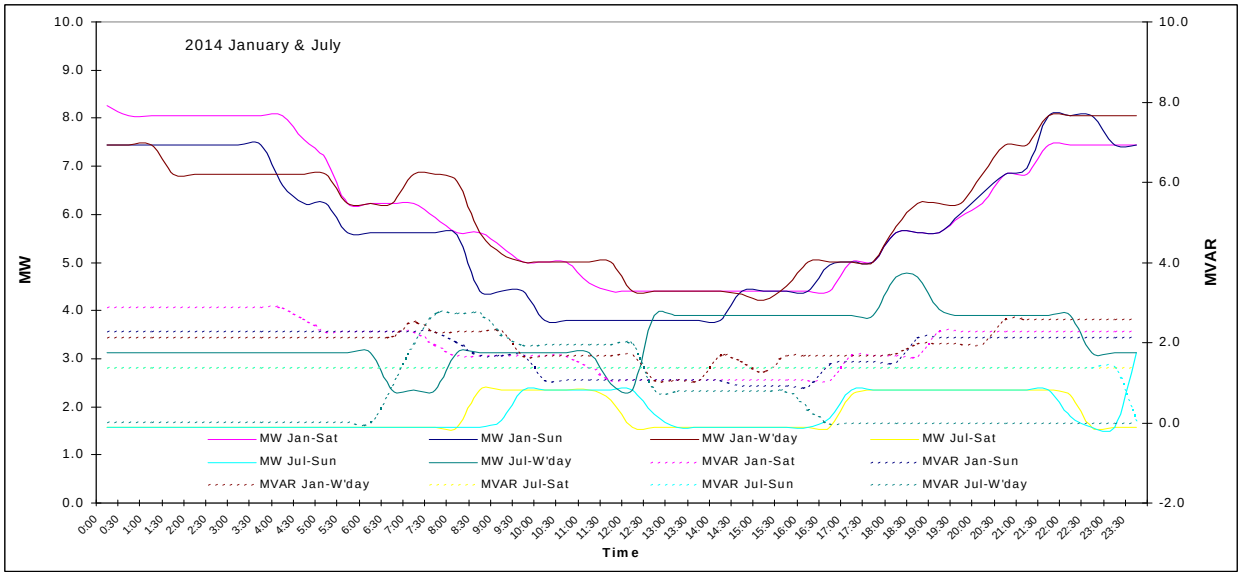
Figure 4-38 Load Profiles: Weekday, Saturday, Sunday for January & July

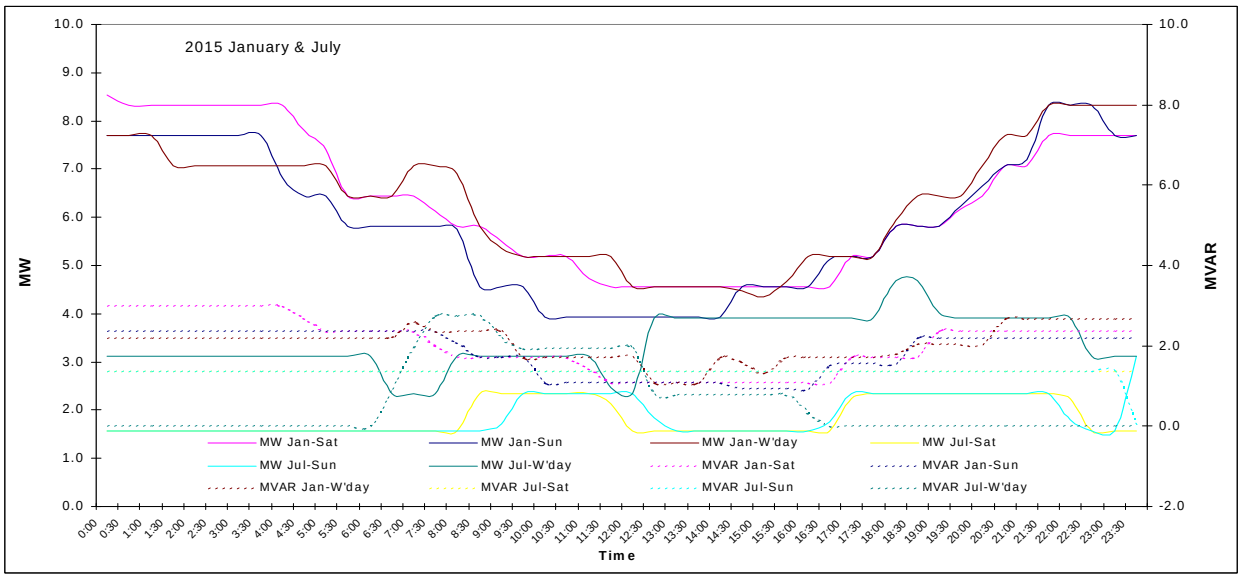












4.5.8 Derwent Bridge

Description:

The Substation is located at Derwent Park and is known as “Derwent Bridge Substation”. The substation is owned by Transend.

Table 4-42 Derwent Bridge Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	1	10	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-43 Derwent Bridge Site Winter load forecast

Derwent Bridge	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2006	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2007	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2008	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2009	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2010	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2011	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2012	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2013	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2014	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2015	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2016	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2017	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2018	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2019	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2020	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20

Table 4-44 Derwent Bridge Site Summer load forecast

Derwent Bridge	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
2006	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2007	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2008	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2009	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2010	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2011	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2012	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2013	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2014	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2015	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2016	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2017	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2018	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2019	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30
2020	0.30	0.30	0.30	0.30	0.30	0.30	0.30	0.30

Load Profiles:

No load profile data available for this site.

4.5.9 Devonport

Description:

The Substation is located at Devonport and is known as "Devonport Substation". The substation is owned by Transend.

Table 4-45 Devonport Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
3	22	11	90	60

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-46 Devonport Site Winter load forecast

Devonport	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	58.70	60.57	58.23	60.08	58.70	60.57	59.15	61.03
2006	62.99	64.84	61.14	62.93	62.99	64.84	62.50	64.34
2007	64.66	64.91	64.66	64.91	64.66	64.91	65.75	66.00
2008	78.95	79.15	67.04	67.20	78.95	79.15	67.93	68.10
2009	72.21	73.33	59.31	60.23	72.21	73.33	60.12	61.06
2010	66.25	67.63	64.80	66.15	66.25	67.63	65.68	67.06
2011	70.85	72.33	69.30	70.75	71.32	72.81	69.76	71.21
2012	72.81	74.33	71.21	72.70	73.27	74.80	71.66	73.16
2013	74.58	76.14	72.95	74.47	75.08	76.65	73.44	74.97
2014	76.85	78.46	75.17	76.74	77.31	78.93	75.62	77.20
2015	79.08	80.73	77.35	78.96	79.59	81.25	77.85	79.47
2016	81.53	83.23	79.74	81.41	82.01	83.73	80.21	81.89
2017	83.97	85.73	82.13	83.85	84.50	86.27	82.65	84.38
2018	86.78	88.59	84.88	86.65	87.26	89.08	85.35	87.13
2019	89.83	91.71	87.86	89.70	90.41	92.30	88.43	90.28
2020	93.16	95.10	91.11	93.02	93.70	95.66	91.65	93.56

Table 4-47 Devonport Site Summer load forecast

Devonport	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	35.98	49.44	35.98	49.44	35.98	49.44	35.98	49.44
2006	35.03	48.74	35.03	48.74	35.03	48.74	35.03	48.74
2007	43.34	43.81	38.38	38.80	43.34	43.81	38.42	38.84
2008	41.05	41.33	41.05	41.33	41.05	41.33	41.57	41.85
2009	43.61	43.83	39.20	39.40	43.61	43.83	39.34	39.54
2010	39.29	39.51	35.59	35.78	39.29	39.51	35.69	35.89
2011	39.65	39.87	35.91	36.11	40.45	40.68	36.64	36.84
2012	41.20	41.42	37.31	37.52	42.05	42.28	38.08	38.29
2013	42.03	42.26	38.06	38.27	42.91	43.15	38.87	39.08
2014	42.40	42.64	38.41	38.62	43.24	43.48	39.16	39.38
2015	43.46	43.70	39.36	39.58	44.33	44.57	40.15	40.37
2016	43.69	43.93	39.57	39.79	44.62	44.86	40.41	40.63
2017	45.58	45.83	41.28	41.51	46.49	46.75	42.11	42.34
2018	46.80	47.06	42.39	42.62	47.76	48.02	43.26	43.50
2019	48.07	48.33	43.54	43.78	49.03	49.30	44.41	44.66
2020	49.44	49.71	44.78	45.02	50.41	50.69	45.66	45.91

Figure 4-39 Devonport Site Summer Load Forecast at 50% and 10% POE

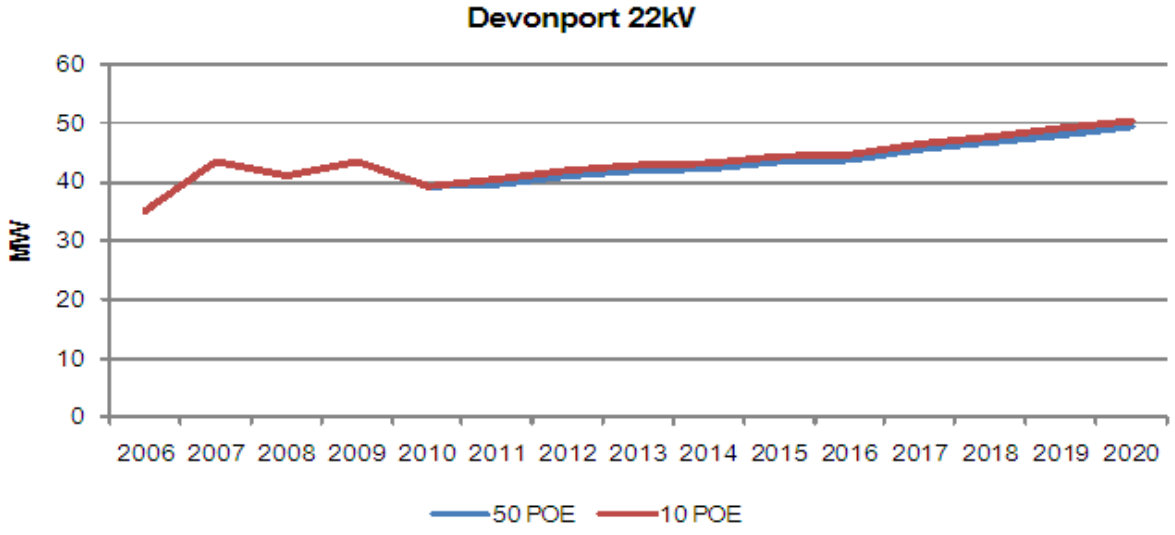
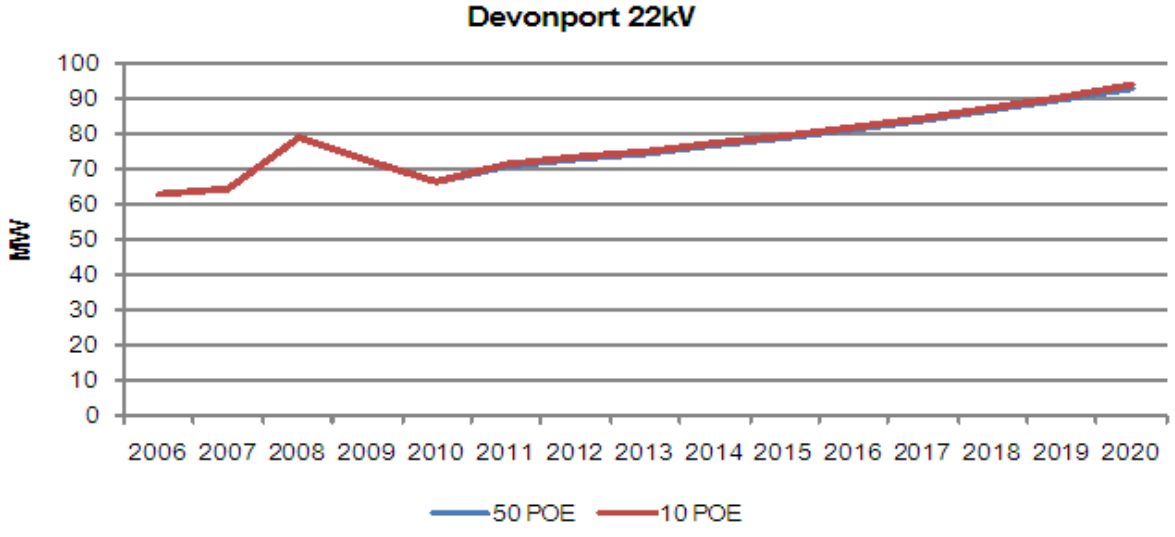
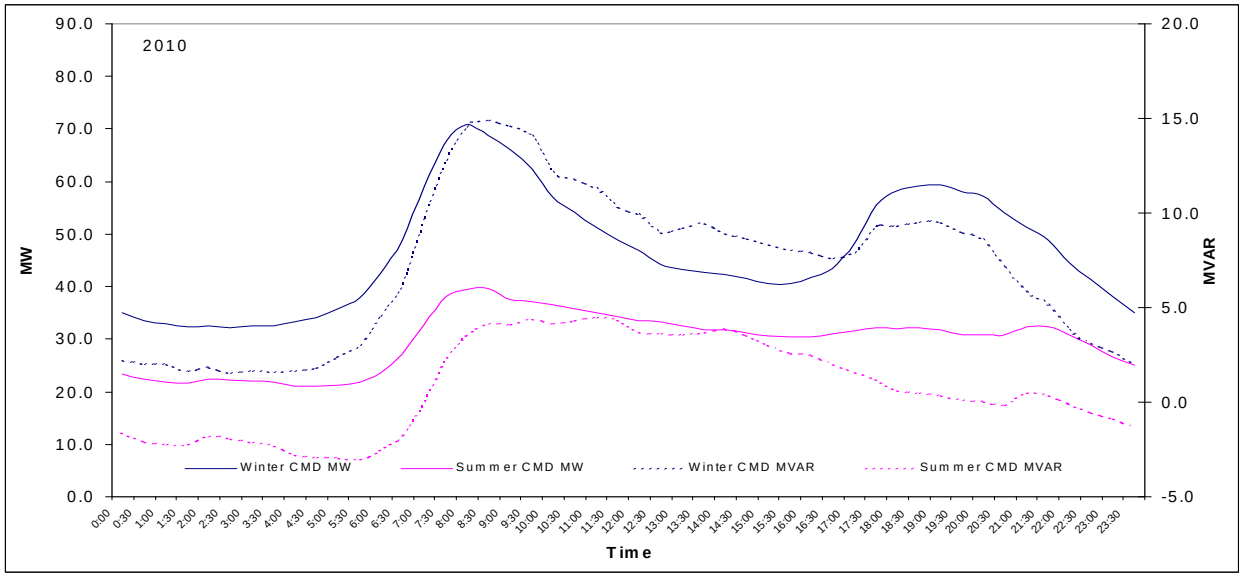


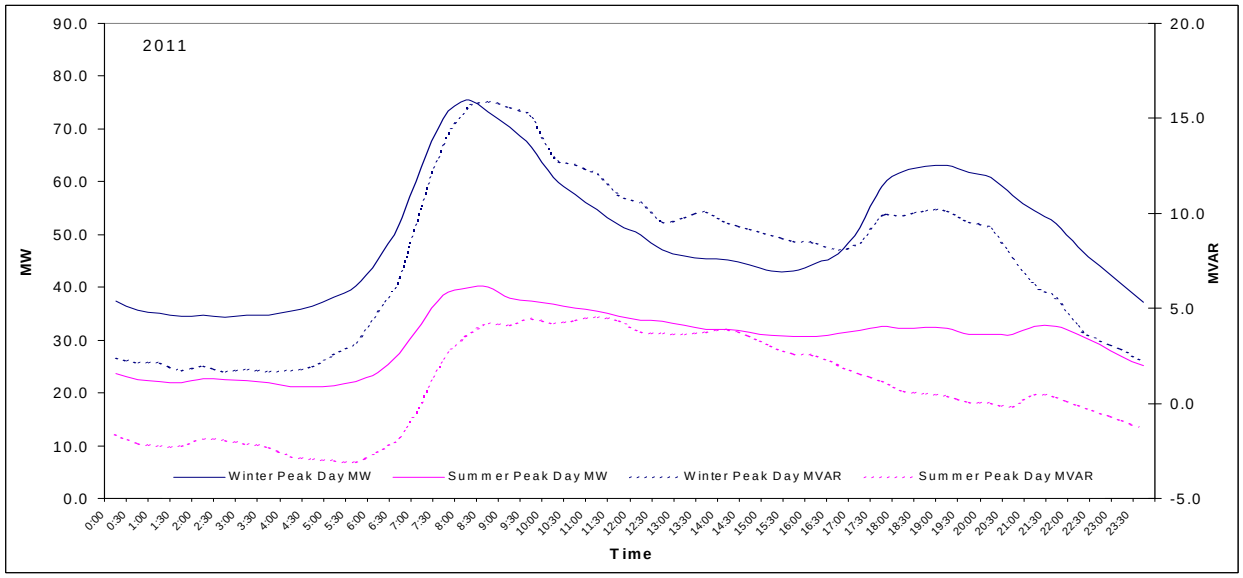
Figure 4-40 Devonport Site Winter Load Forecast at 50% and 10% POE

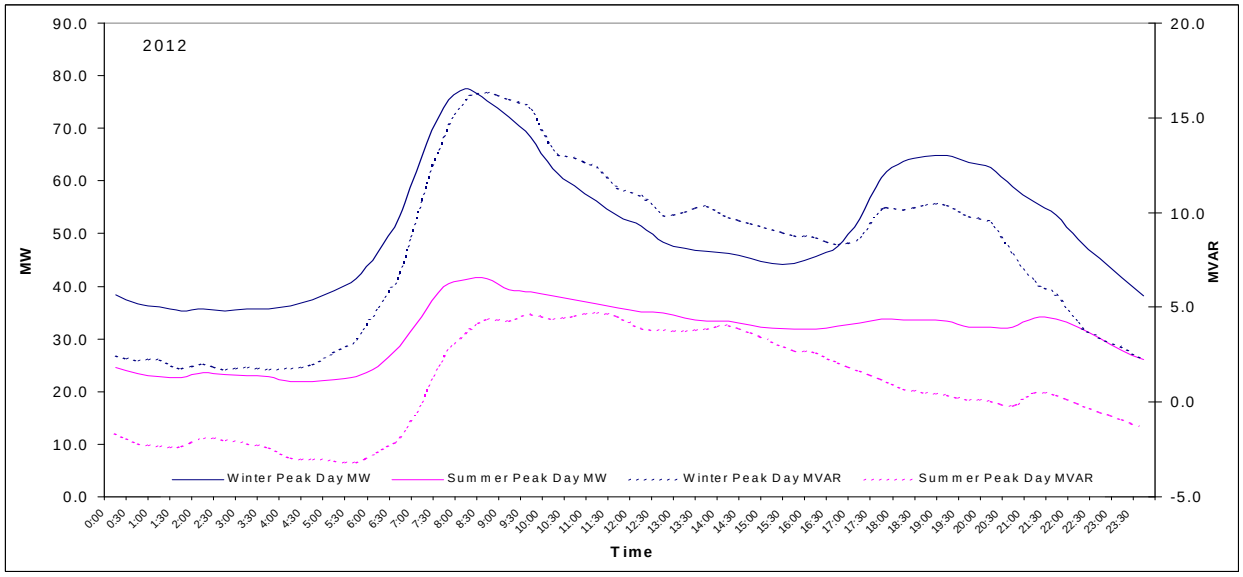


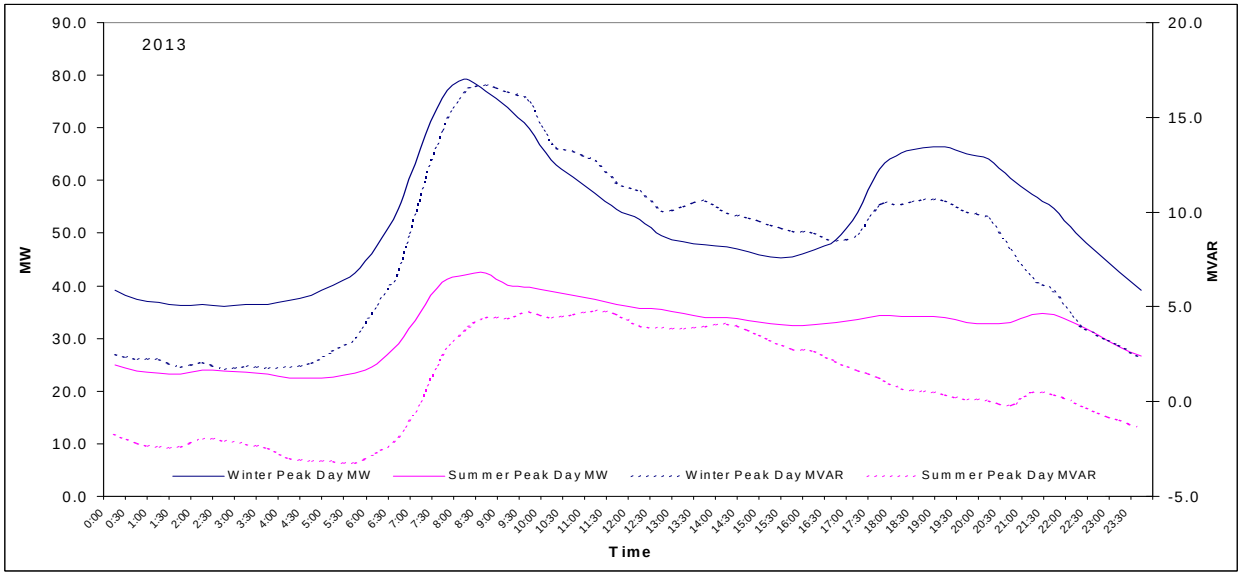
Load Profiles:

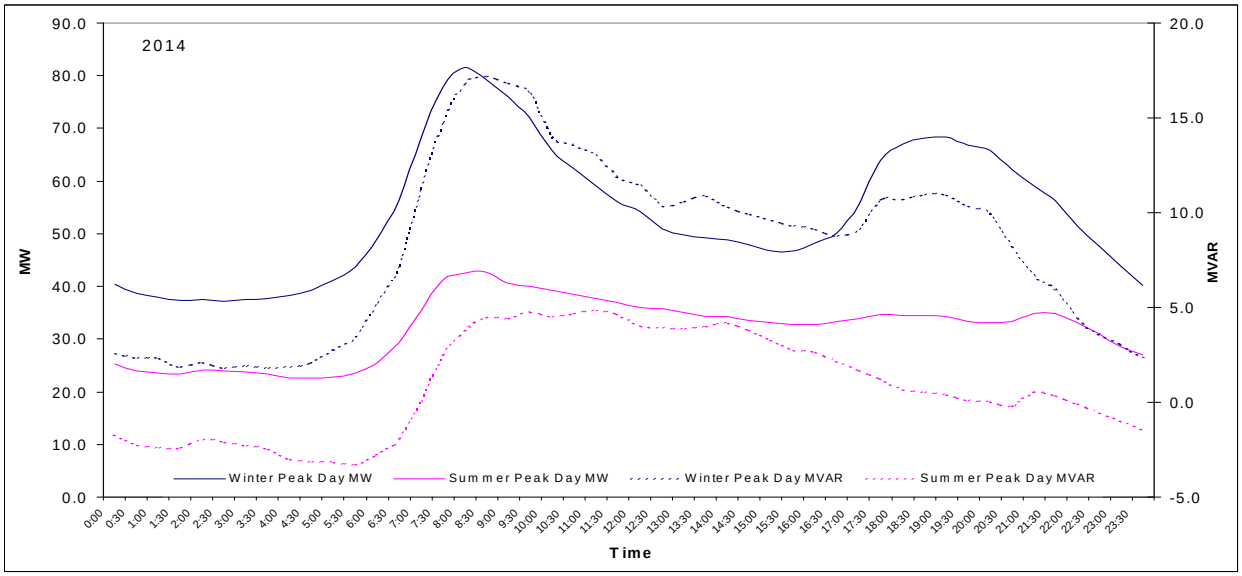
Figure 4-41 Load Profiles: Devonport Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

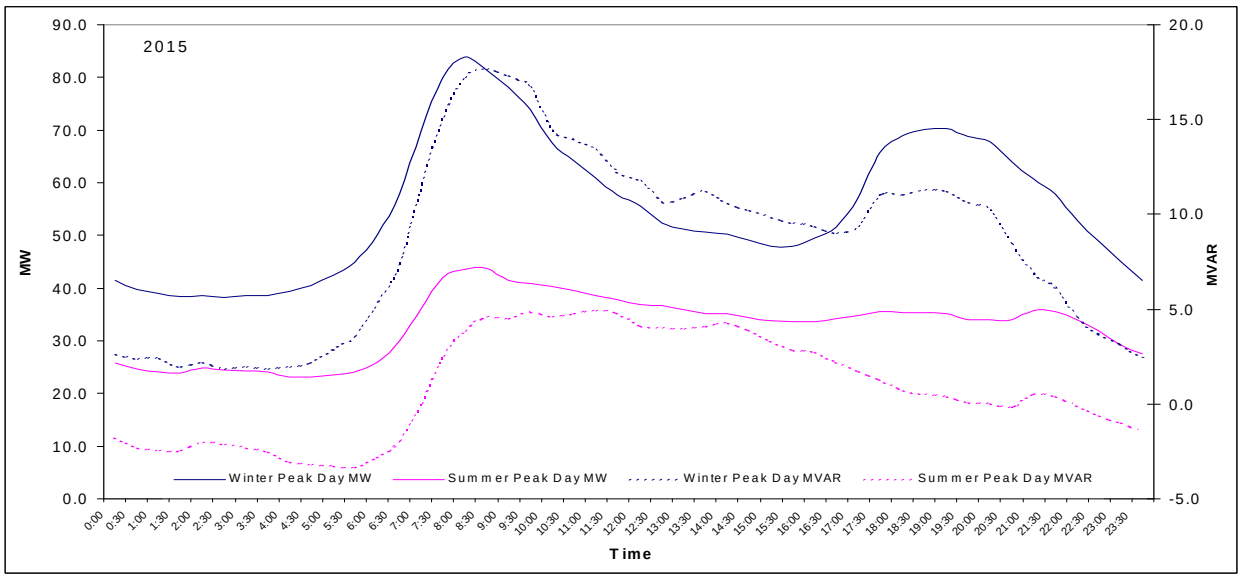
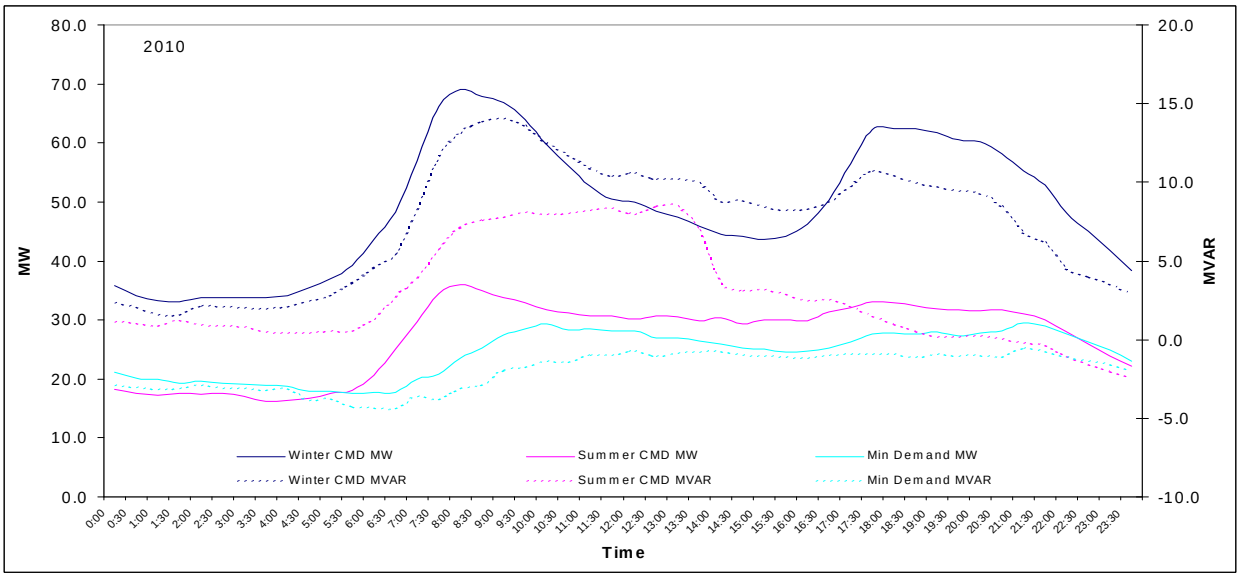
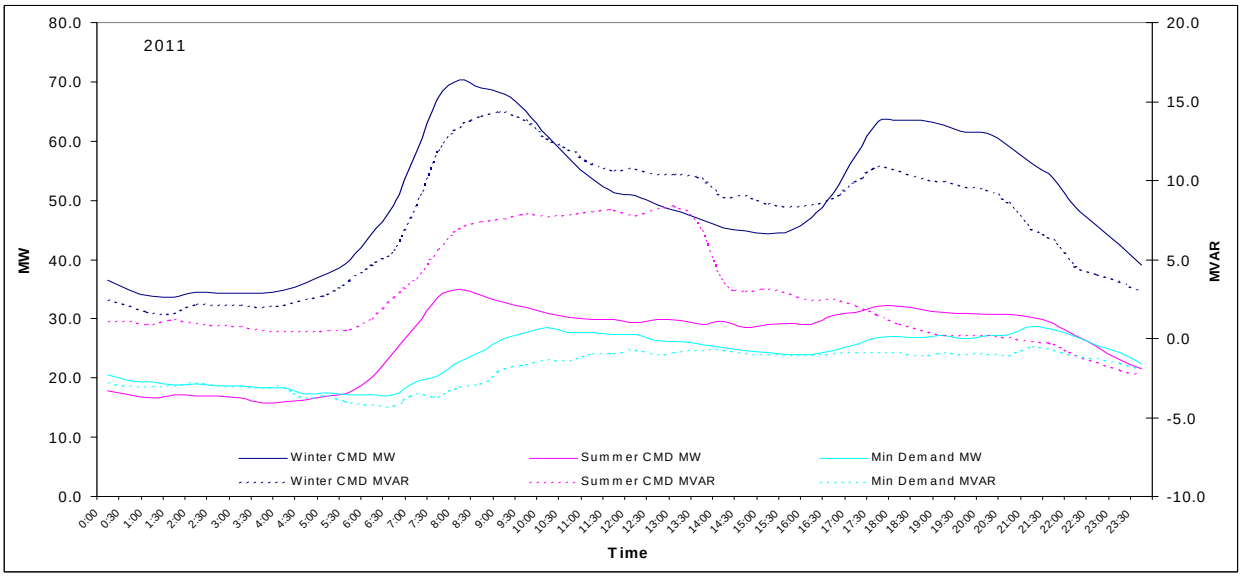
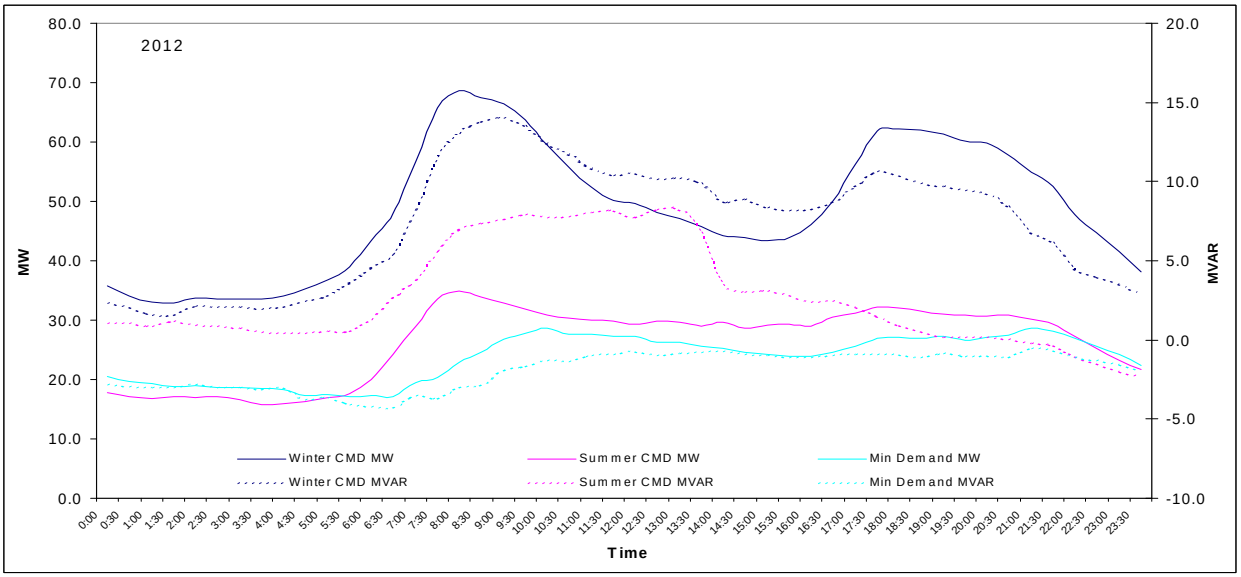
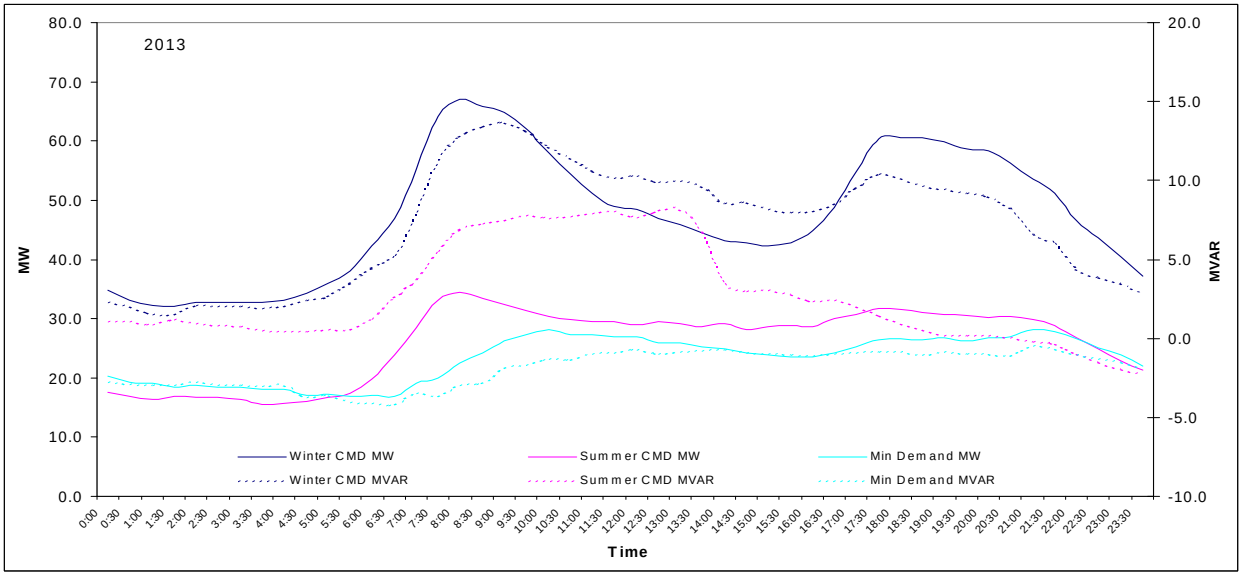

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

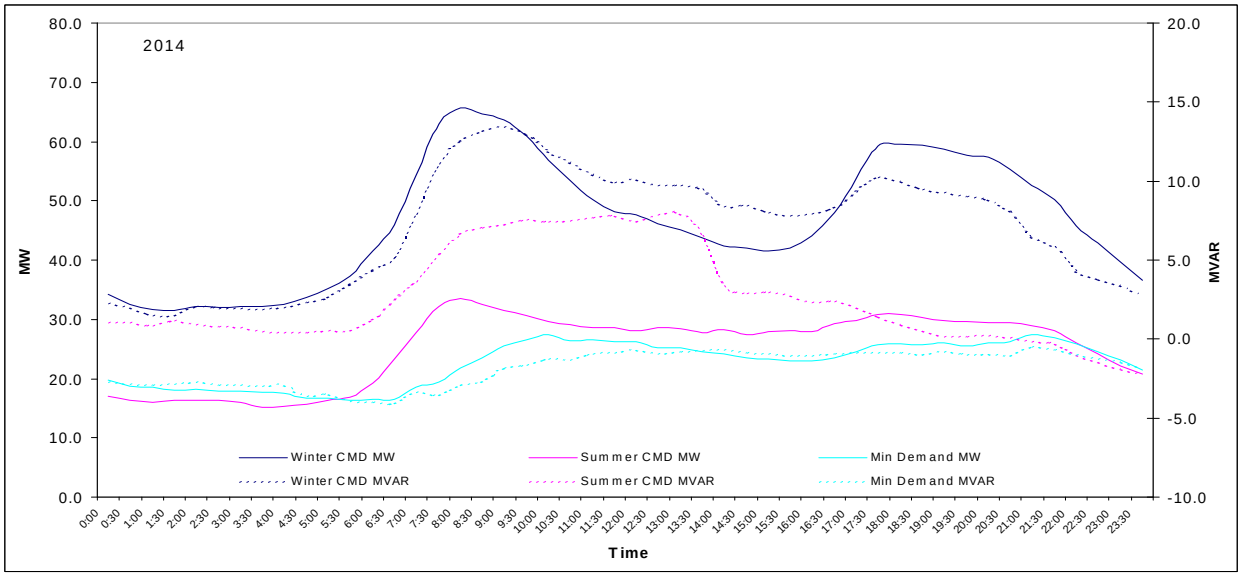
Figure 4-42 Load Profiles: Devonport Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

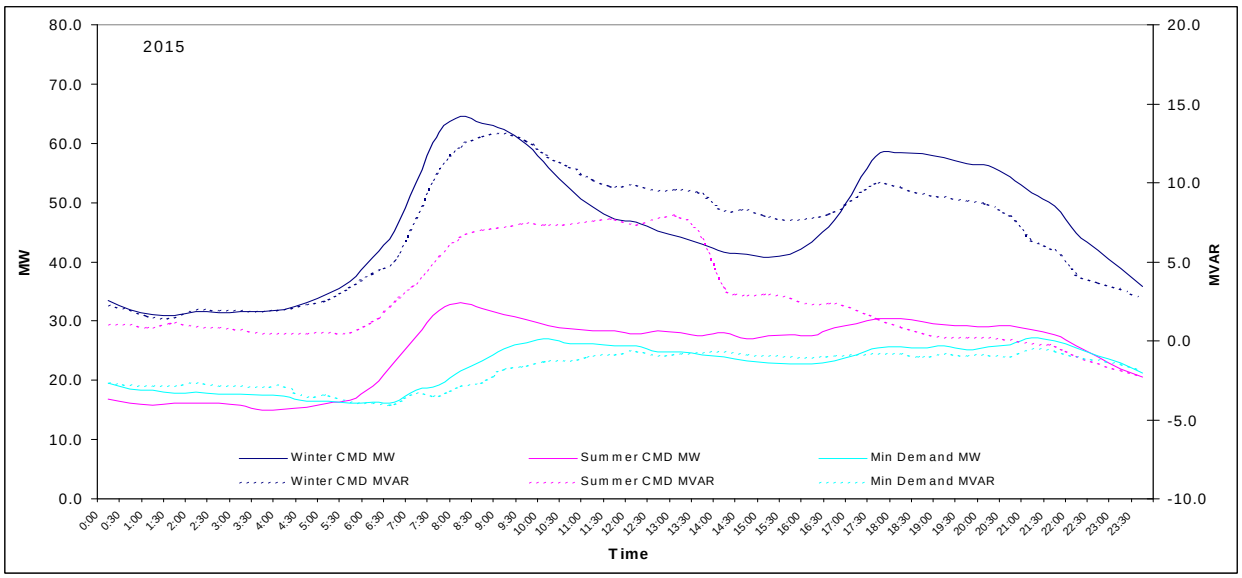
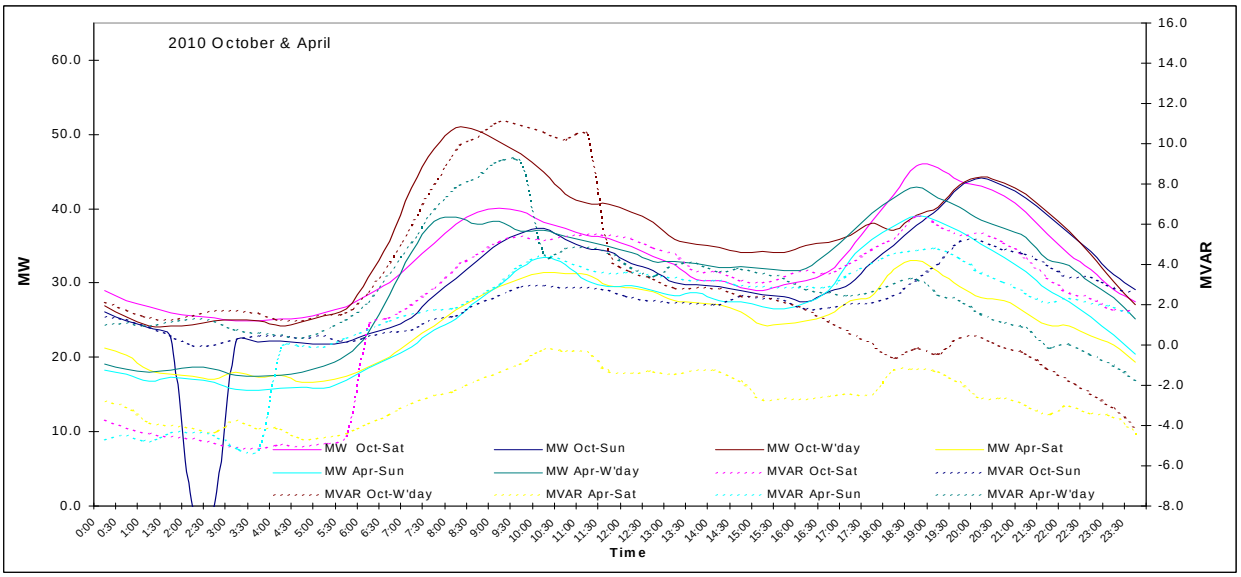
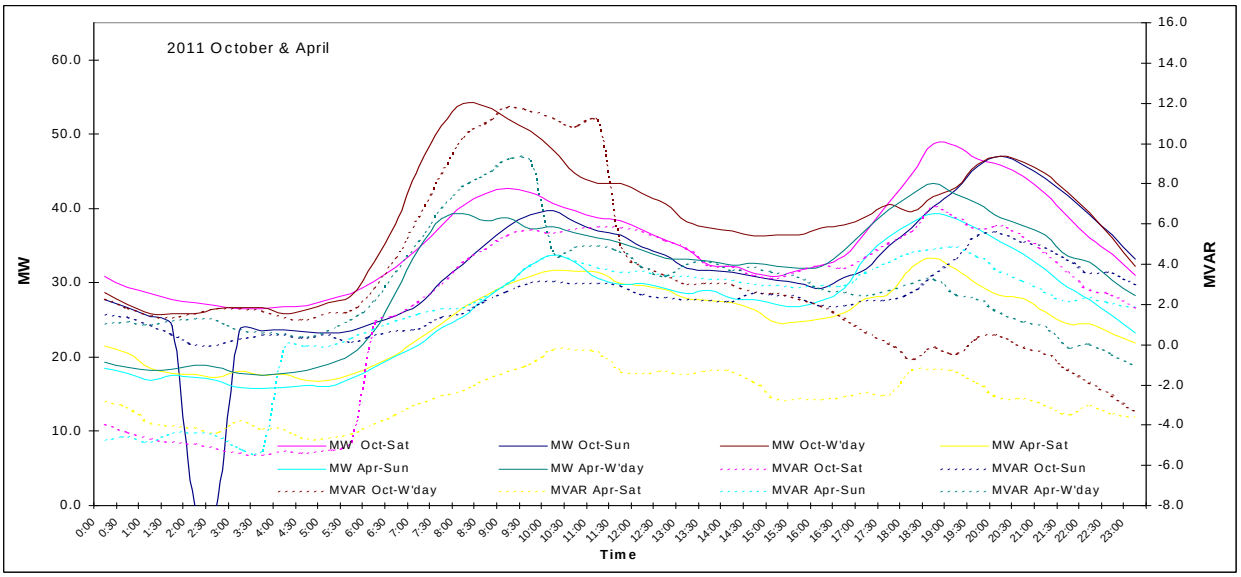
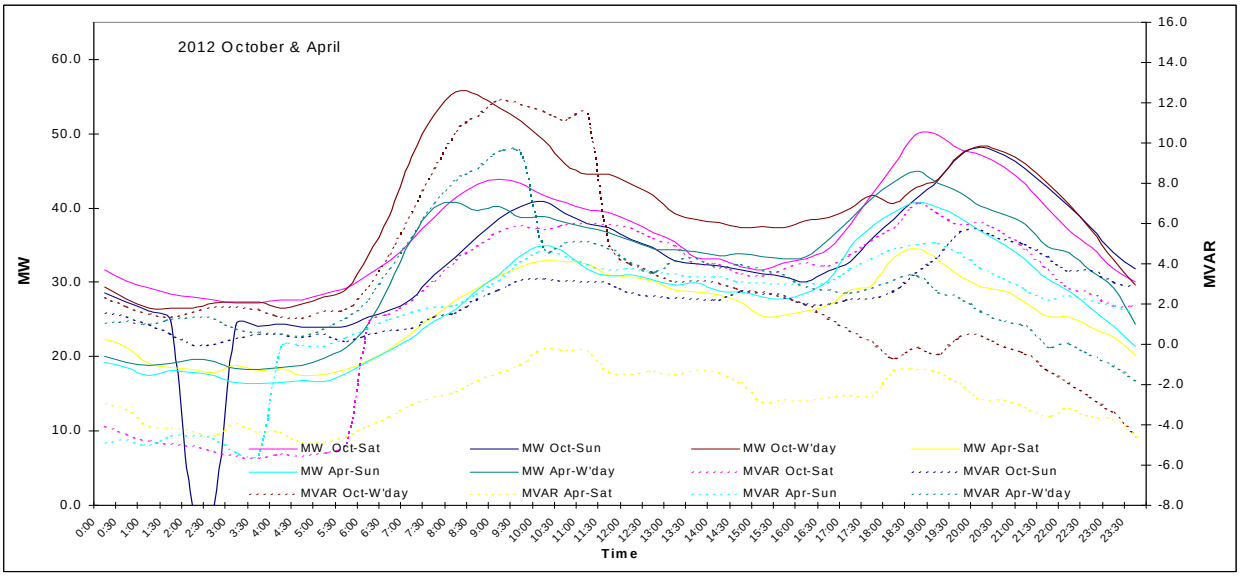
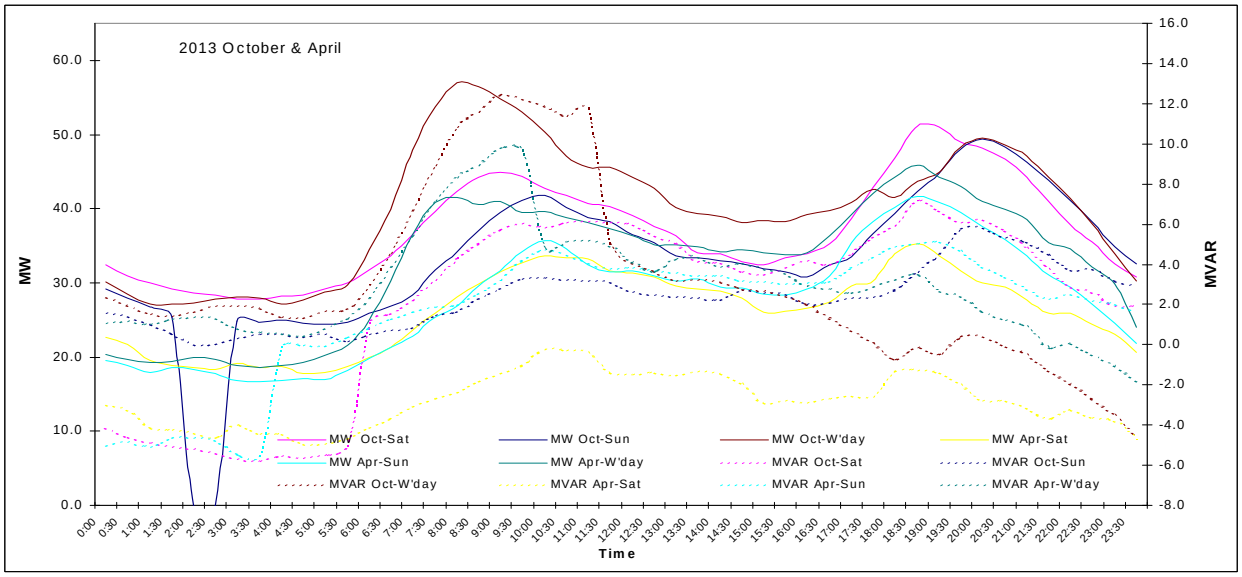

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

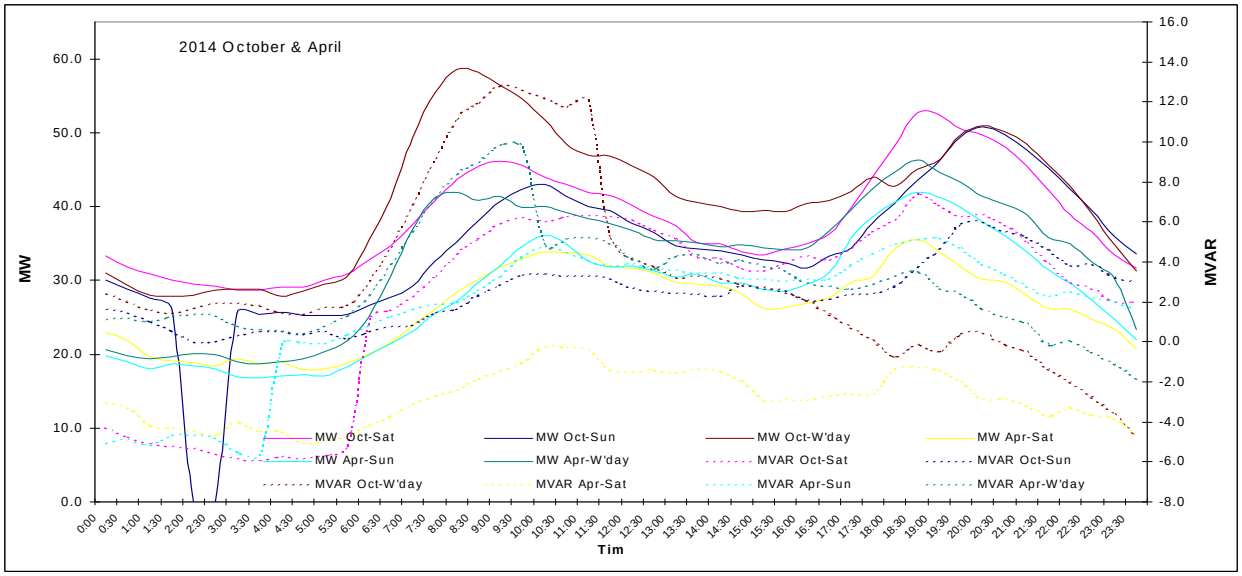
Figure 4-43 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Tim
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

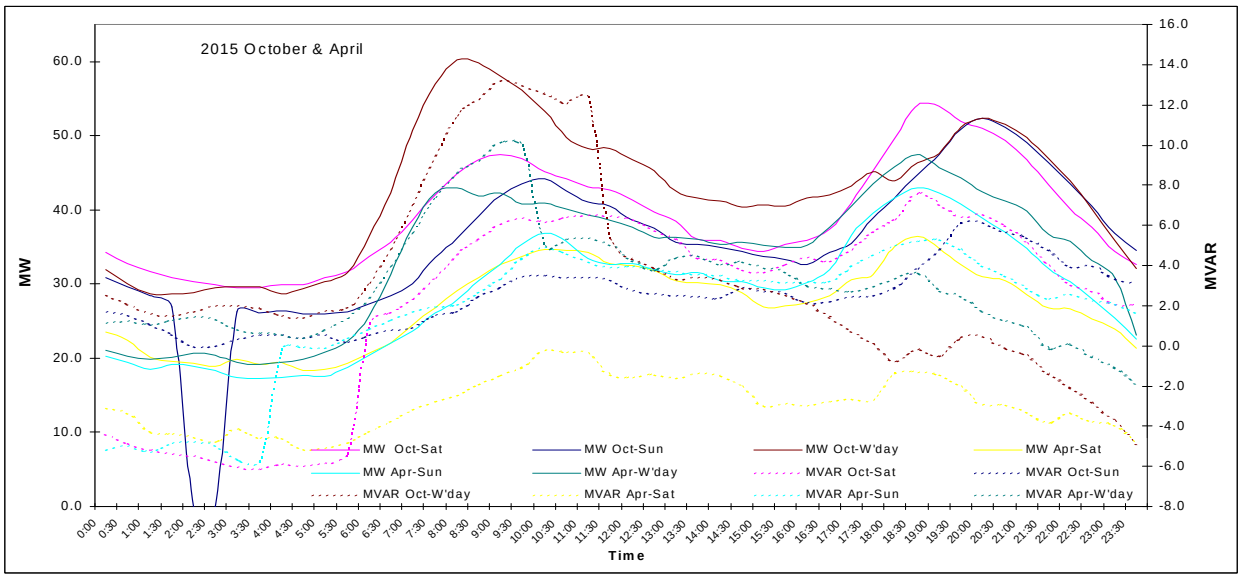
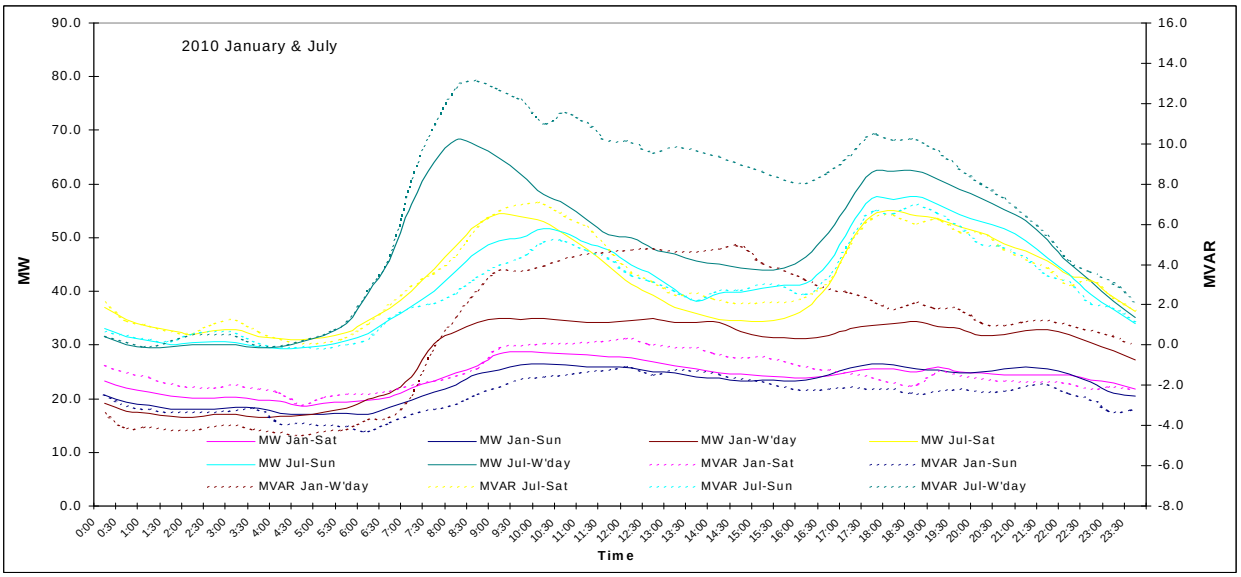
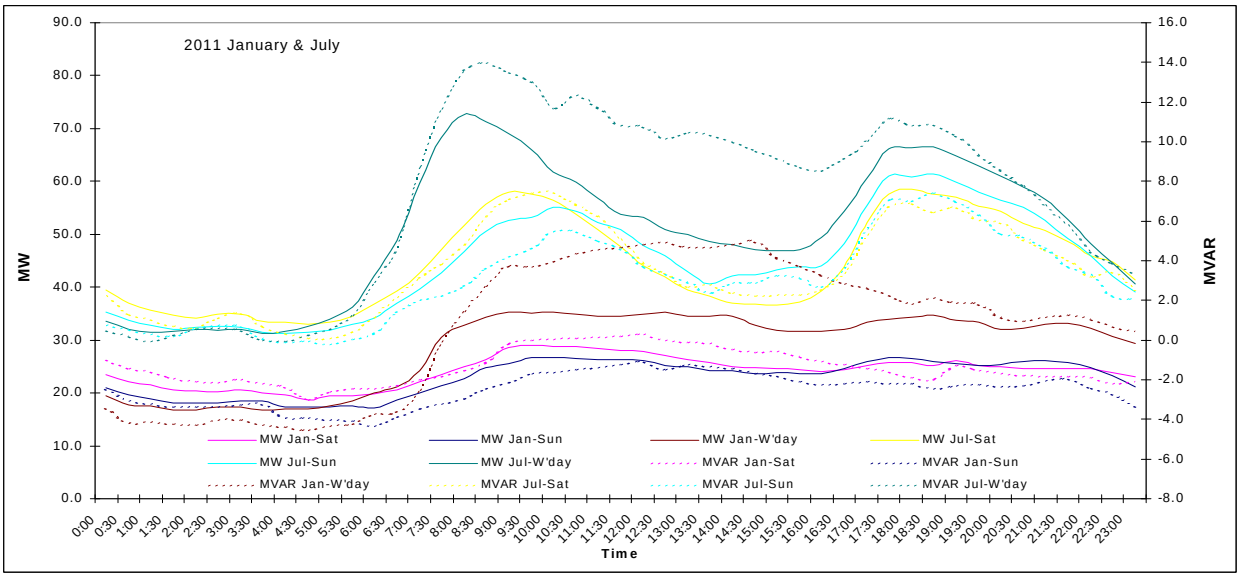
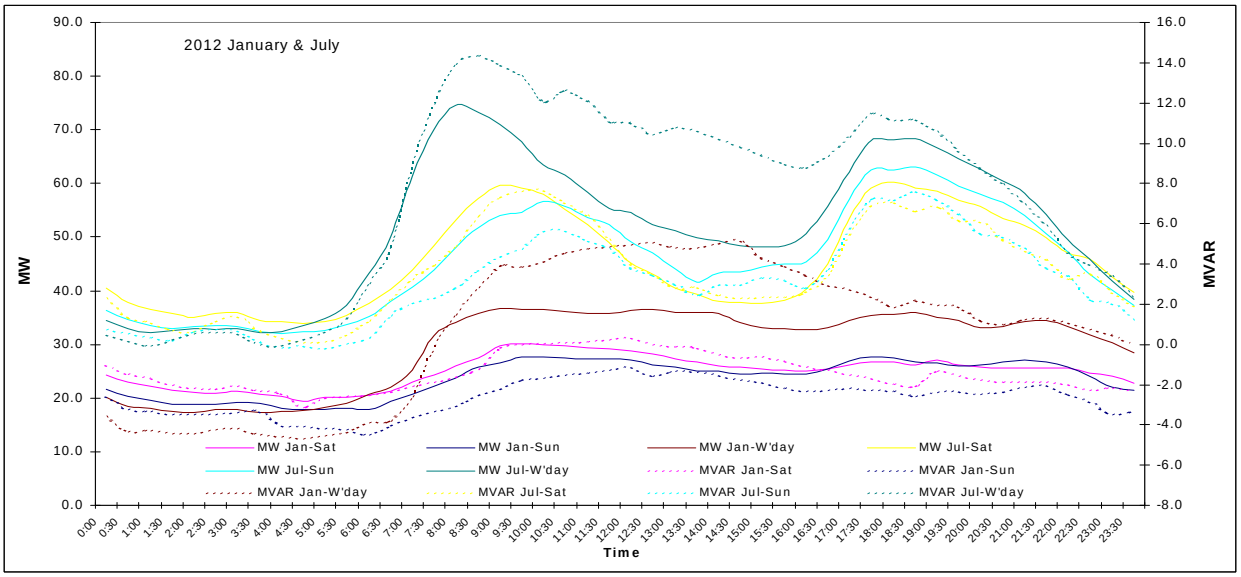
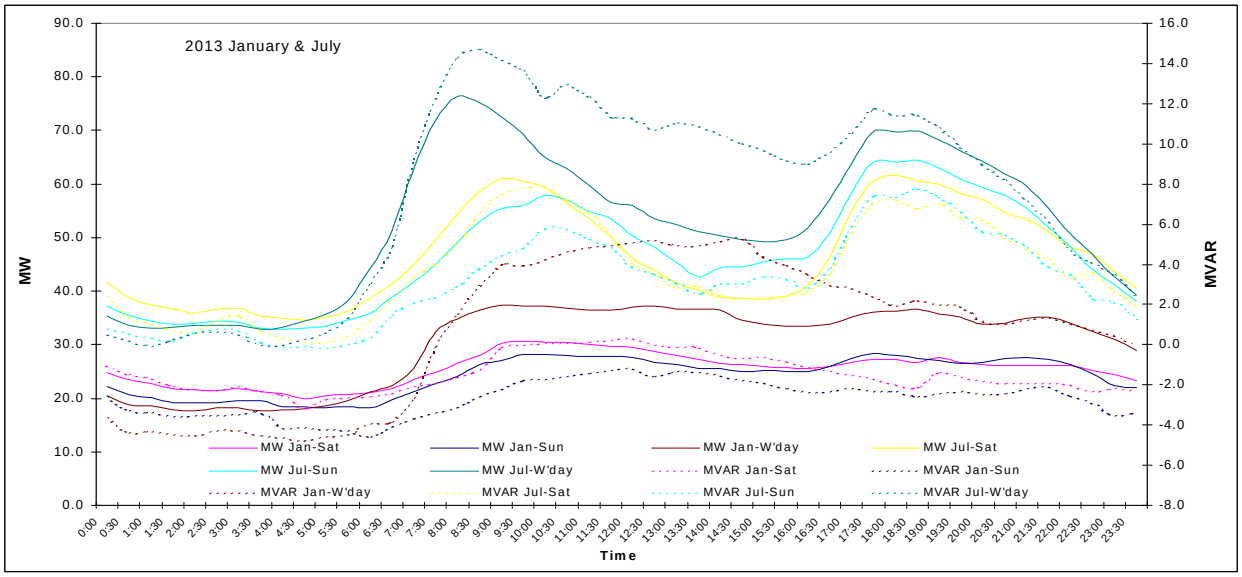

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

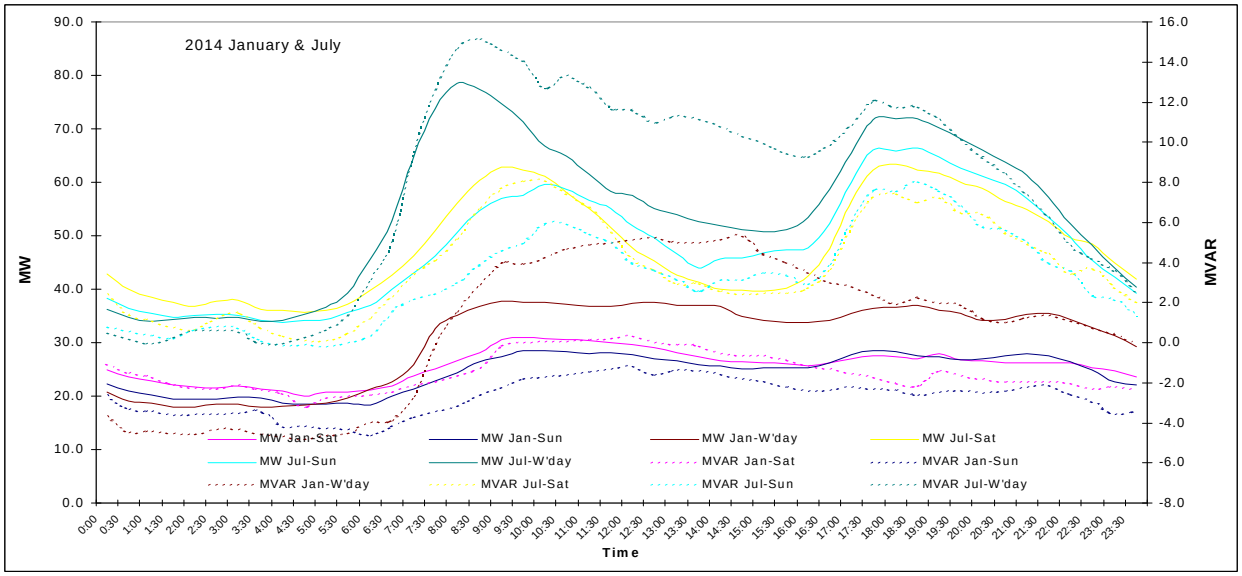
Figure 4-44 Load Profiles: Weekday, Saturday, Sunday for January & July

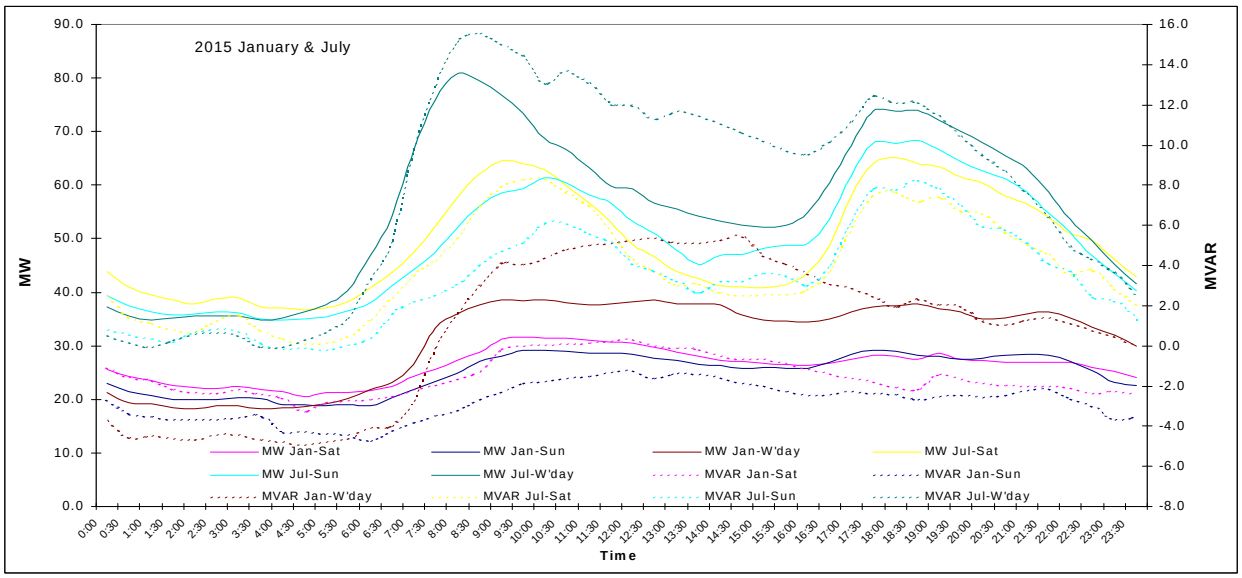







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.10 Electrona

Description:

The Substation located at Electrona and is known as “Electrona Substation”. The substation is owned by Transend.

Table 4-48 Electrona Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	11	13	25	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

Permanent load transfers of 2.0 MW from Kingston Substation in winter 2010 and 1.0MW in summer 2010 have been accounted for in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-49 Electrona Site Winter load forecast

Electrona	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	12.72	13.01	11.28	11.54	12.72	13.01	11.51	11.78
2006	13.52	13.83	12.63	12.92	13.52	13.83	12.88	13.18
2007	14.42	14.75	13.46	13.77	14.42	14.75	13.79	14.10
2008	12.79	13.06	11.85	12.10	12.79	13.06	12.00	12.25
2009	14.48	14.72	14.47	14.71	14.48	14.72	14.74	14.98
2010	19.15	19.43	16.50	16.74	19.15	19.43	16.87	17.11
2011	20.49	20.80	17.66	17.92	20.80	21.10	17.92	18.18
2012	21.07	21.38	18.15	18.42	21.37	21.68	18.41	18.68
2013	21.60	21.91	18.60	18.88	21.91	22.23	18.87	19.15
2014	22.26	22.59	19.18	19.46	22.56	22.89	19.44	19.72
2015	22.92	23.26	19.74	20.03	23.23	23.57	20.01	20.31
2016	23.64	23.99	20.36	20.66	23.94	24.29	20.63	20.93
2017	24.36	24.71	20.98	21.29	24.68	25.04	21.26	21.57
2018	25.18	25.55	21.69	22.01	25.49	25.86	21.96	22.28
2019	26.08	26.46	22.46	22.79	26.41	26.80	22.75	23.09
2020	27.05	27.45	23.30	23.64	27.38	27.78	23.58	23.93

Table 4-50 Electrona Site Summer load forecast

Electrona	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	8.27	8.60	6.16	6.40	8.27	8.60	6.16	6.40
2006	8.00	8.29	7.72	8.01	8.00	8.29	7.80	8.09
2007	9.24	9.47	7.73	7.92	9.24	9.47	7.84	8.04
2008	9.30	9.53	9.30	9.53	9.30	9.53	9.48	9.72
2009	9.41	9.62	9.41	9.62	9.41	9.62	9.61	9.82
2010	10.20	10.21	8.79	8.80	10.20	10.21	8.81	8.82
2011	10.25	10.27	8.83	8.84	10.46	10.47	9.01	9.02
2012	10.61	10.63	9.14	9.15	10.83	10.84	9.33	9.34
2013	10.79	10.80	9.29	9.30	11.01	11.03	9.49	9.50
2014	10.85	10.86	9.34	9.36	11.06	11.07	9.53	9.54
2015	11.09	11.10	9.55	9.56	11.30	11.32	9.73	9.75
2016	11.11	11.12	9.57	9.58	11.34	11.36	9.77	9.78
2017	11.56	11.57	9.95	9.97	11.78	11.80	10.15	10.16
2018	11.83	11.85	10.19	10.20	12.07	12.09	10.40	10.41
2019	12.12	12.14	10.44	10.45	12.36	12.38	10.65	10.66
2020	12.43	12.45	10.71	10.72	12.68	12.69	10.92	10.93

Figure 4-45 Electrona Site Summer Load Forecast at 50% and 10% POE

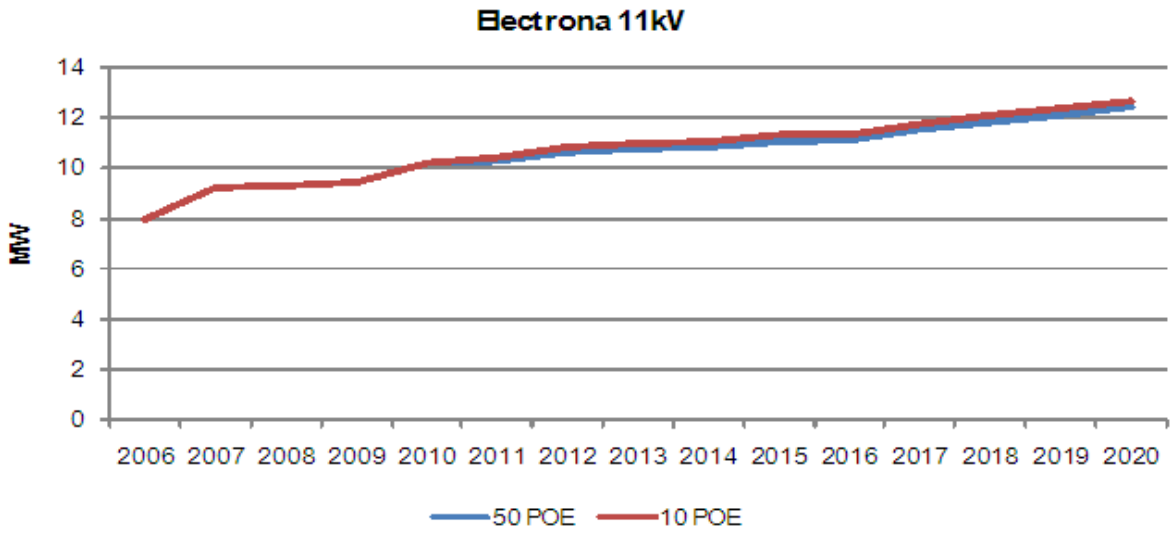
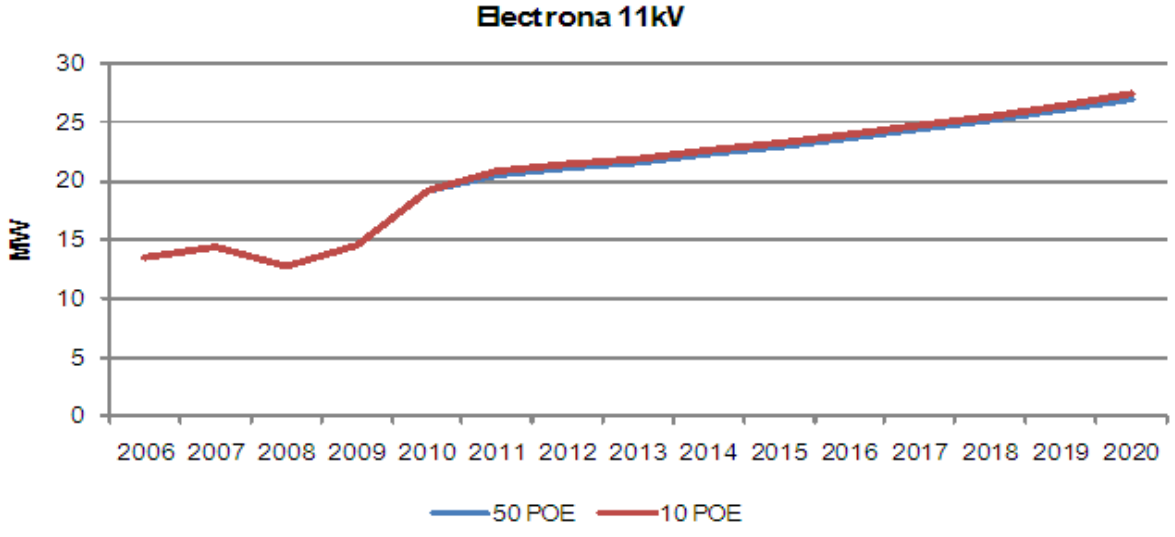
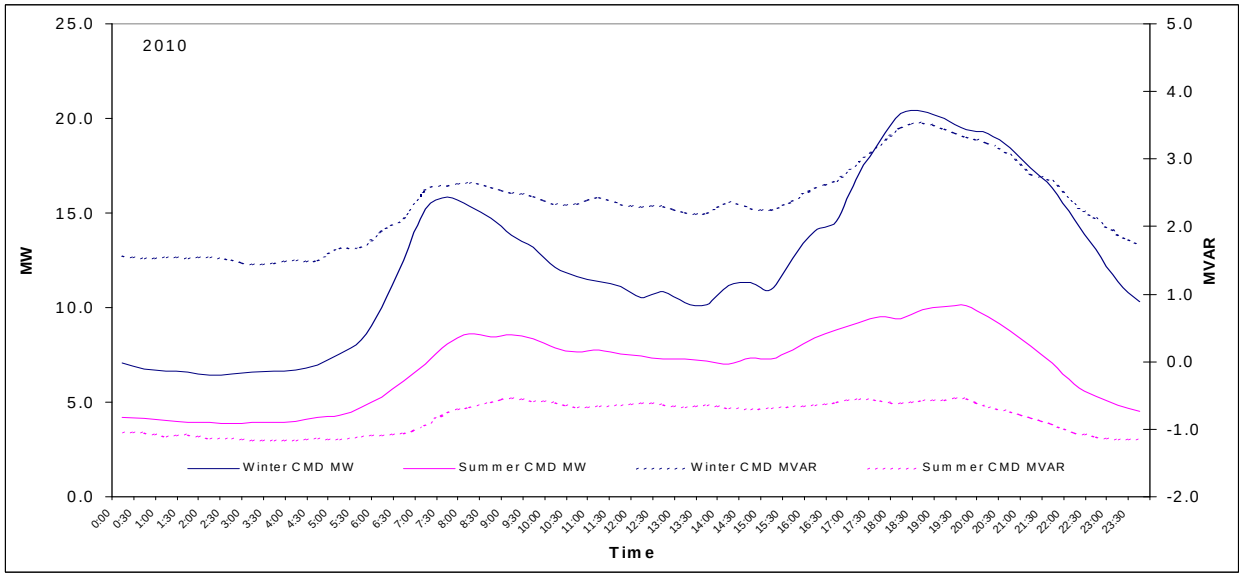


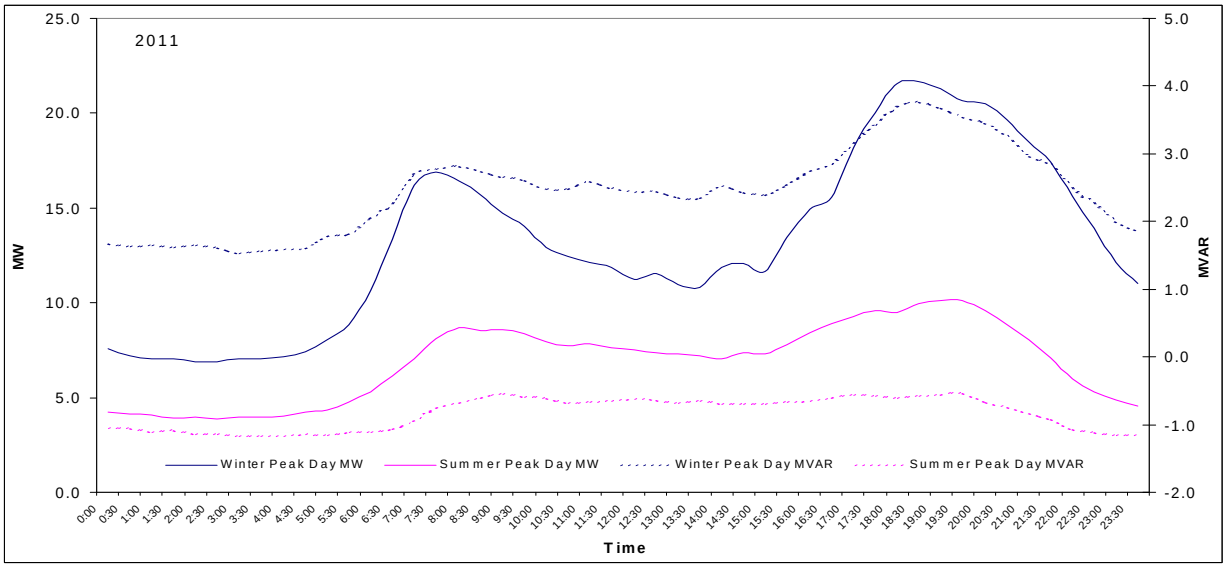
Figure 4-46 Electrona Site Winter Load Forecast at 50% and 10% POE

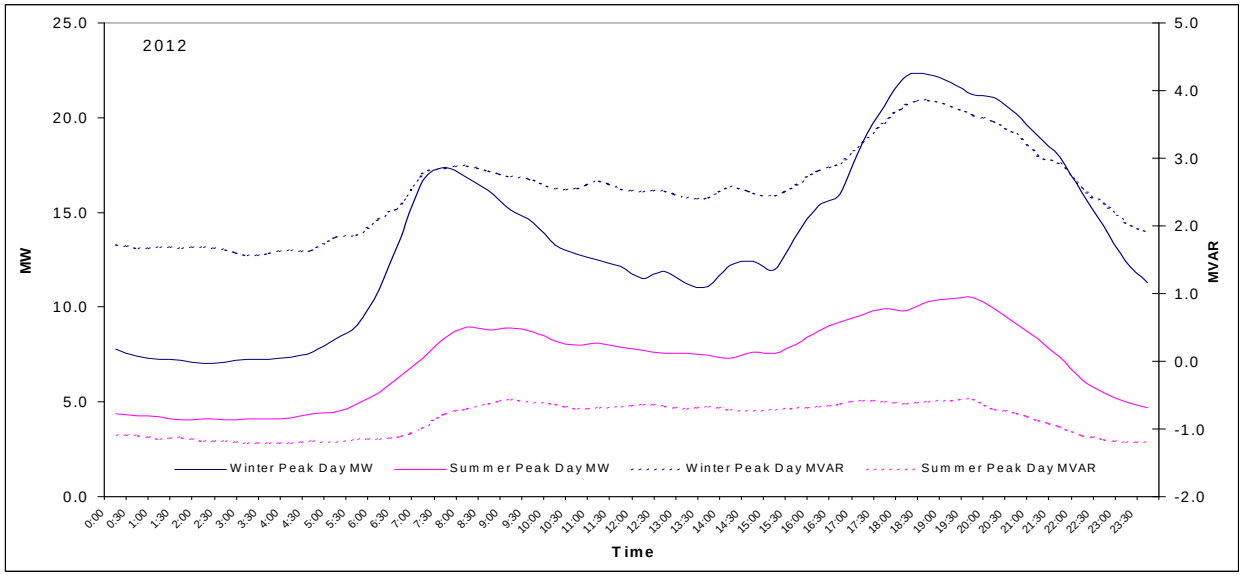


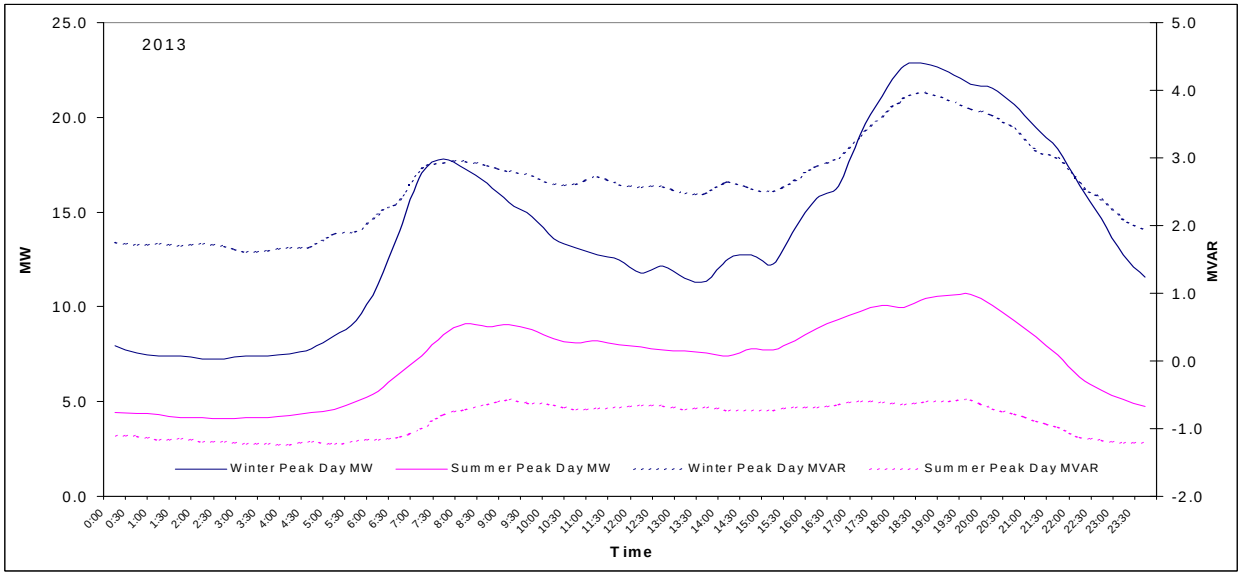
Load Profiles:

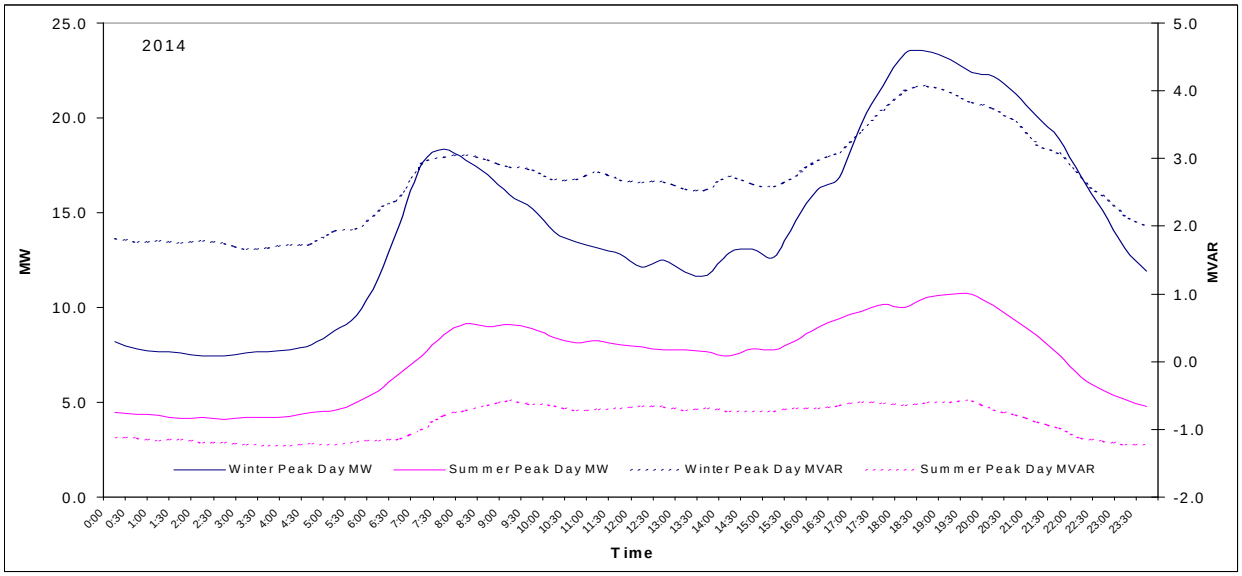
Figure 4-47 Load Profiles: Electrona Substation Day of Summer/Winter Peak Demand





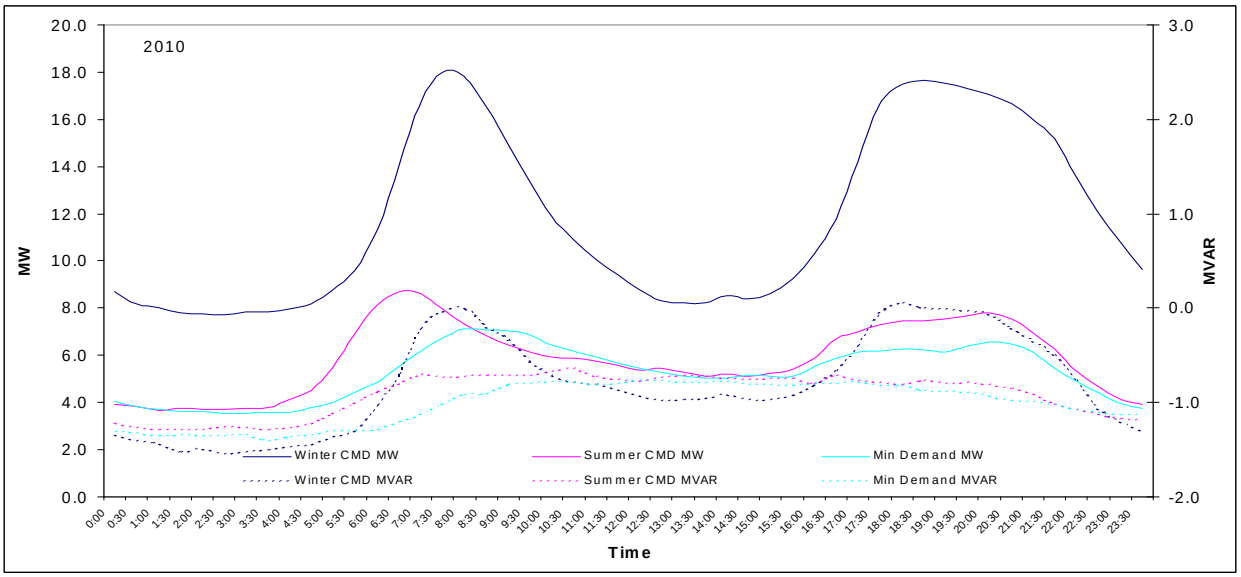


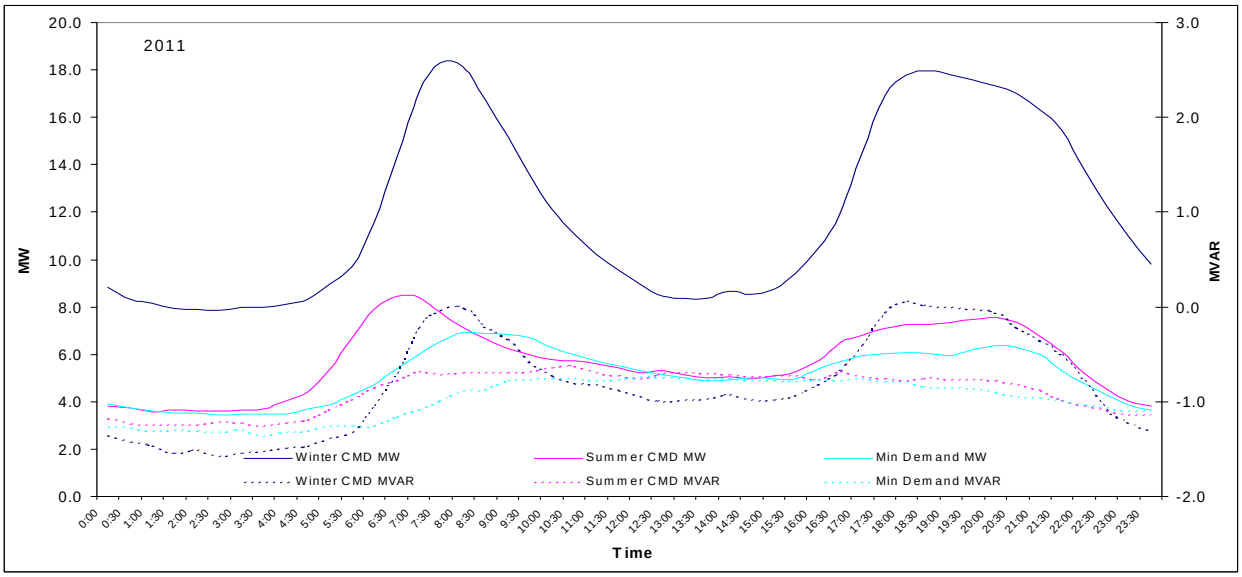

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

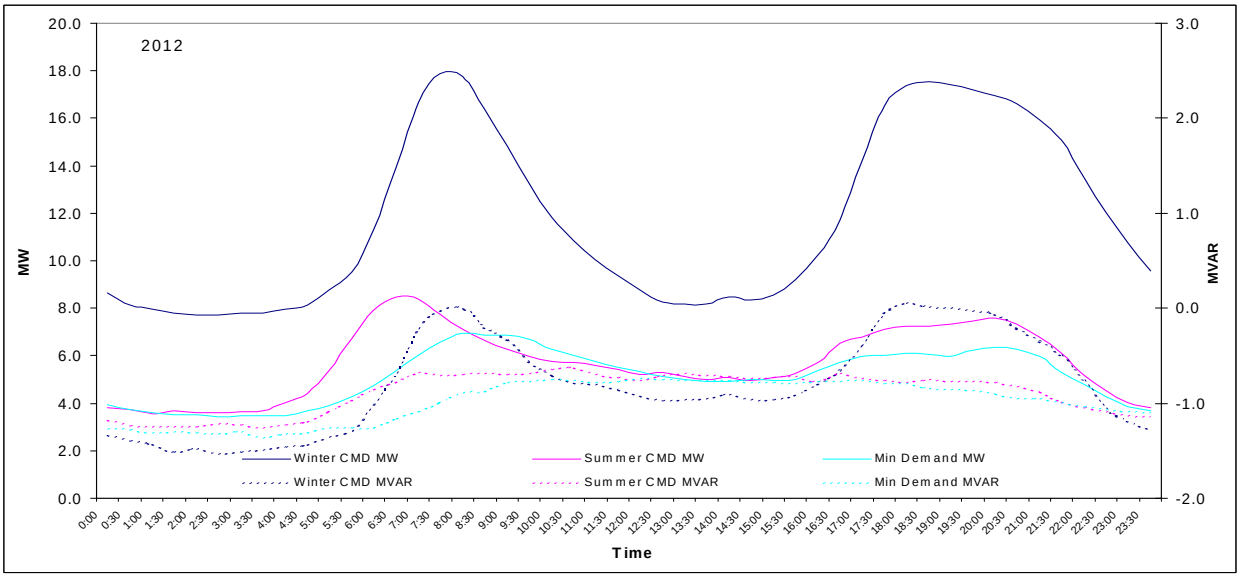

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

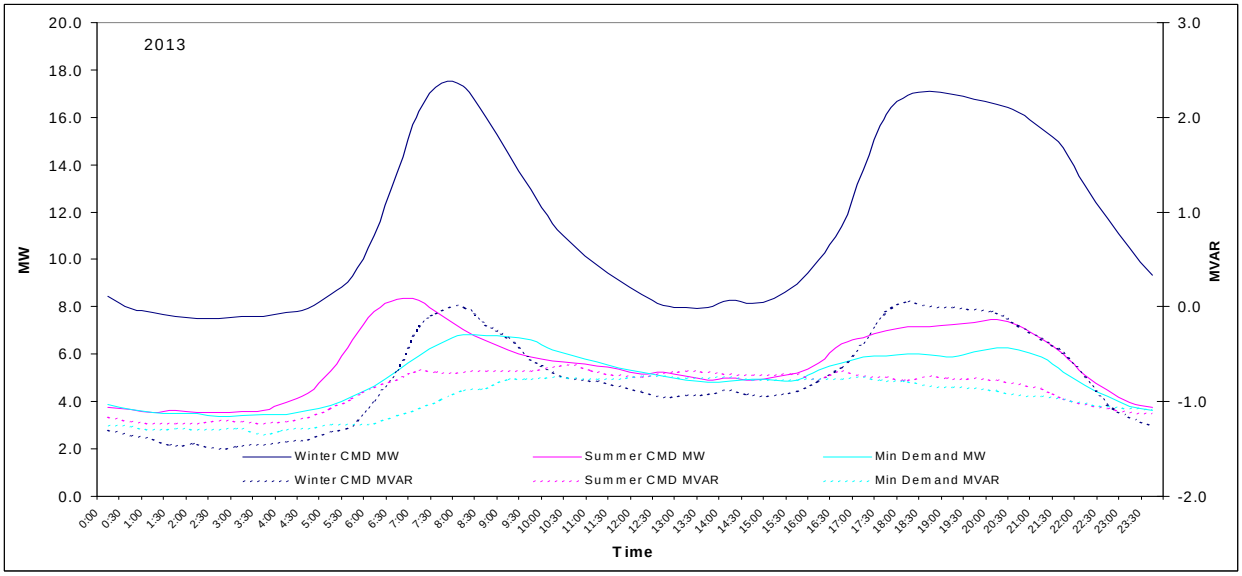

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

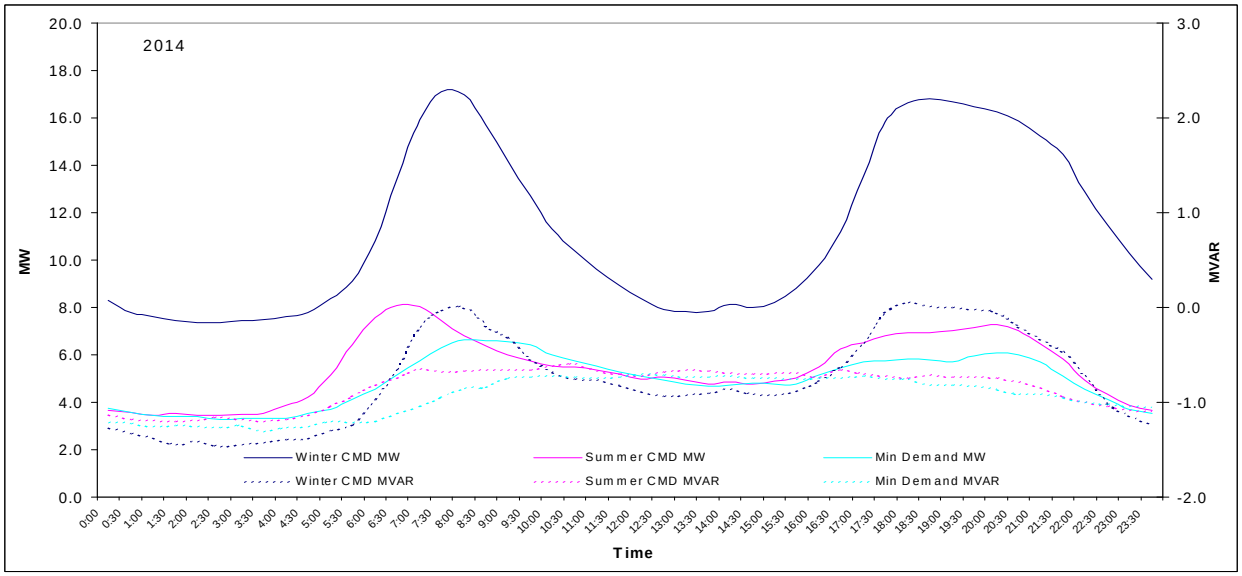
Figure 4-48 Load Profiles: Electrona Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

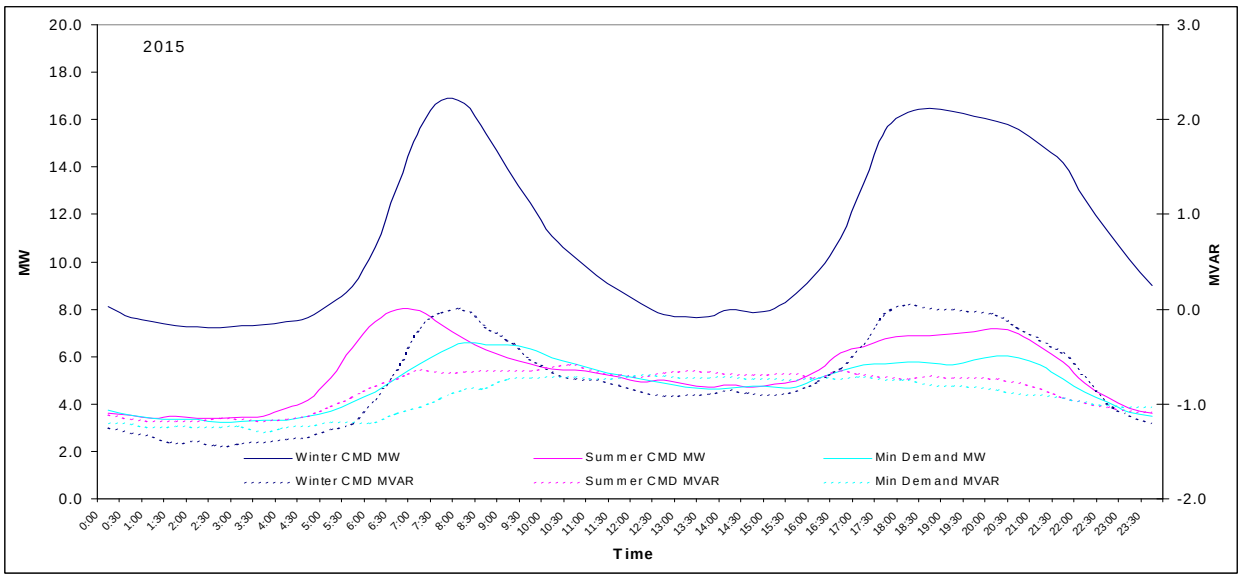
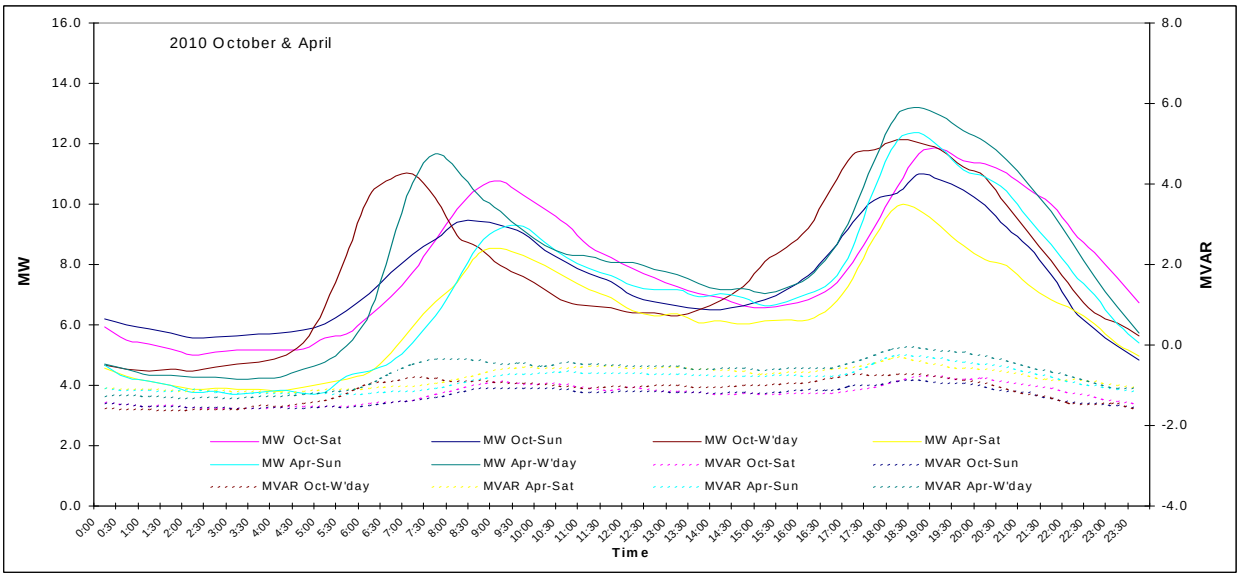
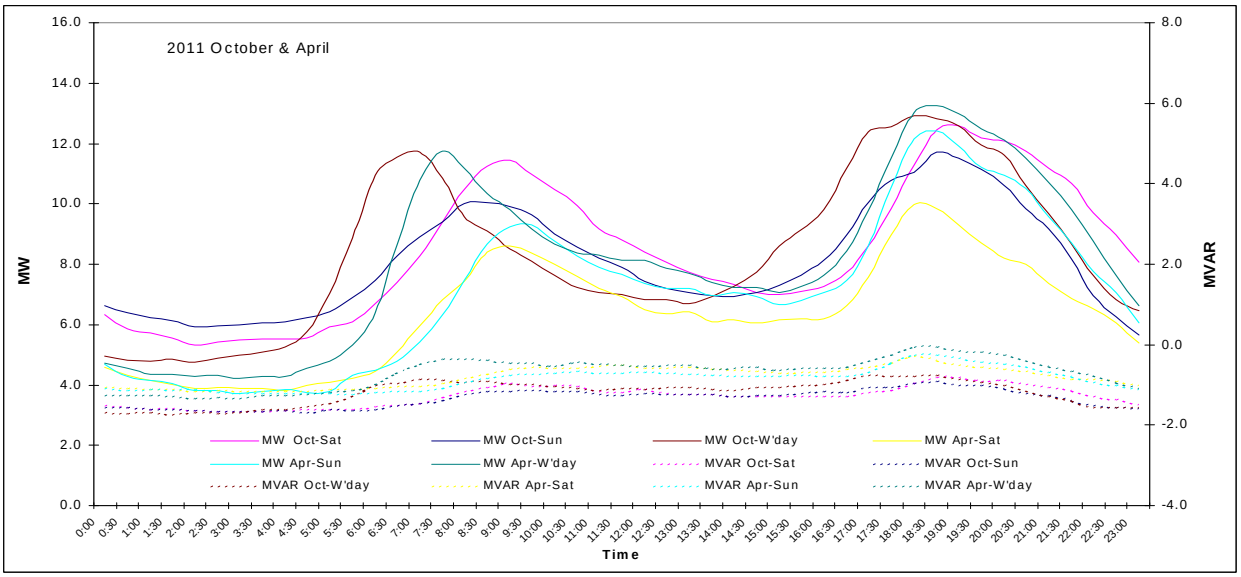
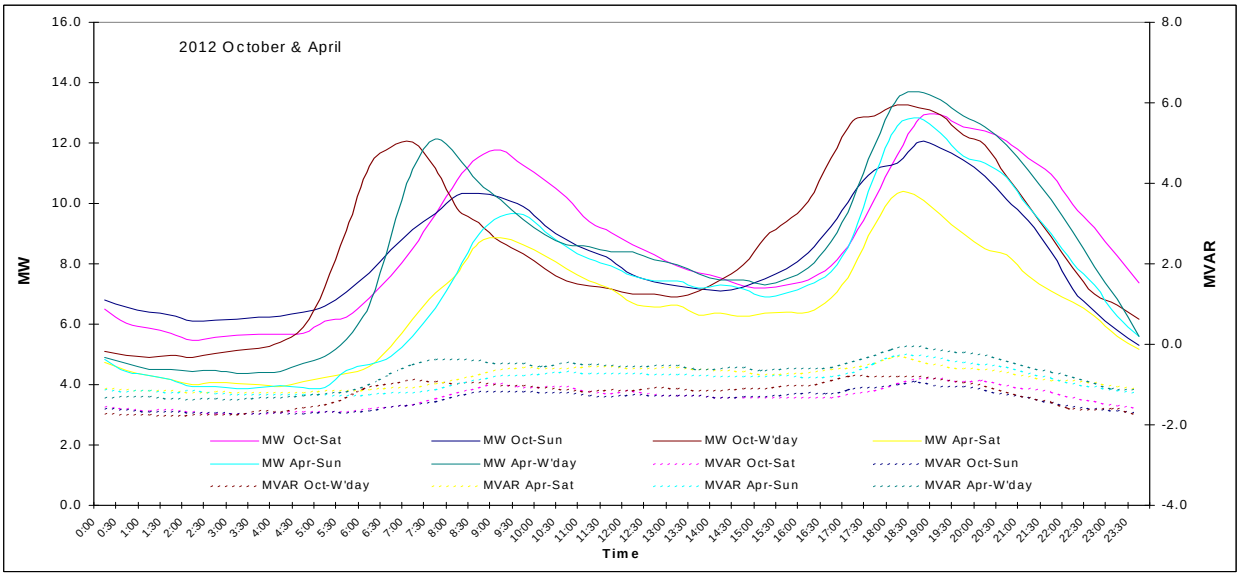
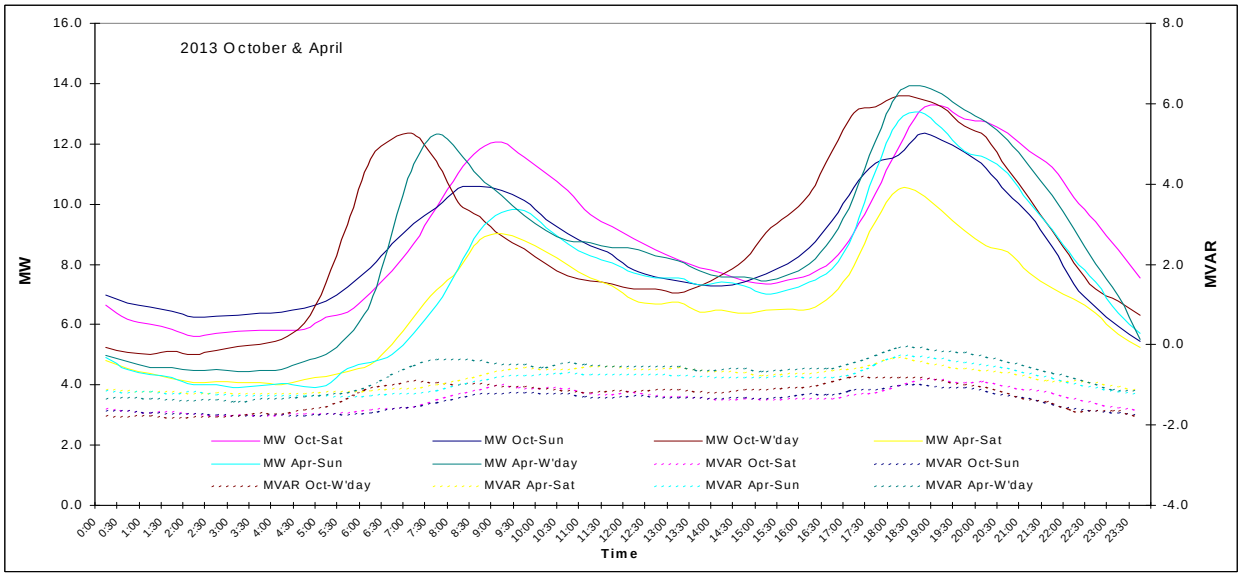

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

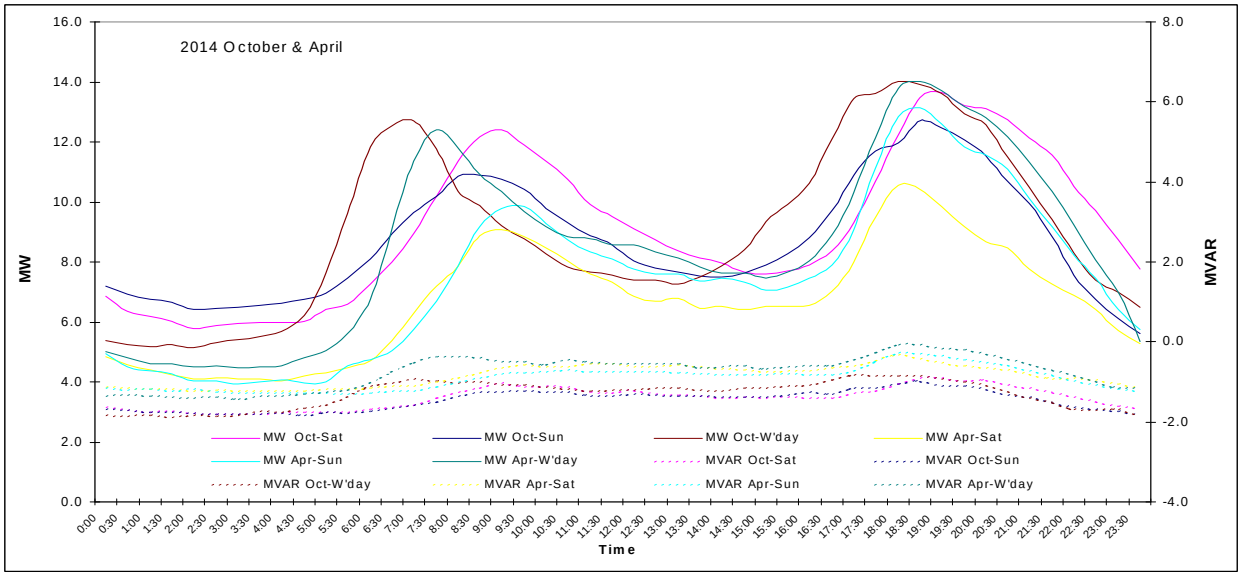
Figure 4-49 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

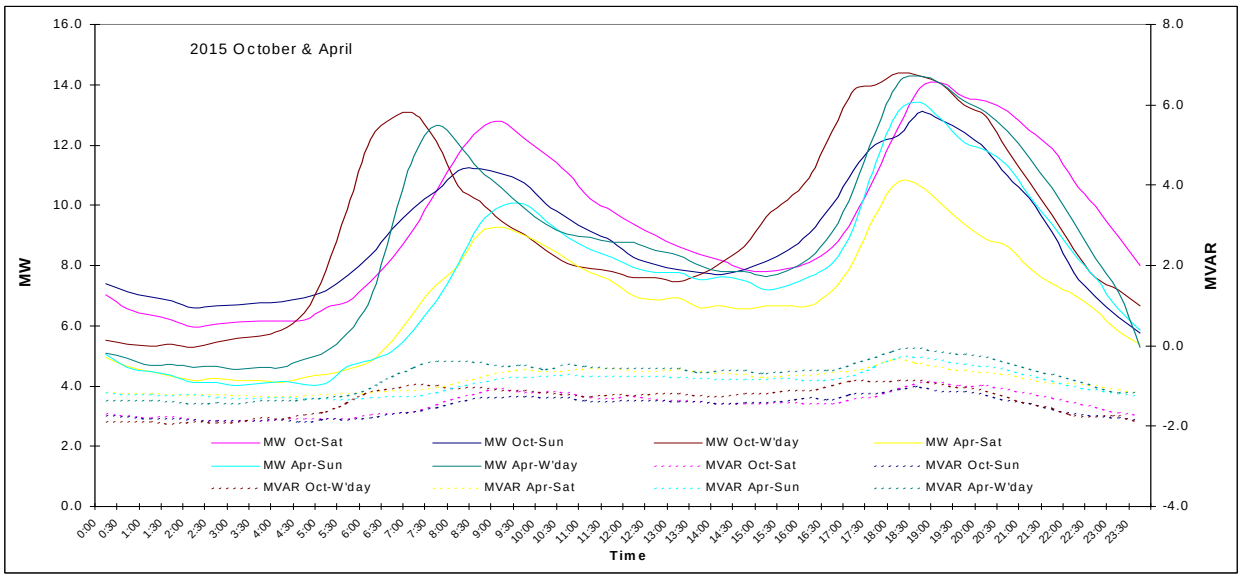
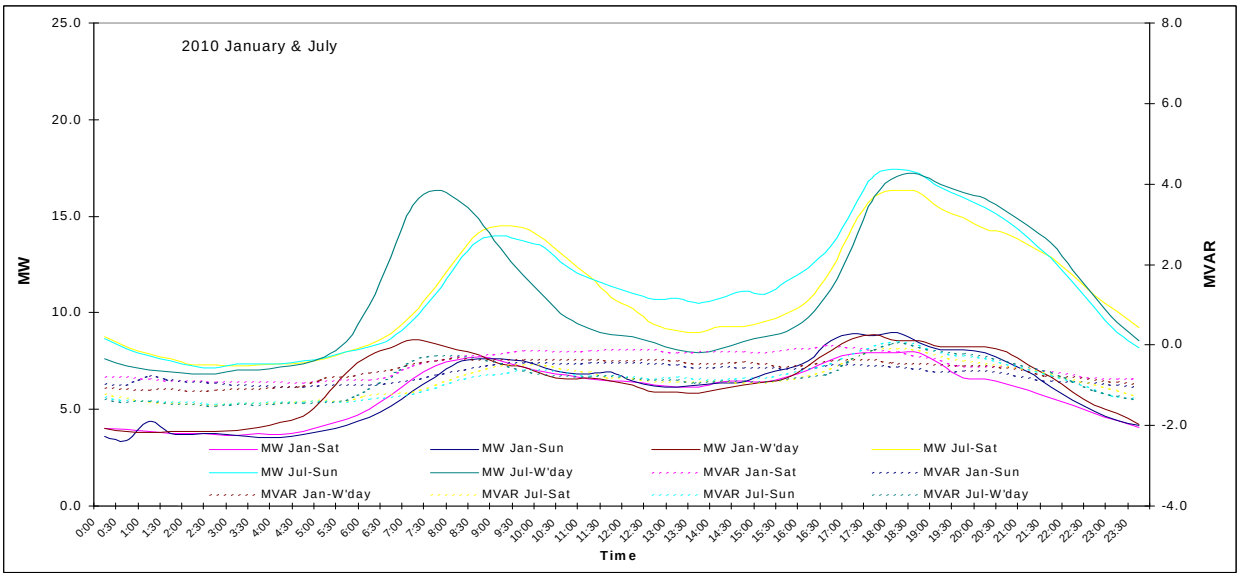
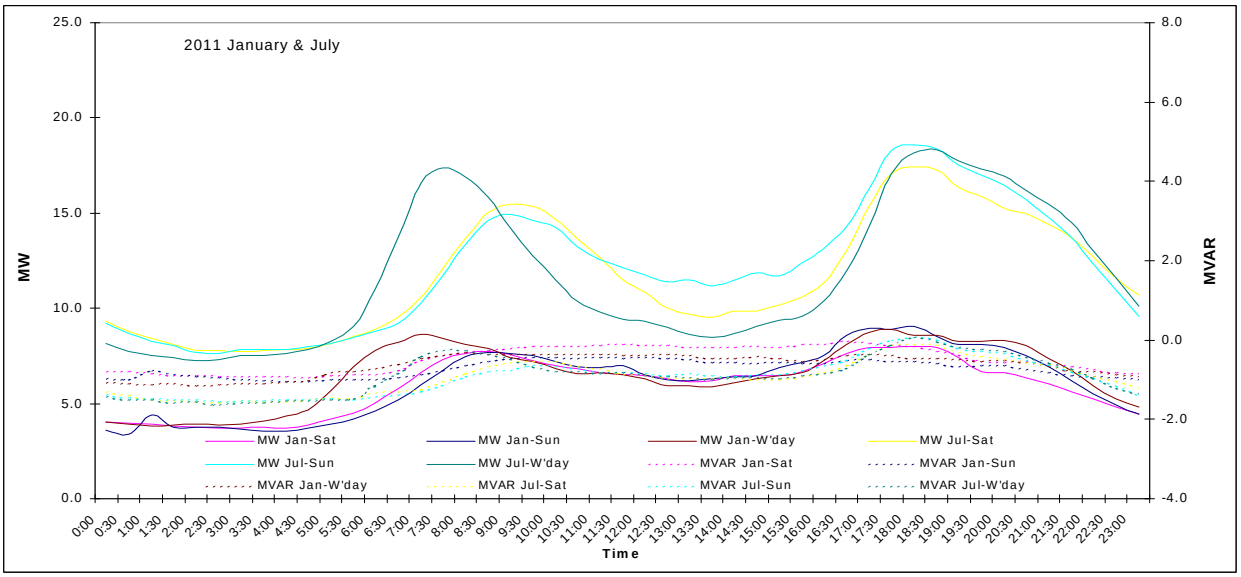
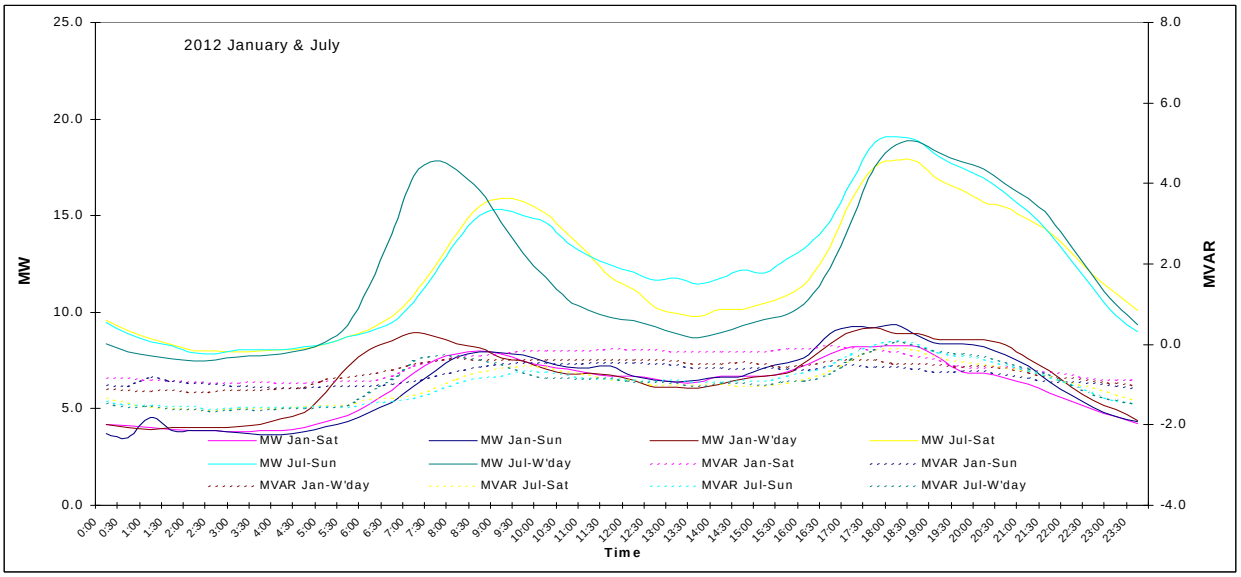
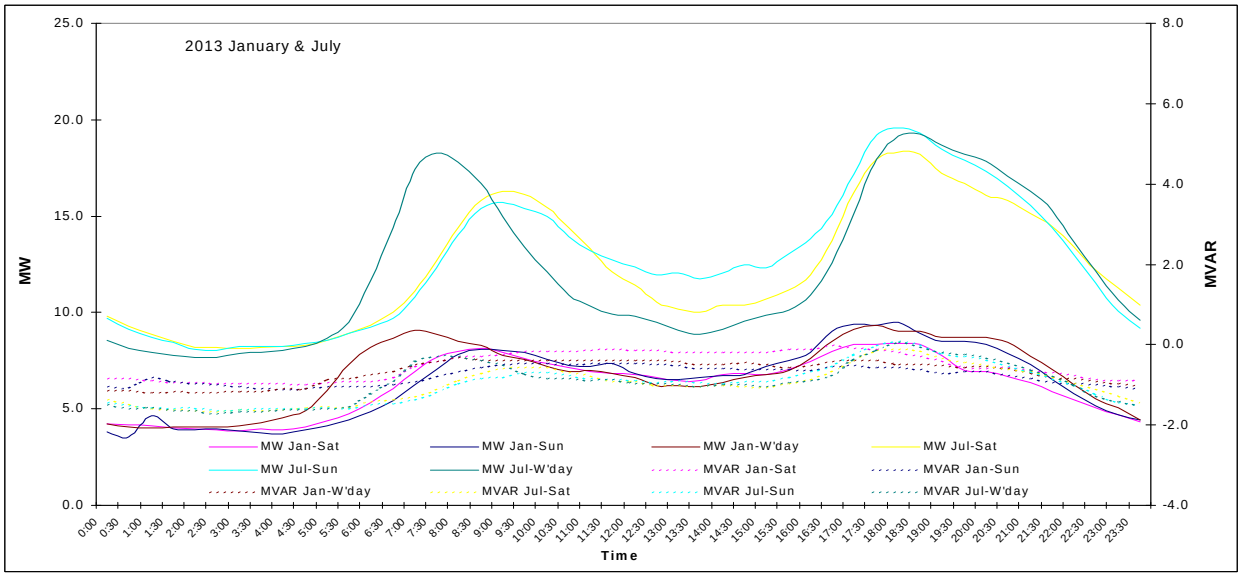

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

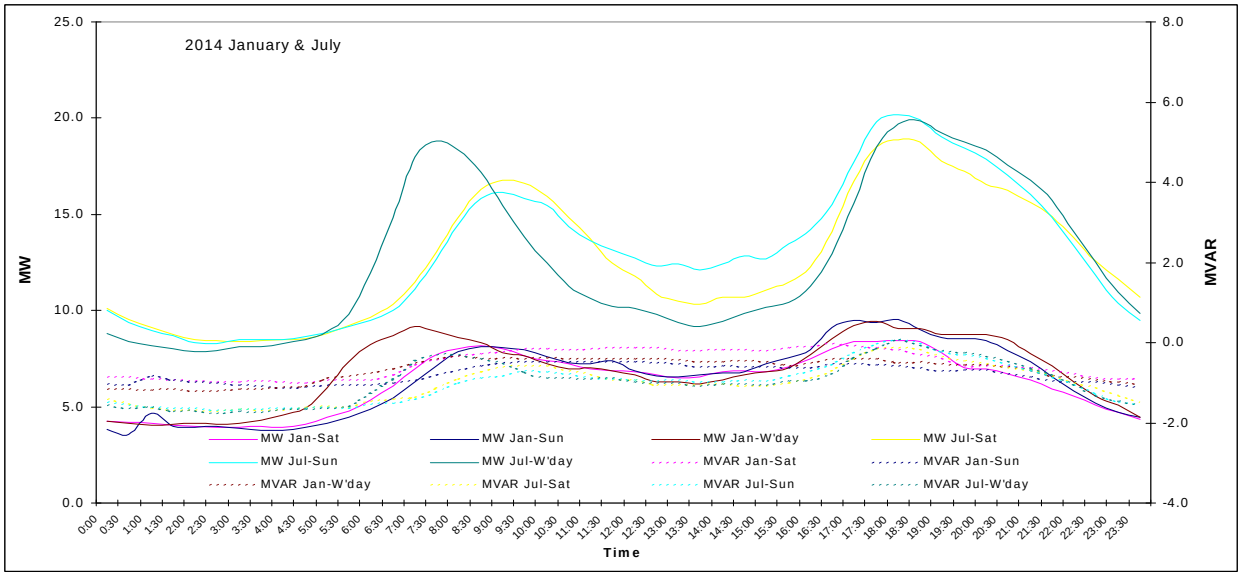
Figure 4-50 Load Profiles: Weekday, Saturday, Sunday for January & July

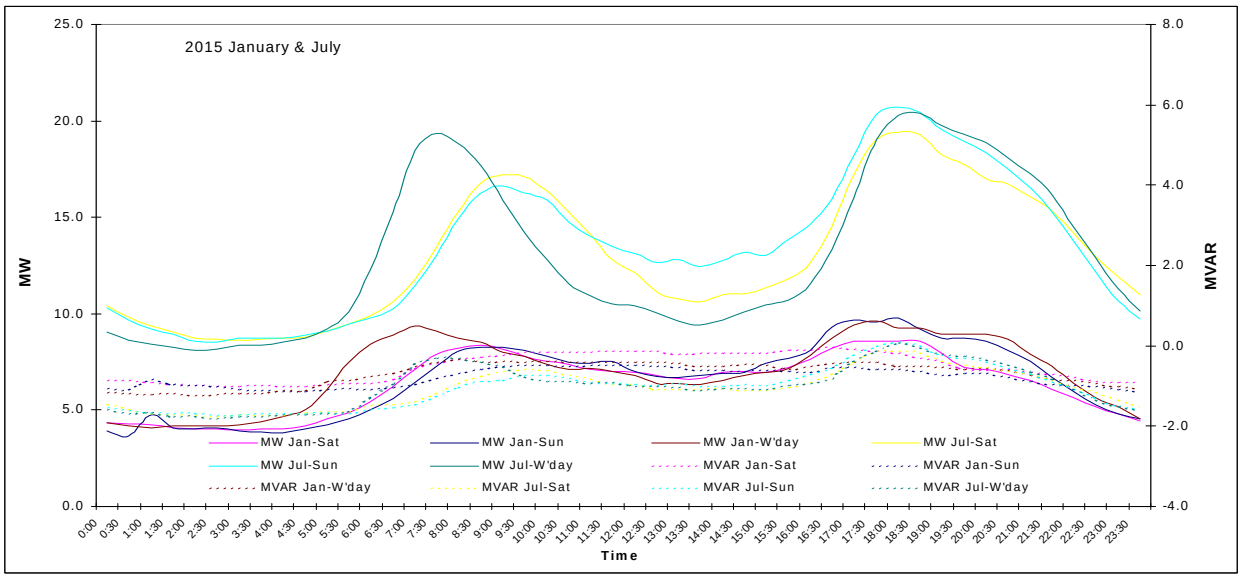







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.11 Emu Bay

Description:

The Substation located at Burnie and is known as “Emu Bay Substation”. The substation is owned by Transend.

Table 4-51 Emu Bay Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	8	80	40

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-52 Emu Bay Site Winter load forecast

Emu Bay Retail	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	22.54	23.00	21.33	21.76	22.54	23.00	22.98	23.45
2006	23.03	23.50	22.68	23.15	23.03	23.50	23.85	24.33
2007	23.30	23.78	22.55	23.01	23.30	23.78	23.76	24.24
2008	23.62	24.10	23.62	24.10	23.62	24.10	25.37	25.89
2009	21.67	22.11	21.59	22.03	21.67	22.11	23.11	23.58
2010	22.79	23.26	21.30	21.73	22.79	23.26	22.56	23.02
2011	23.49	23.97	21.95	22.40	24.72	25.23	23.10	23.57
2012	23.29	23.77	21.76	22.21	24.52	25.02	22.91	23.38
2013	23.04	23.51	21.53	21.97	24.28	24.78	22.69	23.15
2014	22.95	23.42	21.44	21.88	24.18	24.68	22.59	23.06
2015	22.85	23.32	21.35	21.79	24.10	24.59	22.52	22.98
2016	22.81	23.28	21.32	21.75	24.06	24.55	22.48	22.94
2017	22.77	23.24	21.28	21.71	24.04	24.53	22.46	22.92
2018	22.83	23.29	21.33	21.76	24.09	24.58	22.51	22.97
2019	22.94	23.40	21.43	21.87	24.24	24.73	22.65	23.11
2020	23.10	23.57	21.58	22.02	24.41	24.90	22.80	23.27

Table 4-53 Emu Bay Site Summer load forecast

Emu Bay Retail	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	17.47	17.83	15.15	15.46	17.47	17.83	15.15	15.46
2006	17.83	18.19	16.00	16.32	17.83	18.19	16.00	16.32
2007	19.13	19.52	14.94	15.25	19.13	19.52	14.94	15.25
2008	18.48	18.86	15.09	15.40	18.48	18.86	15.09	15.40
2009	18.23	18.60	14.56	14.85	18.23	18.60	14.56	14.85
2010	17.55	17.91	14.55	14.84	17.55	17.91	14.55	14.84
2011	17.24	17.59	14.29	14.58	17.54	17.90	14.54	14.83
2012	17.45	17.80	14.46	14.75	17.76	18.12	14.72	15.02
2013	17.35	17.70	14.38	14.67	17.67	18.03	14.64	14.94
2014	17.07	17.42	14.15	14.44	17.36	17.72	14.39	14.69
2015	17.08	17.43	14.16	14.45	17.38	17.73	14.40	14.70
2016	16.77	17.11	13.90	14.18	17.08	17.43	14.16	14.45
2017	17.10	17.45	14.17	14.46	17.40	17.75	14.42	14.71
2018	17.17	17.52	14.23	14.52	17.48	17.84	14.49	14.78
2019	17.25	17.61	14.30	14.59	17.56	17.92	14.55	14.85
2020	17.37	17.72	14.40	14.69	17.67	18.03	14.65	14.95

Figure 4-51 Emu Bay Site Summer Load Forecast at 50% and 10% POE

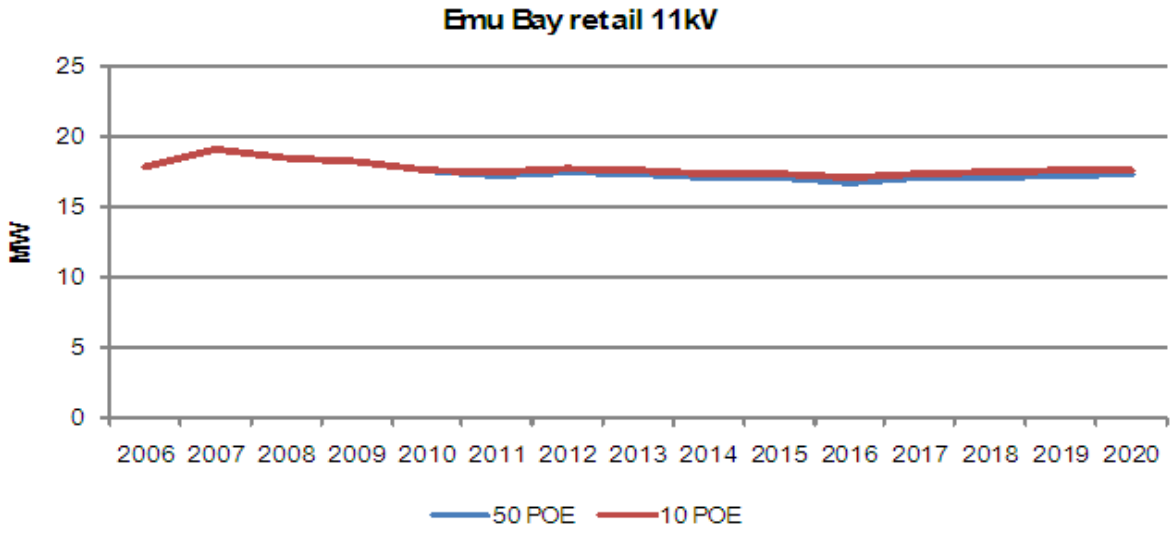
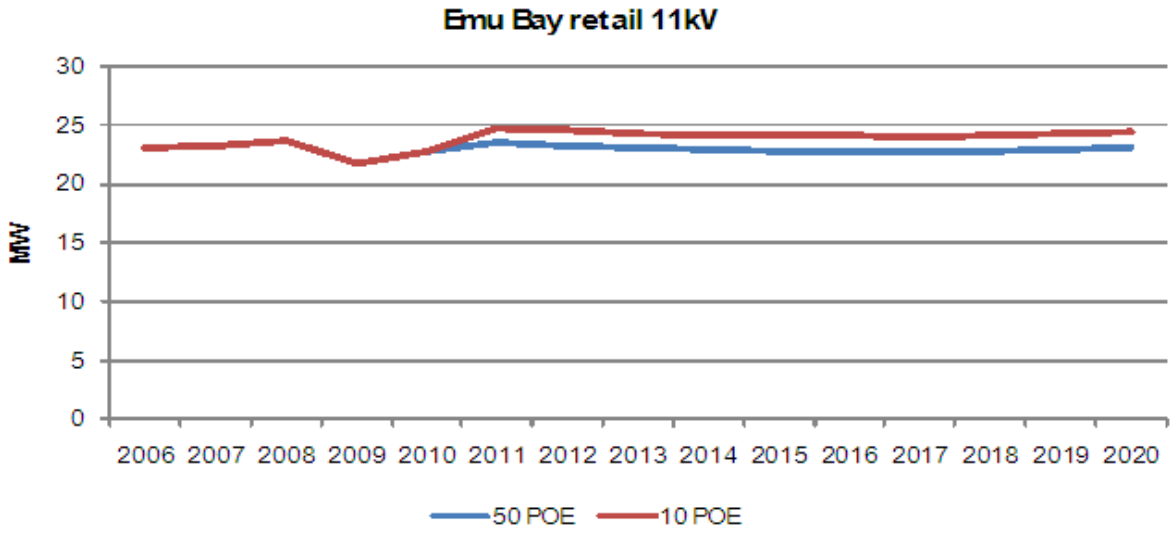
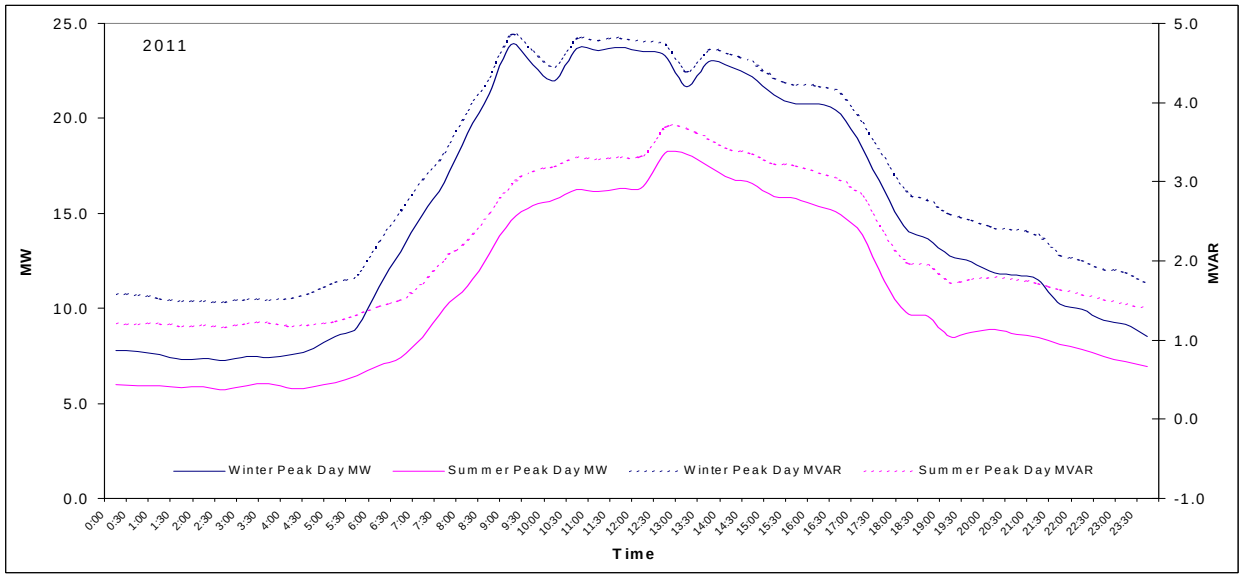


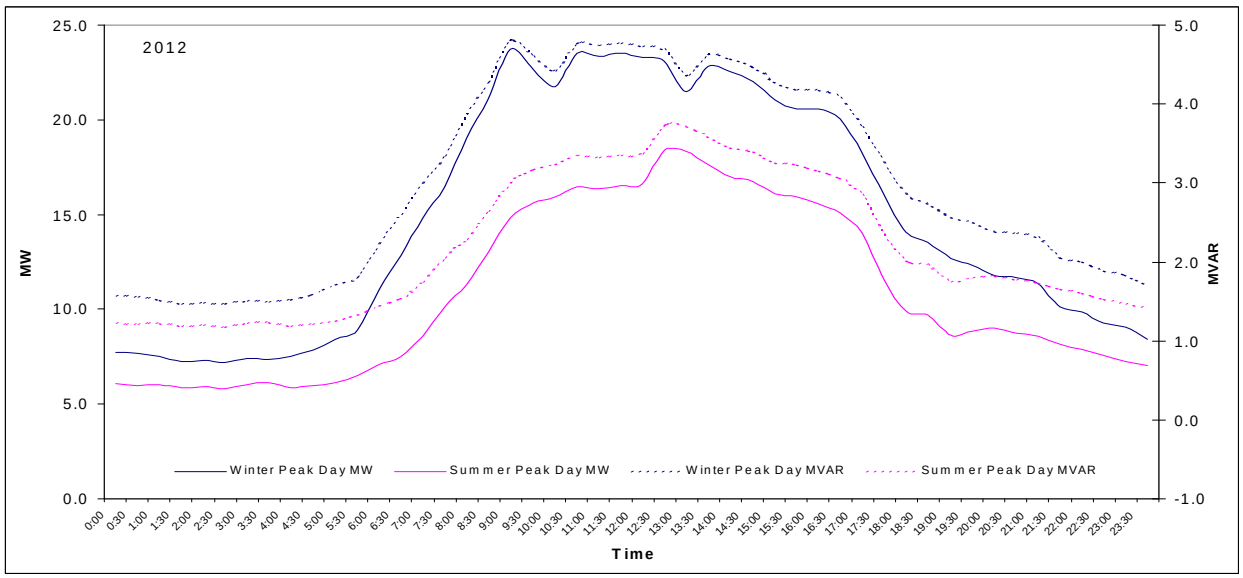
Figure 4-52 Emu Bay Site Winter Load Forecast at 50% and 10% POE



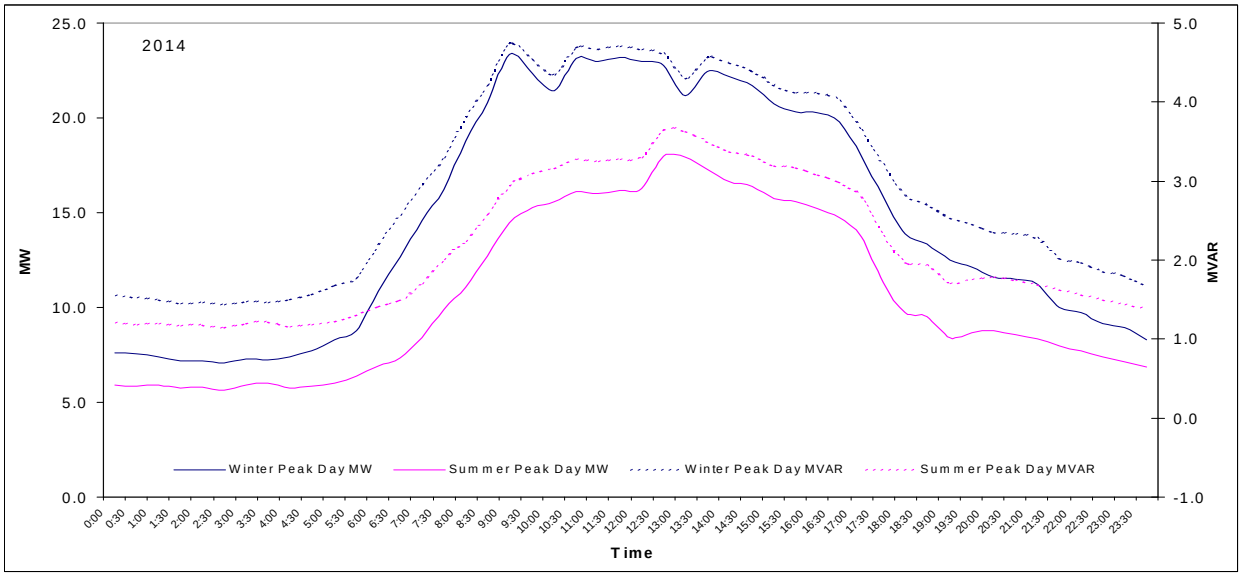
Load Profiles:

Figure 4-53 Load Profiles: Emu Bay Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

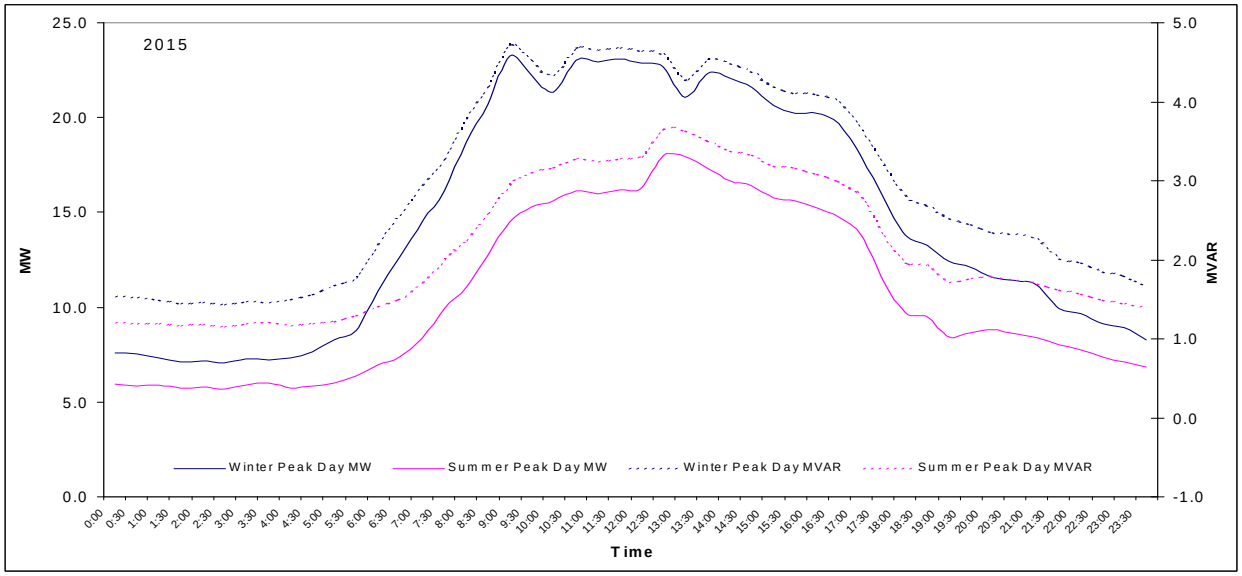
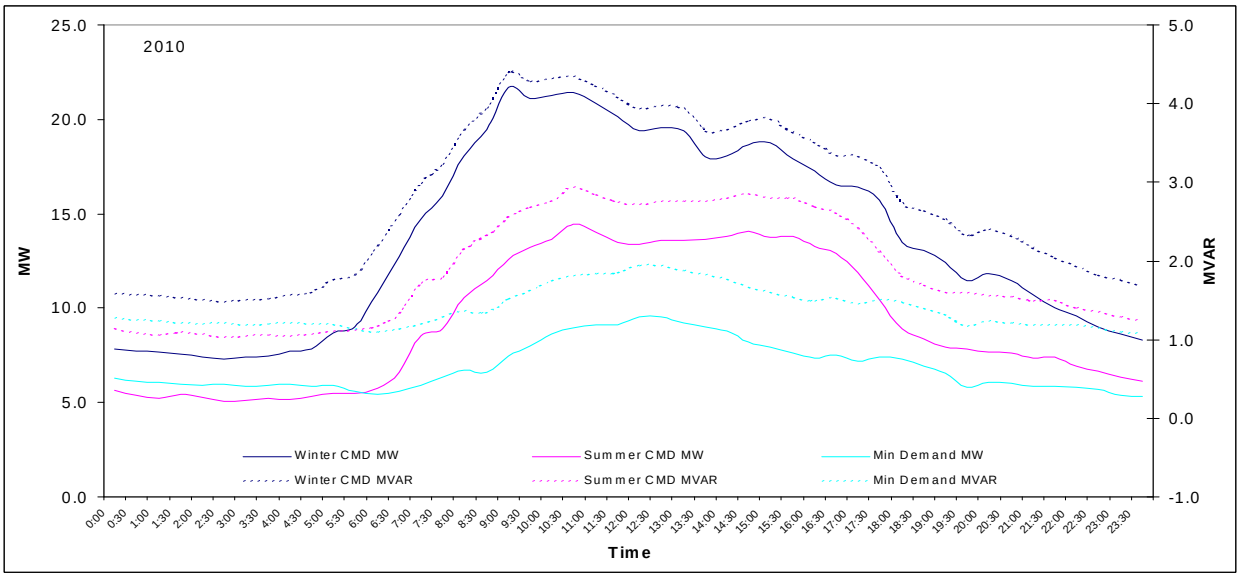
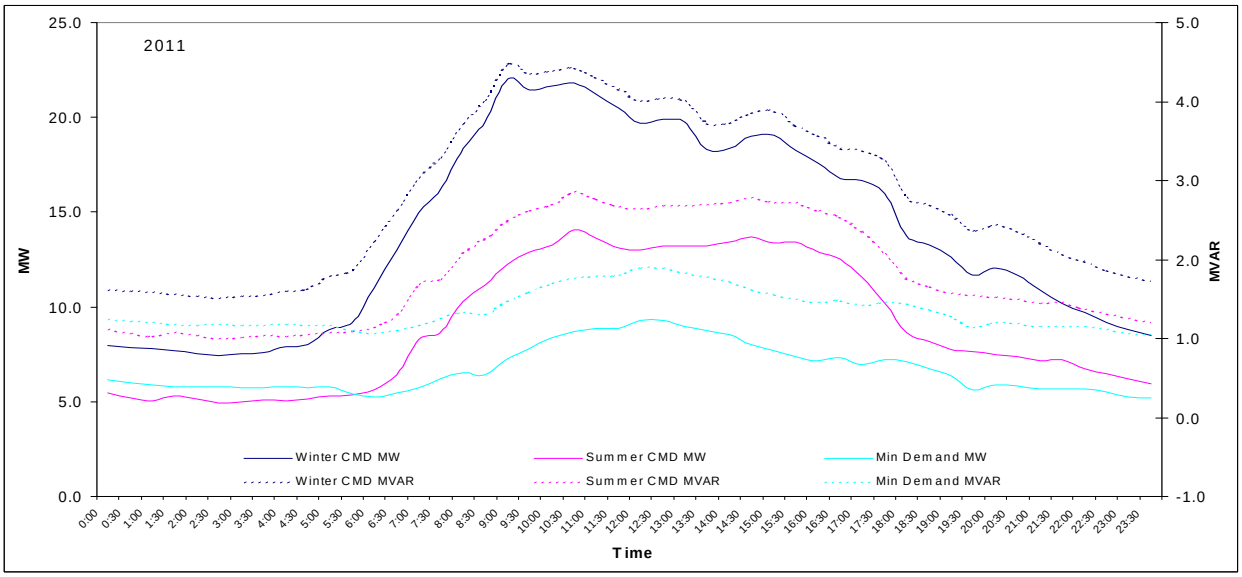
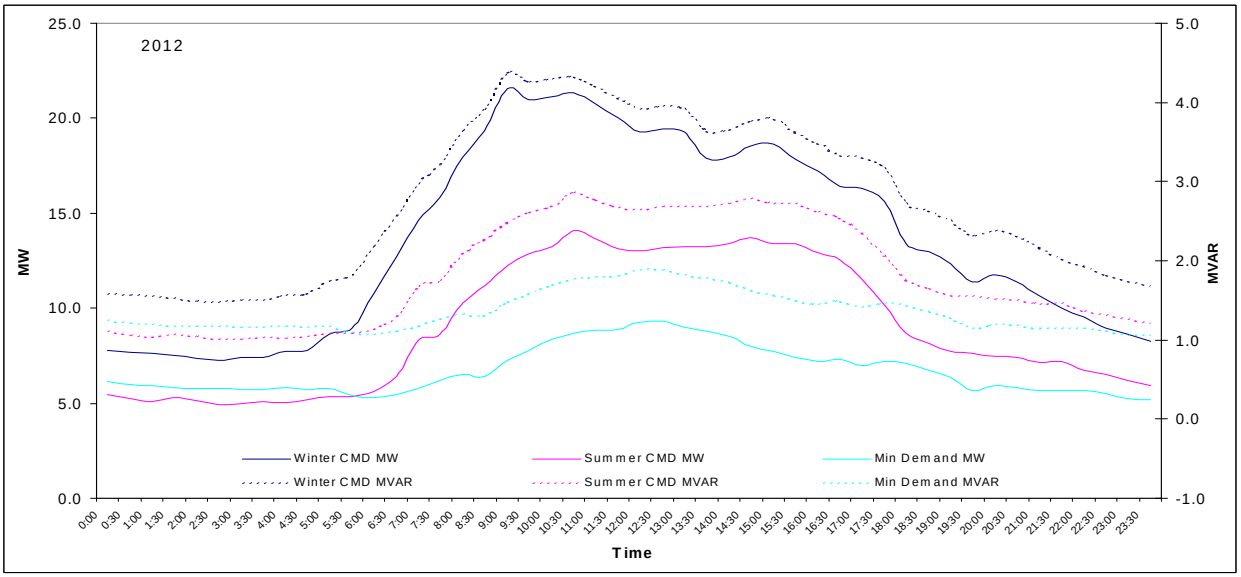
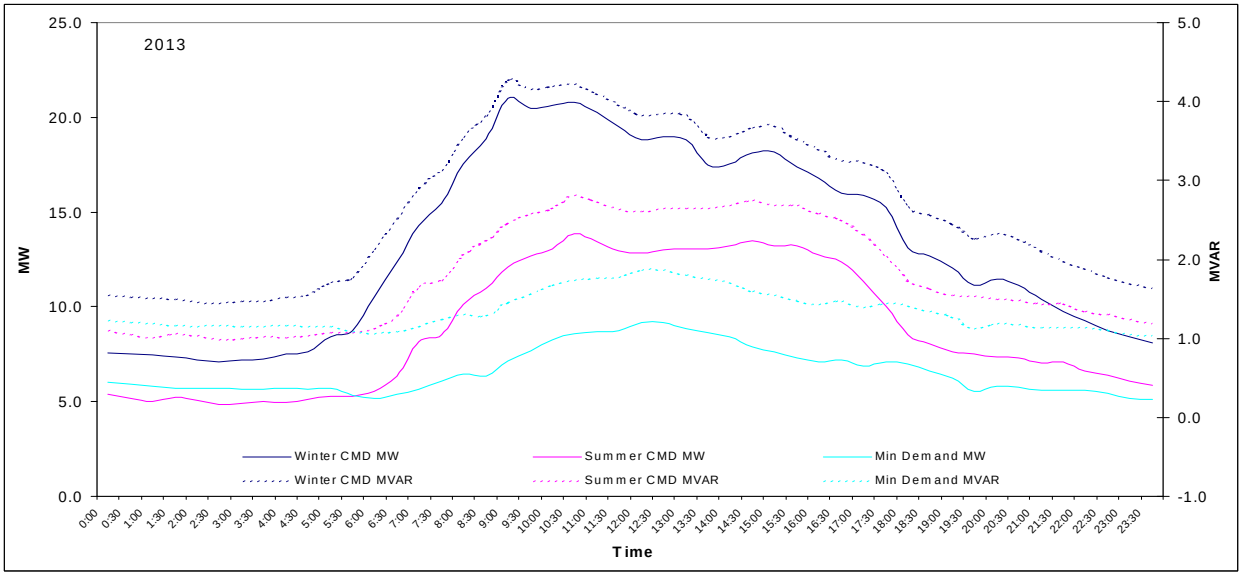

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

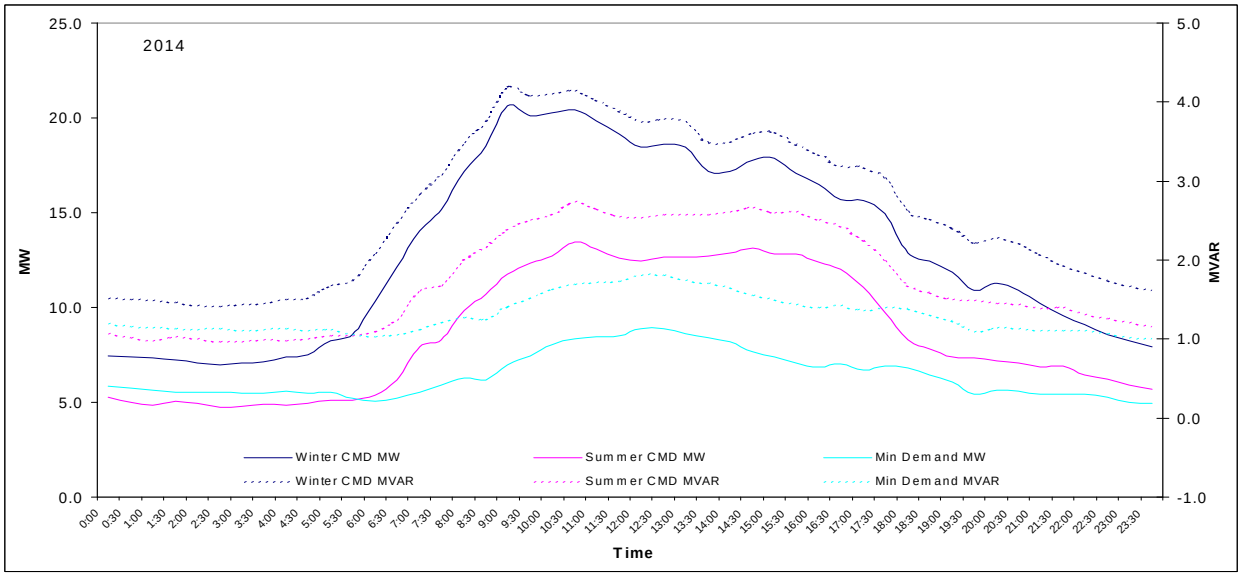
Figure 4-54 Load Profiles: Emu Bay Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

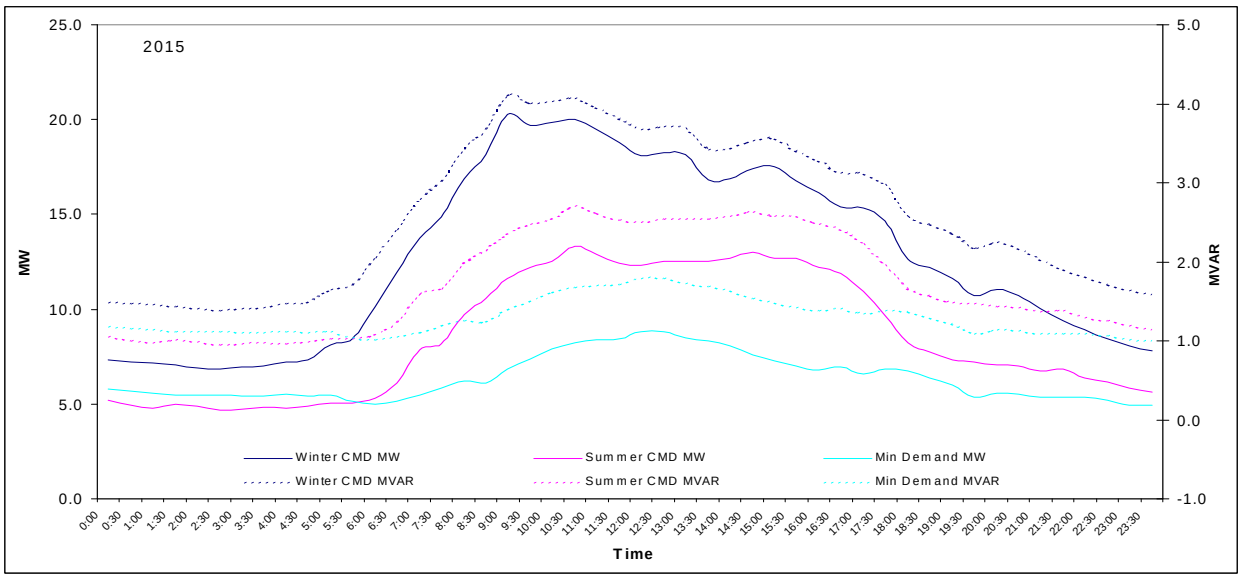
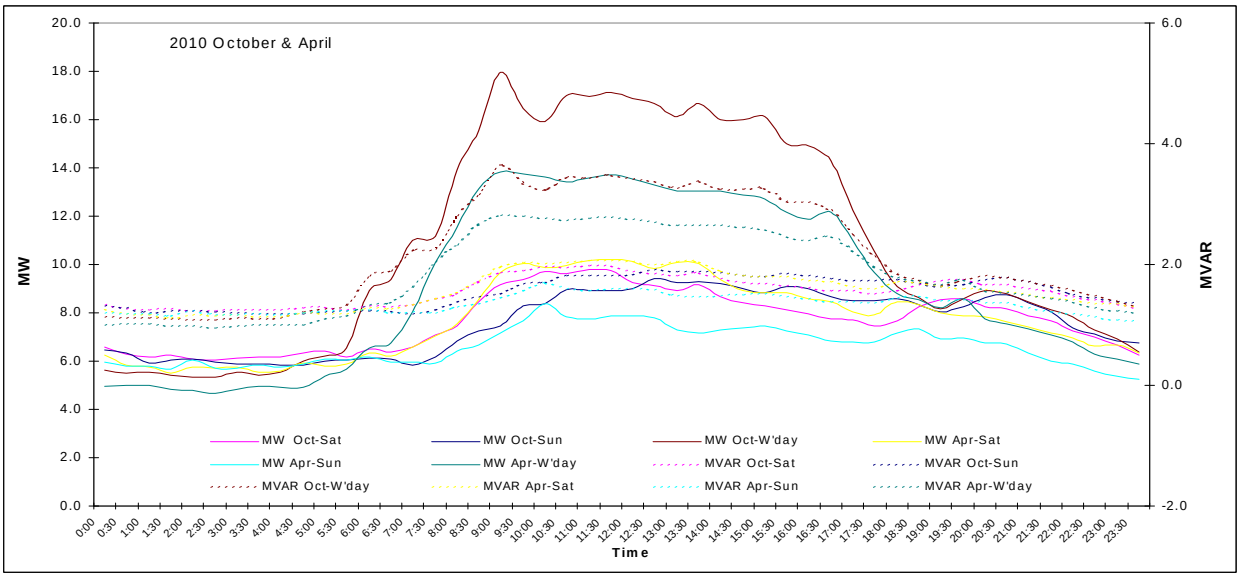
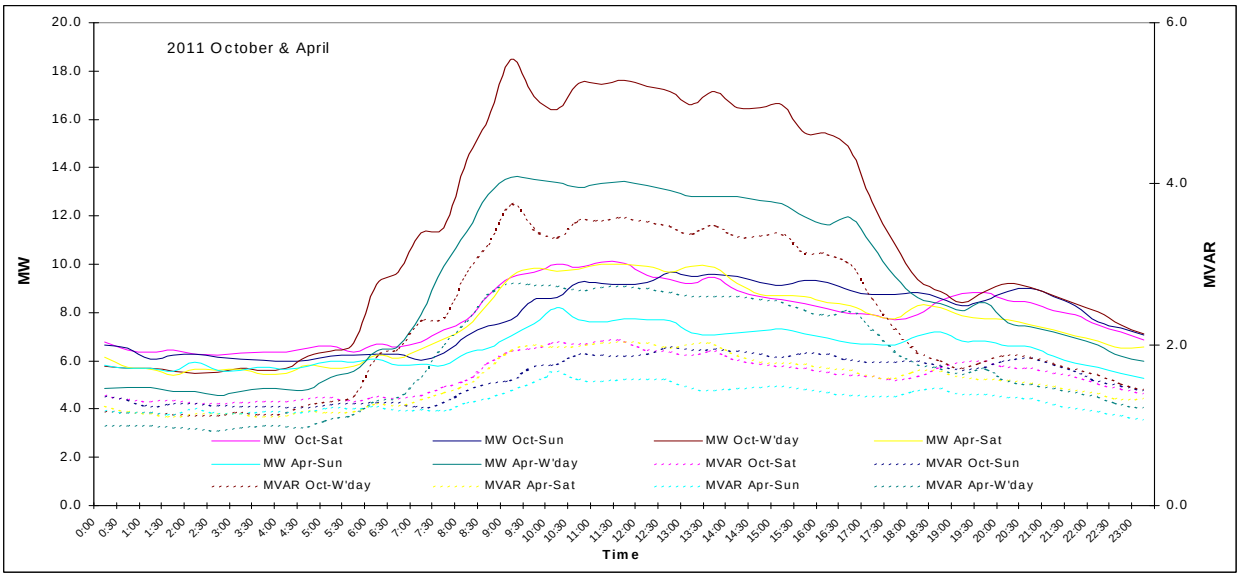
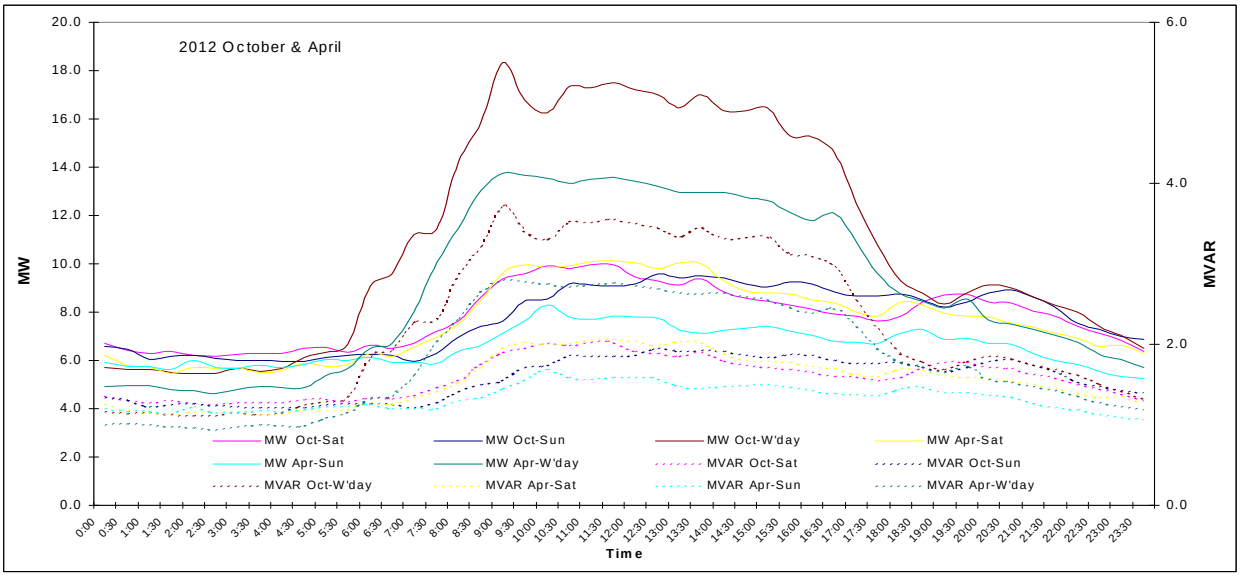
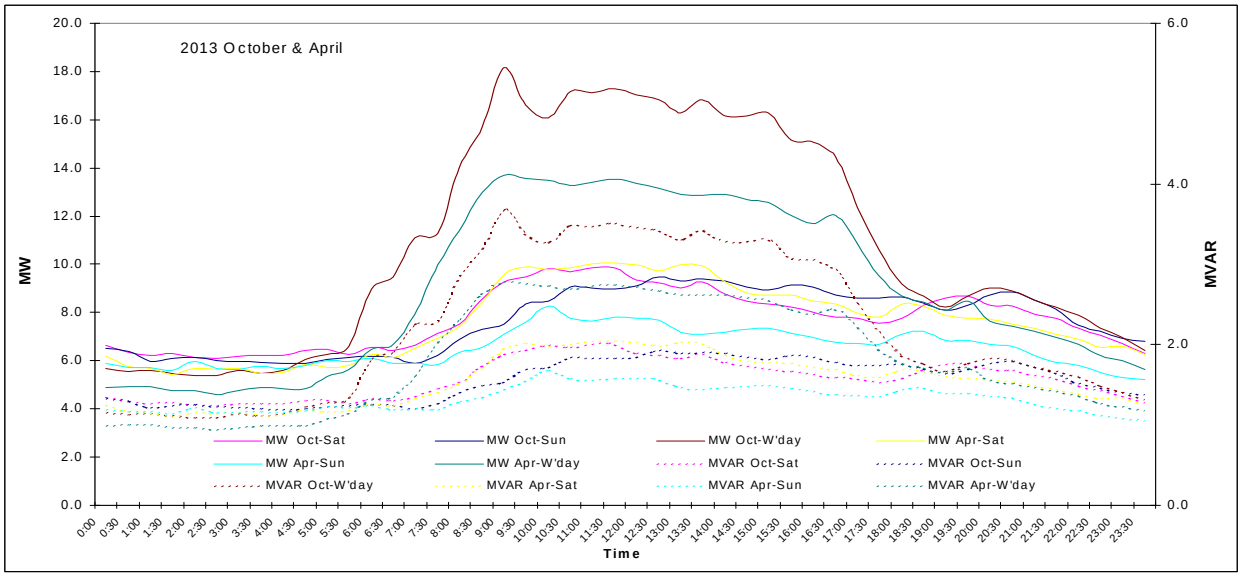

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

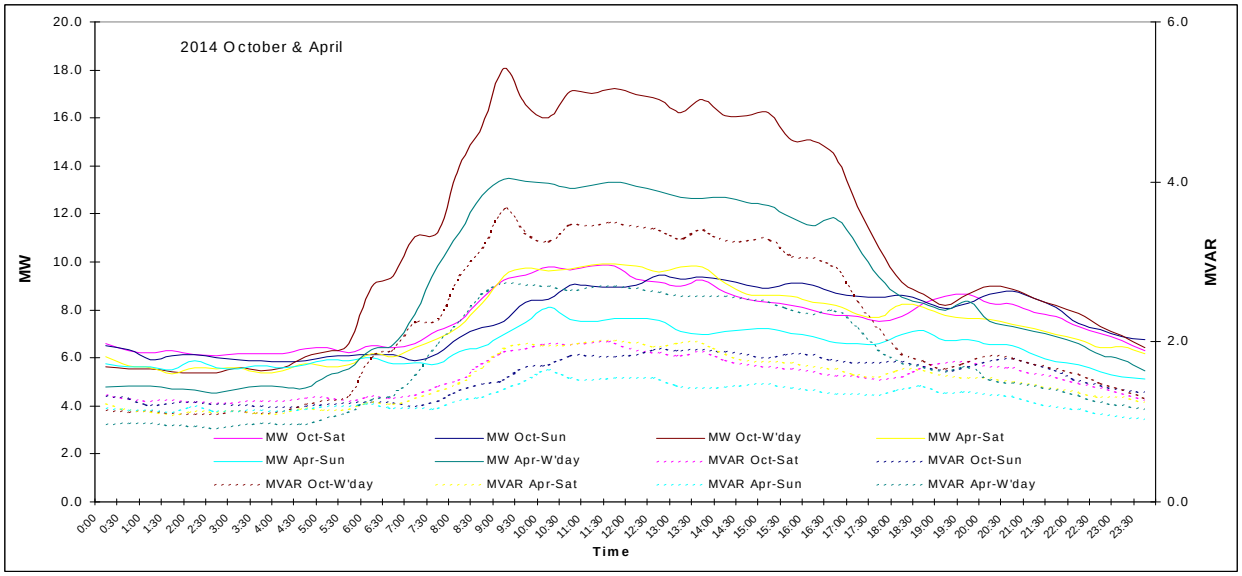
Figure 4-55 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

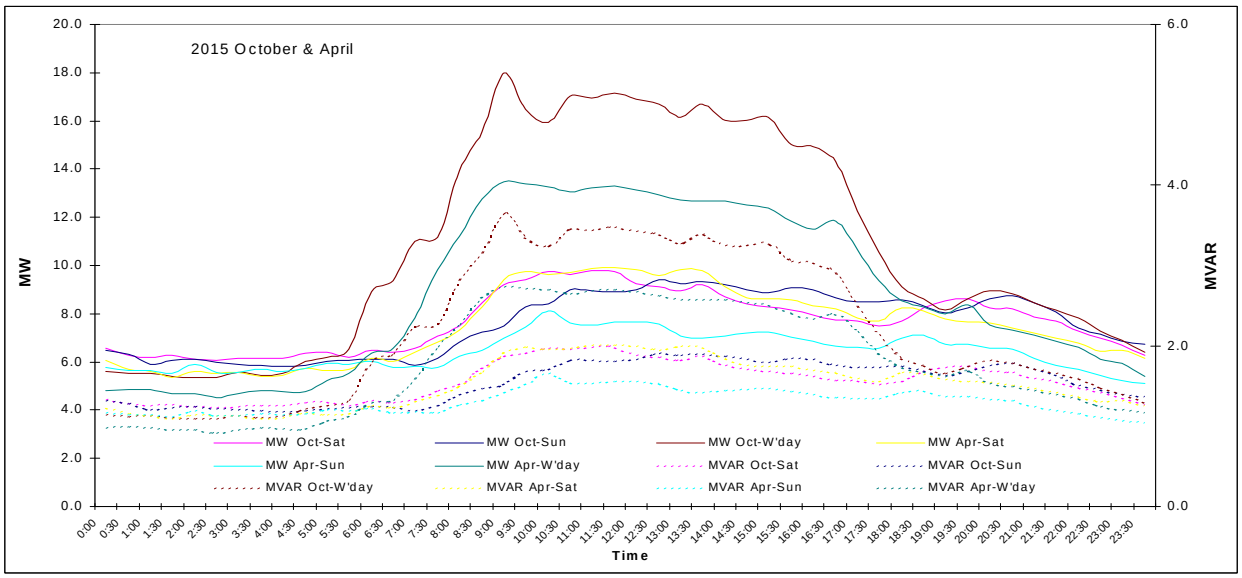
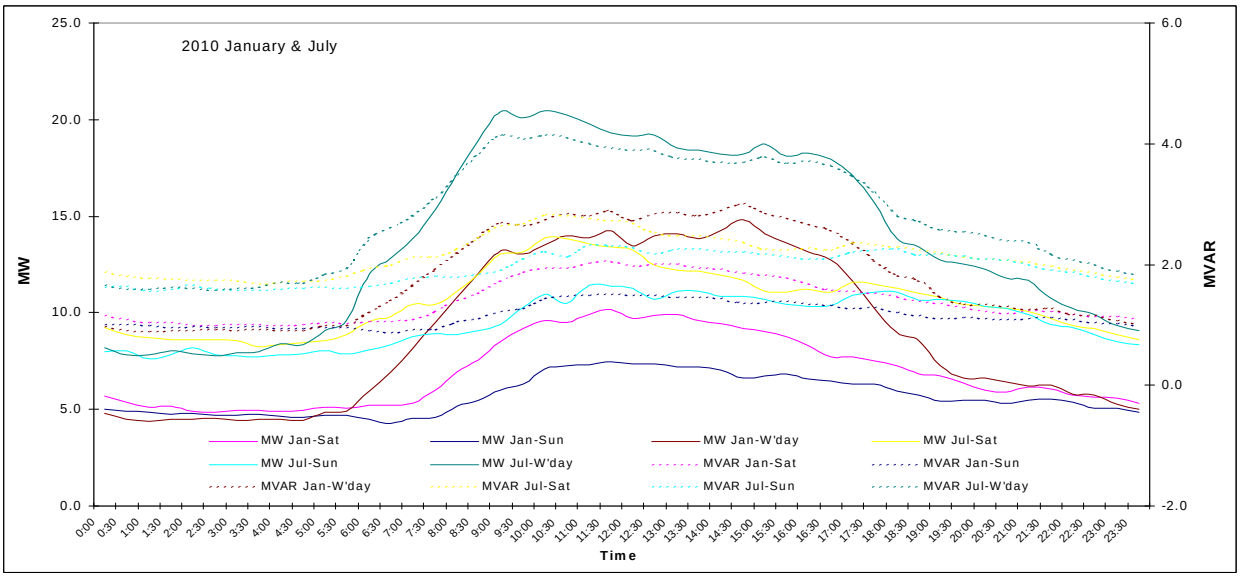
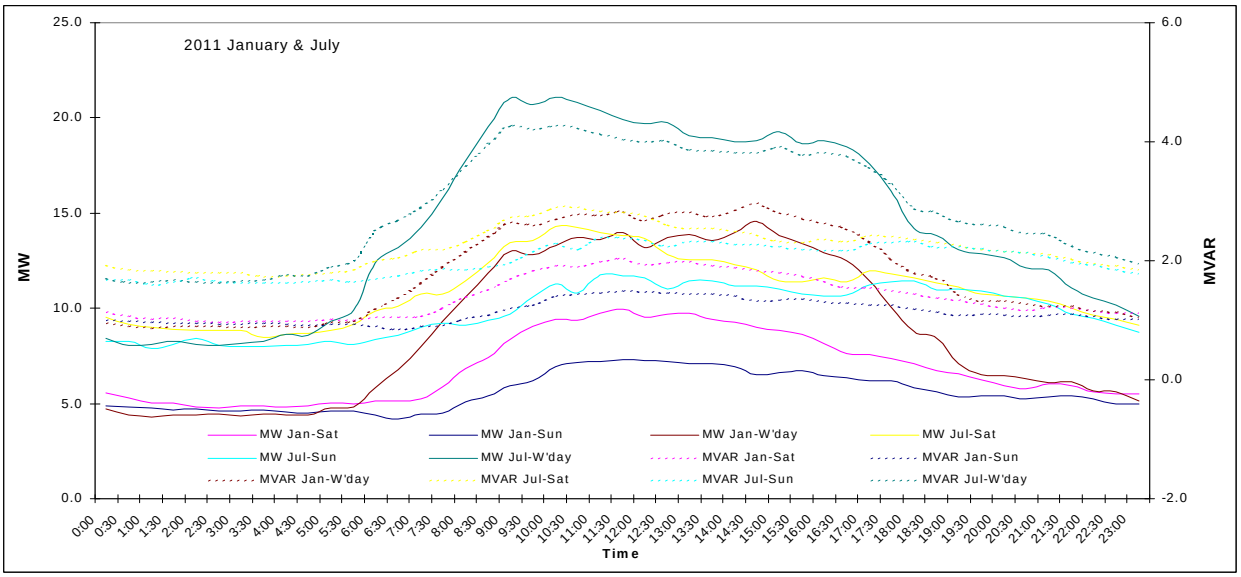
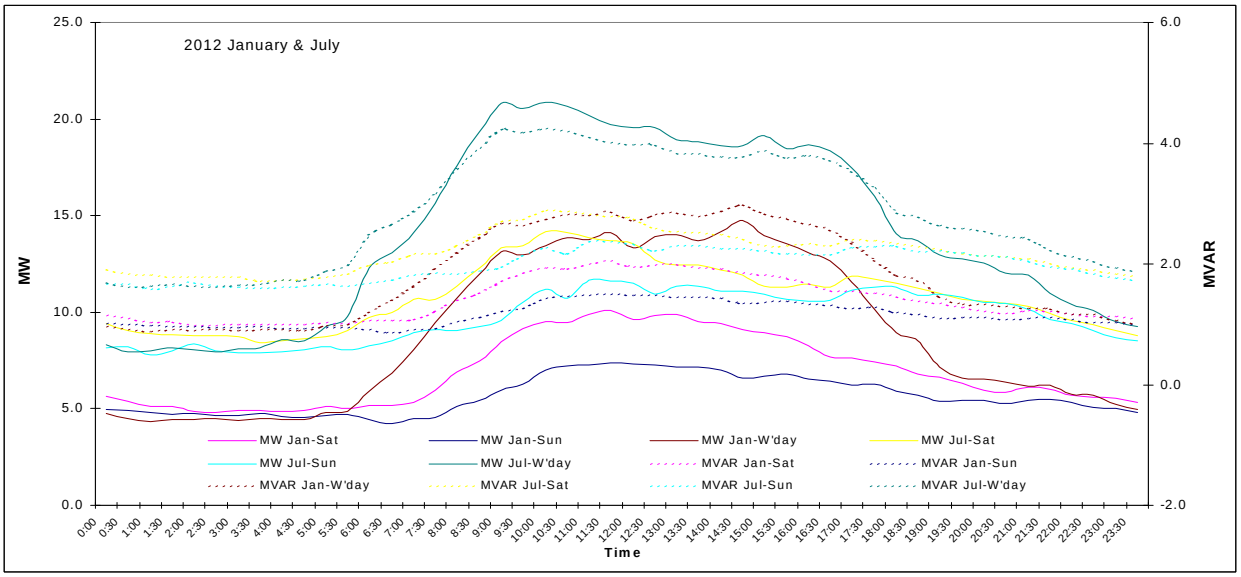
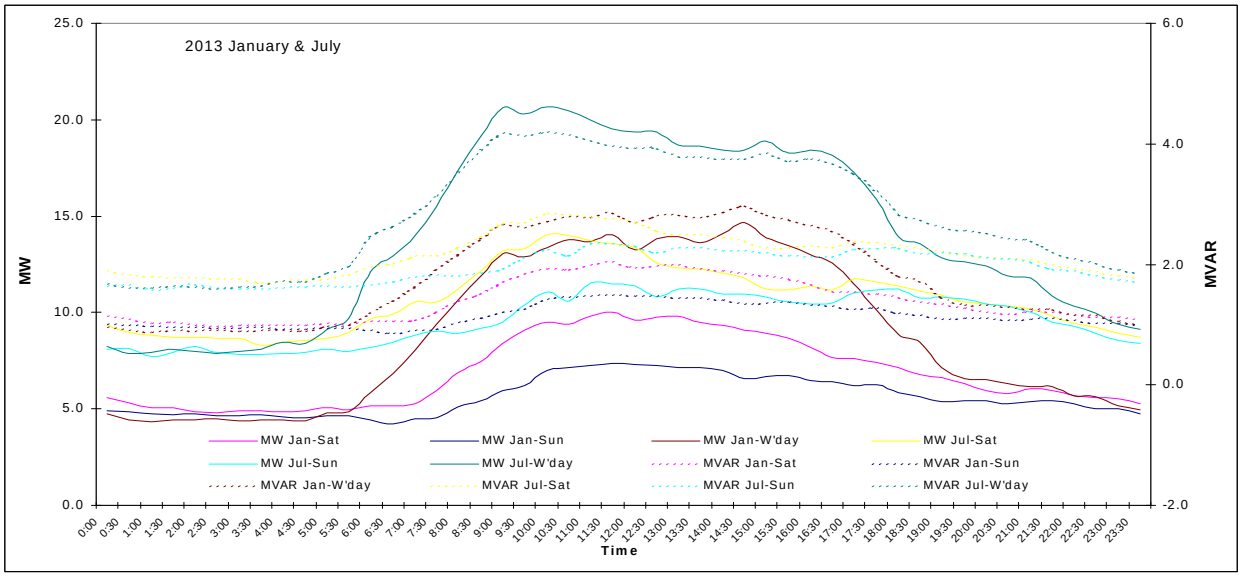

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

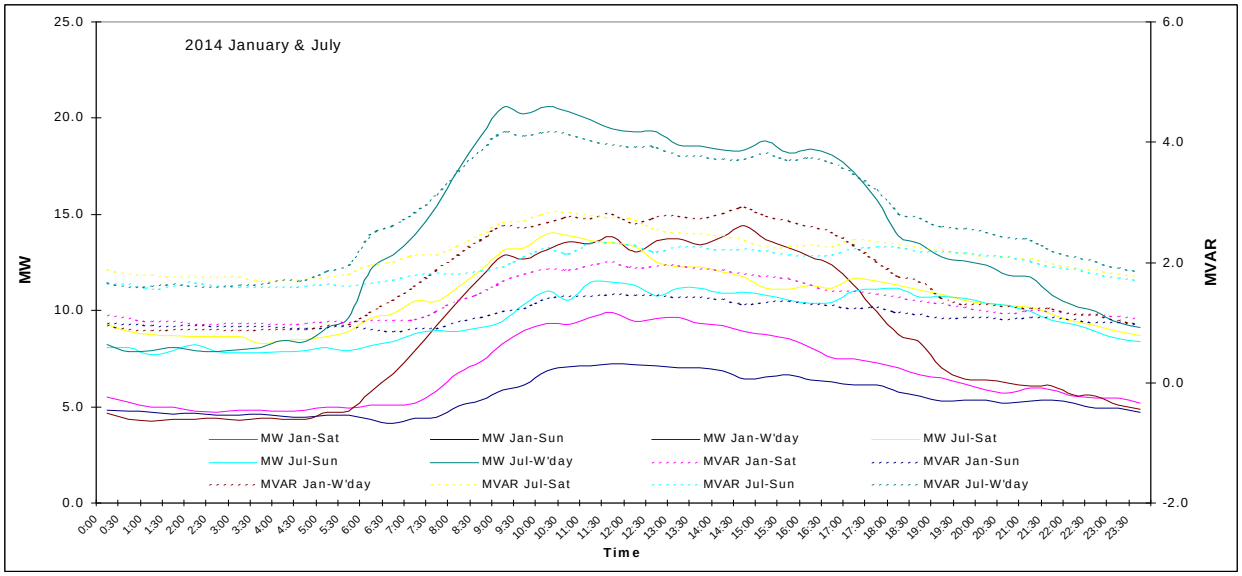
Figure 4-56 Load Profiles: Weekday, Saturday, Sunday for January & July

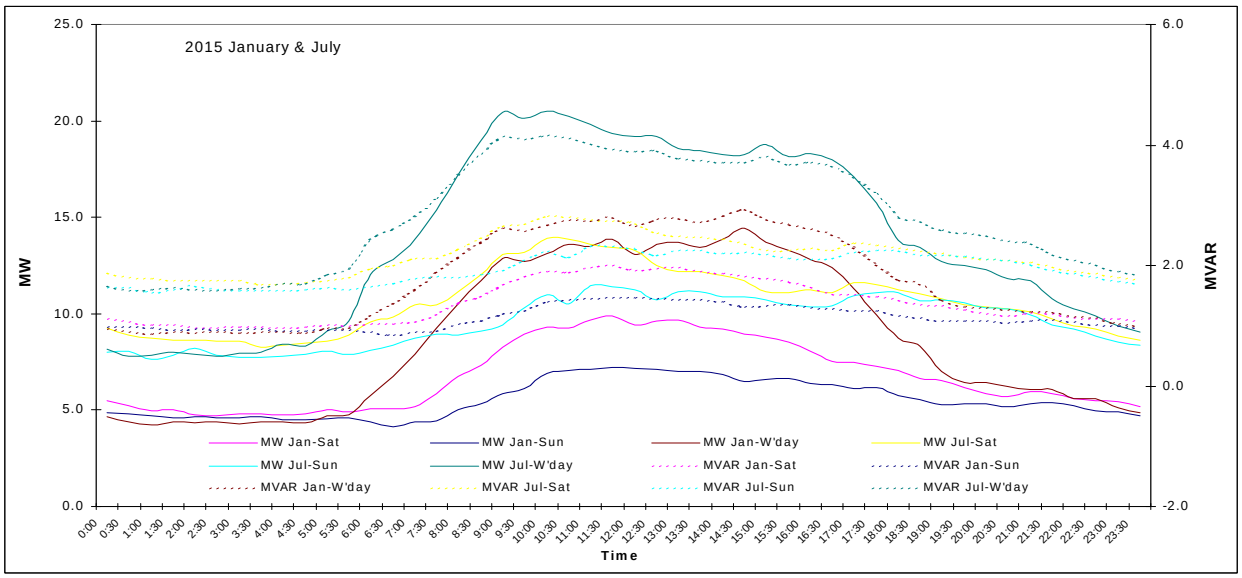







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.12 George Town

Description:

The Substation located at Bell Bay and is known as “George Town Substation”. The substation is owned by Transend.

Table 4-54 George Town Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	10	100	50

Embedded Generation:

A single undispatched embedded generator is connected to this substation. Connection is only for a twelve month period commencing in the 2010 calendar year. The operational profile for this unit is anticipated to be as per the following table. Due to the intermittent operation of this unit, the effect of the unit on the peak summer and winter demand has **not** been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	10.0				
Output – Summer (MW)	0				
Output – Winter (MW)	0				
Operating characteristics	Heat recovery unit associated with industrial process, 24 hour operation when in service. Unit limited to operation during maintenance periods.				

Point Load:

The George Town connection site has been subject to historical significant point load movements, primarily changes in load and operation of the Beaconsfield Gold mine.

Prior to the 2006 winter and 2007 summer periods, a 5.0MW point load reduction.

An additional 3.0MW point load on the 2007 winter period and an additional 2.0MW point load on the 2008 winter period.

An additional total point load of 5.0MW prior to the 2008 summer period.

These load movements have been factored into the load forecast for this site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-55 George Town Site Winter load forecast

George Town	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	31.07	31.92	26.63	27.35	31.07	31.92	27.03	27.77
2006	26.51	27.52	26.04	27.04	26.51	27.52	26.60	27.62
2007	28.33	28.58	26.48	26.71	28.33	28.58	27.09	27.32
2008	29.01	29.32	27.73	28.02	29.01	29.32	28.35	28.65
2009	27.07	27.34	25.91	26.17	27.07	27.34	26.60	26.86
2010	28.07	28.38	27.50	27.81	28.07	28.38	28.11	28.42
2011	29.03	29.35	28.43	28.75	29.48	29.80	28.87	29.19
2012	28.87	29.19	28.28	28.59	29.32	29.64	28.72	29.04
2013	28.65	28.97	28.07	28.38	29.12	29.45	28.53	28.84
2014	28.63	28.95	28.05	28.36	29.09	29.41	28.50	28.81
2015	28.60	28.91	28.01	28.32	29.08	29.40	28.49	28.80
2016	28.64	28.96	28.06	28.37	29.12	29.44	28.53	28.84
2017	28.69	29.00	28.10	28.41	29.18	29.51	28.59	28.90
2018	28.84	29.16	28.26	28.57	29.33	29.66	28.73	29.05
2019	29.08	29.40	28.48	28.80	29.60	29.93	29.00	29.32
2020	29.38	29.71	28.78	29.10	29.90	30.23	29.29	29.62

Table 4-56 George Town Site Summer load forecast

George Town	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	28.44	29.13	28.44	29.13	28.44	29.13	28.62	29.31
2006	23.13	23.78	17.66	18.15	23.13	23.78	17.66	18.15
2007	16.27	16.48	15.21	15.41	16.27	16.48	15.21	15.41
2008	22.38	23.42	20.61	21.57	22.38	23.42	20.86	21.82
2009	22.03	22.43	19.02	19.37	22.03	22.43	19.22	19.57
2010	19.74	20.26	18.12	18.60	19.74	20.26	18.26	18.75
2011	19.36	19.87	17.76	18.24	19.85	20.38	18.22	18.70
2012	19.56	20.08	17.95	18.43	20.07	20.60	18.42	18.91
2013	19.42	19.93	17.82	18.29	19.94	20.46	18.30	18.78
2014	19.08	19.59	17.51	17.98	19.57	20.08	17.96	18.43
2015	19.06	19.57	17.49	17.96	19.55	20.07	17.94	18.42
2016	18.69	19.18	17.15	17.60	19.19	19.70	17.61	18.08
2017	19.02	19.53	17.46	17.92	19.51	20.03	17.91	18.38
2018	19.07	19.58	17.50	17.97	19.57	20.09	17.96	18.44
2019	19.14	19.65	17.56	18.03	19.63	20.15	18.02	18.50
2020	19.24	19.75	17.66	18.12	19.73	20.25	18.11	18.59

Figure 4-57 George Town Site Summer Load Forecast at 50% and 10% POE

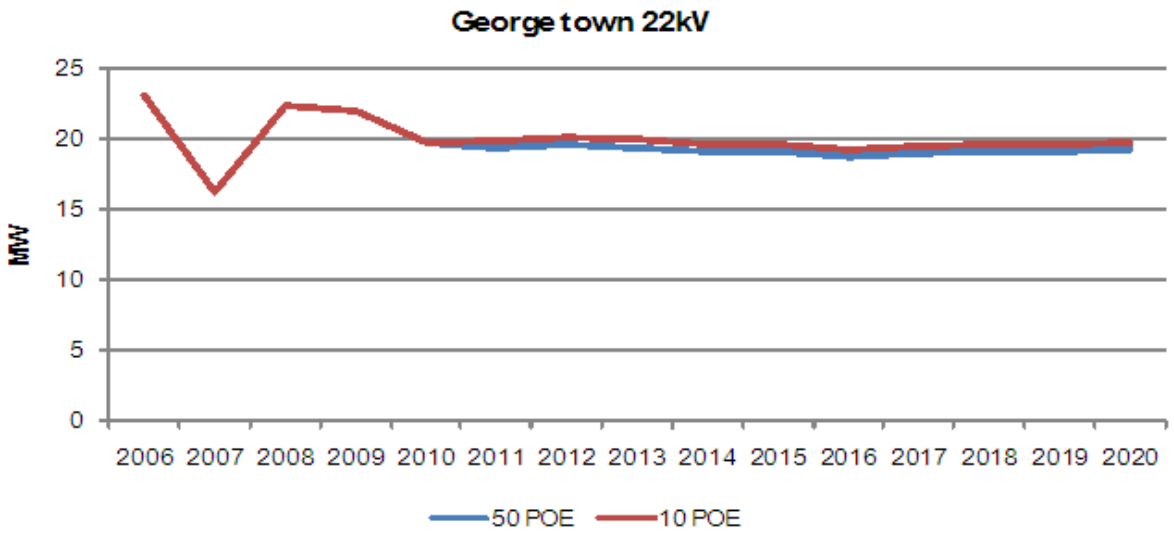
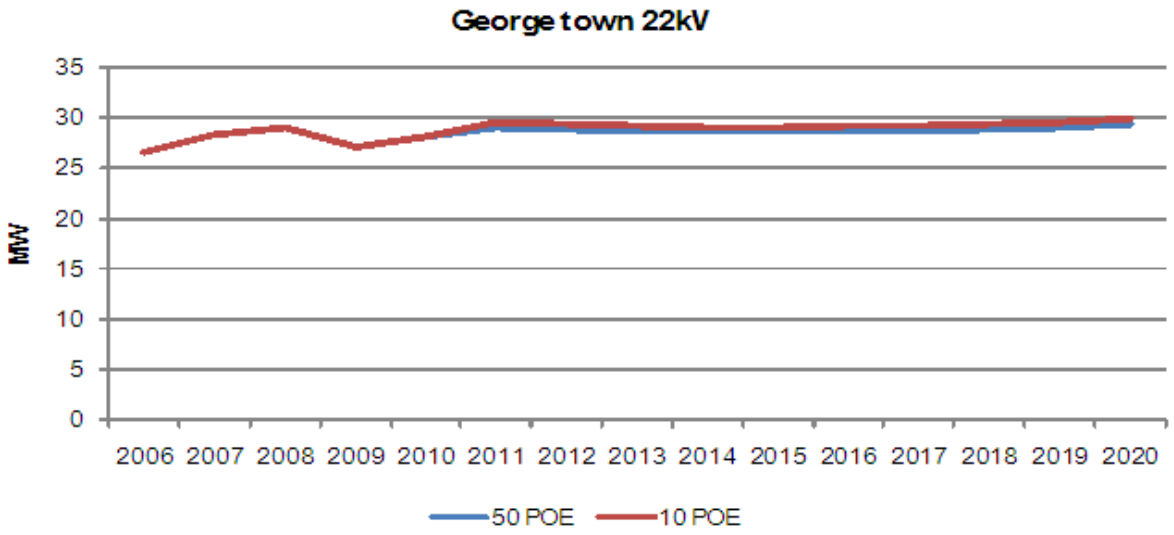
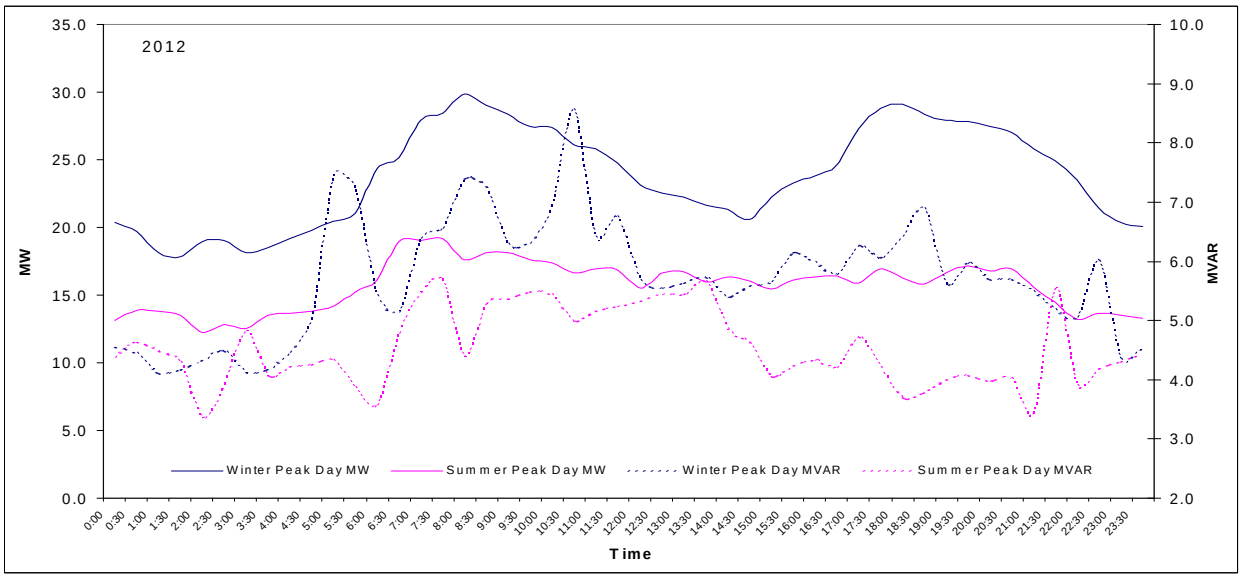


Figure 4-58 George Town Site Winter Load Forecast at 50% and 10% POE

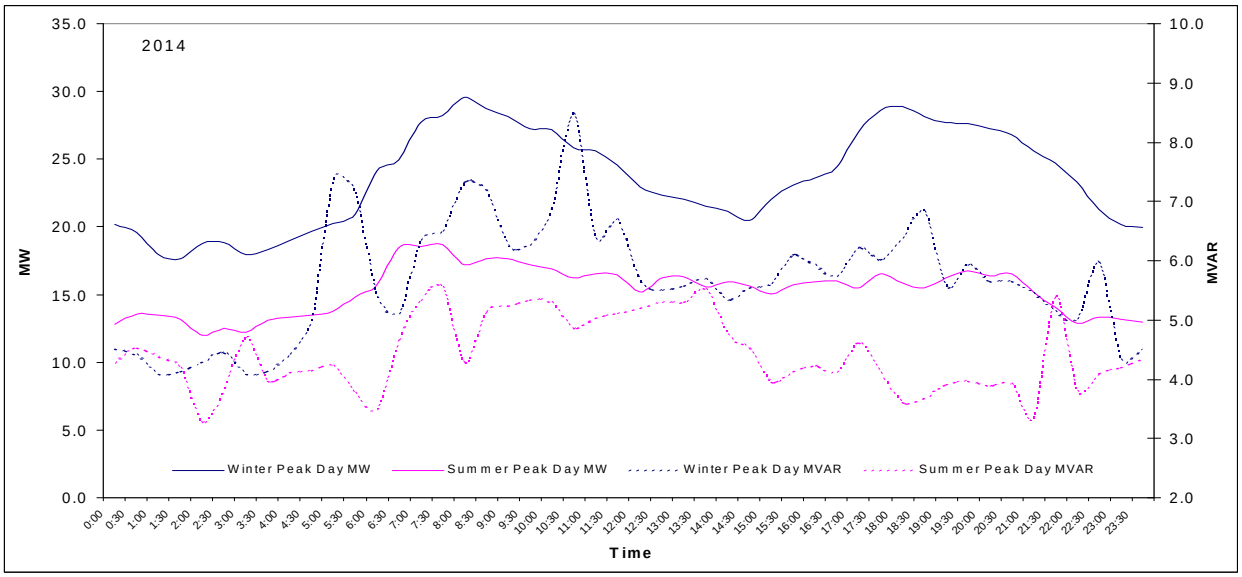


Load Profiles:

Figure 4-59 Load Profiles: George Town Substation Day of Summer/Winter Peak Demand




2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

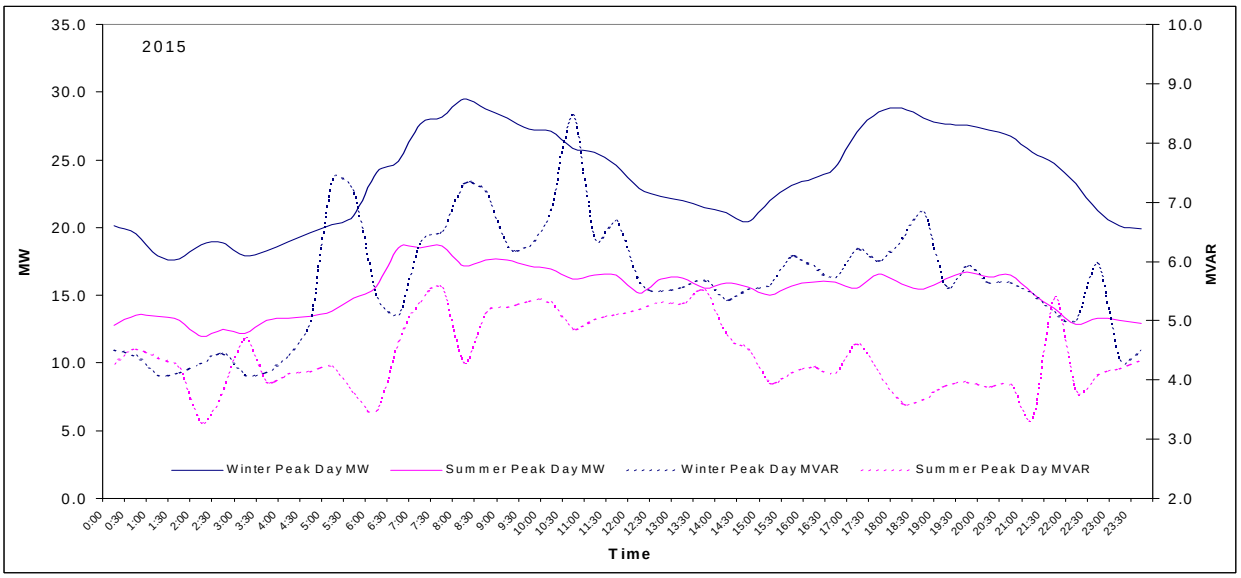
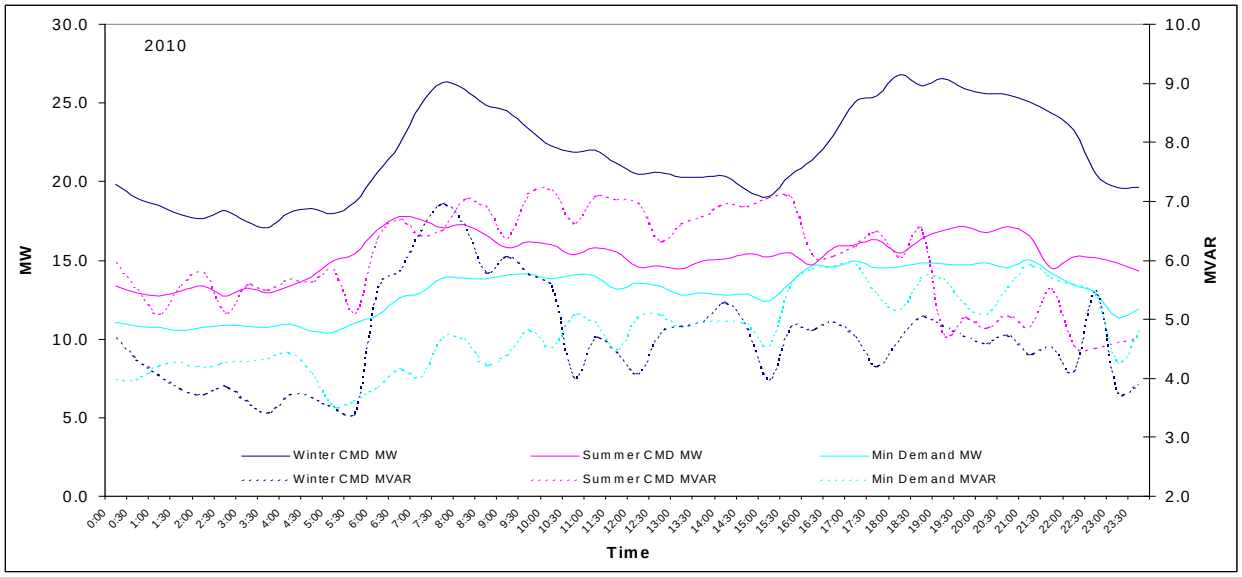
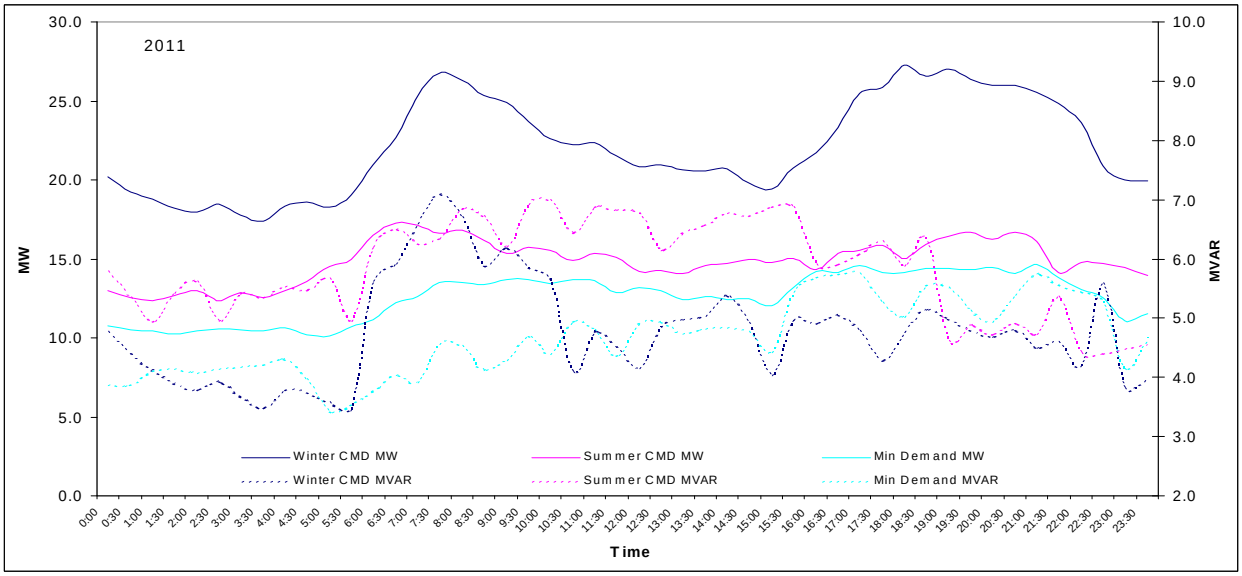
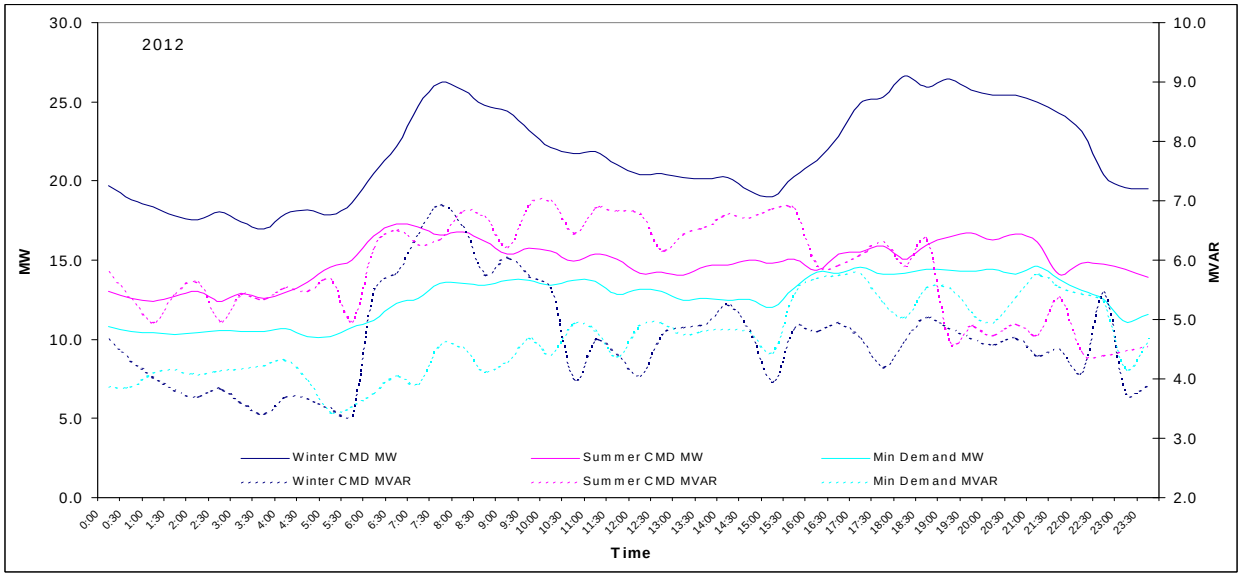
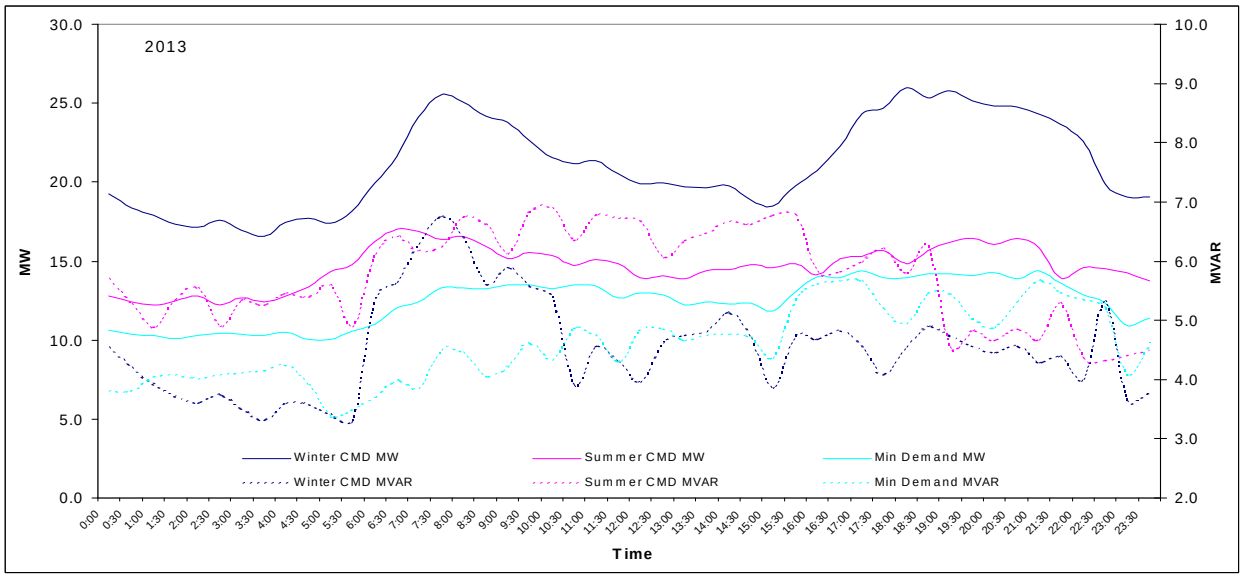

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

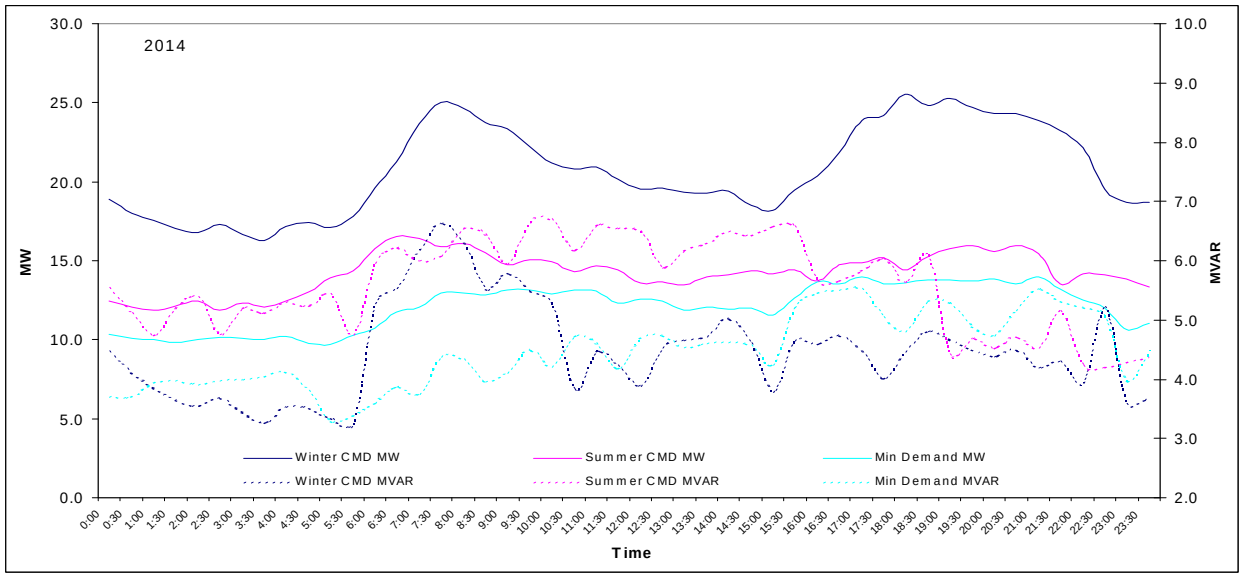
Figure 4-60 Load Profiles: George Town Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

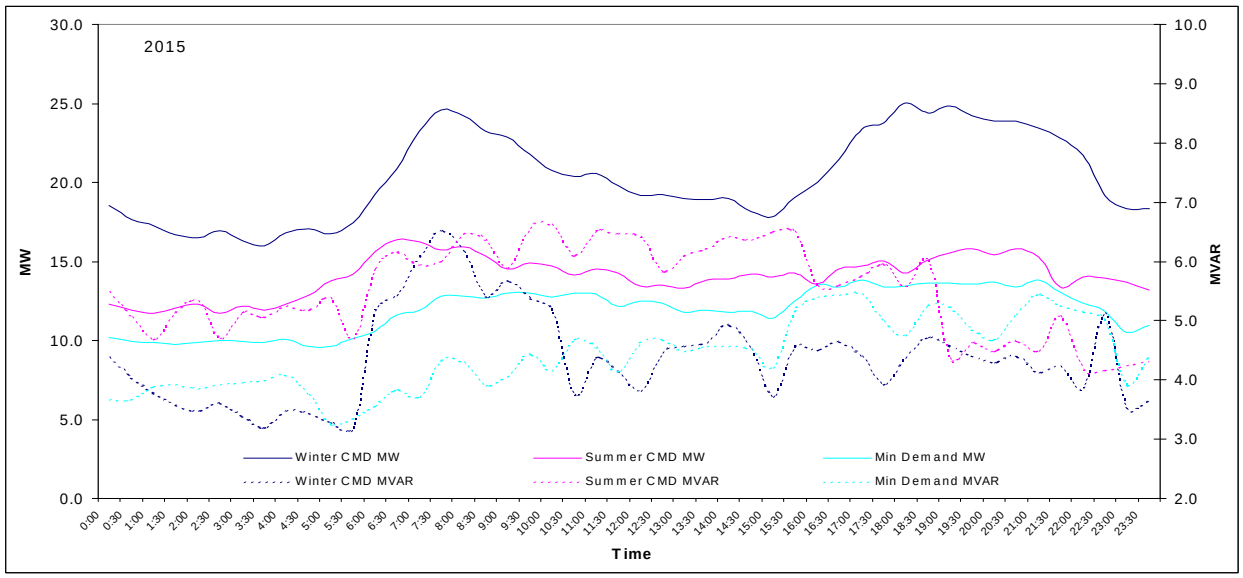
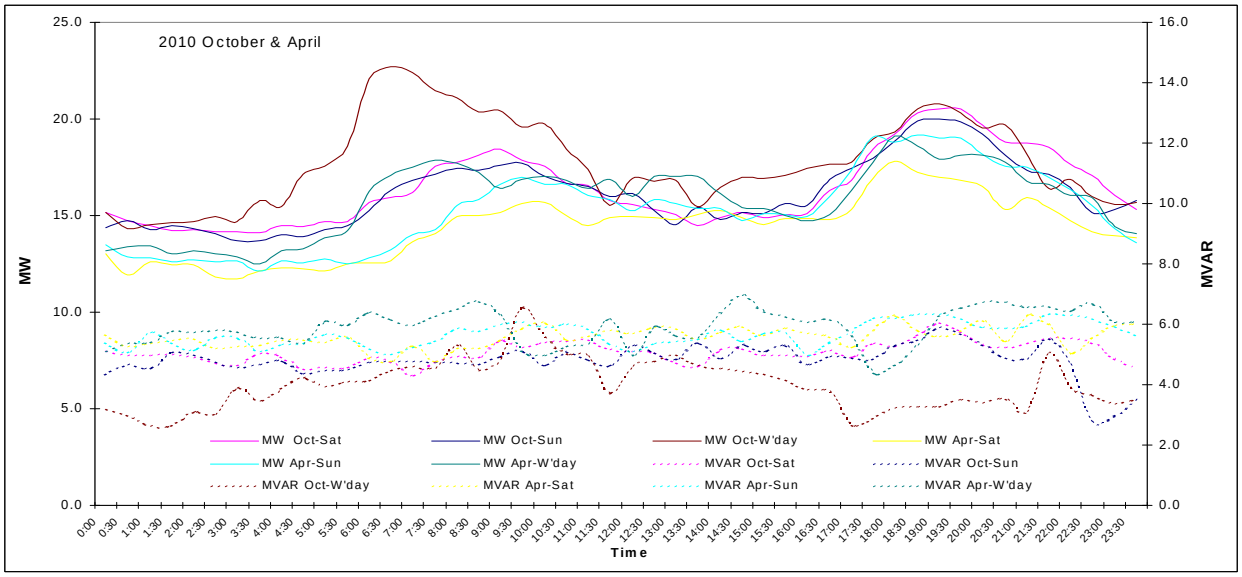
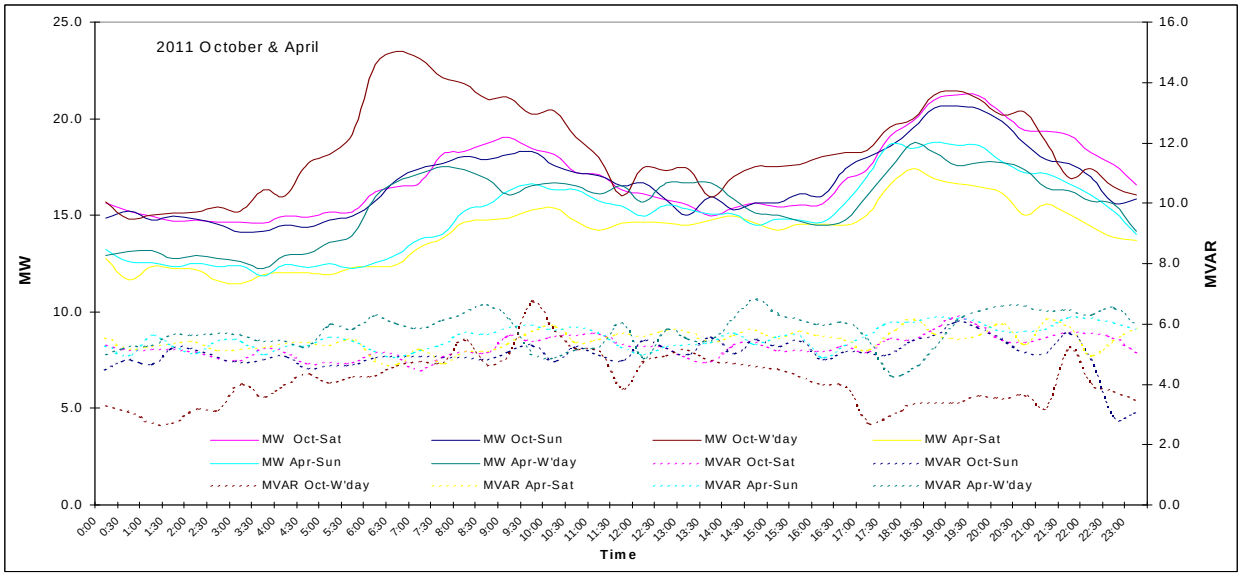
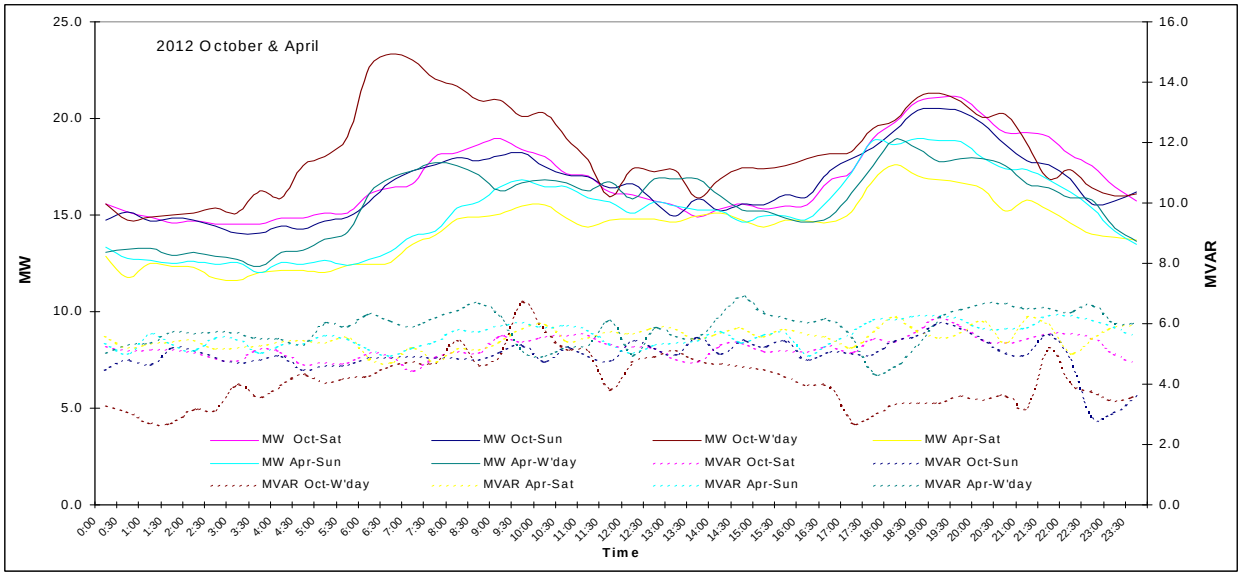
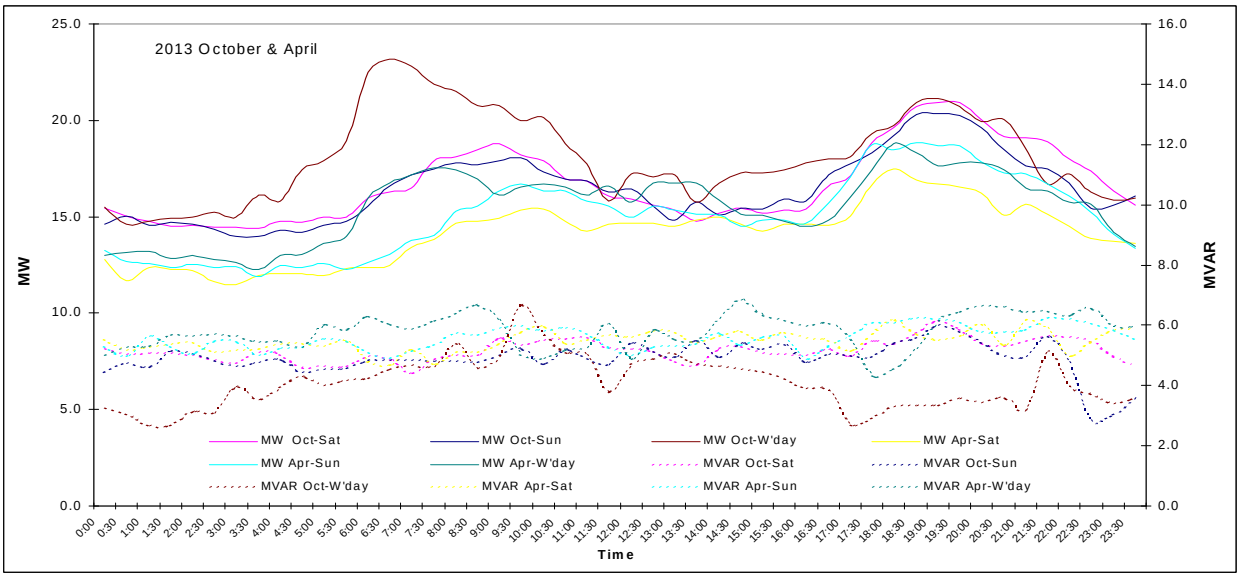

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

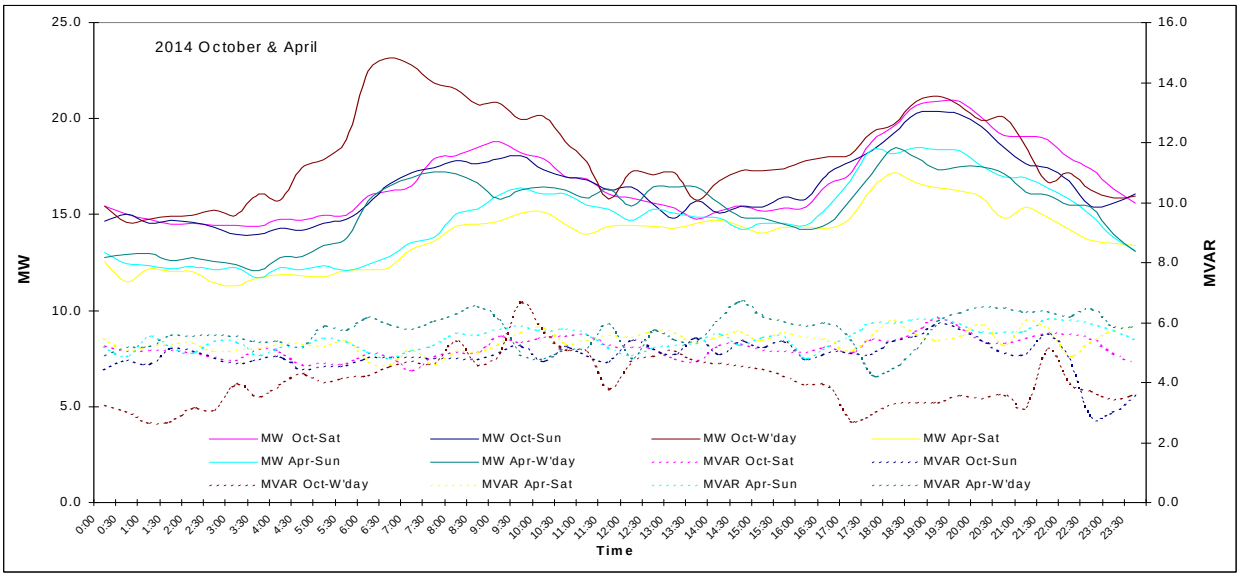
Figure 4-61 Load Profiles: Weekday, Saturday, Sunday for October & April











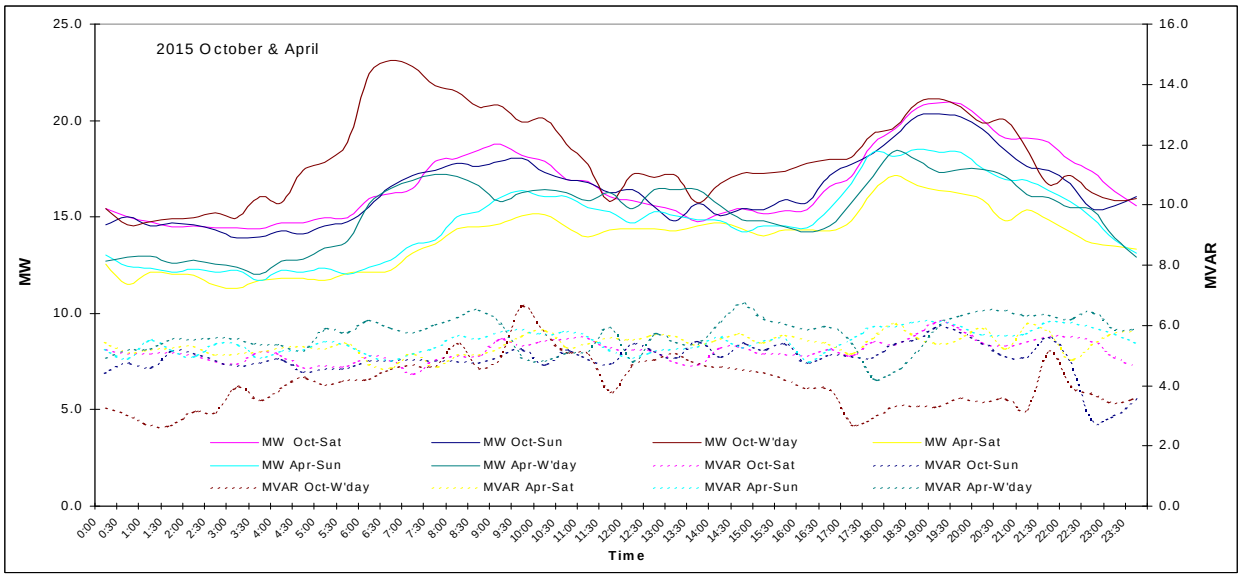
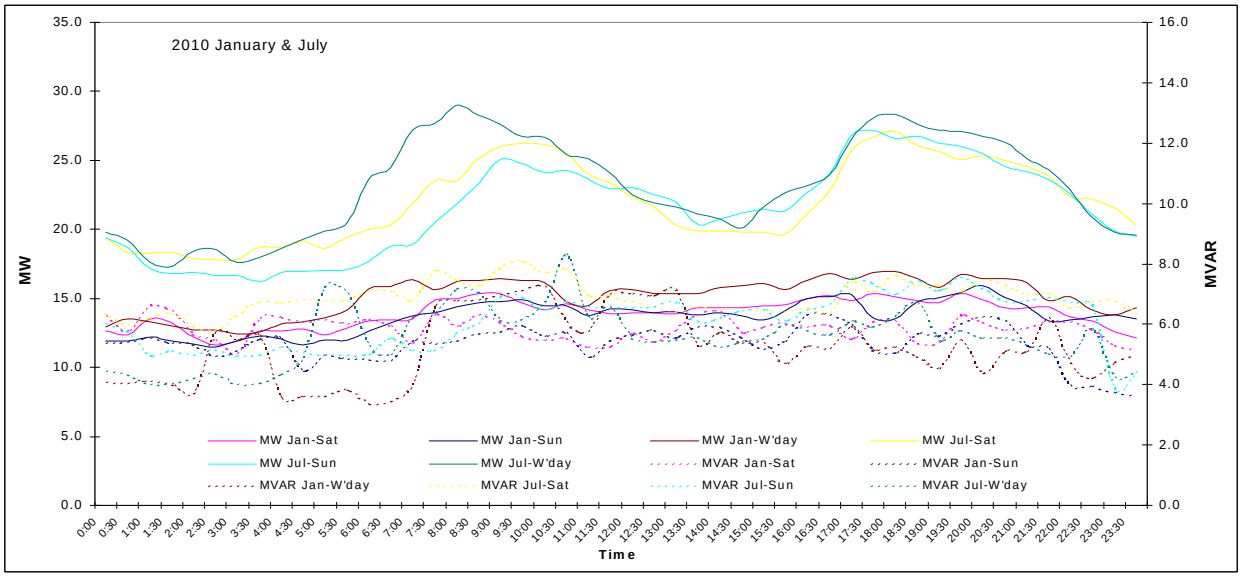
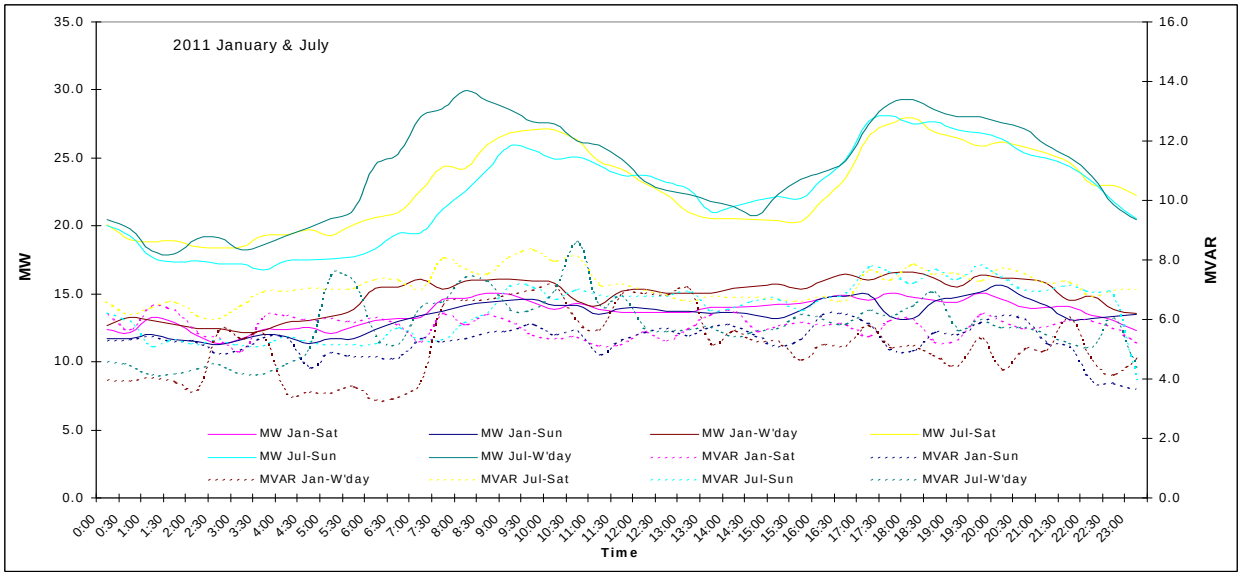
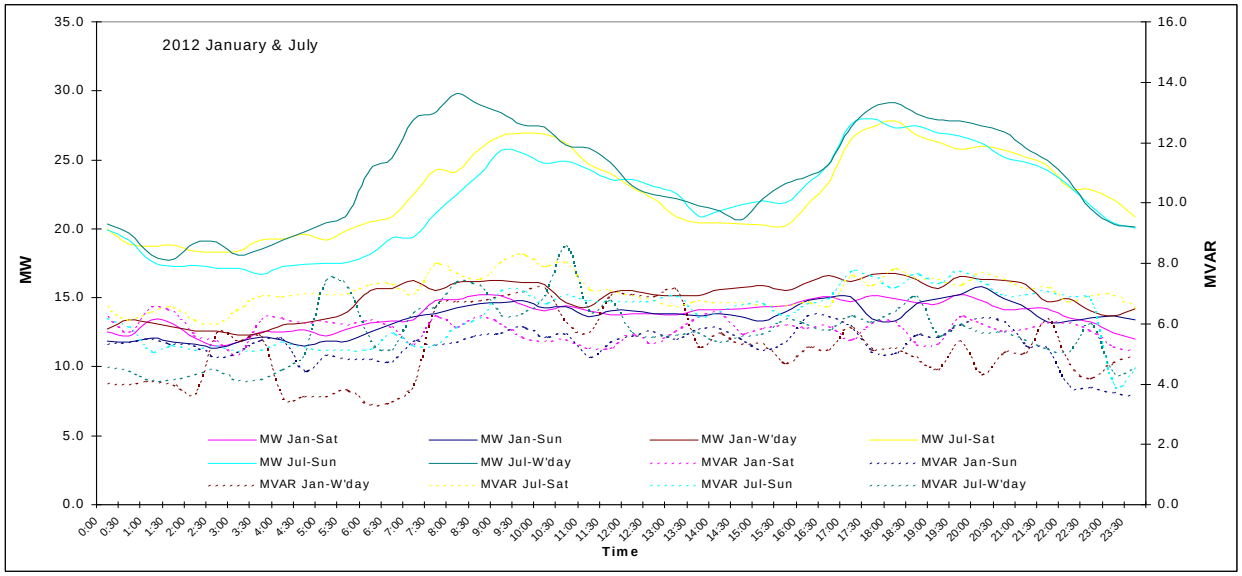
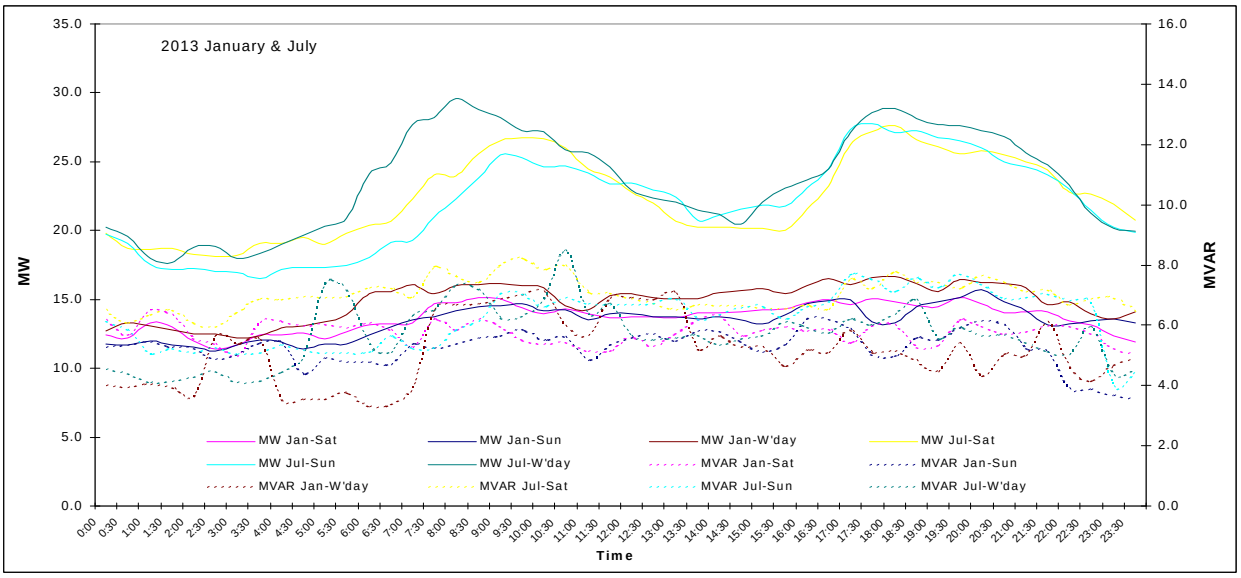


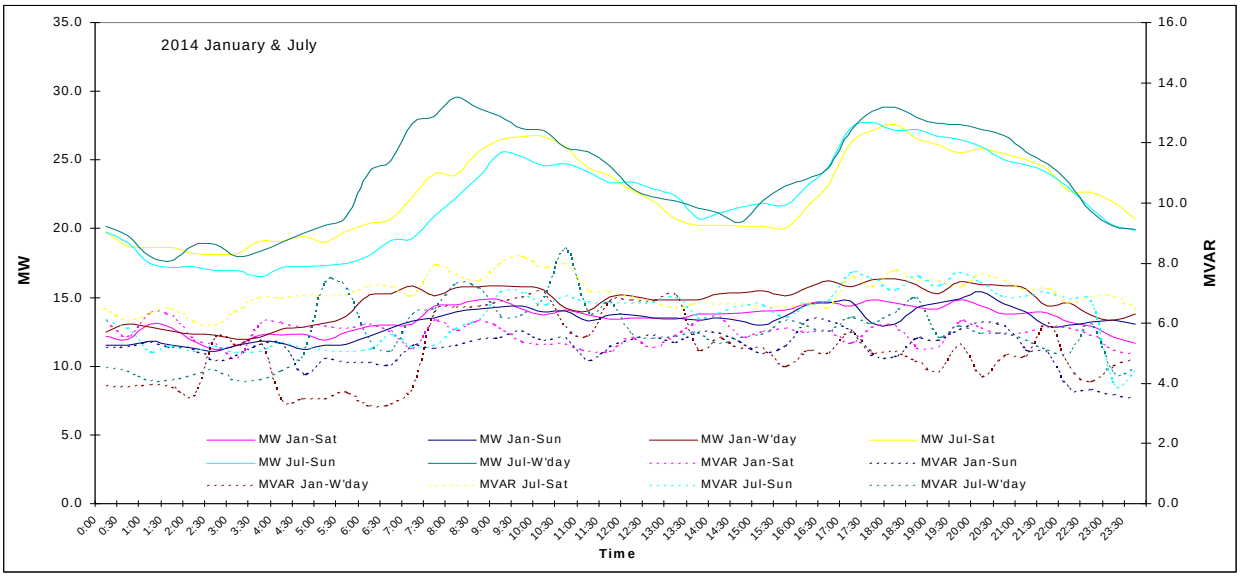
Figure 4-62 Load Profiles: Weekday, Saturday, Sunday for January & July

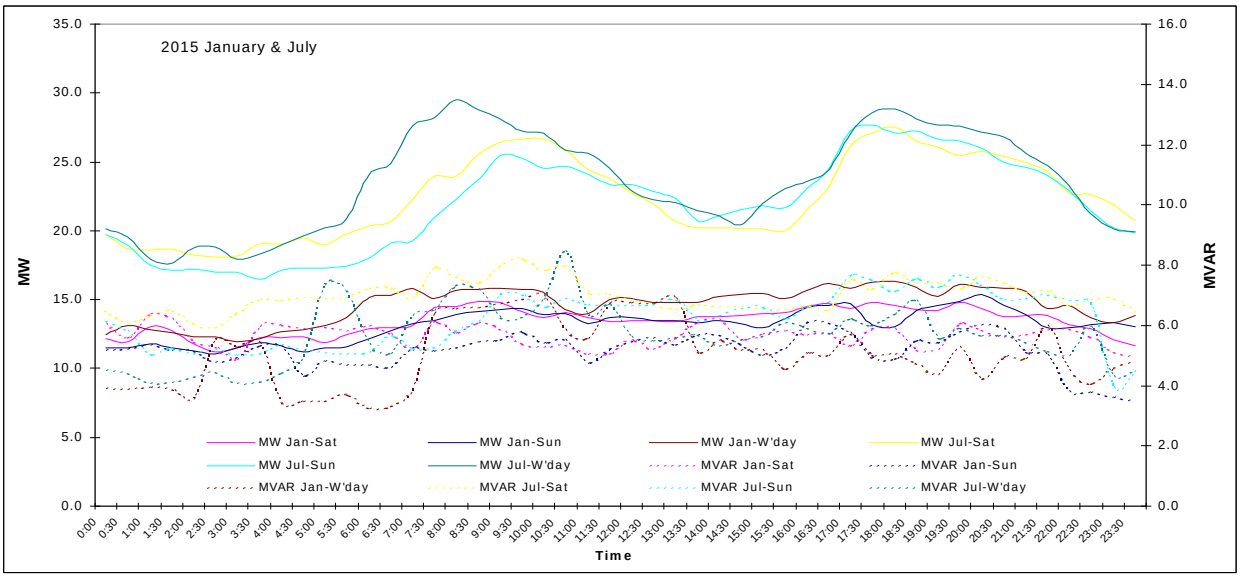







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.13 Gordon

Description:

The Substation located at Strathgordon and is known as “Gordon Substation”. The substation is owned by Hydro Tasmania.

Table 4-57 Gordon Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	1	10	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-58 Gordon Site Winter load forecast

Gordon	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.40	0.41	0.35	0.36	0.40	0.41	0.35	0.36
2006	0.47	0.48	0.39	0.39	0.47	0.48	0.39	0.40
2007	0.41	0.42	0.32	0.33	0.41	0.42	0.32	0.33
2008	0.35	0.36	0.32	0.33	0.35	0.36	0.33	0.34
2009	0.46	0.47	0.28	0.29	0.46	0.47	0.29	0.29
2010	0.31	0.31	0.20	0.20	0.31	0.31	0.20	0.20
2011	0.32	0.32	0.20	0.21	0.32	0.32	0.20	0.21
2012	0.32	0.32	0.20	0.21	0.32	0.32	0.20	0.21
2013	0.31	0.32	0.20	0.20	0.31	0.32	0.20	0.20
2014	0.31	0.32	0.20	0.20	0.31	0.32	0.20	0.20
2015	0.31	0.32	0.20	0.20	0.31	0.32	0.20	0.20
2016	0.31	0.32	0.20	0.20	0.31	0.32	0.20	0.20
2017	0.31	0.32	0.20	0.20	0.31	0.32	0.20	0.20
2018	0.32	0.32	0.20	0.21	0.32	0.32	0.20	0.21
2019	0.32	0.32	0.20	0.21	0.32	0.32	0.20	0.21
2020	0.32	0.33	0.20	0.21	0.32	0.33	0.21	0.21

Table 4-59 Gordon Site Summer load forecast

Gordon	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.31	0.32	0.27	0.27	0.31	0.32	0.28	0.28
2006	0.36	0.37	0.26	0.26	0.36	0.37	0.27	0.27
2007	0.34	0.35	0.26	0.27	0.34	0.35	0.27	0.28
2008	0.25	0.26	0.23	0.24	0.25	0.26	0.24	0.24
2009	0.30	0.30	0.19	0.19	0.30	0.30	0.19	0.20
2010	0.39	0.40	0.23	0.23	0.39	0.40	0.23	0.24
2011	0.38	0.39	0.22	0.23	0.40	0.40	0.23	0.24
2012	0.38	0.39	0.23	0.23	0.40	0.41	0.24	0.24
2013	0.38	0.39	0.23	0.23	0.40	0.41	0.23	0.24
2014	0.38	0.38	0.22	0.23	0.39	0.40	0.23	0.23
2015	0.38	0.38	0.22	0.23	0.39	0.40	0.23	0.23
2016	0.37	0.38	0.22	0.22	0.38	0.39	0.23	0.23
2017	0.37	0.38	0.22	0.23	0.39	0.40	0.23	0.23
2018	0.38	0.38	0.22	0.23	0.39	0.40	0.23	0.23
2019	0.38	0.38	0.22	0.23	0.39	0.40	0.23	0.24
2020	0.38	0.39	0.22	0.23	0.39	0.40	0.23	0.24

Figure 4-63 Gordon Site Summer Load Forecast at 50% and 10% POE

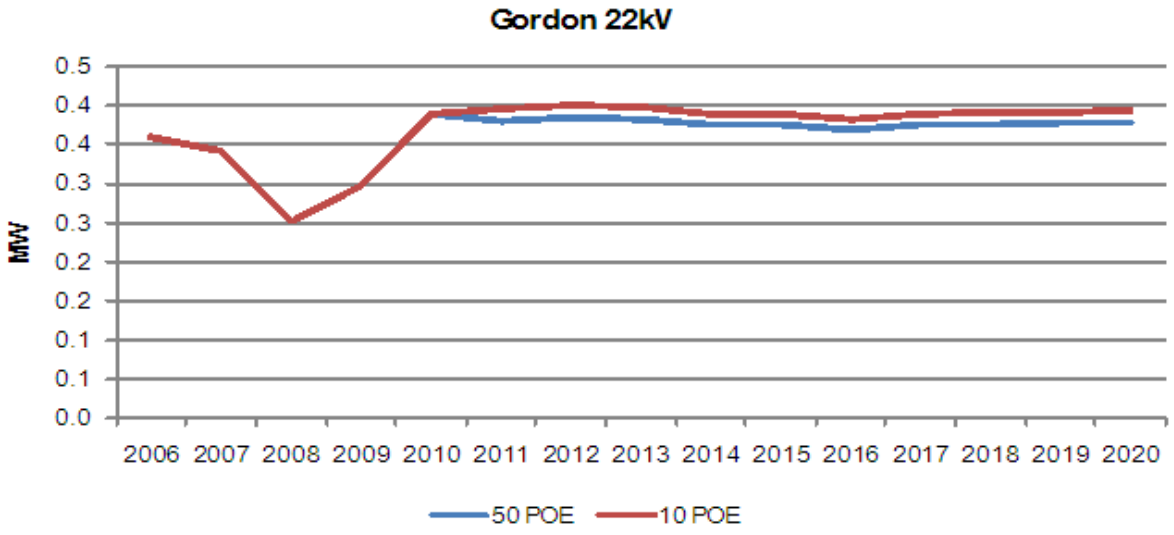
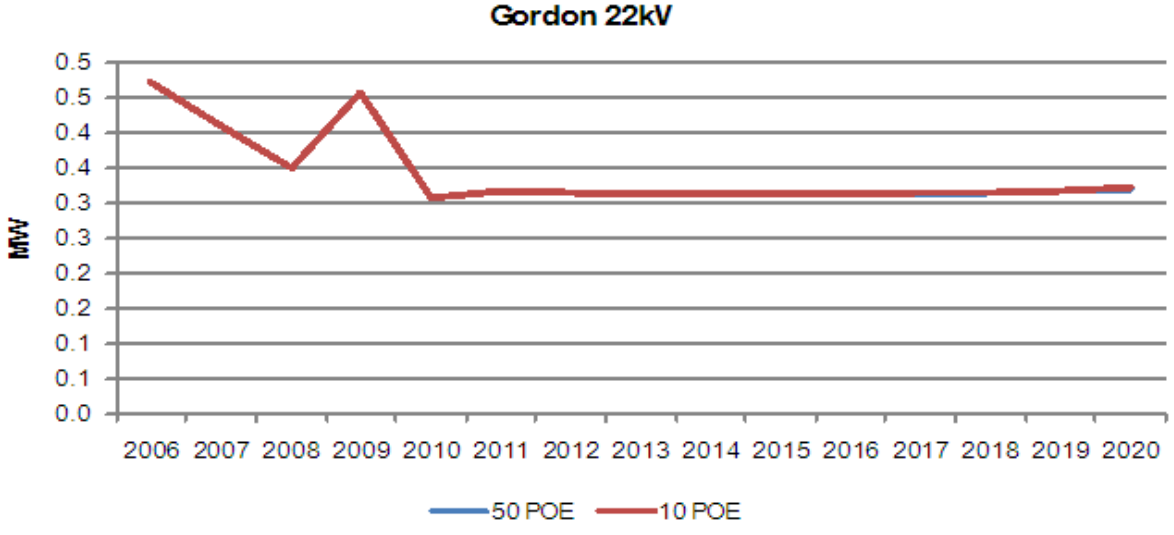
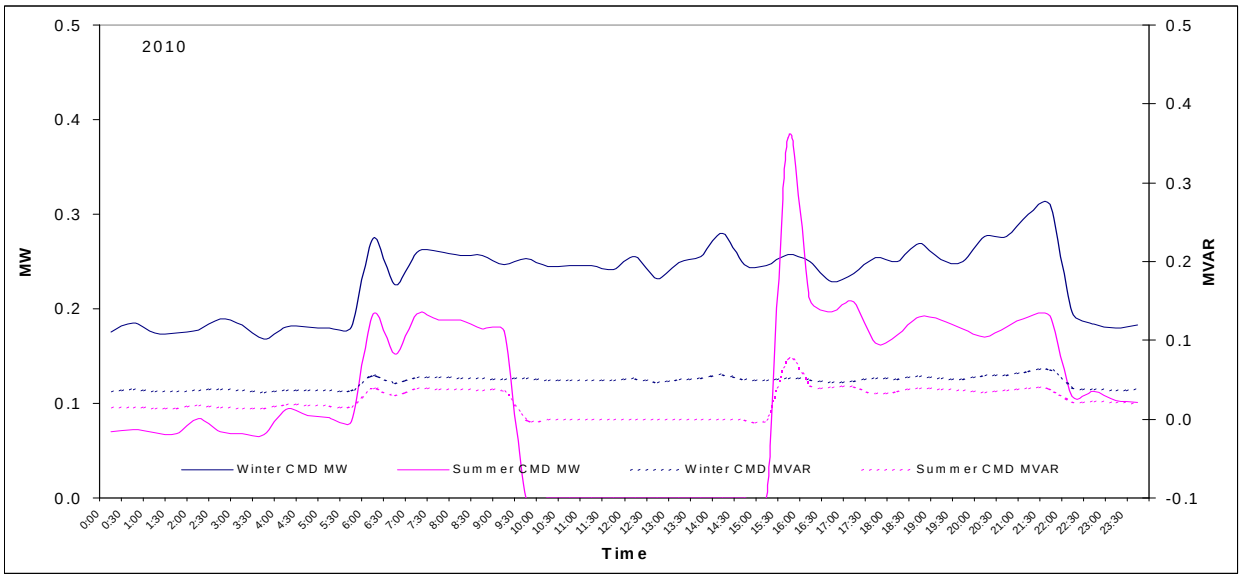


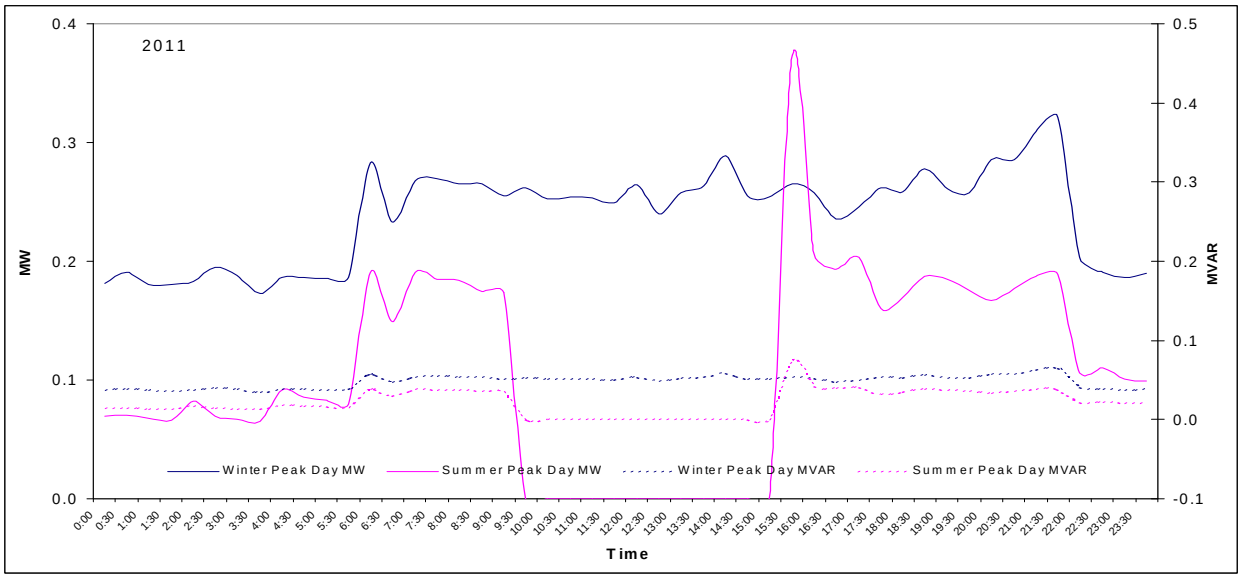
Figure 4-64 Gordon Site Winter Load Forecast at 50% and 10% POE

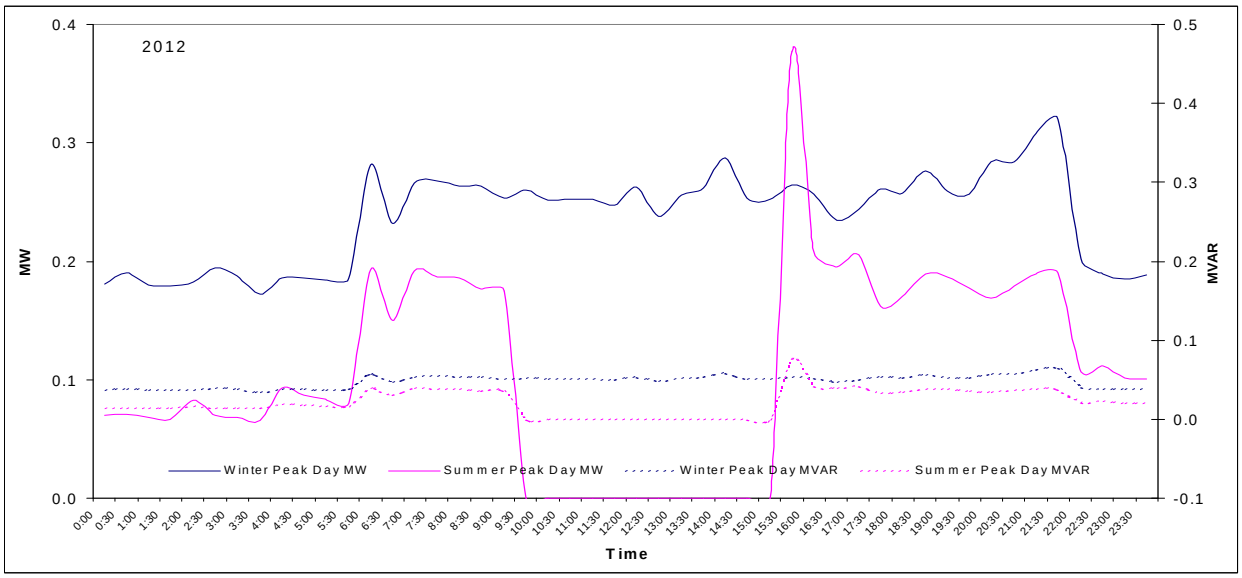


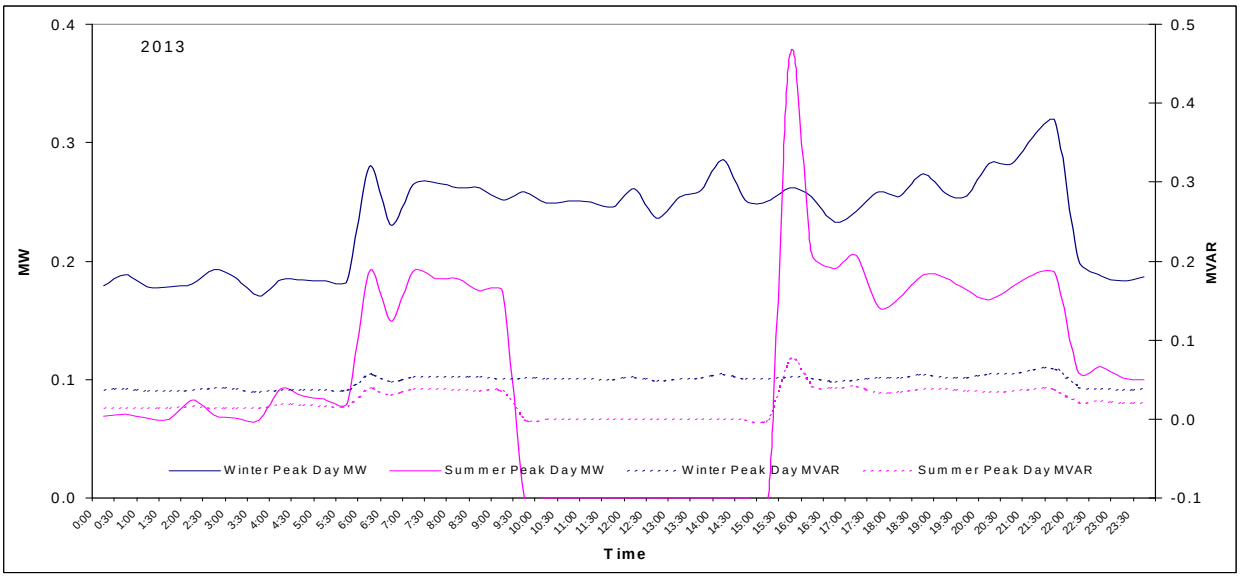
Load Profiles:

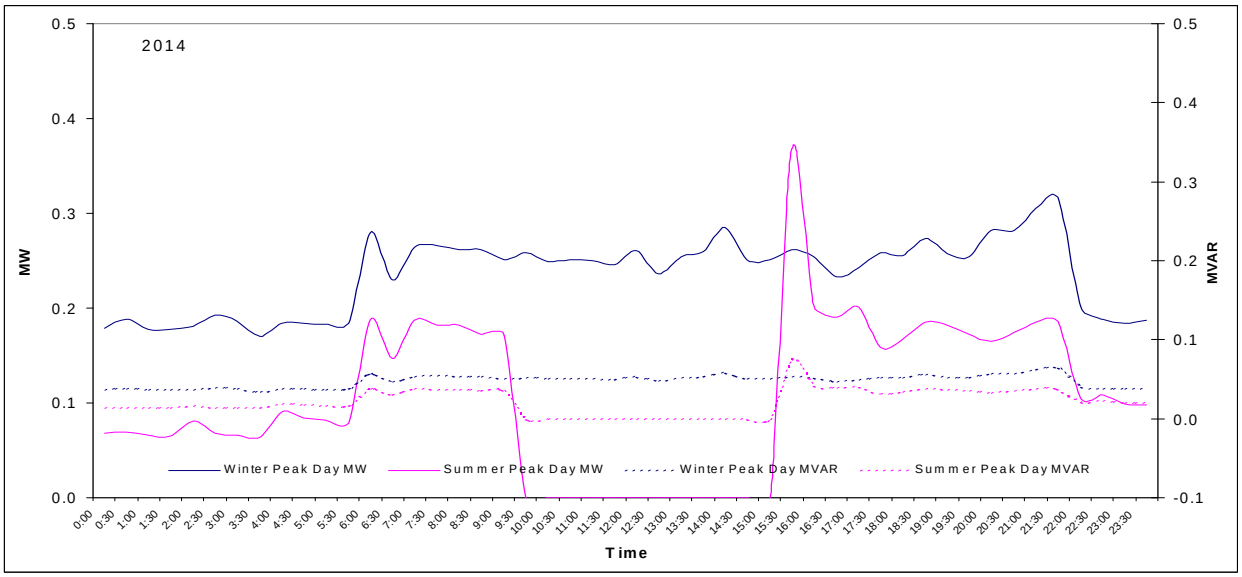
Figure 4-65 Load Profiles: Gordon Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

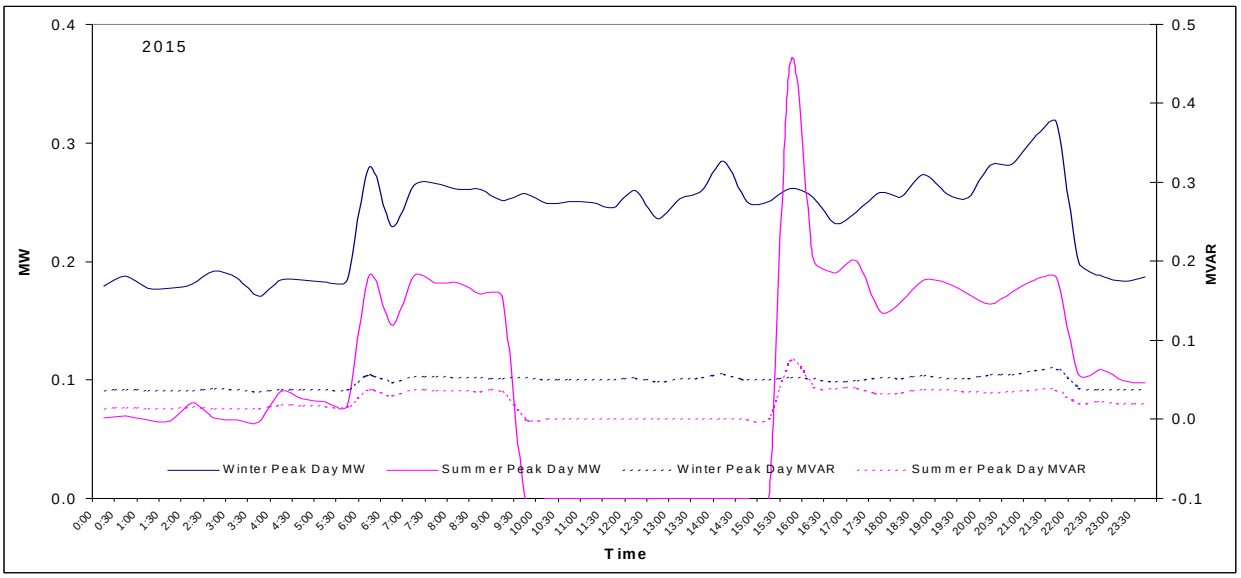
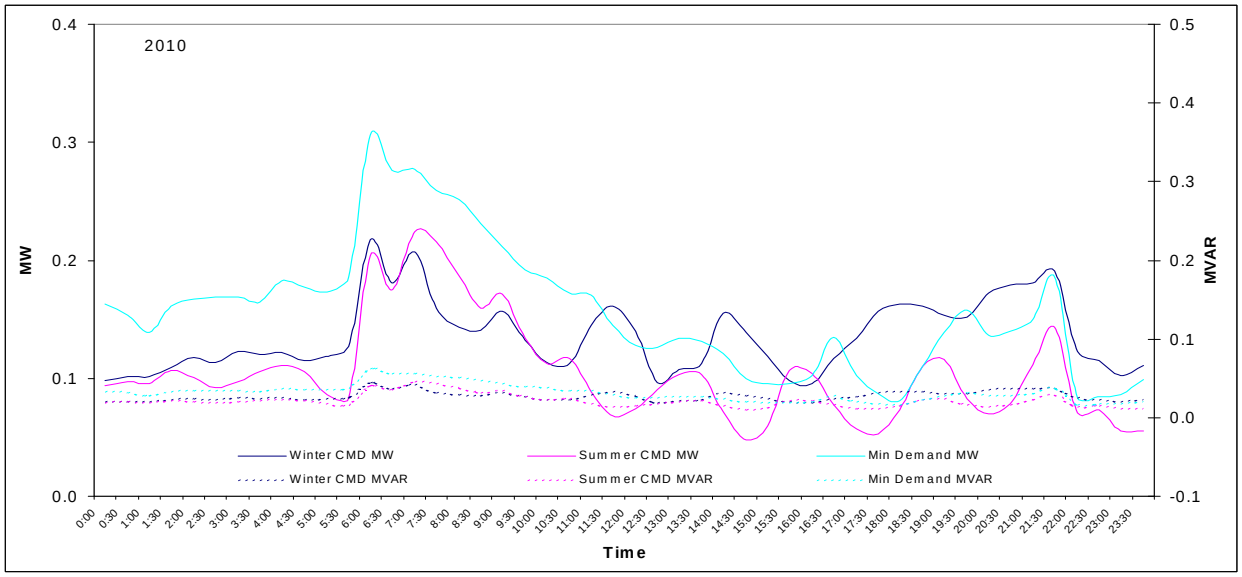
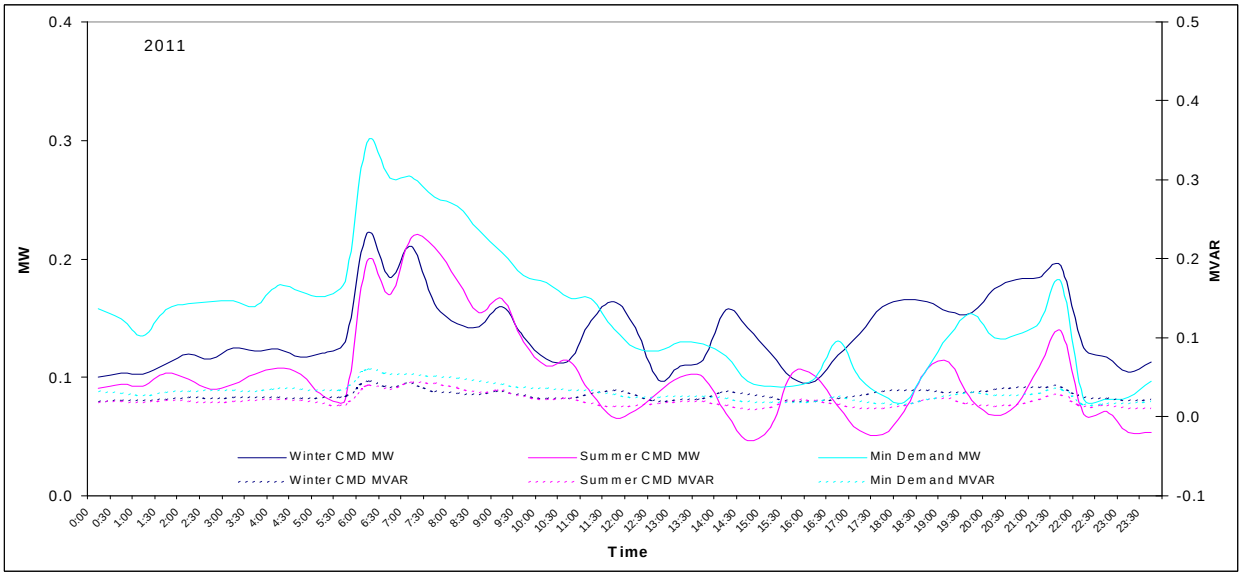
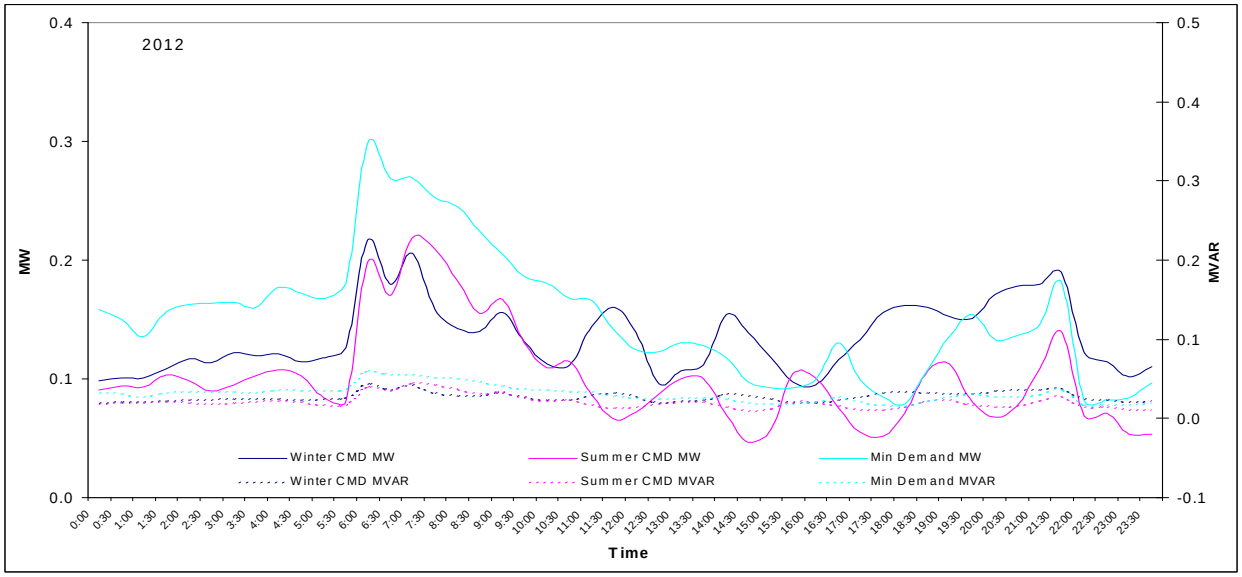
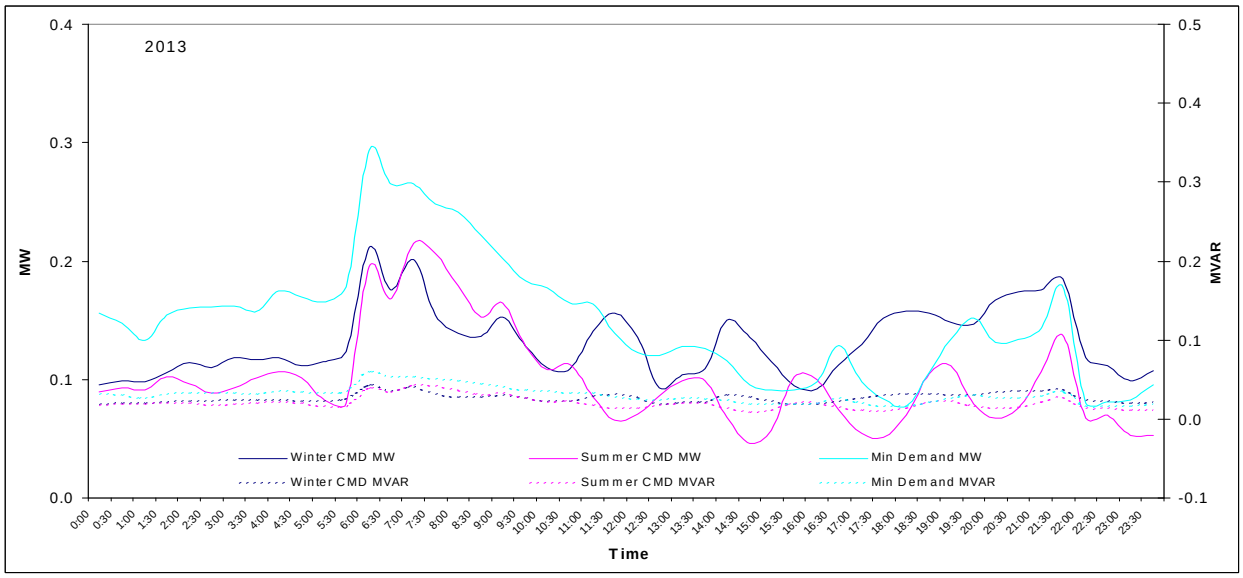

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

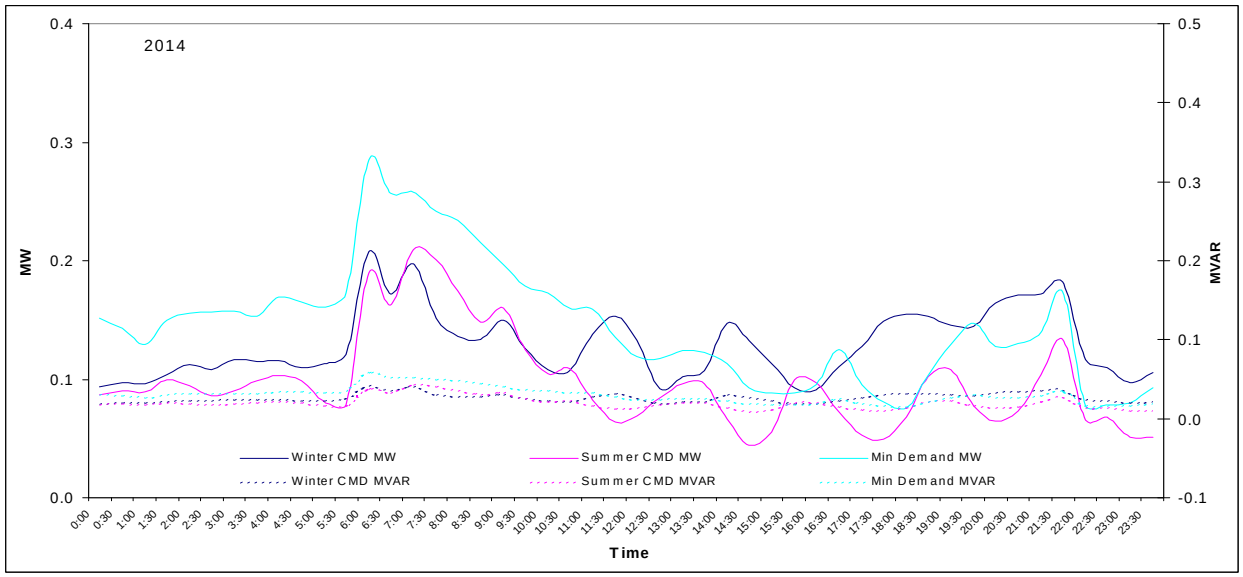
Figure 4-66 Load Profiles: Gordon Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

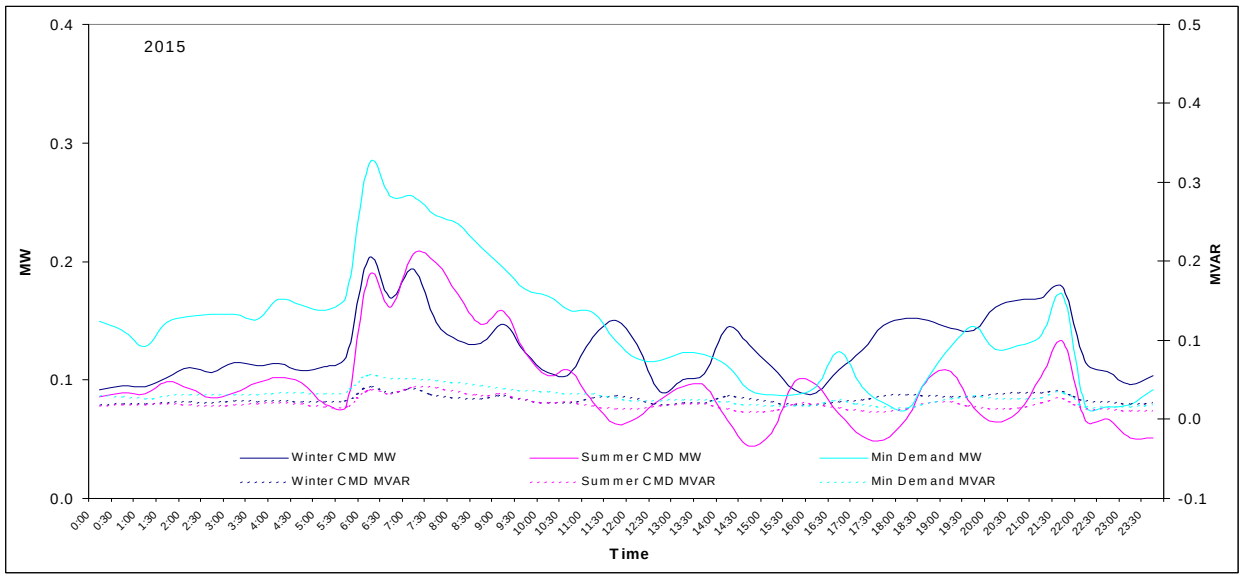
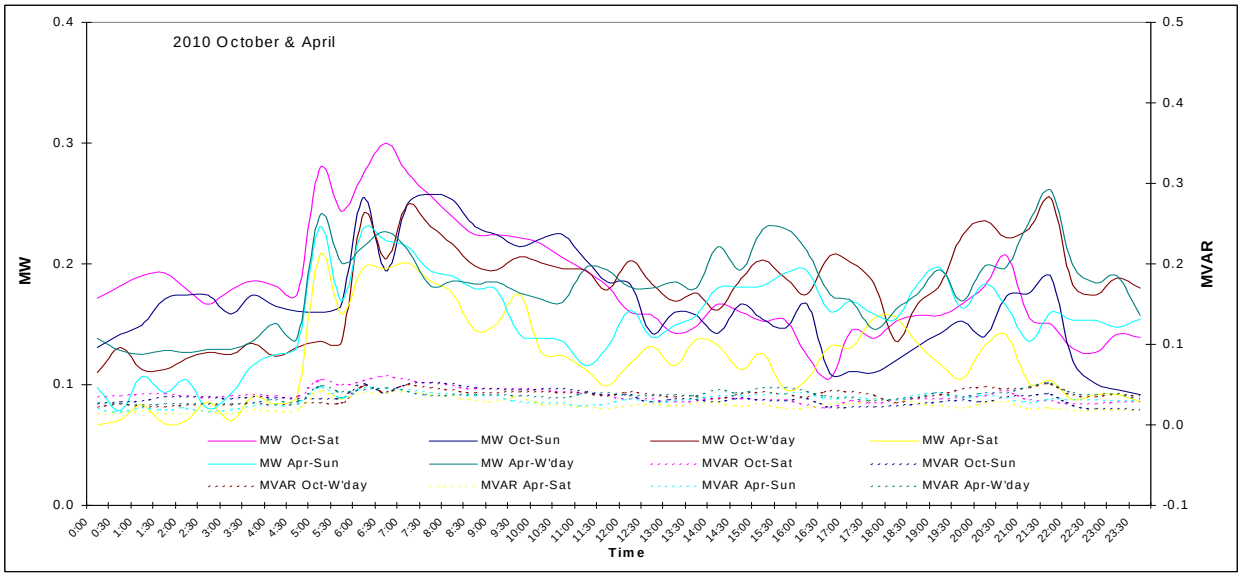
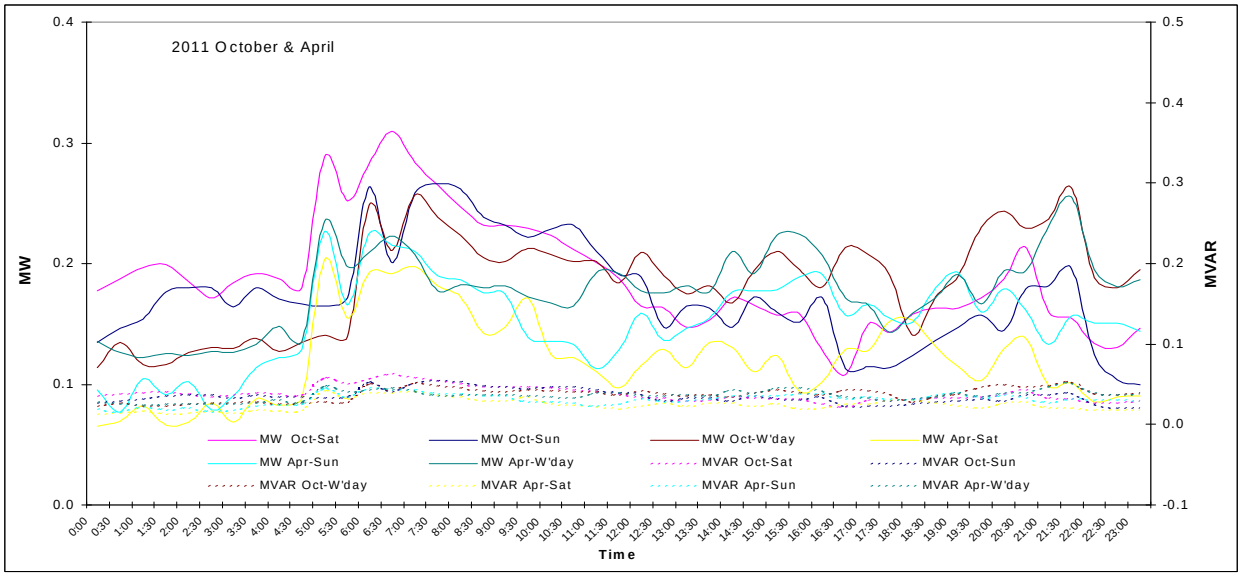
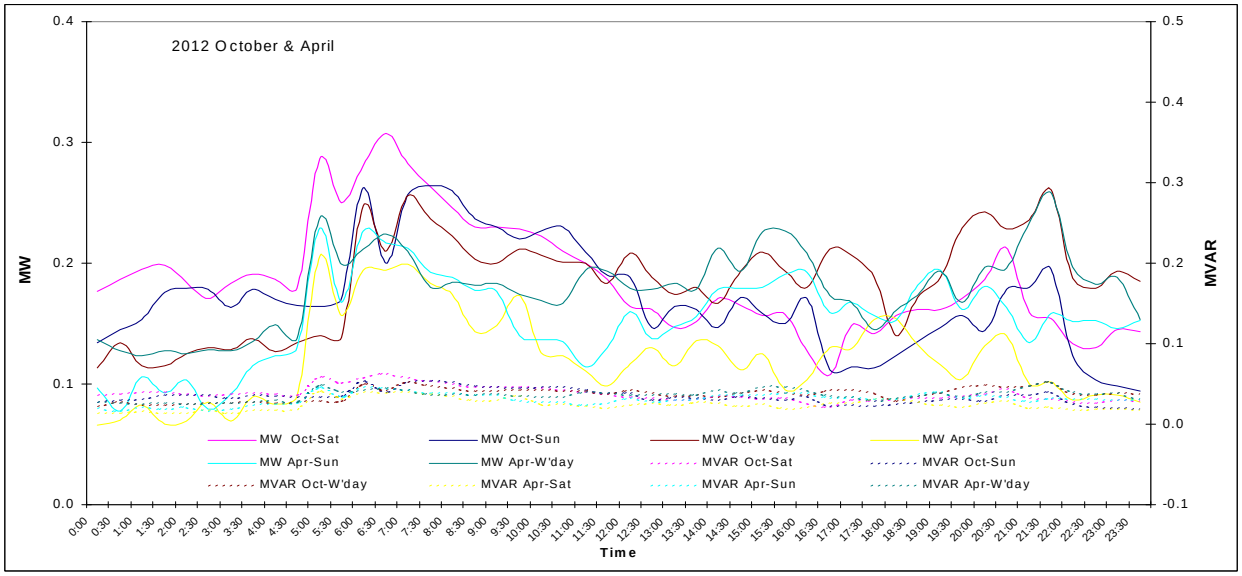
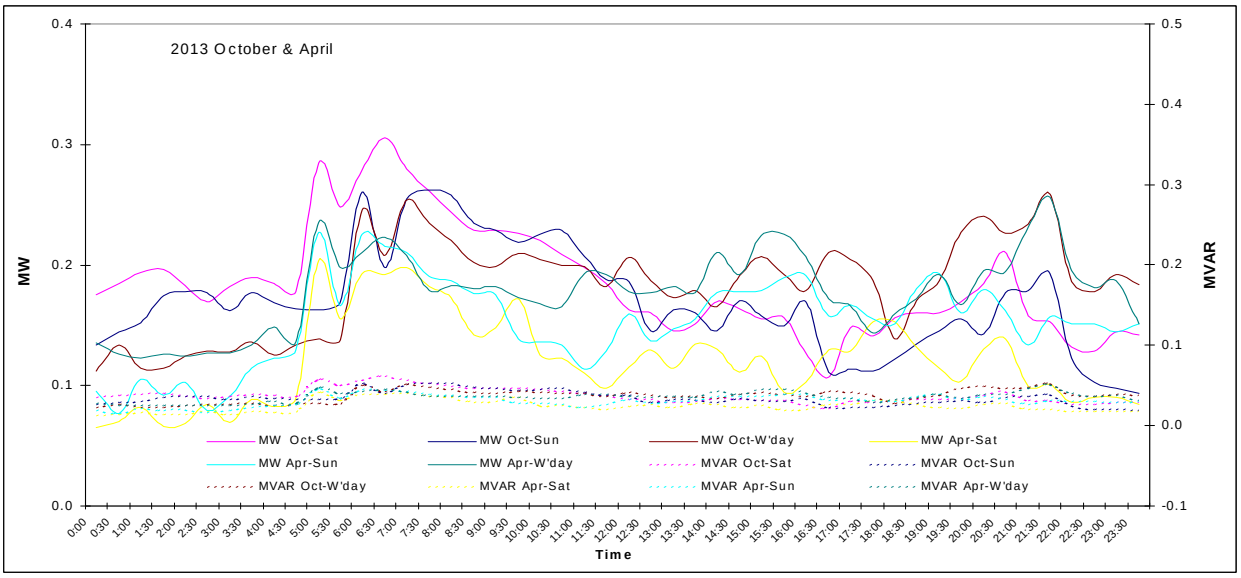

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

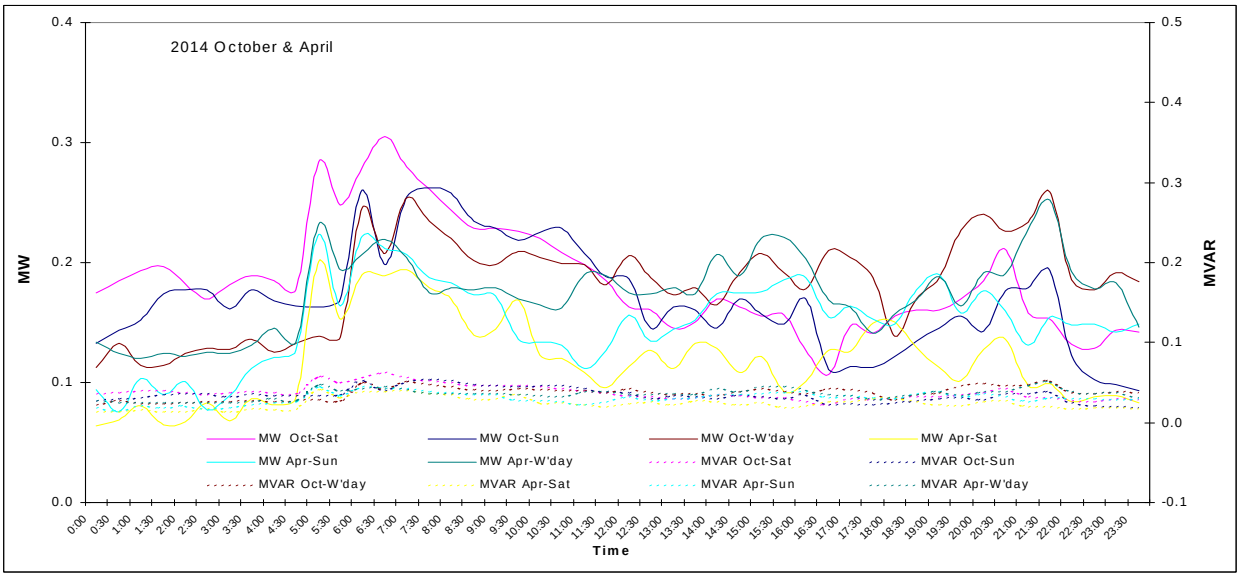
Figure 4-67 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

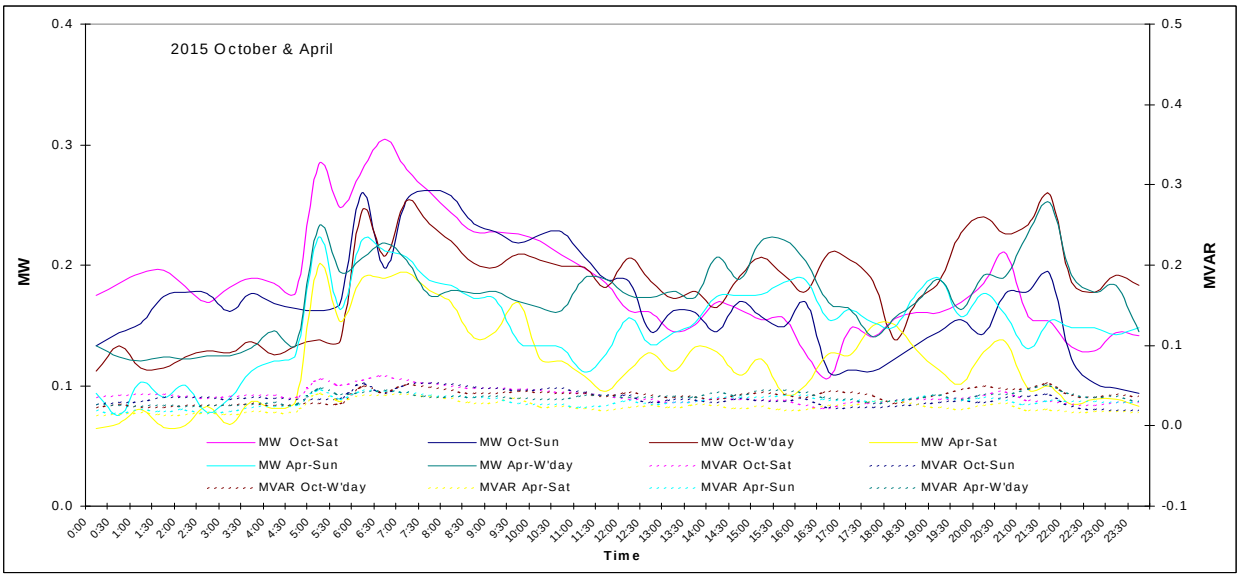
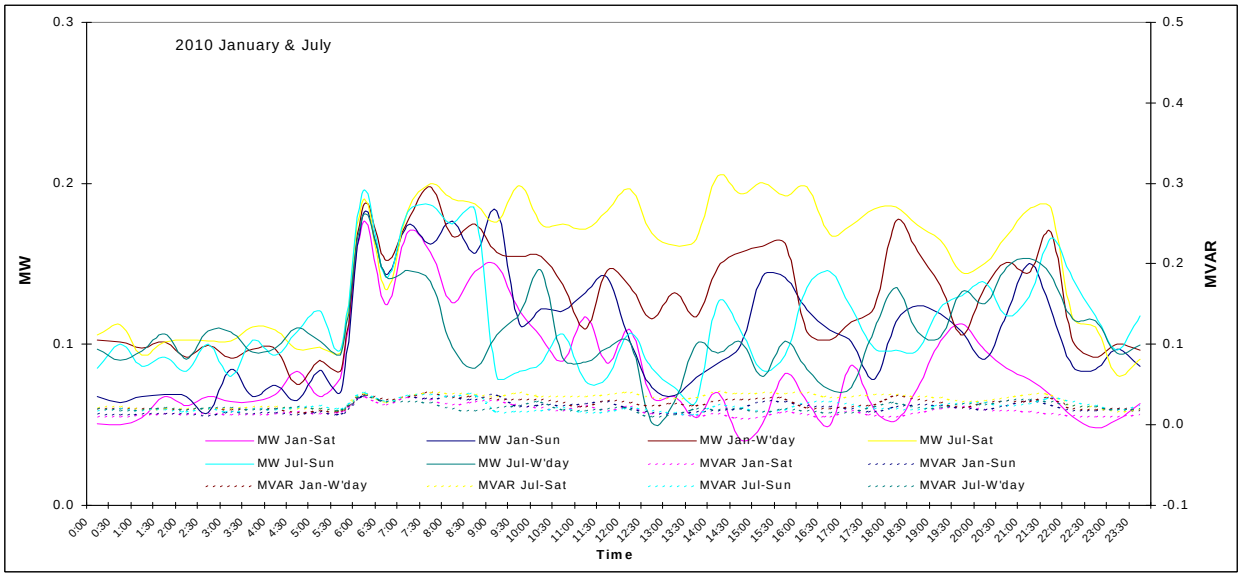
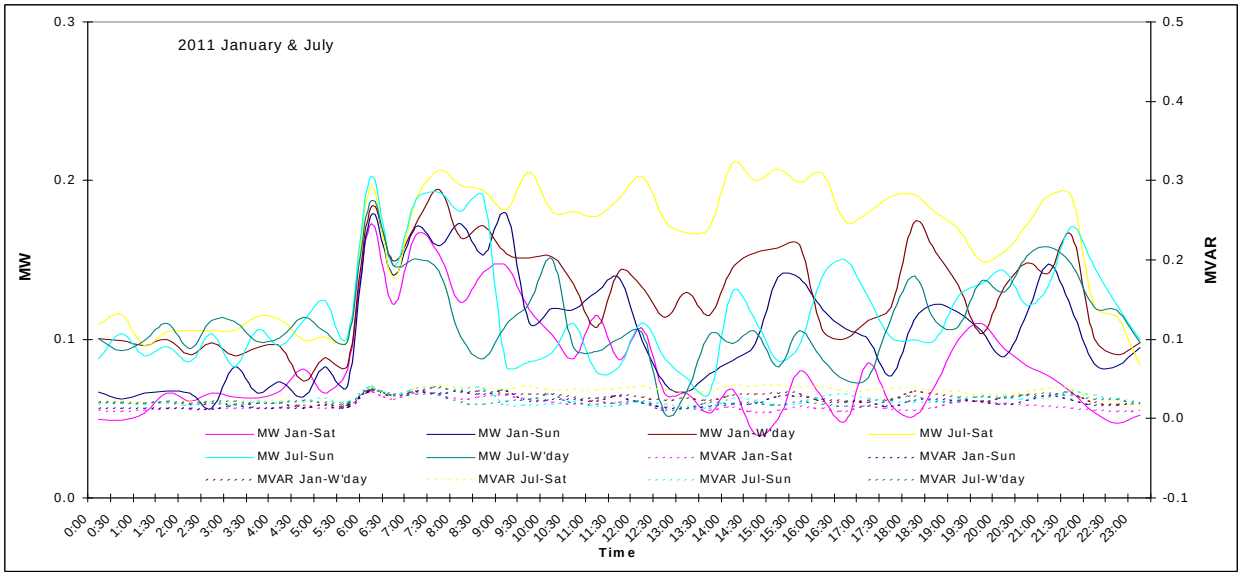
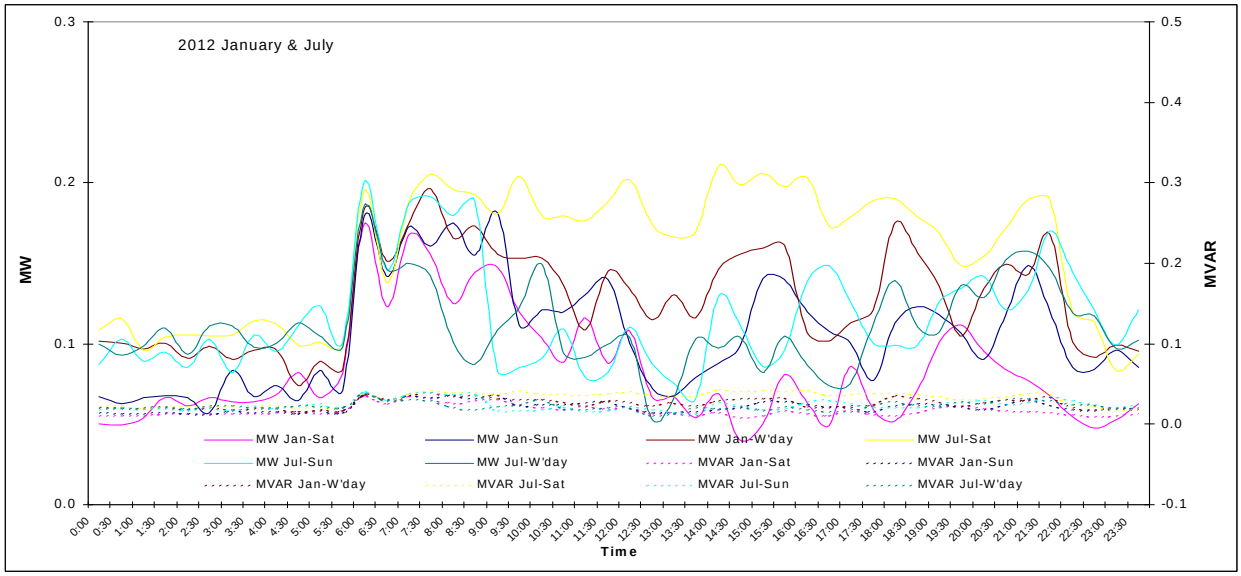
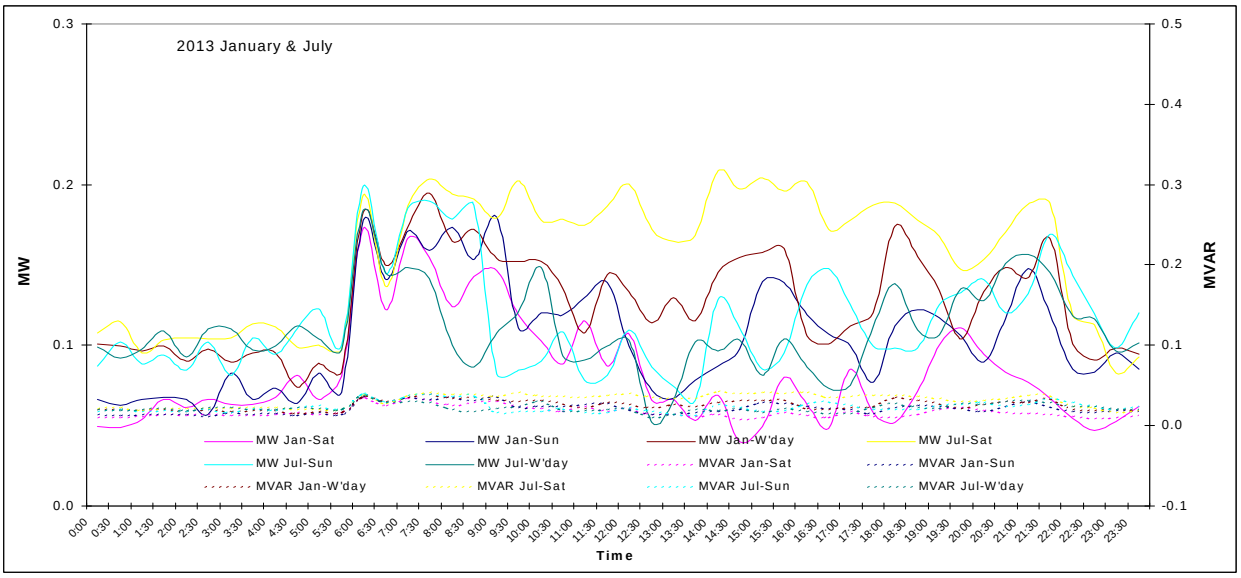

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

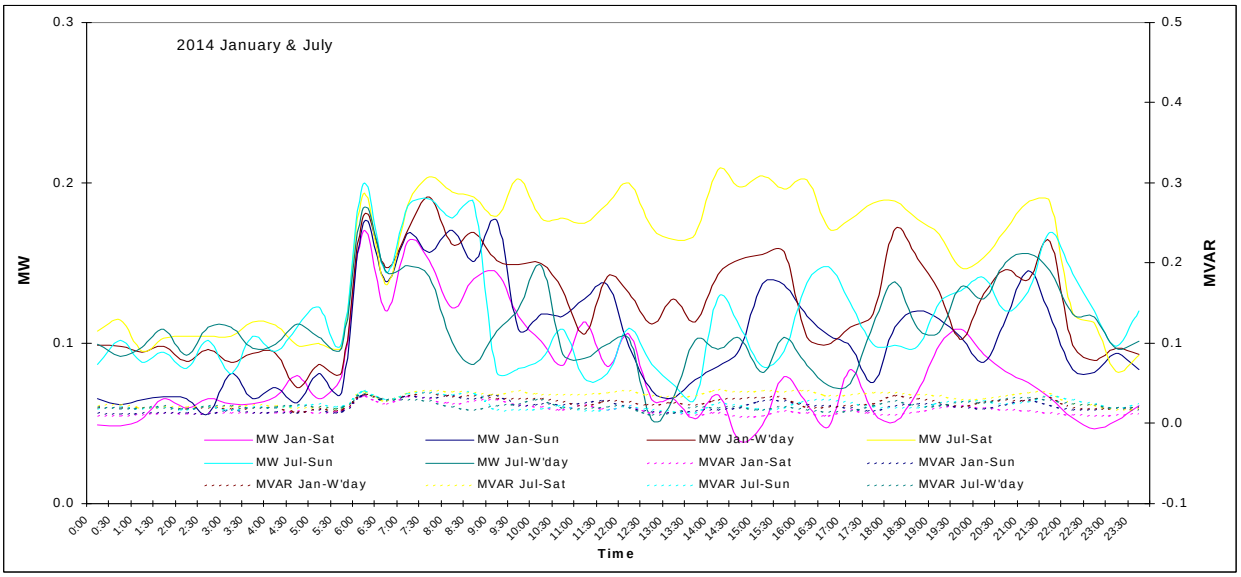
Figure 4-68 Load Profiles: Weekday, Saturday, Sunday for January & July

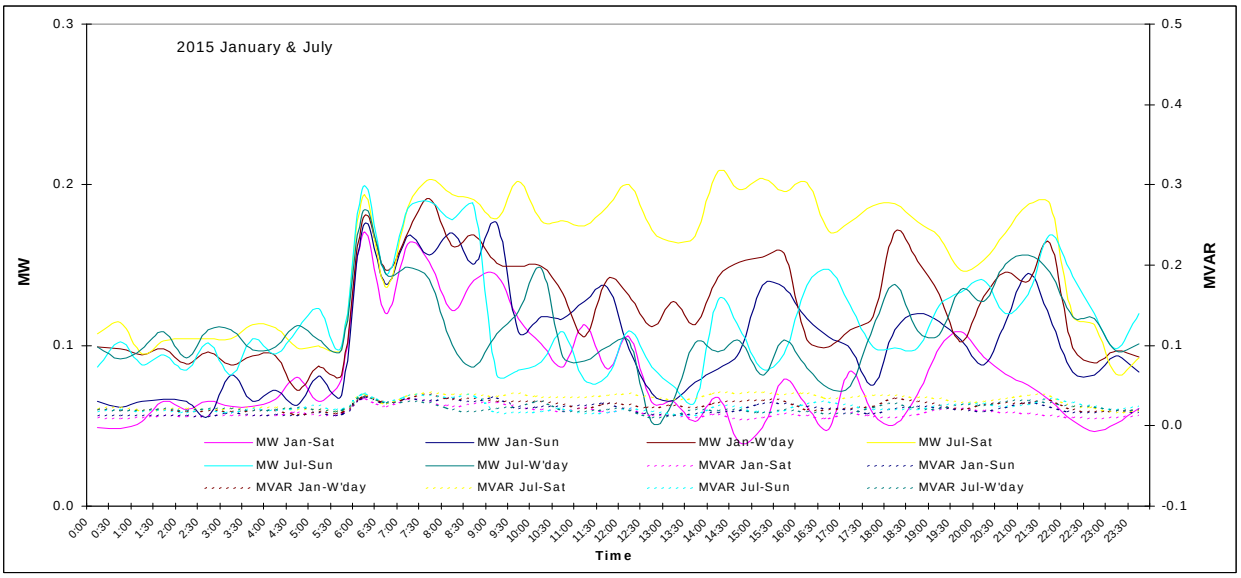







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.14 Hadspen

Description:

The Substation is located at Hadspen and is known as “Hadspen Substation”. The substation is owned by Transend.

Table 4-60 Hadspen Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	8	100	50

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

The following confirmed material point loads that will affect both the summer and winter peak demands have been included in the forecast:

December 2010, 2.0 MW BOC Gas plant at Westbury

December 2011, 4.0 MW bulk distribution facility at Launceston Airport.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-61 Hadspen Site Winter load forecast

Hadspen	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!
2006	29.84	30.10	29.06	29.31	29.84	30.10	30.11	30.37
2007	41.04	41.22	41.04	41.22	41.04	41.22	43.08	43.27
2008	43.61	43.82	43.03	43.23	43.61	43.82	43.44	43.65
2009	45.43	45.43	42.37	42.37	45.43	45.43	44.04	44.04
2010	47.79	47.97	46.41	46.59	47.79	47.97	48.14	48.32
2011	54.28	54.48	52.72	52.91	55.76	55.96	54.15	54.35
2012	54.72	54.92	53.14	53.34	56.18	56.39	54.56	54.77
2013	55.02	55.23	53.44	53.64	56.52	56.74	54.90	55.10
2014	55.71	55.91	54.10	54.30	57.18	57.40	55.54	55.74
2015	56.36	56.57	54.74	54.94	57.88	58.10	56.21	56.42
2016	57.18	57.39	55.53	55.73	58.68	58.90	56.99	57.20
2017	57.98	58.20	56.31	56.52	59.53	59.75	57.81	58.03
2018	59.03	59.25	57.33	57.55	60.55	60.78	58.81	59.03
2019	60.24	60.47	58.51	58.72	61.84	62.08	60.06	60.29
2020	61.61	61.84	59.84	60.06	63.21	63.44	61.38	61.61

Table 4-62 Hadspen Site Summer load forecast

Hadspen	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	26.69	27.37	25.87	26.53	26.69	27.37	26.01	26.68
2008	29.36	29.67	29.36	29.67	29.36	29.67	29.93	30.24
2009	28.58	28.58	27.33	27.33	28.58	28.58	27.78	27.78
2010	27.38	27.68	27.38	27.68	27.38	27.68	27.57	27.88
2011	30.90	31.24	30.90	31.24	31.63	31.98	31.63	31.98
2012	31.44	31.79	31.44	31.79	32.20	32.56	32.20	32.56
2013	31.45	31.79	31.45	31.79	32.22	32.58	32.22	32.58
2014	31.13	31.47	31.13	31.47	31.85	32.20	31.85	32.20
2015	31.32	31.67	31.32	31.67	32.06	32.41	32.06	32.41
2016	30.93	31.28	30.93	31.28	31.70	32.05	31.70	32.05
2017	31.72	32.07	31.72	32.07	32.47	32.83	32.47	32.83
2018	32.04	32.40	32.04	32.40	32.81	33.18	32.81	33.18
2019	32.39	32.75	32.39	32.75	33.16	33.52	33.16	33.52
2020	32.80	33.17	32.80	33.17	33.57	33.94	33.57	33.94

Figure 4-69 Hadspen Site Summer Load Forecast at 50% and 10% POE

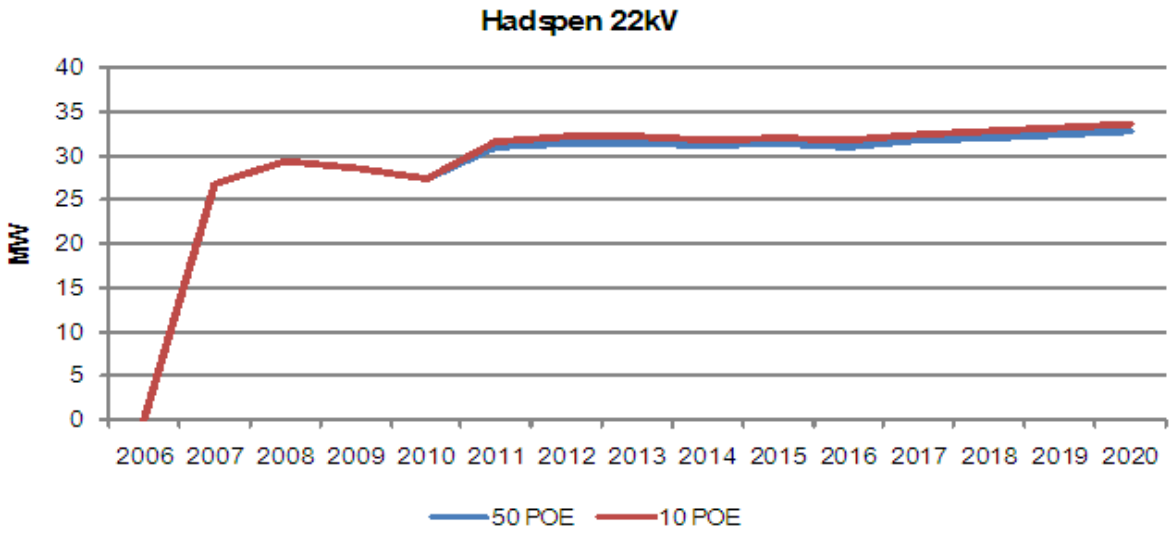
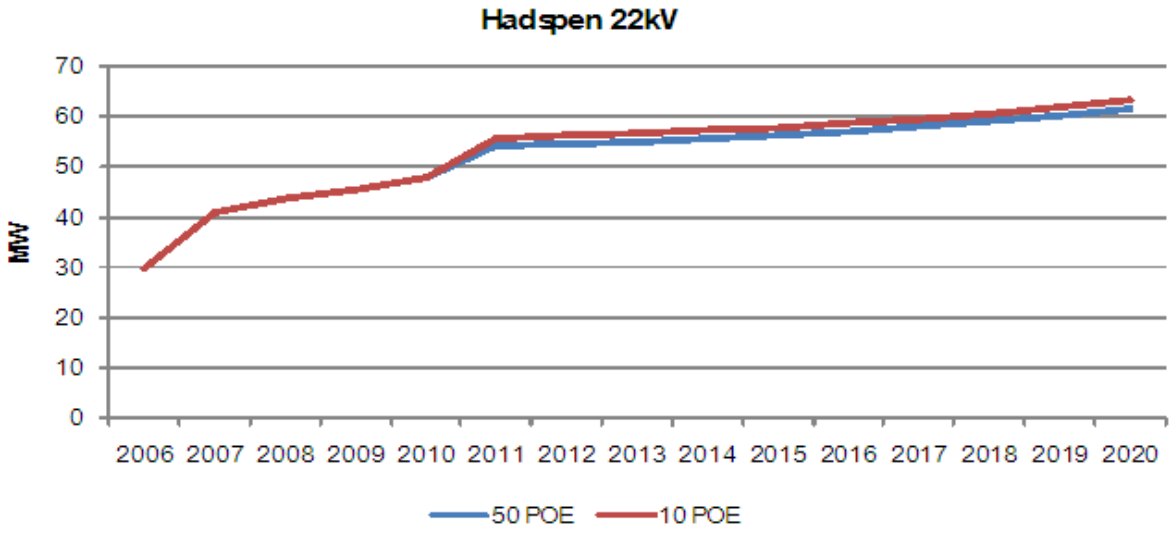
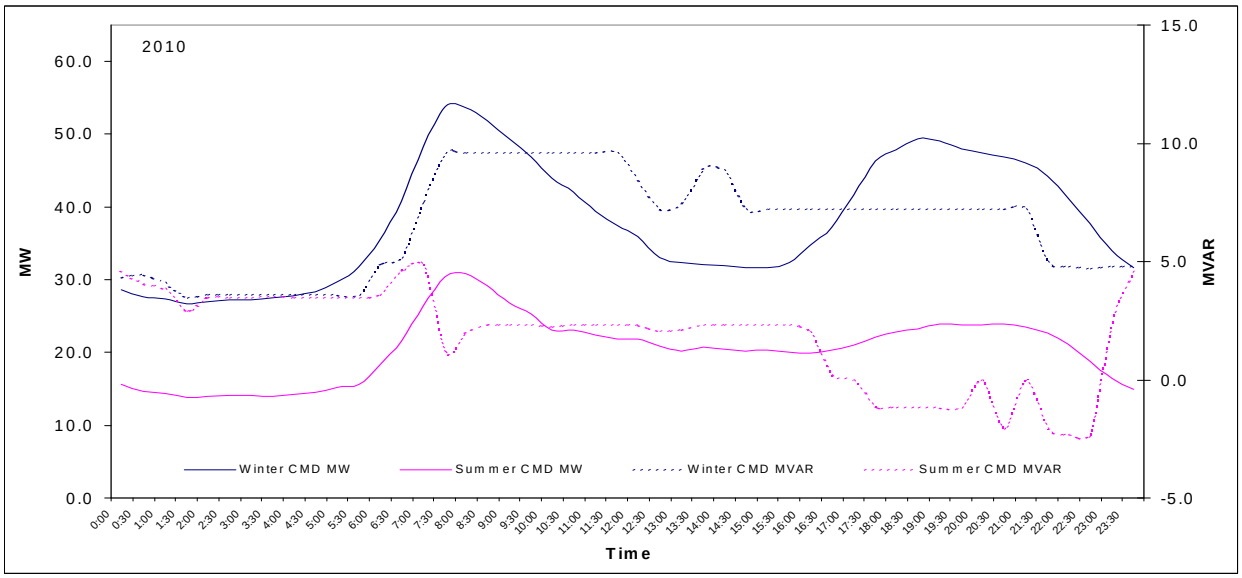


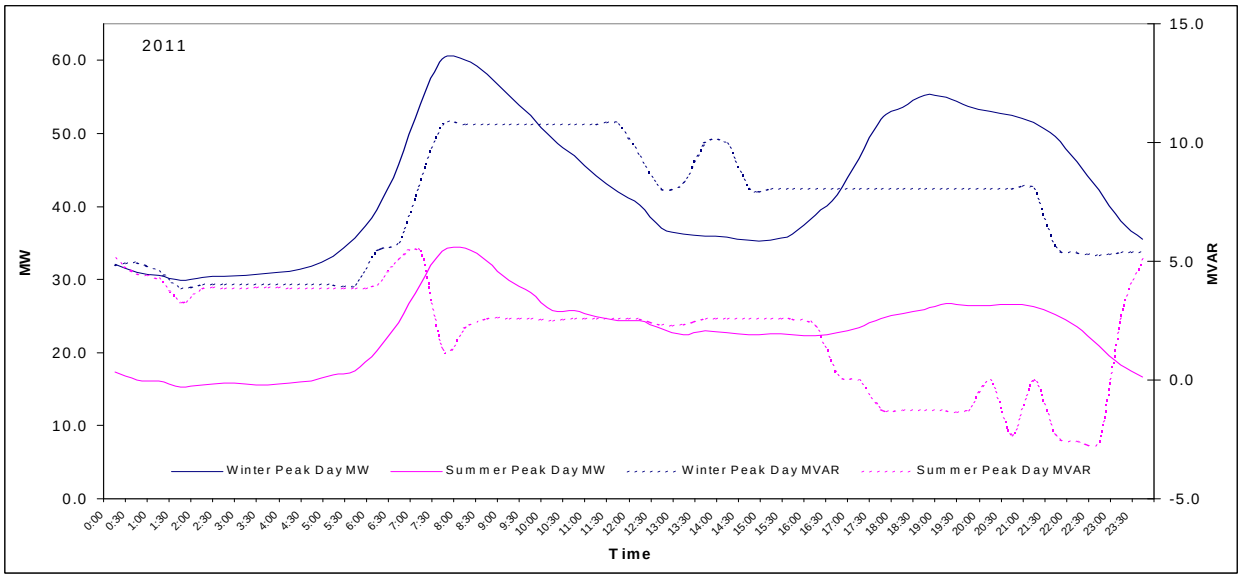
Figure 4-70 Hadspen Site Winter Load Forecast at 50% and 10% POE

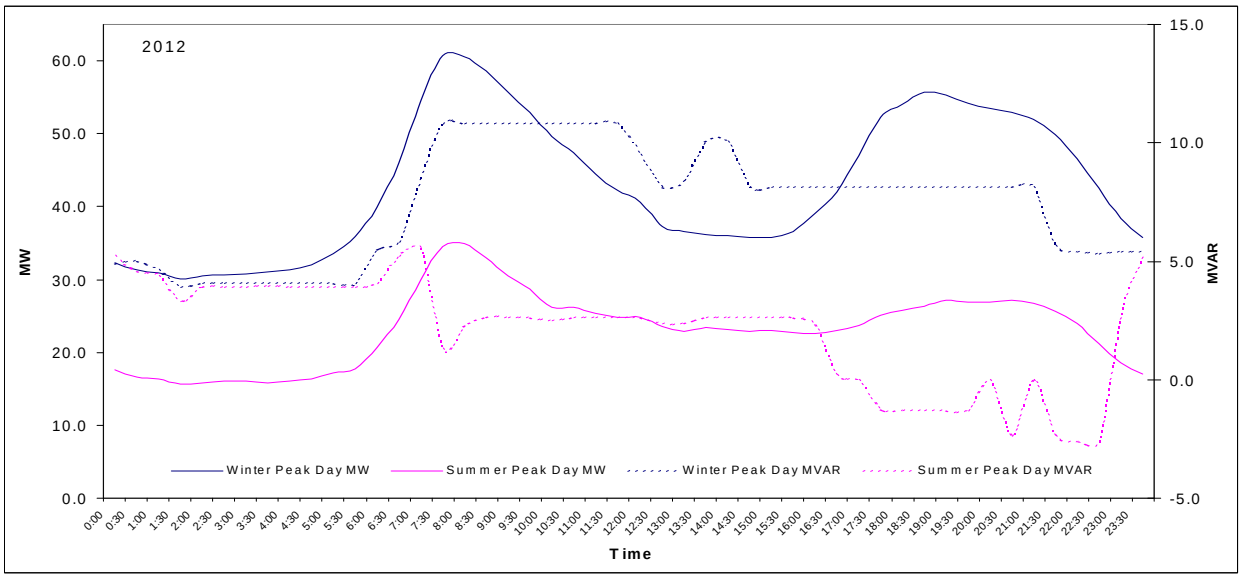


Load Profiles:

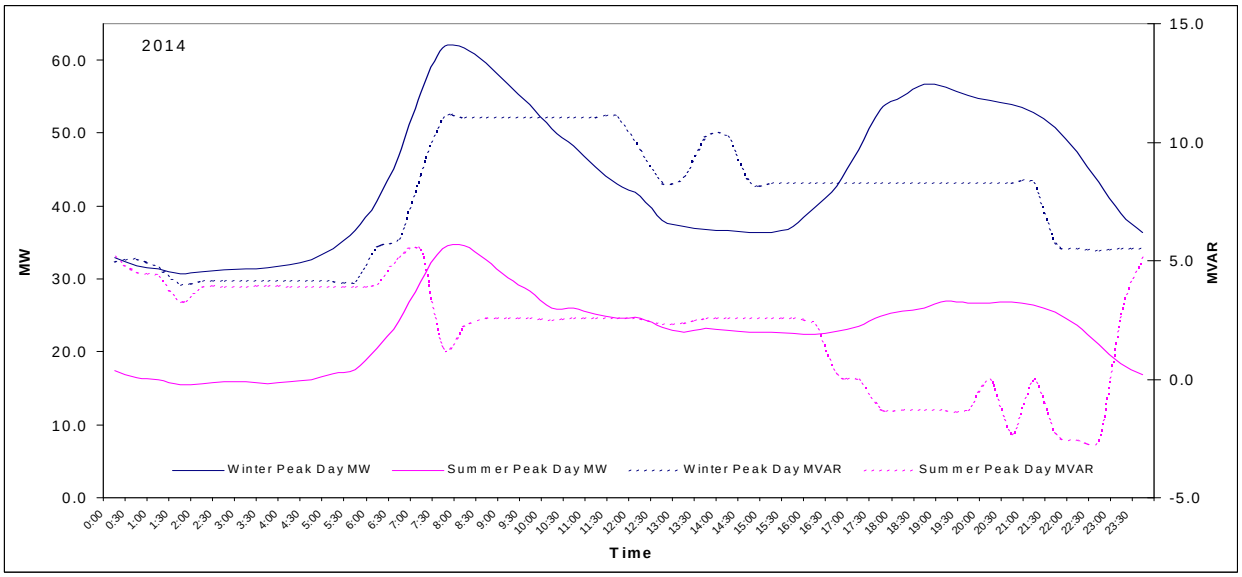
Figure 4-71 Load Profiles: Hadspen Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

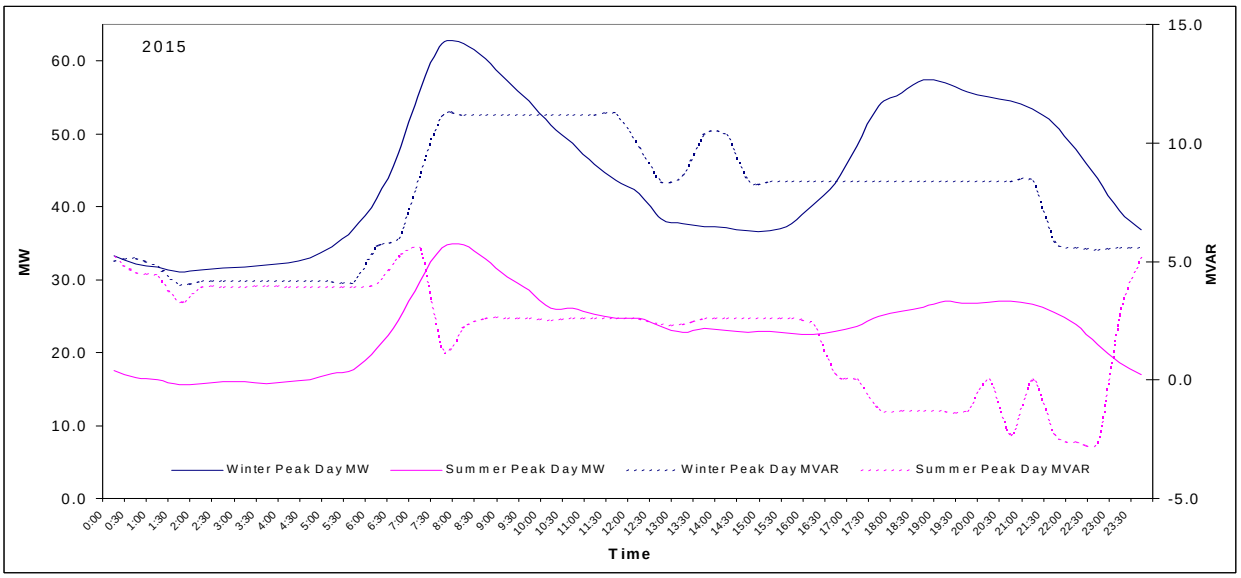
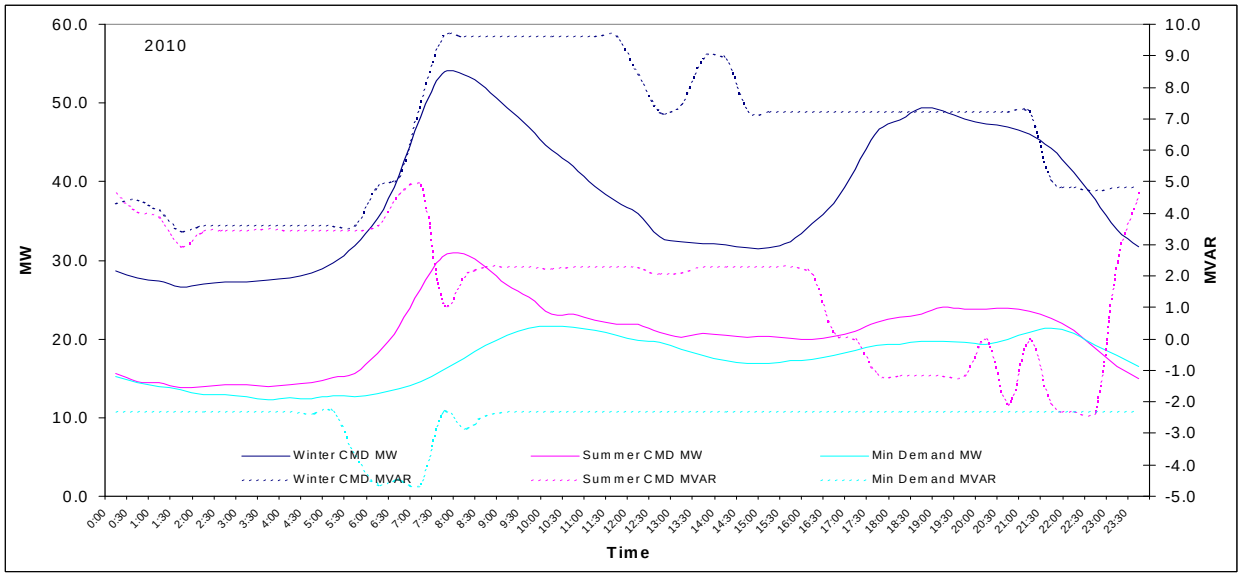
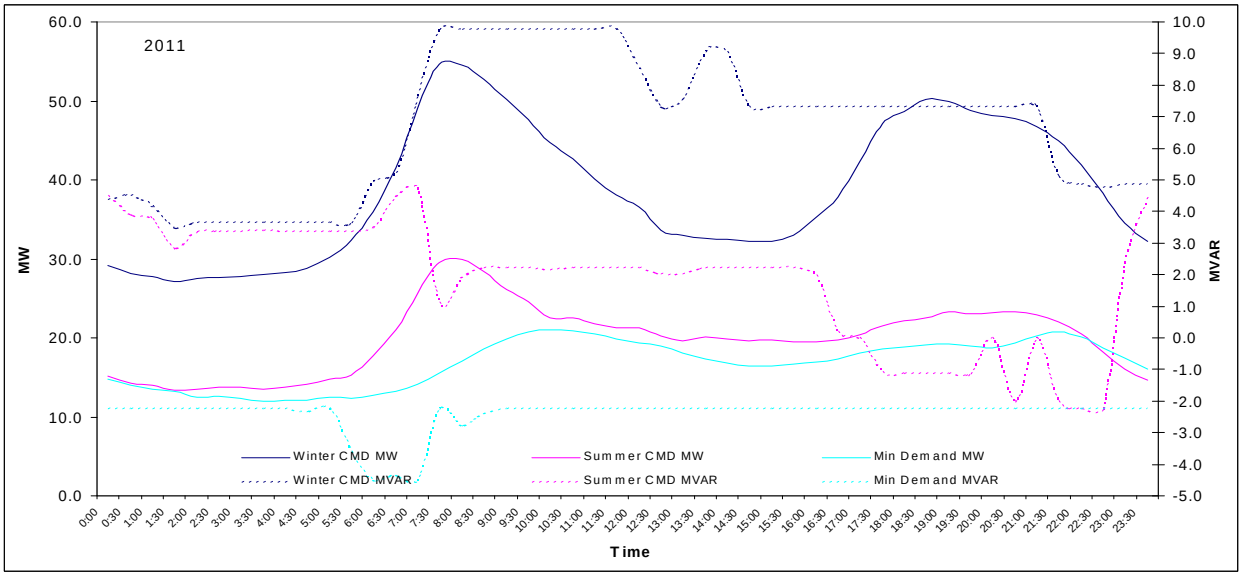
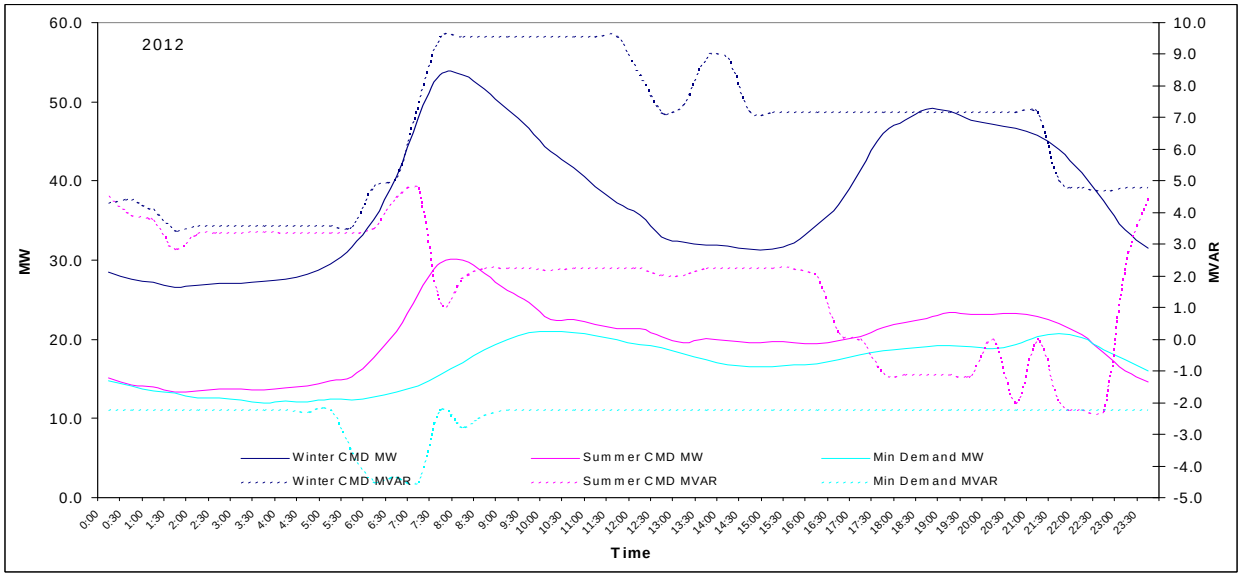
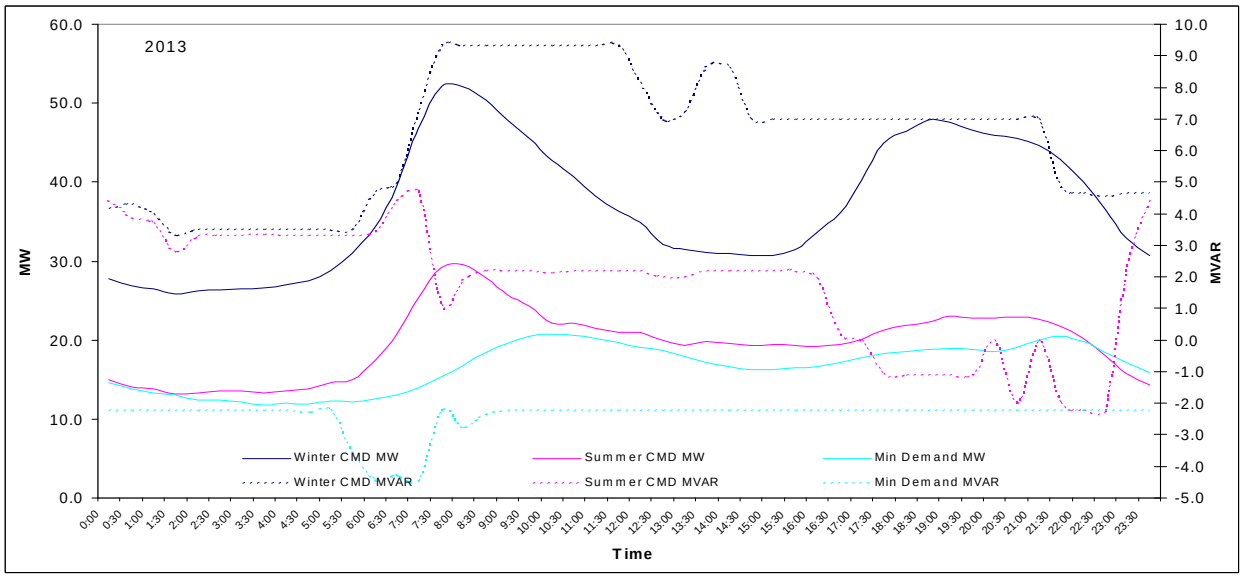

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

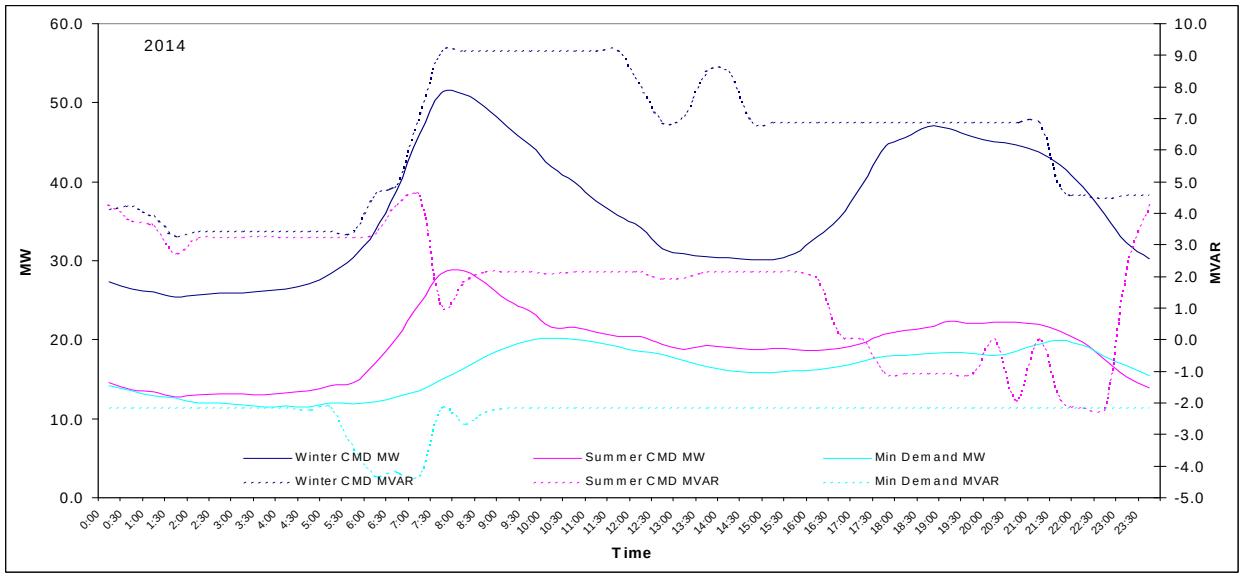
Figure 4-72 Load Profiles: Hadspen Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

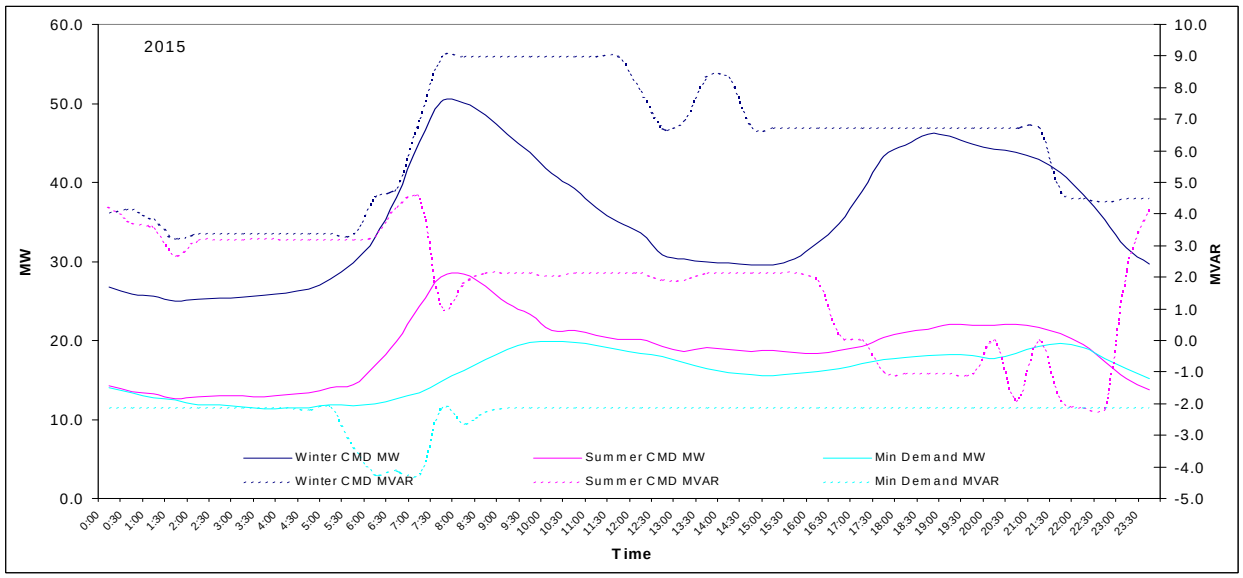
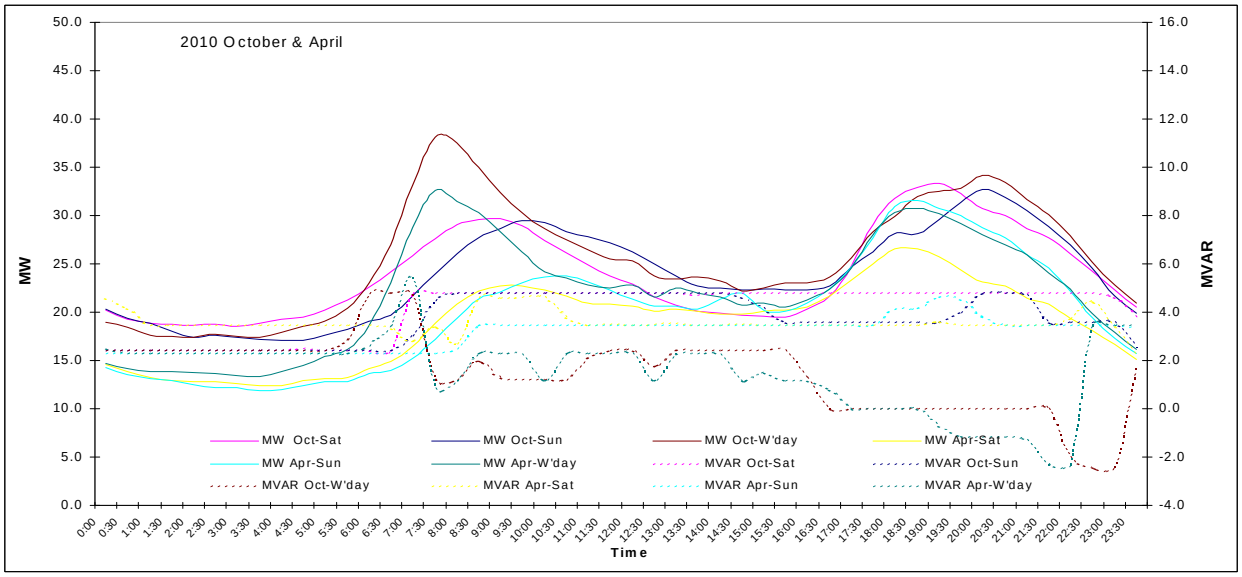
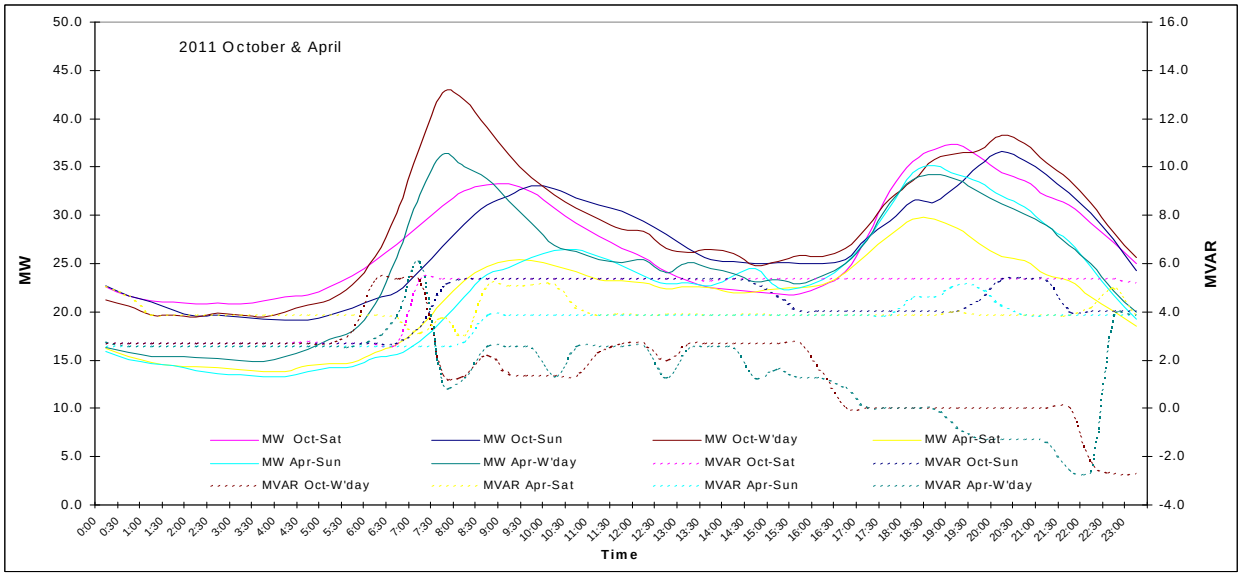
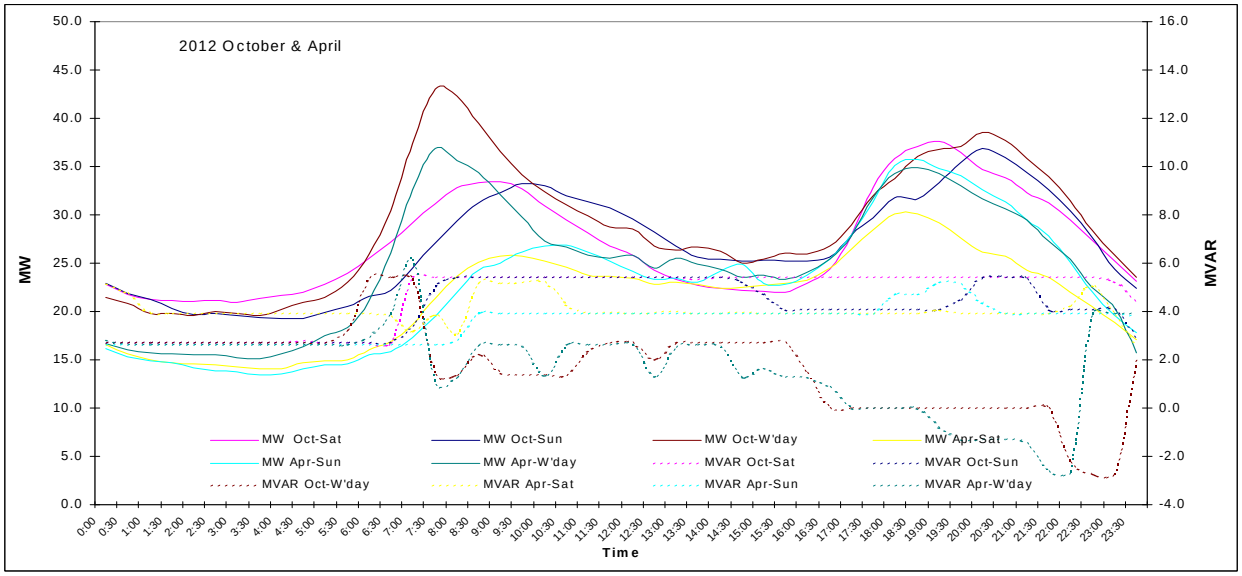
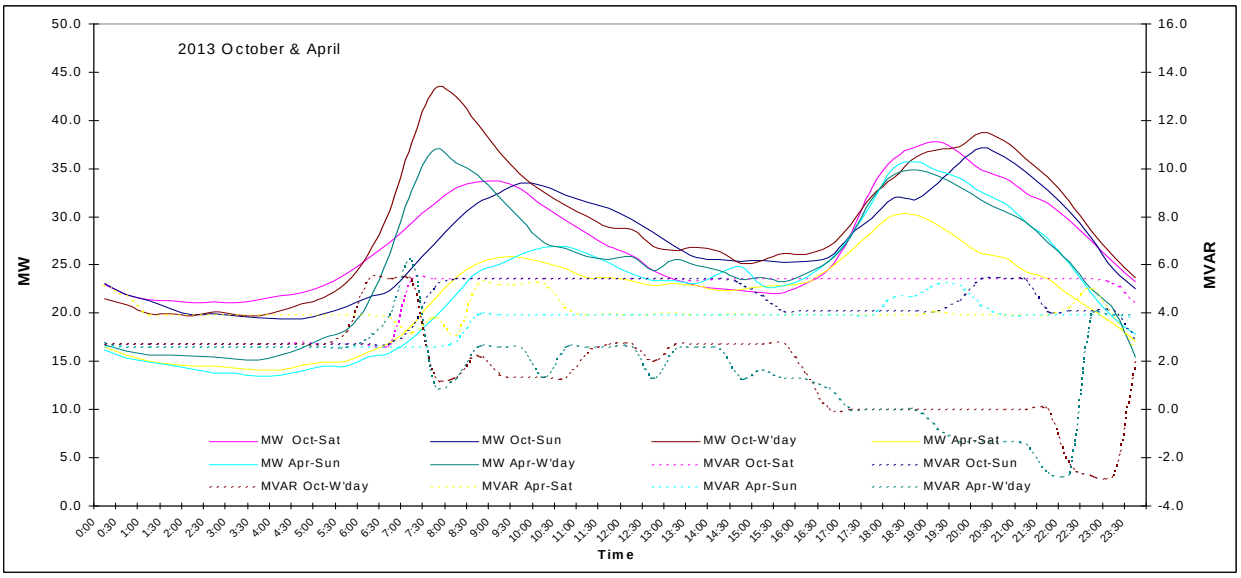

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

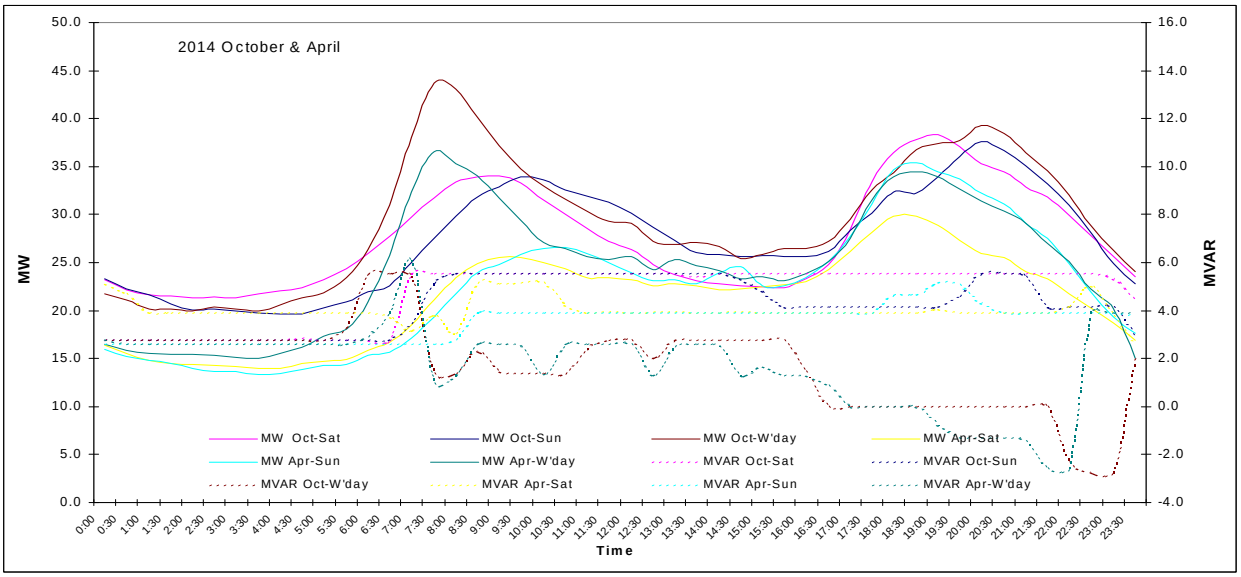
Figure 4-73 Load Profiles: Weekday, Saturday, Sunday for October & April











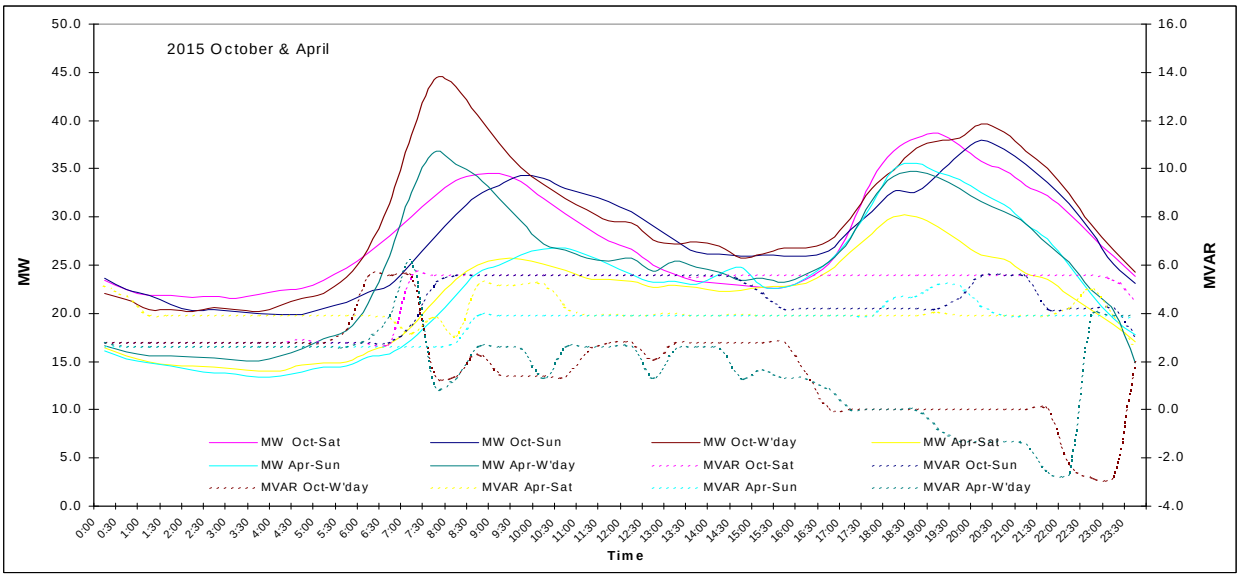
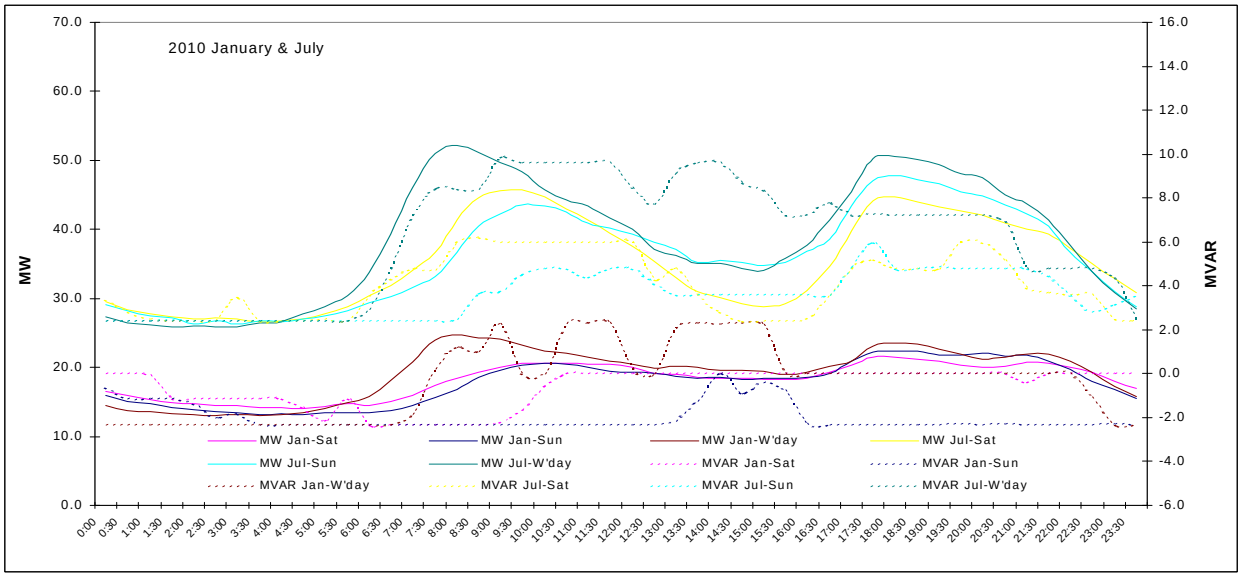
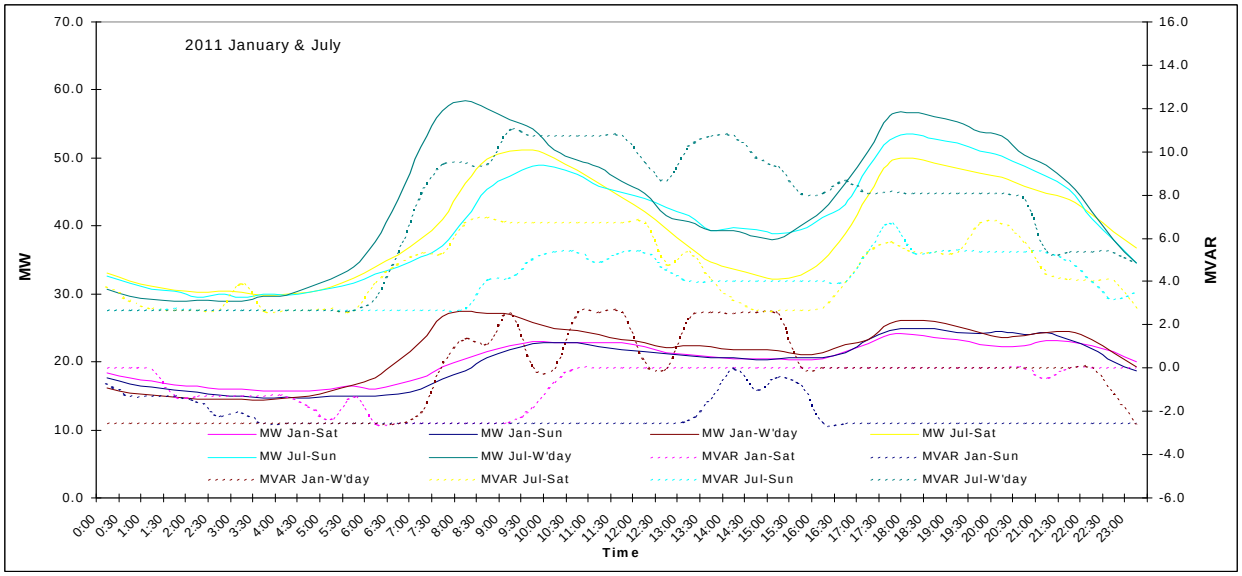
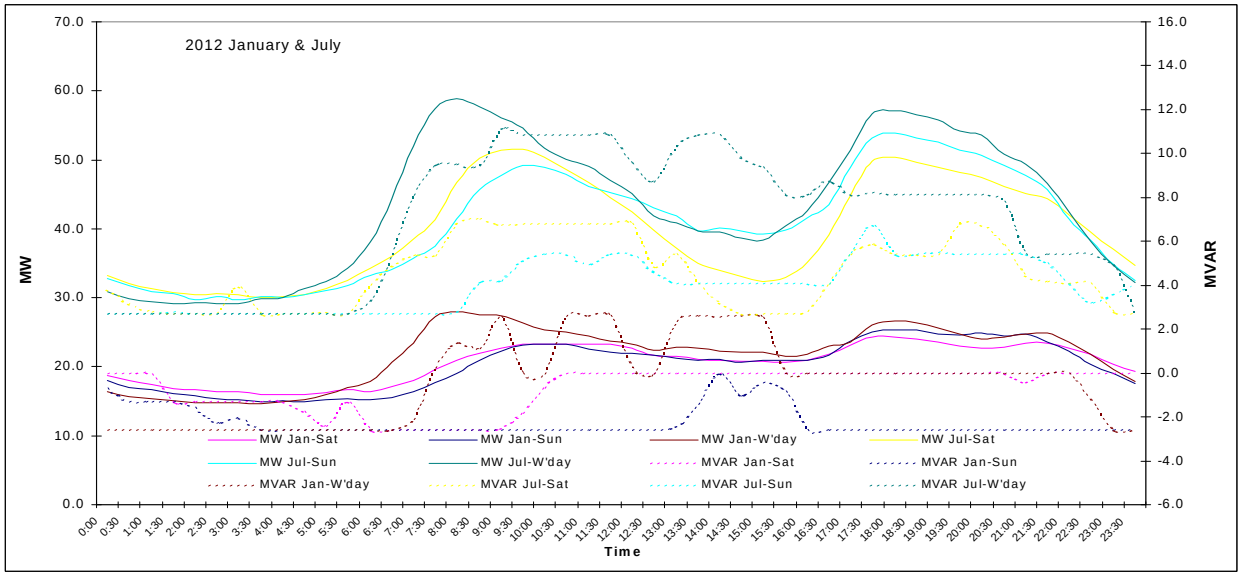
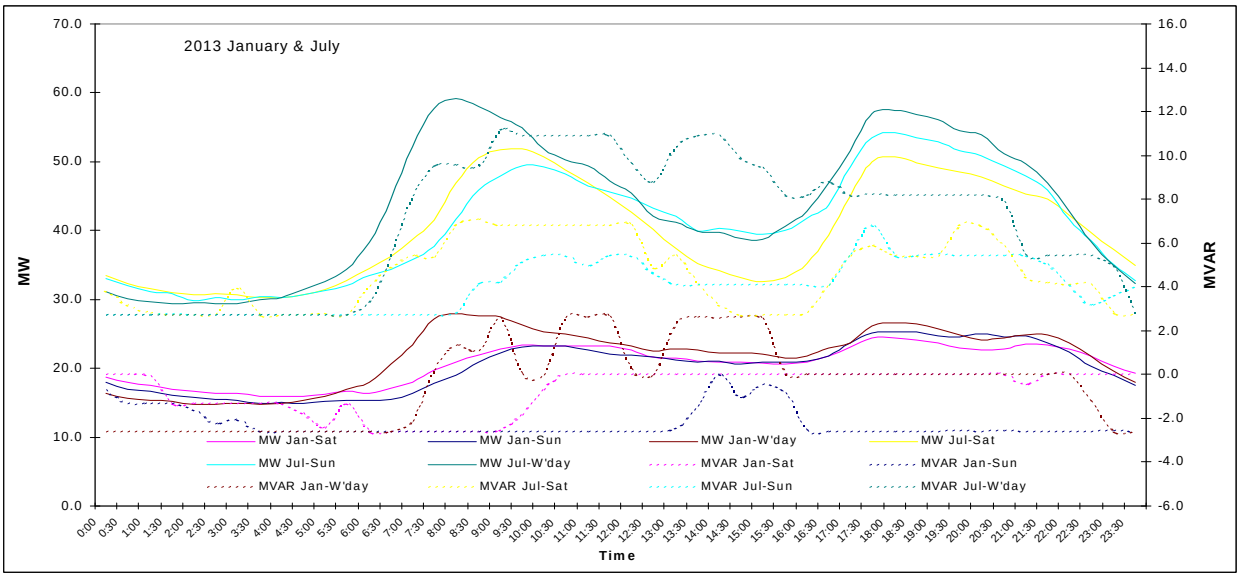


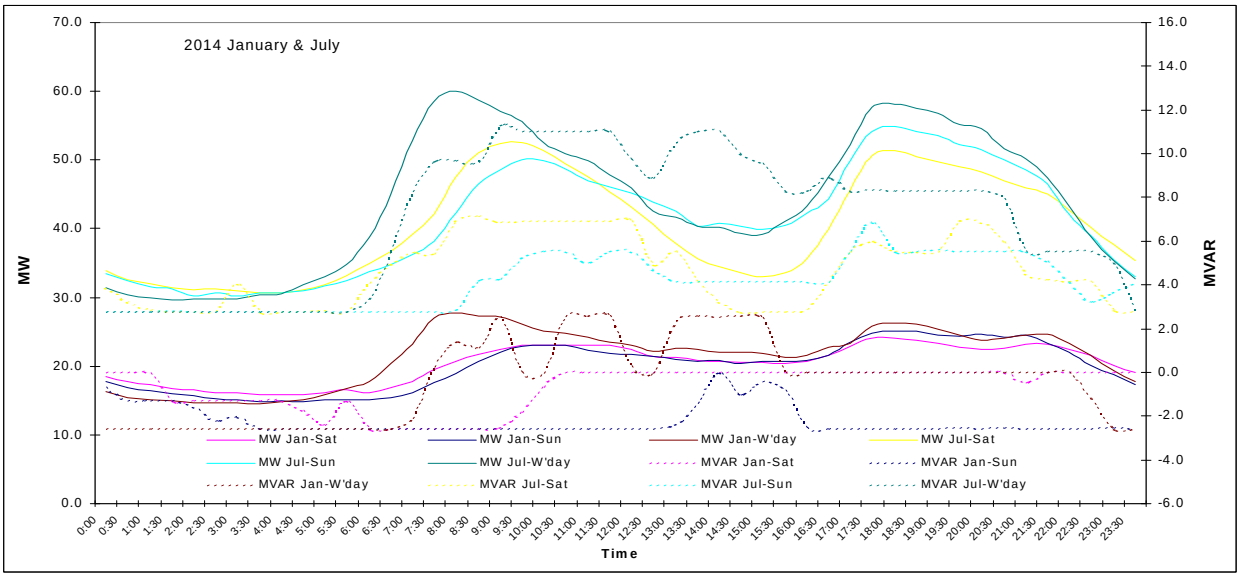
Figure 4-74 Load Profiles: Weekday, Saturday, Sunday for January & July

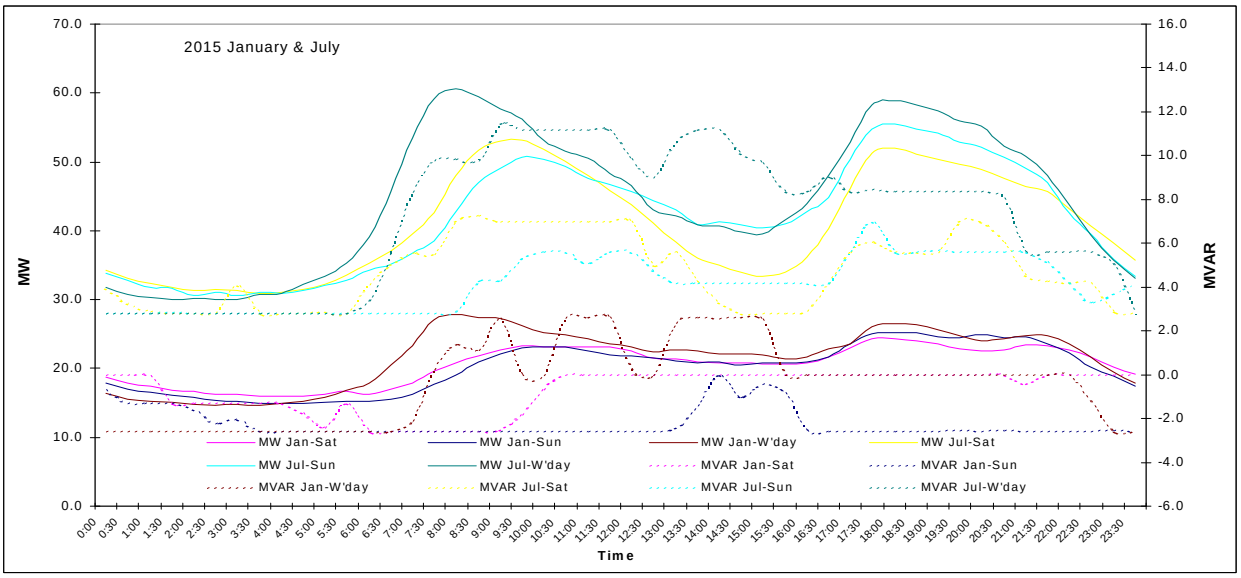







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.15 Kermandie

Description:

The Substation is located at Kermandie and is known as “Kermandie Substation”. The substation is owned by Transend.

Table 4-63 Kermandie Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	4	20	10

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-64 Kermandie Site Winter load forecast

Kermandie	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	6.23	6.48	6.10	6.34	6.23	6.48	6.26	6.51
2006	7.98	8.12	6.38	6.50	7.98	8.12	6.48	6.60
2007	6.81	7.04	6.02	6.23	6.81	7.04	6.13	6.34
2008	7.11	7.34	7.11	7.34	7.11	7.34	7.24	7.47
2009	7.21	7.48	7.15	7.42	7.21	7.48	7.27	7.54
2010	6.96	7.11	6.43	6.57	6.96	7.11	6.56	6.70
2011	7.25	7.41	6.69	6.84	7.34	7.51	6.78	6.93
2012	7.26	7.42	6.70	6.85	7.35	7.52	6.79	6.94
2013	7.25	7.41	6.69	6.84	7.35	7.51	6.79	6.94
2014	7.29	7.45	6.73	6.88	7.39	7.56	6.82	6.97
2015	7.33	7.49	6.77	6.92	7.44	7.60	6.87	7.02
2016	7.39	7.56	6.82	6.97	7.50	7.66	6.92	7.07
2017	7.45	7.62	6.88	7.03	7.56	7.73	6.98	7.13
2018	7.54	7.71	6.96	7.12	7.65	7.82	7.06	7.22
2019	7.65	7.82	7.06	7.22	7.77	7.94	7.17	7.33
2020	7.78	7.95	7.18	7.34	7.90	8.07	7.29	7.45

Table 4-65 Kermandie Site Summer load forecast

Kermandie	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	4.80	5.27	4.53	4.97	4.80	5.27	4.57	5.01
2006	4.82	4.91	4.40	4.48	4.82	4.91	4.40	4.48
2007	4.96	5.33	4.70	5.05	4.96	5.33	4.75	5.10
2008	5.04	5.26	5.04	5.26	5.04	5.26	5.10	5.32
2009	5.29	5.56	5.29	5.56	5.29	5.56	5.38	5.65
2010	5.06	5.30	5.01	5.25	5.06	5.30	5.06	5.30
2011	5.04	5.28	4.99	5.23	5.17	5.43	5.12	5.37
2012	5.17	5.42	5.12	5.37	5.31	5.57	5.26	5.52
2013	5.21	5.46	5.16	5.41	5.35	5.62	5.30	5.56
2014	5.19	5.45	5.14	5.39	5.33	5.59	5.28	5.54
2015	5.26	5.52	5.21	5.47	5.41	5.67	5.35	5.61
2016	5.24	5.49	5.18	5.44	5.38	5.65	5.33	5.59
2017	5.41	5.67	5.35	5.62	5.55	5.82	5.50	5.77
2018	5.50	5.77	5.44	5.71	5.65	5.92	5.59	5.86
2019	5.59	5.87	5.54	5.81	5.74	6.02	5.68	5.96
2020	5.70	5.98	5.64	5.92	5.85	6.14	5.79	6.07

Figure 4-75 Kermandie Site Summer Load Forecast at 50% and 10% POE

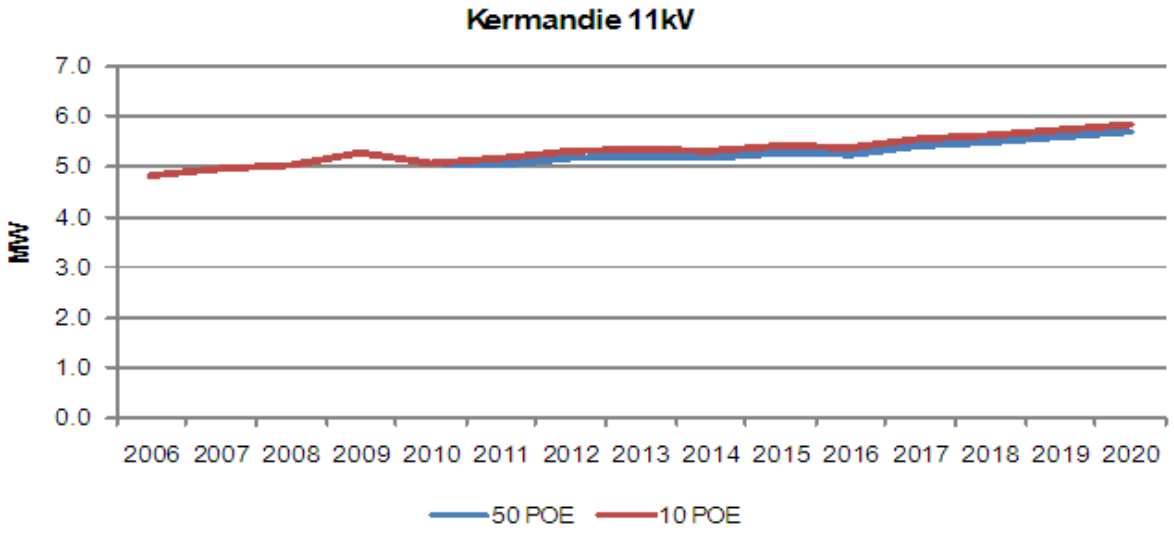
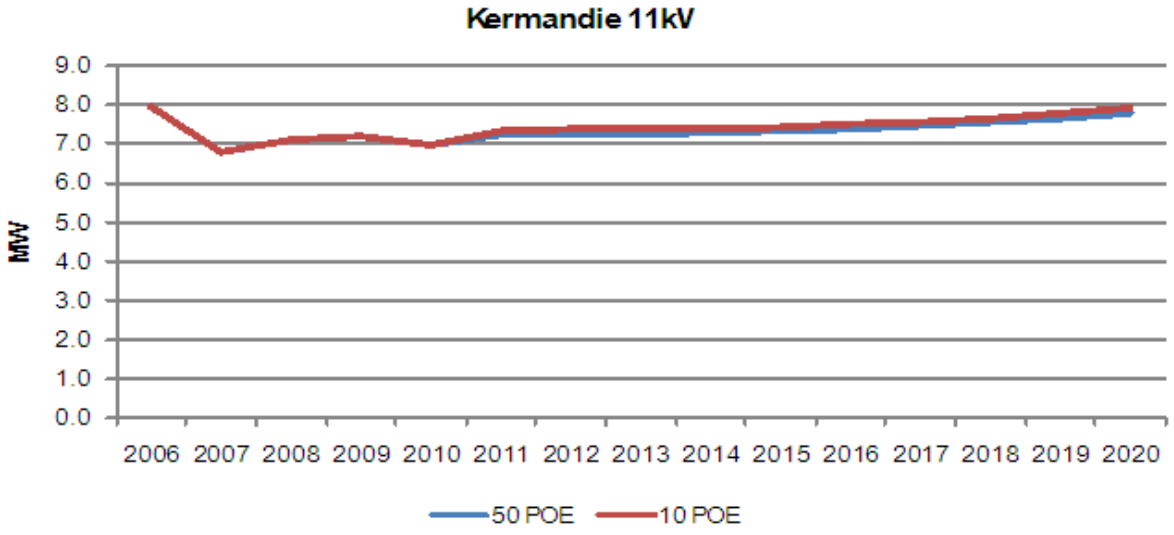
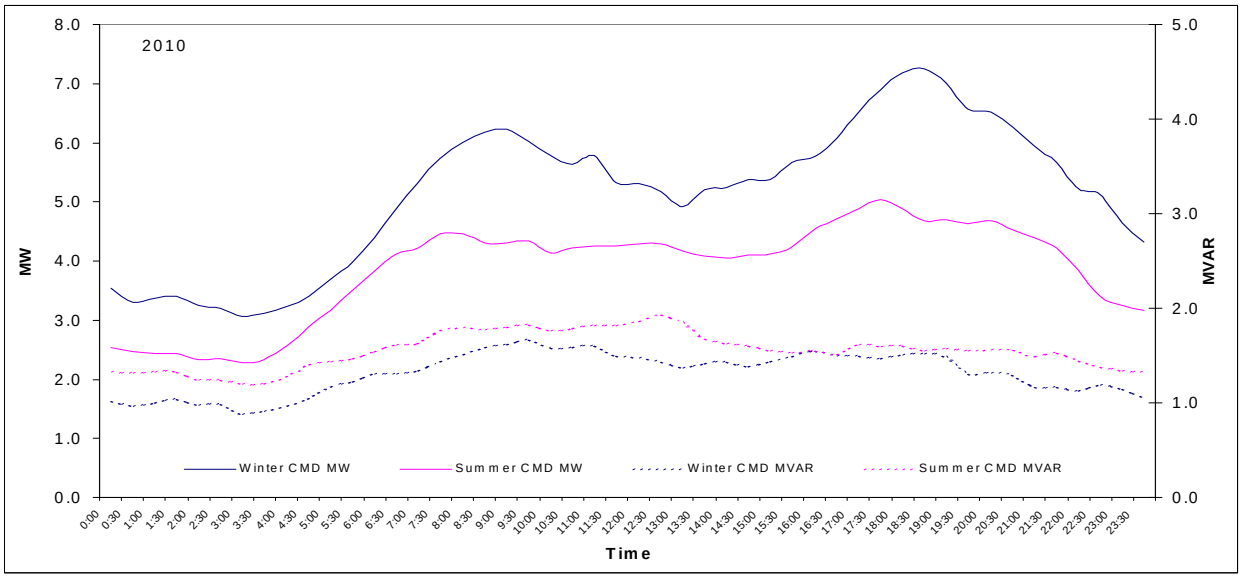


Figure 4-76 Kermandie Site Winter Load Forecast at 50% and 10% POE

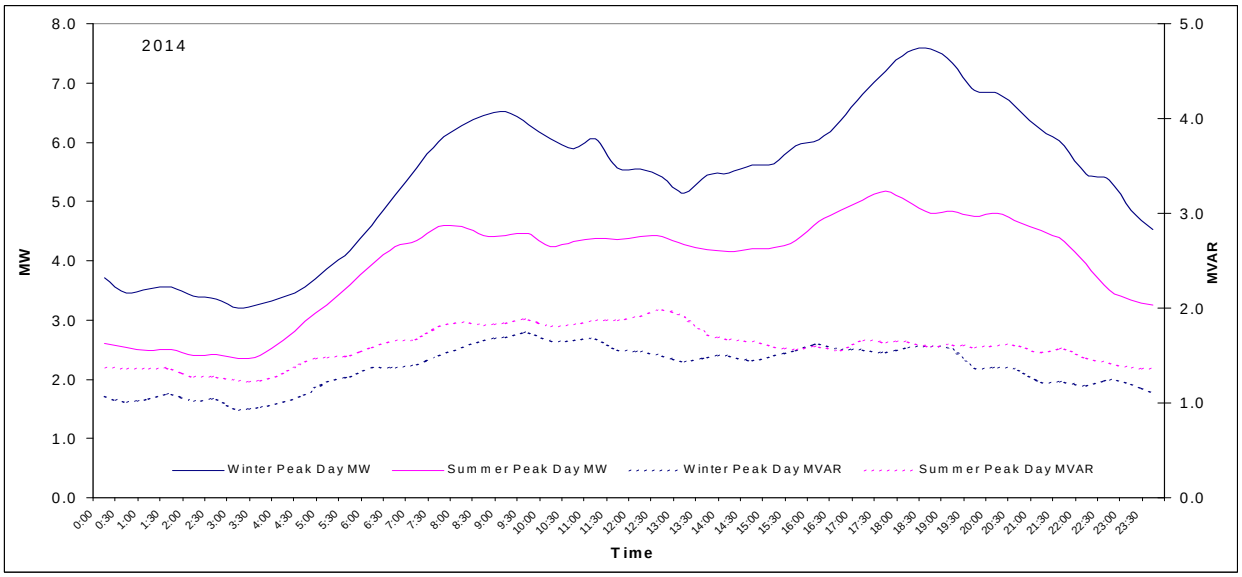


Load Profiles:

Figure 4-77 Load Profiles: Kermandie Substation Day of Summer/Winter Peak Demand




2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

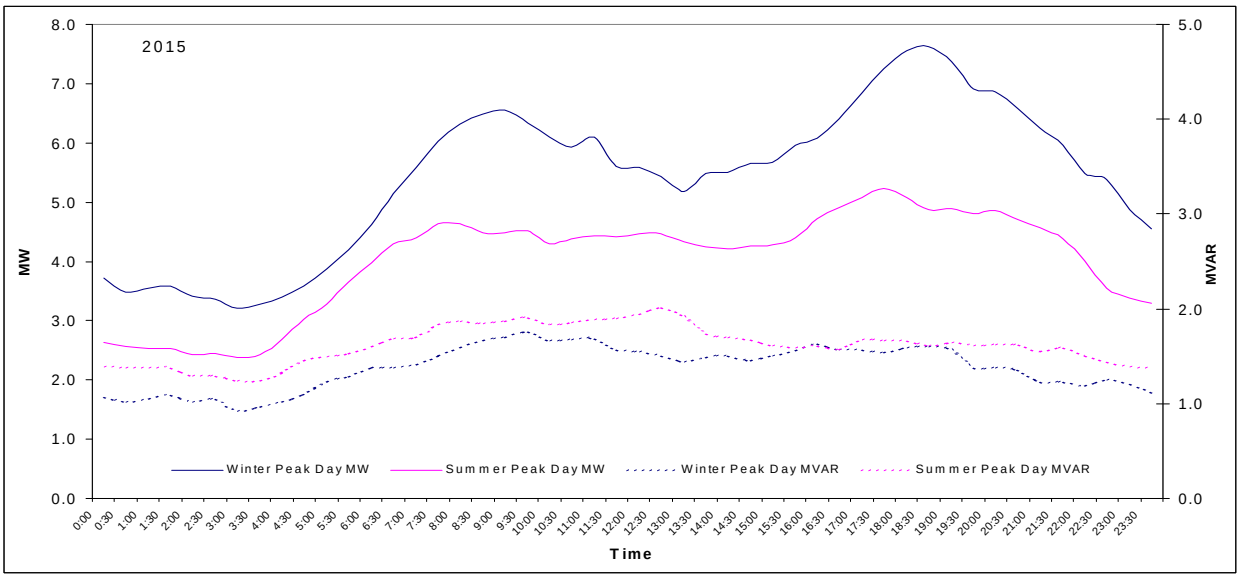
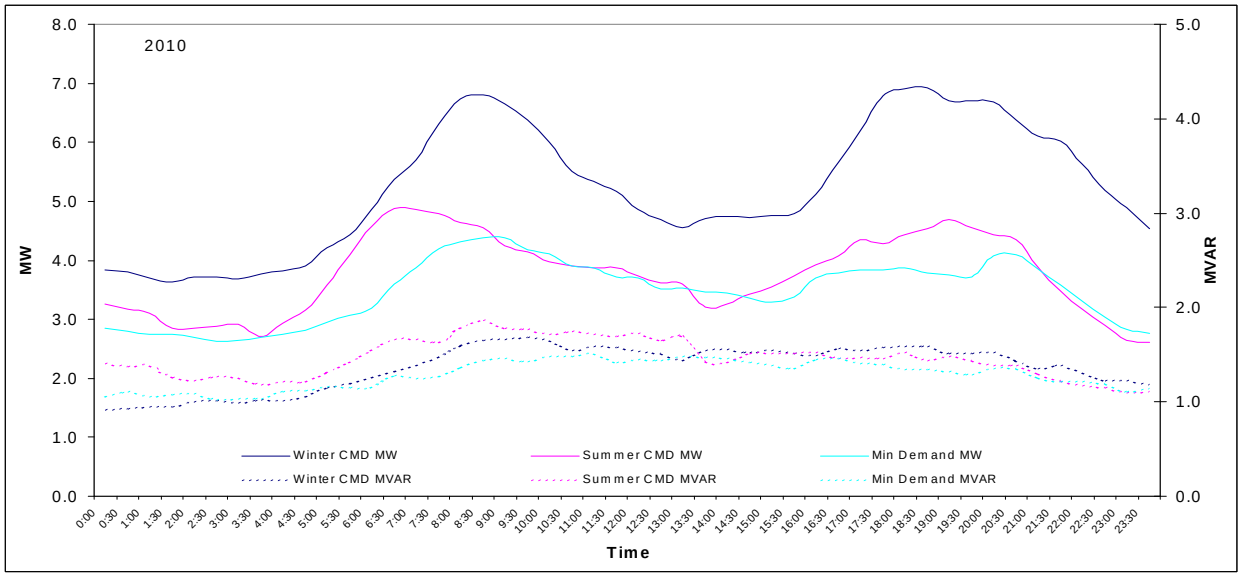
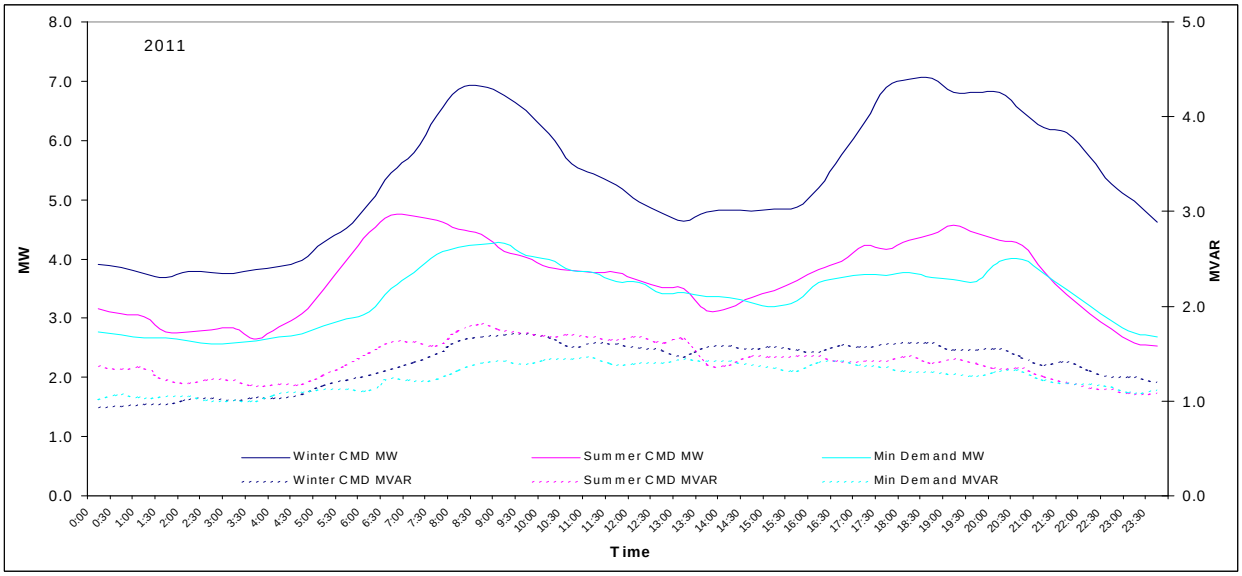
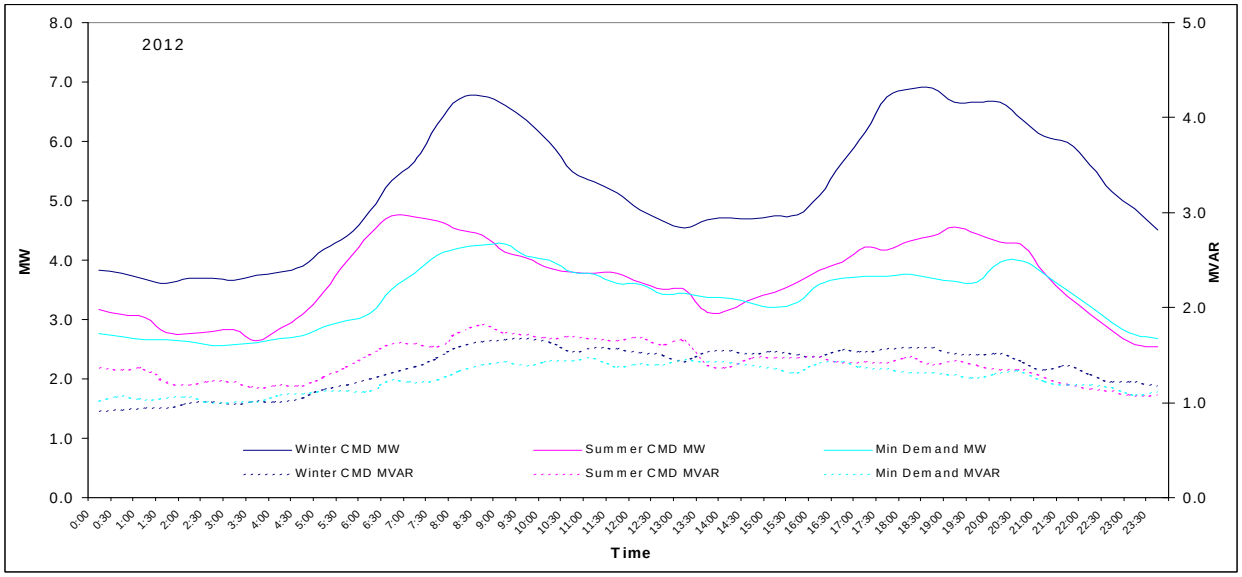
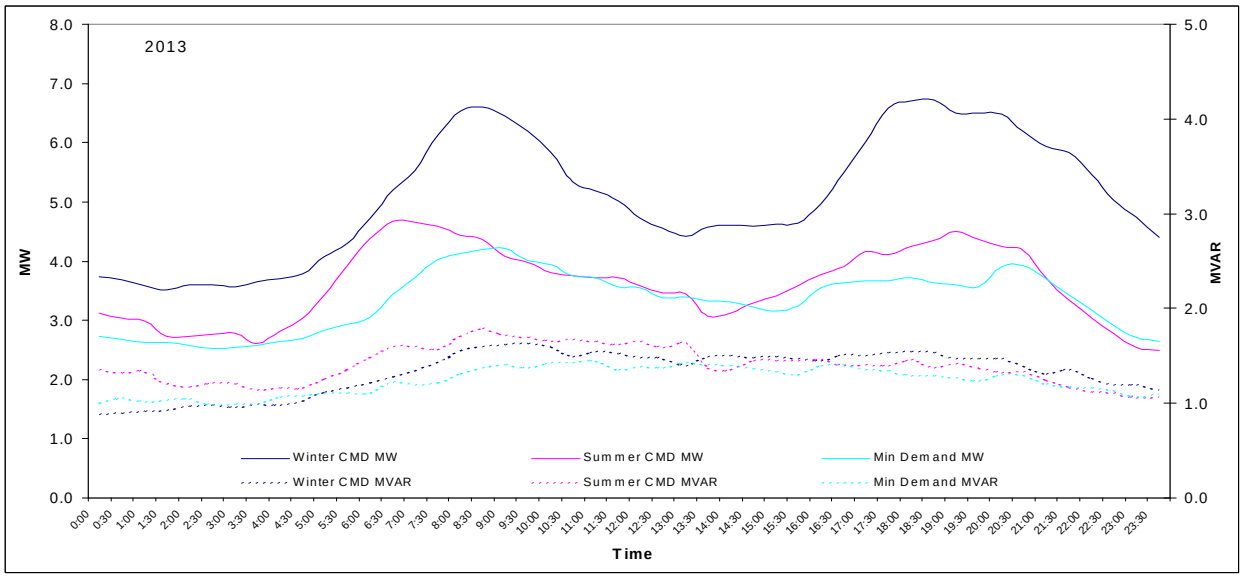

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

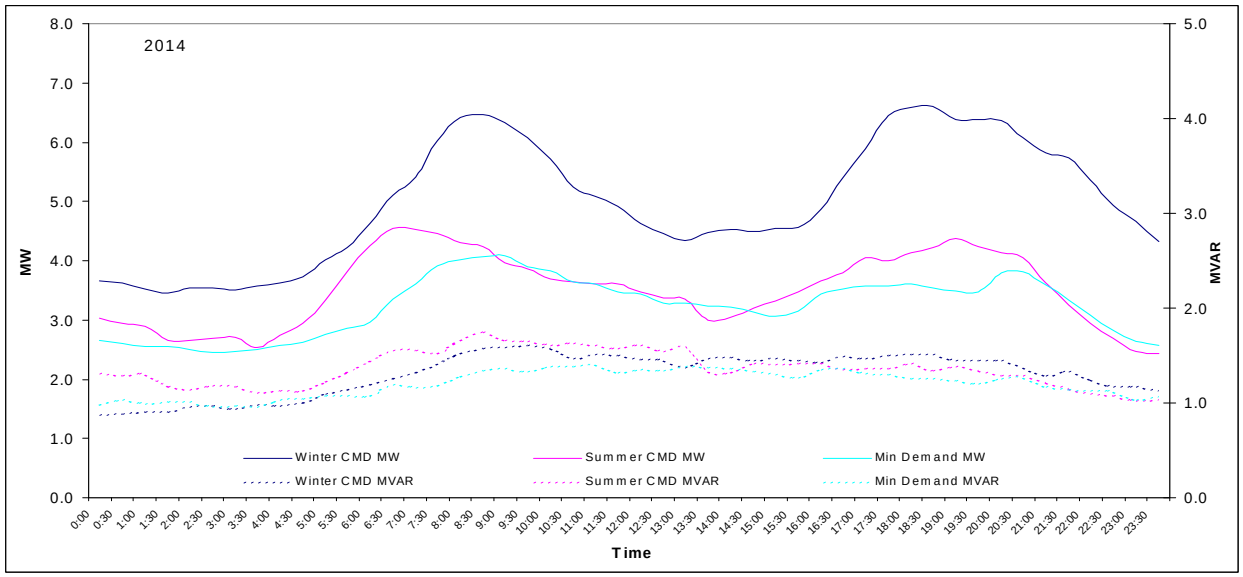
Figure 4-78 Load Profiles: Kermandie Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

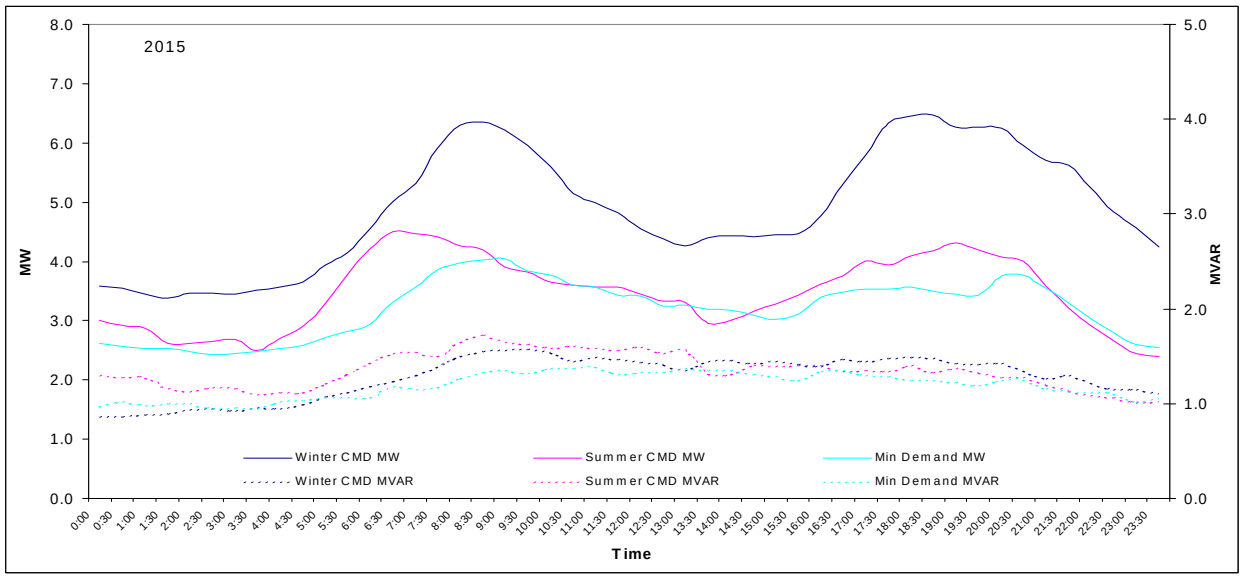
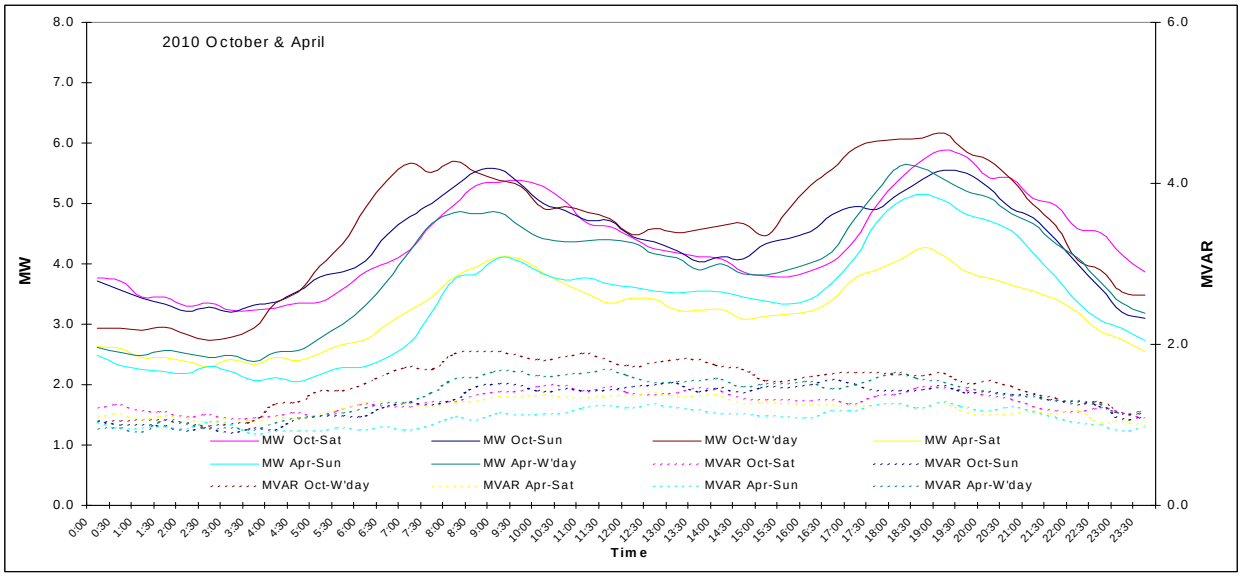
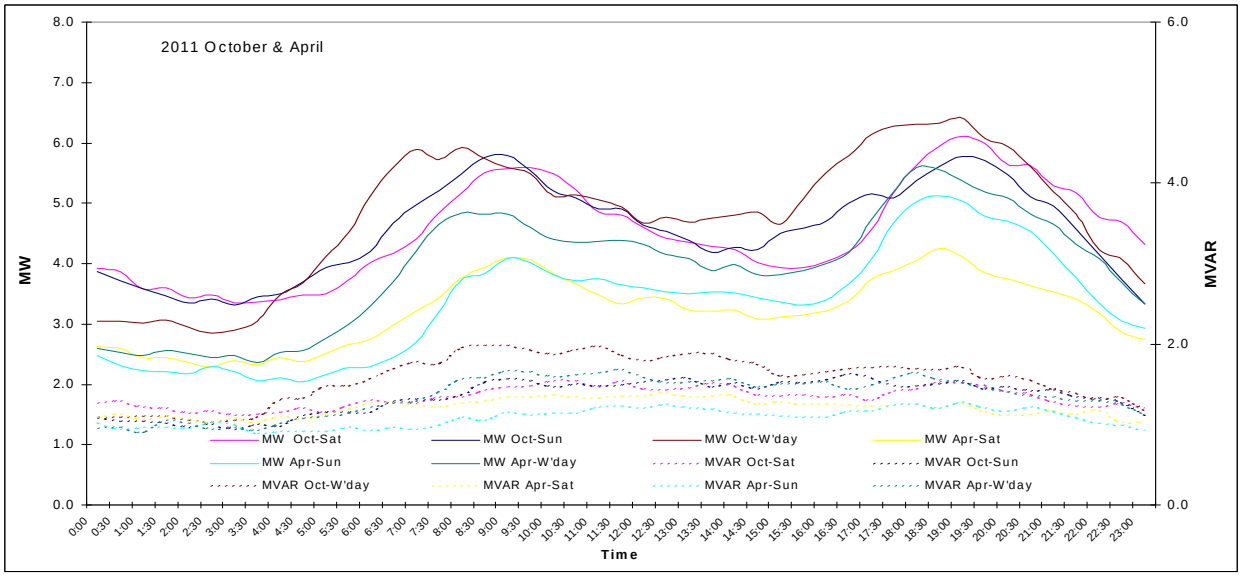
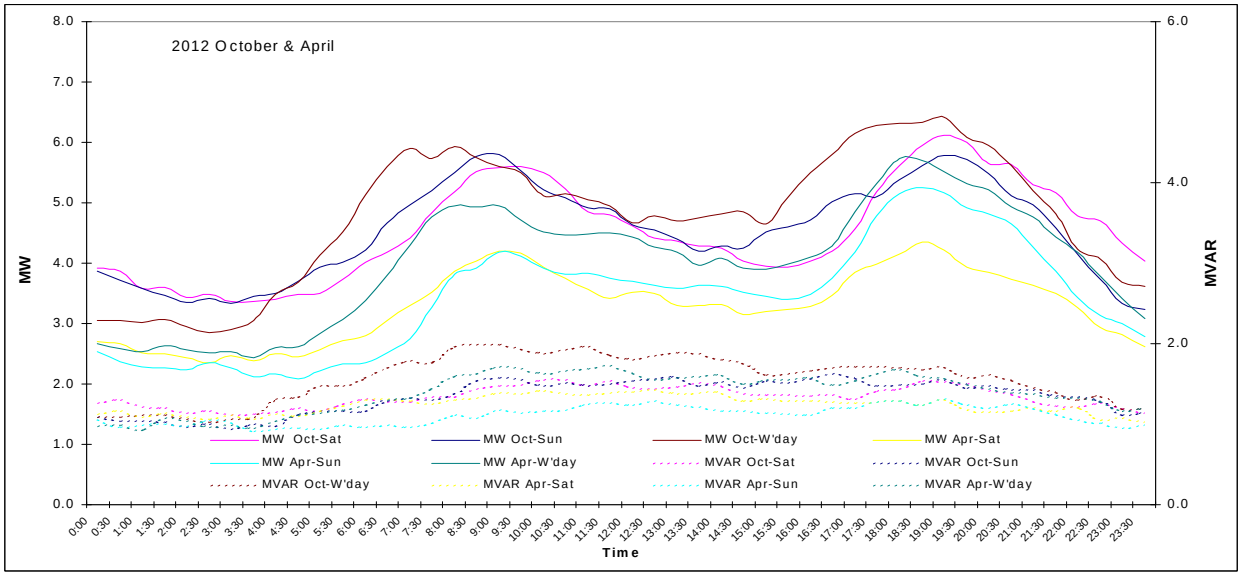
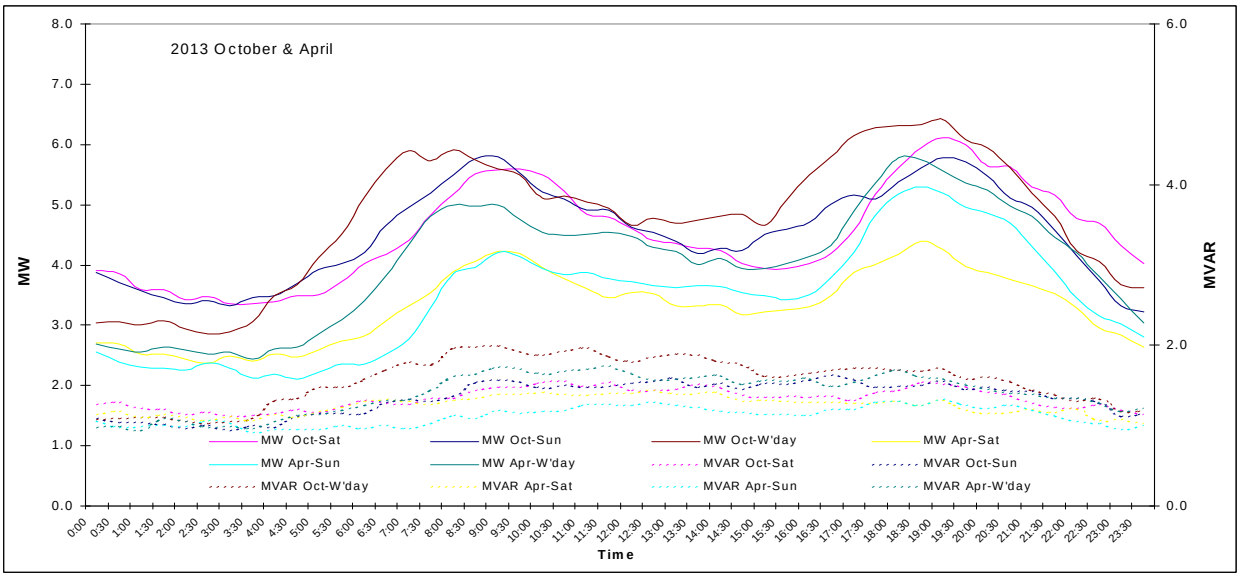

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

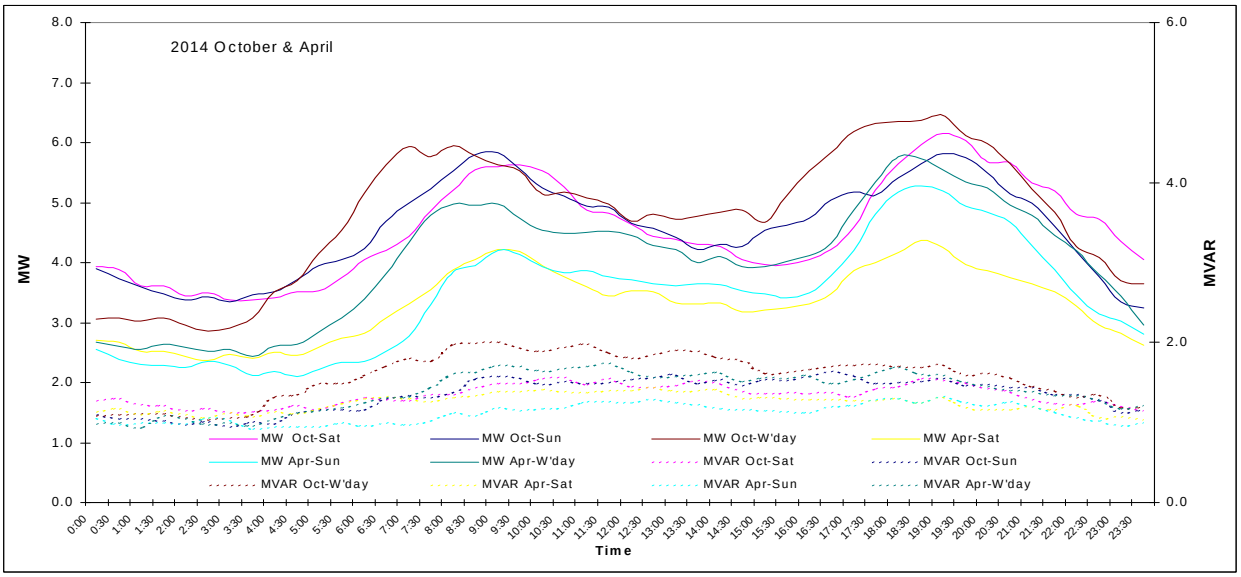
Figure 4-79 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

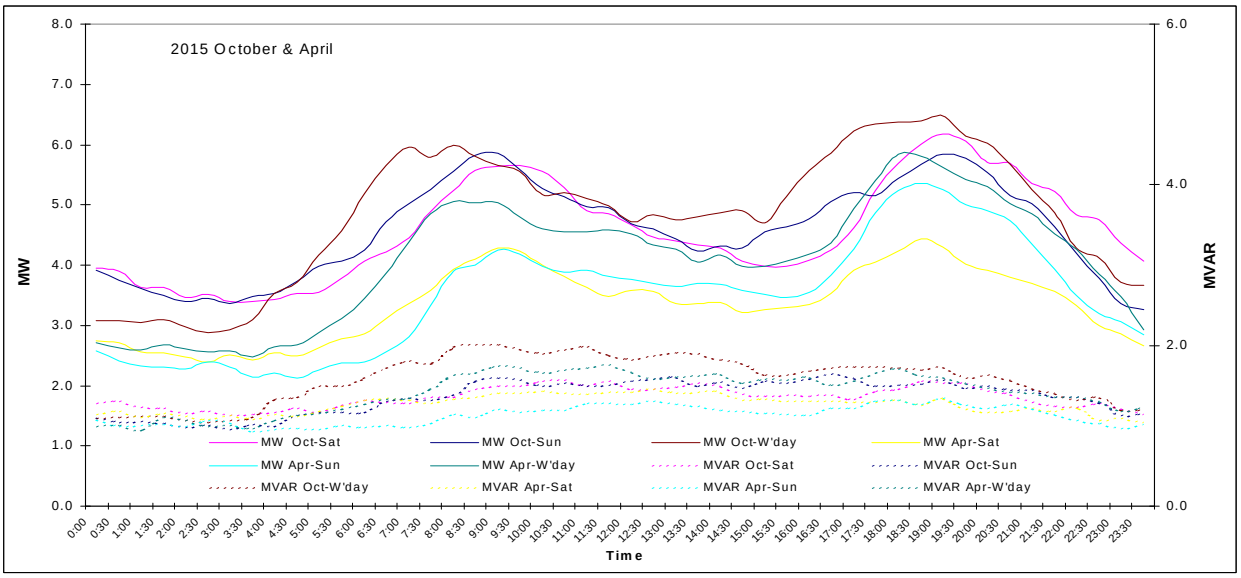
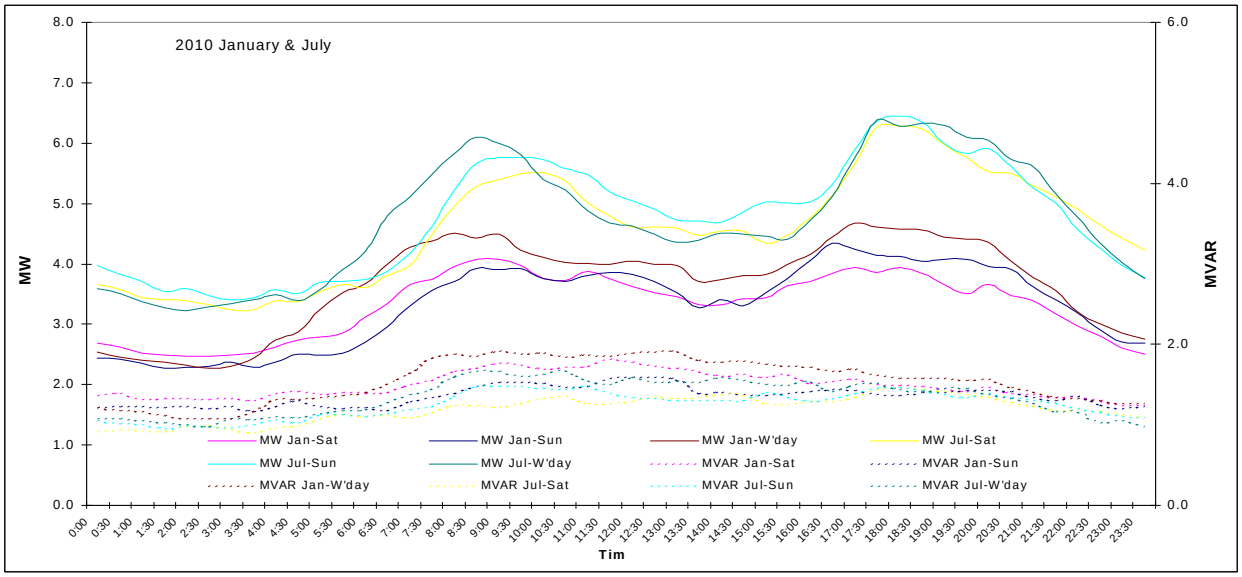
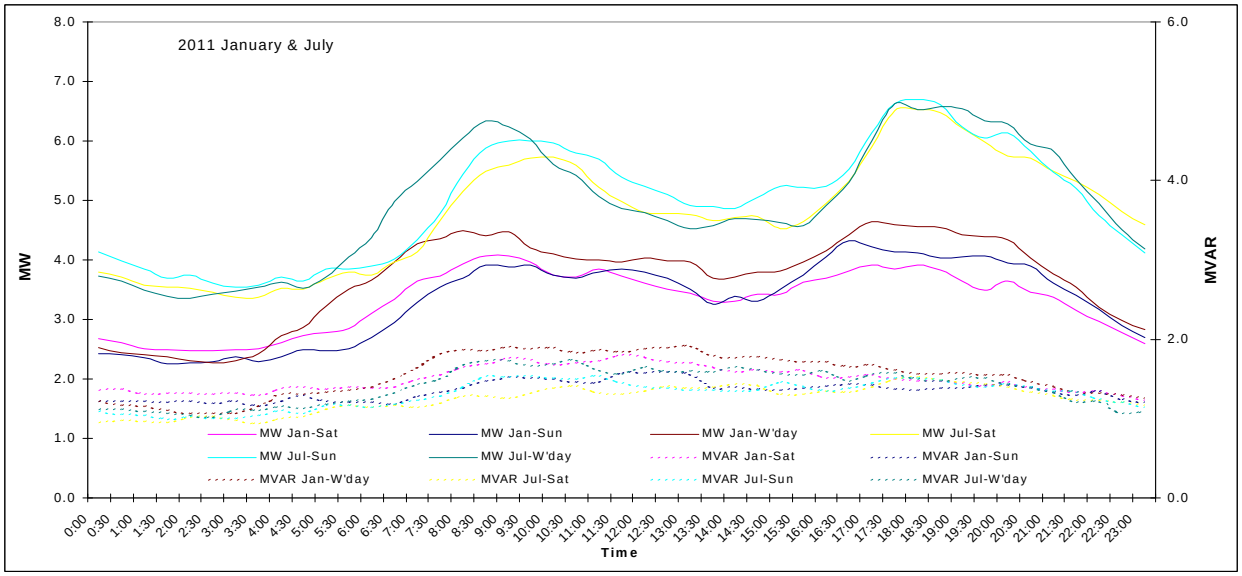
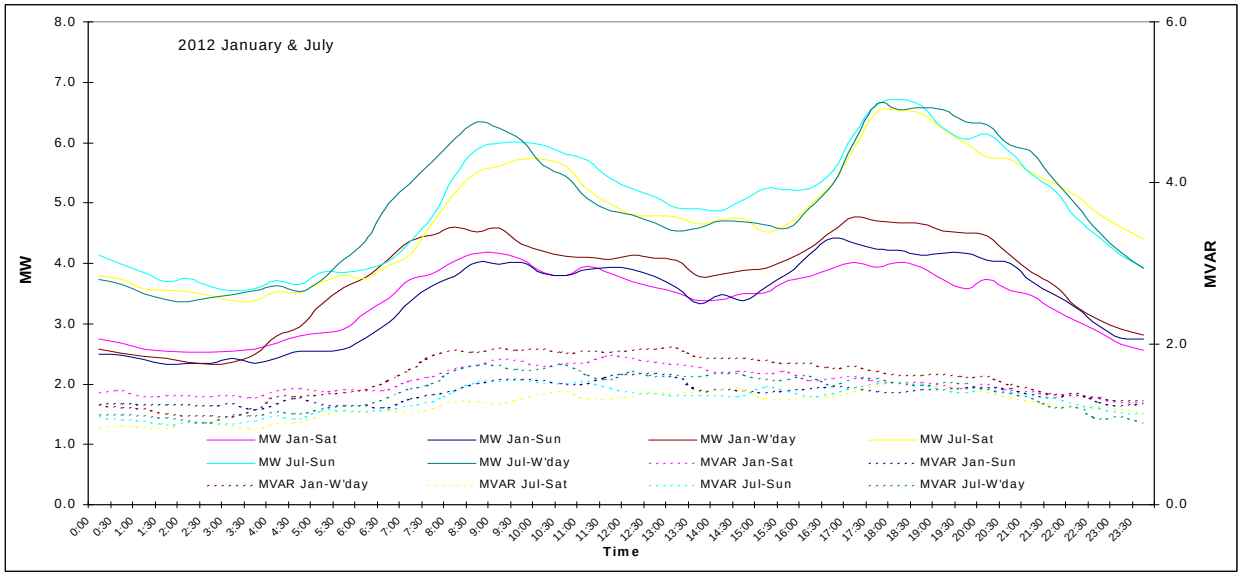
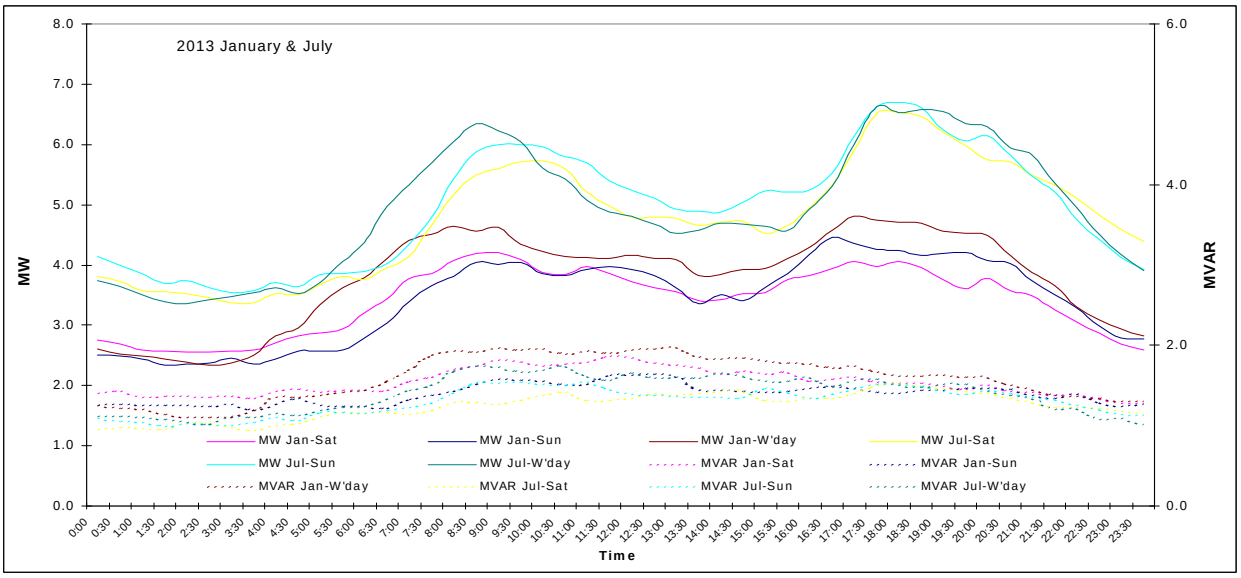

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

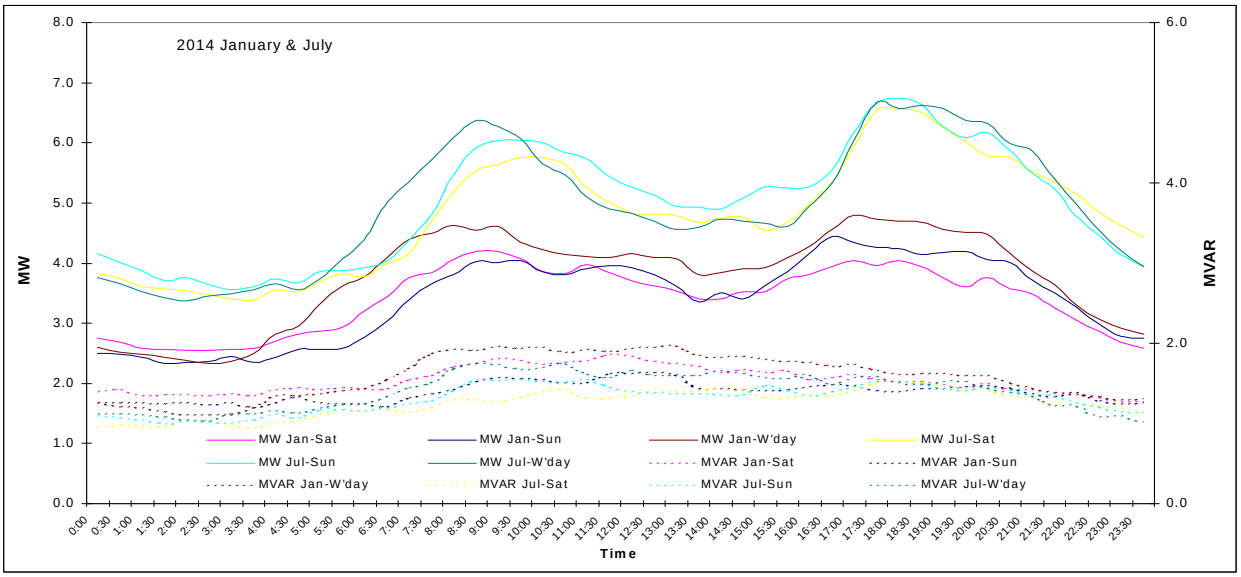
Figure 4-80 Load Profiles: Weekday, Saturday, Sunday for January & July

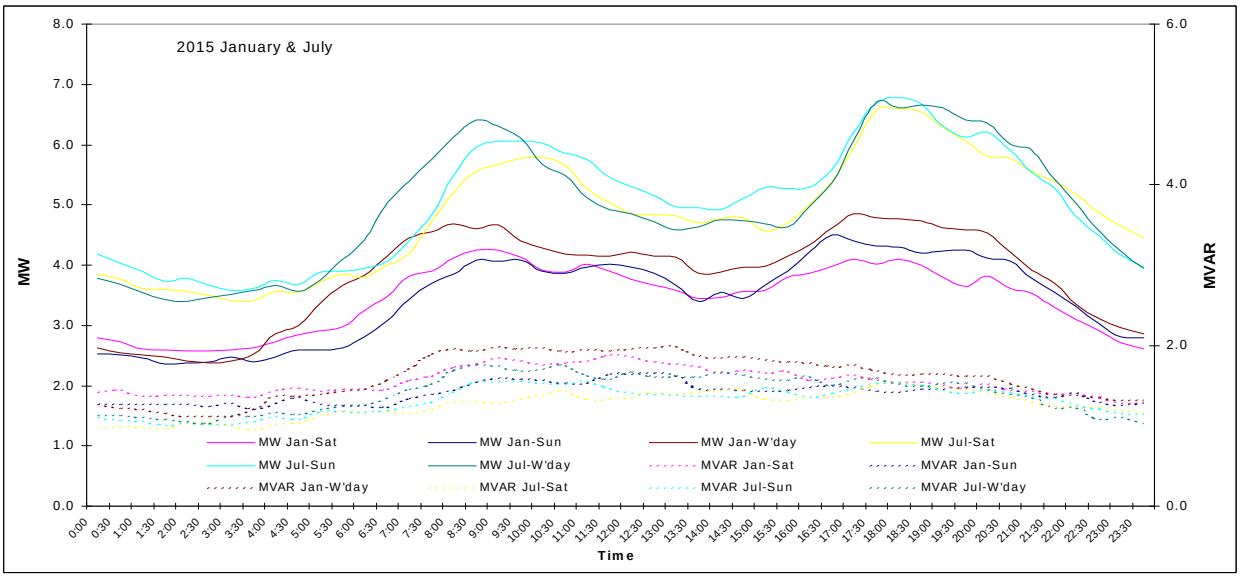







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.16 Kingston

Description:

The Substation is located at Kingston and is known as “Kingston Substation”. The substation is owned by Transend.

Table 4-66 Kingston Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	12	70	35

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

The following confirmed material point loads that will affect both the summer and winter peak demands have been included in the forecast:

December 2010, 1.5 MW UTAS facility at Taroona

December 2012, 2.0 MW retail centre at Kingston.

Permanent Load Transfers:

Material historic load transfers that have been included in the forecast for this connection site:

2.0 MW of load affecting winter peak demand transferred to Electrona Substation prior to the 2010.

1.0 MW of load affecting summer peak demand transferred to Electrona Substation prior to the 2010.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-67 Kingston Site Winter load forecast

Kingston	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	38.80	39.62	35.69	36.45	38.80	39.62	36.44	37.21
2006	38.08	38.65	35.80	36.34	38.08	38.65	36.62	37.17
2007	40.67	41.43	40.67	41.43	40.67	41.43	41.63	42.41
2008	42.48	43.08	42.48	43.08	42.48	43.08	43.64	44.26
2009	39.42	39.82	39.42	39.82	39.42	39.82	40.37	40.78
2010	37.15	37.97	34.48	35.25	37.15	37.97	35.40	36.18
2011	40.18	41.07	37.30	38.13	40.93	41.84	38.00	38.84
2012	40.19	41.08	37.31	38.13	40.94	41.85	38.00	38.84
2013	42.15	43.08	39.12	39.99	42.91	43.86	39.84	40.72
2014	42.37	43.31	39.33	40.20	43.12	44.07	40.03	40.91
2015	42.57	43.51	39.52	40.39	43.35	44.31	40.24	41.14
2016	42.89	43.84	39.81	40.70	43.67	44.63	40.53	41.43
2017	43.21	44.17	40.11	41.00	44.01	44.99	40.85	41.76
2018	43.70	44.67	40.57	41.47	44.49	45.48	41.30	42.21
2019	44.31	45.29	41.13	42.05	45.16	46.16	41.92	42.85
2020	45.04	46.04	41.81	42.73	45.88	46.89	42.58	43.53

Table 4-68 Kingston Site Summer load forecast

Kingston	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	29.94	30.84	29.94	30.84	29.94	30.84	30.39	31.31
2006	21.81	22.83	19.99	20.92	21.81	22.83	20.20	21.14
2007	21.48	21.70	20.08	20.29	21.48	21.70	20.42	20.63
2008	24.53	24.80	24.53	24.80	24.53	24.80	25.13	25.40
2009	26.44	26.76	26.44	26.76	26.44	26.76	26.98	27.30
2010	27.93	28.18	27.93	28.18	27.93	28.18	29.16	29.42
2011	29.19	29.45	29.19	29.45	30.93	31.20	30.93	31.20
2012	31.82	32.10	31.82	32.10	33.62	33.92	33.62	33.92
2013	33.92	34.22	33.92	34.22	35.77	36.09	35.77	36.09
2014	33.69	33.99	33.69	33.99	35.47	35.79	35.47	35.79
2015	34.01	34.31	34.01	34.31	35.81	36.13	35.81	36.13
2016	33.69	33.99	33.69	33.99	35.51	35.82	35.51	35.82
2017	34.66	34.97	34.66	34.97	36.47	36.79	36.47	36.79
2018	35.11	35.42	35.11	35.42	36.95	37.28	36.95	37.28
2019	35.59	35.90	35.59	35.90	37.43	37.76	37.43	37.76
2020	36.14	36.46	36.14	36.46	37.98	38.32	37.98	38.32

Figure 4-81 Kingston Site Summer Load Forecast at 50% and 10% POE

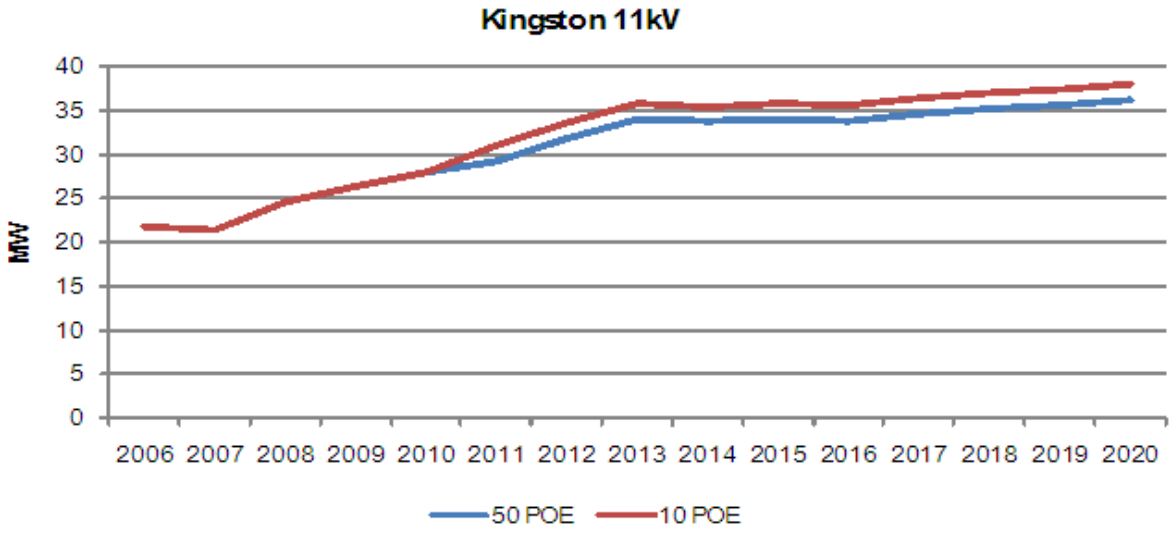
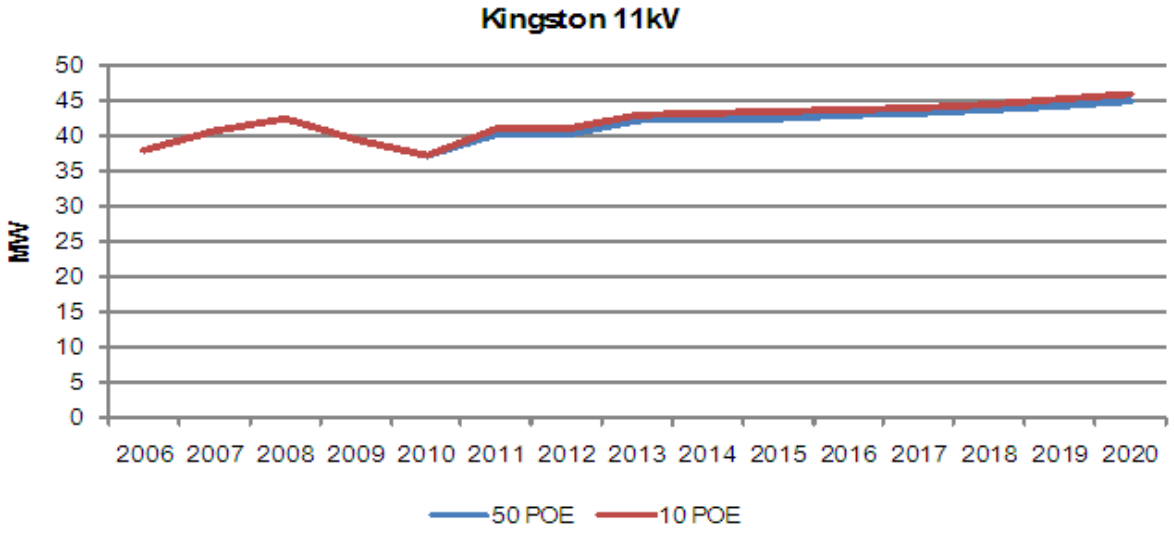
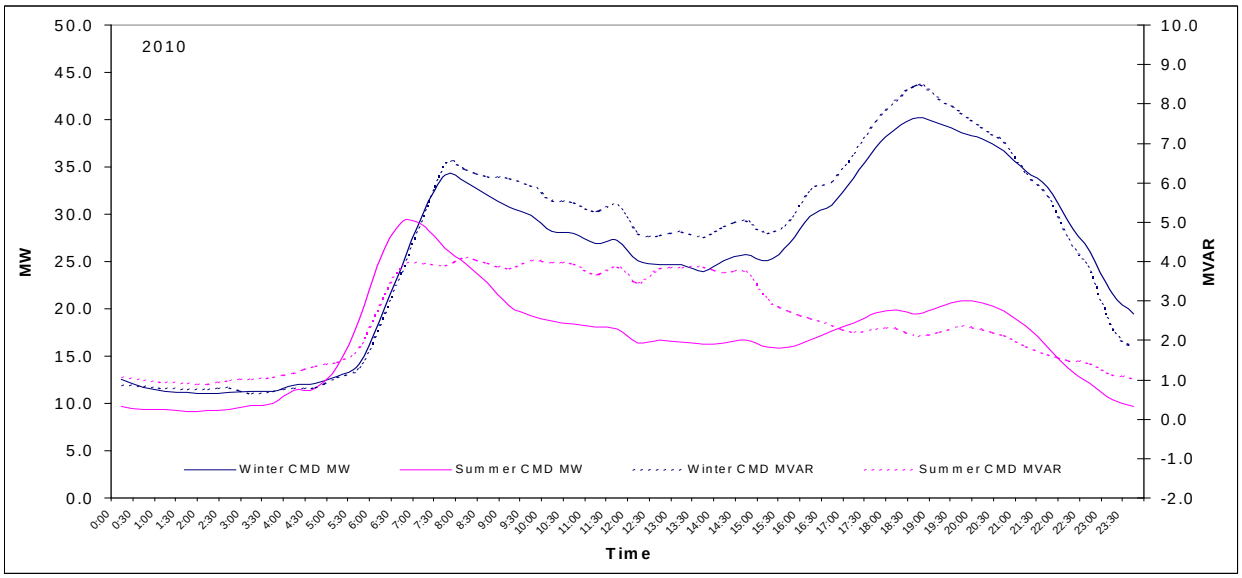


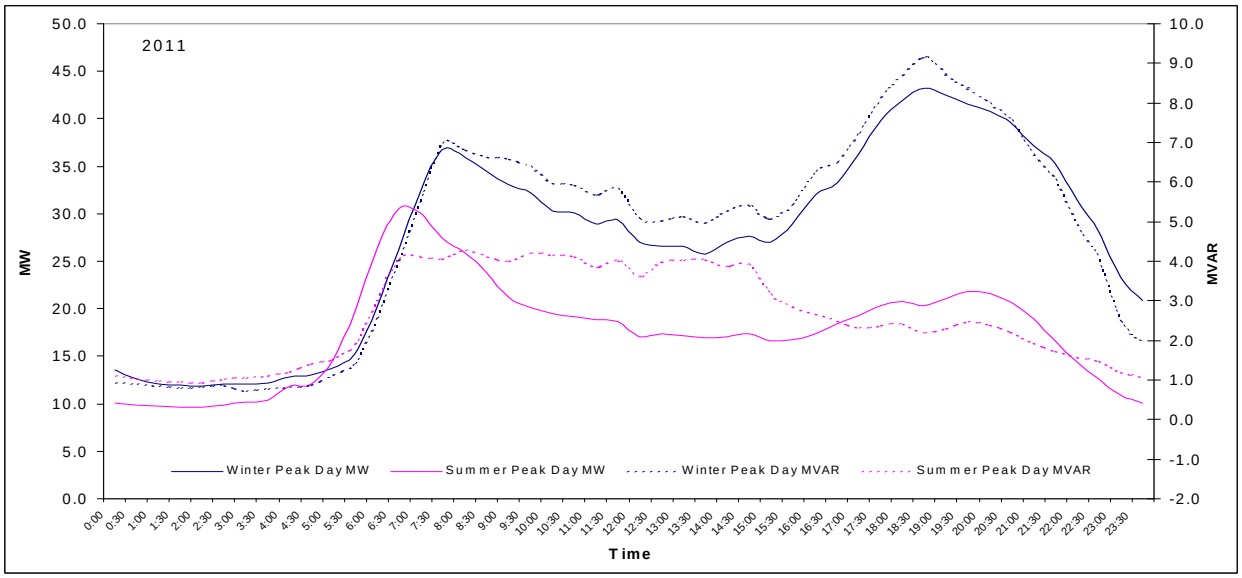
Figure 4-82 Kingston Site Winter Load Forecast at 50% and 10% POE

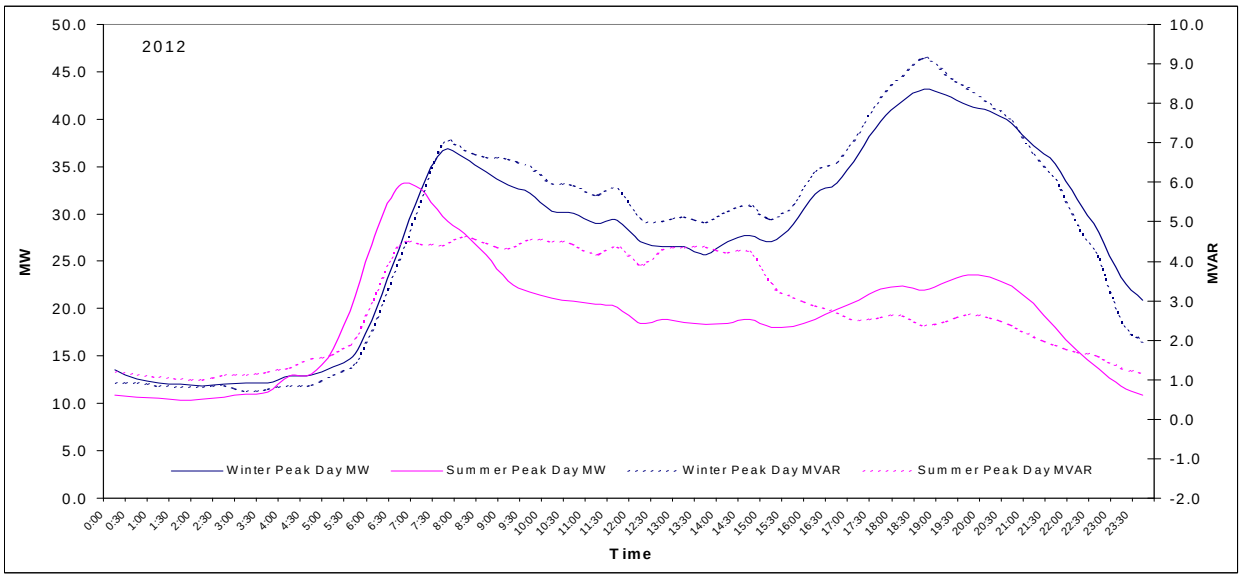


Load Profiles:

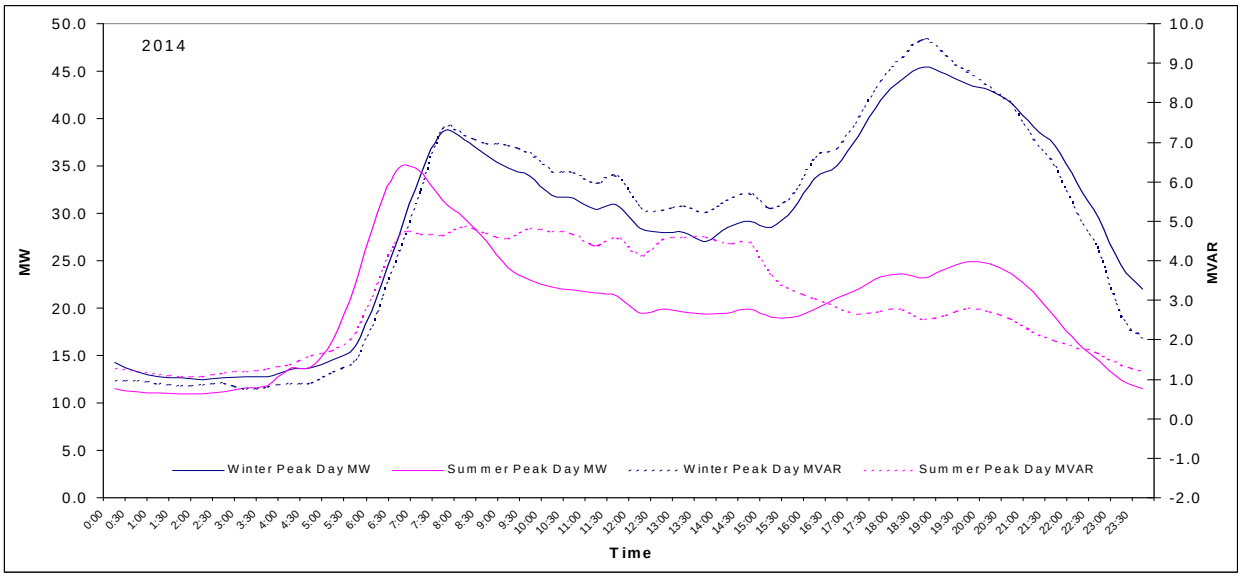
Figure 4-83 Load Profiles: Kingston Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

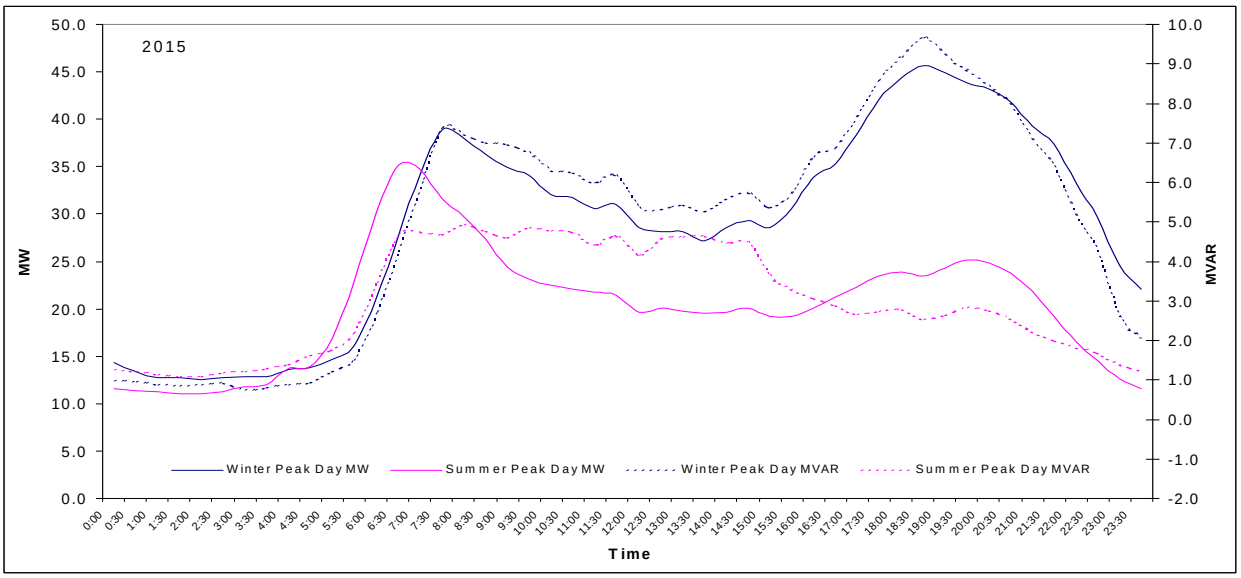
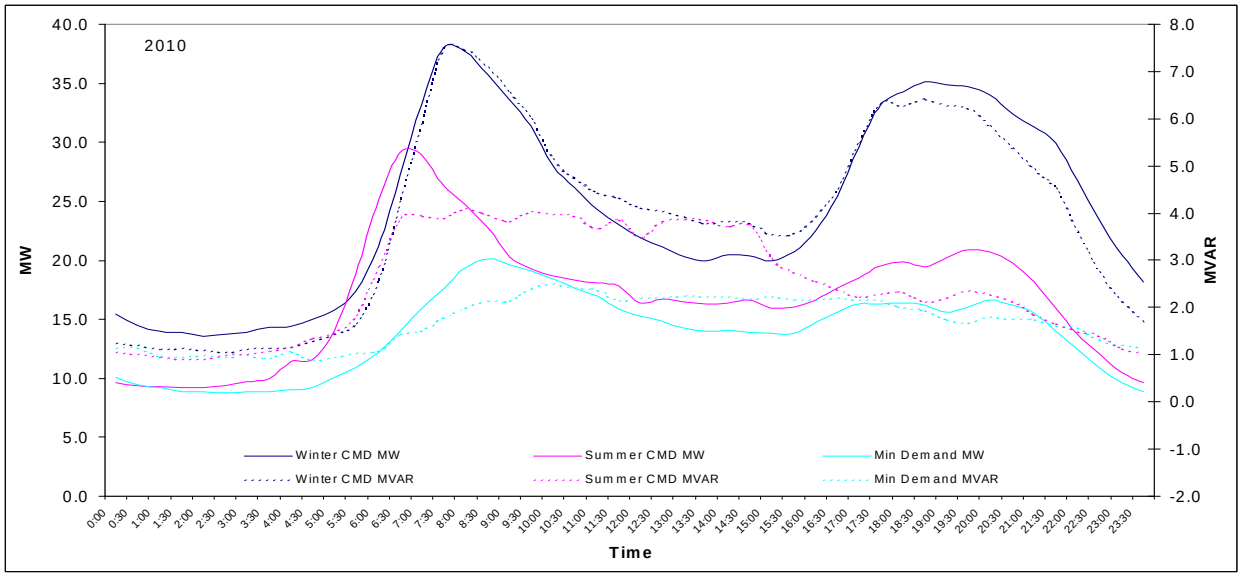
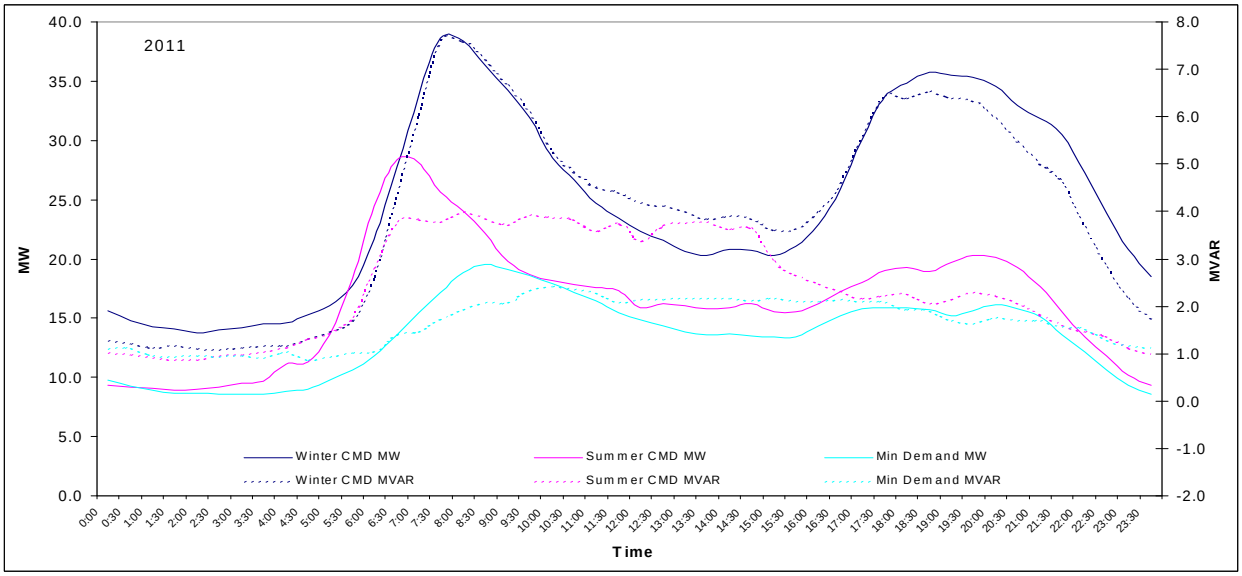
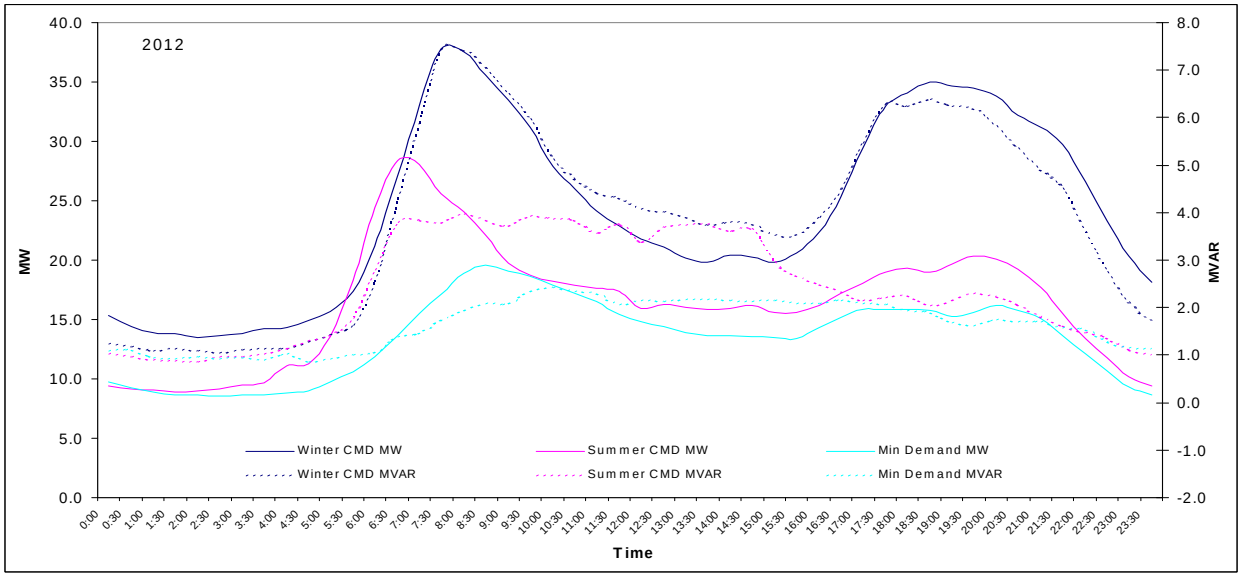
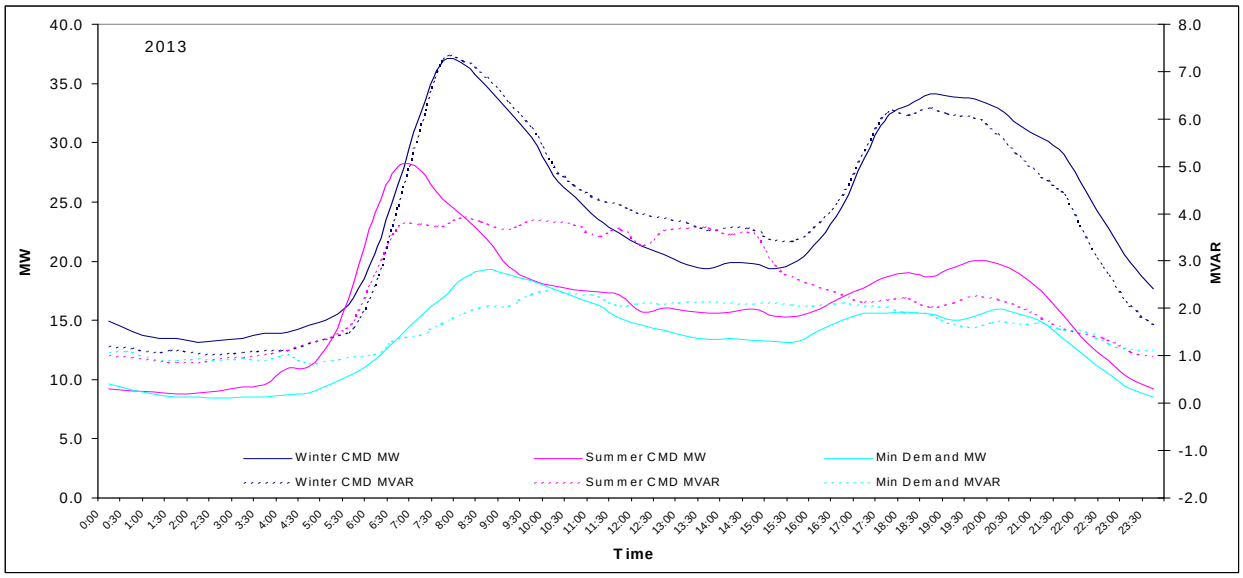

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

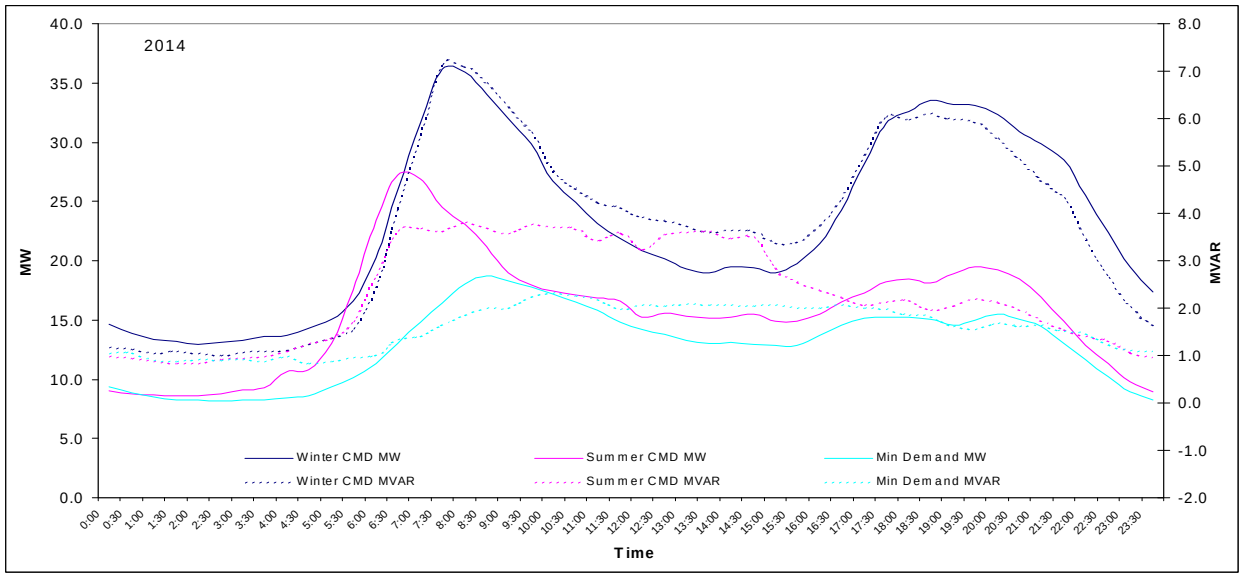
Figure 4-84 Load Profiles Kingston Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

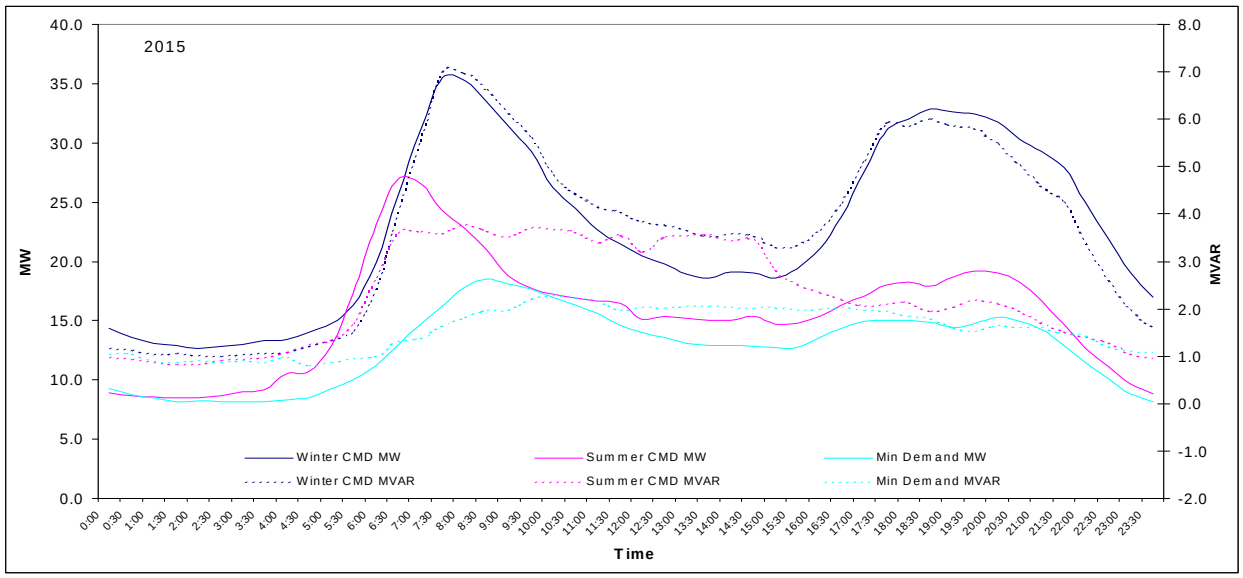
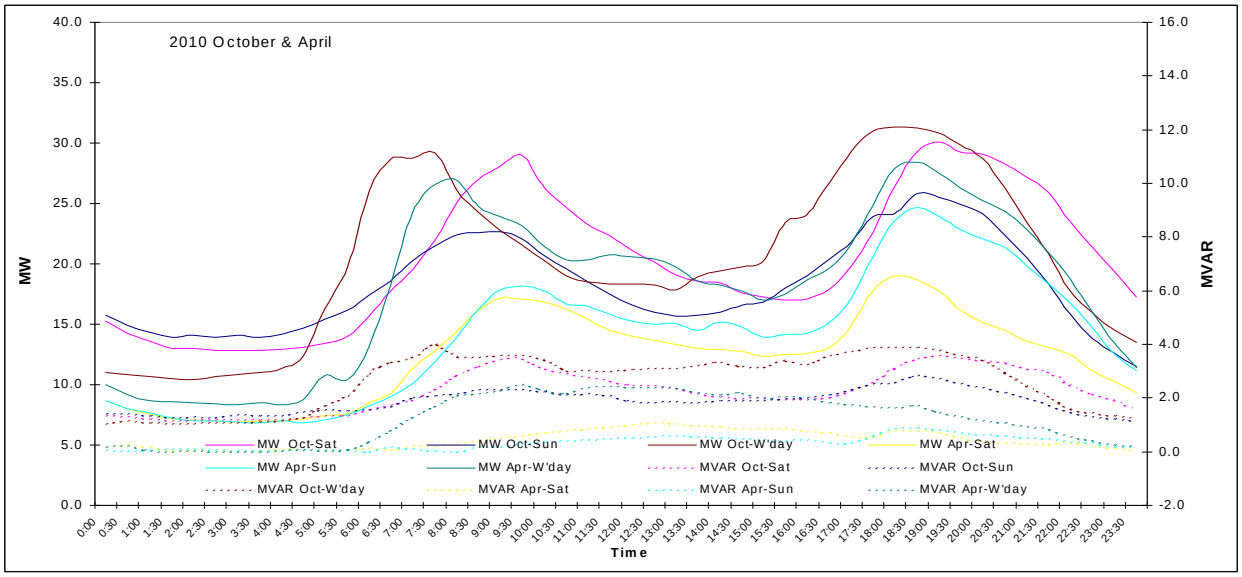
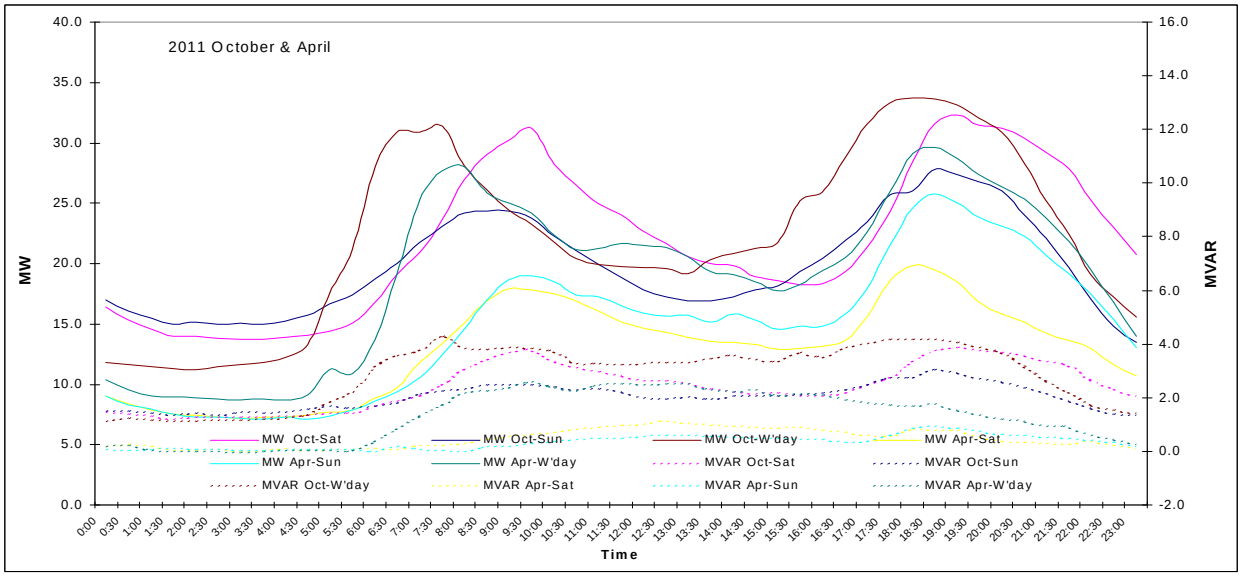
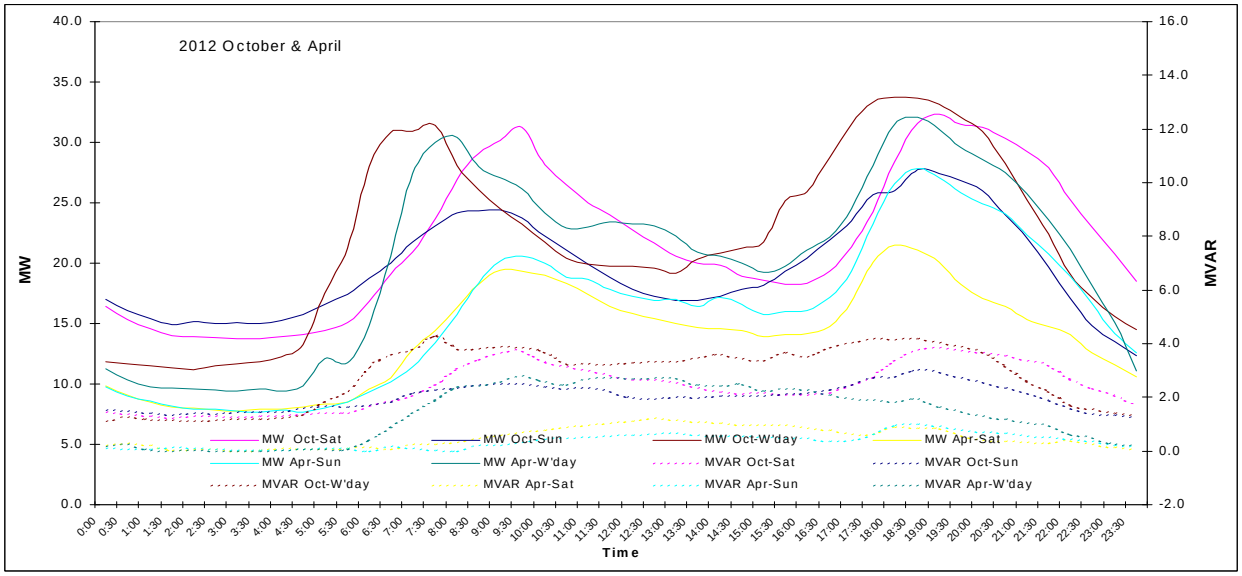
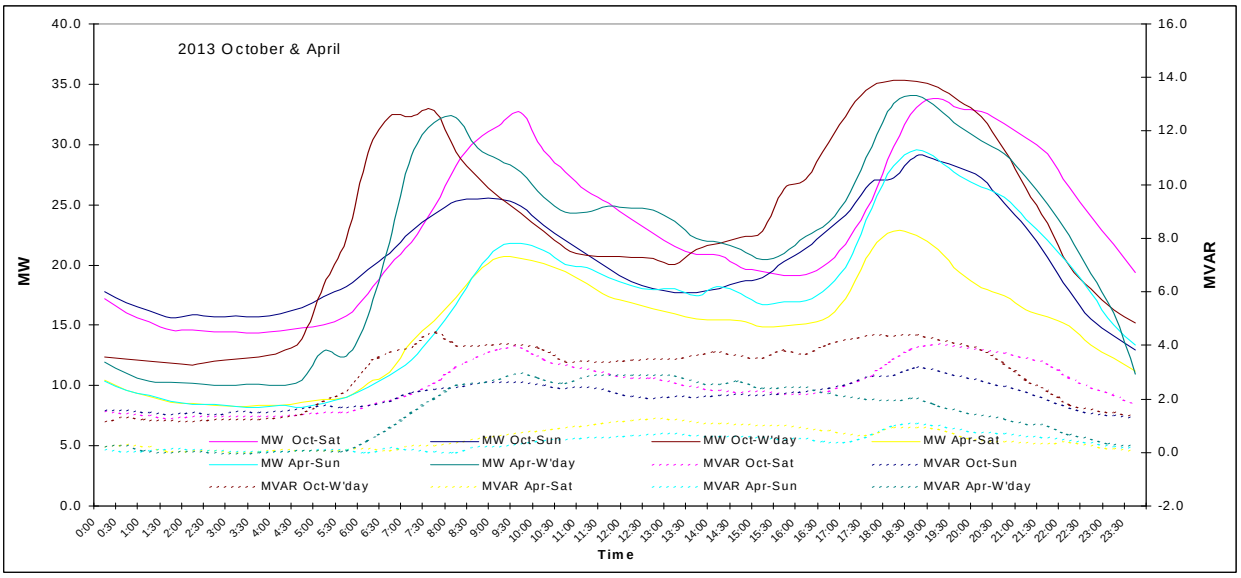

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

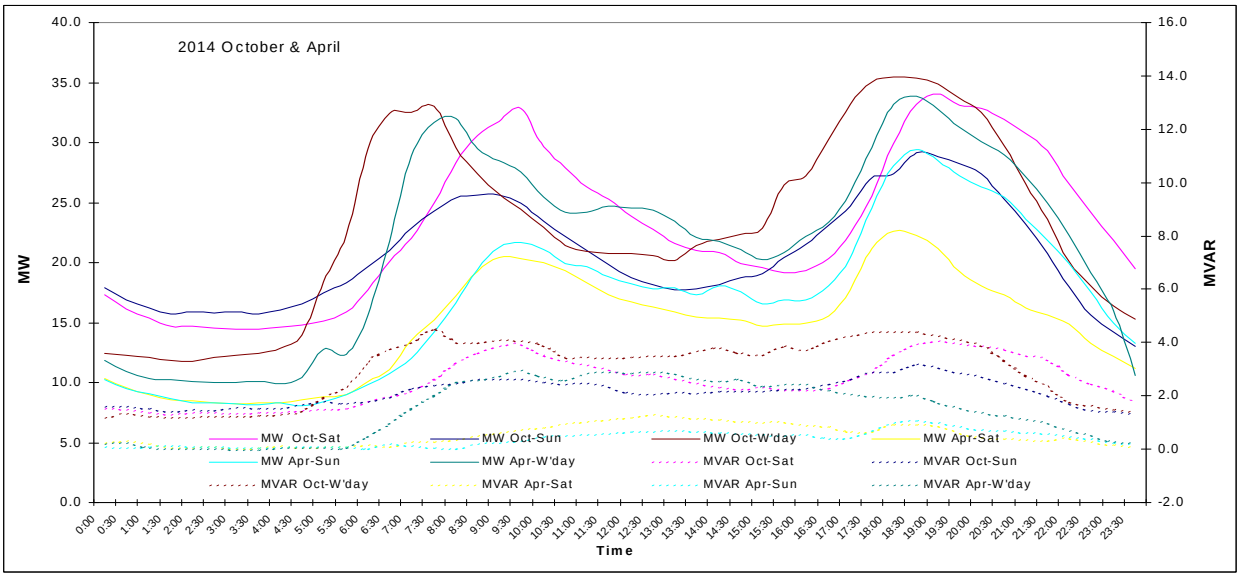
Figure 4-85 Load Profiles: Weekday, Saturday, Sunday for October & April











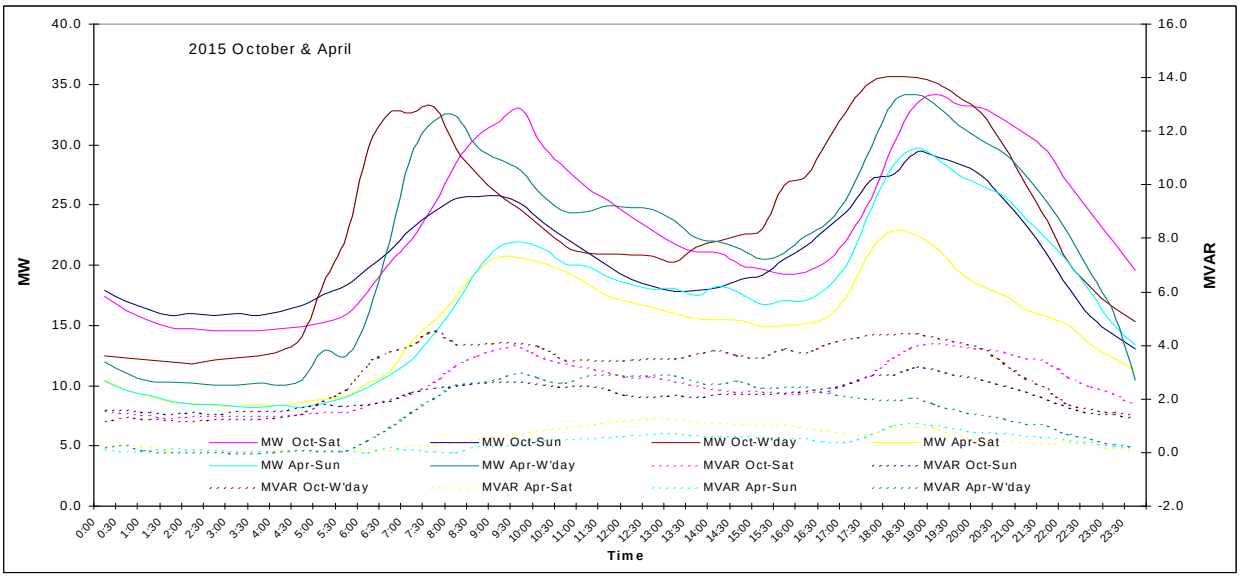
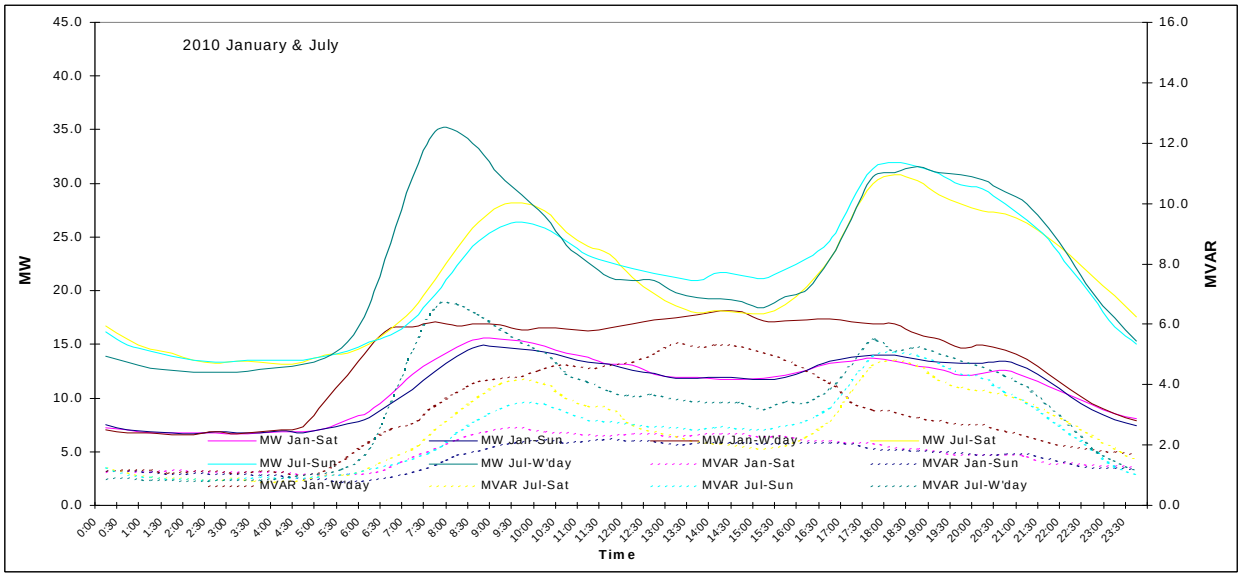
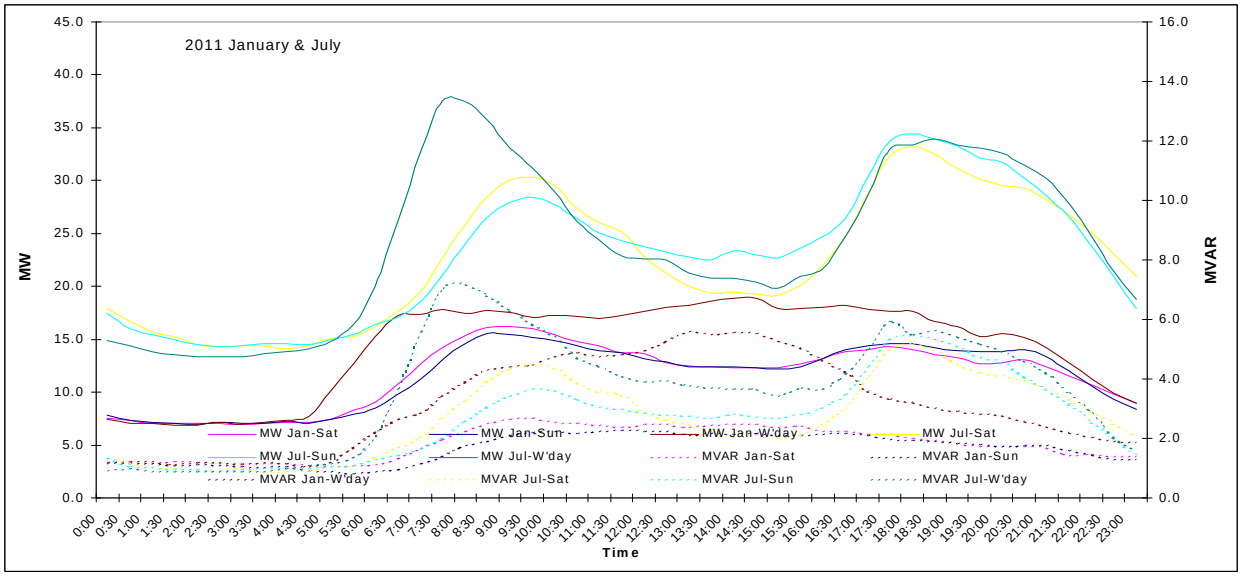
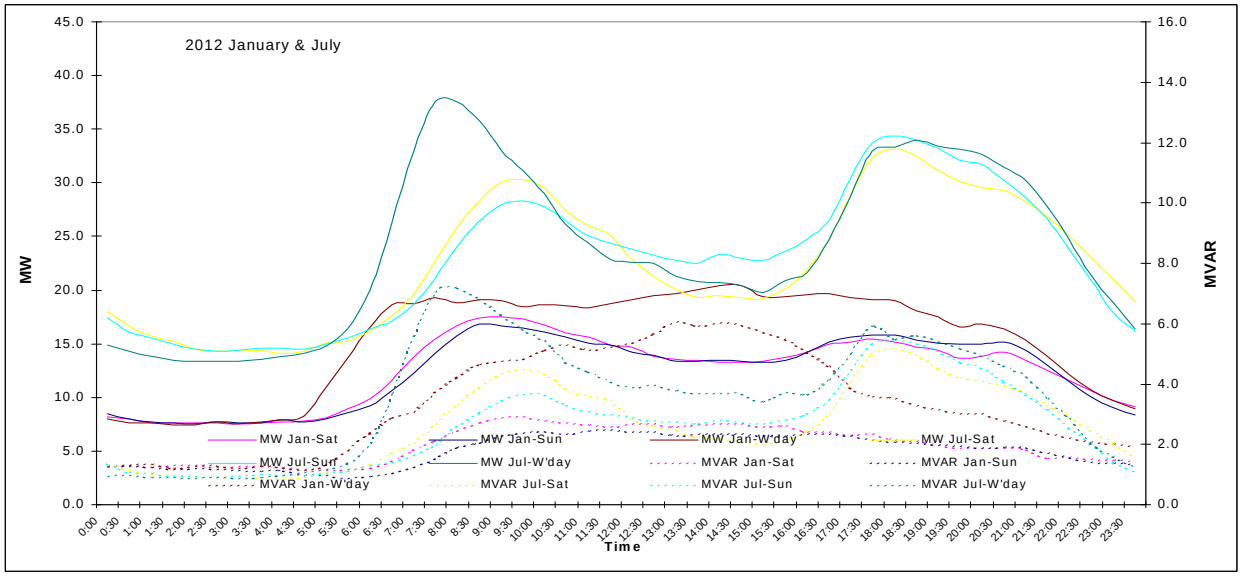
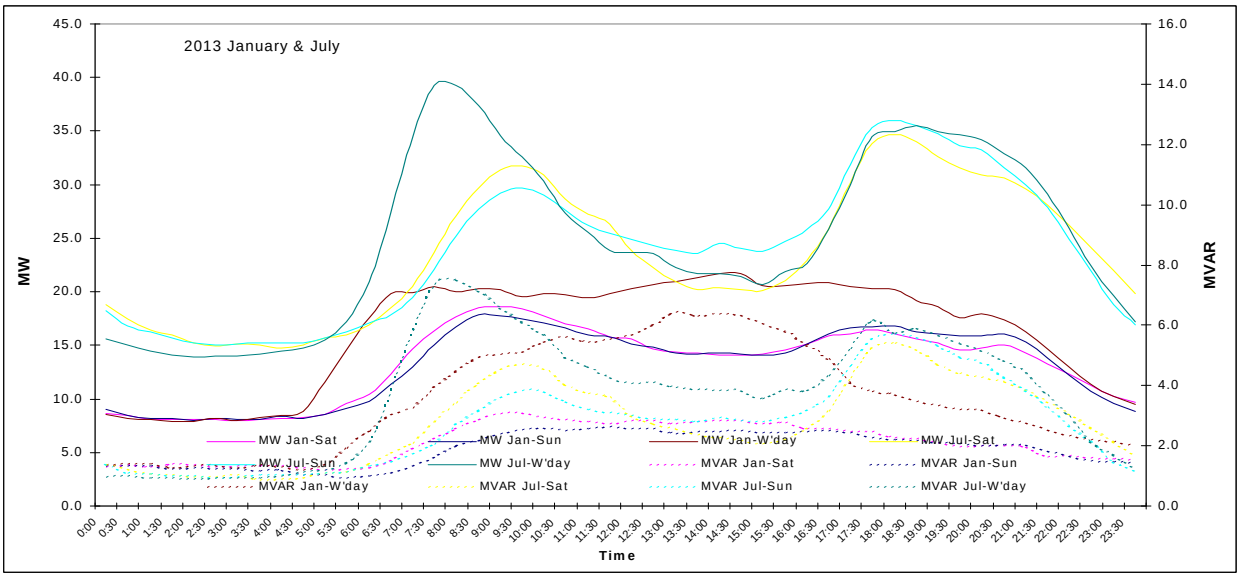


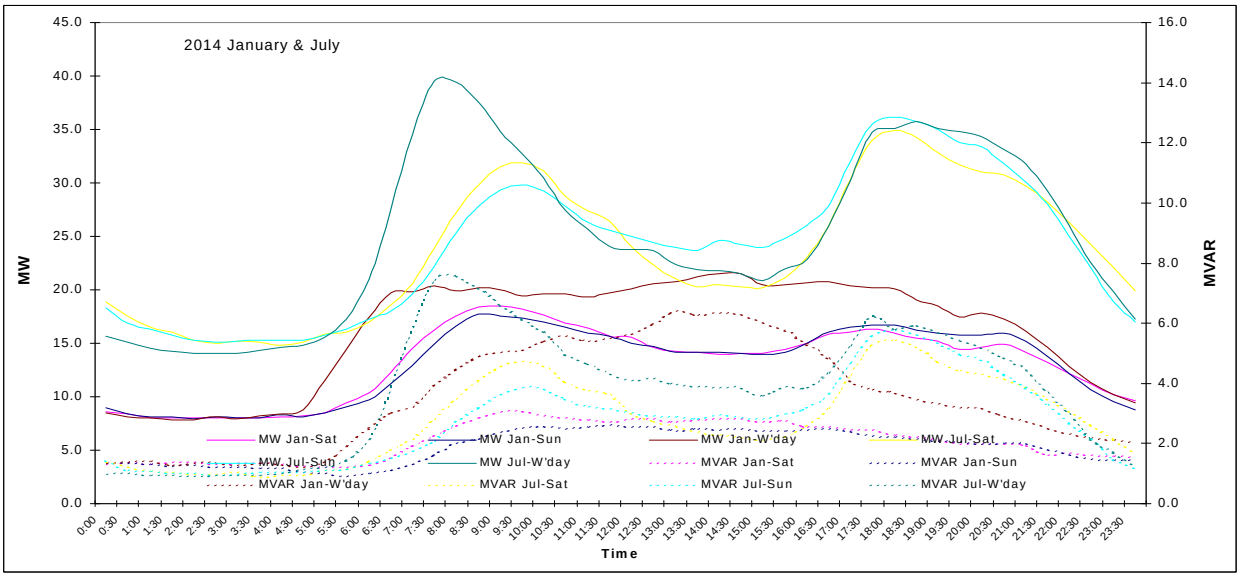
Figure 4-86 Load Profiles: Weekday, Saturday, Sunday for January & July

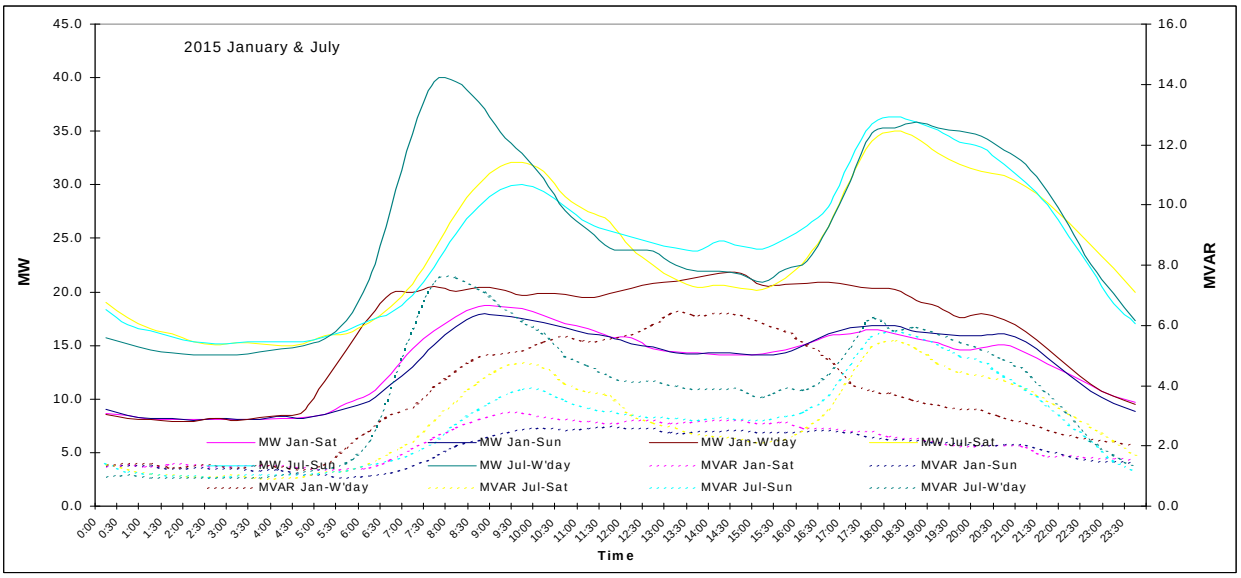







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.17 Knights Road

Description:

The Substation is located at Huonville and is known as “Knights road Substation”. The substation is owned by Transend.

Table 4-69 Knights Road Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	6	40	20

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-70 Knights Road Site Winter load forecast

Knights Rd	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	16.20	17.10	15.61	16.47	16.20	17.10	15.81	16.69
2006	16.49	17.36	15.75	16.59	16.49	17.36	16.06	16.91
2007	16.72	17.34	15.44	16.01	16.72	17.34	15.77	16.36
2008	16.49	17.05	16.49	17.05	16.49	17.05	16.89	17.46
2009	17.35	17.46	17.21	17.32	17.35	17.46	17.58	17.69
2010	17.35	17.87	16.42	16.91	17.35	17.87	16.75	17.25
2011	18.18	18.73	17.20	17.72	18.42	18.97	17.43	17.95
2012	18.32	18.87	17.33	17.85	18.56	19.12	17.56	18.09
2013	18.42	18.97	17.43	17.95	18.67	19.23	17.66	18.19
2014	18.64	19.20	17.64	18.17	18.89	19.45	17.87	18.40
2015	18.86	19.42	17.84	18.37	19.11	19.69	18.08	18.63
2016	19.12	19.70	18.09	18.63	19.38	19.96	18.33	18.88
2017	19.39	19.97	18.34	18.89	19.65	20.24	18.59	19.15
2018	19.73	20.33	18.67	19.23	19.99	20.59	18.91	19.48
2019	20.13	20.74	19.05	19.62	20.41	21.03	19.31	19.89
2020	20.59	21.20	19.48	20.06	20.86	21.49	19.74	20.33

Table 4-71 Knights Road Site Summer load forecast

Knights Rd	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	9.92	11.07	9.68	10.81	9.92	11.07	9.75	10.88
2006	10.99	12.11	9.82	10.81	10.99	12.11	9.91	10.92
2007	10.68	11.41	10.12	10.80	10.68	11.41	10.25	10.94
2008	11.33	11.89	11.33	11.89	11.33	11.89	11.49	12.05
2009	12.04	12.08	12.04	12.08	12.04	12.08	12.21	12.25
2010	12.08	12.79	11.35	12.02	12.08	12.79	11.44	12.11
2011	12.25	12.97	11.51	12.19	12.56	13.30	11.80	12.50
2012	12.79	13.55	12.02	12.73	13.12	13.89	12.33	13.05
2013	13.11	13.88	12.32	13.05	13.45	14.24	12.64	13.38
2014	13.29	14.07	12.49	13.22	13.61	14.41	12.79	13.54
2015	13.68	14.48	12.85	13.61	14.01	14.83	13.16	13.94
2016	13.80	14.62	12.97	13.73	14.15	14.98	13.30	14.08
2017	14.45	15.30	13.58	14.38	14.80	15.67	13.91	14.73
2018	14.89	15.77	14.00	14.82	15.26	16.15	14.34	15.18
2019	15.35	16.25	14.42	15.27	15.71	16.64	14.77	15.63
2020	15.84	16.77	14.88	15.76	16.21	17.16	15.23	16.12

Figure 4-87 Knights Road Site Summer Load Forecast at 50% and 10% POE

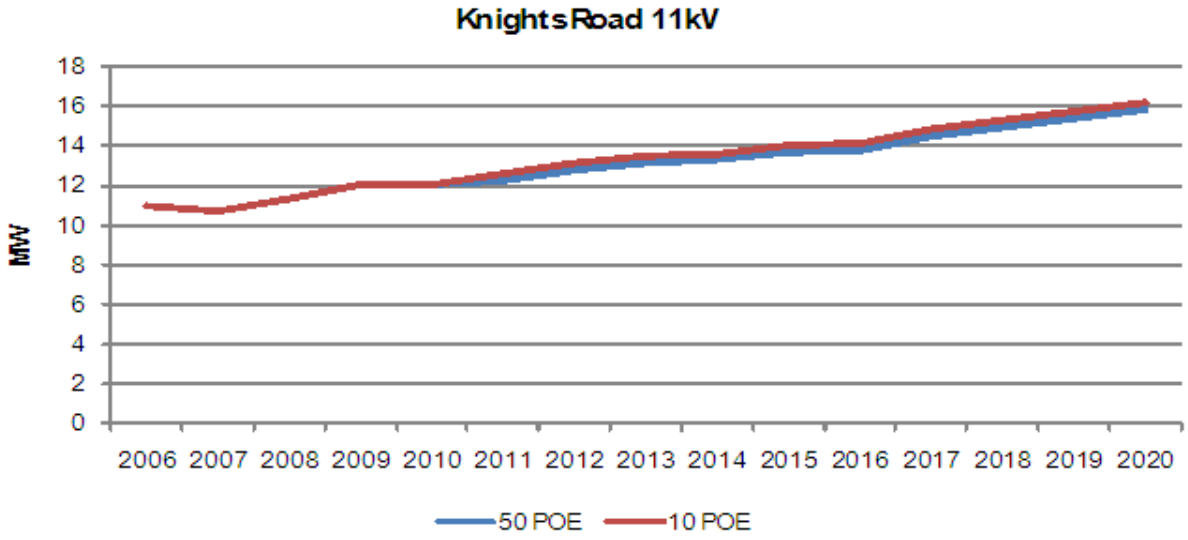
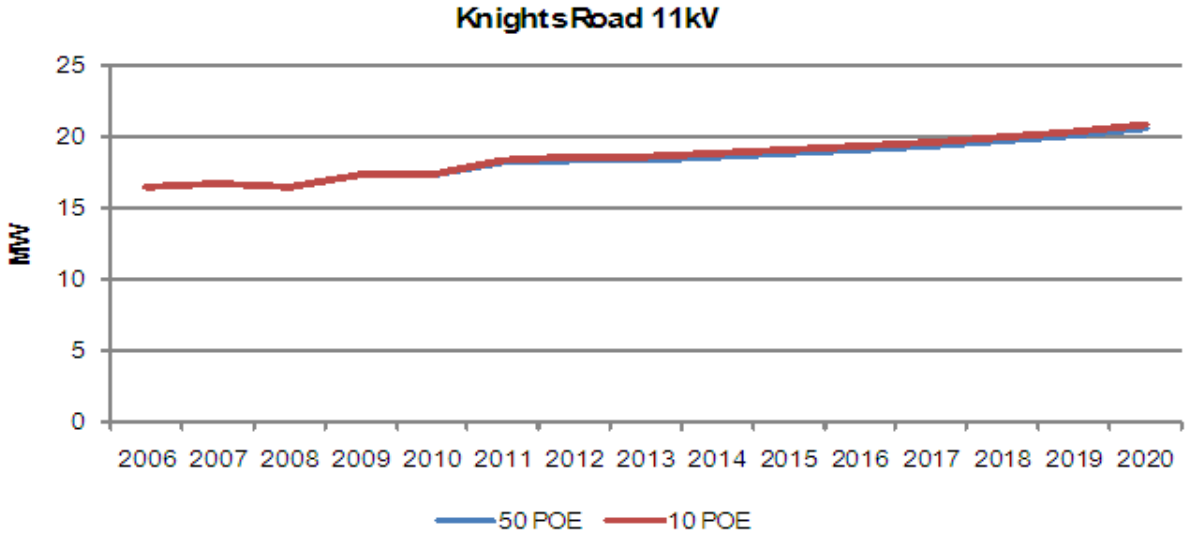
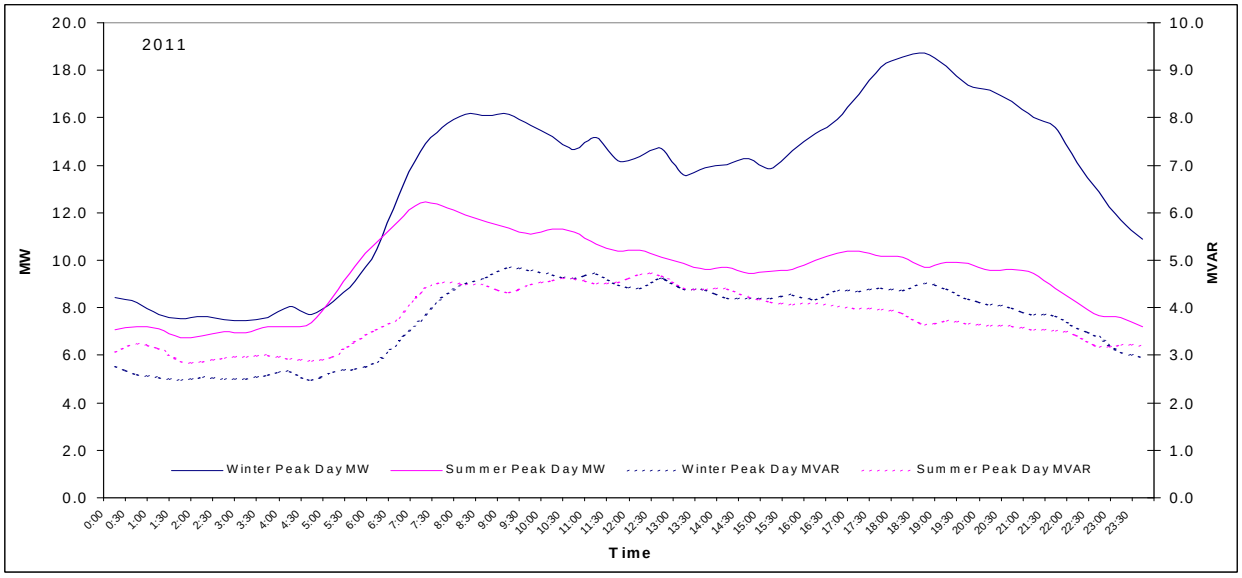


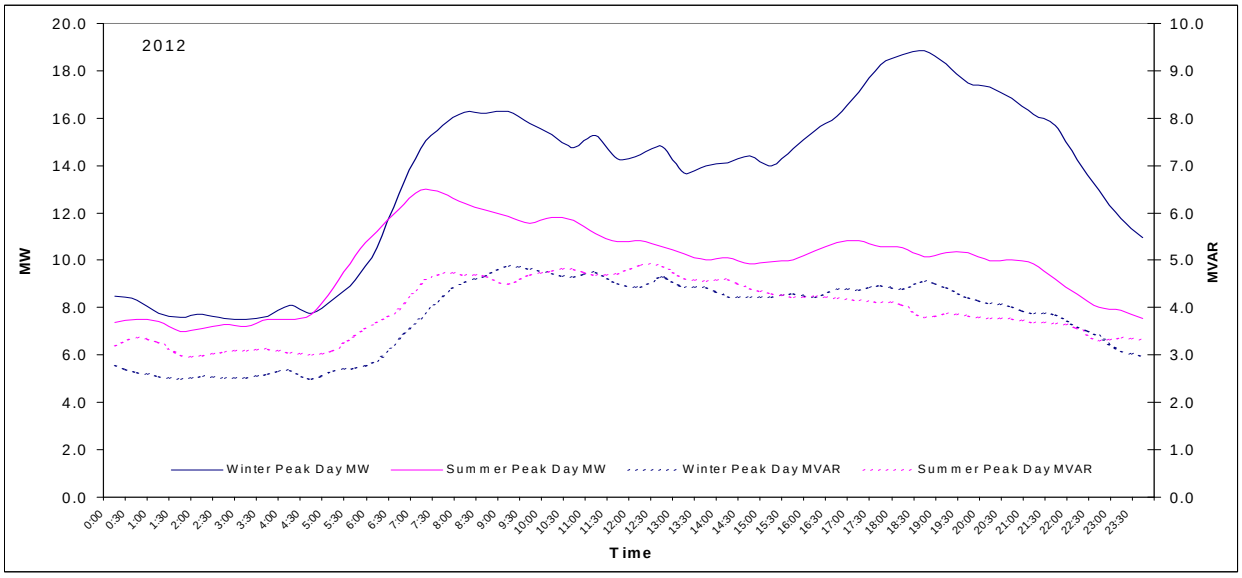
Figure 4-88 Knights Road Site Winter Load Forecast at 50% and 10% POE



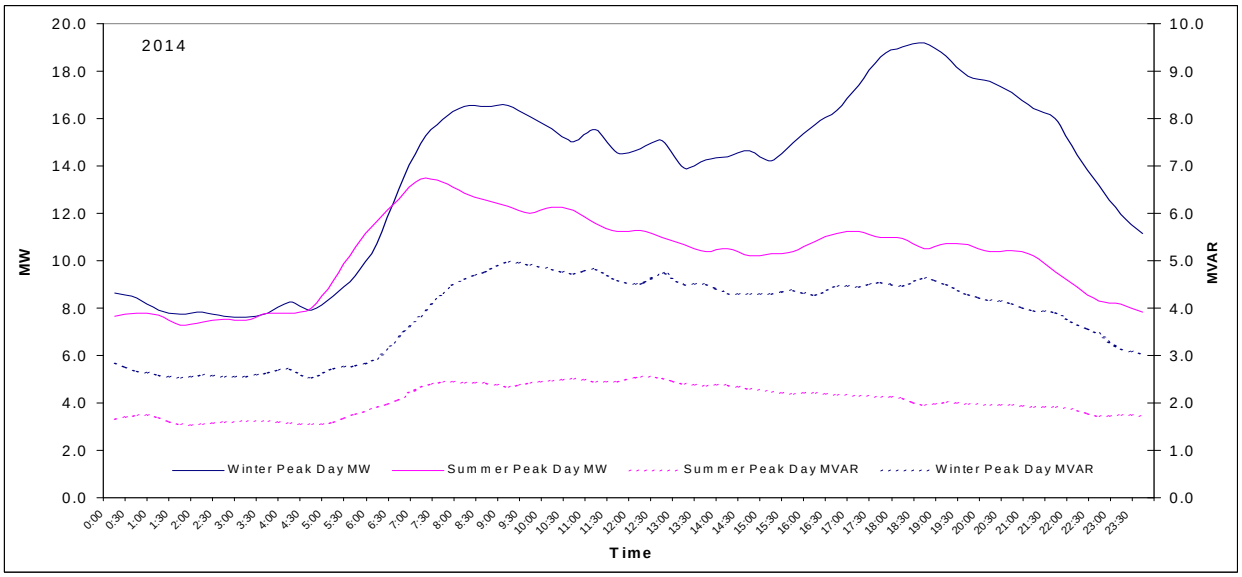
Load Profiles:

Figure 4-89 Load Profiles: Knights Road Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Summer Peak Day MVAR
Winter Peak Day MVAR

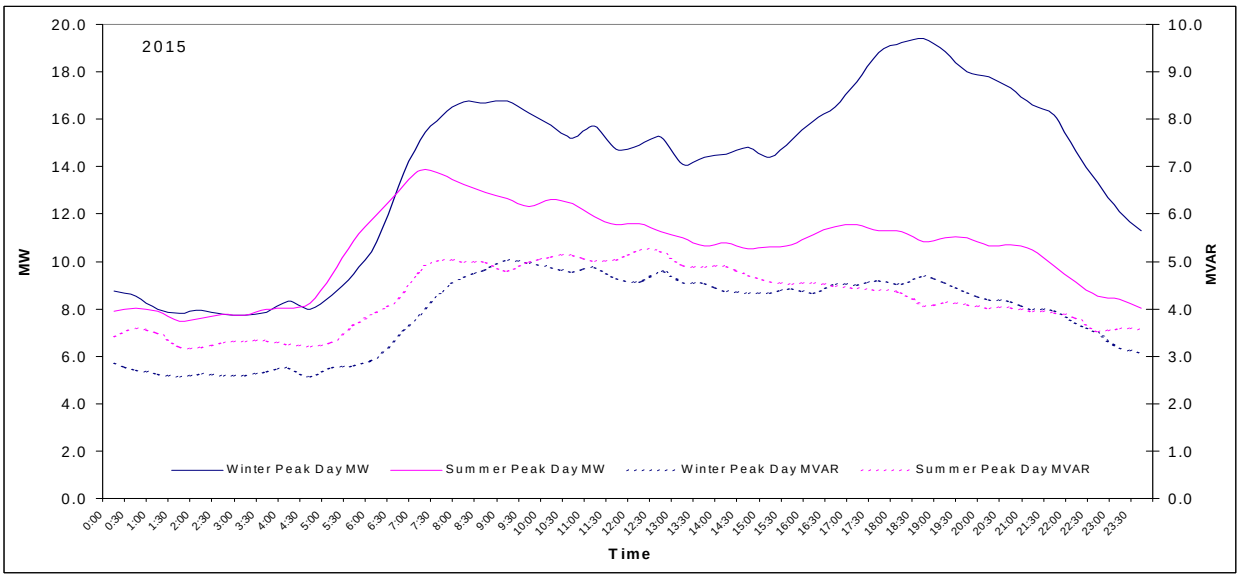
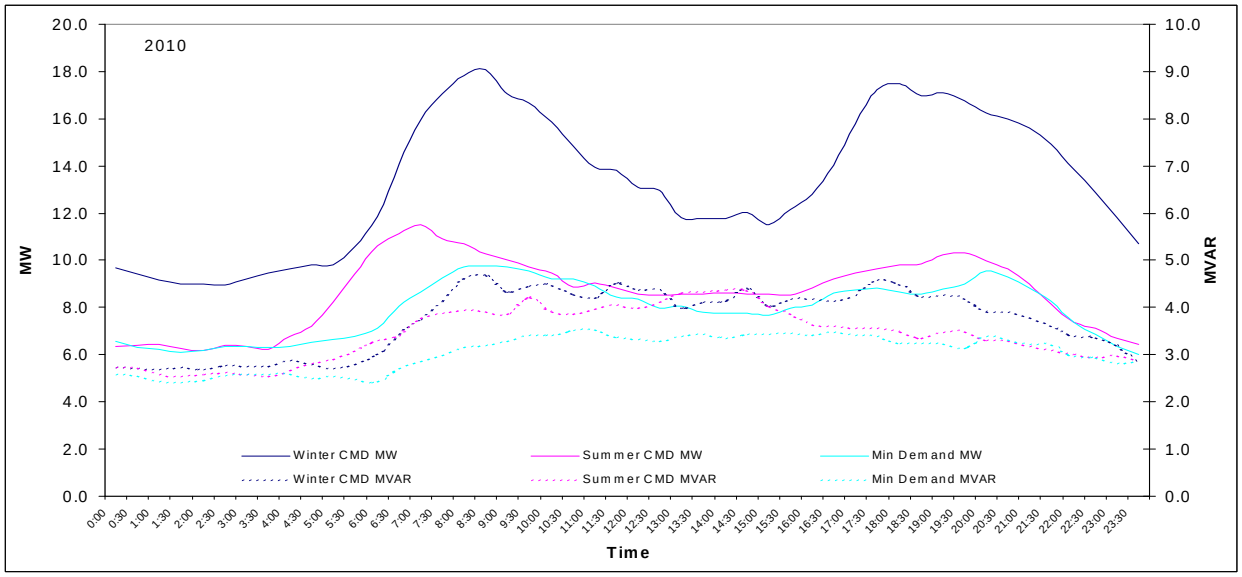
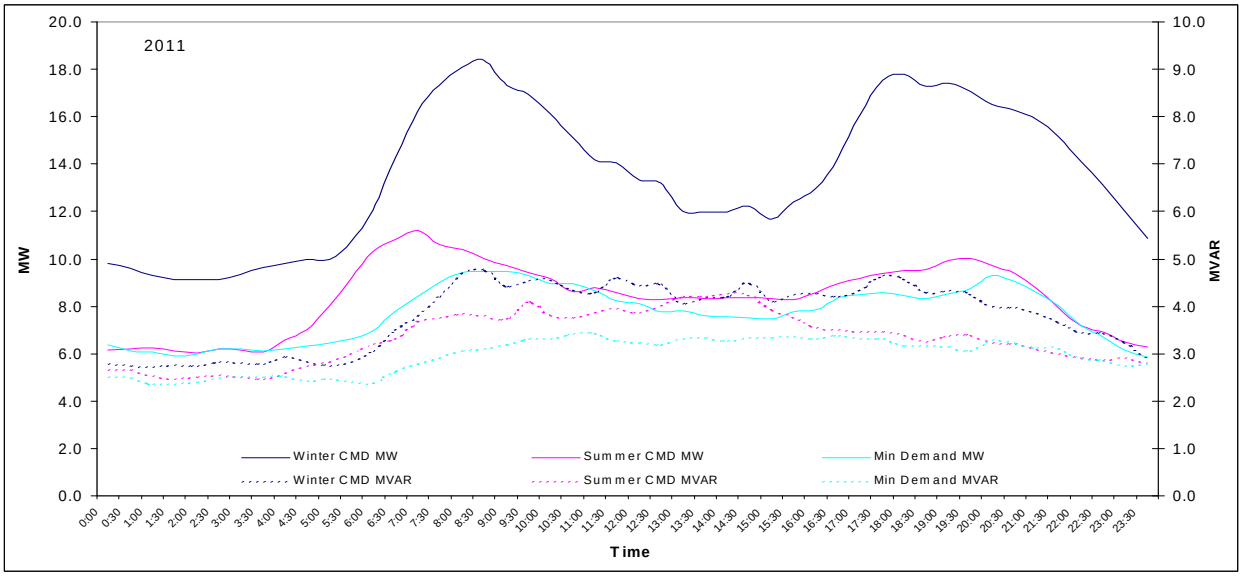
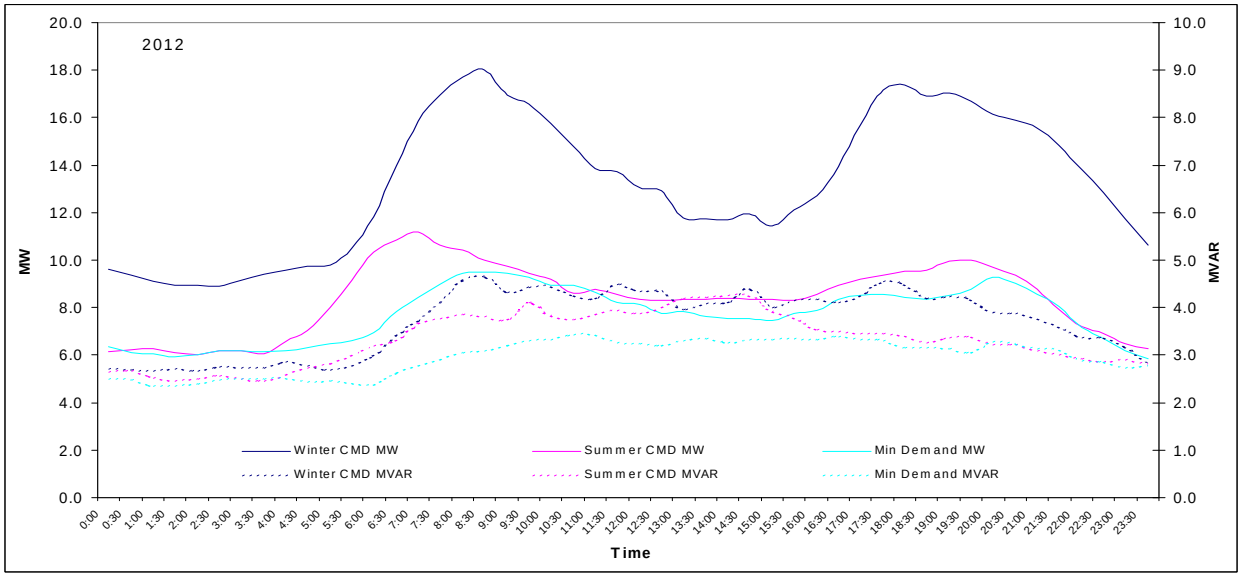
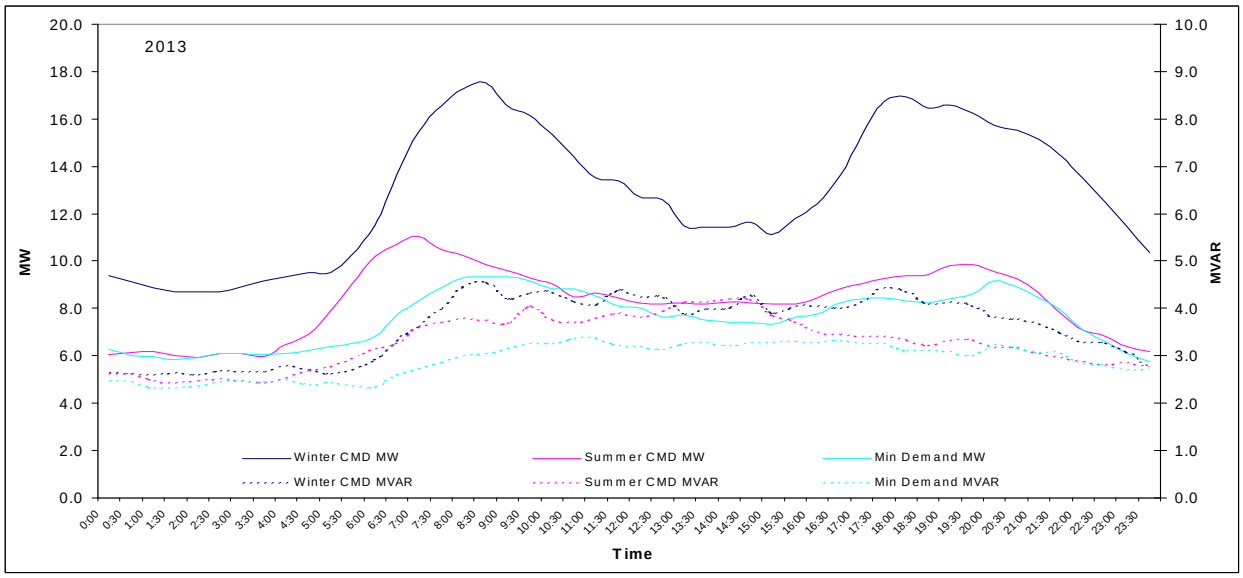

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

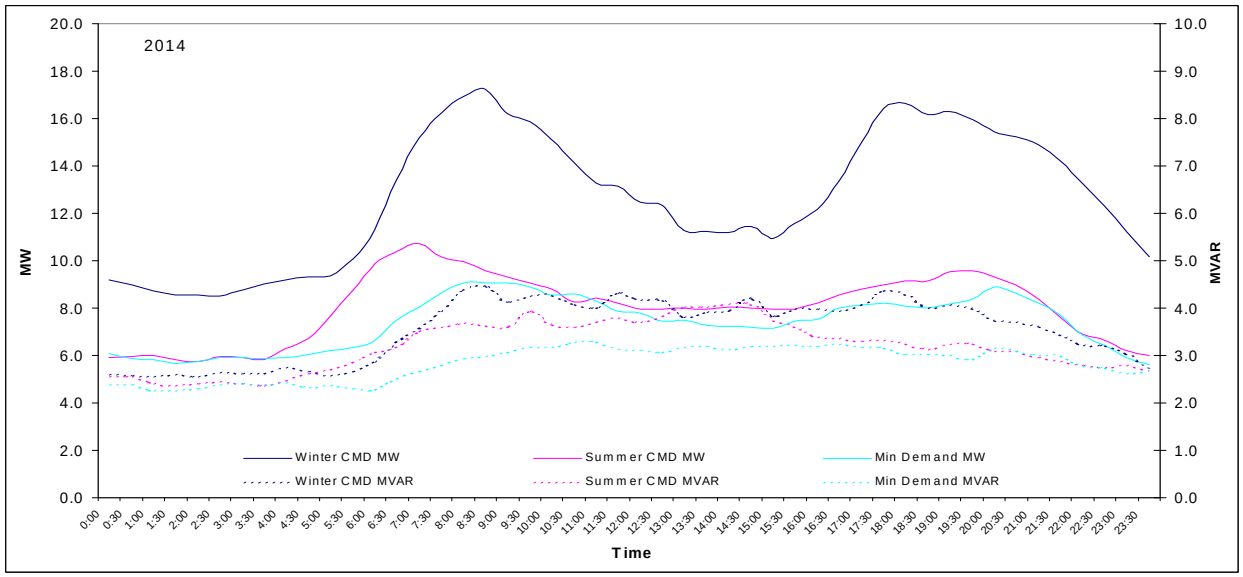
Figure 4-90 Load Profiles: Knights Road Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

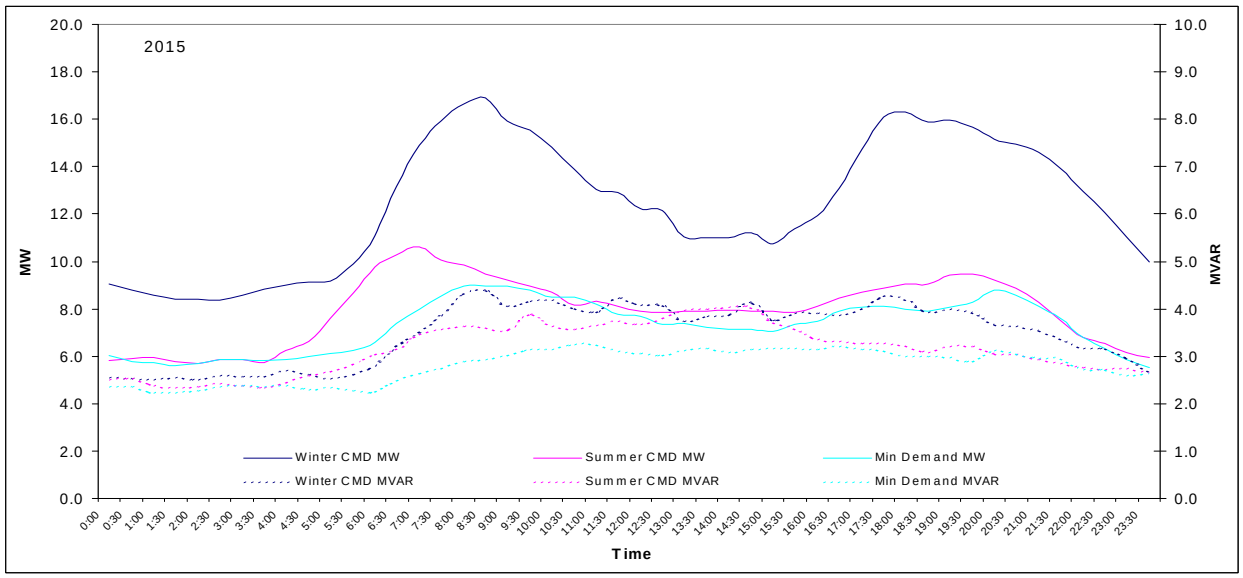
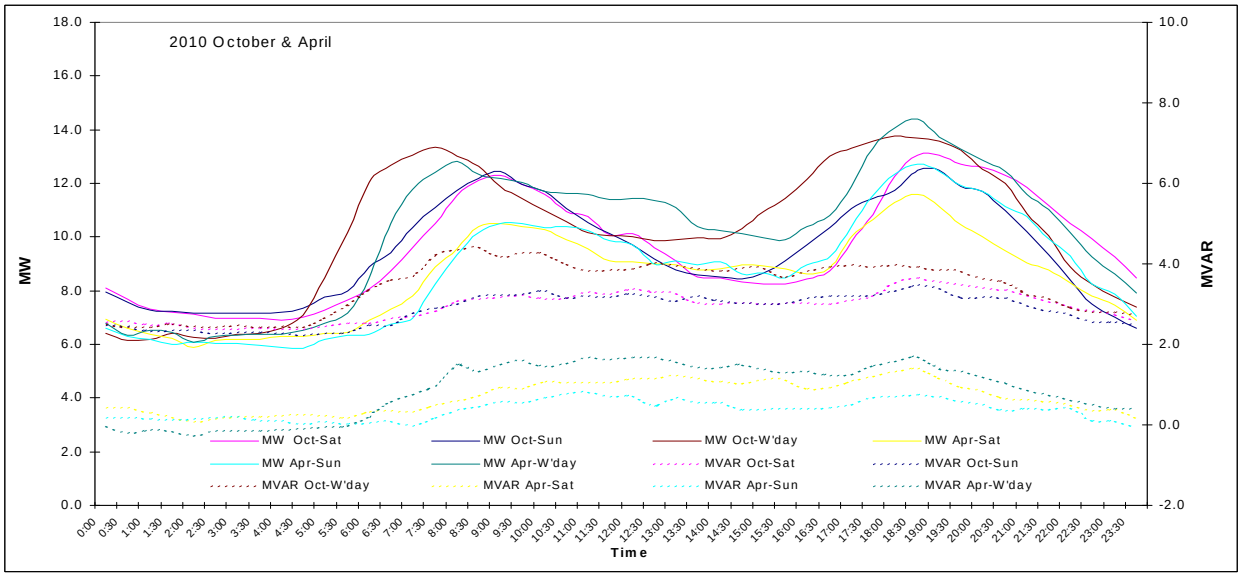
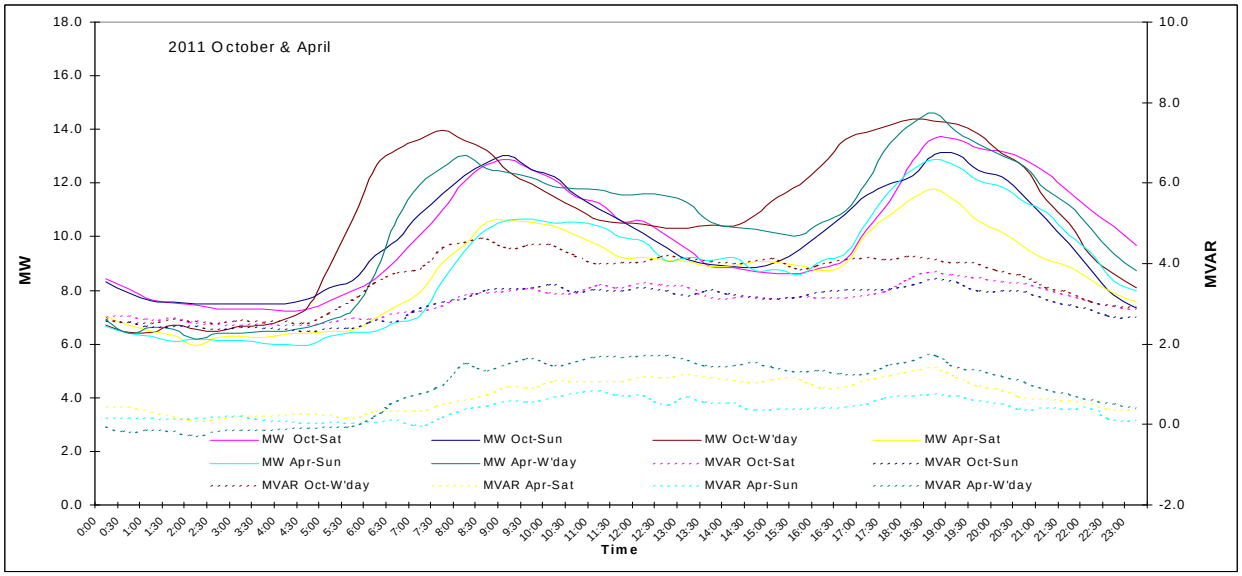
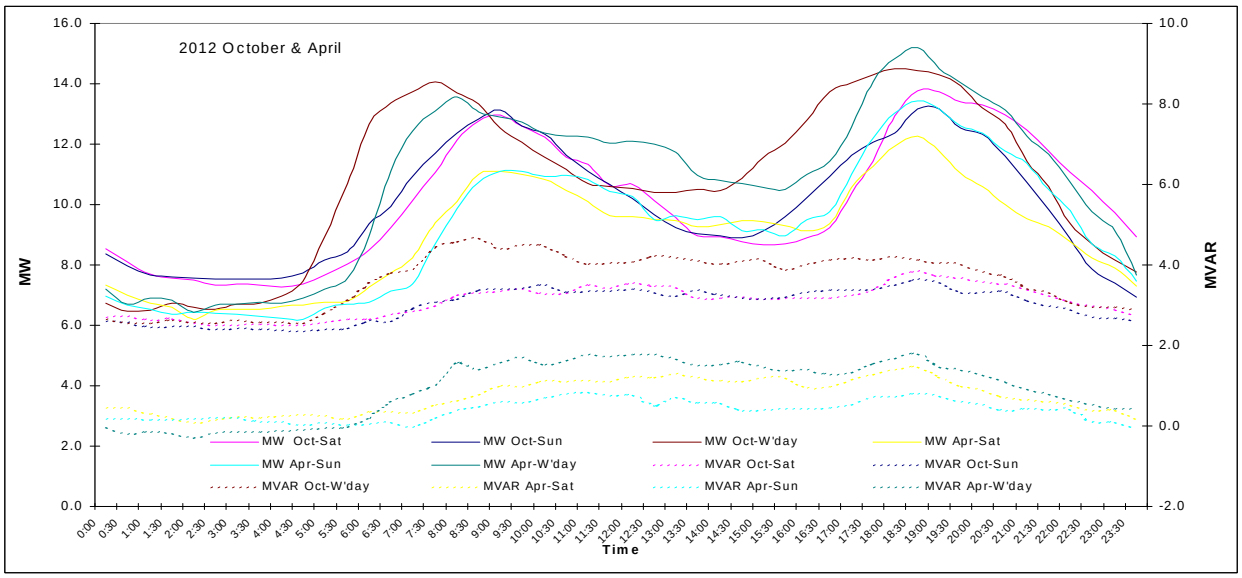
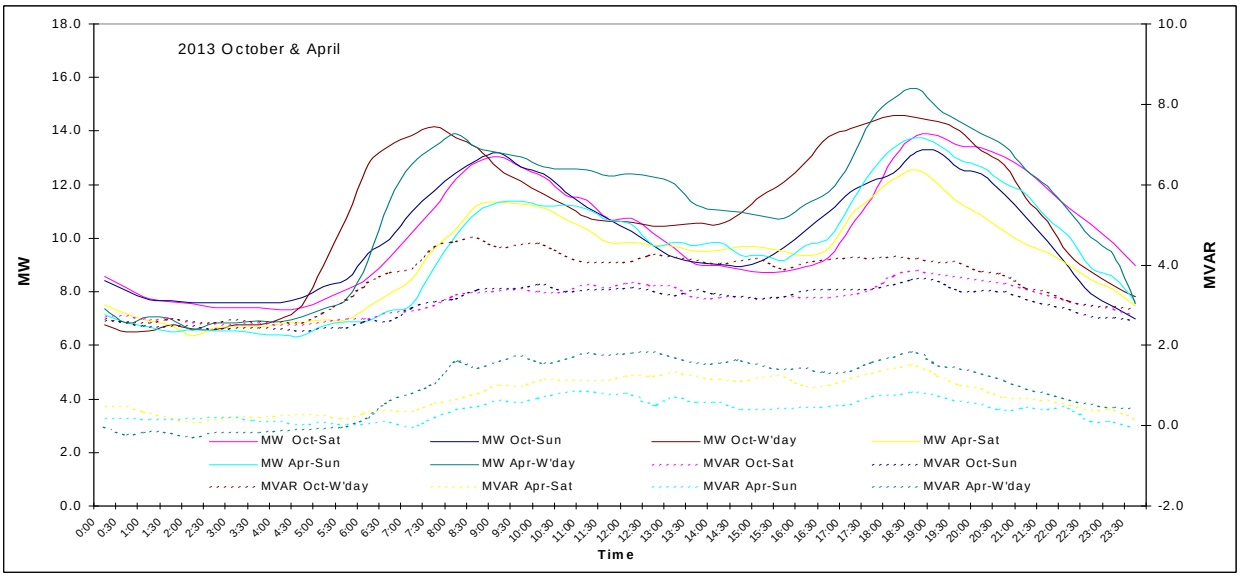

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

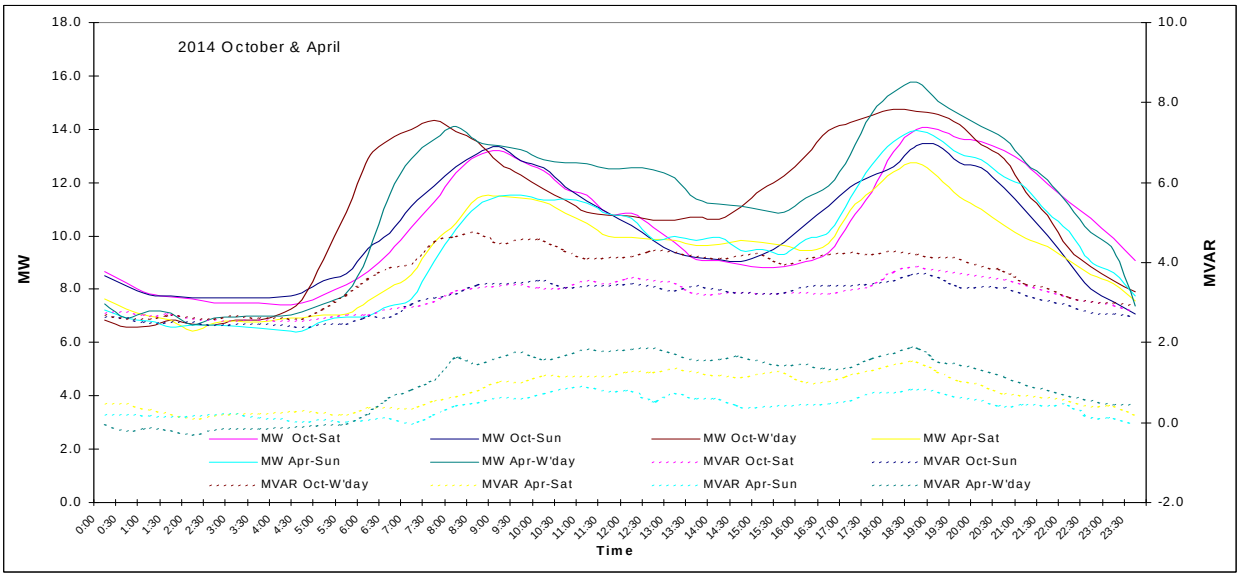
Figure 4-91 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

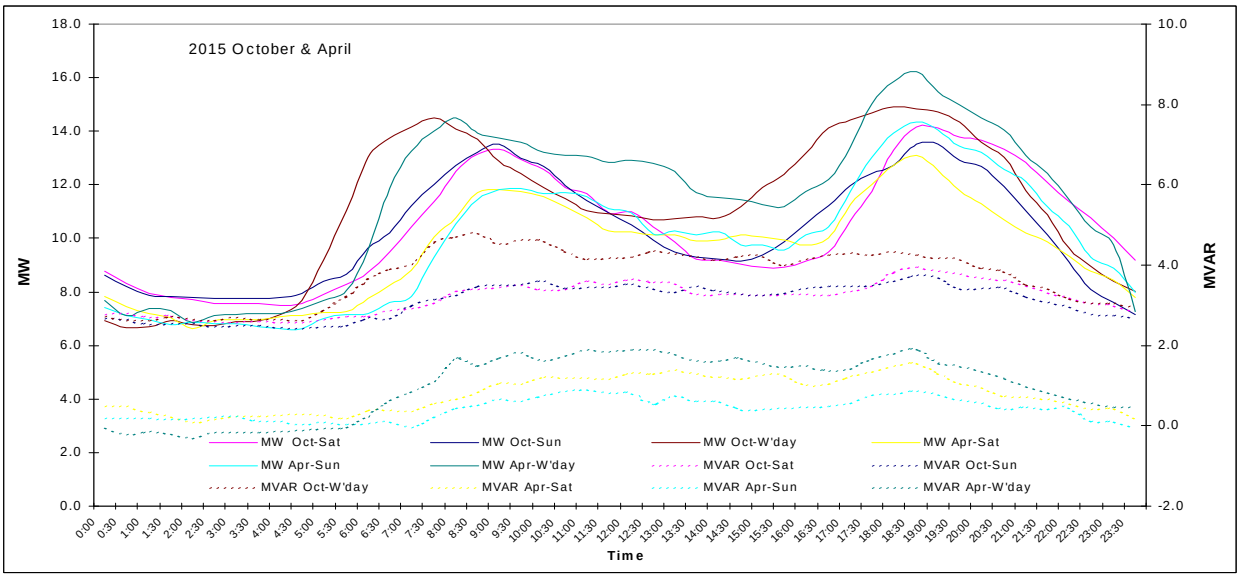
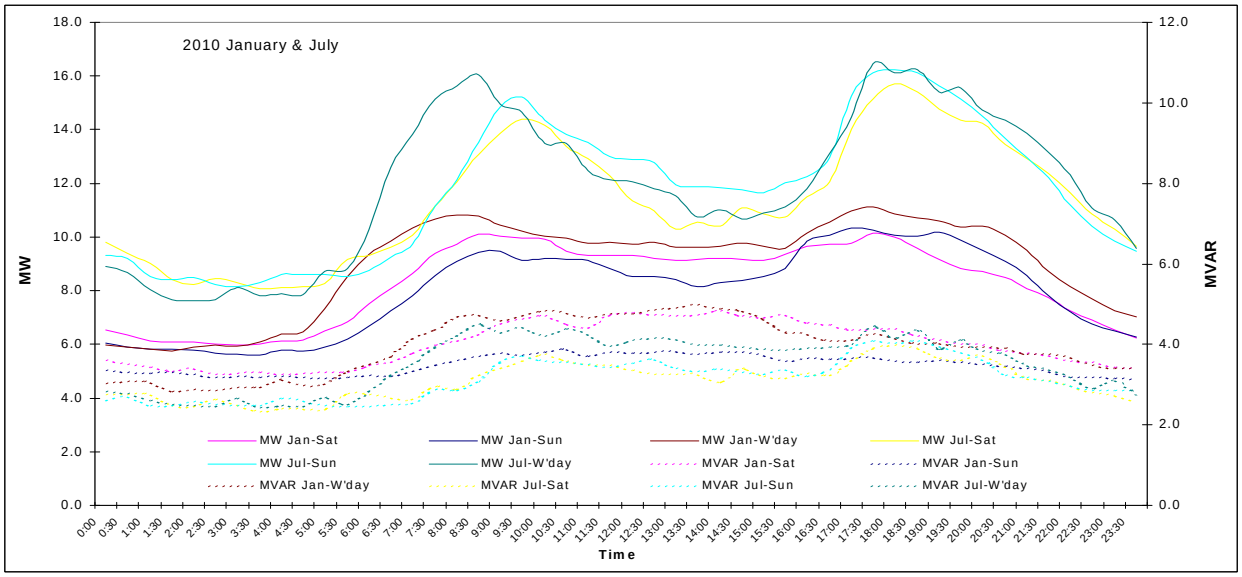
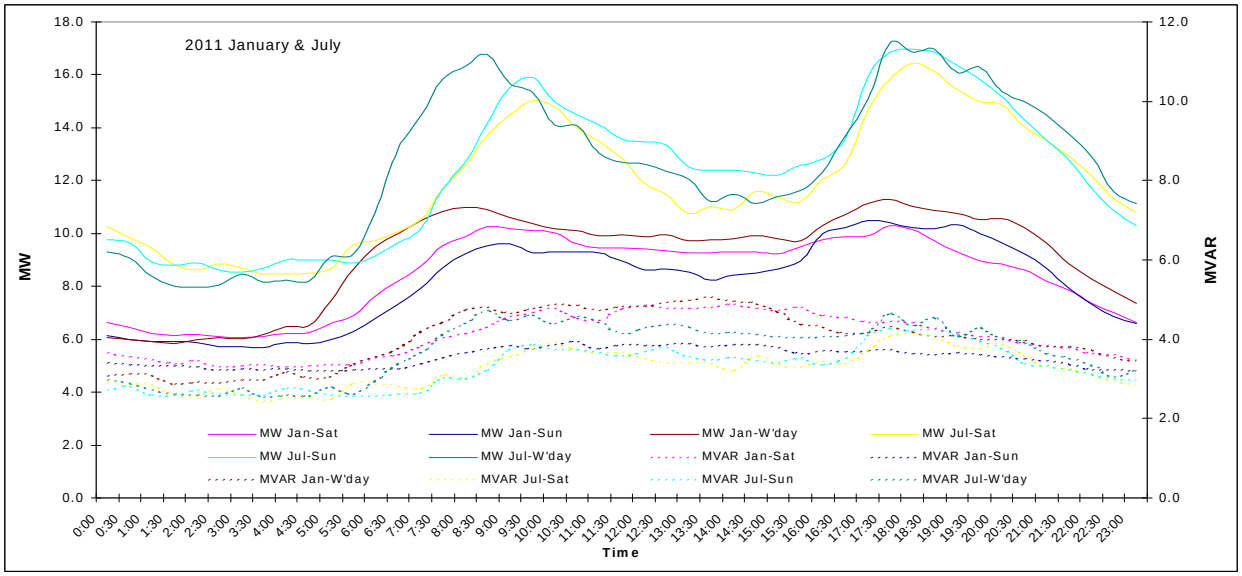
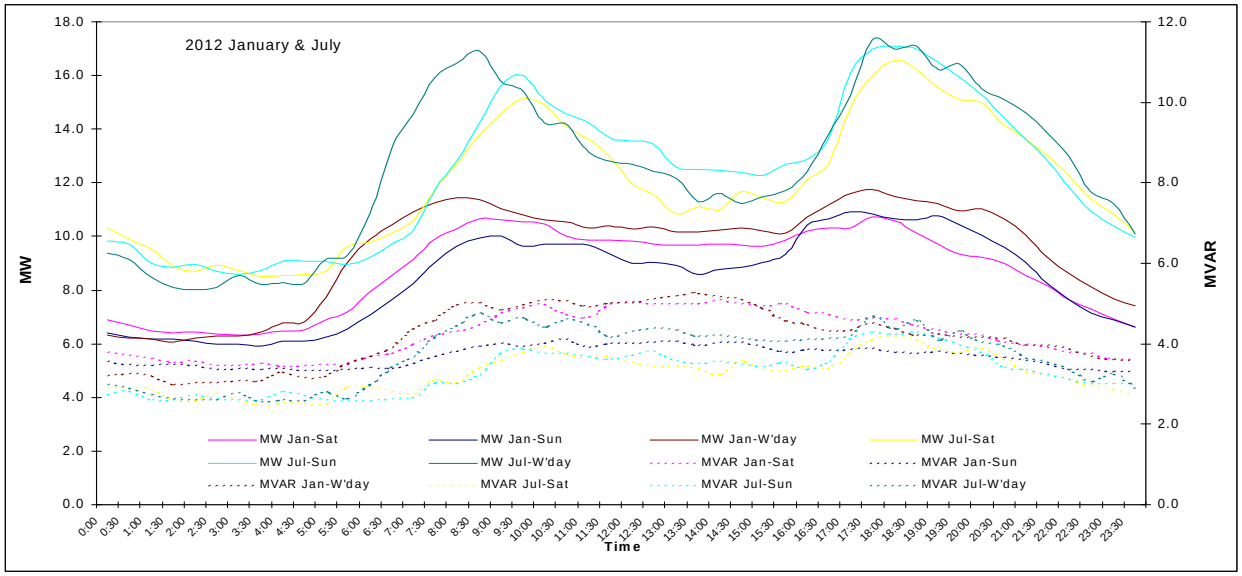
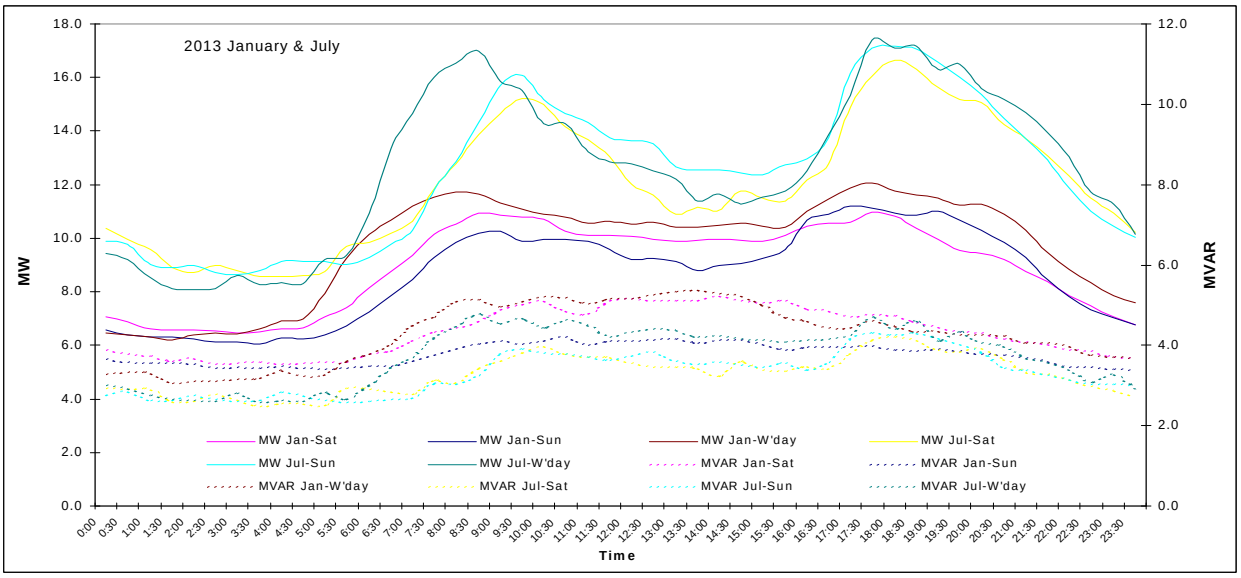

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

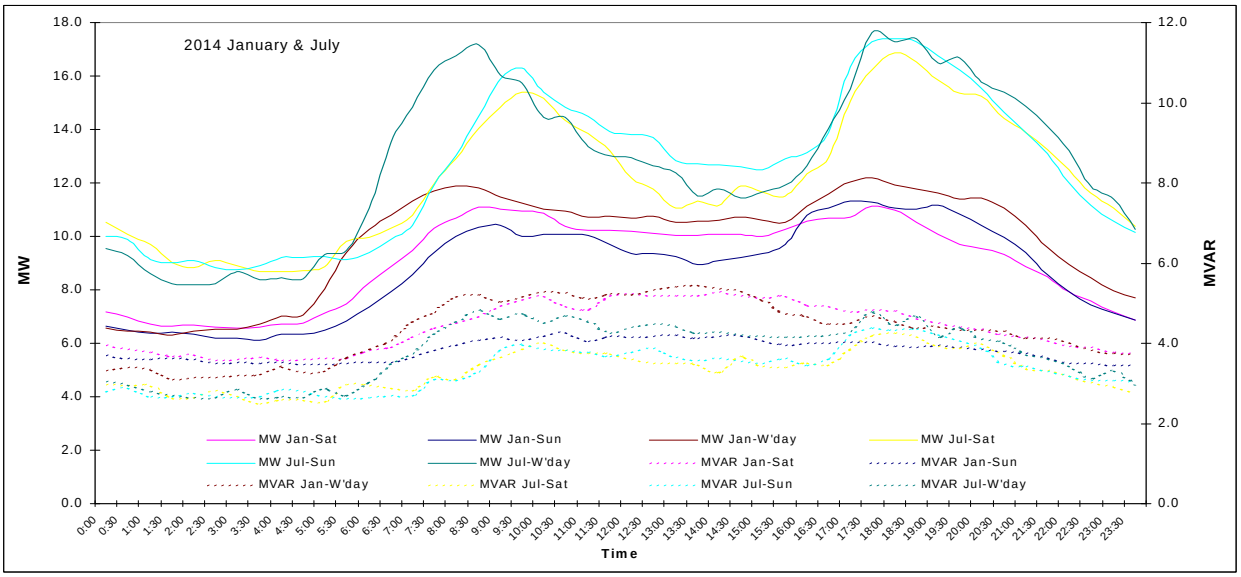
Figure 4-92 Load Profiles: Weekday, Saturday, Sunday for January & July

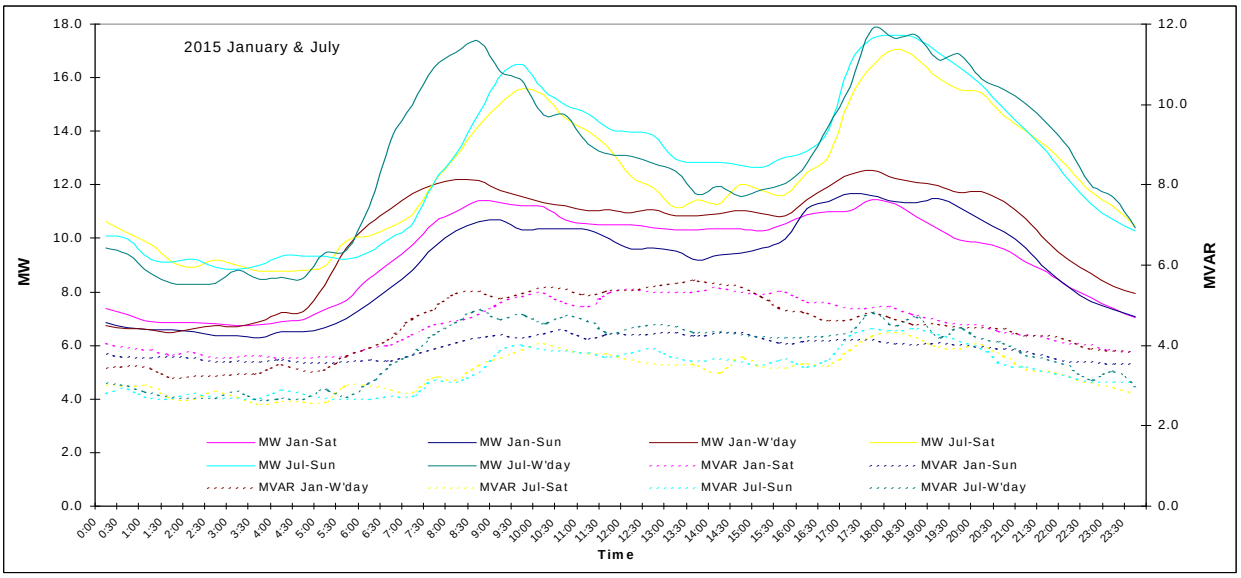







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.18 Lindisfarne

Description:

The Substation is located Lindisfarne and is known as “Lindisfarne Substation”. The substation is owned by Transend.

Table 4-72 Lindisfarne Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	33	6	90	45

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

Permanent load transfers included in the forecast for this connection site:

4.0 MW of load affecting both summer and winter peak demand transferred from Rokeby substation (to Cambridge zone substation) prior to the 2009 winter period.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-73 Lindisfarne Site Winter load forecast

Lindisfarne	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006	57.06	57.31	54.33	54.57	57.06	57.31	56.40	56.65
2007	59.24	61.71	53.99	56.25	59.24	61.71	55.53	57.85
2008	59.80	62.05	59.80	62.05	59.80	62.05	61.91	64.24
2009	61.53	61.58	61.51	61.56	61.53	61.58	63.26	63.31
2010	61.72	61.75	56.68	56.72	61.72	61.75	58.37	58.41
2011	63.78	63.81	58.57	58.60	65.25	65.29	59.93	59.96
2012	63.39	63.43	58.22	58.25	64.86	64.90	59.57	59.60
2013	62.87	62.91	57.74	57.78	64.39	64.43	59.14	59.17
2014	62.79	62.83	57.67	57.70	64.29	64.32	59.04	59.07
2015	62.68	62.72	57.57	57.60	64.22	64.26	58.98	59.02
2016	62.74	62.78	57.62	57.65	64.28	64.31	59.03	59.06
2017	62.80	62.83	57.67	57.70	64.37	64.41	59.12	59.15
2018	63.11	63.14	57.96	57.99	64.67	64.70	59.39	59.42
2019	63.58	63.61	58.39	58.42	65.22	65.26	59.90	59.93
2020	64.20	64.24	58.96	59.00	65.84	65.88	60.47	60.50

Table 4-74 Lindisfarne Site Summer load forecast

Lindisfarne	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	37.33	37.69	34.07	34.40	37.33	37.69	34.51	34.85
2008	37.90	38.05	37.90	38.05	37.90	38.05	38.74	38.89
2009	38.06	38.19	38.06	38.19	38.06	38.19	38.91	39.04
2010	37.94	37.95	37.94	37.95	37.94	37.95	38.88	38.89
2011	37.20	37.21	37.20	37.21	38.79	38.80	38.79	38.80
2012	37.59	37.60	37.59	37.60	39.21	39.22	39.21	39.22
2013	37.32	37.33	37.32	37.33	38.95	38.96	38.95	38.96
2014	36.67	36.69	36.67	36.69	38.23	38.24	38.23	38.24
2015	36.64	36.65	36.64	36.65	38.20	38.21	38.20	38.21
2016	35.92	35.93	35.92	35.93	37.49	37.50	37.49	37.50
2017	36.56	36.57	36.56	36.57	38.13	38.14	38.13	38.14
2018	36.66	36.67	36.66	36.67	38.25	38.26	38.25	38.26
2019	36.78	36.79	36.78	36.79	38.36	38.37	38.36	38.37
2020	36.97	36.99	36.97	36.99	38.55	38.57	38.55	38.57

Figure 4-93 Lindisfarne Site Summer Load Forecast at 50% and 10% POE

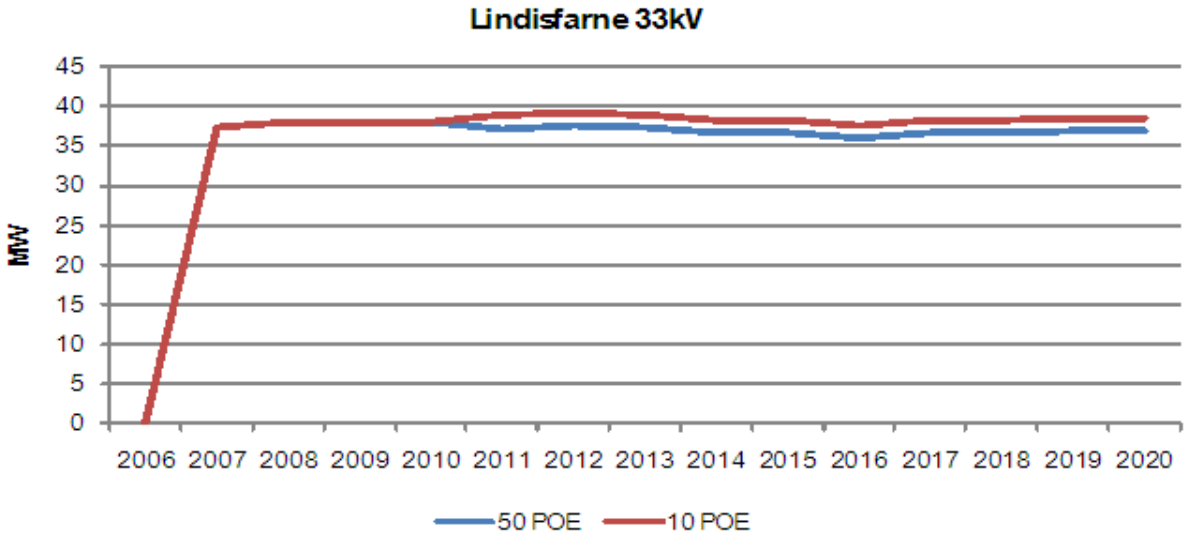
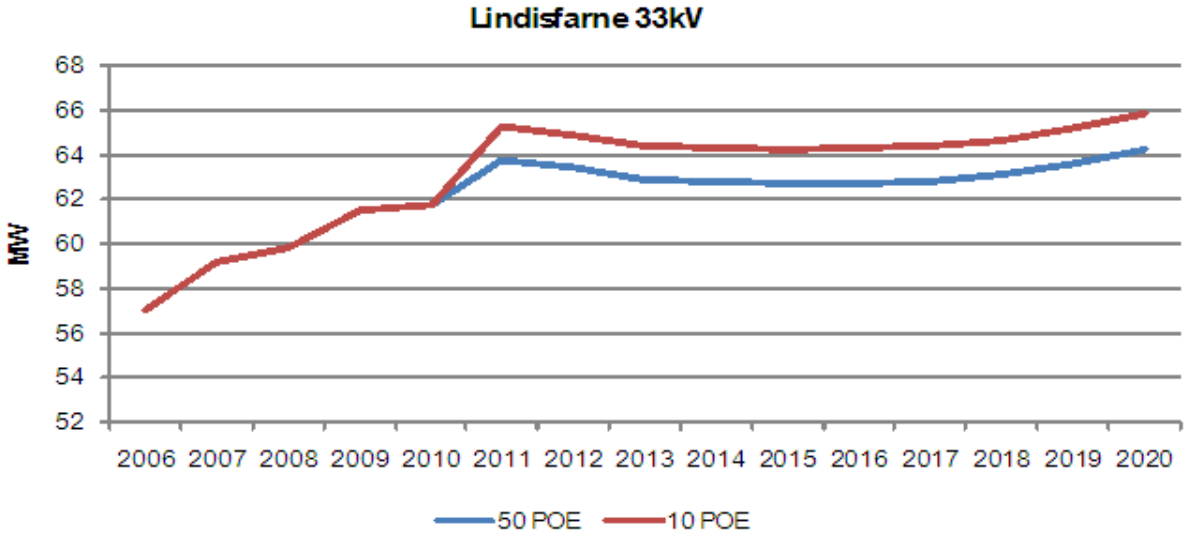
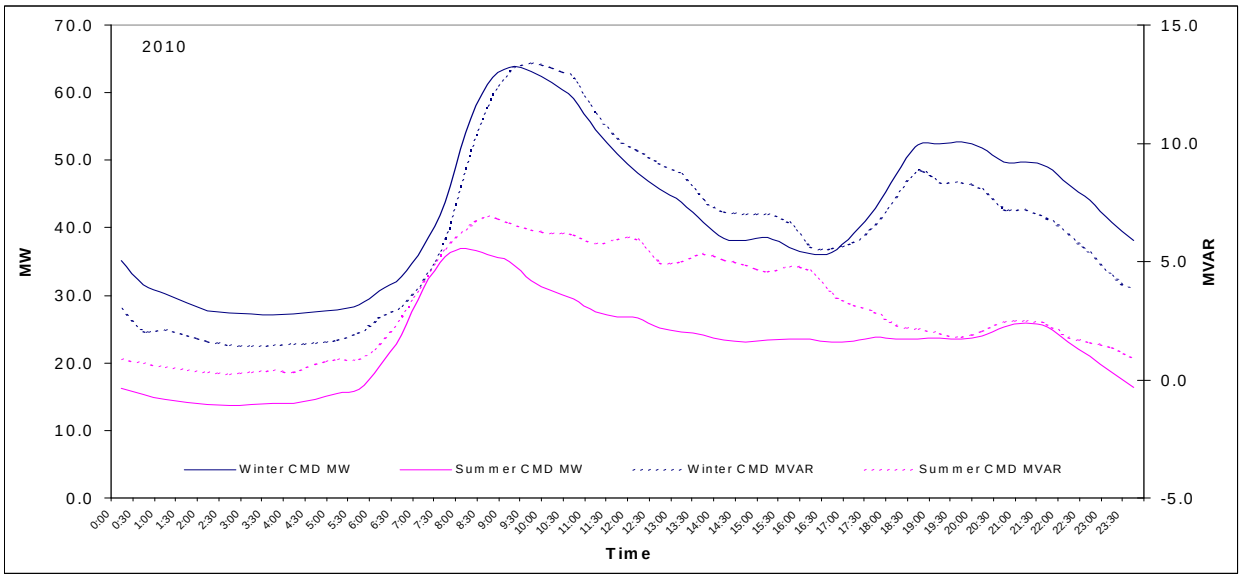


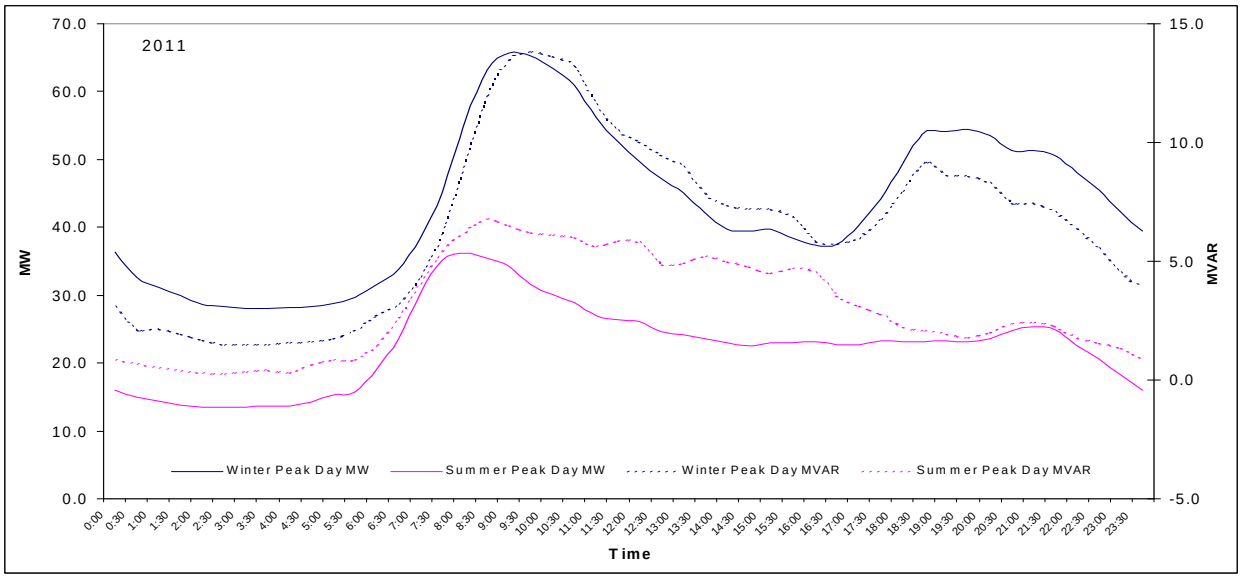
Figure 4-94 Lindisfarne Site Winter Load Forecast at 50% and 10% POE

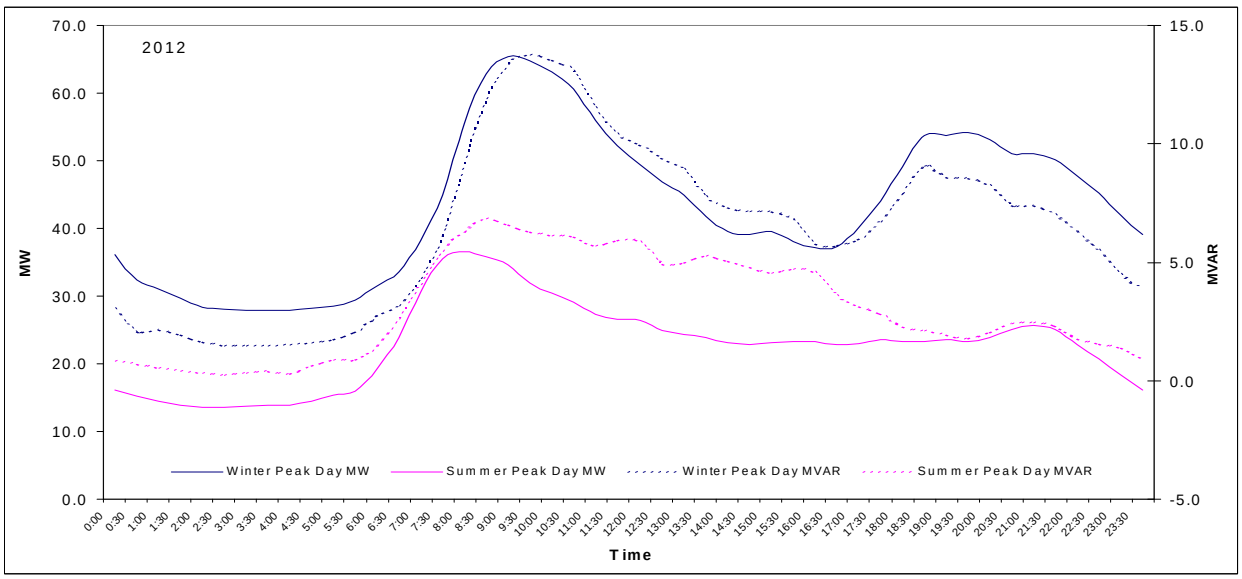


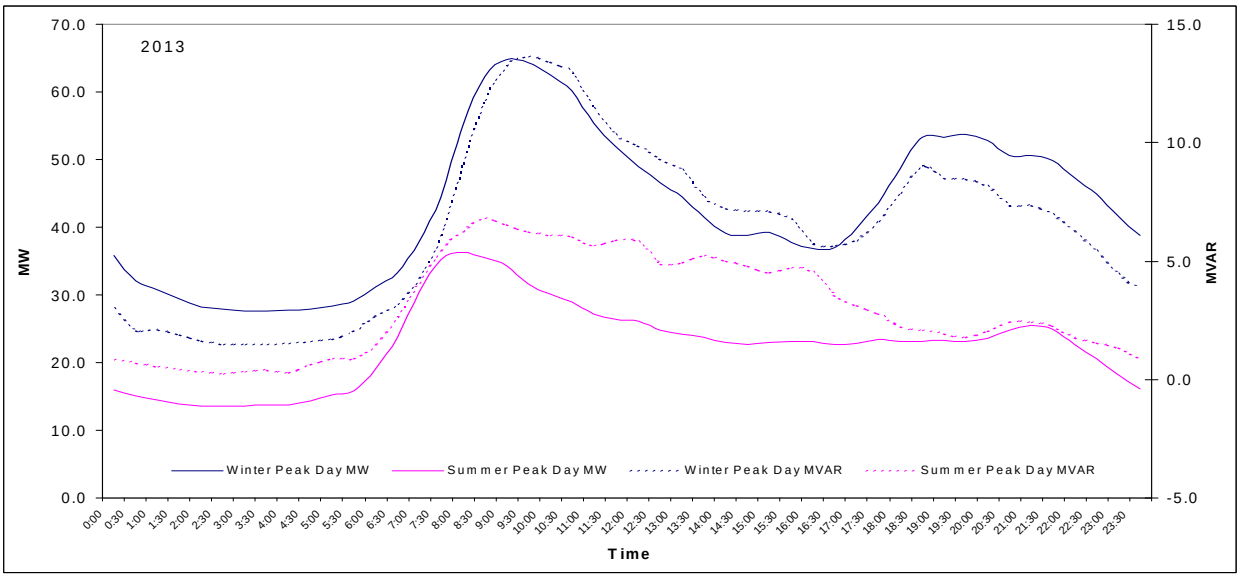
Load Profiles:

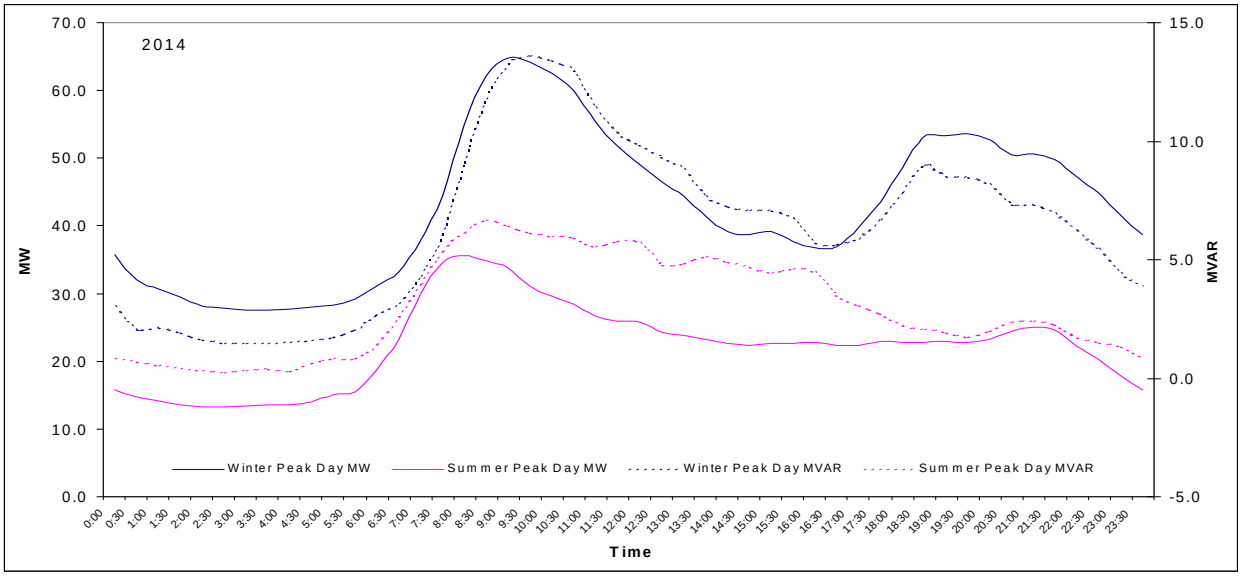
Figure 4-95 Load Profiles: Lindisfarne Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

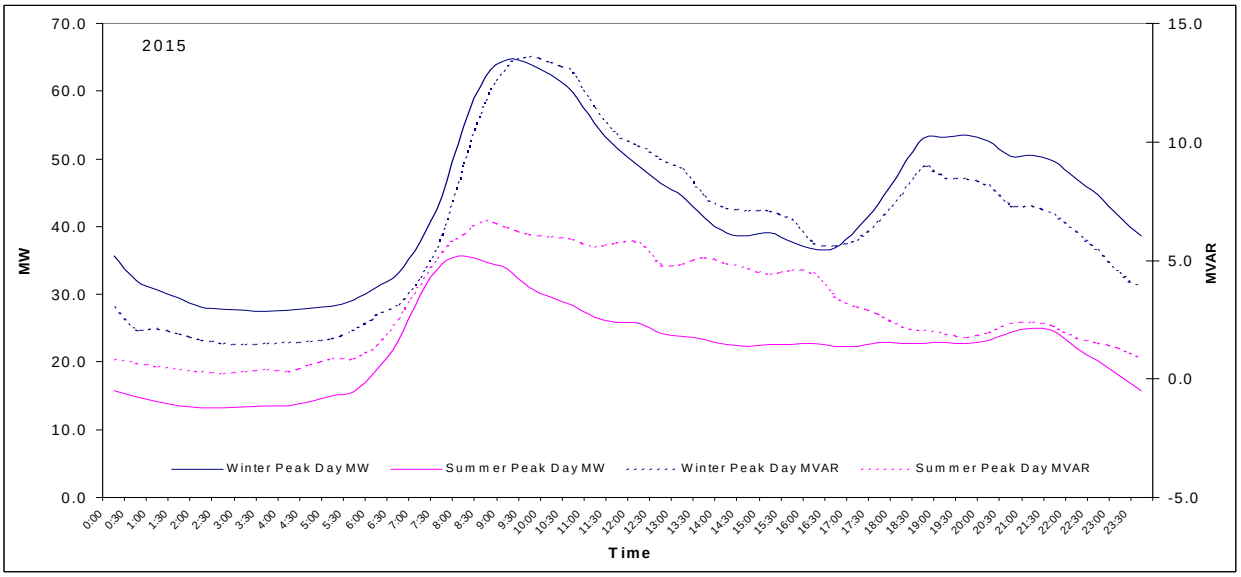
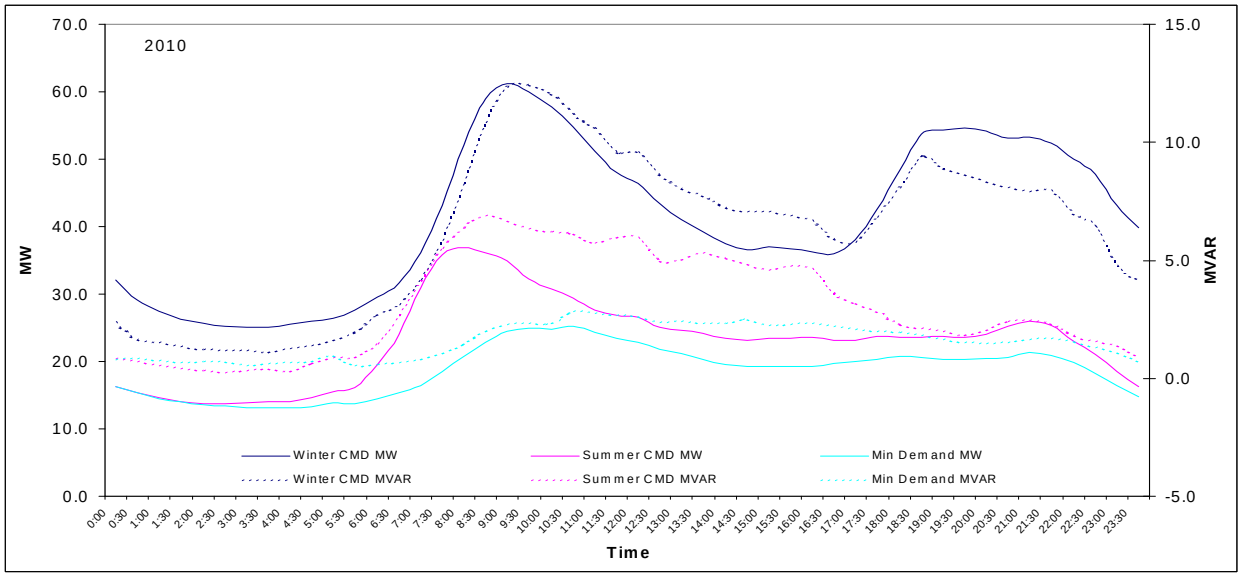
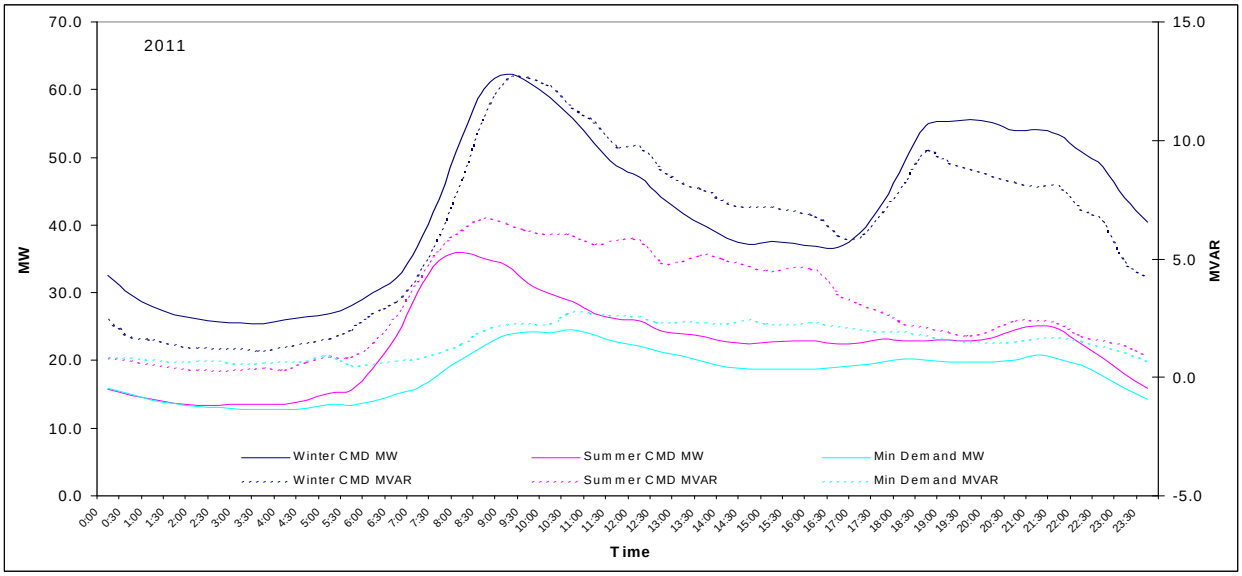
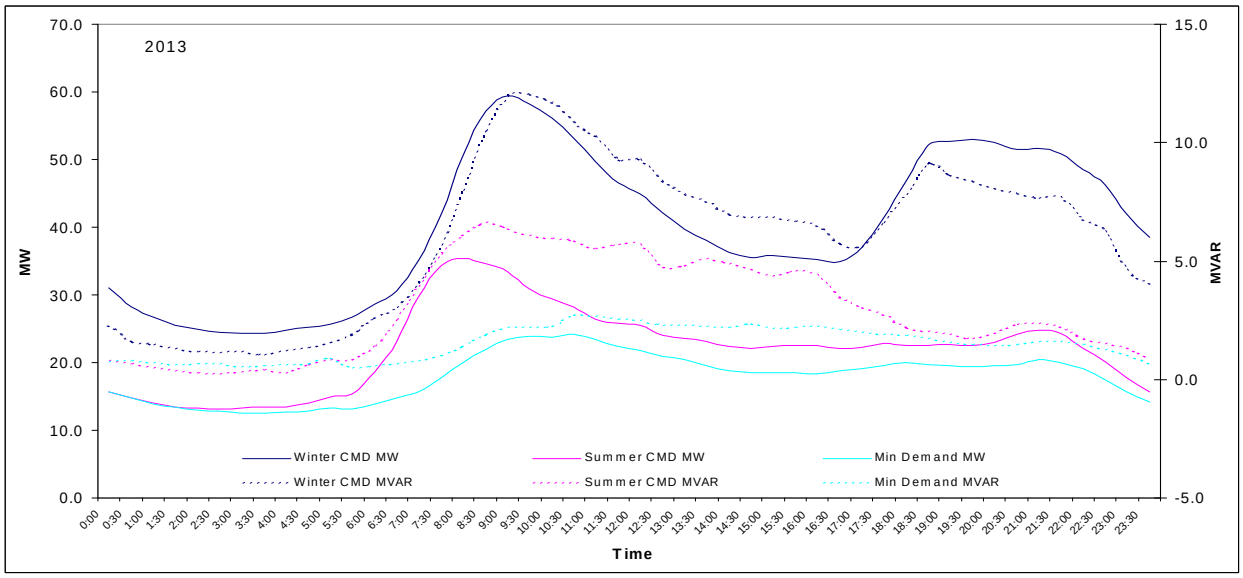
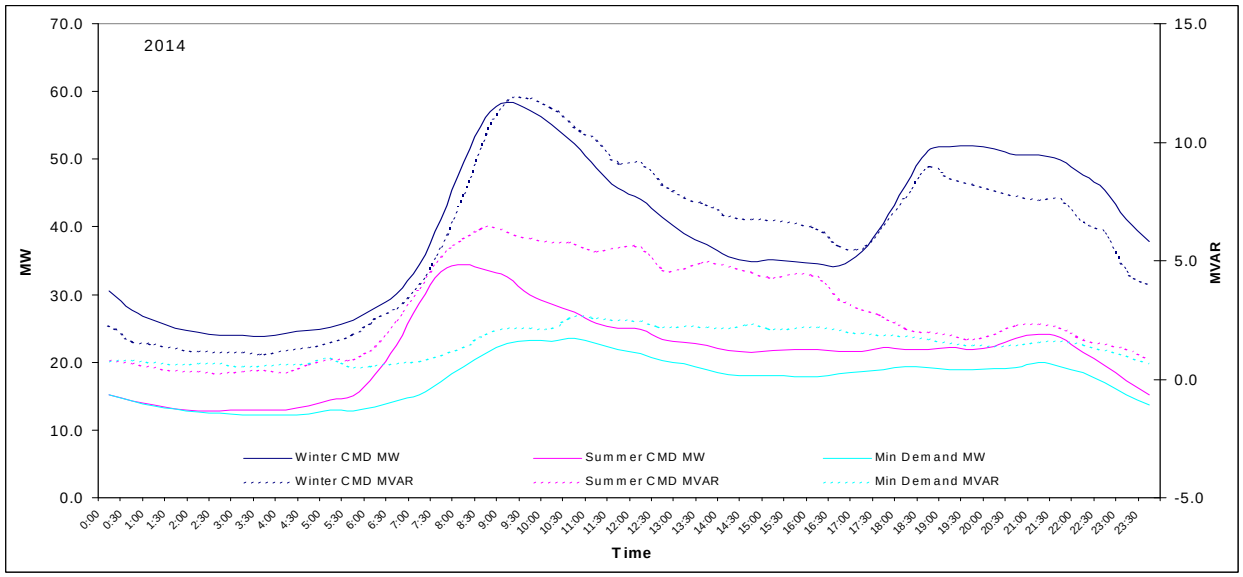

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

Figure 4-96 Load Profiles: Lindisfarne Substation Day of Summer/Winter CMD, Peak & Min Demand






2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

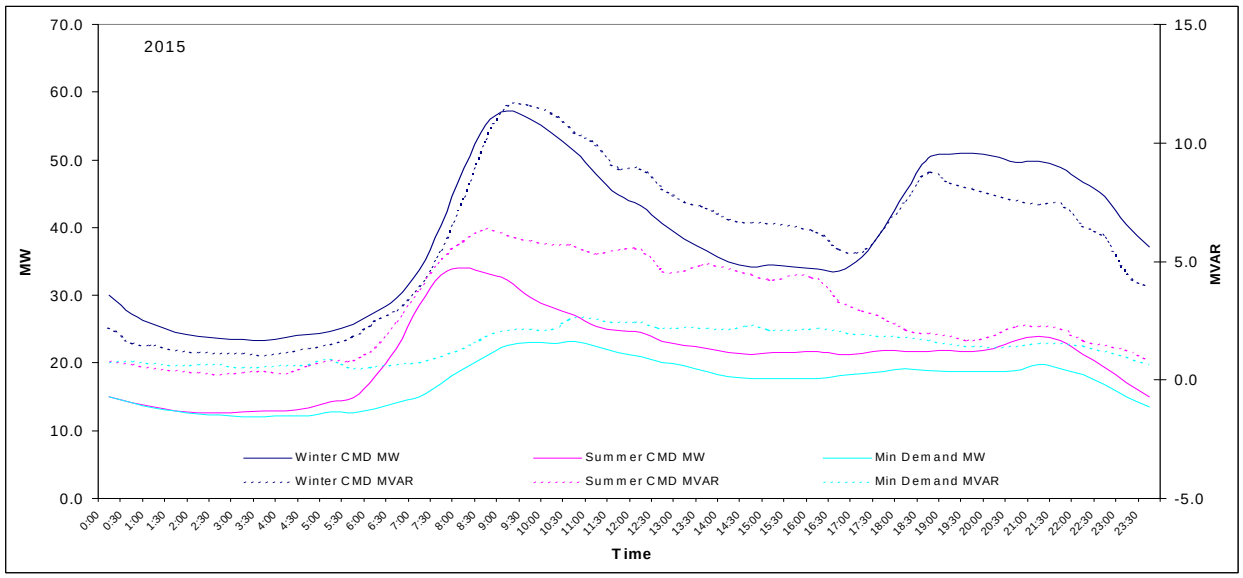
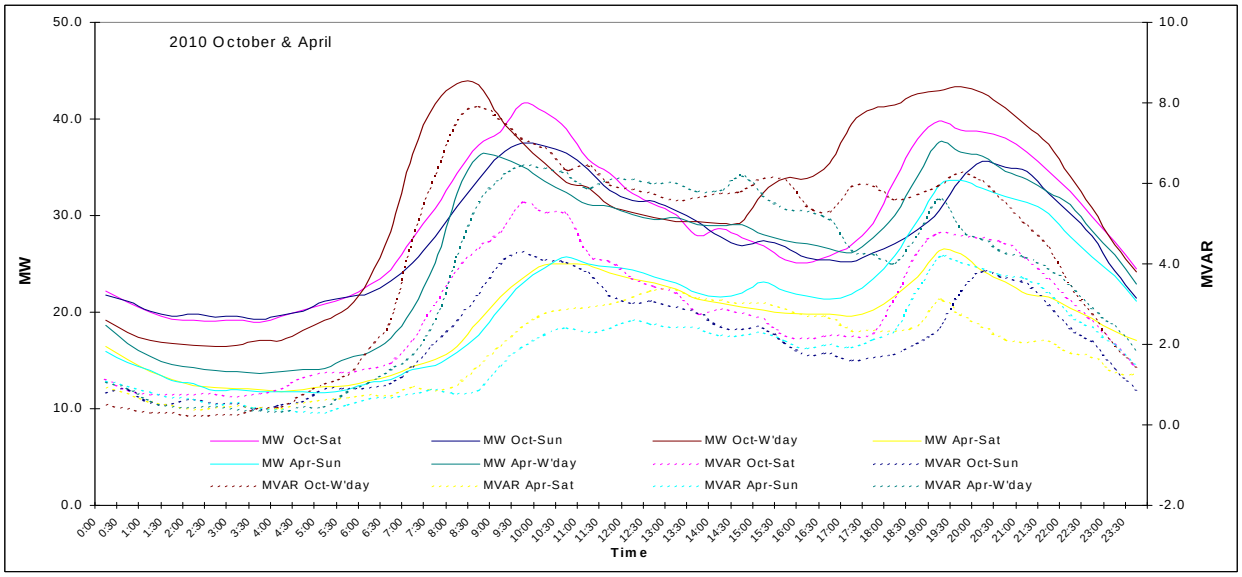
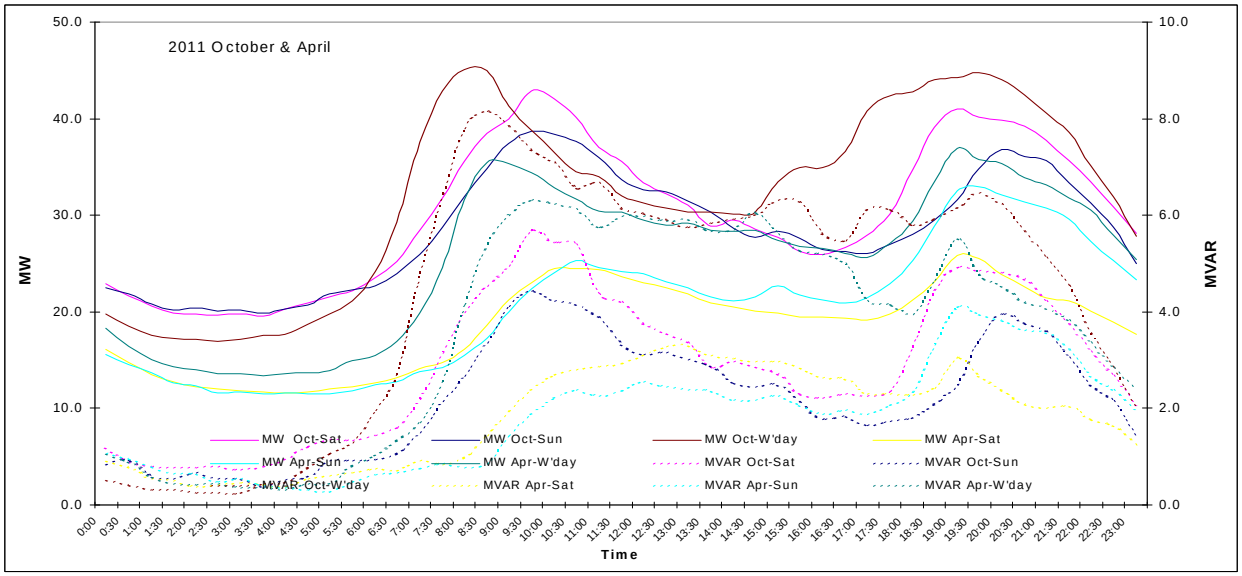
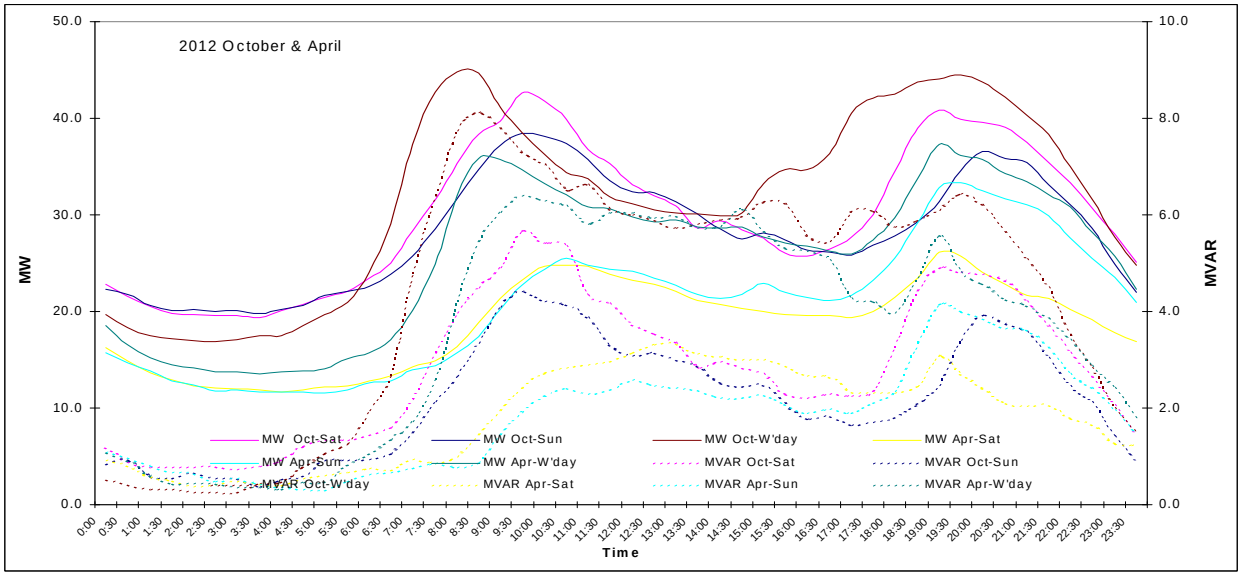
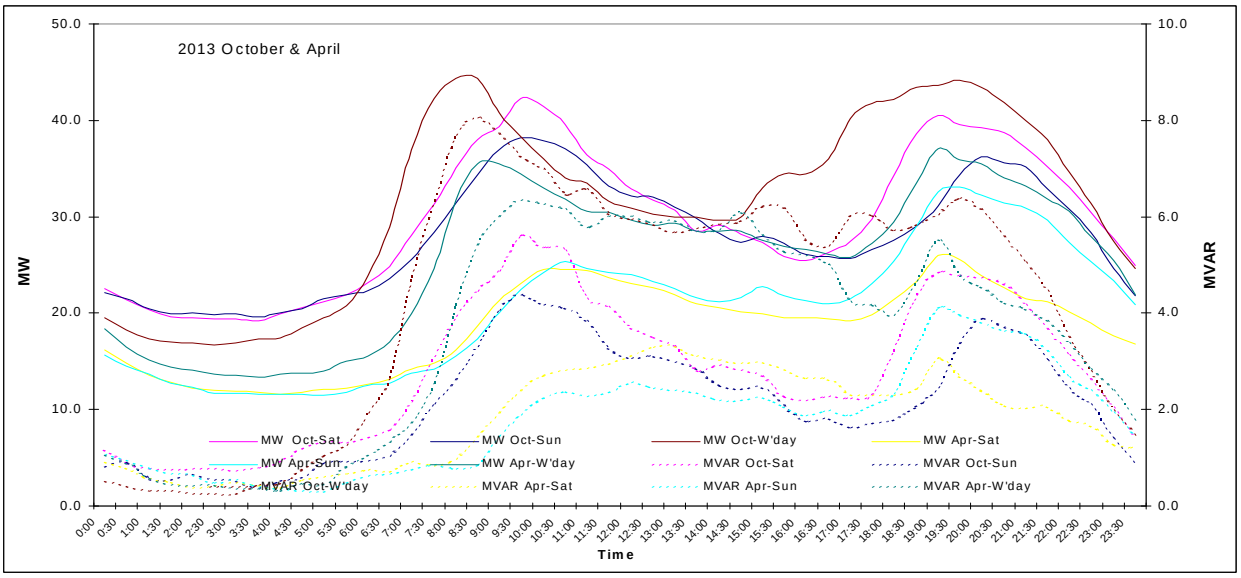

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

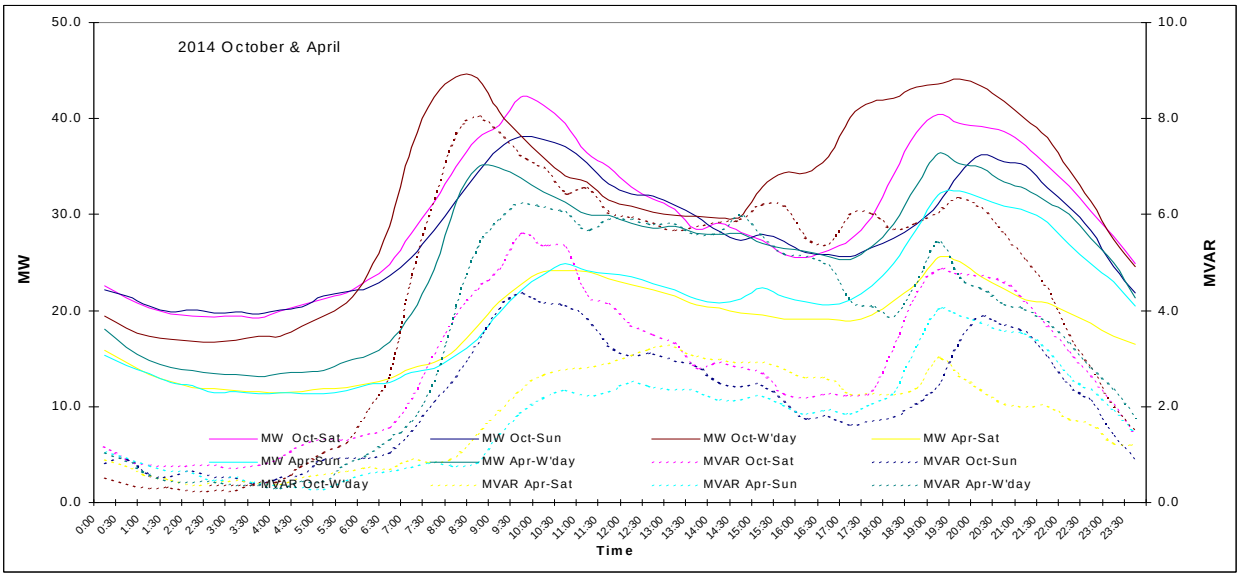
Figure 4-97 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

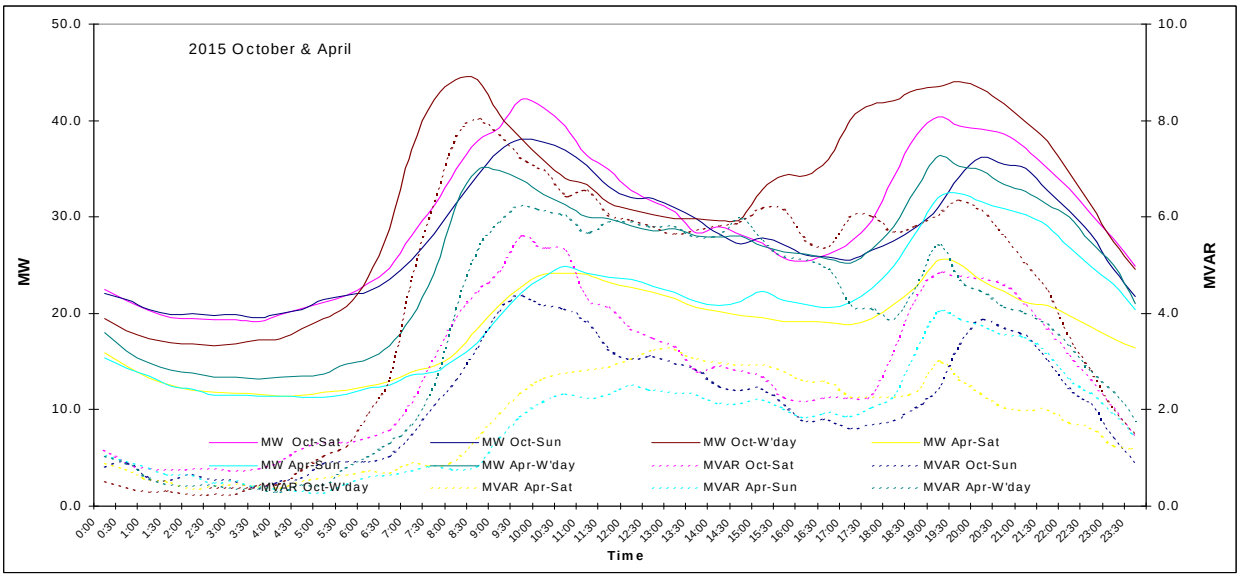
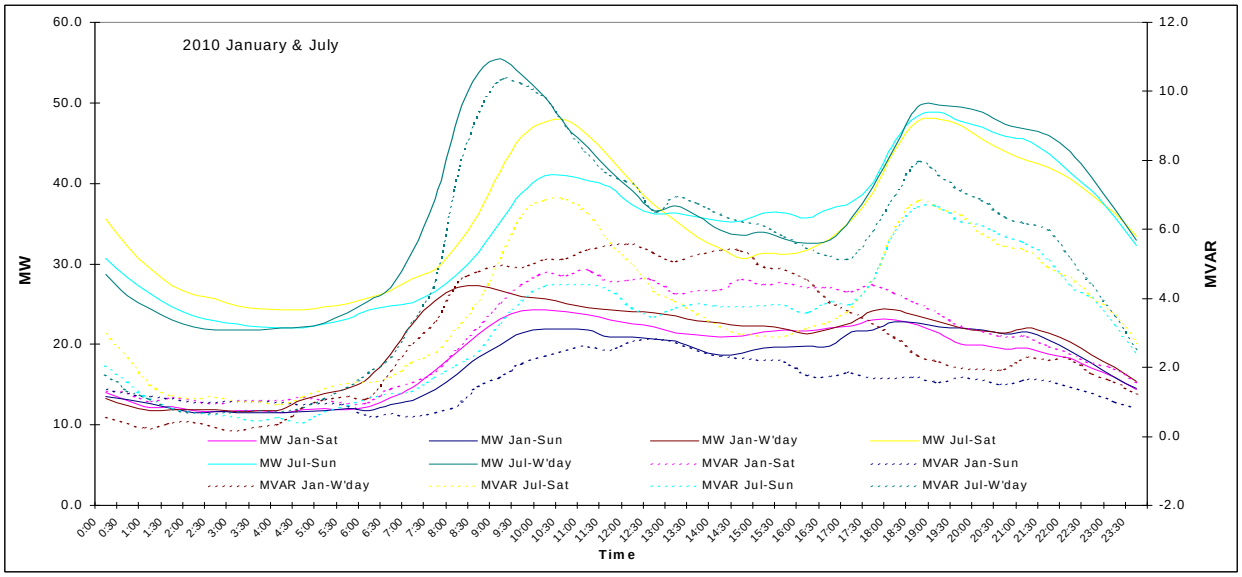
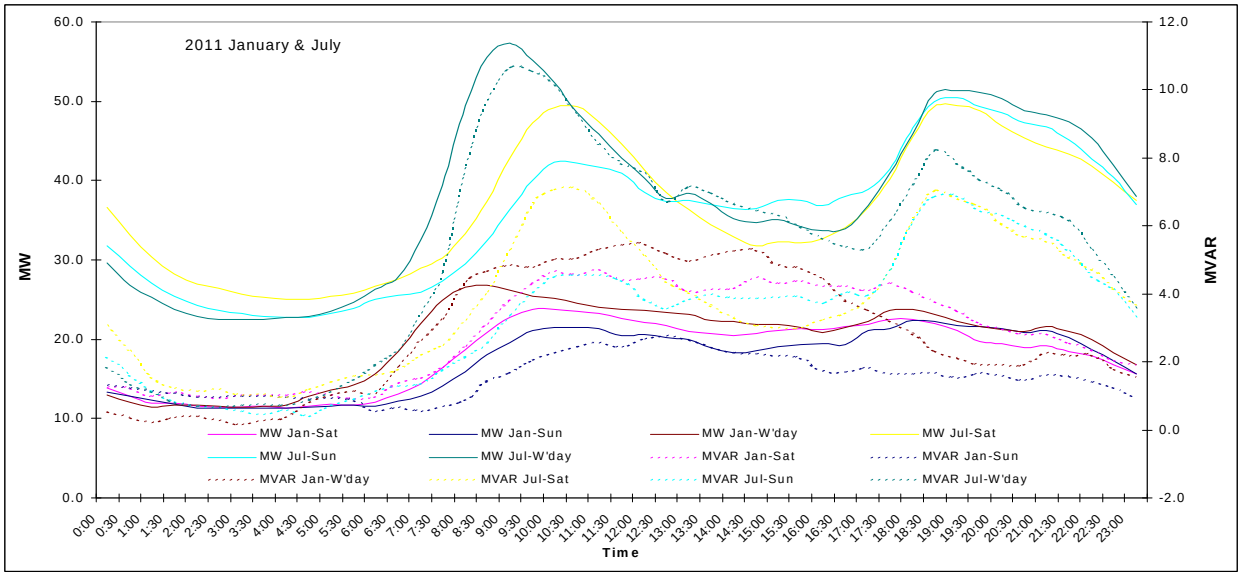
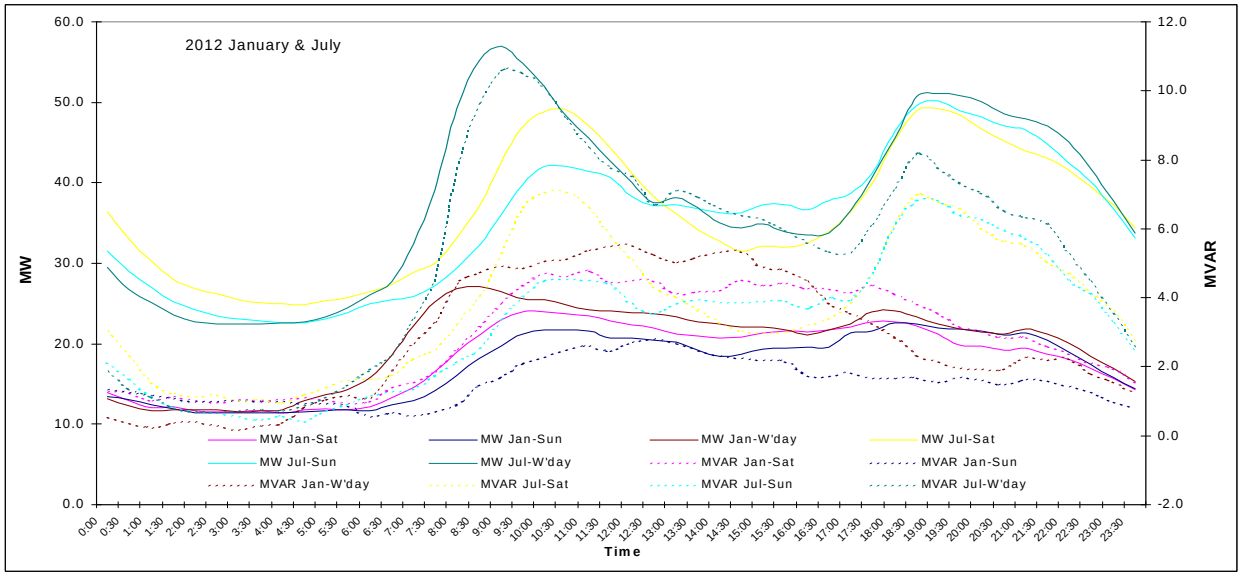
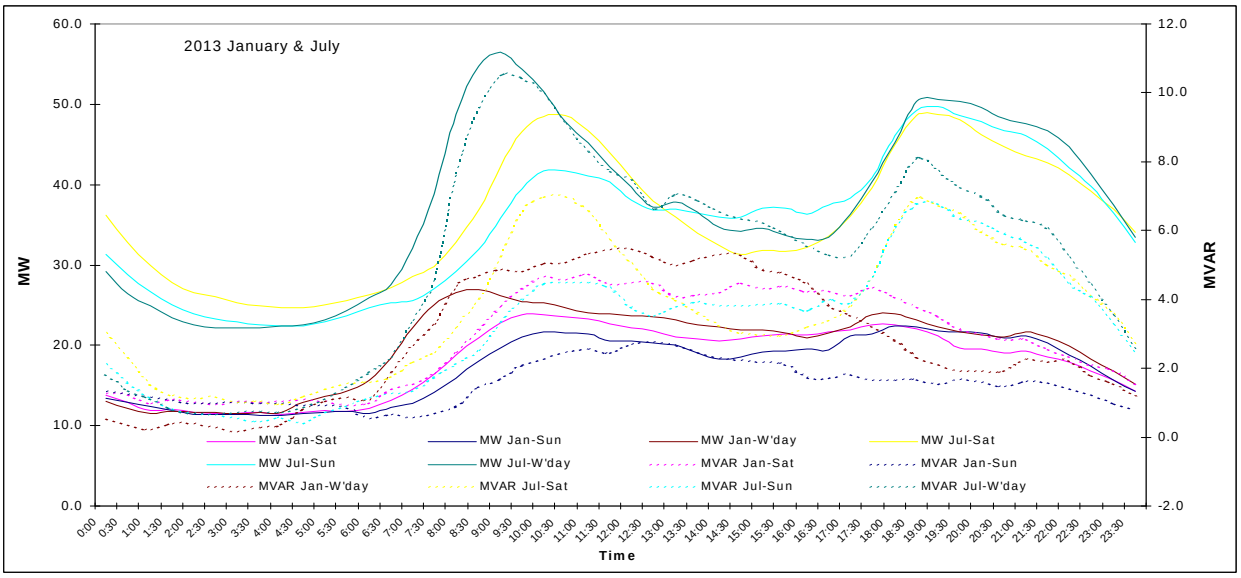

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

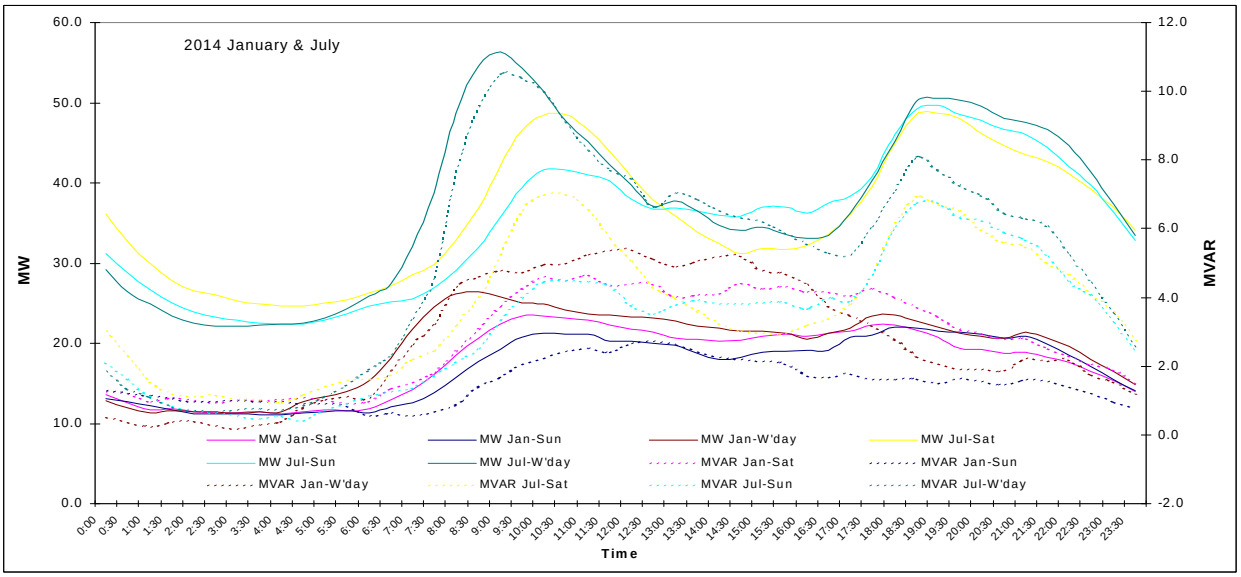
Figure 4-98 Load Profiles: Weekday, Saturday, Sunday for January & July

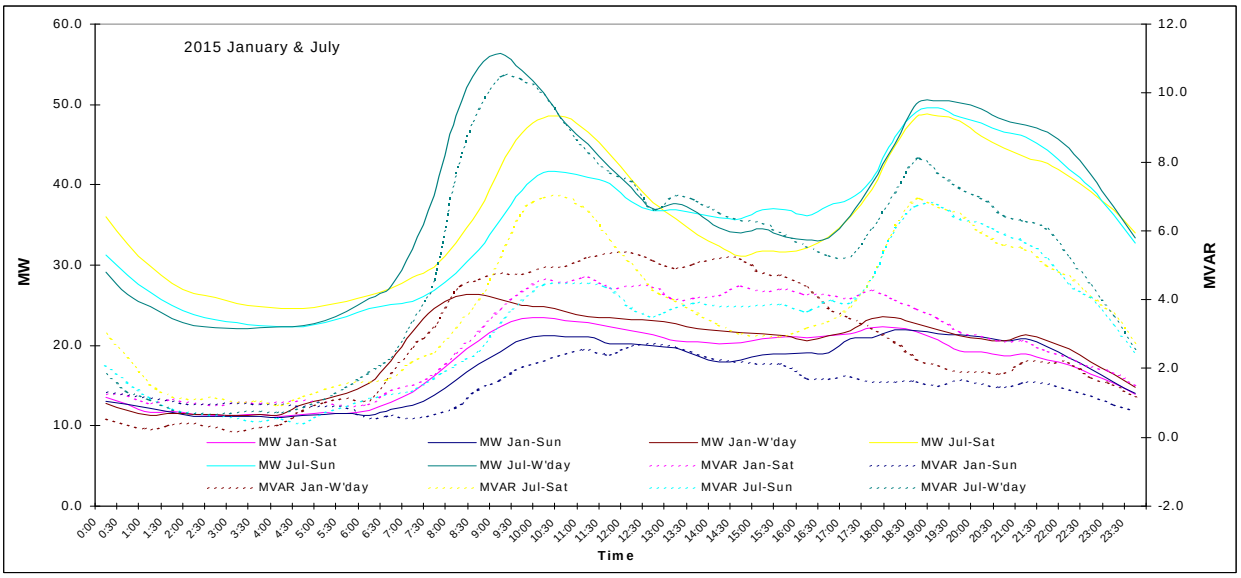







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.19 Meadowbank

Description:

The Substation is located at Meadowbank and is known as “Meadowbank Substation”. The substation is owned by Transend.

Table 4-75 Meadowbank Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	3	10	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-76 Meadowbank Site Winter load forecast

Meadowbank	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	4.30	4.33	4.29	4.33	4.30	4.33	4.37	4.41
2006	3.25	4.05	2.75	3.42	3.25	4.05	2.79	3.48
2007	4.27	4.28	2.77	2.78	4.27	4.28	2.82	2.83
2008	6.07	7.37	2.89	3.51	6.07	7.37	2.91	3.53
2009	5.44	7.05	3.35	4.34	5.44	7.05	3.42	4.44
2010	3.47	3.52	2.58	2.62	3.47	3.52	2.63	2.67
2011	3.72	3.77	2.76	2.80	3.76	3.81	2.80	2.84
2012	3.82	3.87	2.84	2.88	3.87	3.92	2.88	2.92
2013	3.92	3.97	2.91	2.95	3.96	4.02	2.95	2.99
2014	4.04	4.09	3.00	3.05	4.08	4.14	3.04	3.08
2015	4.16	4.22	3.09	3.14	4.21	4.26	3.13	3.17
2016	4.29	4.35	3.19	3.23	4.34	4.39	3.22	3.27
2017	4.42	4.48	3.29	3.33	4.47	4.53	3.32	3.37
2018	4.57	4.63	3.40	3.45	4.62	4.68	3.43	3.48
2019	4.73	4.80	3.52	3.57	4.78	4.85	3.56	3.61
2020	4.91	4.98	3.65	3.70	4.96	5.03	3.69	3.74

Table 4-77 Meadowbank Site Summer load forecast

Meadowbank	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	5.65	6.16	4.09	4.45	5.65	6.16	4.09	4.45
2006	4.26	4.67	3.01	3.30	4.26	4.67	3.01	3.30
2007	5.76	6.37	5.60	6.20	5.76	6.37	5.69	6.29
2008	4.87	5.32	3.76	4.10	4.87	5.32	3.76	4.10
2009	5.94	6.25	3.20	3.37	5.94	6.25	3.20	3.37
2010	5.30	5.70	2.29	2.46	5.30	5.70	2.29	2.46
2011	5.27	5.66	2.28	2.45	5.36	5.76	2.32	2.49
2012	5.39	5.79	2.33	2.50	5.48	5.90	2.37	2.55
2013	5.42	5.83	2.34	2.52	5.52	5.93	2.38	2.56
2014	5.39	5.80	2.33	2.51	5.48	5.90	2.37	2.55
2015	5.45	5.86	2.36	2.53	5.55	5.96	2.40	2.58
2016	5.41	5.82	2.34	2.51	5.51	5.93	2.38	2.56
2017	5.57	5.99	2.41	2.59	5.67	6.10	2.45	2.64
2018	5.65	6.08	2.44	2.63	5.76	6.19	2.49	2.68
2019	5.74	6.17	2.48	2.67	5.84	6.28	2.52	2.71
2020	5.84	6.28	2.52	2.71	5.94	6.39	2.57	2.76

Figure 4-99 Meadowbank Site Summer Load Forecast at 50% and 10% POE

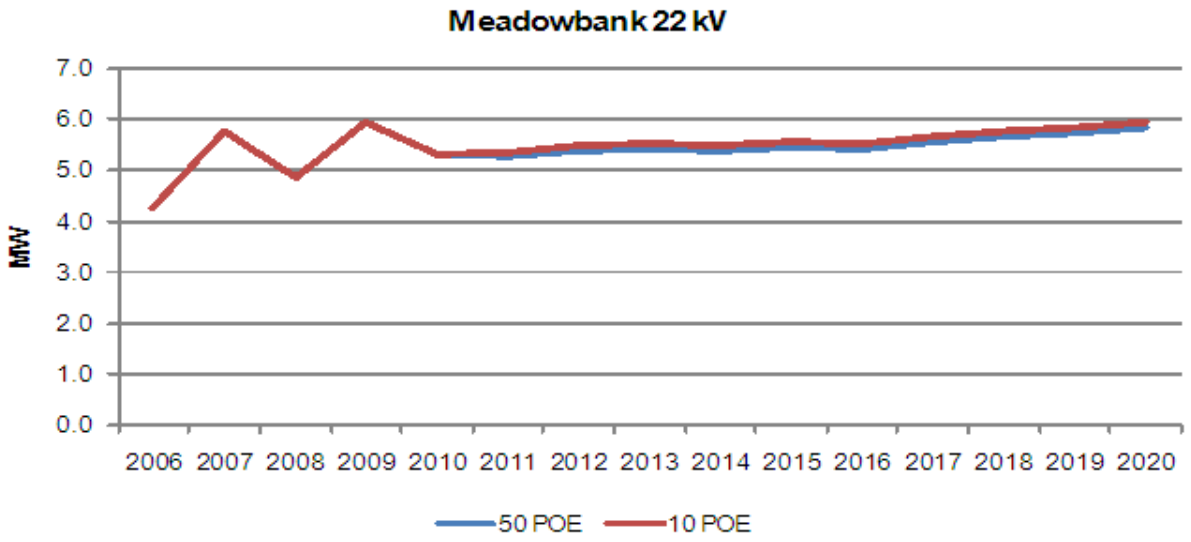
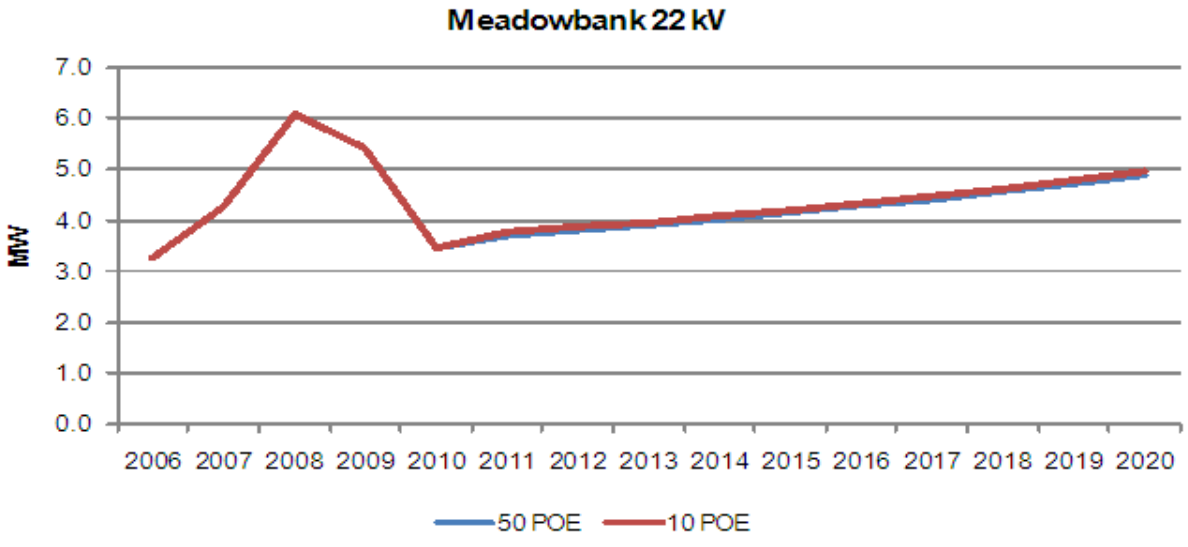
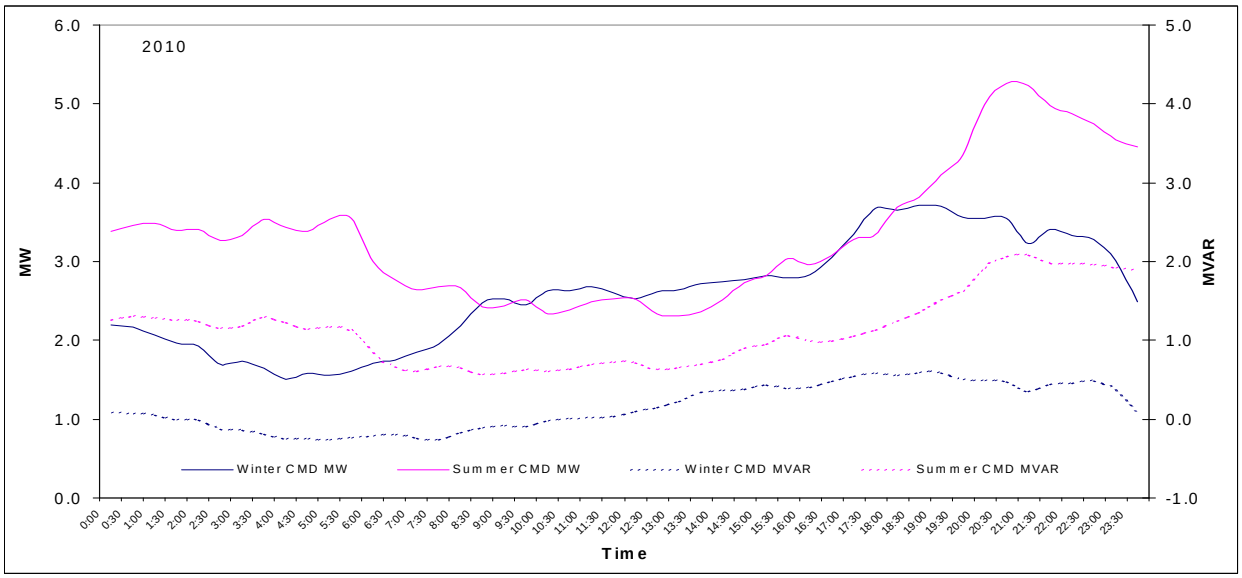


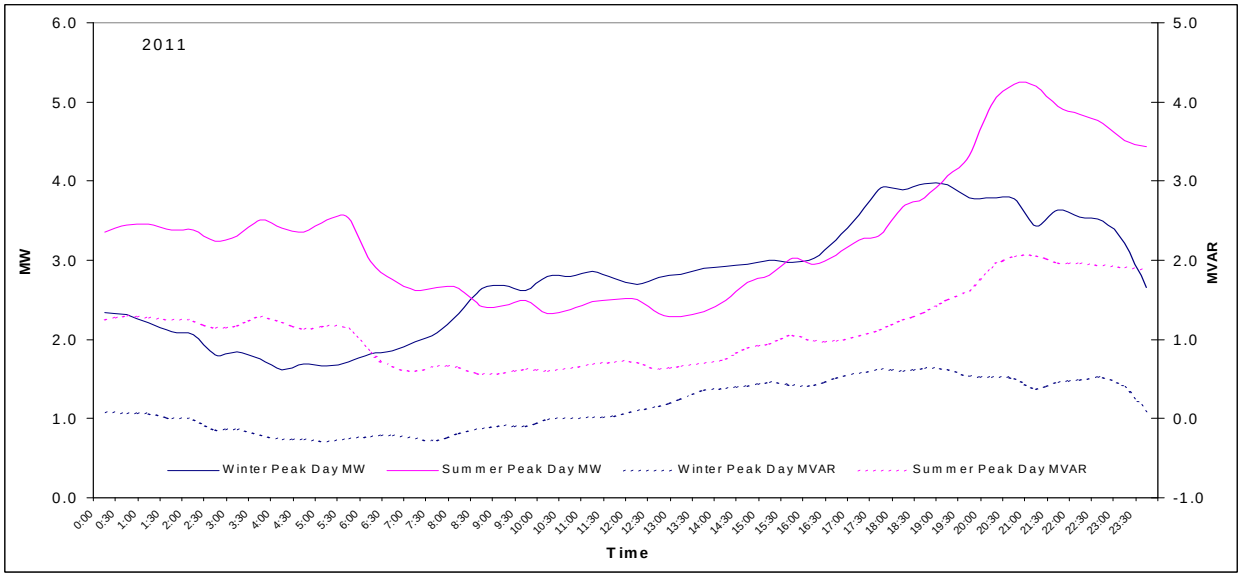
Figure 4-100 Meadowbank Site Winter Load Forecast at 50% and 10% POE

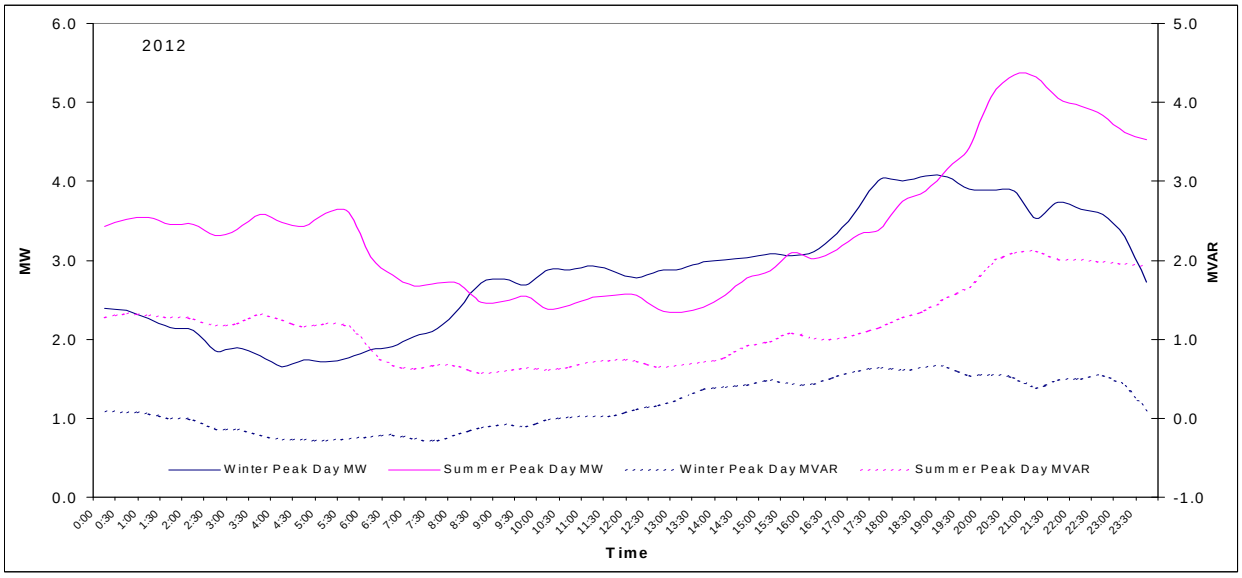


Load Profiles:

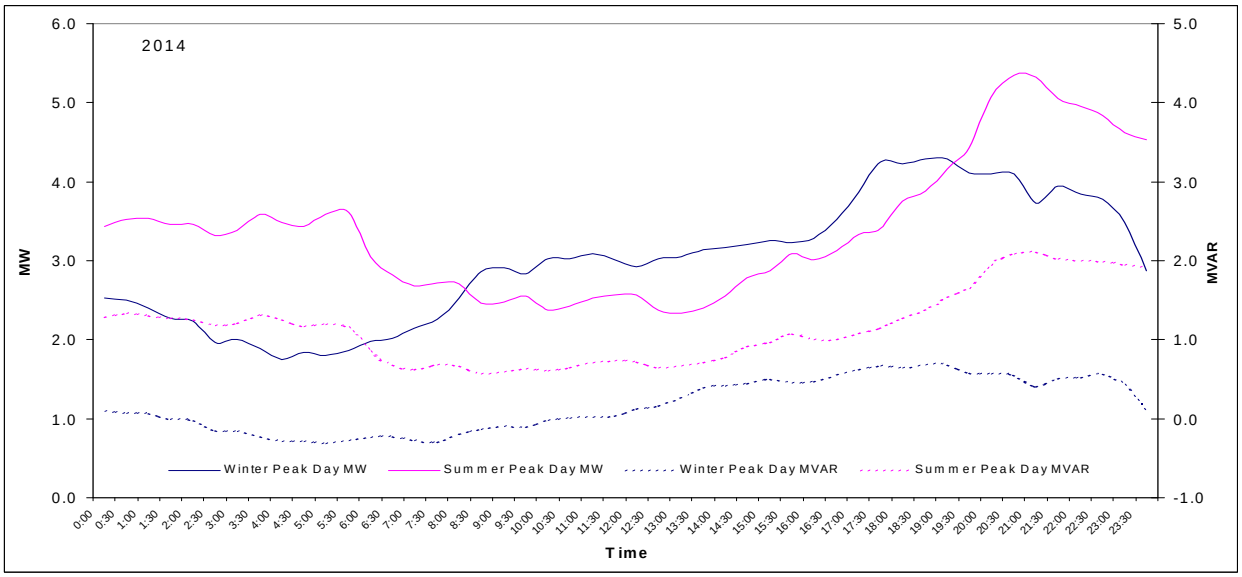
Figure 4-101 Load Profiles: Meadowbank Substation Day of Summer/Winter Peak Demand





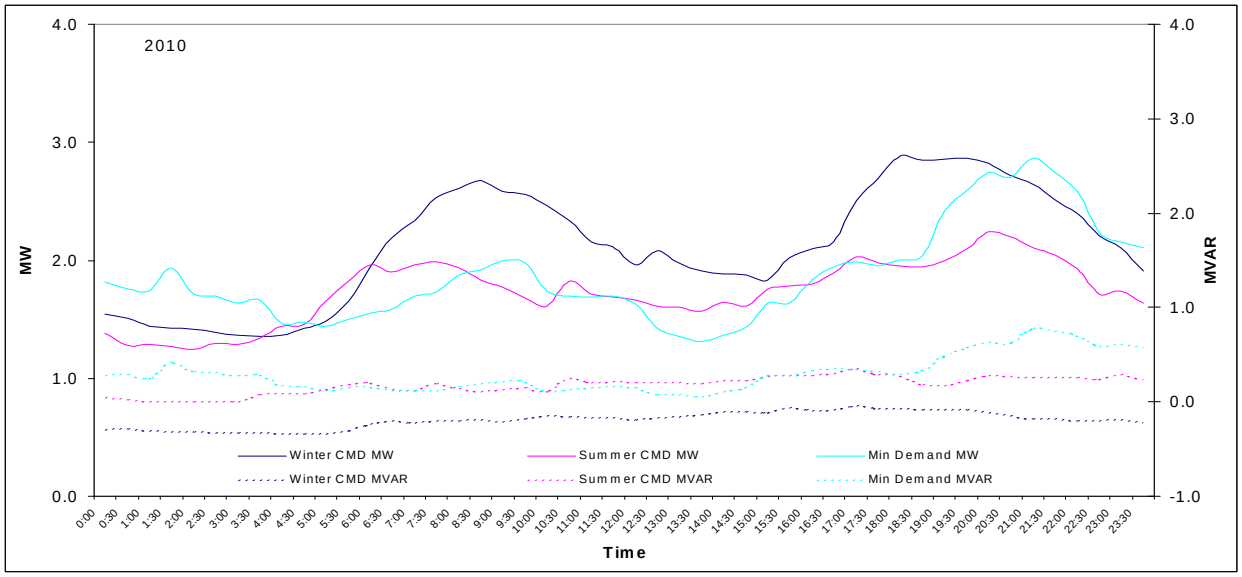


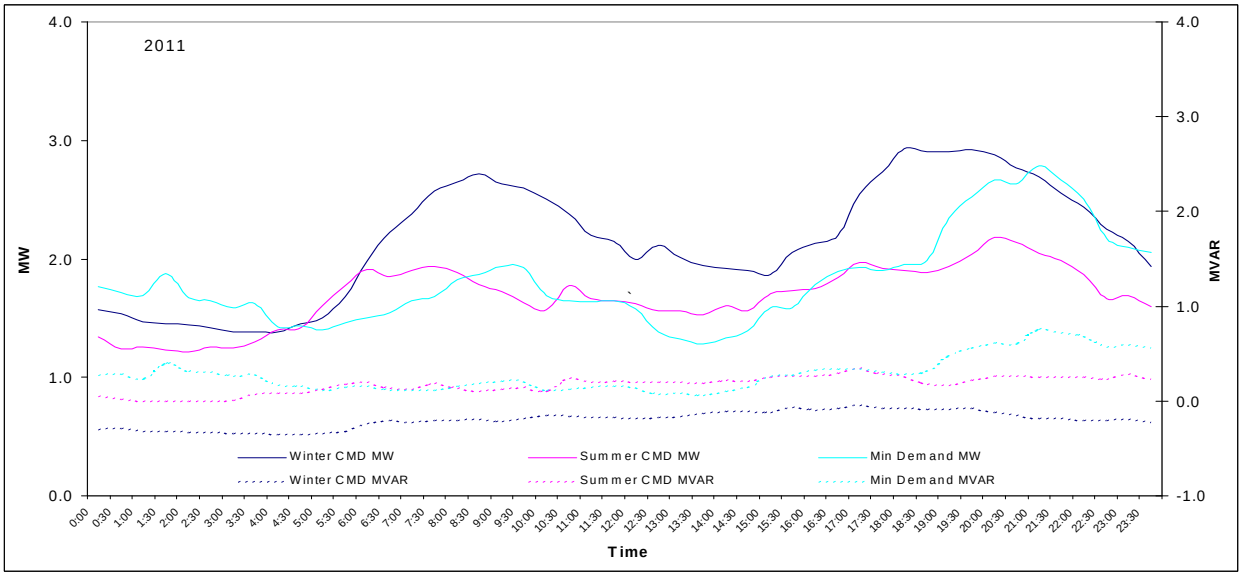

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

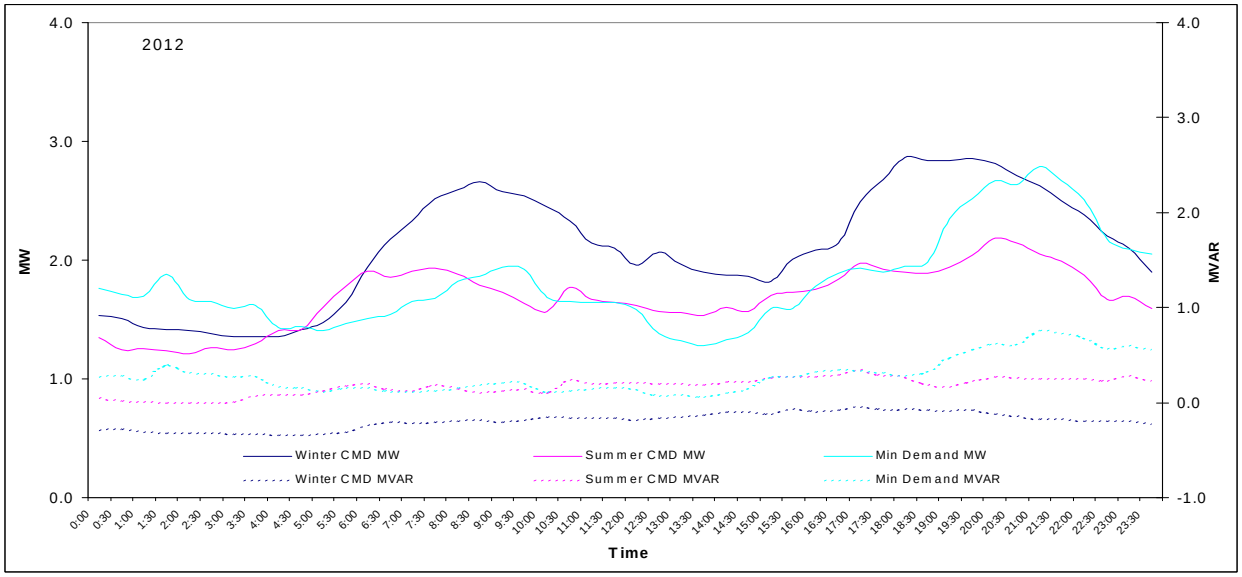

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

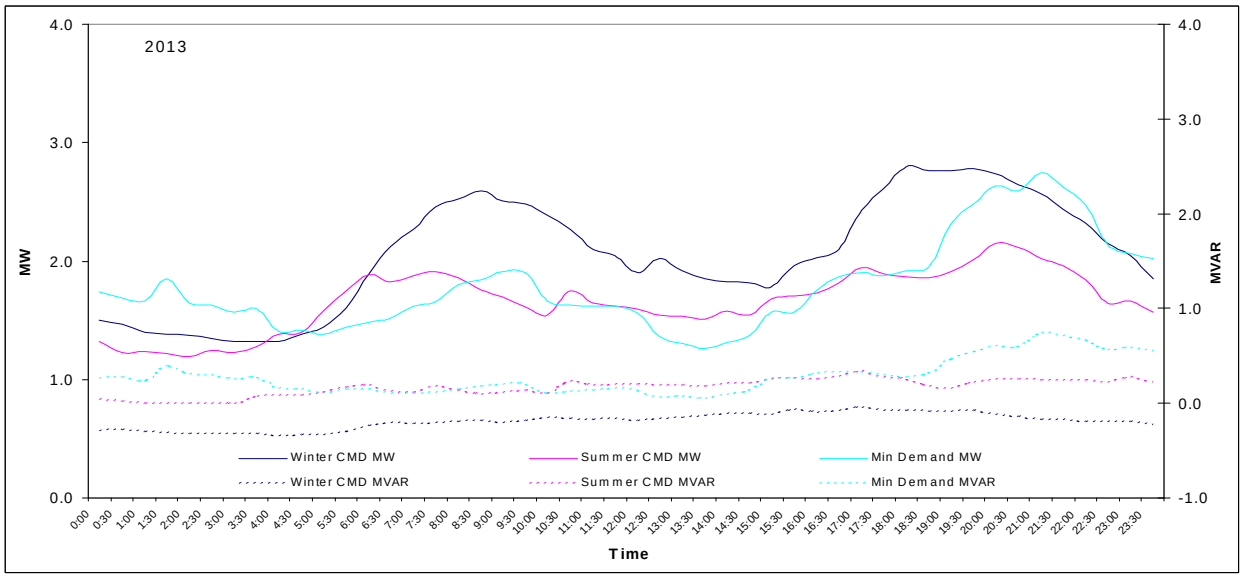

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

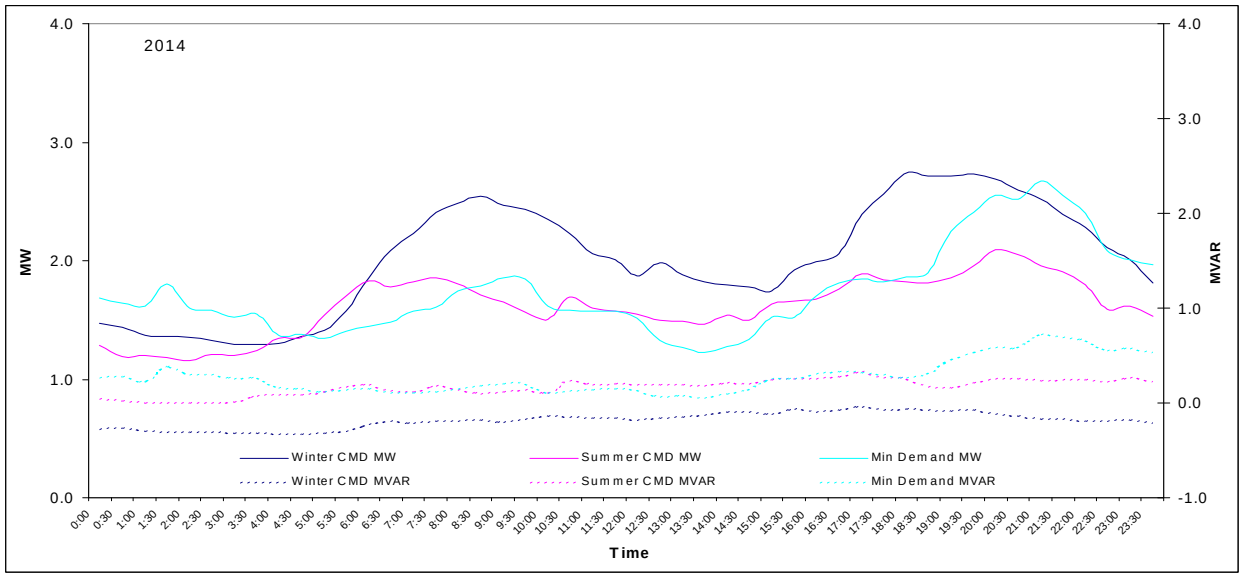
Figure 4-102 Load Profiles: Meadowbank Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

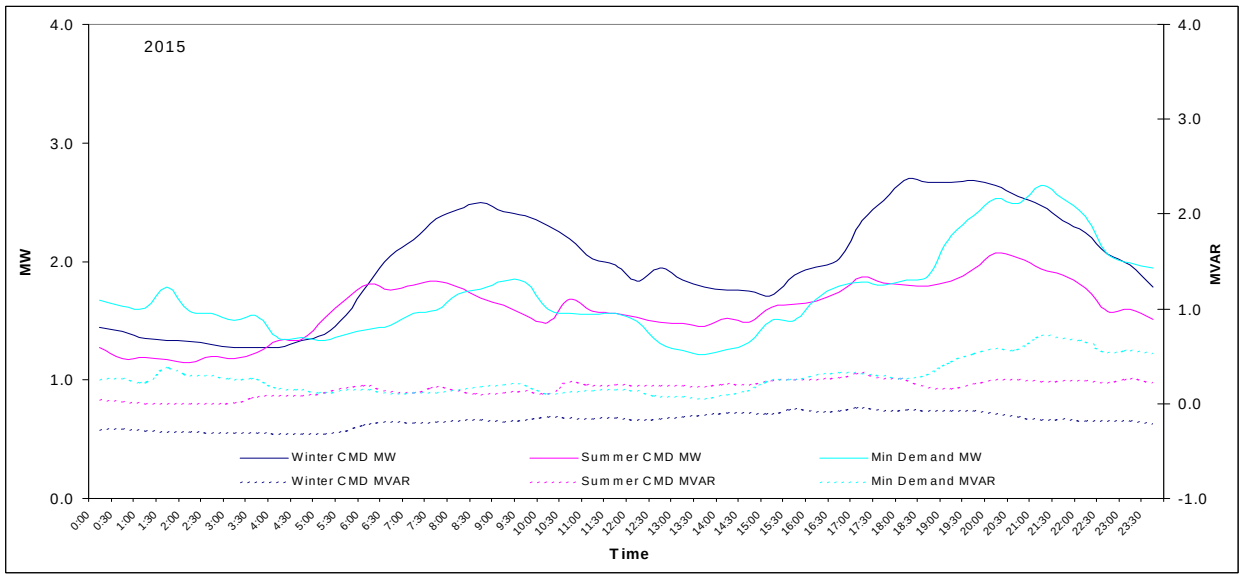
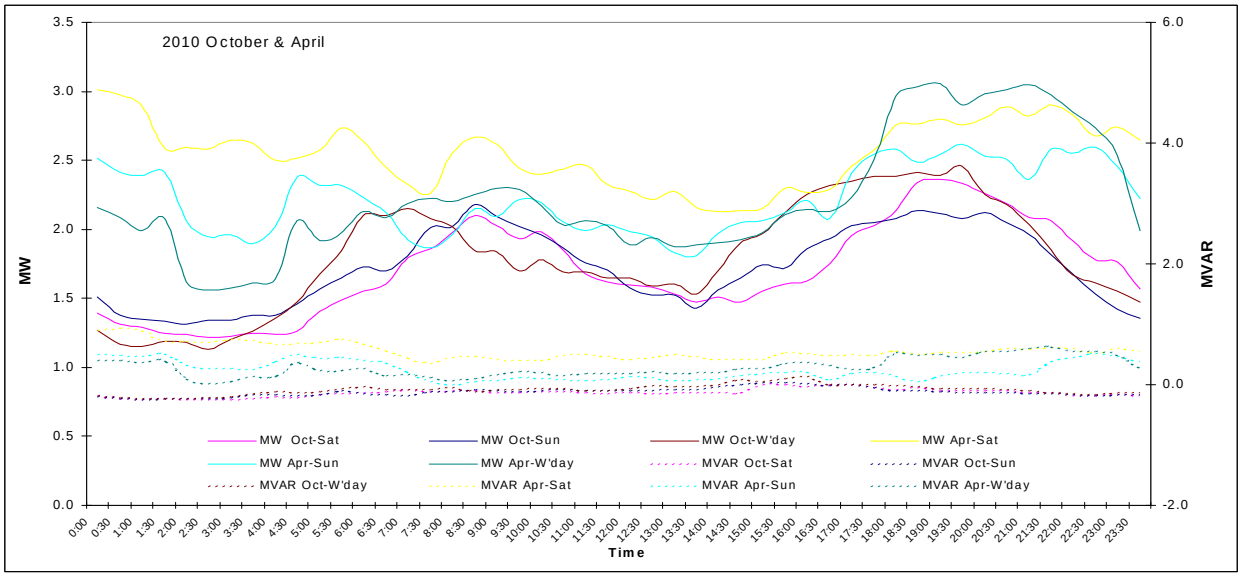
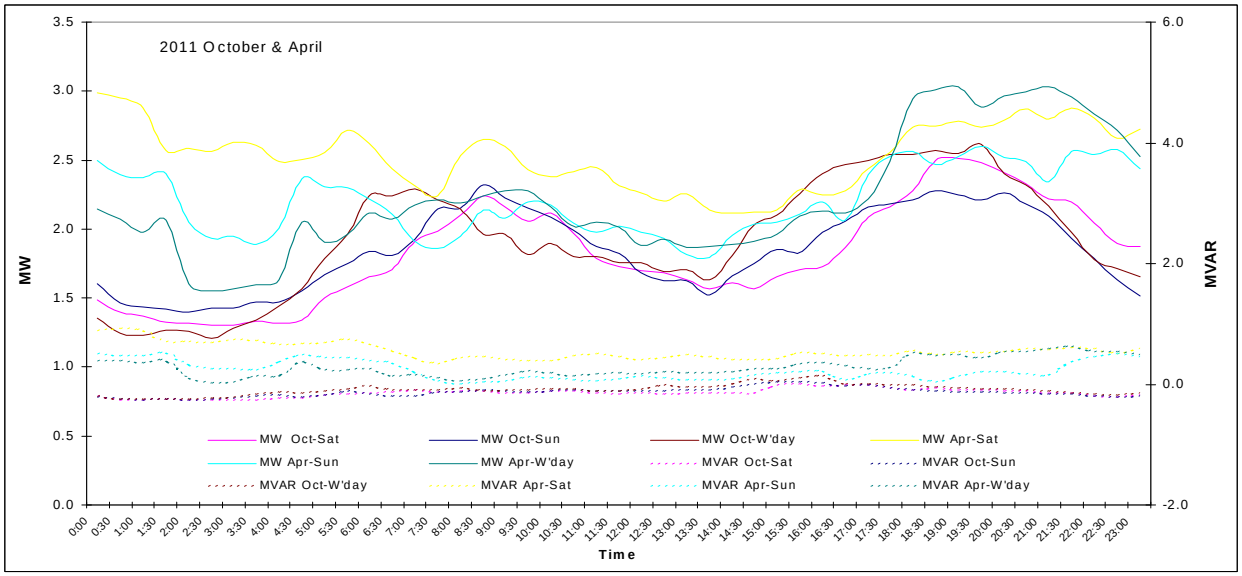
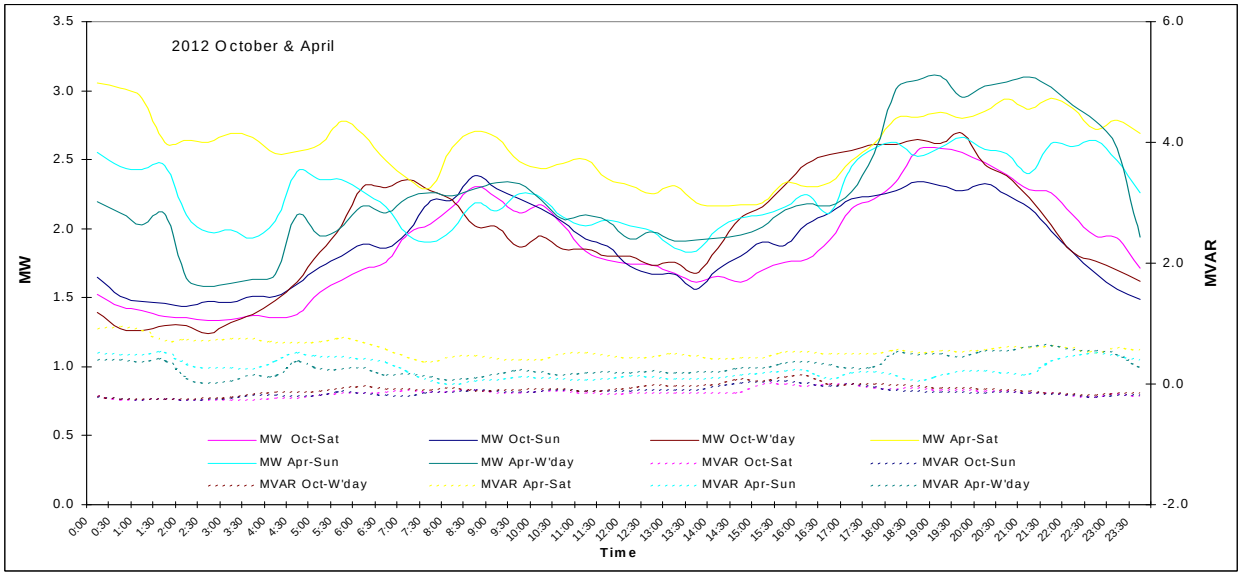
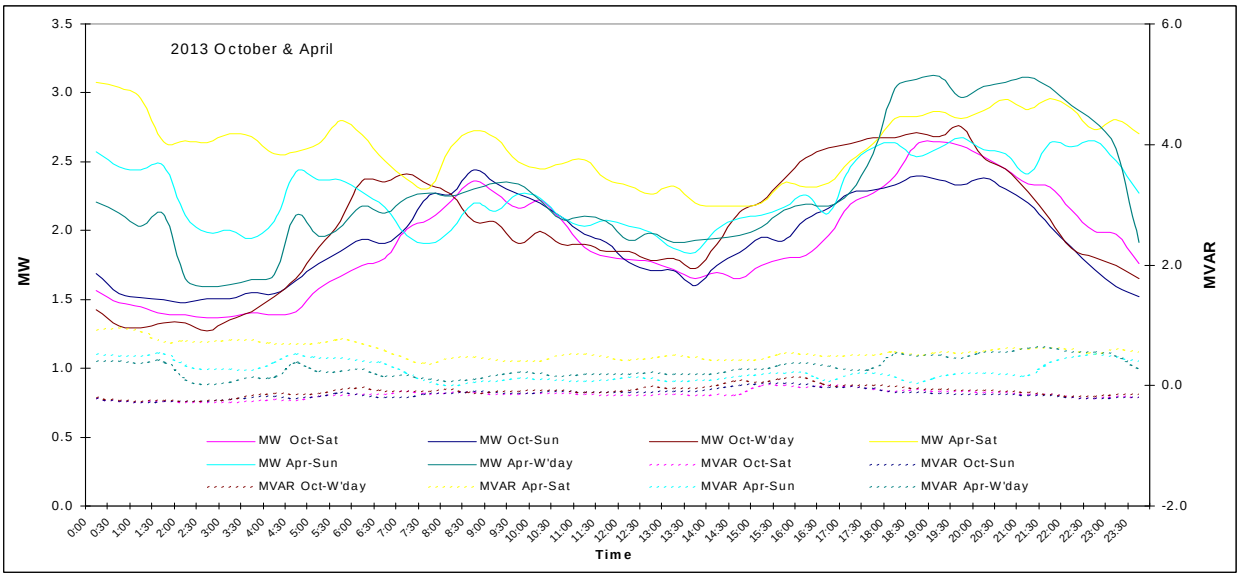

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

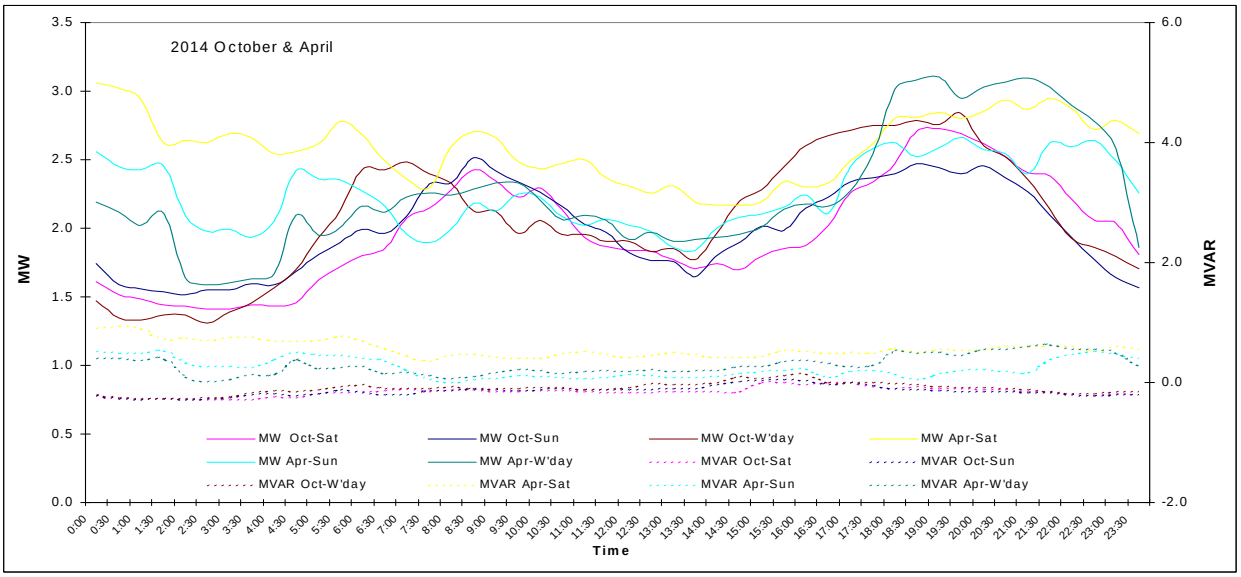
Figure 4-103 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

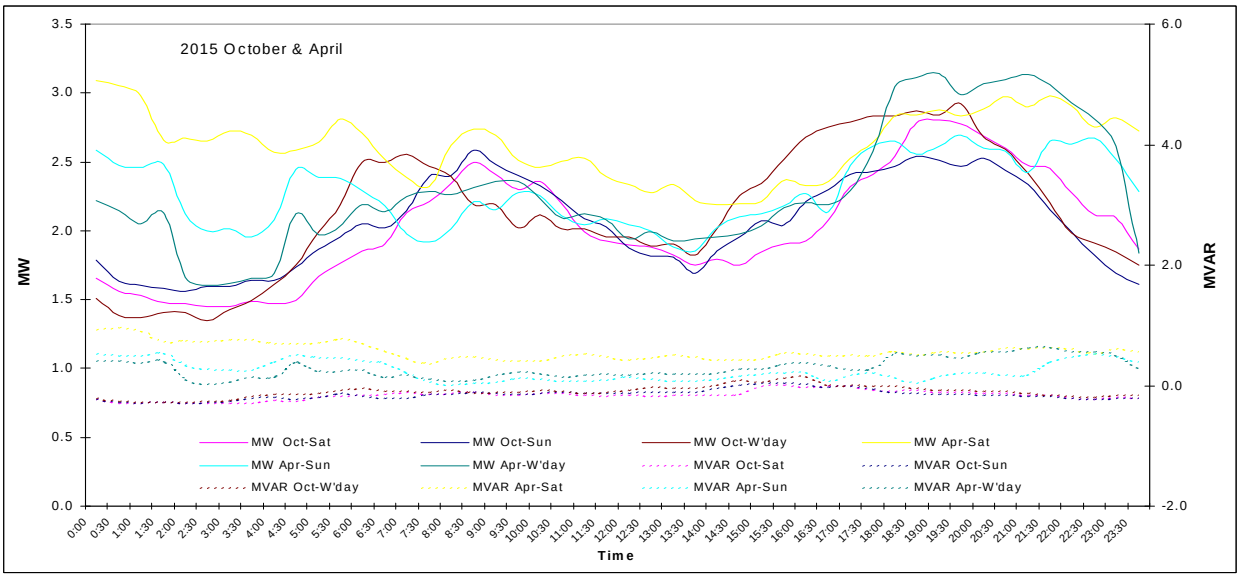
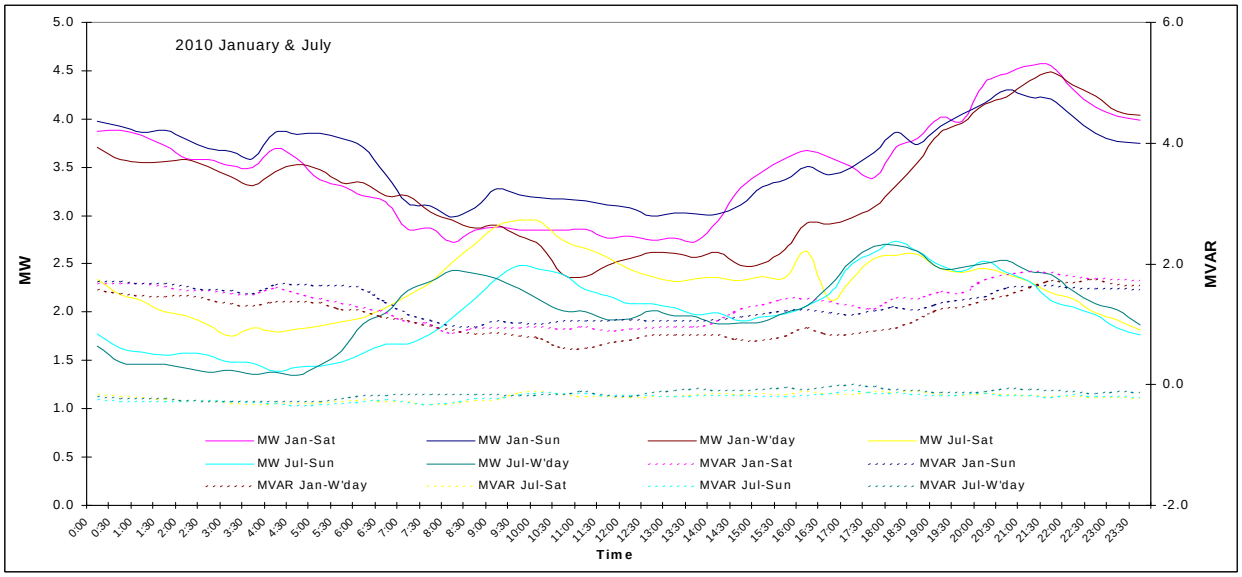
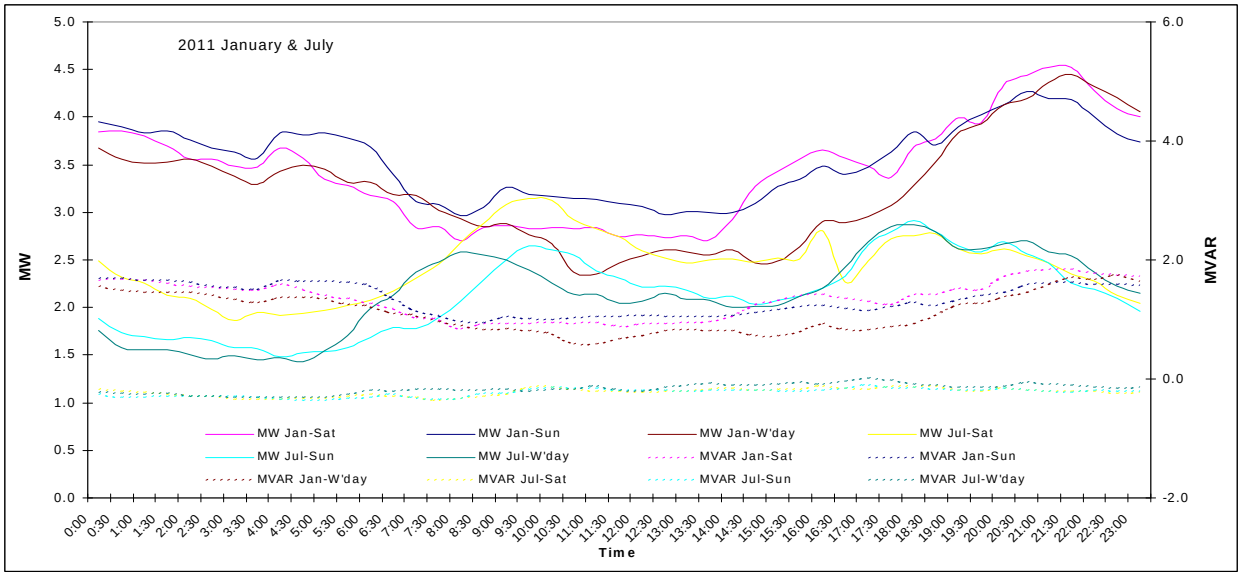
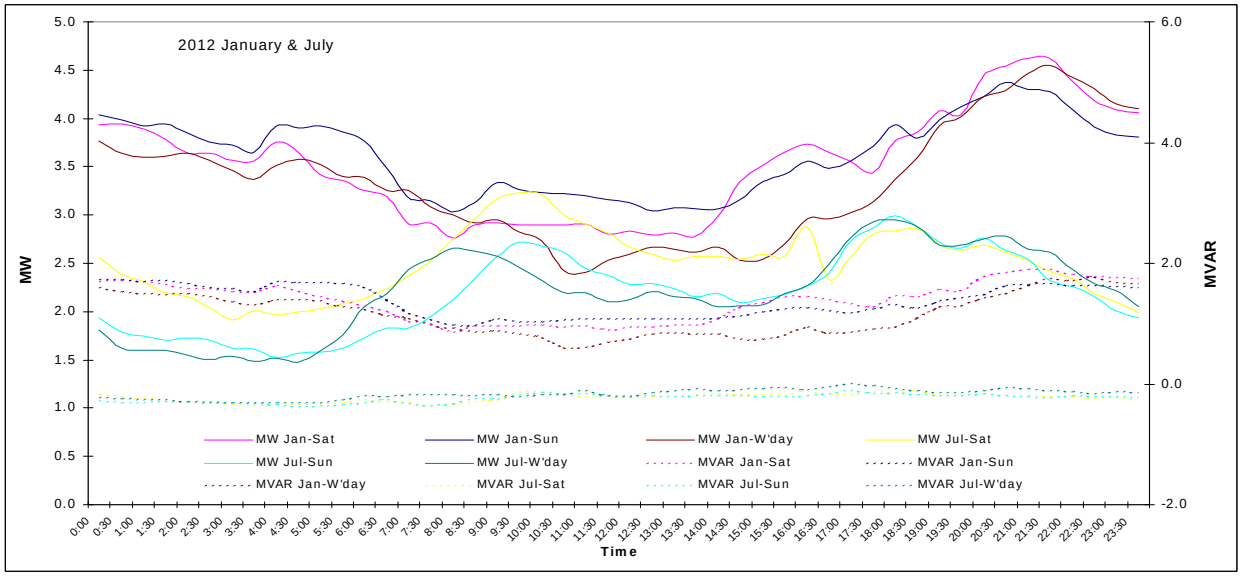
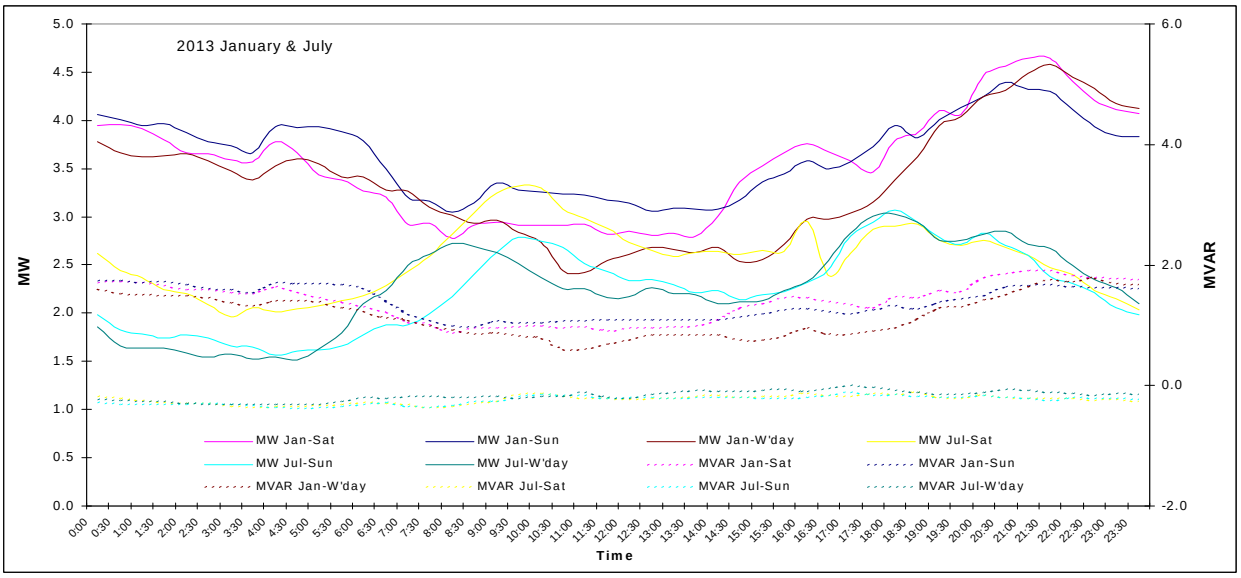

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

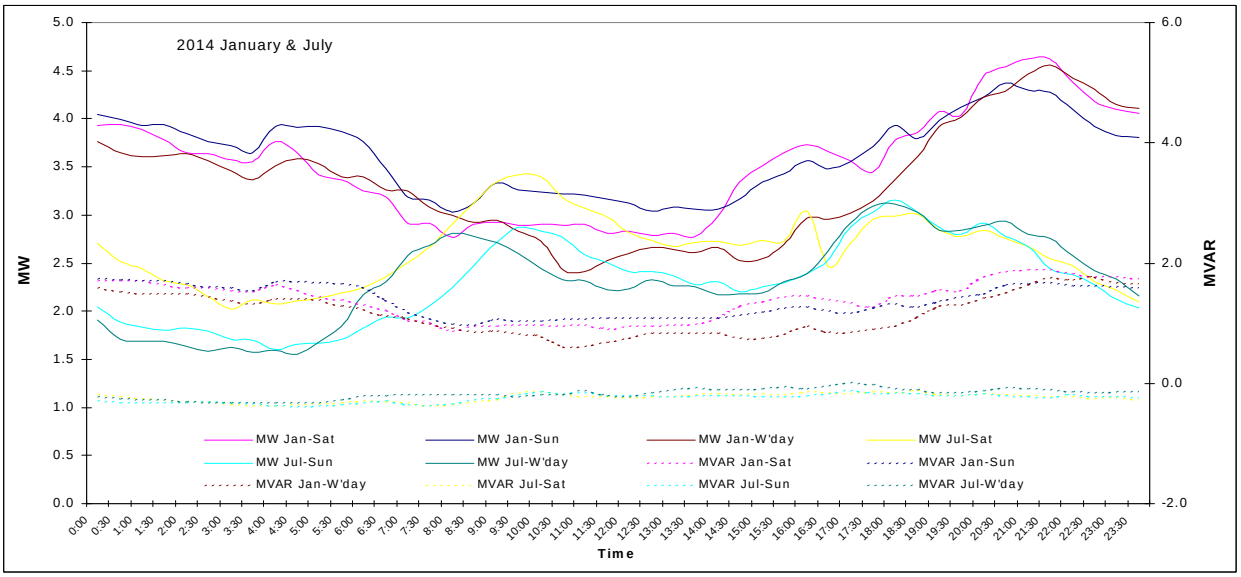
Figure 4-104 Load Profiles: Weekday, Saturday, Sunday for January & July

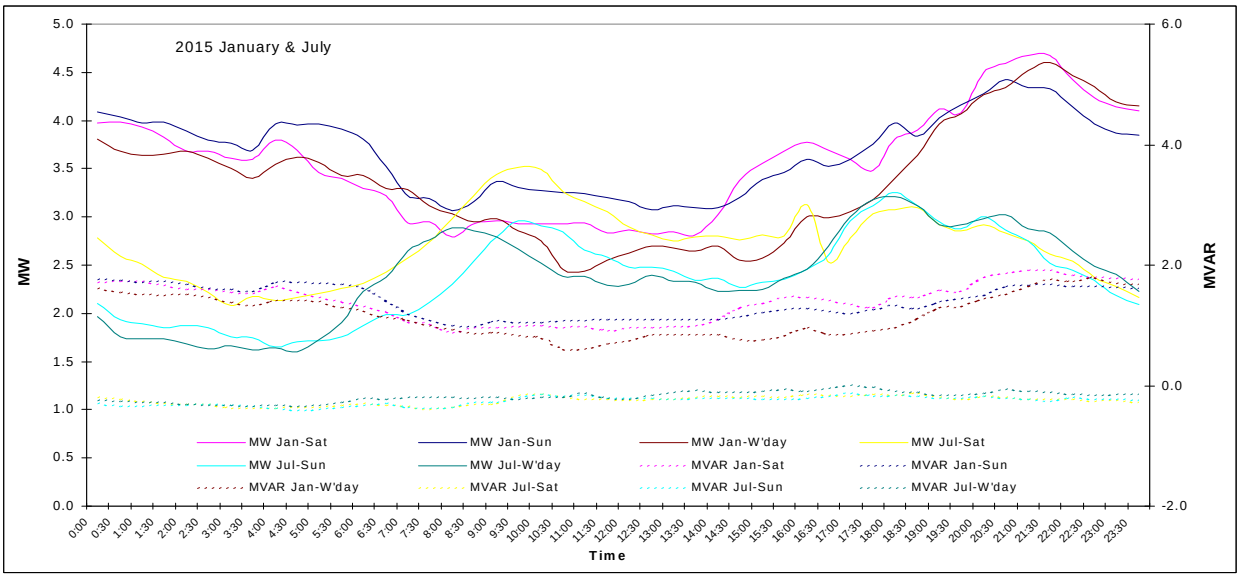







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.20 Mowbray

Description:

The Substation is located at Mowbray and is known as “Mowbray Substation”. The substation is owned by Transend.

Table 4-78 Mowbray Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	10	50	0

Embedded Generation:

Two undispatched embedded generators are connected to this substation. The first unit was connected in summer 2007, and the second unit connected in winter 2010. The operational profile for these units is anticipated to be as per the following table. The effect of the units on the peak summer and winter demand has been included in the demand forecast for this connection site.

Unit 1	2011	2012	2013	2014	2015
Rating (MW)	1.3	1.3	1.3	1.3	1.3
Output – Summer (MW)	1.3	1.3	1.3	1.3	1.3
Output – Winter (MW)	1.3	1.3	1.3	1.3	1.3
Operating characteristics	Biomass unit associated with methane recovery from refuse site, 24 hour operation.				
Unit 2	**2011**	**2012**	**2013**	**2014**	**2015**
Rating (MW)	1.3	1.3	1.3	1.3	1.3
Output – Summer (MW)	1.3	1.3	1.3	1.3	1.3
Output – Winter (MW)	1.3	1.3	1.3	1.3	1.3
Operating characteristics	Biomass unit associated with methane recovery from refuse site, 24 hour operation.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

Due to the fixed interconnection through the distribution network to Trevallyn Substation, continuous load transfer between Mowbray and Trevallyn substations has been factored into both the summer and winter the forecasts for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-79 Mowbray Site Winter load forecast

Mowbray	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006	45.21	49.13	45.21	49.13	45.21	49.13	45.21	49.13
2007	49.61	53.62	43.89	47.44	49.61	53.62	45.45	49.13
2008	45.74	48.37	41.20	43.57	45.74	48.37	43.45	45.95
2009	51.58	55.87	47.82	51.81	51.58	55.87	49.53	53.66
2010	55.72	59.96	47.29	50.89	55.72	59.96	49.05	52.78
2011	55.85	60.10	47.40	51.01	57.61	62.00	48.90	52.62
2012	55.85	60.11	47.40	51.01	57.61	62.00	48.89	52.62
2013	56.75	61.08	48.17	51.84	58.54	63.00	49.68	53.47
2014	58.04	62.46	49.26	53.01	59.80	64.35	50.75	54.62
2015	59.29	63.81	50.33	54.16	61.09	65.74	51.85	55.80
2016	60.71	65.34	51.53	55.45	62.49	67.25	53.04	57.08
2017	62.13	66.86	52.73	56.75	63.95	68.82	54.27	58.41
2018	63.81	68.67	54.16	58.28	65.60	70.60	55.68	59.92
2019	65.67	70.67	55.73	59.98	67.55	72.69	57.33	61.70
2020	67.71	72.87	57.47	61.85	69.58	74.88	59.06	63.55

Table 4-80 Mowbray Site Summer load forecast

Mowbray	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	26.73	33.95	24.13	30.65	26.73	33.95	24.13	30.65
2008	26.49	33.95	24.61	31.55	26.49	33.95	24.79	31.78
2009	30.97	40.84	25.47	33.59	30.97	40.84	25.47	33.59
2010	25.32	31.57	23.36	29.12	25.32	31.57	23.45	29.24
2011	25.84	32.21	23.83	29.71	26.39	32.90	24.34	30.34
2012	27.12	33.81	25.02	31.19	27.71	34.54	25.56	31.87
2013	26.95	33.60	24.86	31.00	27.55	34.35	25.41	31.68
2014	26.51	33.05	24.45	30.49	27.06	33.74	24.96	31.12
2015	26.51	33.04	24.45	30.48	27.07	33.74	24.97	31.13
2016	26.01	32.43	23.99	29.91	26.59	33.15	24.53	30.58
2017	26.50	33.04	24.44	30.48	27.07	33.74	24.97	31.13
2018	26.59	33.16	24.53	30.58	27.18	33.88	25.07	31.25
2019	26.71	33.30	24.64	30.72	27.28	34.01	25.17	31.38
2020	26.87	33.50	24.79	30.91	27.44	34.21	25.32	31.56

Figure 4-105 Mowbray Site Summer Load Forecast at 50% and 10% POE

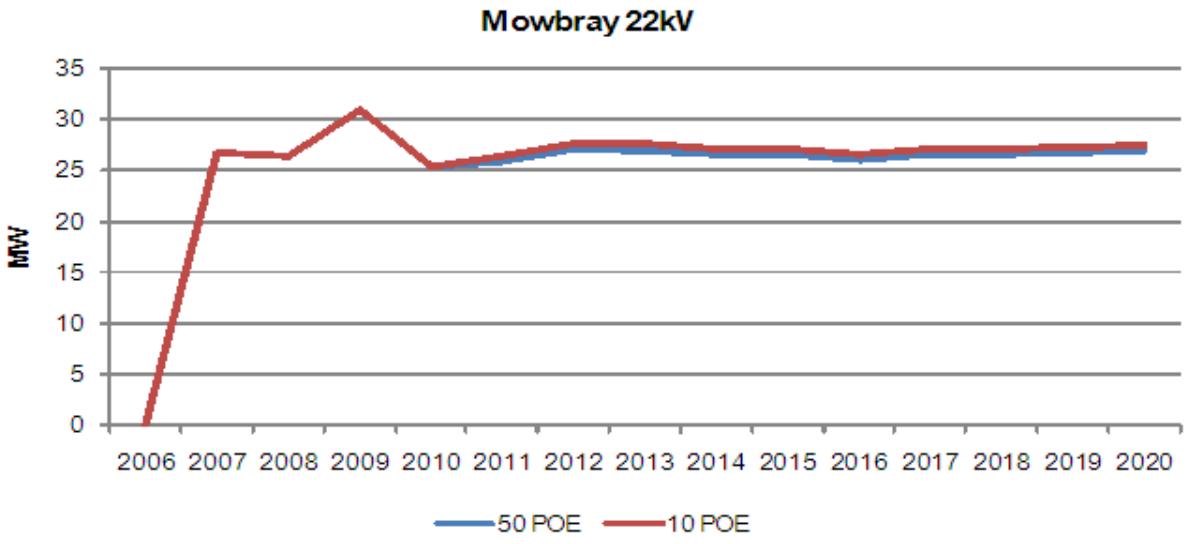
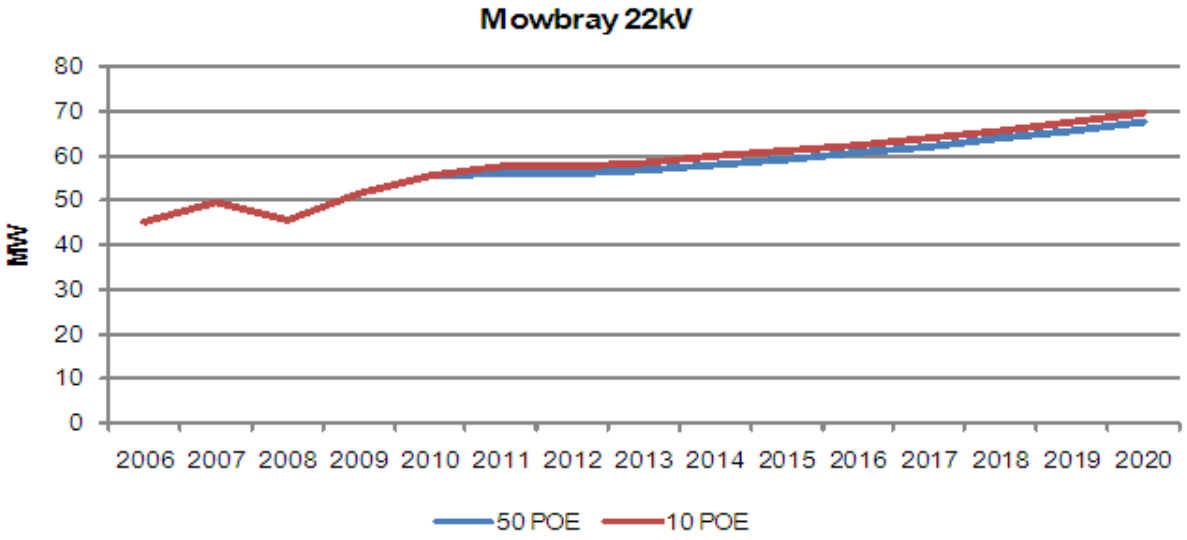
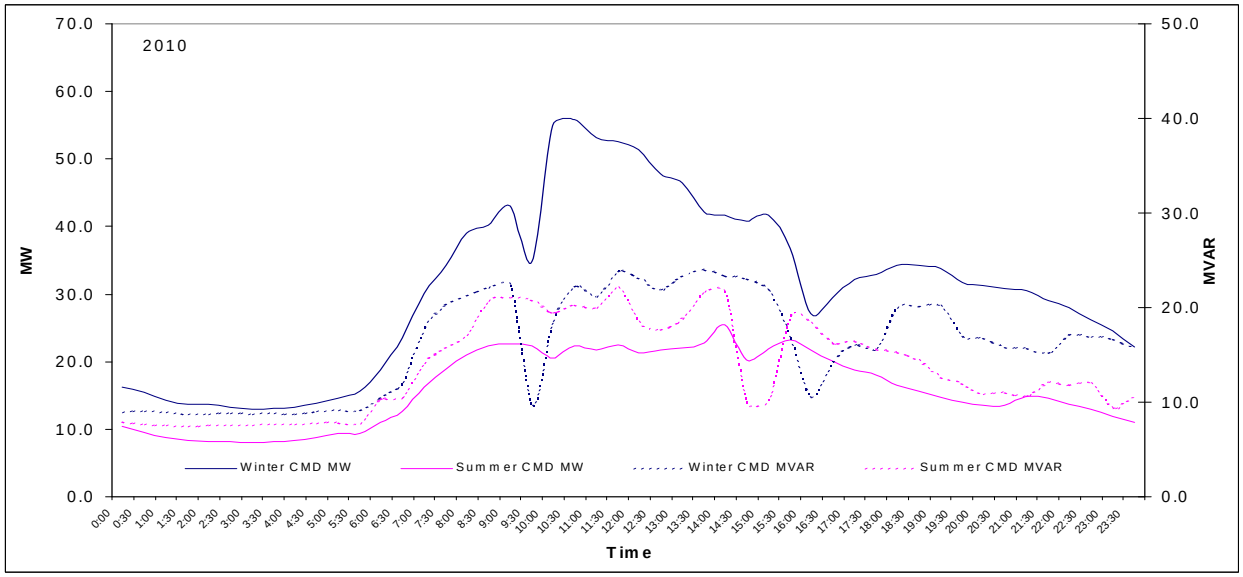


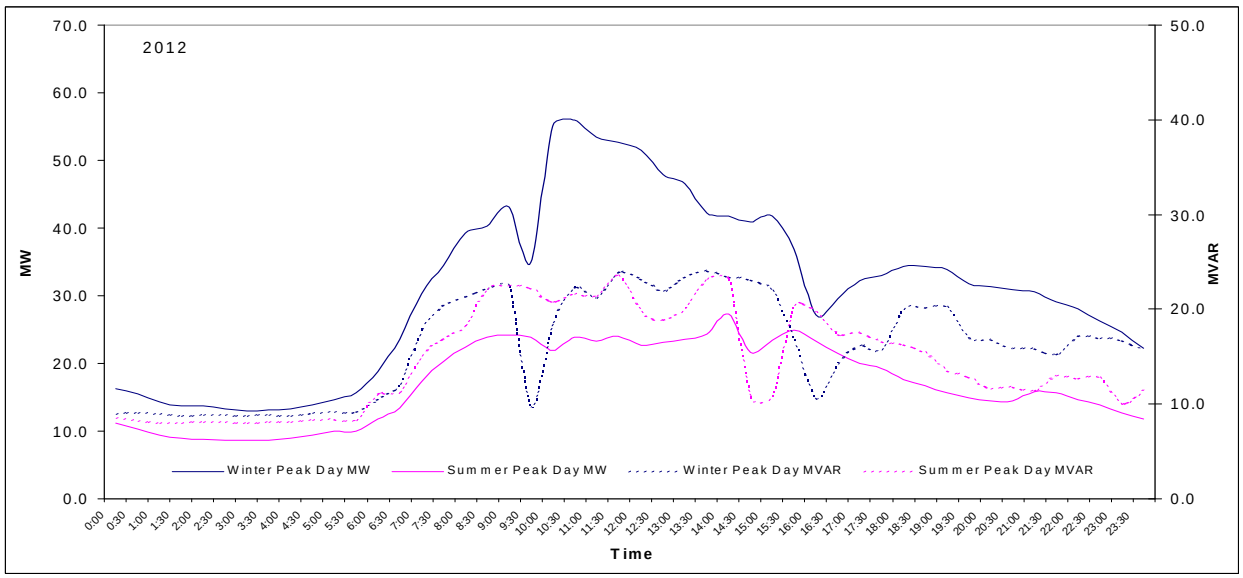
Figure 4-106 Mowbray Site Winter Load Forecast at 50% and 10% POE

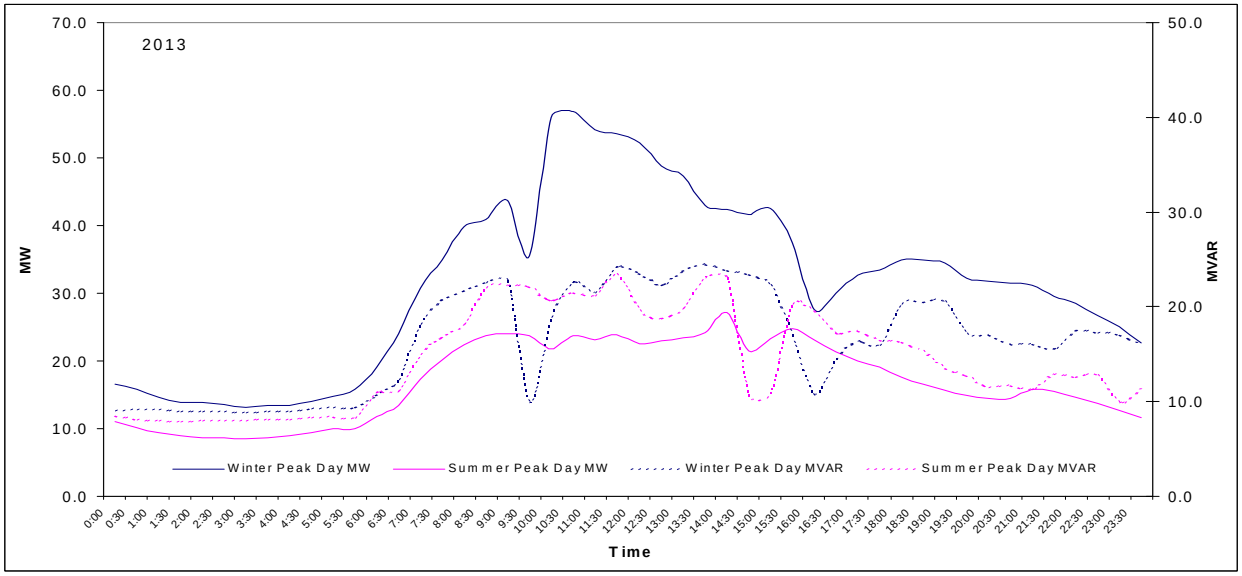


Load Profiles:

Figure 4-107 Load Profiles: Mowbray Substation Day of Summer/Winter Peak Demand



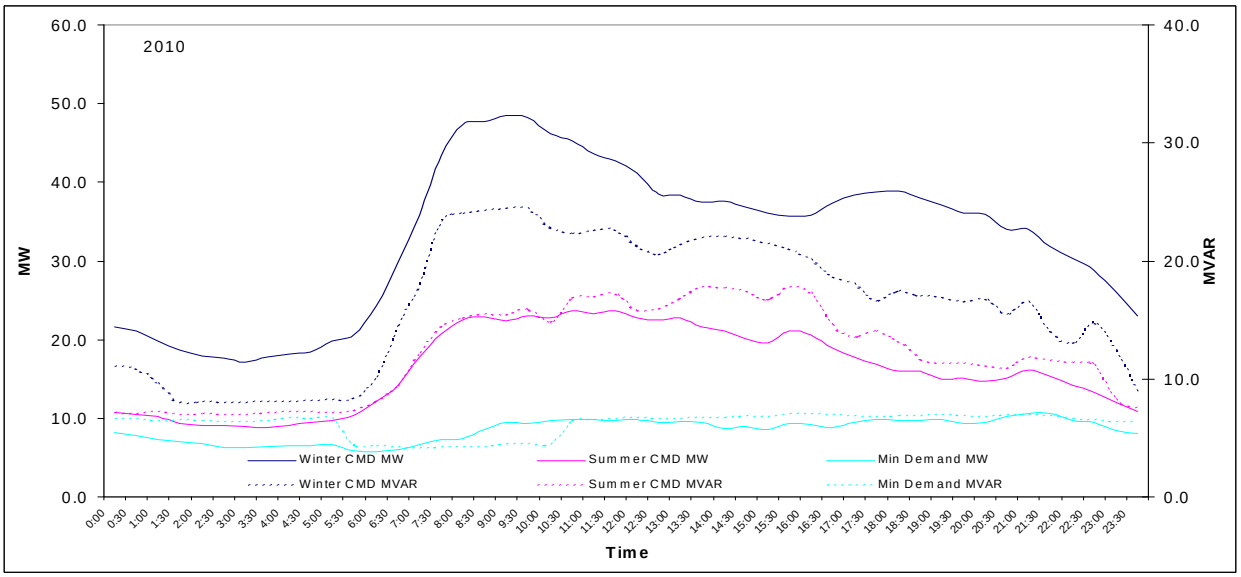


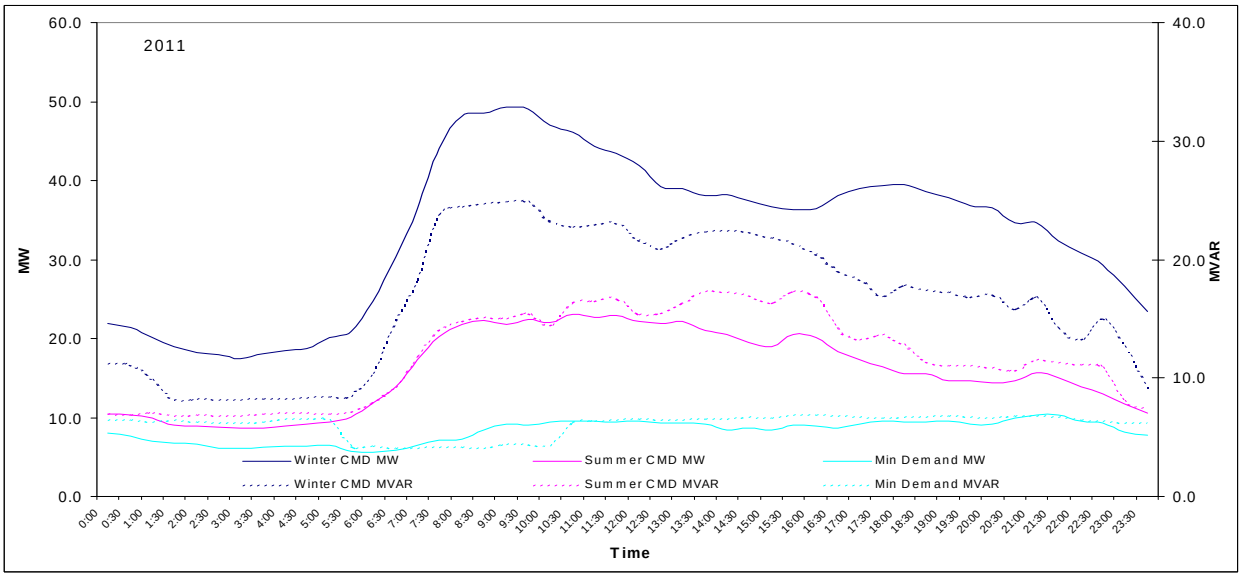

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

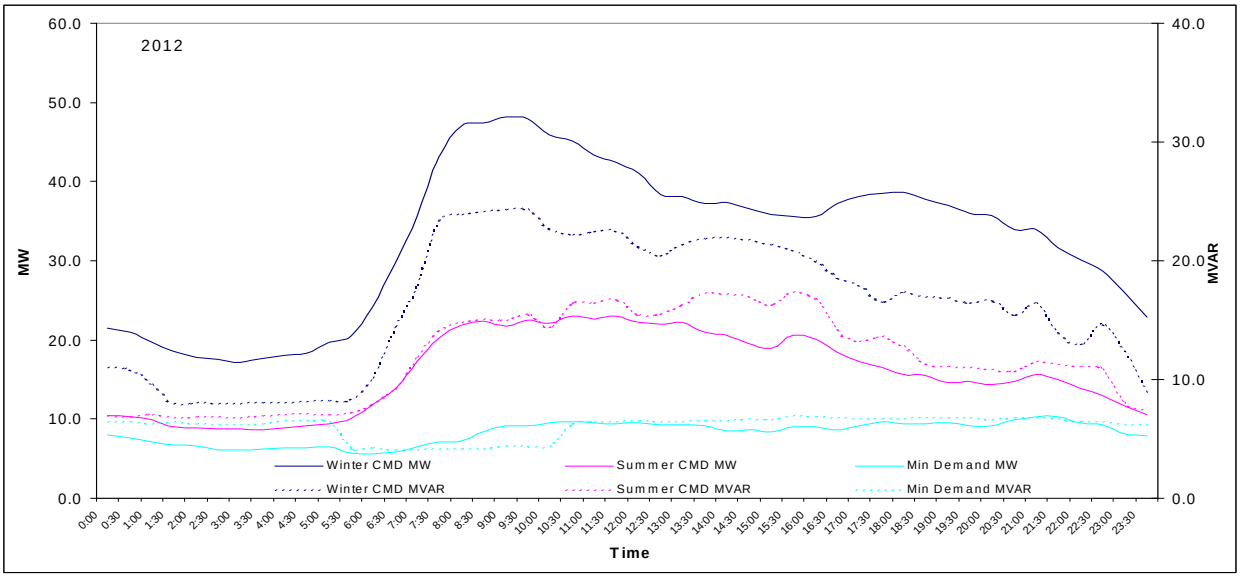

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

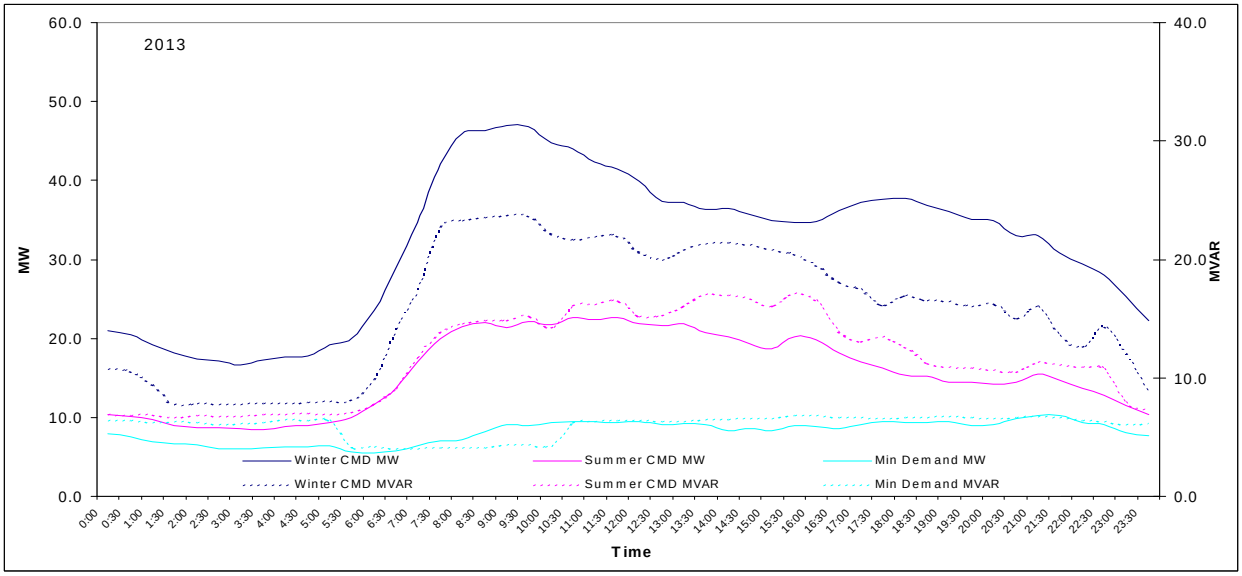

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

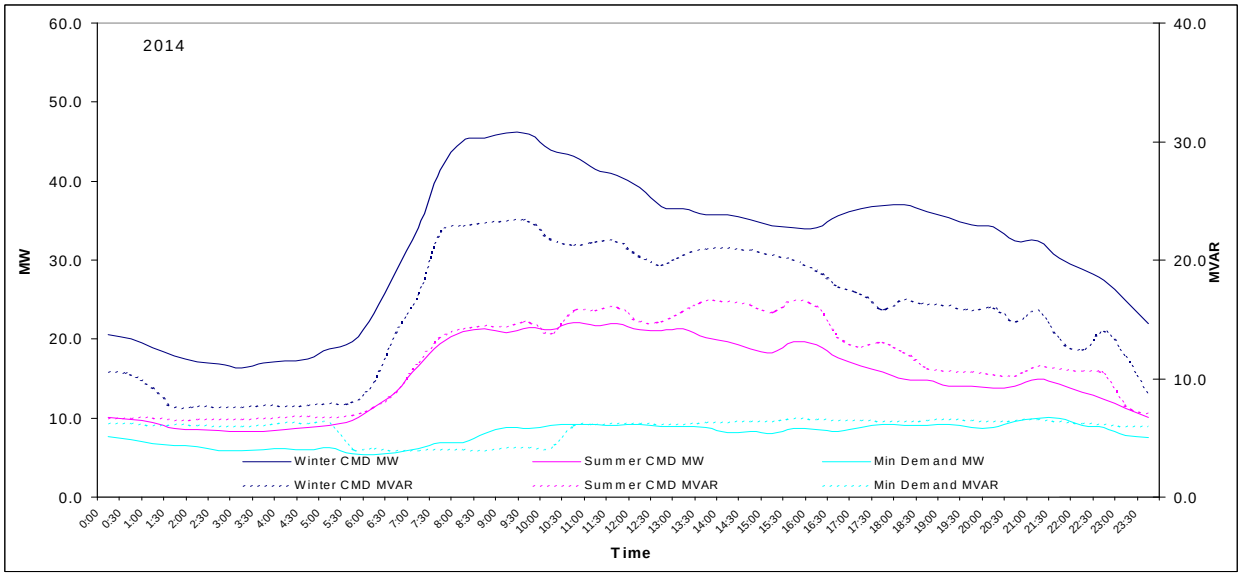
Figure 4-108 Load Profiles: Mowbray Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

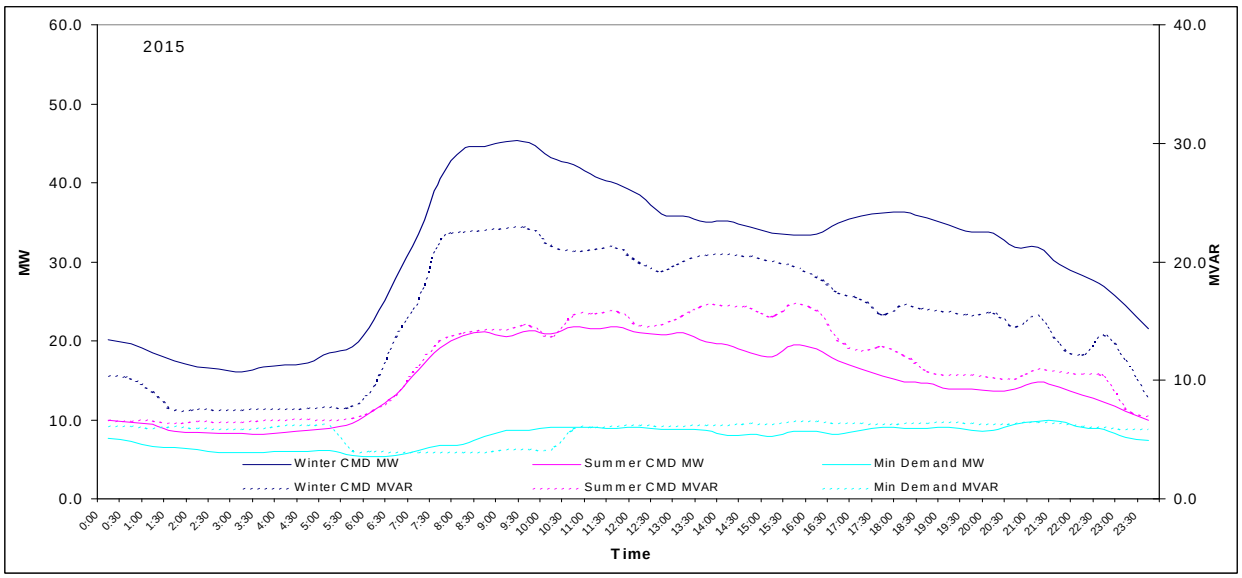
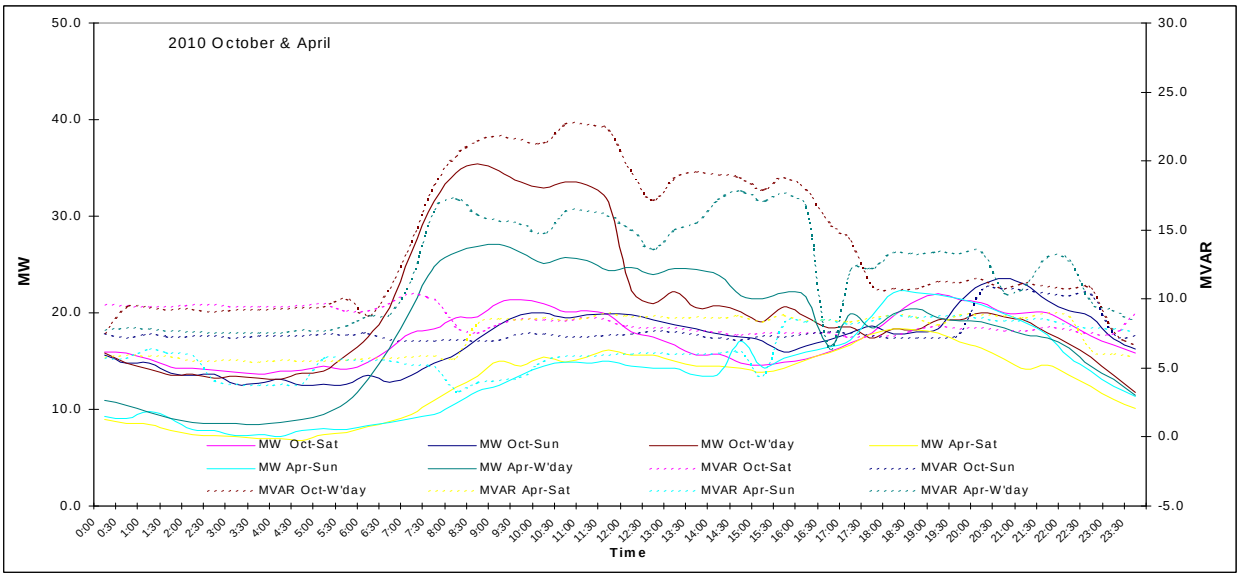
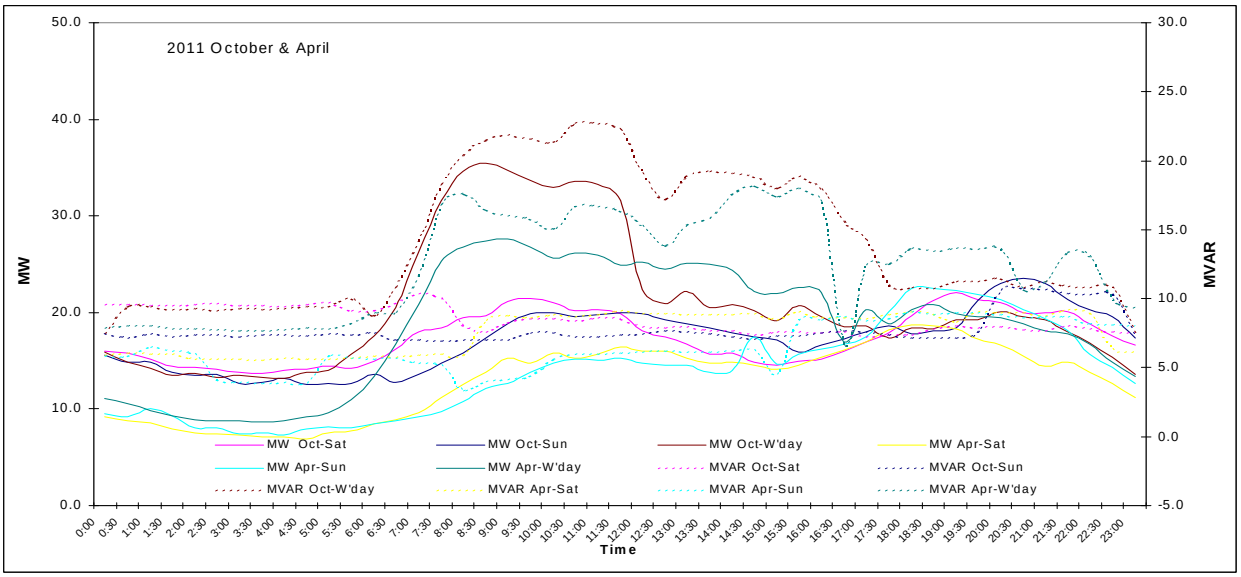
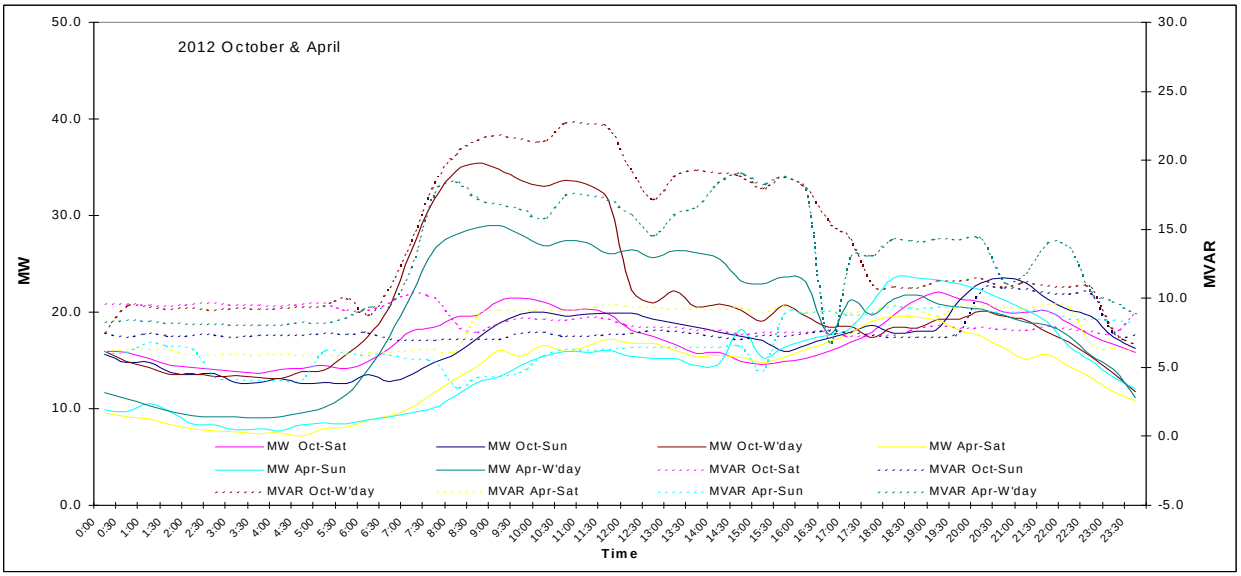
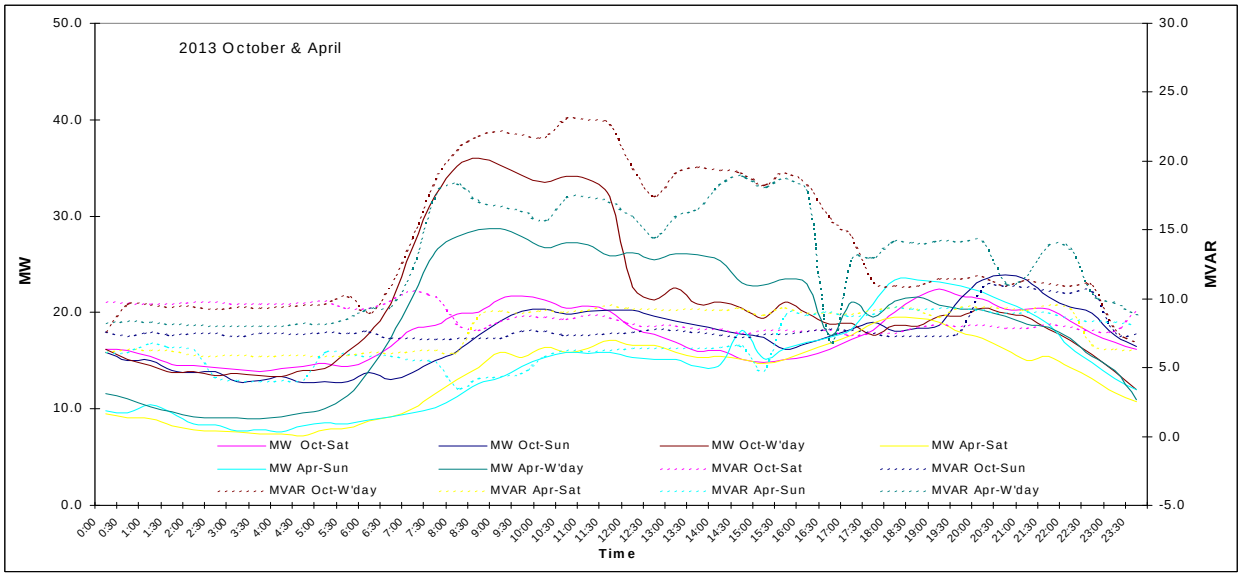

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

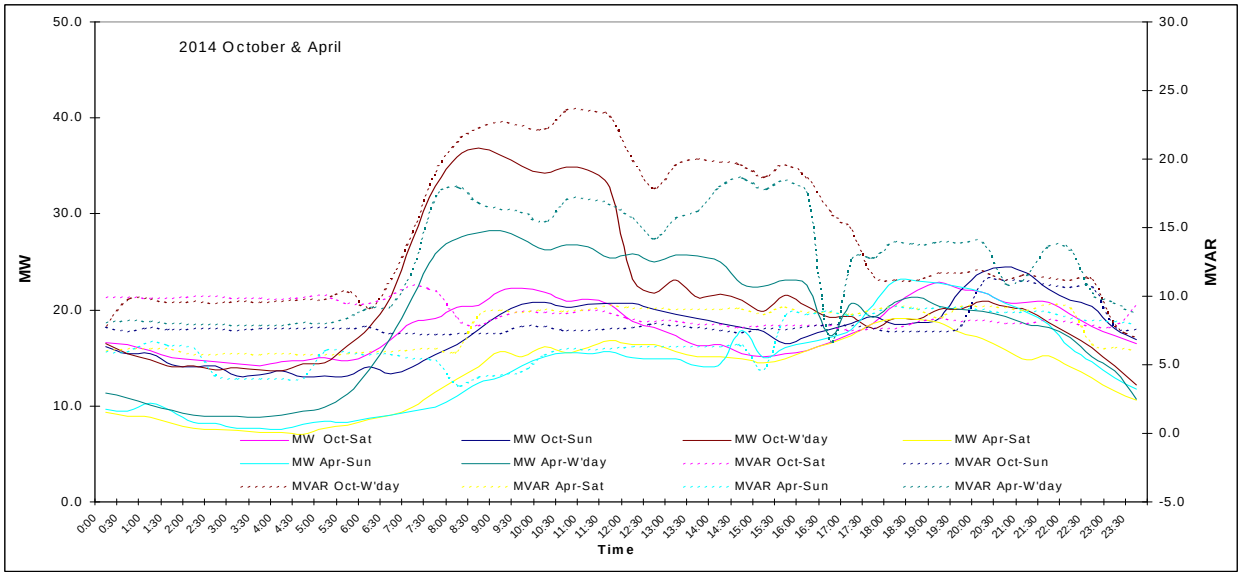
Figure 4-109 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

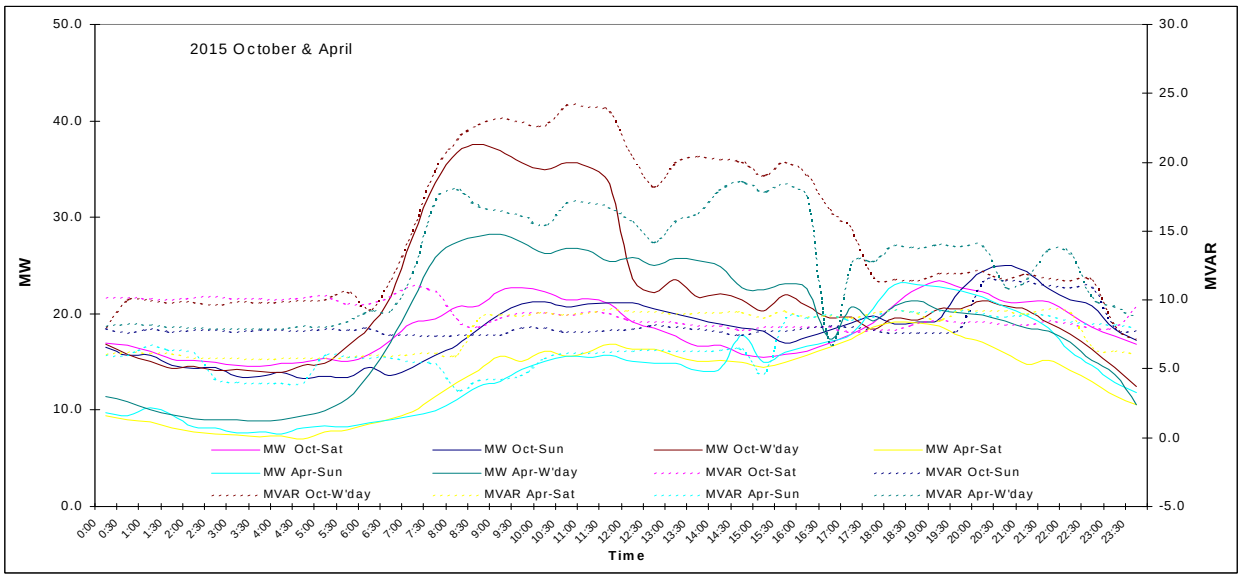
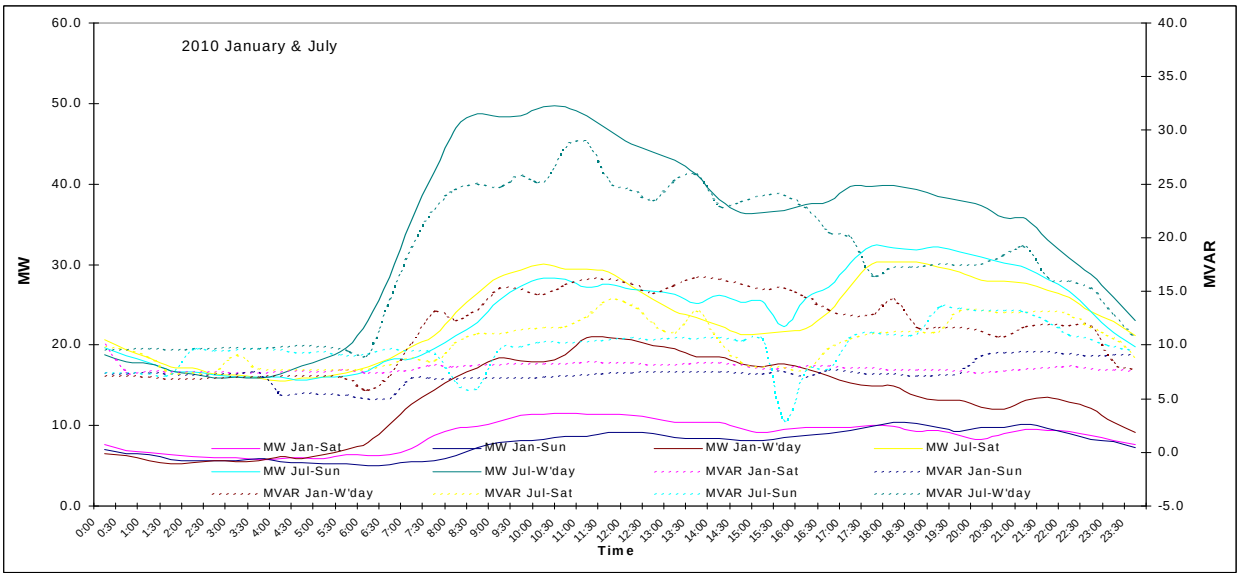
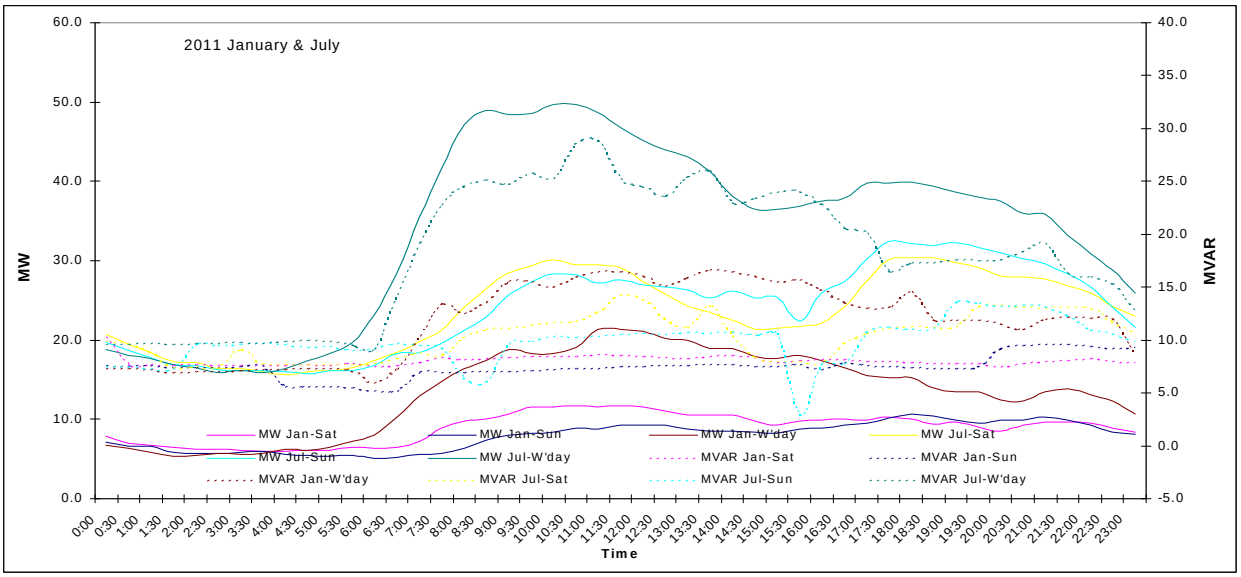
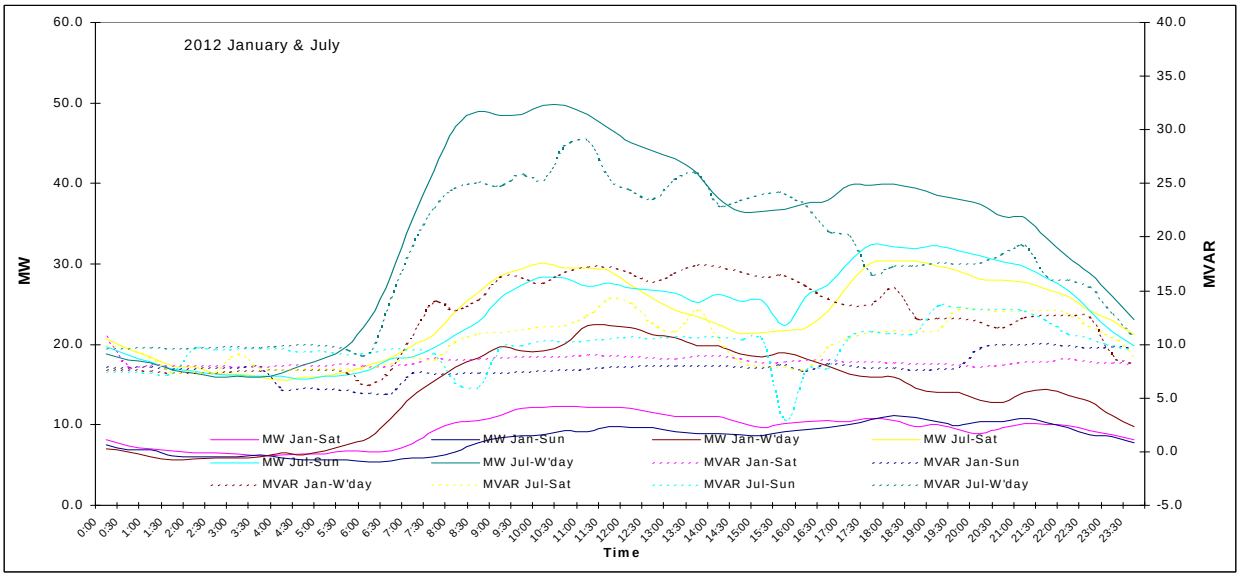
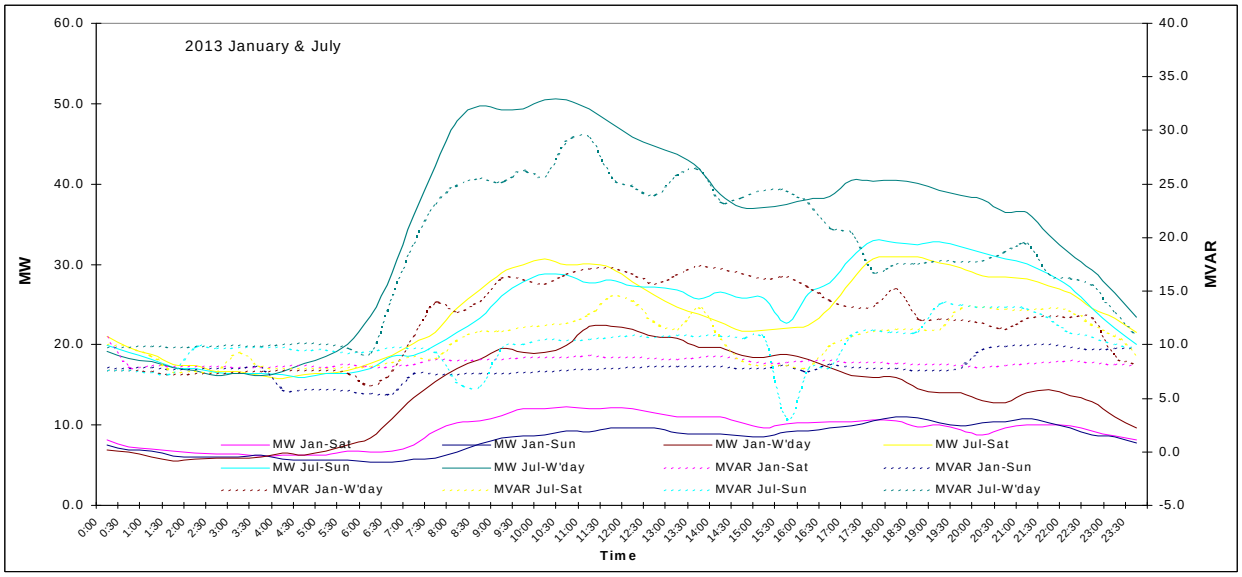

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

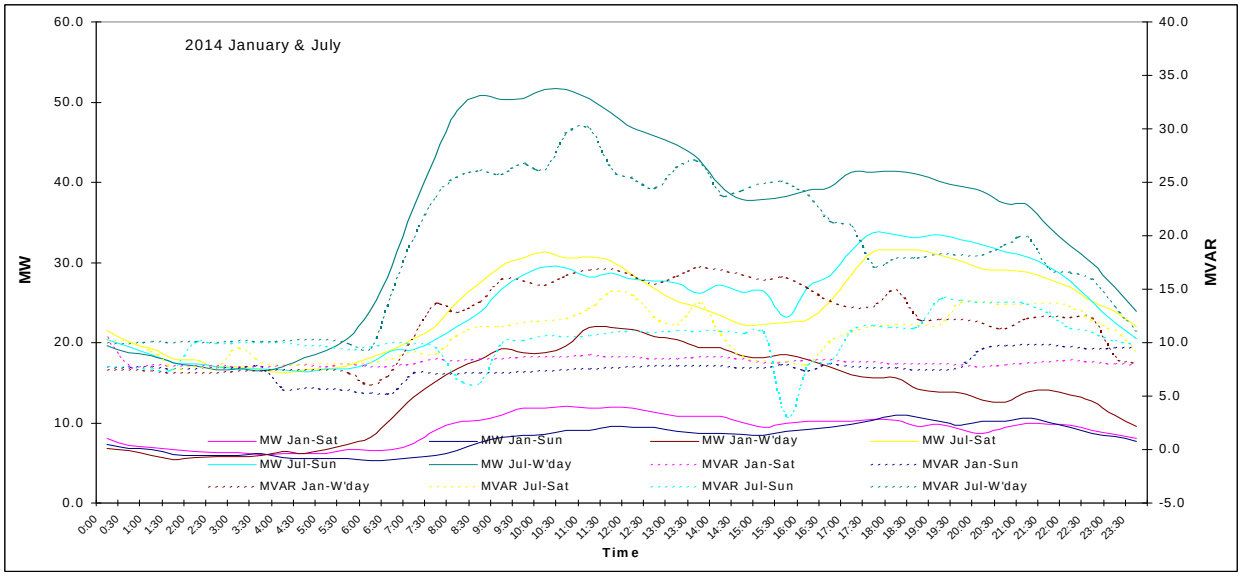
Figure 4-110 Load Profiles: Weekday, Saturday, Sunday for January & July

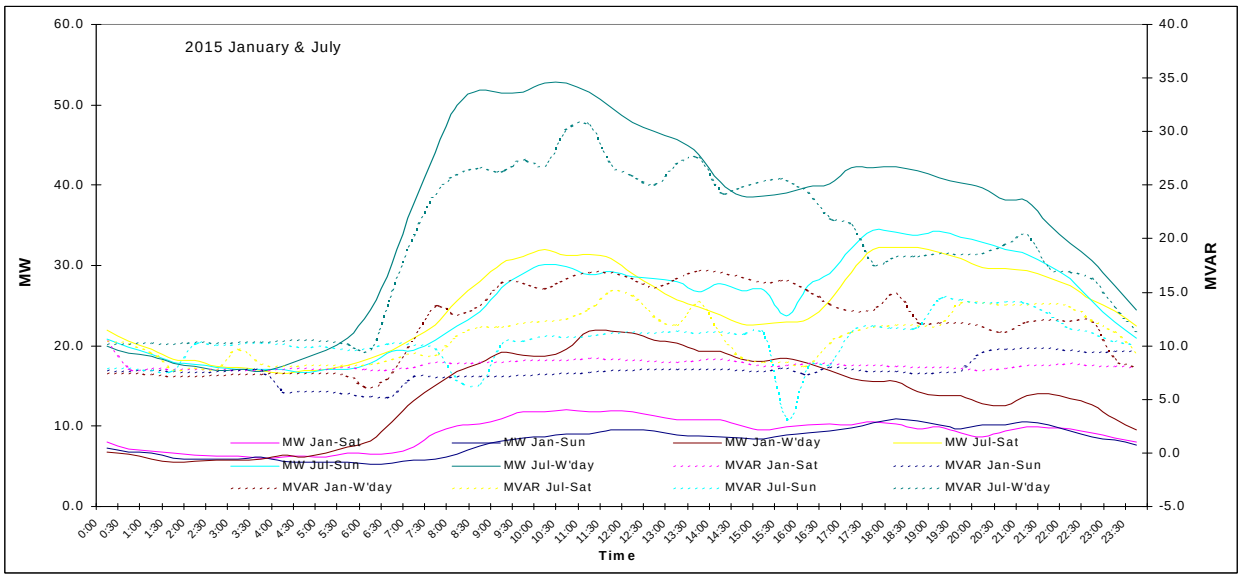







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.21 New Norfolk

Description:

The Substation is located at New Norfolk and is known as “New Norfolk Substation”. The substation is owned by Transend.

Table 4-81 New Norfolk Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	6	50	30

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-82 New Norfolk Site Winter load forecast

New Norfolk	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	8.67	8.85	8.55	8.73	8.67	8.85	8.83	9.01
2006	9.65	9.85	8.90	9.08	9.65	9.85	9.13	9.32
2007	9.68	9.88	8.95	9.13	9.68	9.88	9.23	9.42
2008	10.01	10.22	9.49	9.69	10.01	10.22	9.80	10.00
2009	9.50	9.69	9.10	9.29	9.50	9.69	9.40	9.59
2010	9.97	10.18	8.90	9.08	9.97	10.18	9.39	9.58
2011	10.50	10.71	9.37	9.56	10.99	11.22	9.81	10.01
2012	10.63	10.85	9.49	9.68	11.12	11.35	9.92	10.13
2013	10.74	10.96	9.58	9.78	11.23	11.46	10.02	10.23
2014	10.91	11.14	9.74	9.94	11.40	11.64	10.18	10.38
2015	11.09	11.31	9.89	10.10	11.58	11.82	10.34	10.55
2016	11.29	11.52	10.08	10.28	11.78	12.02	10.52	10.73
2017	11.49	11.73	10.26	10.47	11.99	12.24	10.70	10.92
2018	11.74	11.98	10.48	10.70	12.24	12.49	10.93	11.15
2019	12.03	12.27	10.73	10.95	12.54	12.80	11.19	11.42
2020	12.34	12.60	11.02	11.24	12.86	13.12	11.48	11.71

Table 4-83 New Norfolk Site Summer load forecast

New Norfolk	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	7.15	7.30	6.58	6.71	7.15	7.30	6.58	6.71
2006	7.66	7.81	7.11	7.26	7.66	7.81	7.13	7.28
2007	7.98	8.14	7.35	7.50	7.98	8.14	7.40	7.56
2008	7.59	7.74	7.16	7.31	7.59	7.74	7.17	7.31
2009	7.78	7.94	6.67	6.80	7.78	7.94	6.67	6.80
2010	7.73	7.88	5.43	5.54	7.73	7.88	5.43	5.54
2011	7.65	7.81	5.38	5.49	7.79	7.95	5.47	5.58
2012	7.81	7.97	5.49	5.60	7.95	8.12	5.59	5.70
2013	7.84	8.00	5.51	5.62	7.98	8.15	5.61	5.72
2014	7.78	7.94	5.47	5.58	7.91	8.07	5.56	5.67
2015	7.85	8.01	5.51	5.63	7.99	8.15	5.61	5.72
2016	7.77	7.93	5.46	5.57	7.92	8.08	5.56	5.68
2017	7.99	8.15	5.61	5.73	8.13	8.30	5.71	5.83
2018	8.09	8.25	5.68	5.80	8.24	8.40	5.79	5.90
2019	8.19	8.36	5.76	5.87	8.34	8.51	5.86	5.98
2020	8.32	8.49	5.84	5.96	8.46	8.63	5.94	6.07

Figure 4-111 New Norfolk Site Summer Load Forecast at 50% and 10% POE

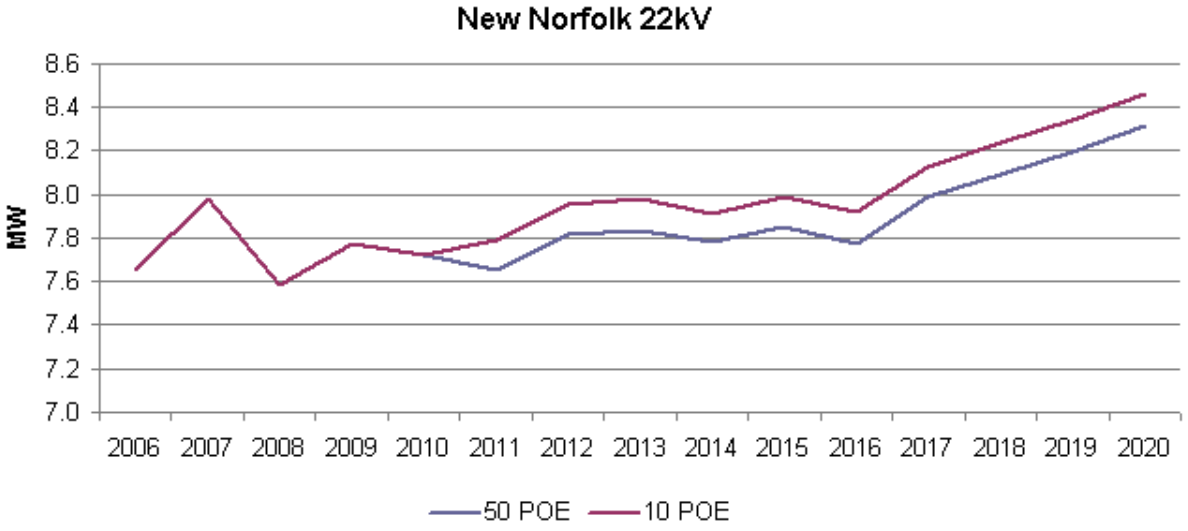
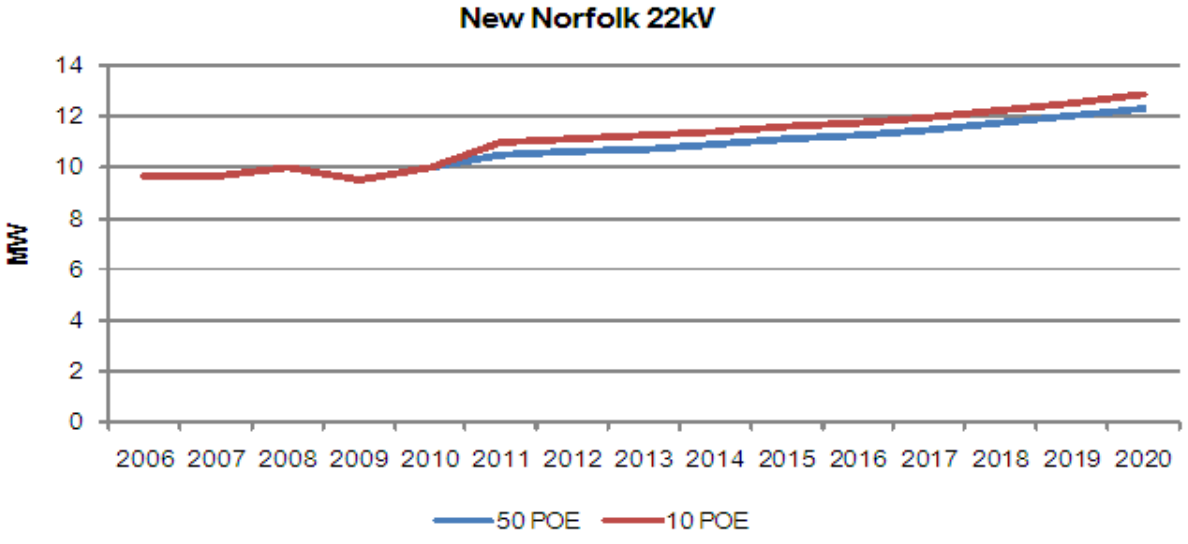
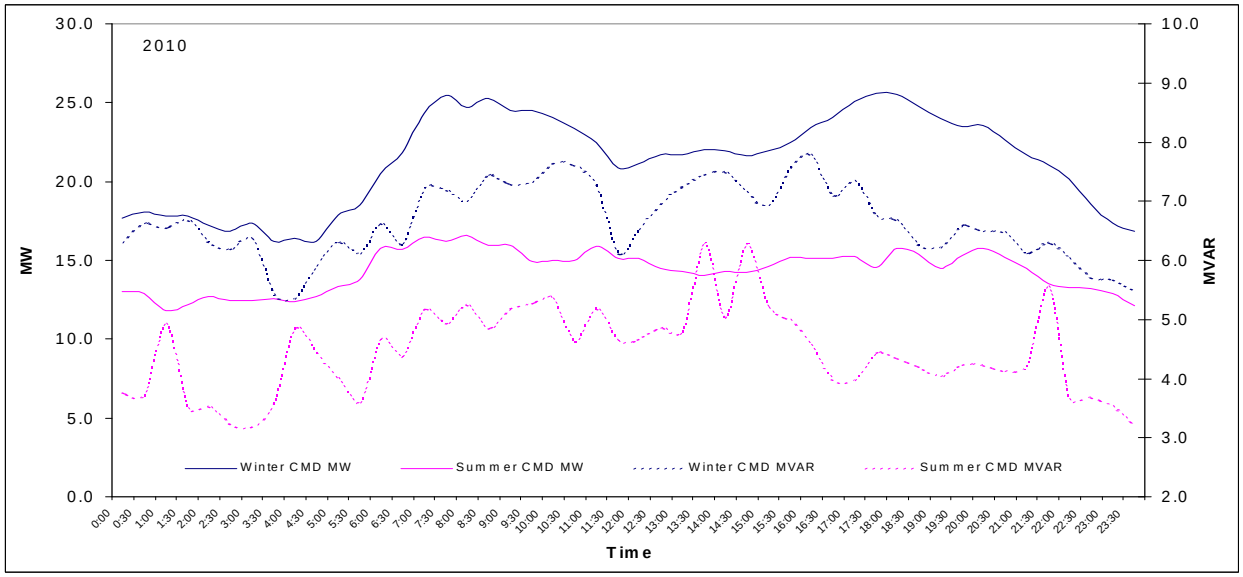


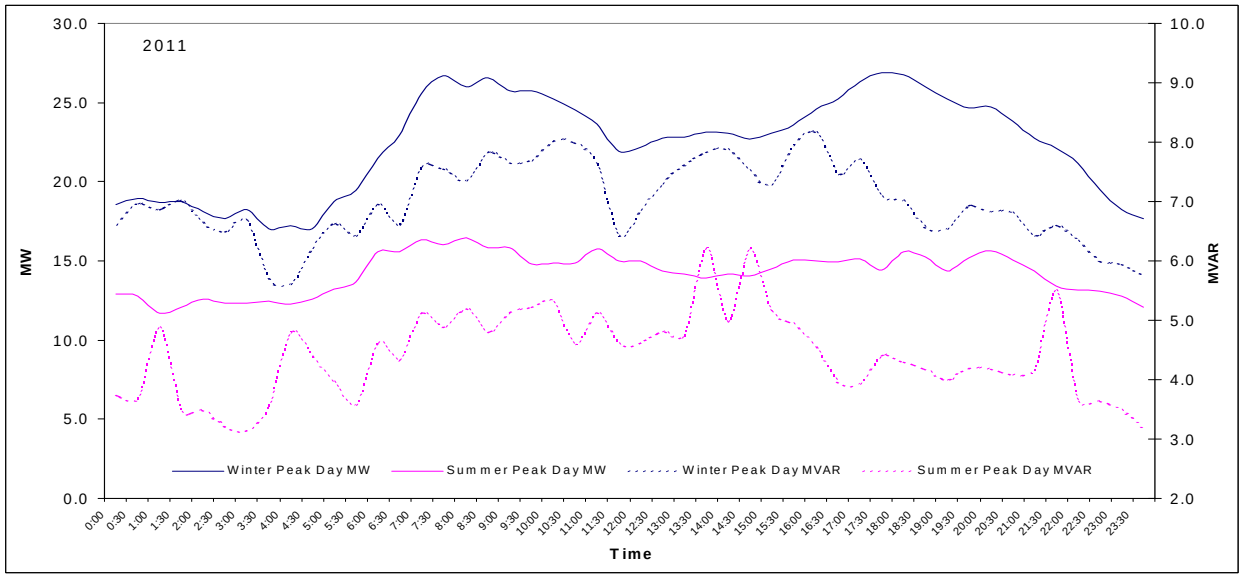
Figure 4-112 New Norfolk Site Winter Load Forecast at 50% and 10% POE

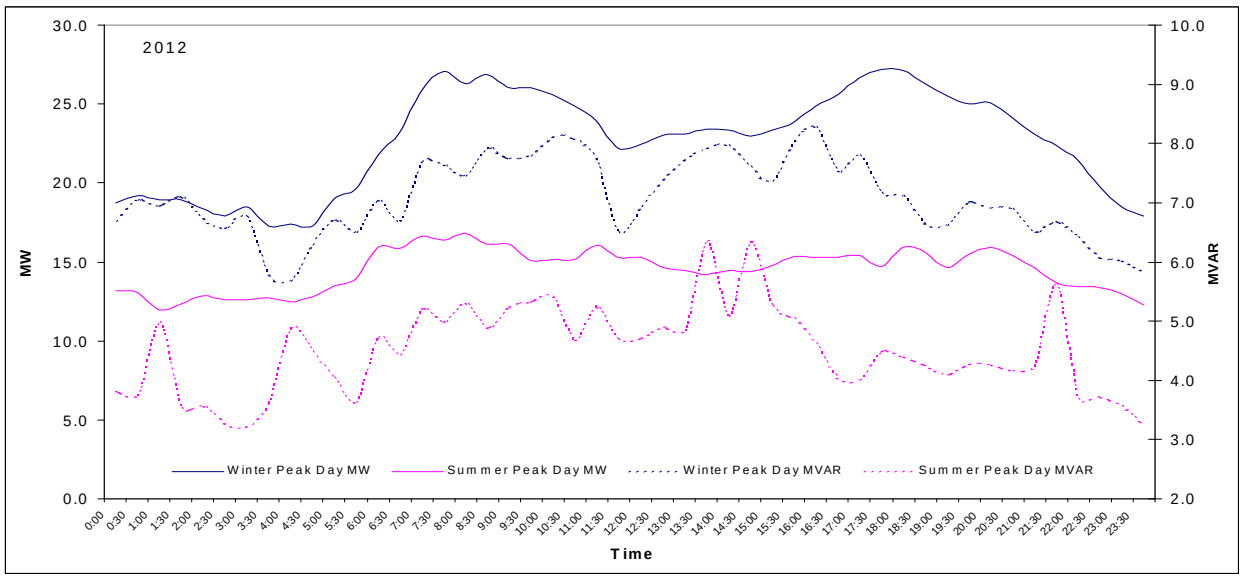


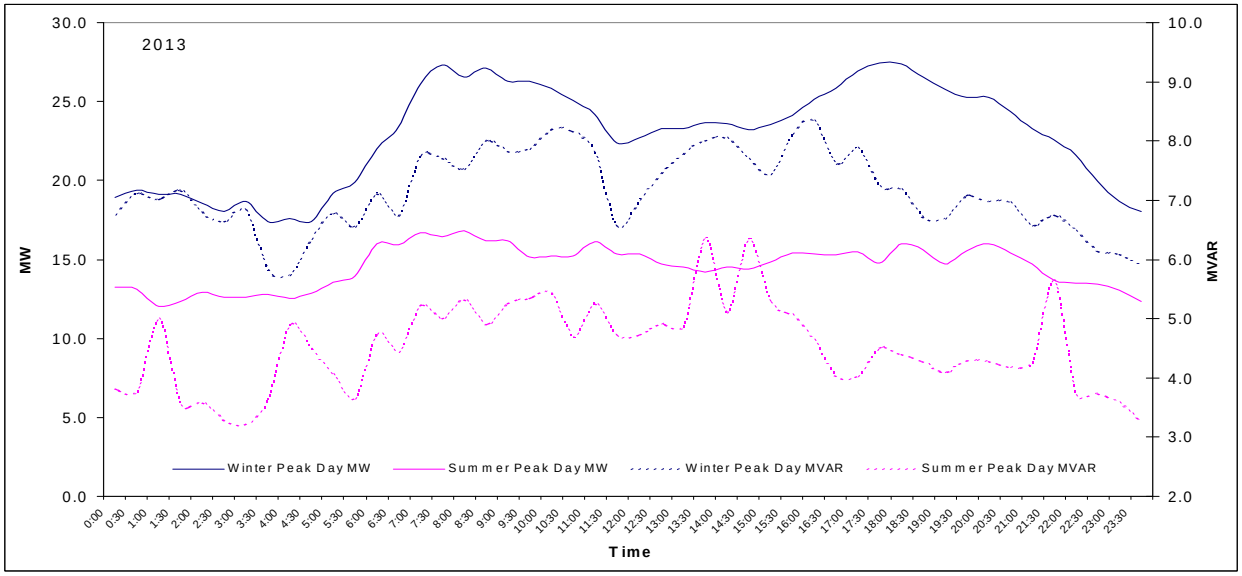
Load Profiles:

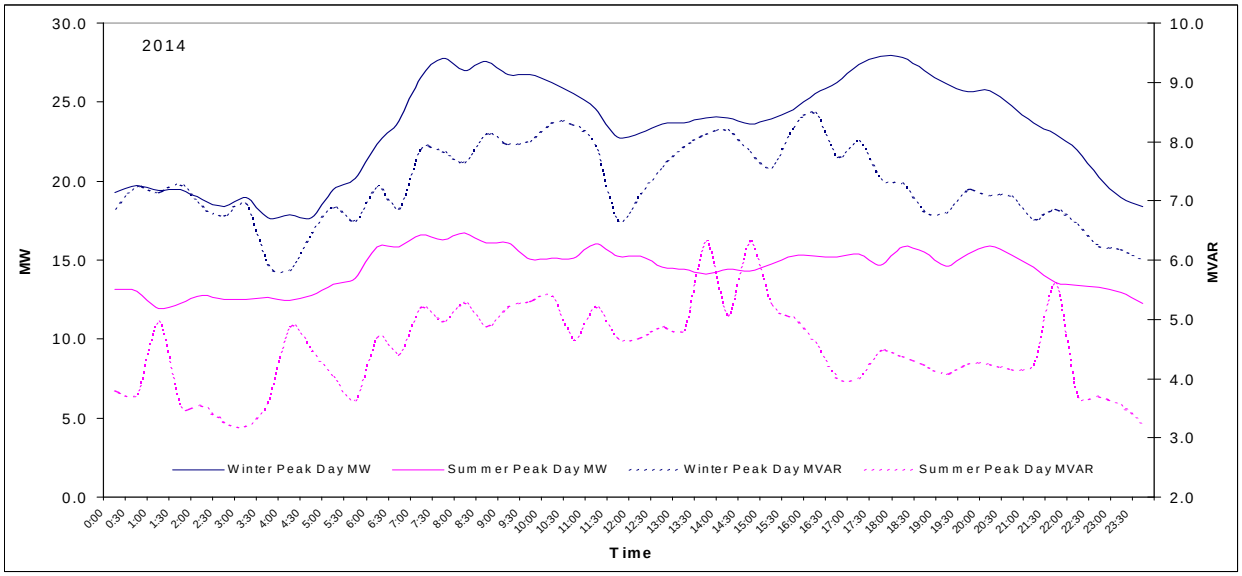
Figure 4-113 Load Profiles: New Norfolk Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

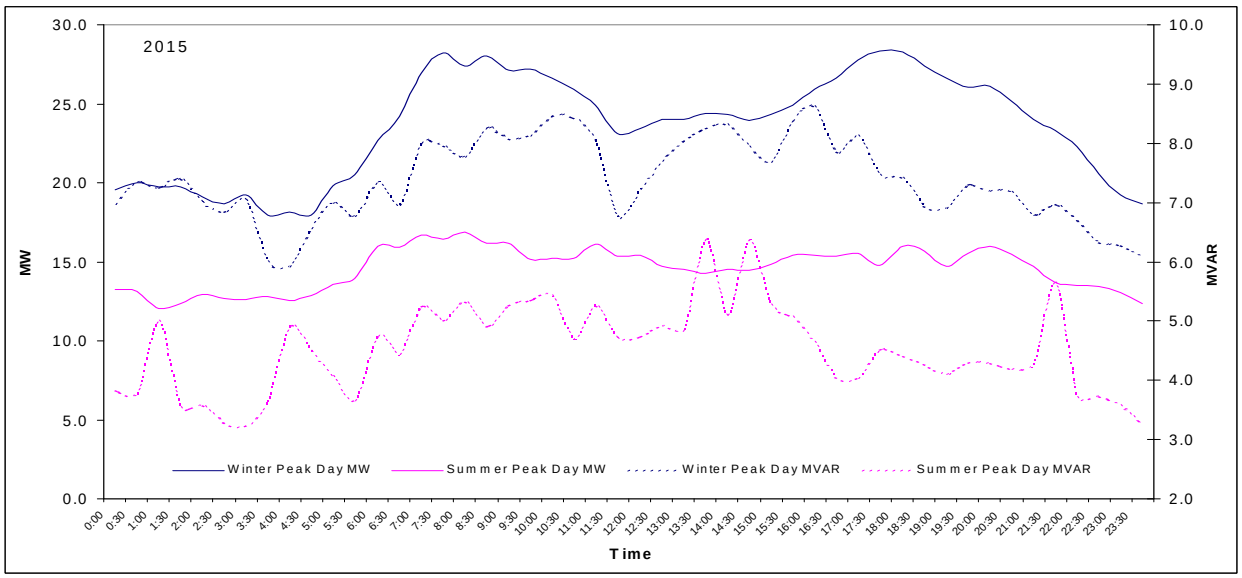
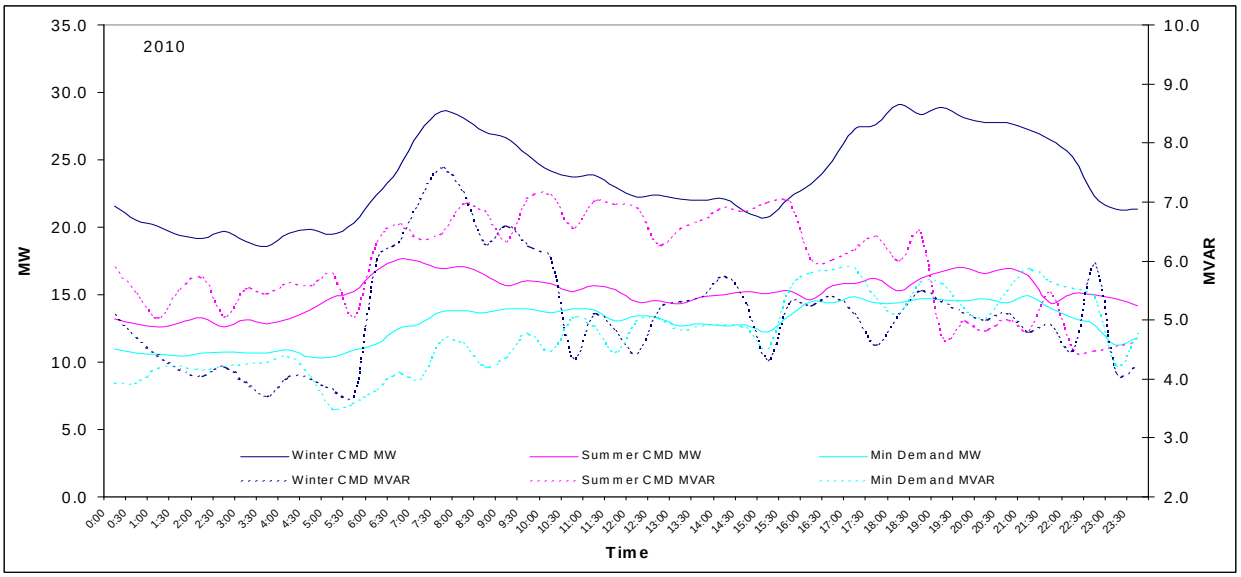
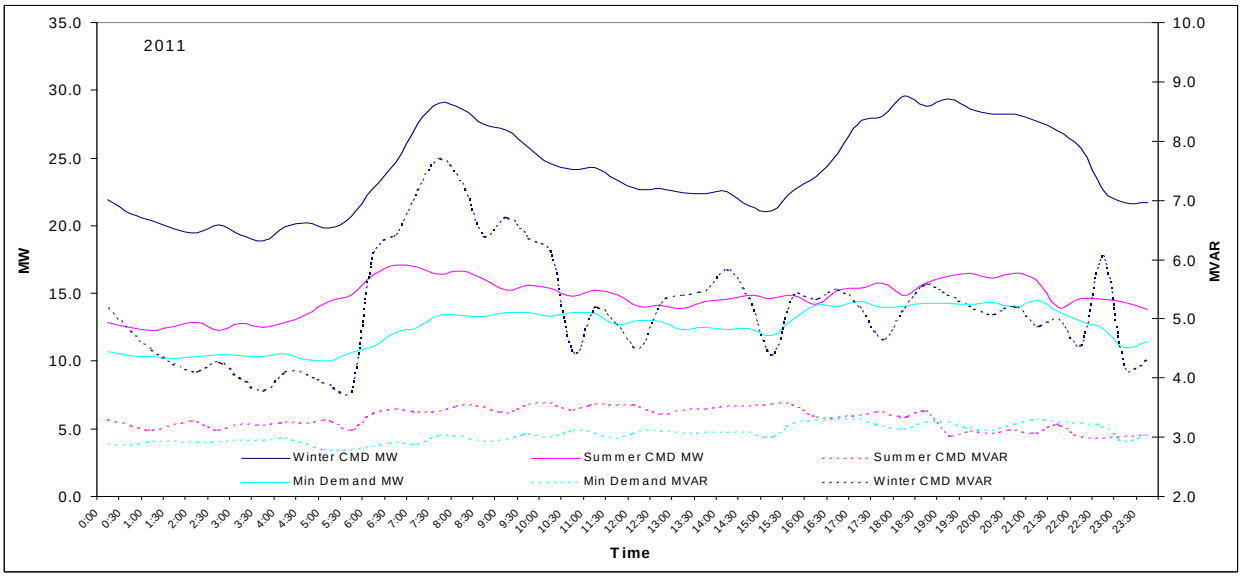
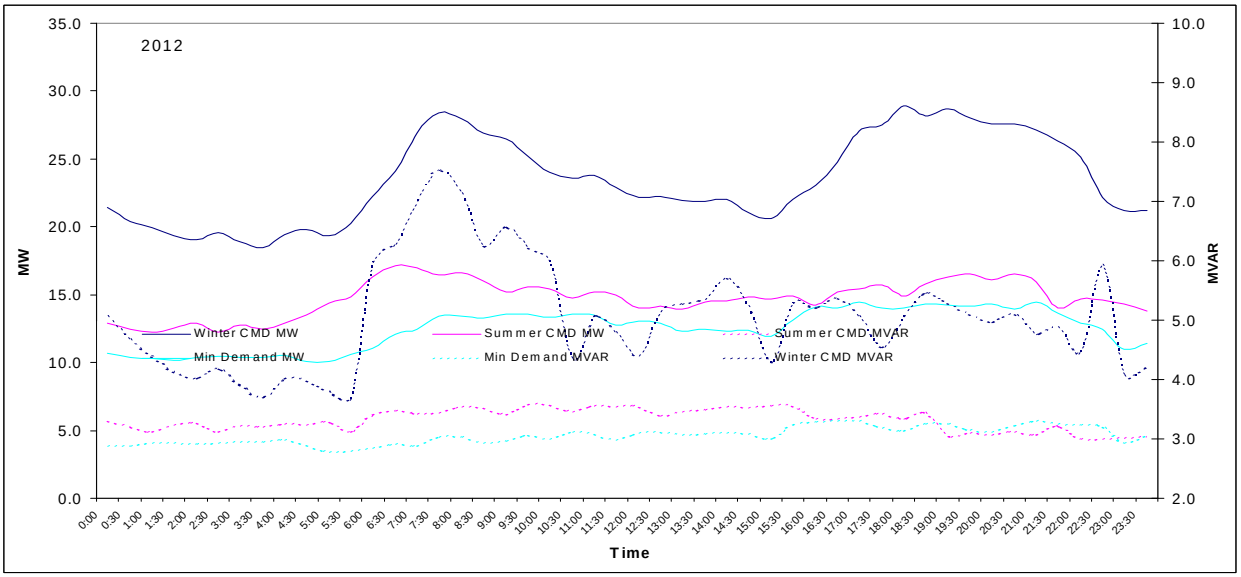
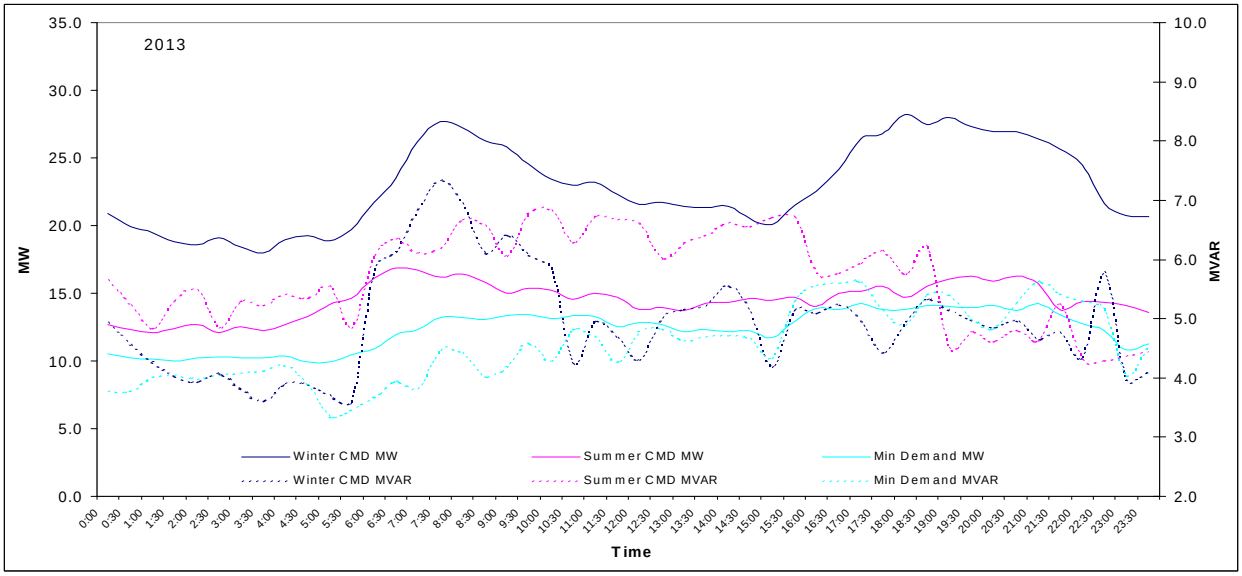

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

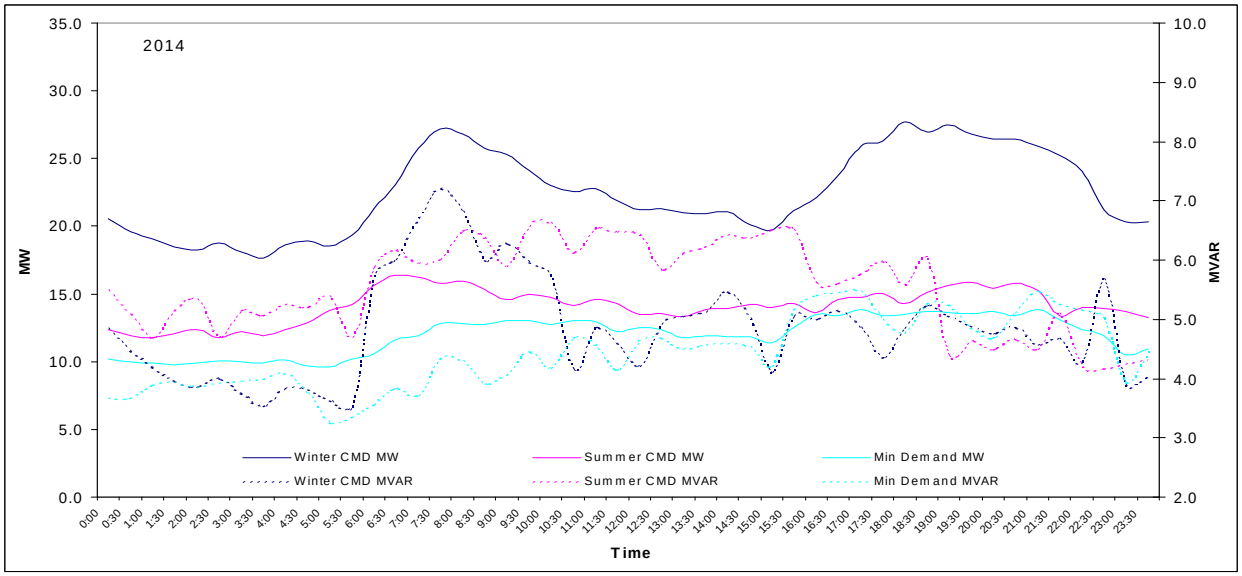
Figure 4-114 Load Profiles: New Norfolk Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

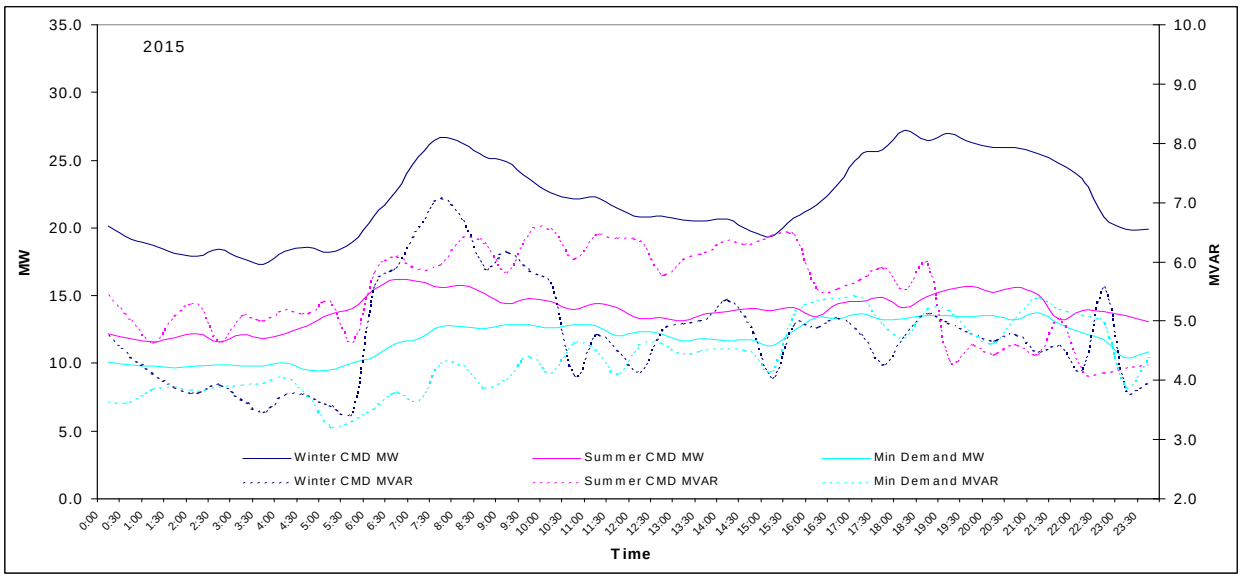
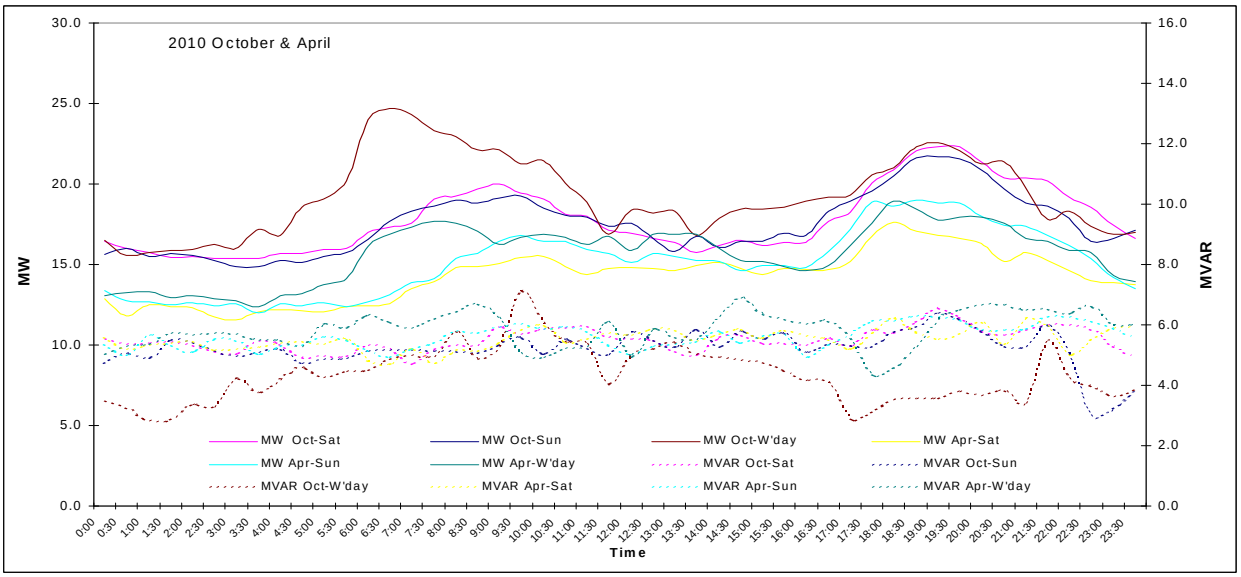
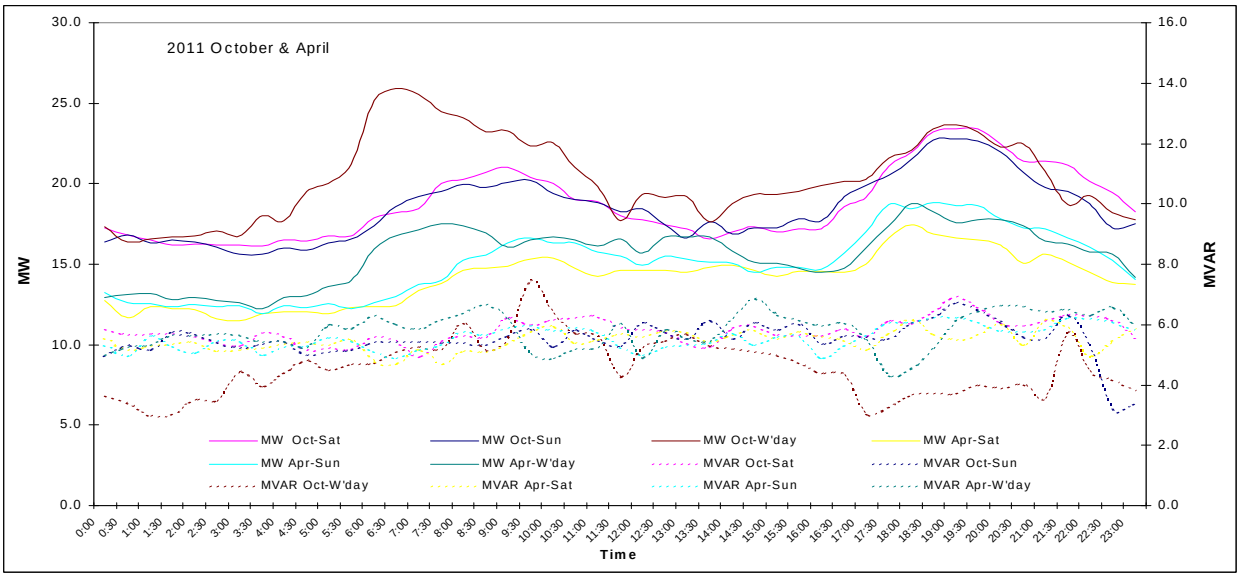
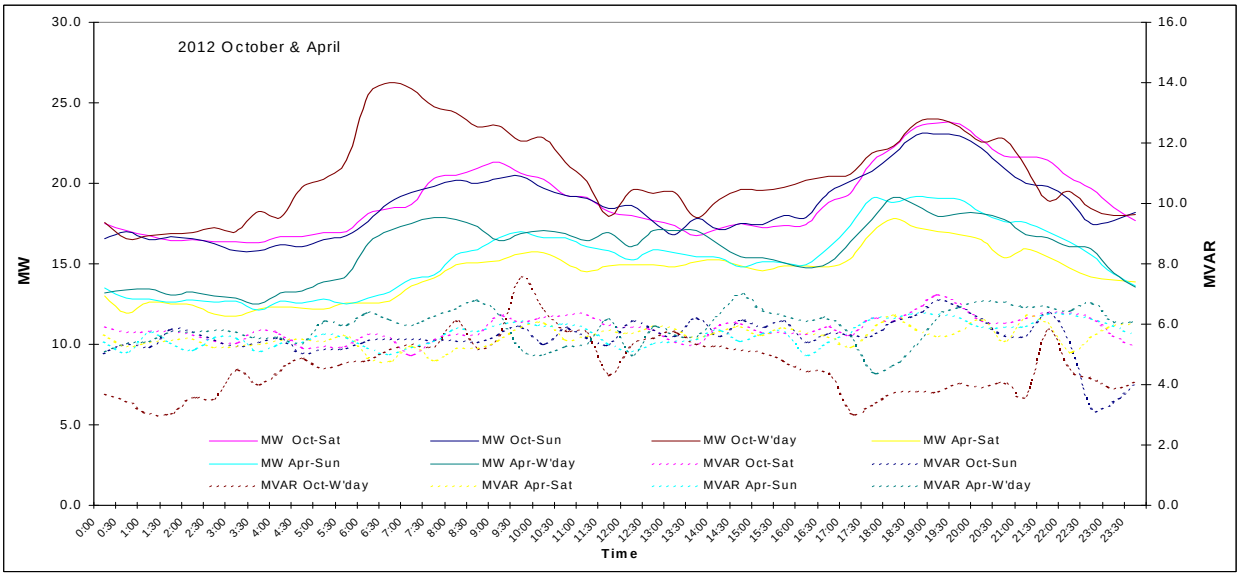
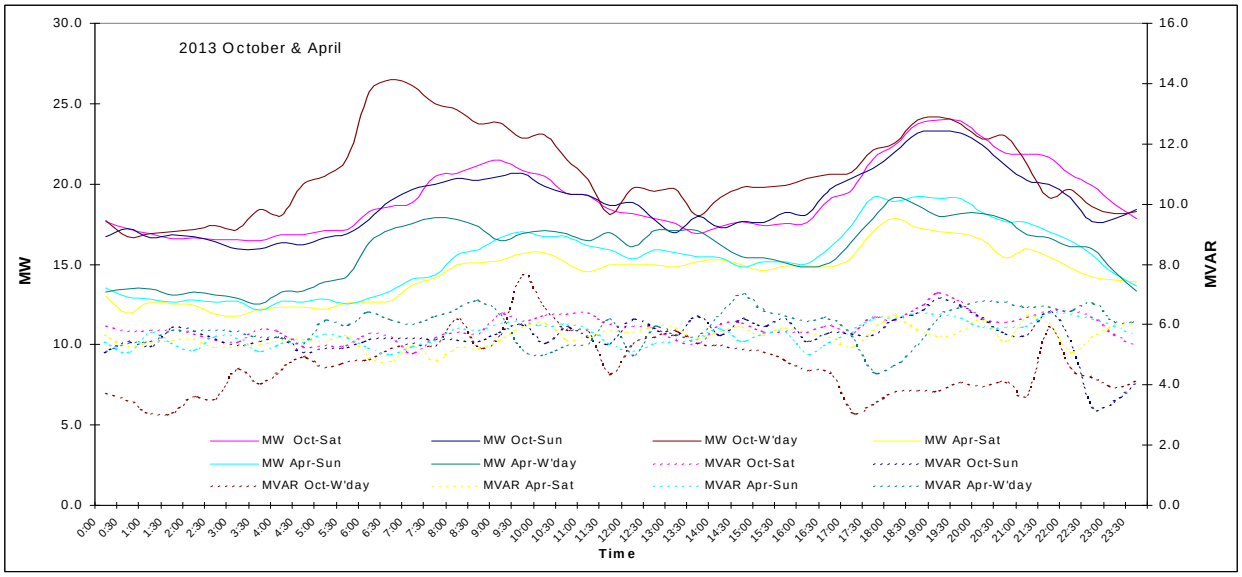

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

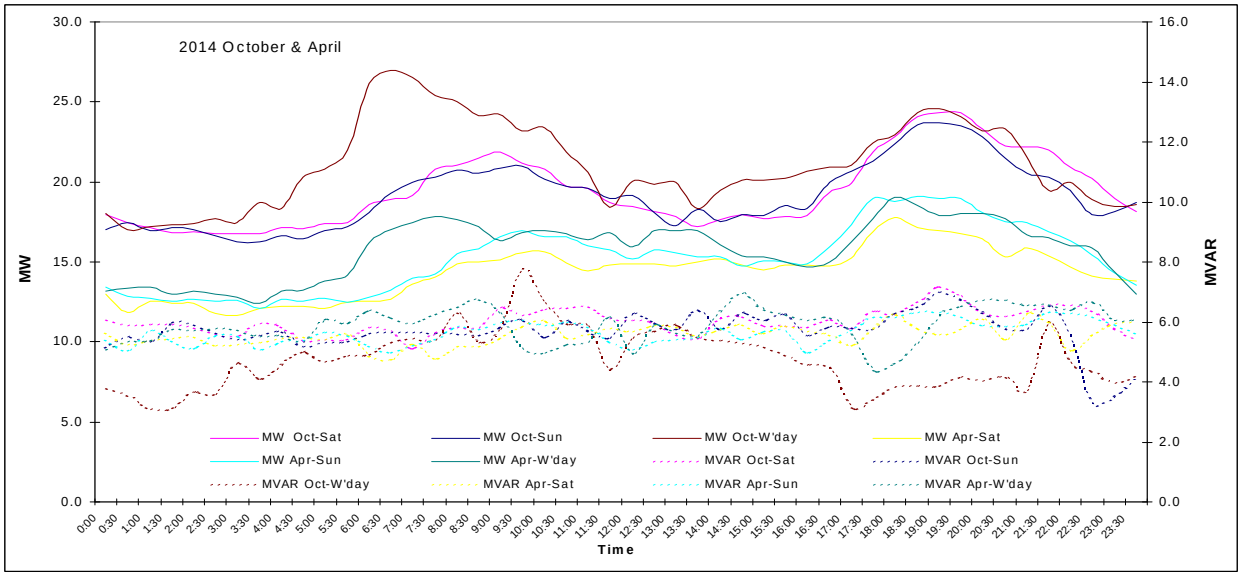
Figure 4-115 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

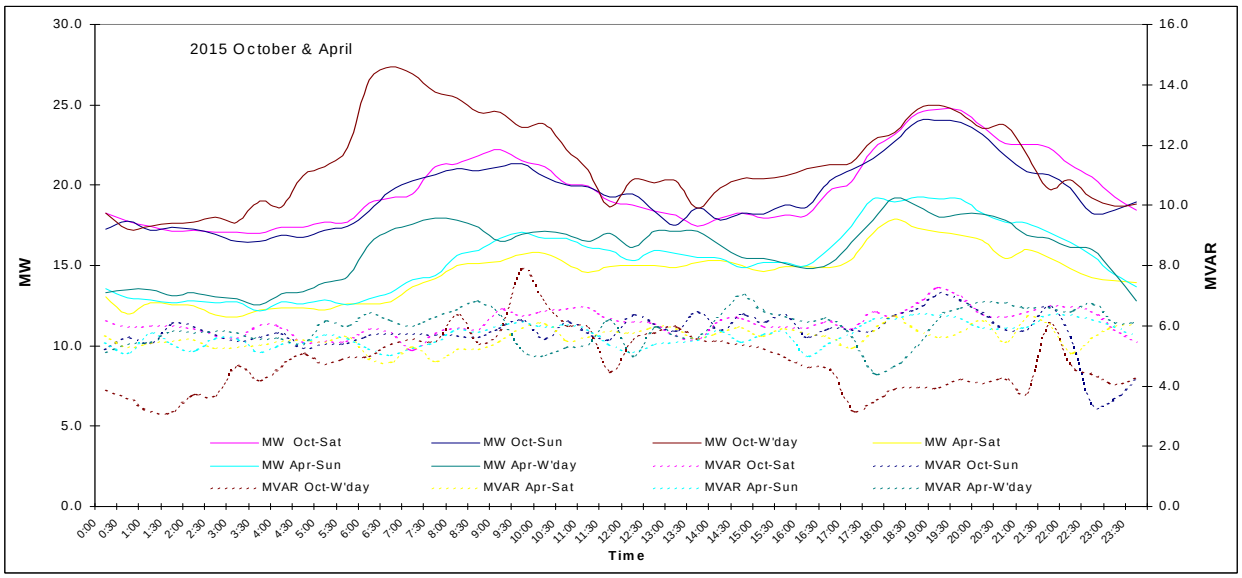
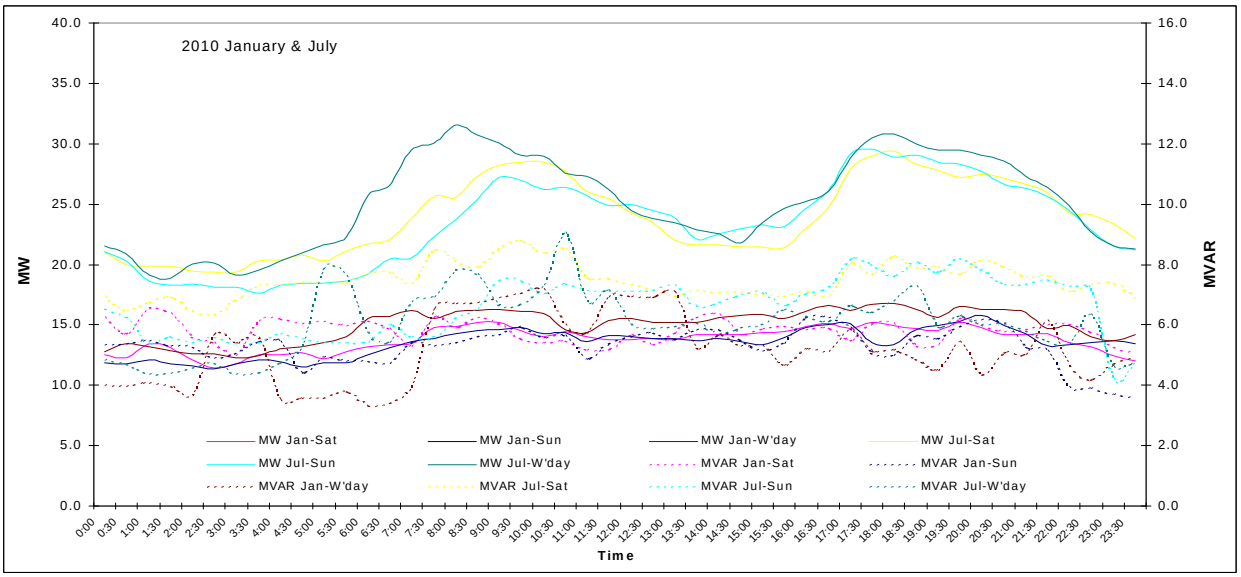
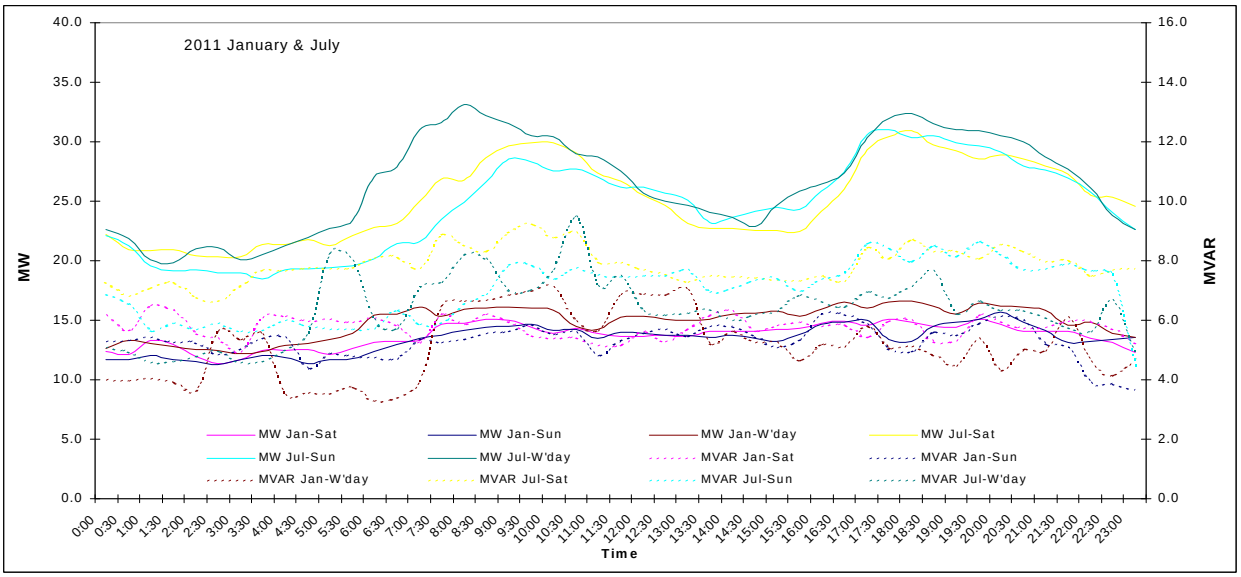
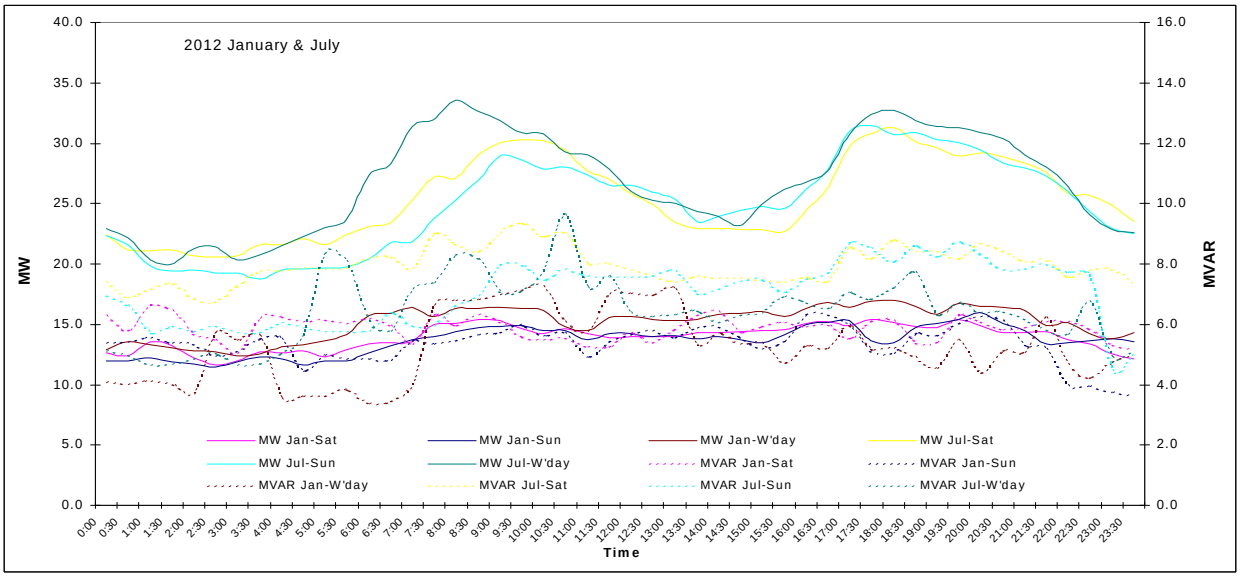
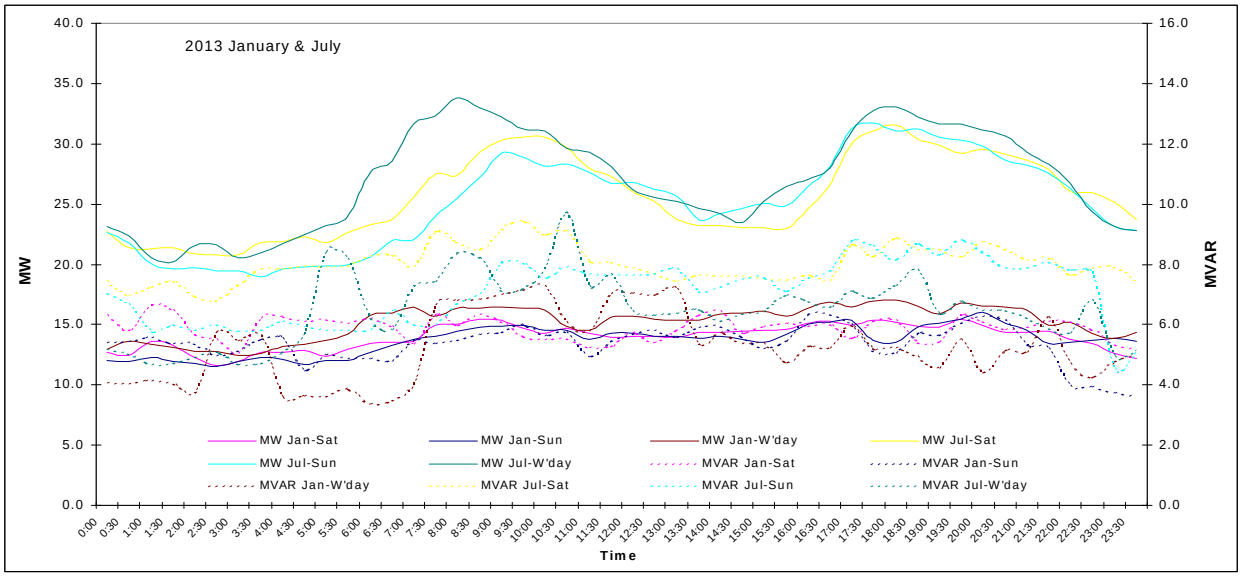

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

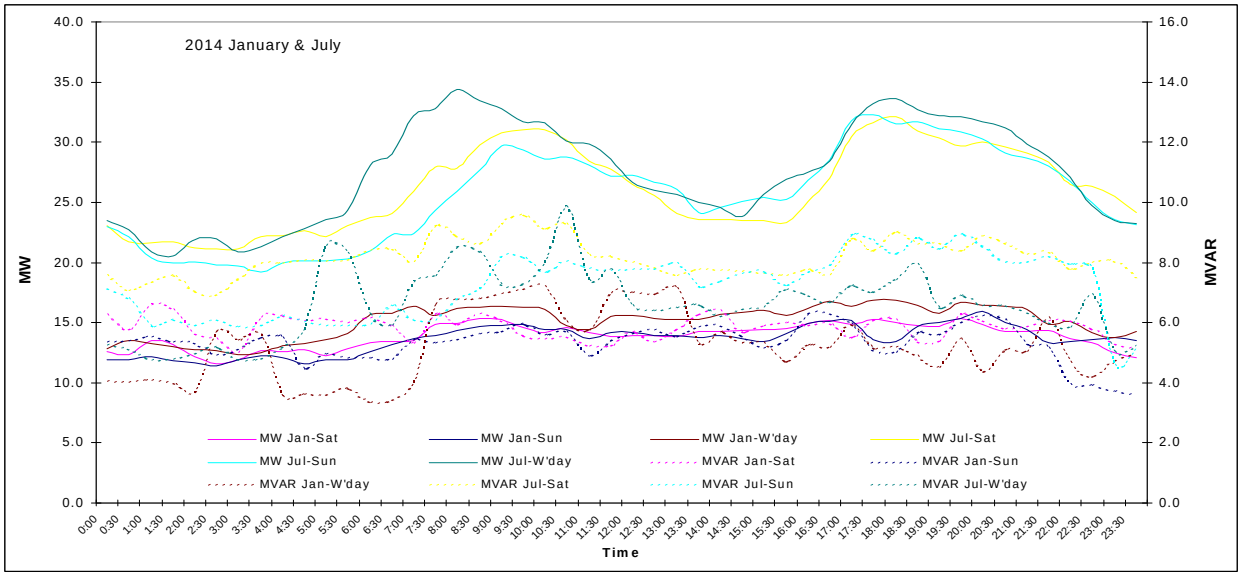
Figure 4-116 Load Profiles: Weekday, Saturday, Sunday for January & July

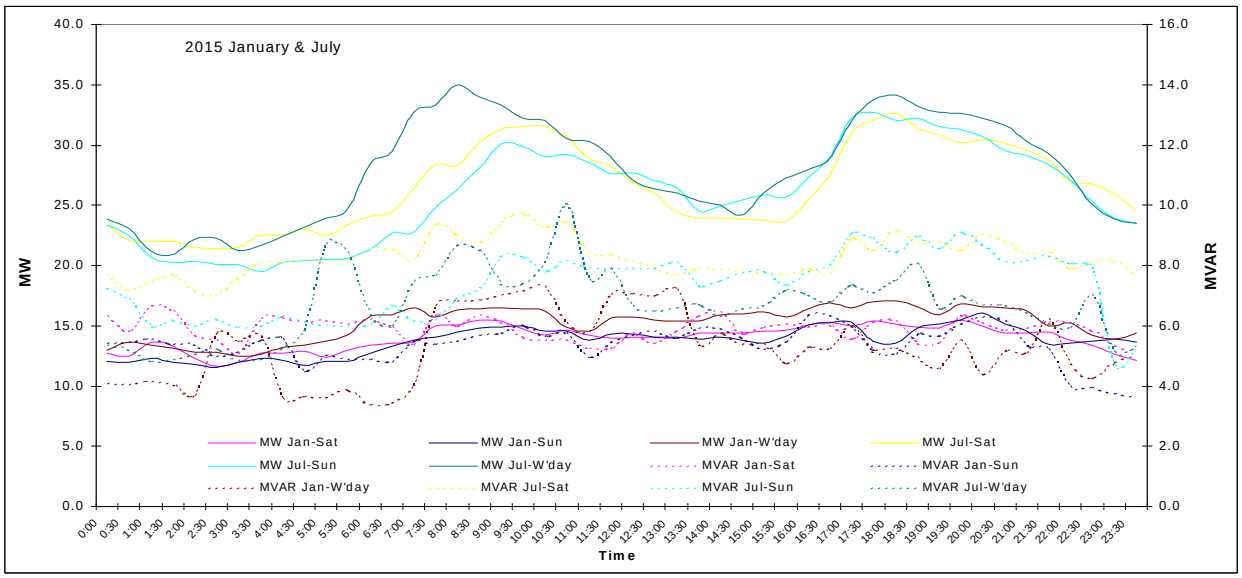












4.5.22 Newton

Description:

The Substation is located adjacent to Newton Dam and is known as “Newton Substation”. The substation is owned by Transend.

Table 4-84 Newton Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	1	7.5	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-85 Newton Site Winter load forecast

Newton	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	3.82	3.90	3.40	3.47	3.82	3.90	3.40	3.47
2006	3.75	3.83	3.68	3.76	3.75	3.83	3.70	3.78
2007	3.83	3.91	3.83	3.91	3.83	3.91	3.85	3.92
2008	3.84	3.92	3.44	3.51	3.84	3.92	3.45	3.52
2009	3.31	3.38	2.80	2.85	3.31	3.38	2.80	2.85
2010	3.93	4.01	3.65	3.72	3.93	4.01	3.68	3.75
2011	4.05	4.13	3.75	3.83	4.05	4.13	3.76	3.83
2012	4.00	4.08	3.71	3.79	4.01	4.09	3.72	3.79
2013	3.95	4.03	3.66	3.74	3.96	4.04	3.67	3.74
2014	3.92	4.00	3.64	3.71	3.93	4.01	3.65	3.72
2015	3.90	3.98	3.62	3.69	3.91	3.99	3.62	3.70
2016	3.88	3.96	3.60	3.67	3.89	3.97	3.61	3.68
2017	3.87	3.95	3.59	3.66	3.88	3.96	3.60	3.67
2018	3.87	3.94	3.59	3.66	3.88	3.96	3.59	3.67
2019	3.87	3.95	3.59	3.67	3.89	3.97	3.61	3.68
2020	3.89	3.97	3.61	3.68	3.91	3.99	3.62	3.70

Table 4-86 Newton Site Summer load forecast

Newton	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	3.52	3.59	3.08	3.14	3.52	3.59	3.08	3.14
2006	4.42	4.51	3.22	3.29	4.42	4.51	3.22	3.29
2007	3.66	3.74	3.23	3.30	3.66	3.74	3.24	3.31
2008	4.35	4.44	3.33	3.40	4.35	4.44	3.33	3.40
2009	3.38	3.45	3.23	3.30	3.38	3.45	3.25	3.32
2010	3.45	3.52	2.90	2.96	3.45	3.52	2.91	2.97
2011	3.46	3.53	2.90	2.96	3.54	3.61	2.97	3.03
2012	3.57	3.64	3.00	3.06	3.65	3.73	3.06	3.13
2013	3.62	3.69	3.03	3.10	3.70	3.78	3.11	3.17
2014	3.62	3.70	3.04	3.10	3.71	3.78	3.11	3.17
2015	3.69	3.77	3.10	3.16	3.78	3.85	3.17	3.23
2016	3.69	3.77	3.10	3.16	3.78	3.85	3.17	3.24
2017	3.83	3.91	3.21	3.28	3.91	3.99	3.29	3.35
2018	3.91	3.99	3.28	3.35	4.00	4.08	3.36	3.43
2019	4.00	4.08	3.35	3.42	4.09	4.17	3.43	3.50
2020	4.09	4.17	3.43	3.50	4.18	4.26	3.51	3.58

Figure 4-117 Newton Site Summer Load Forecast at 50% and 10% POE

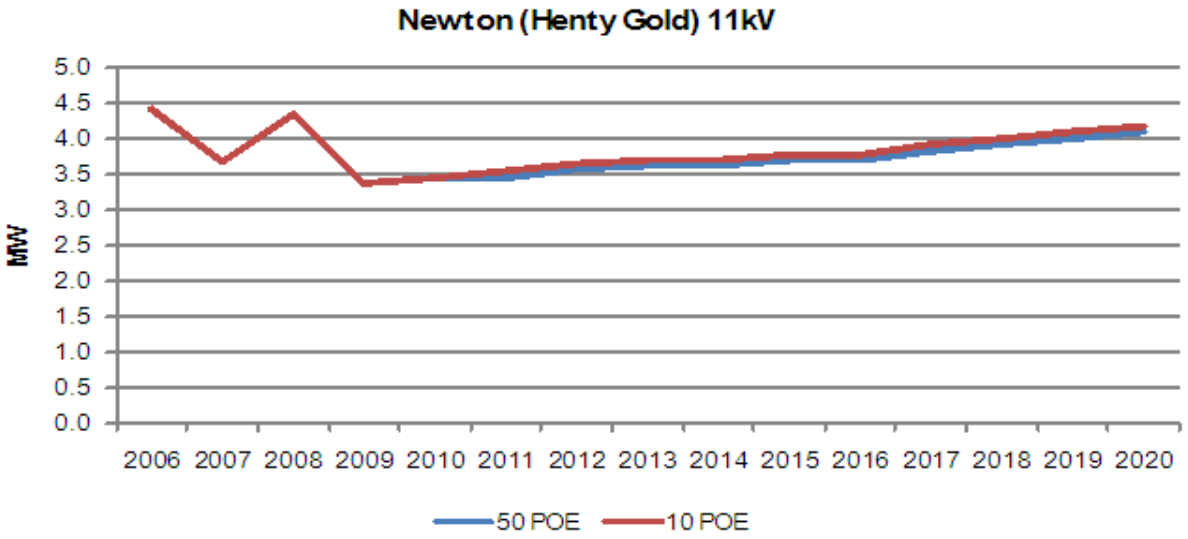
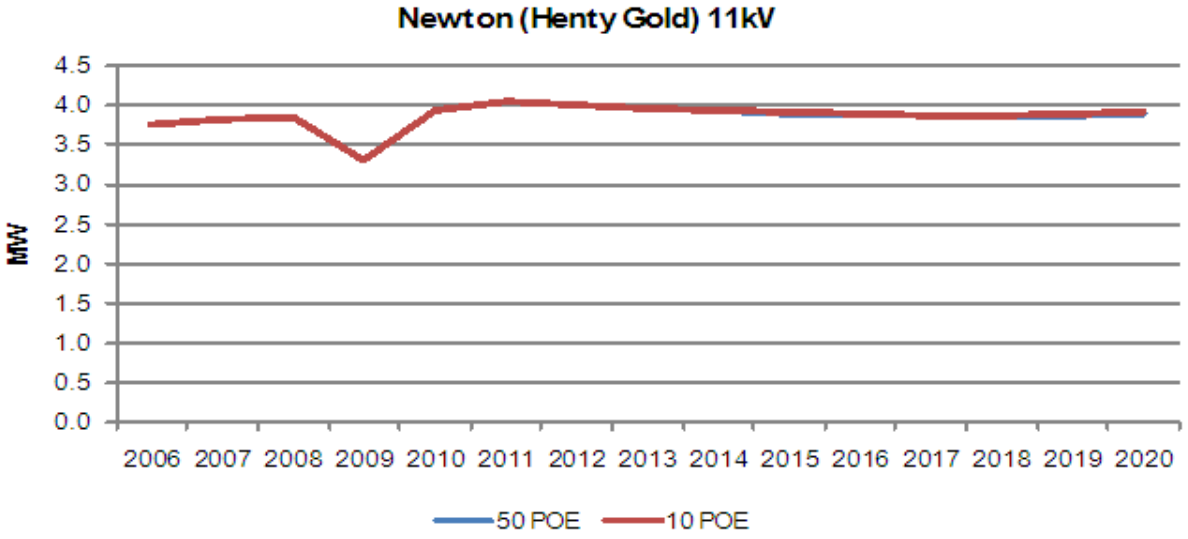
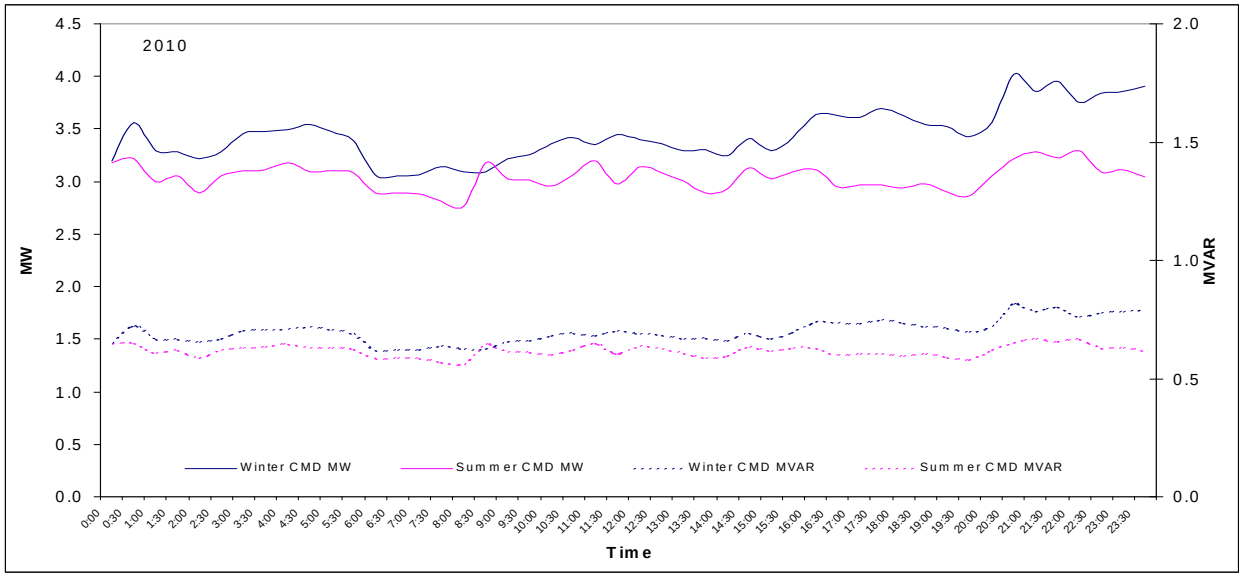


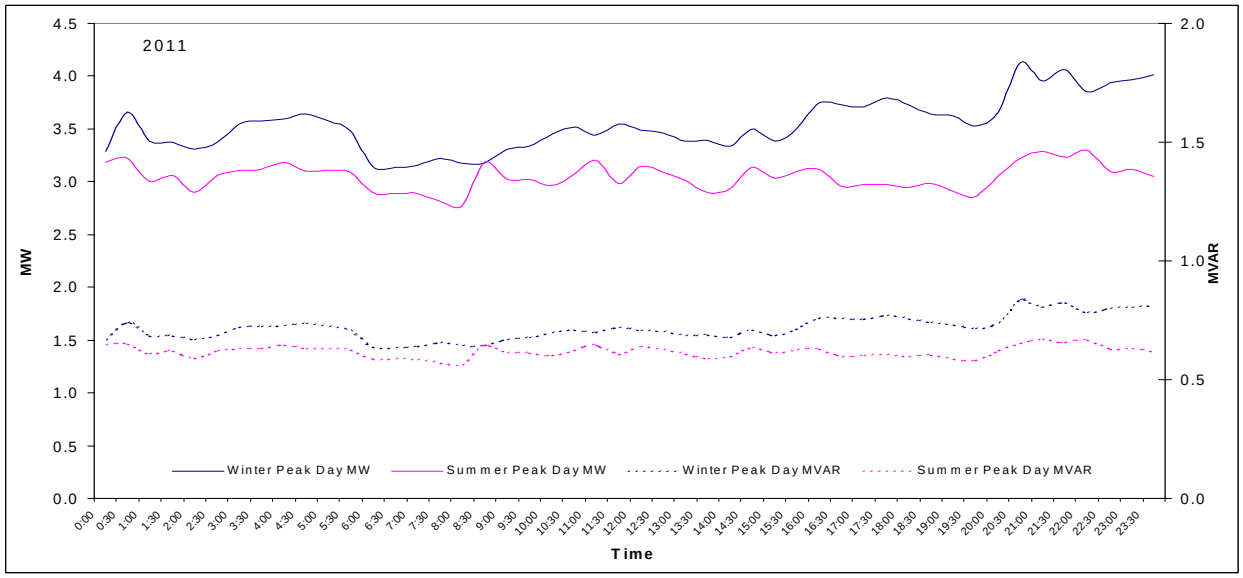
Figure 4-118 Newton Site Winter Load Forecast at 50% and 10% POE

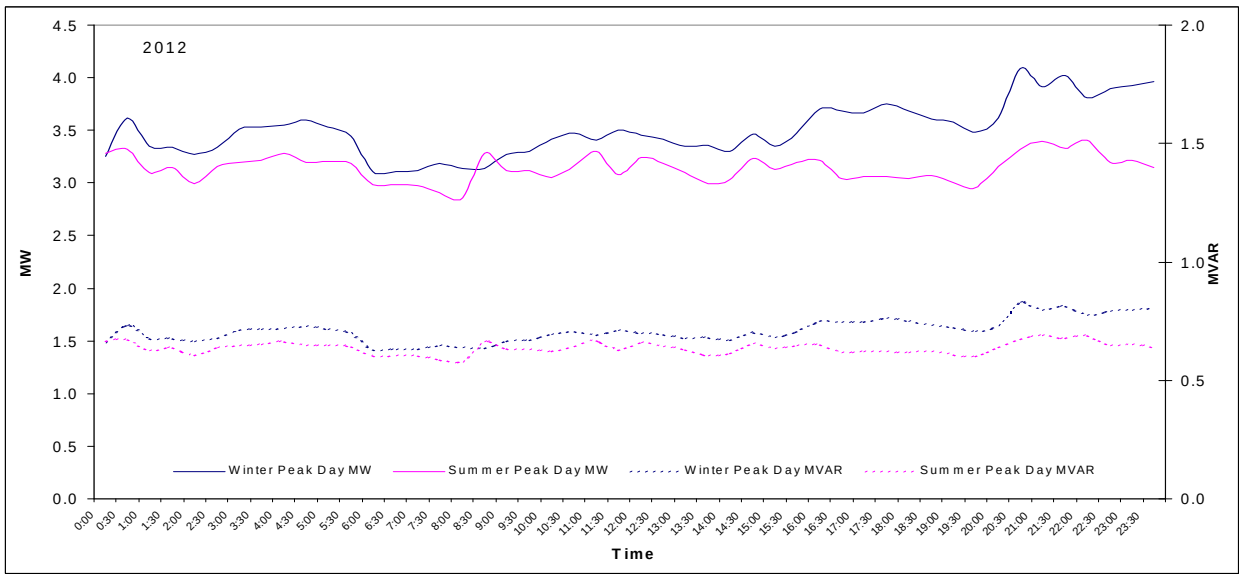


Load Profiles:

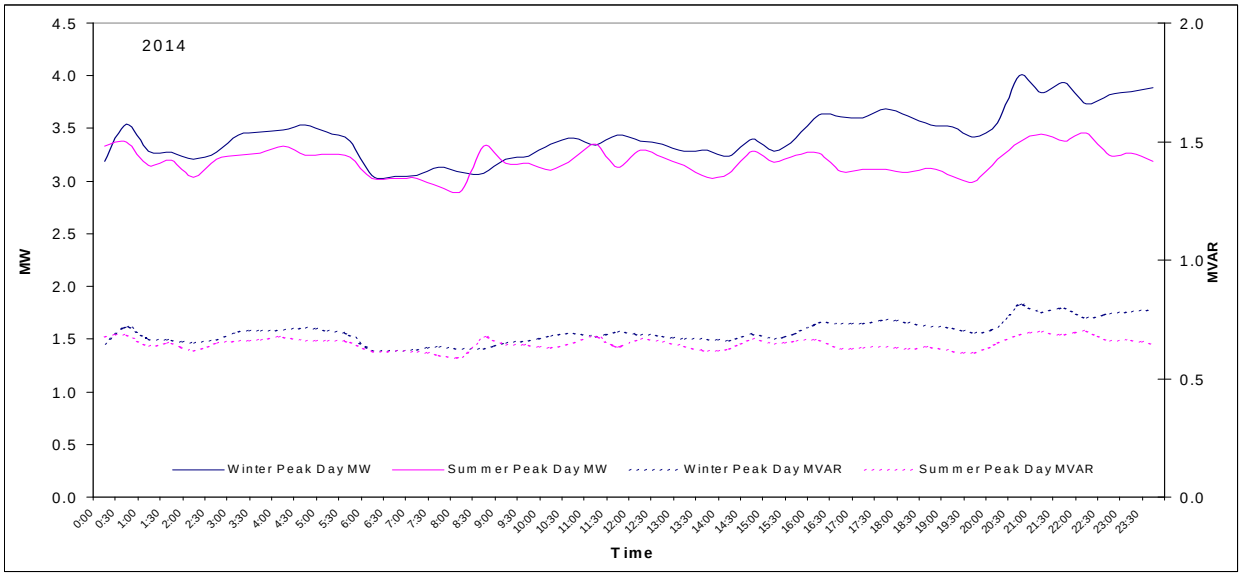
Figure 4-119 Load Profiles: Newton Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

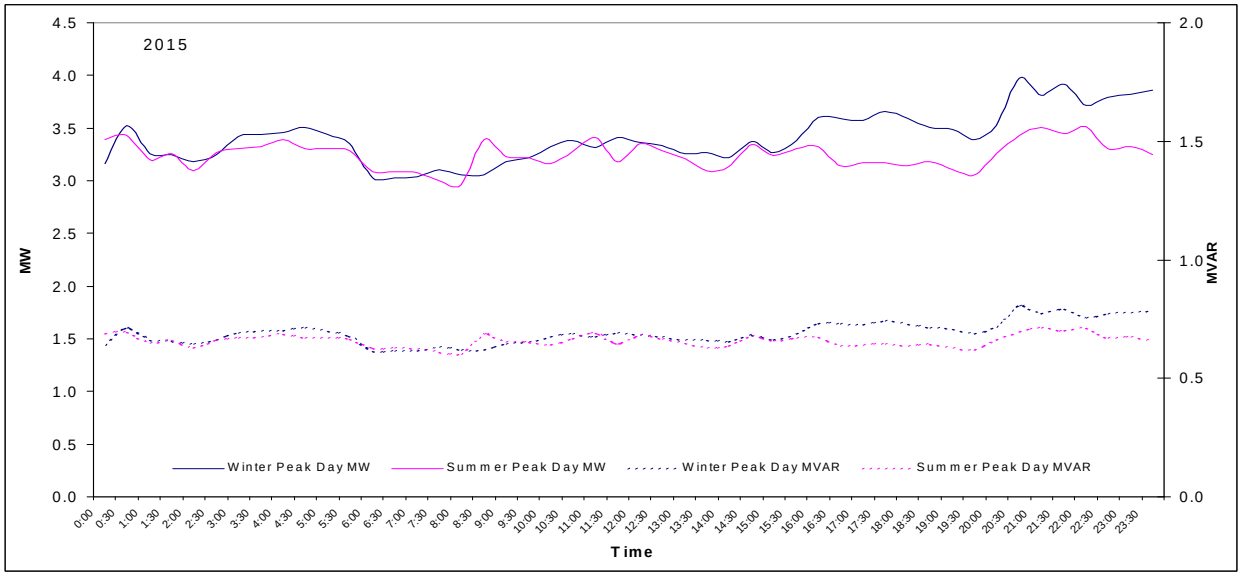
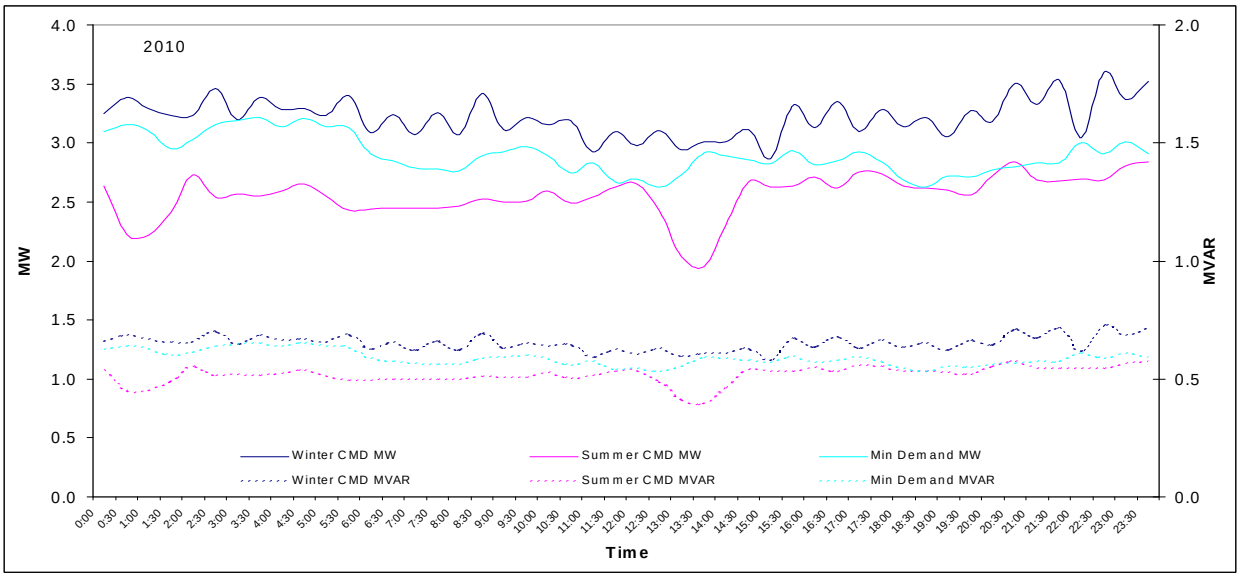
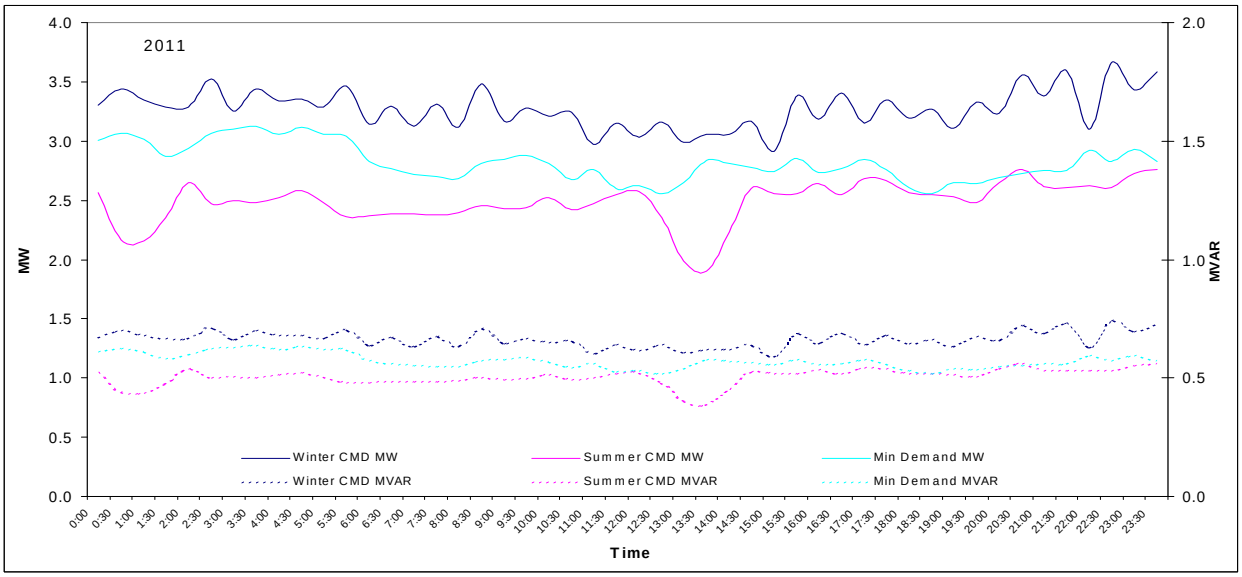
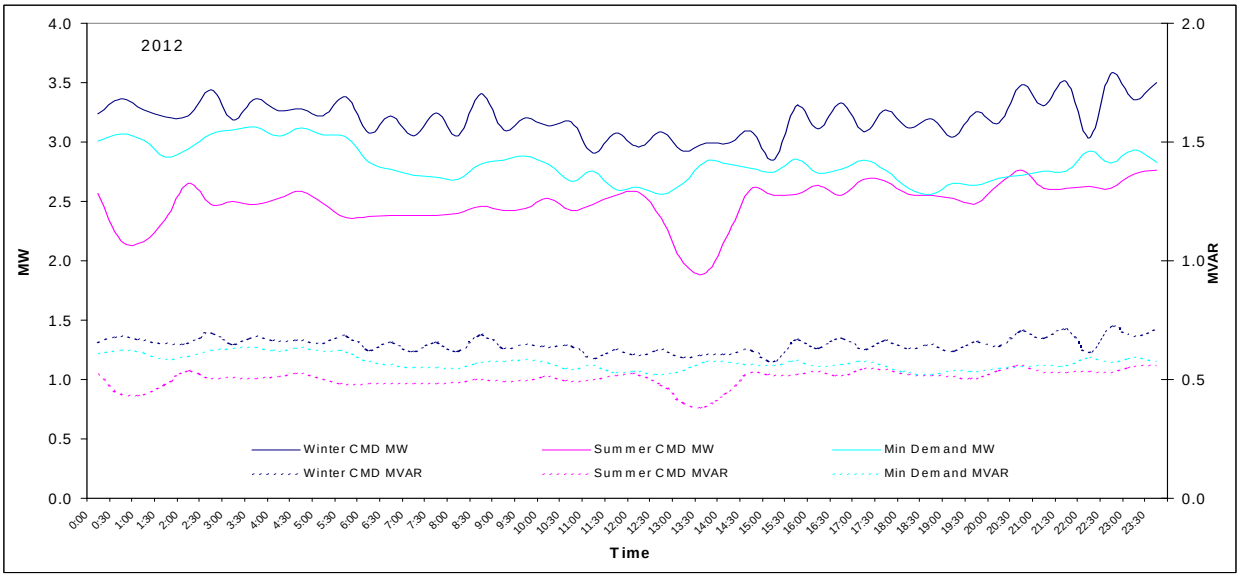
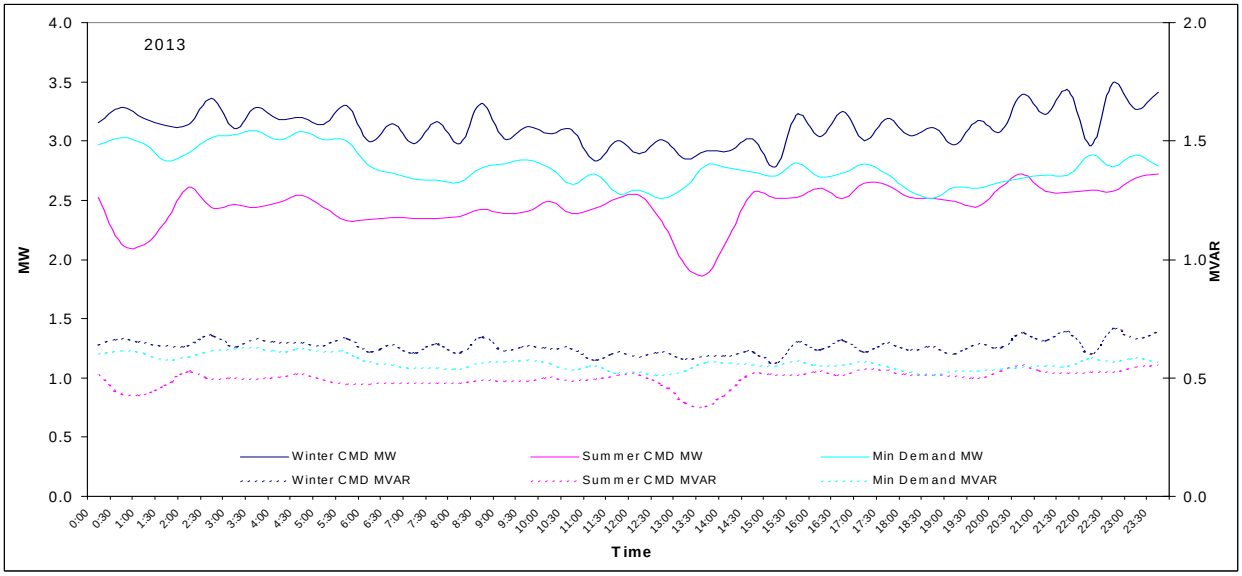

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

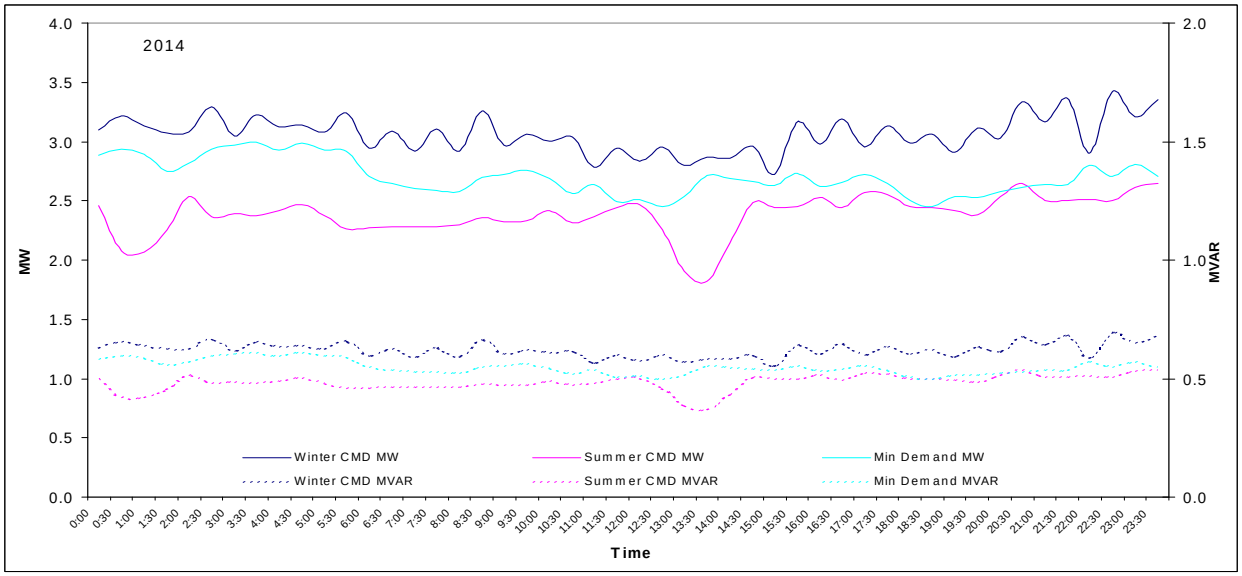
Figure 4-120 Load Profiles: Newton Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

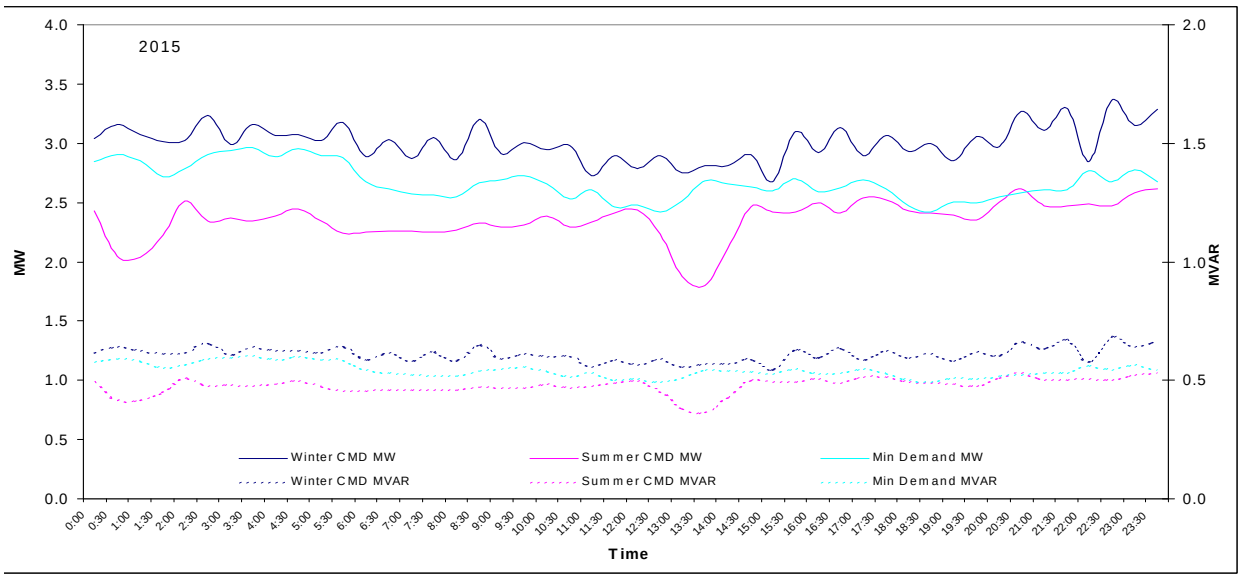
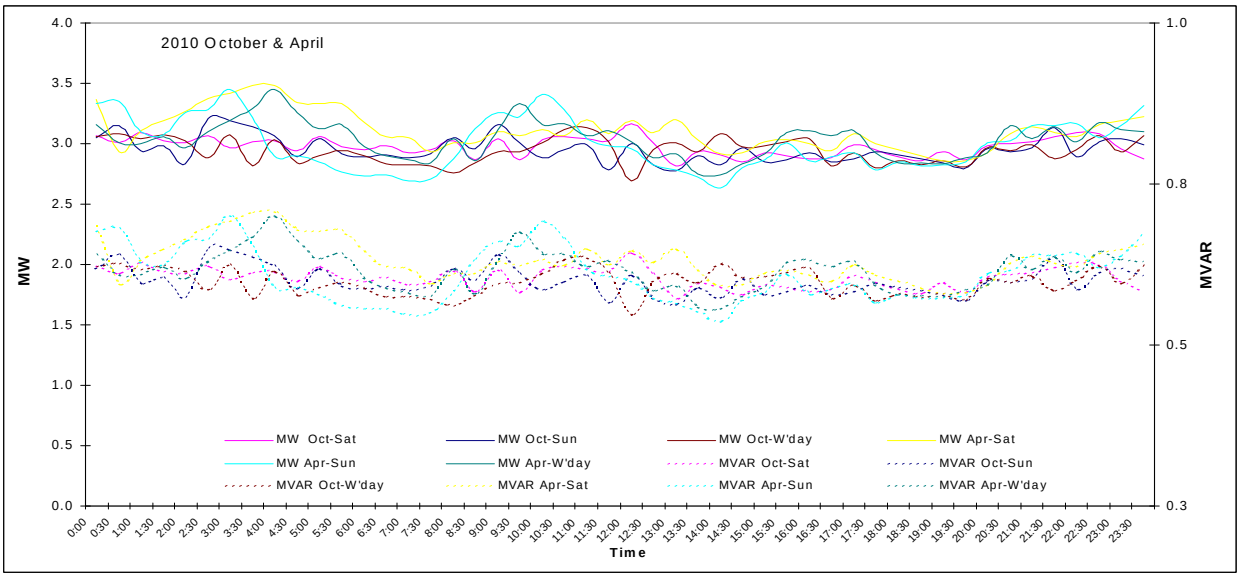
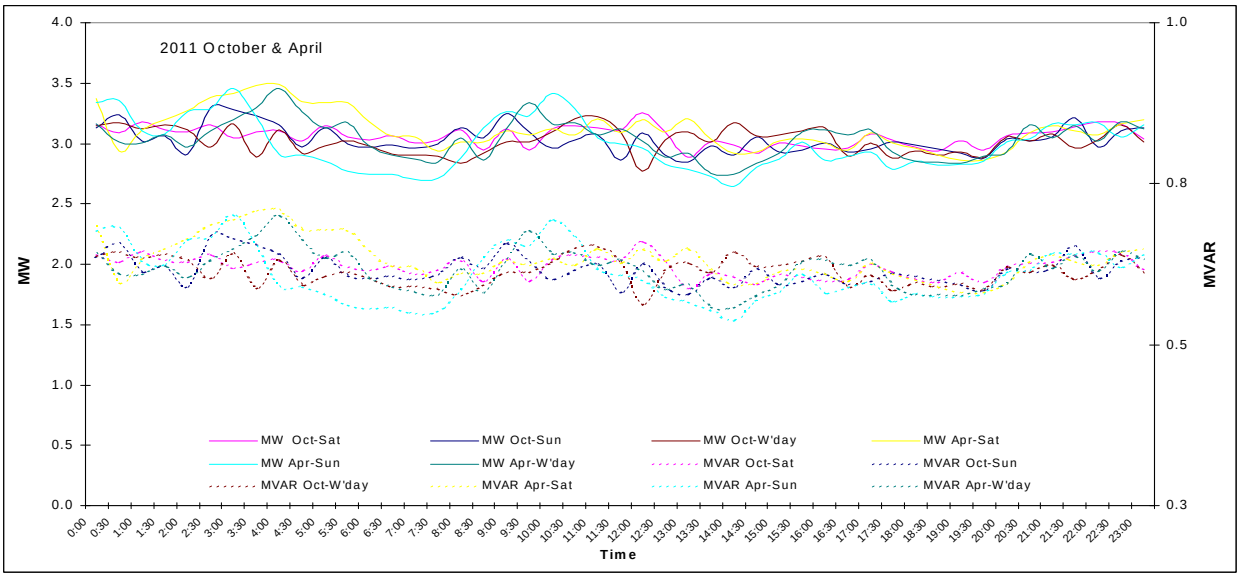
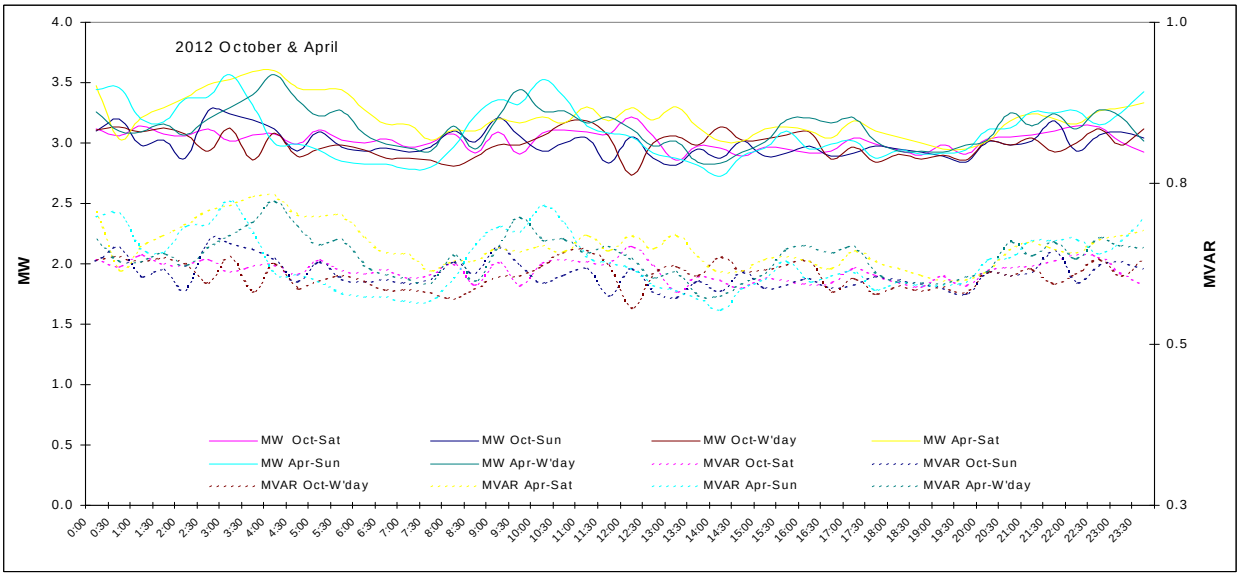
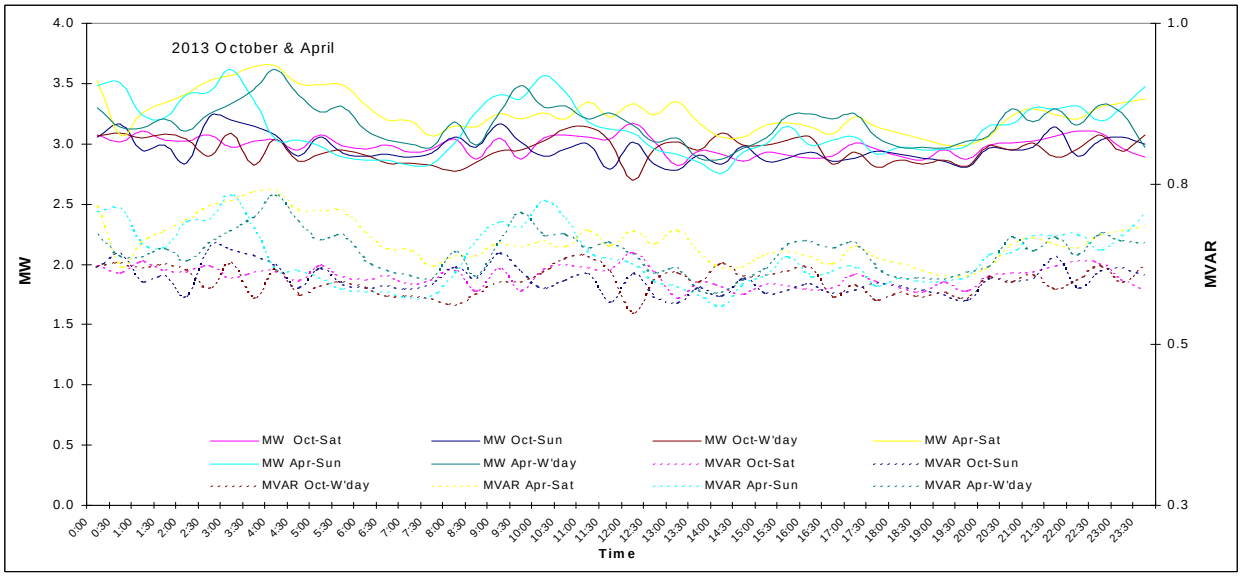

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

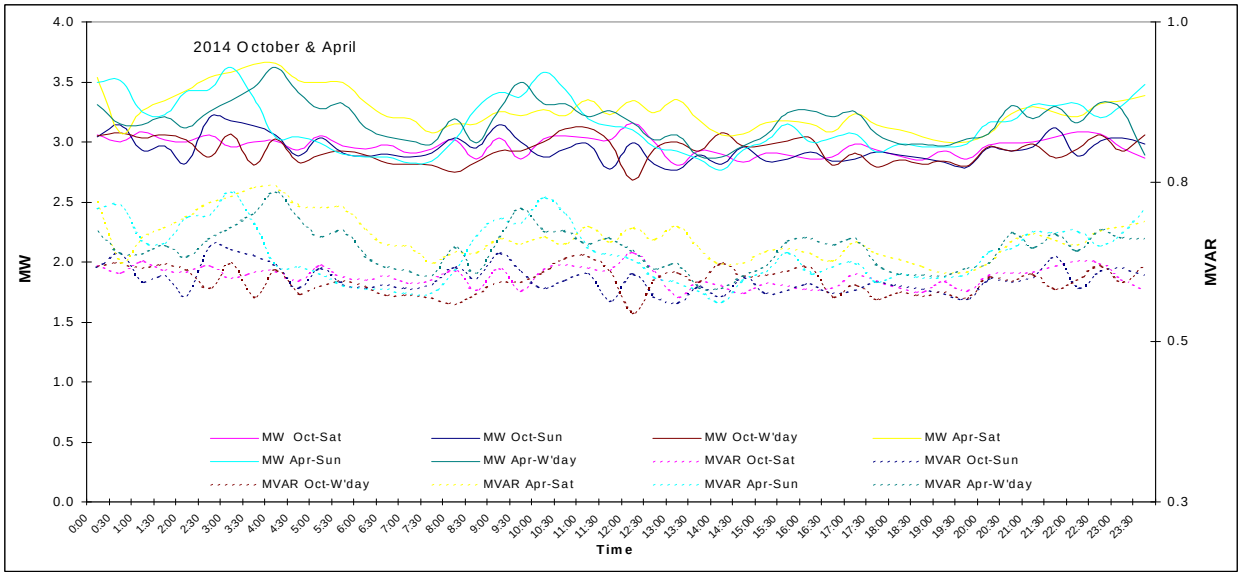
Figure 4-121 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

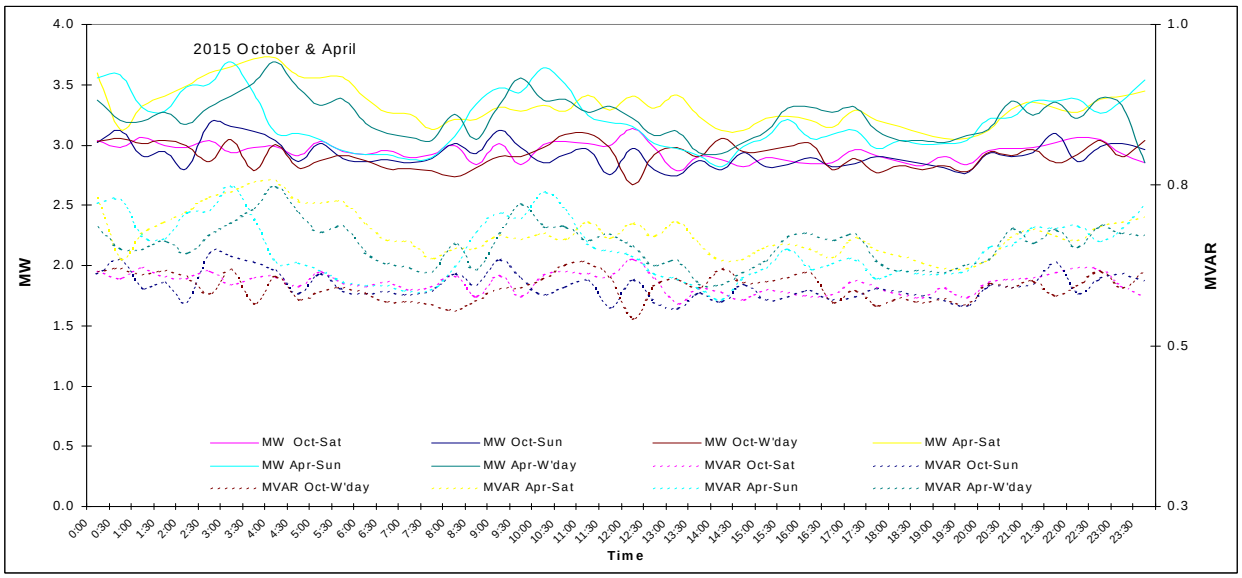
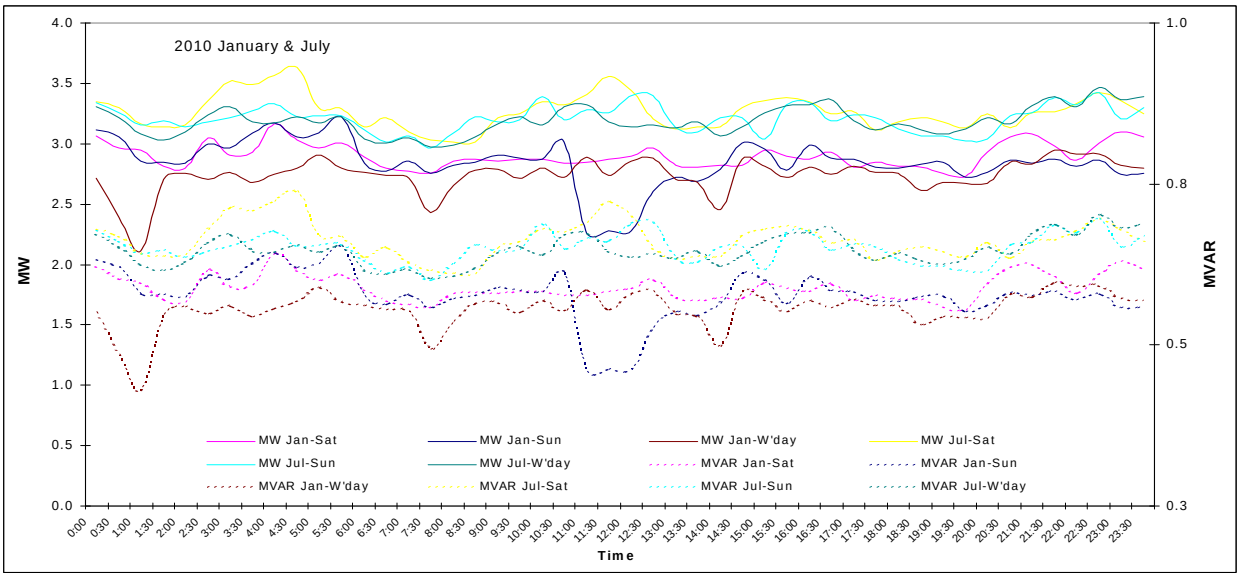
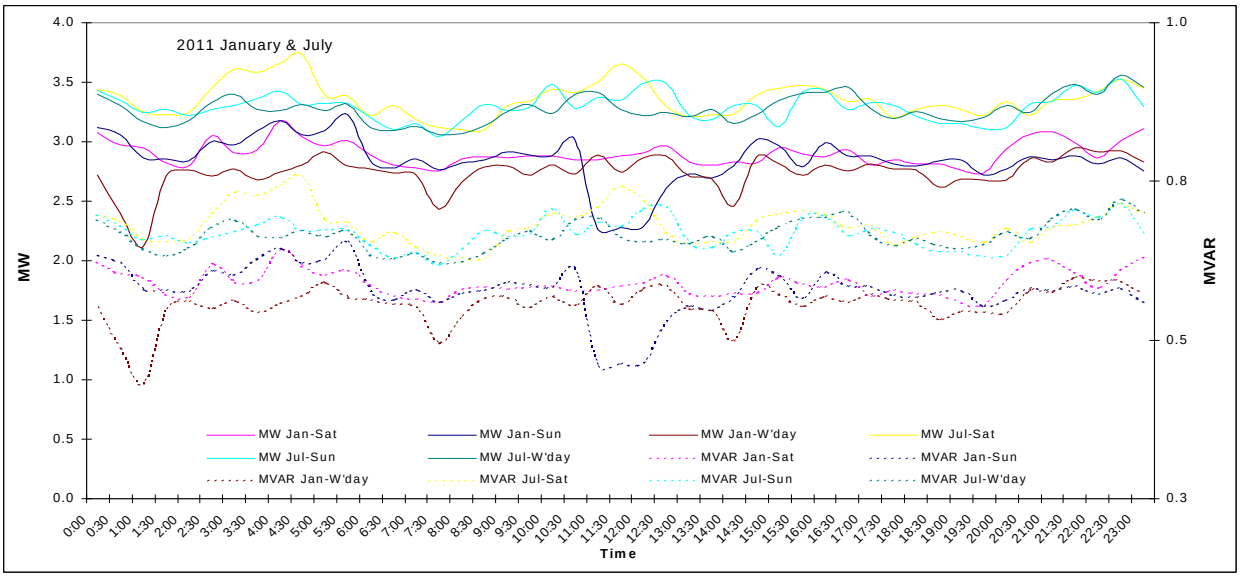
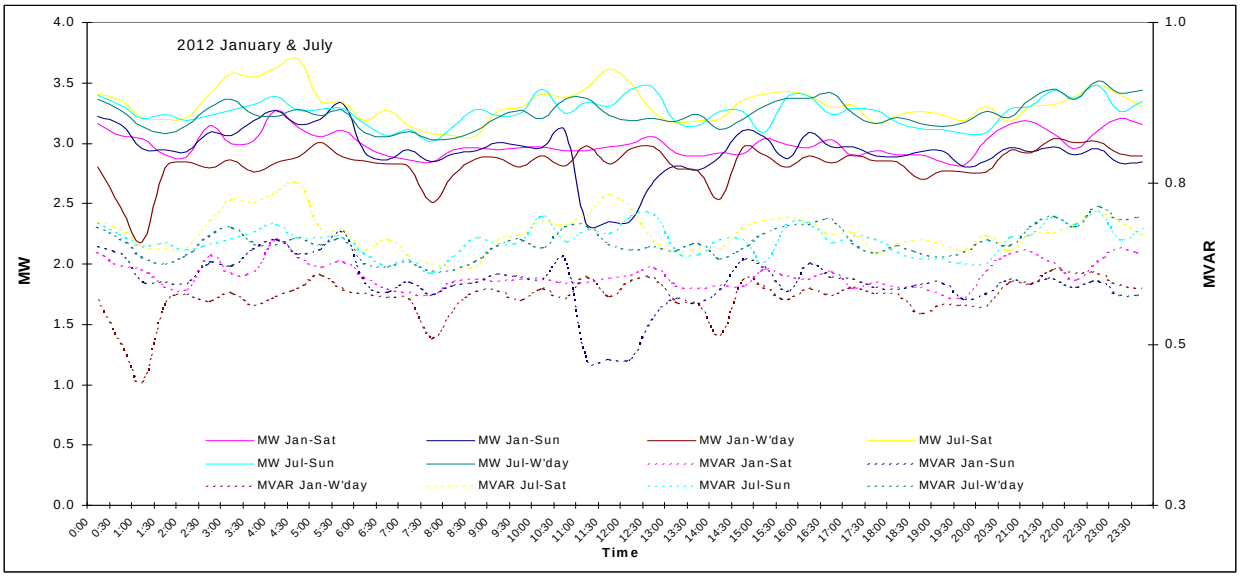
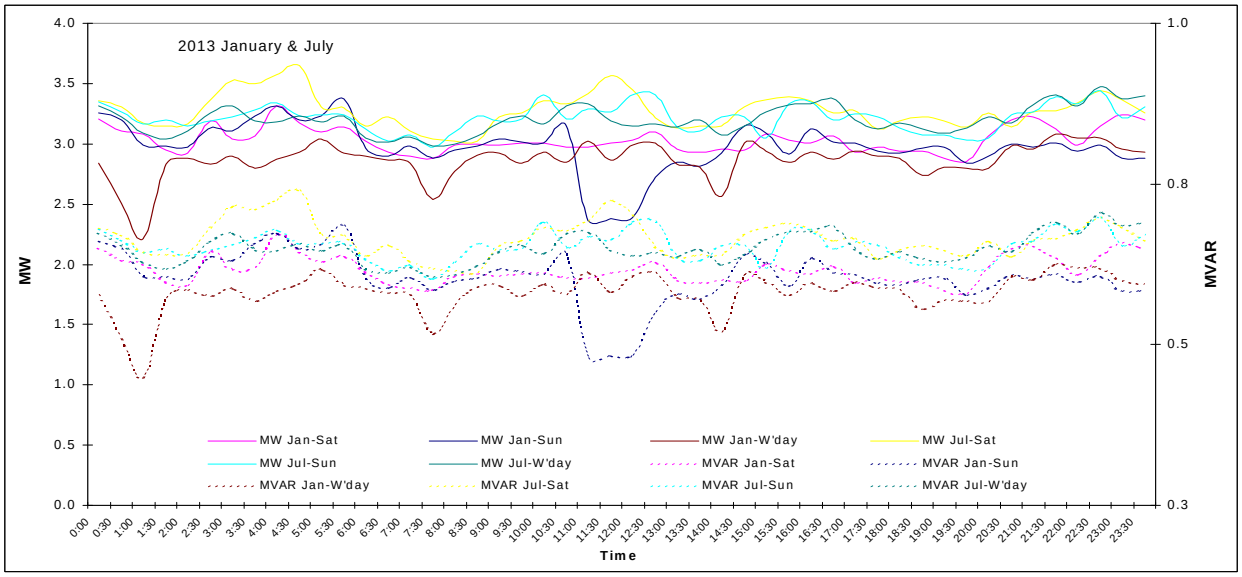

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

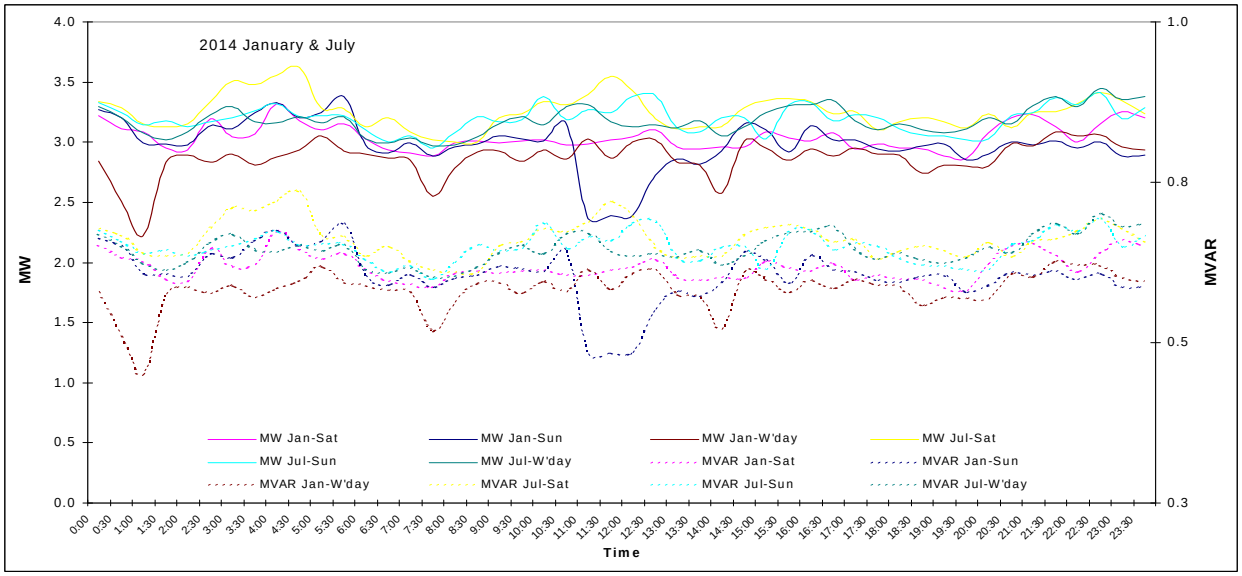
Figure 4-122 Load Profiles: Weekday, Saturday, Sunday for January & July

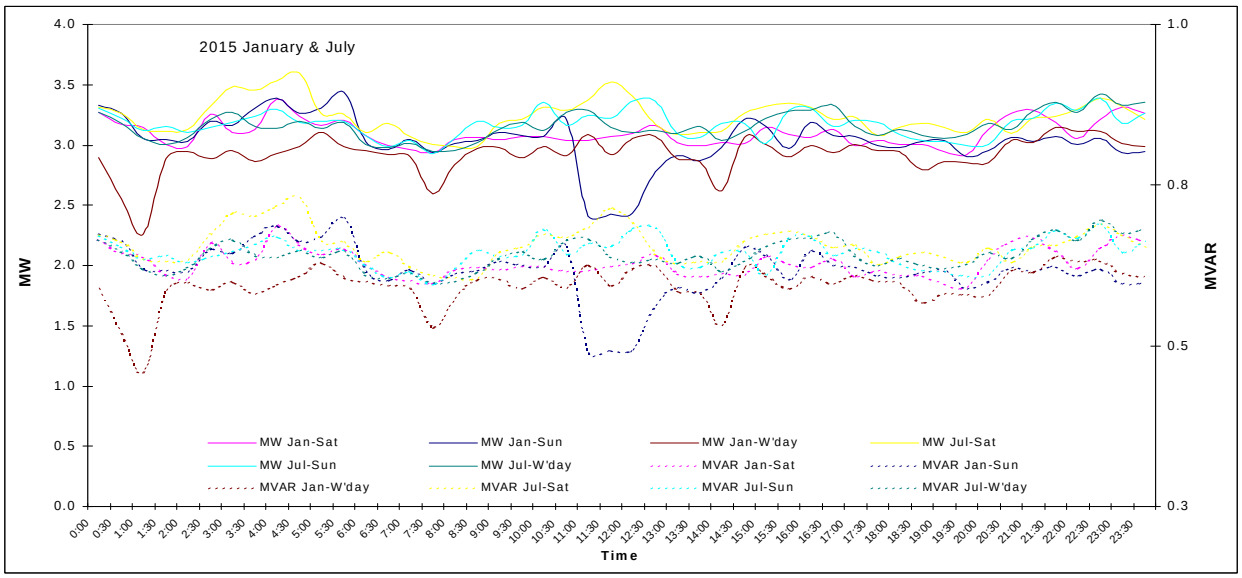







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.23 North Hobart

Description:

The Substation is located at North Hobart and is known as “North Hobart Substation”. The substation is owned by Transend.

Table 4-87 North Hobart Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	22	120	60

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-88 North Hobart Site Winter load forecast

North Hobart	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	64.56	66.35	64.56	66.35	64.56	66.35	66.18	68.02
2006	67.05	68.86	57.16	58.71	67.05	68.86	58.83	60.42
2007	57.98	59.70	55.62	57.26	57.98	59.70	57.24	58.94
2008	58.06	59.83	56.21	57.92	58.06	59.83	58.00	59.76
2009	56.25	57.75	56.25	57.75	56.25	57.75	57.95	59.50
2010	60.26	61.59	54.92	56.13	60.26	61.59	56.39	57.64
2011	62.82	64.21	57.25	58.52	64.07	65.49	58.39	59.69
2012	62.99	64.39	57.41	58.68	64.24	65.66	58.55	59.84
2013	63.03	64.42	57.44	58.71	64.32	65.74	58.62	59.92
2014	63.49	64.90	57.87	59.15	64.76	66.19	59.02	60.33
2015	63.93	65.34	58.26	59.55	65.24	66.69	59.46	60.78
2016	64.54	65.97	58.82	60.12	65.84	67.30	60.01	61.33
2017	65.15	66.59	59.38	60.69	66.49	67.96	60.60	61.94
2018	66.02	67.48	60.17	61.50	67.34	68.83	61.38	62.73
2019	67.07	68.56	61.13	62.48	68.48	70.00	62.41	63.79
2020	68.30	69.81	62.25	63.62	69.69	71.24	63.52	64.92

Table 4-89 North Hobart Site Summer load forecast

North Hobart	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	36.43	37.97	36.43	37.97	36.43	37.97	36.62	38.17
2006	37.31	39.59	37.31	39.59	37.31	39.59	37.60	39.90
2007	37.97	40.01	32.49	34.24	37.97	40.01	32.54	34.29
2008	35.11	36.38	35.11	36.38	35.11	36.38	35.50	36.79
2009	36.16	37.80	35.58	37.19	36.16	37.80	36.15	37.79
2010	33.49	34.77	33.49	34.77	33.49	34.77	34.01	35.31
2011	33.37	34.65	33.37	34.65	34.47	35.79	34.47	35.79
2012	34.26	35.56	34.26	35.56	35.40	36.75	35.40	36.75
2013	34.55	35.86	34.55	35.86	35.70	37.07	35.70	37.07
2014	34.47	35.79	34.47	35.79	35.57	36.93	35.57	36.93
2015	34.96	36.29	34.96	36.29	36.08	37.45	36.08	37.45
2016	34.79	36.11	34.79	36.11	35.94	37.31	35.94	37.31
2017	35.93	37.31	35.93	37.31	37.08	38.49	37.08	38.49
2018	36.55	37.95	36.55	37.95	37.73	39.17	37.73	39.17
2019	37.20	38.62	37.20	38.62	38.38	39.84	38.38	39.84
2020	37.93	39.38	37.93	39.38	39.11	40.60	39.11	40.60

Figure 4-123 North Hobart Site Summer Load Forecast at 50% and 10% POE

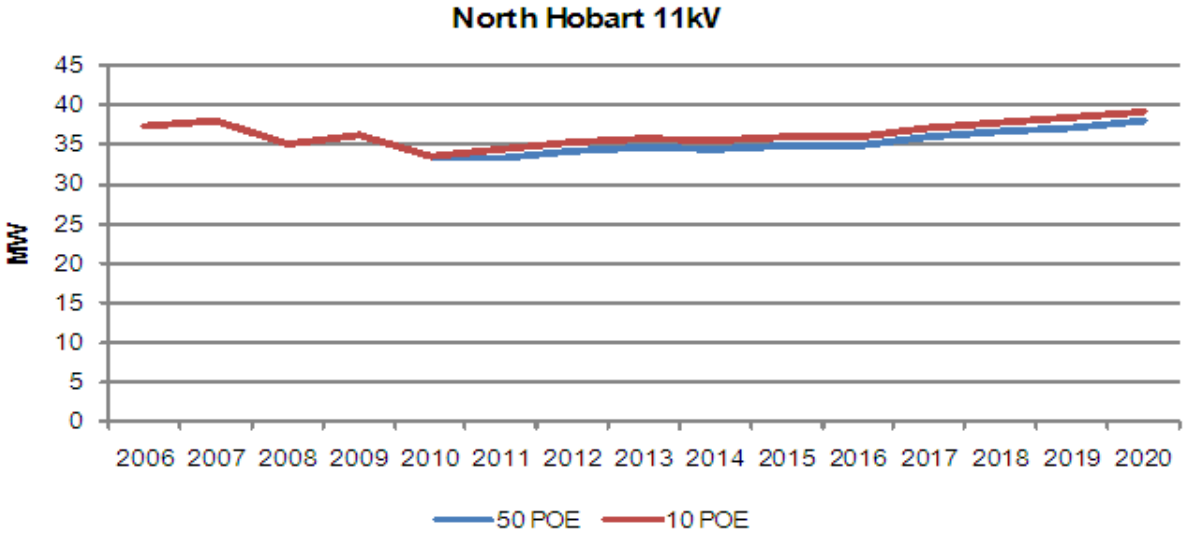
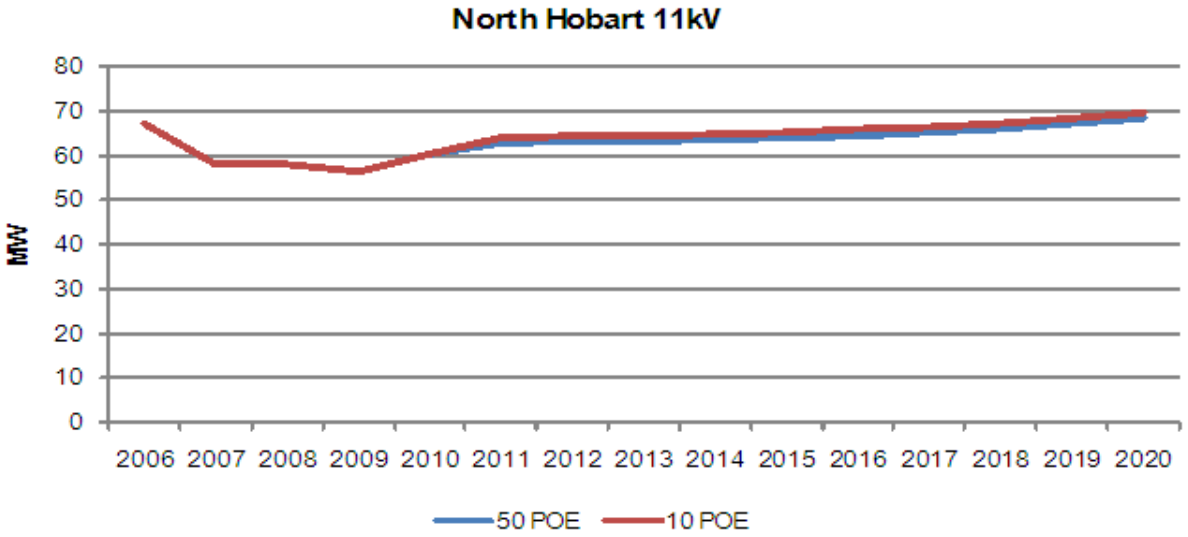
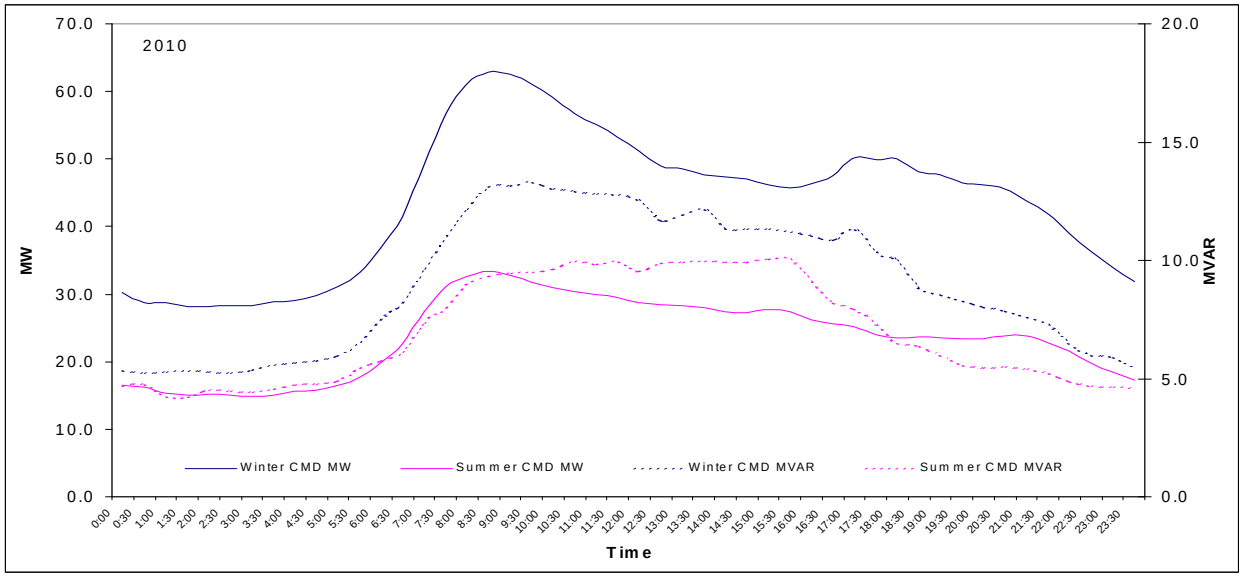


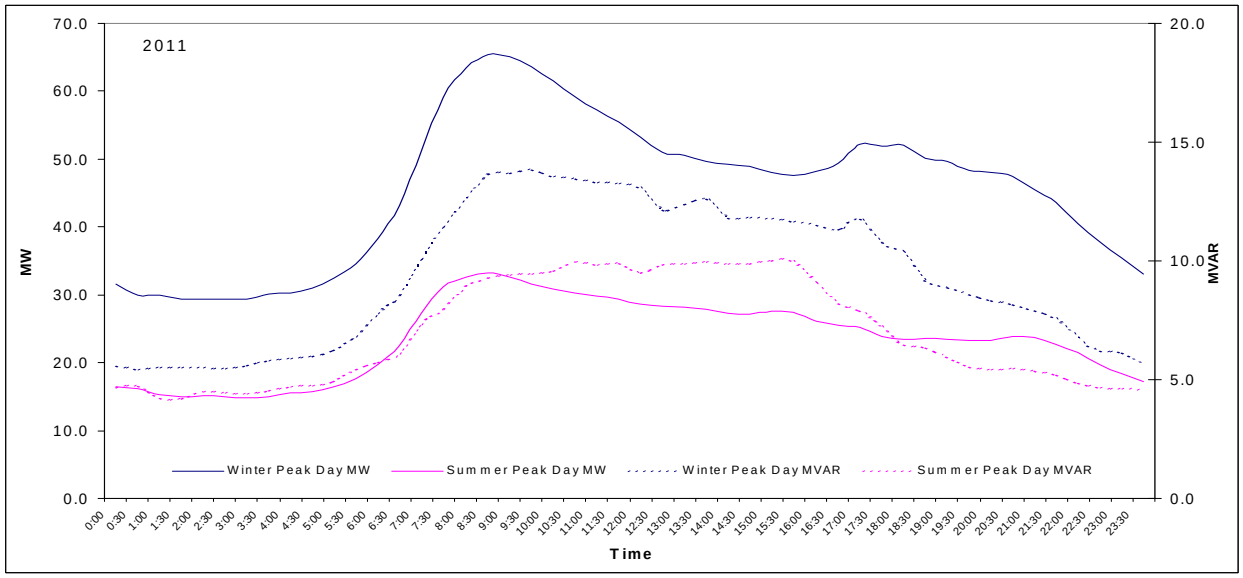
Figure 4-124 North Hobart Site Winter Load Forecast at 50% and 10% POE

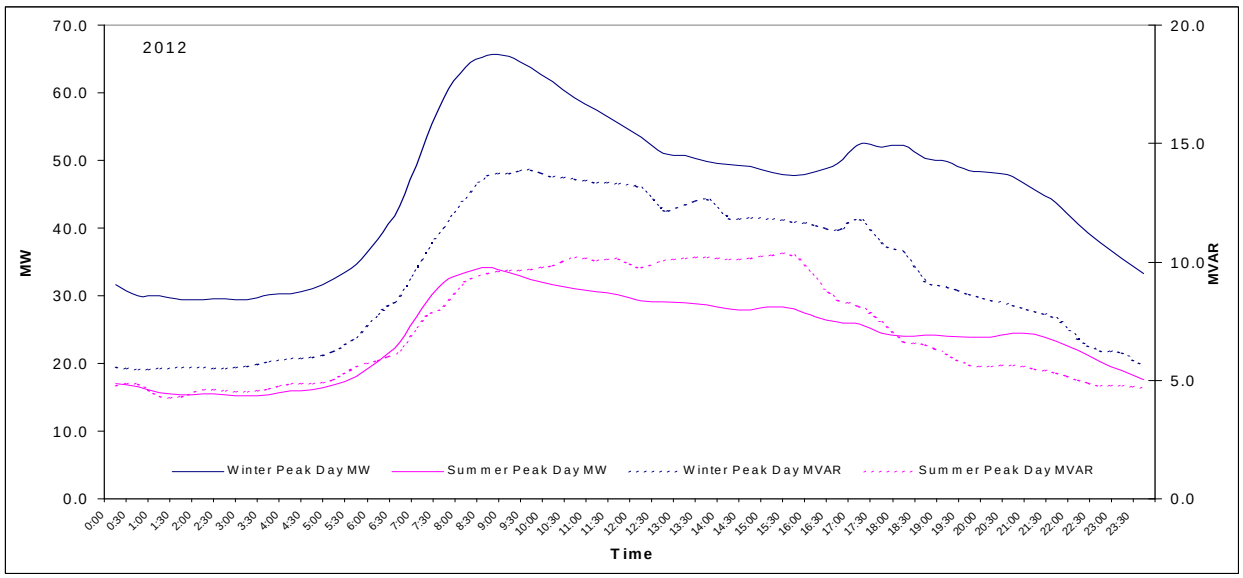


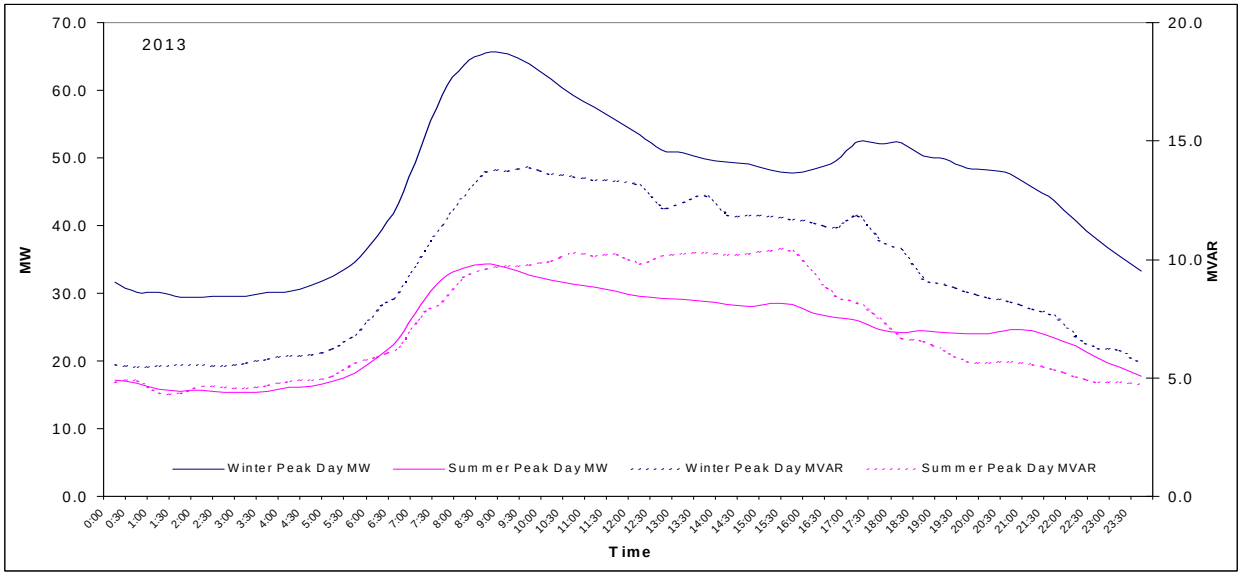
Load Profiles:

Figure 4-125 Load Profiles: North Hobart Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

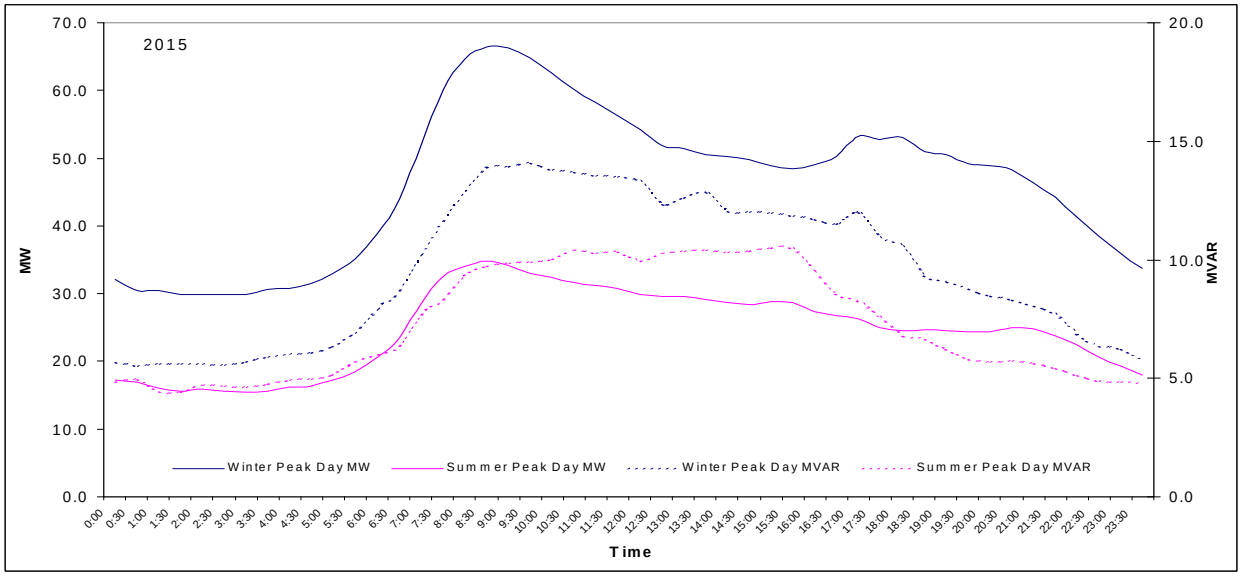
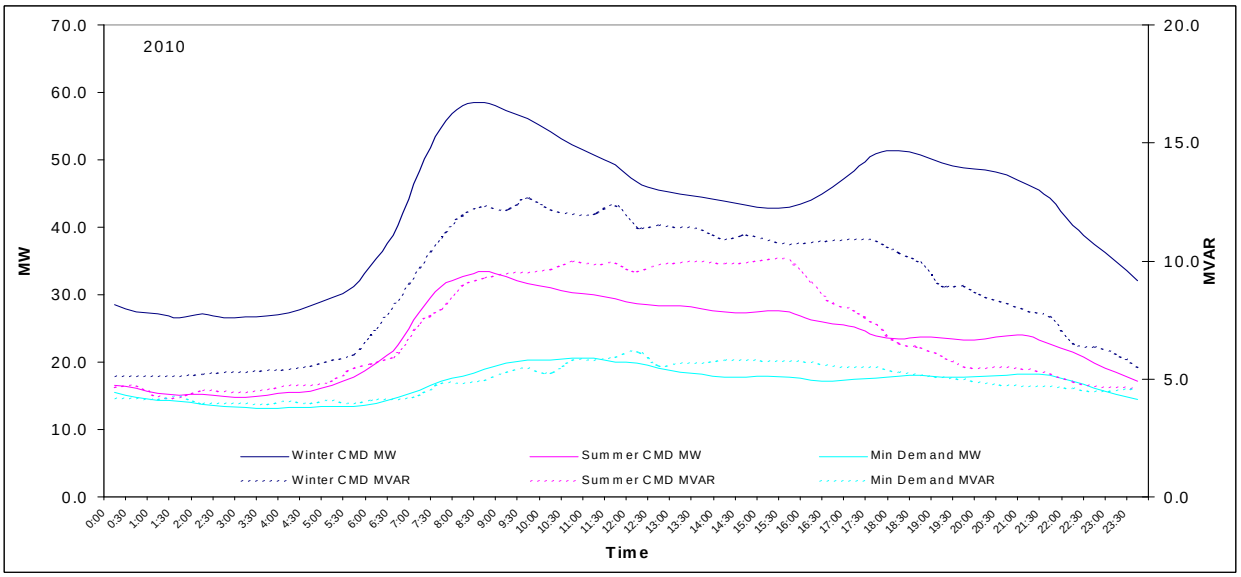
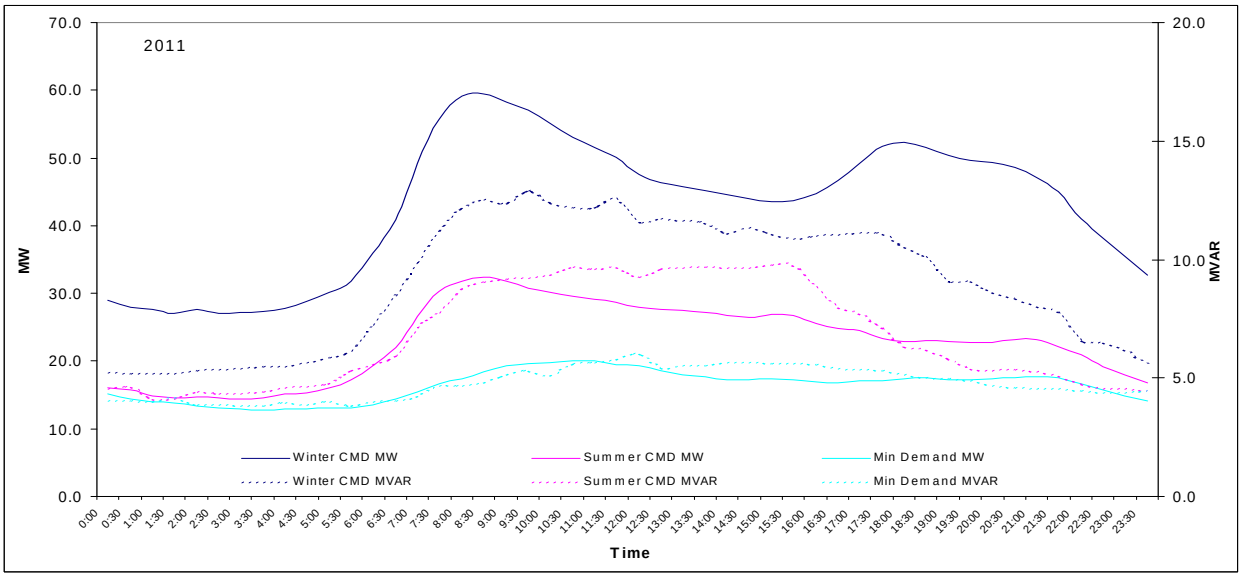
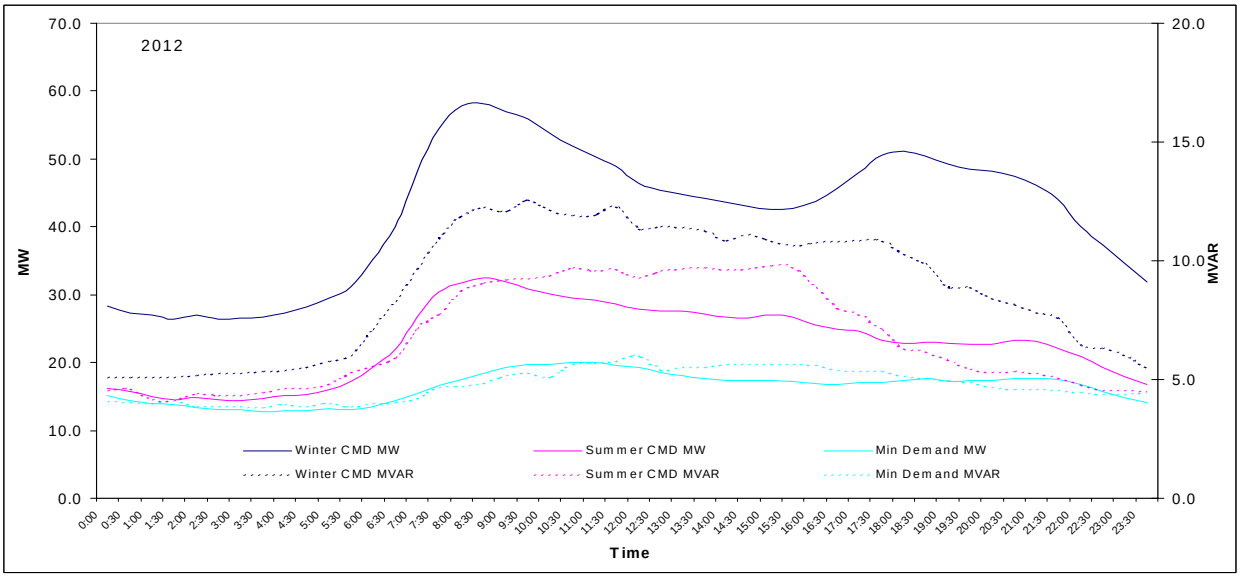
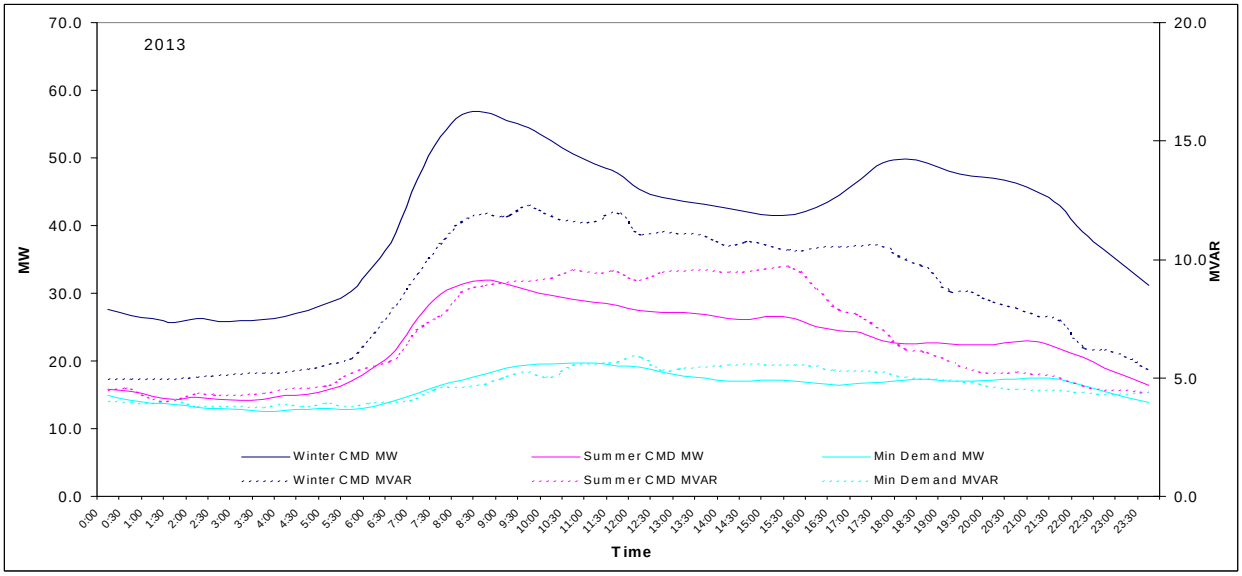

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

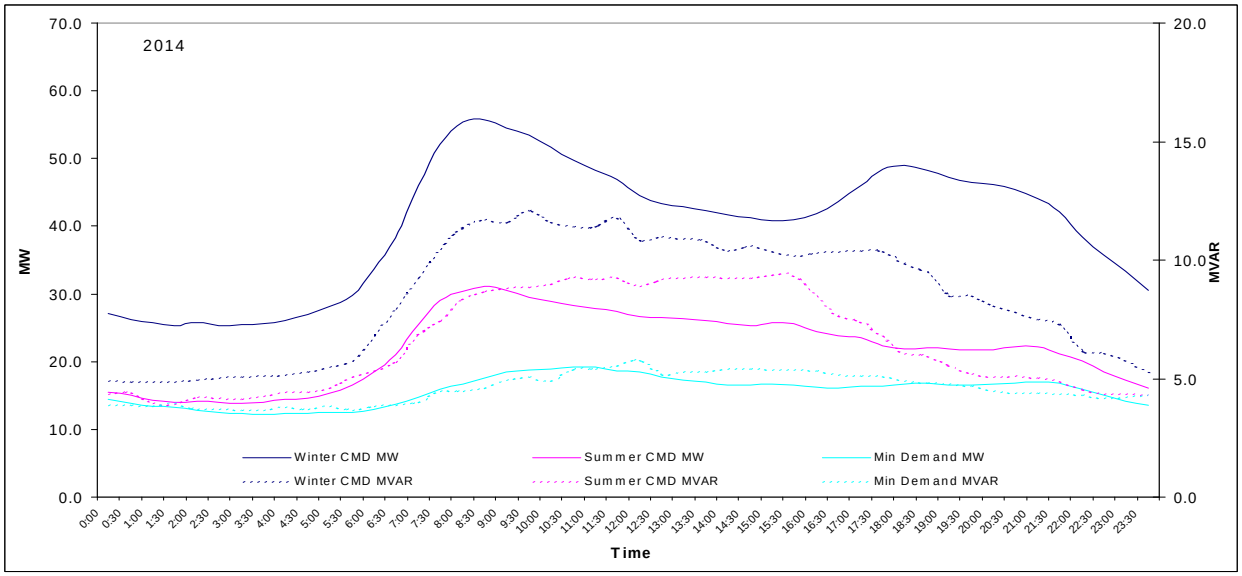
Figure 4-126 Load Profiles: North Hobart Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

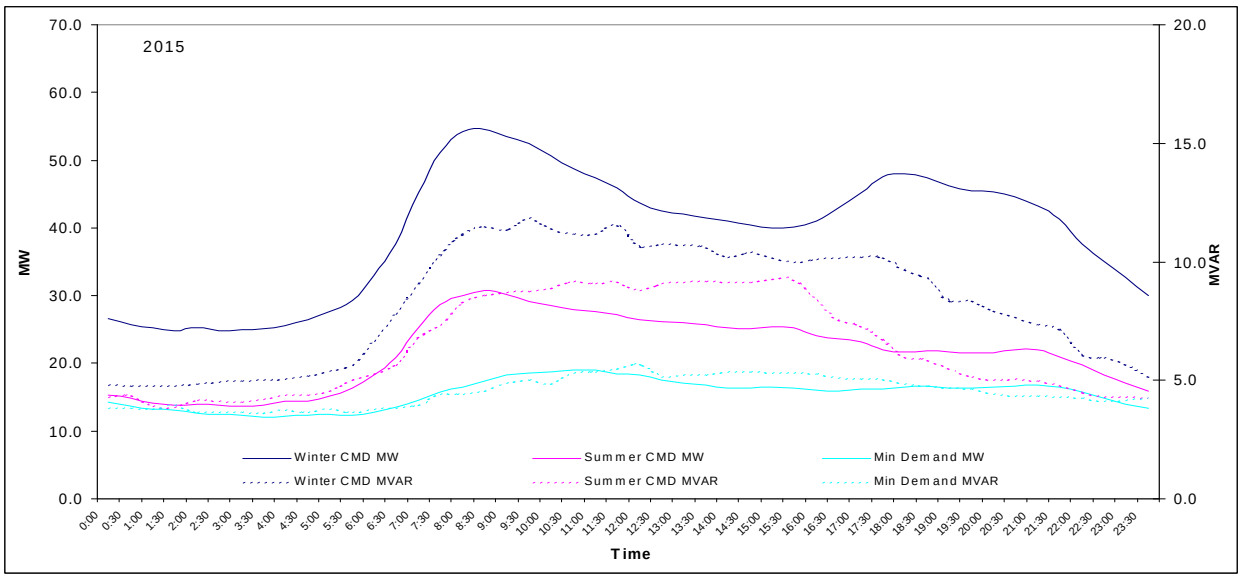
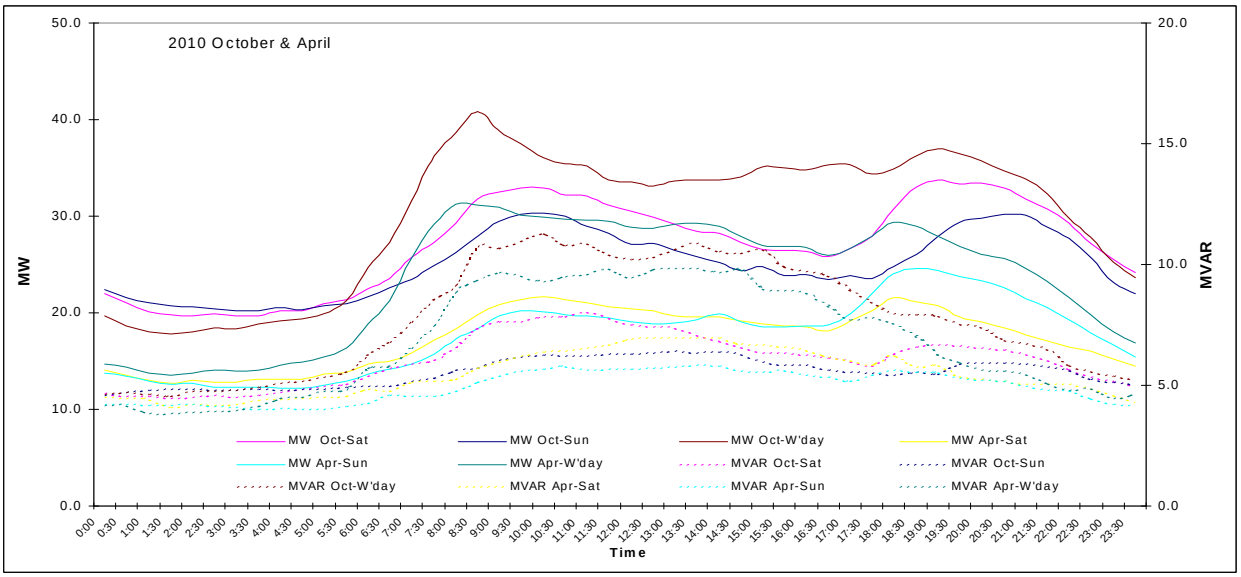
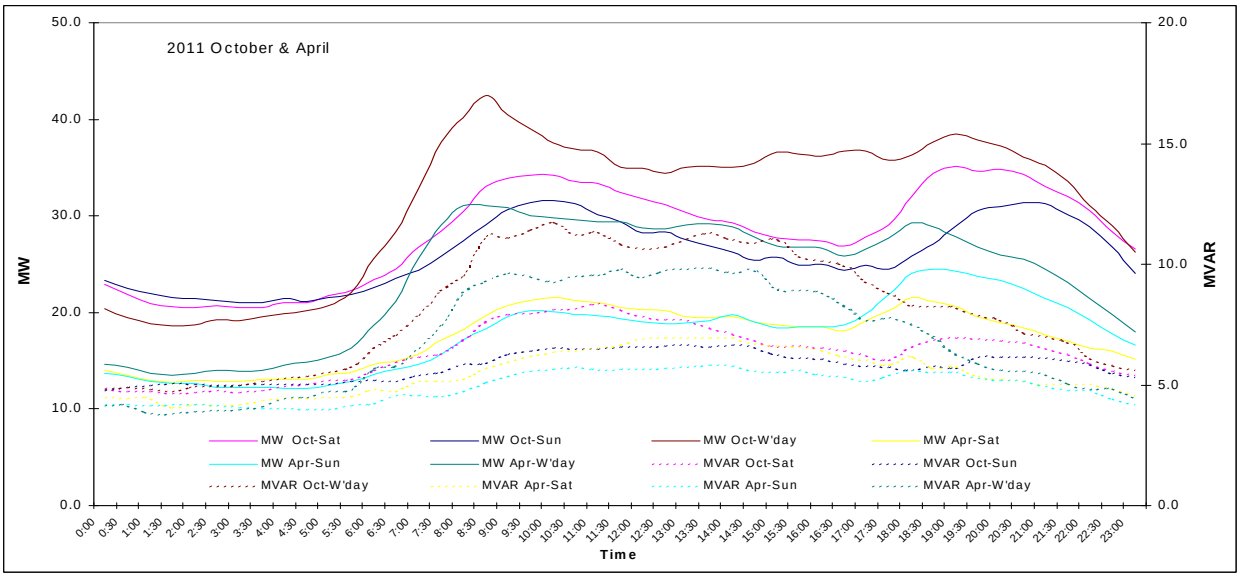
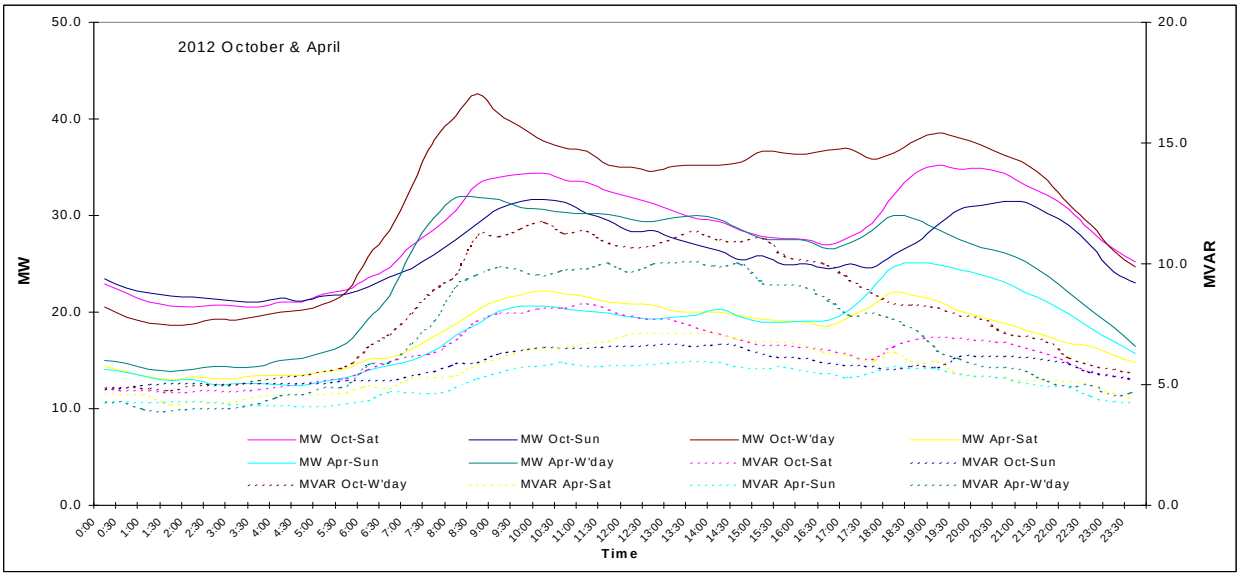
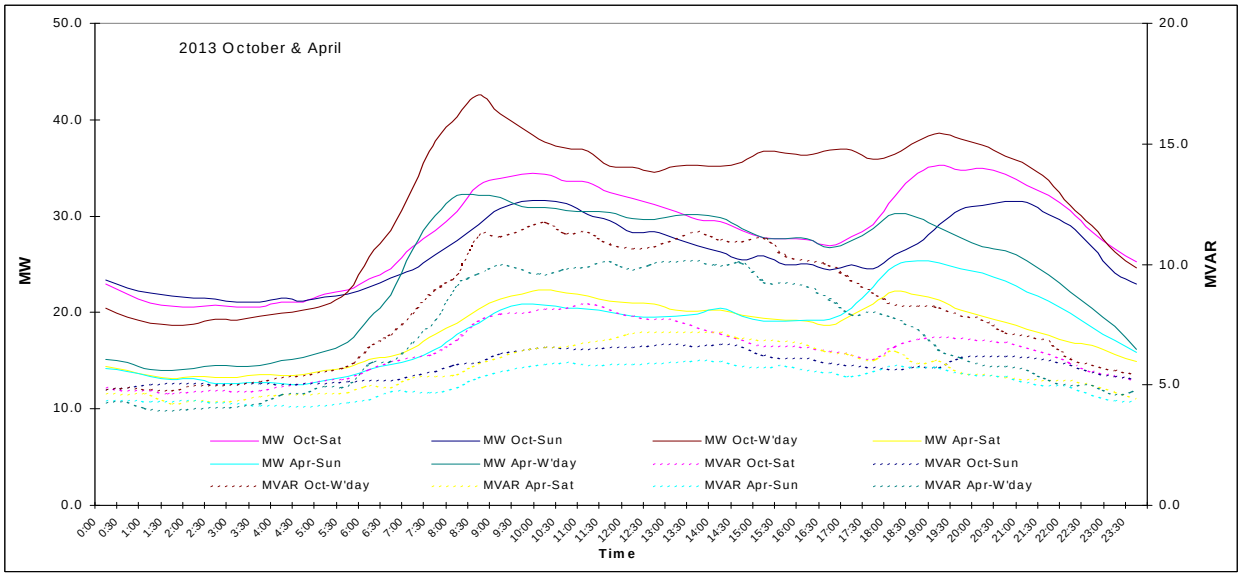

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

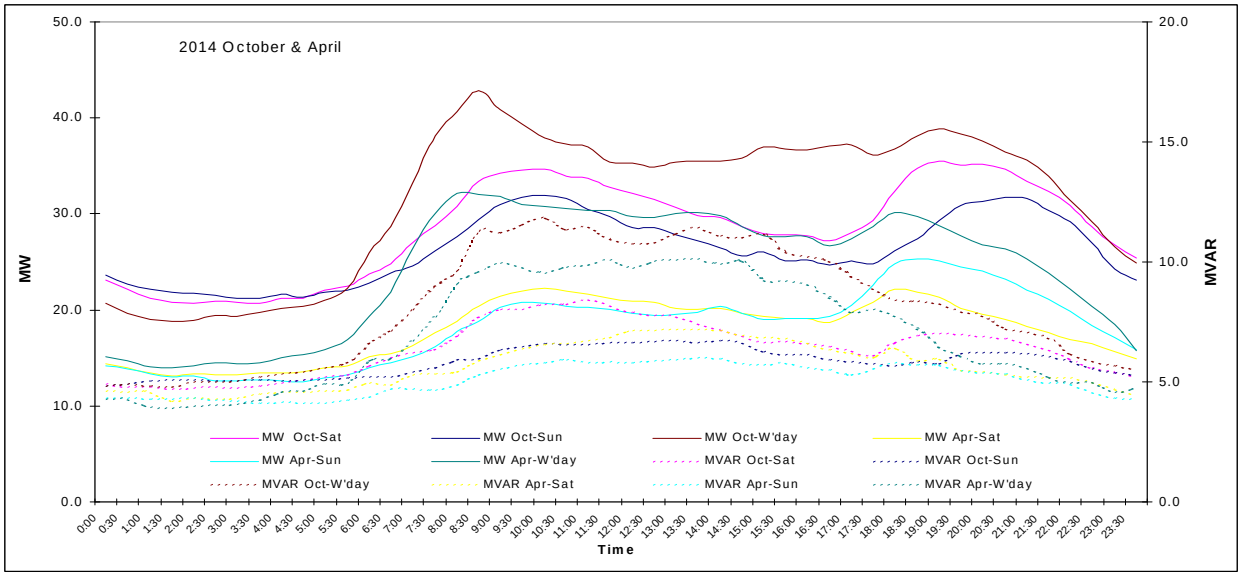
Figure 4-127 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

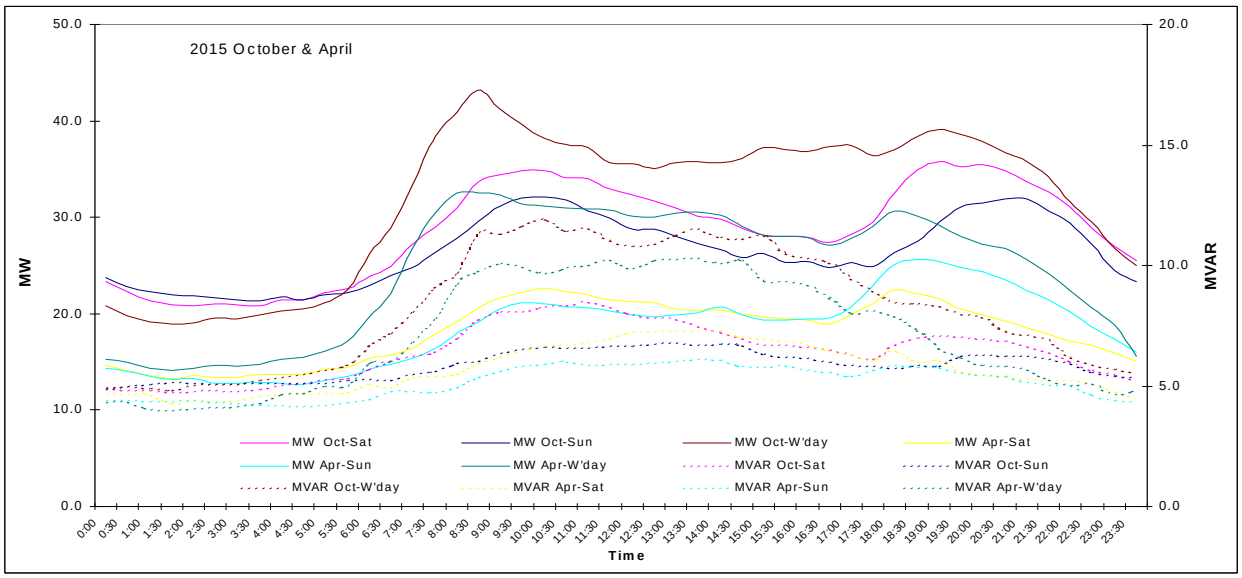
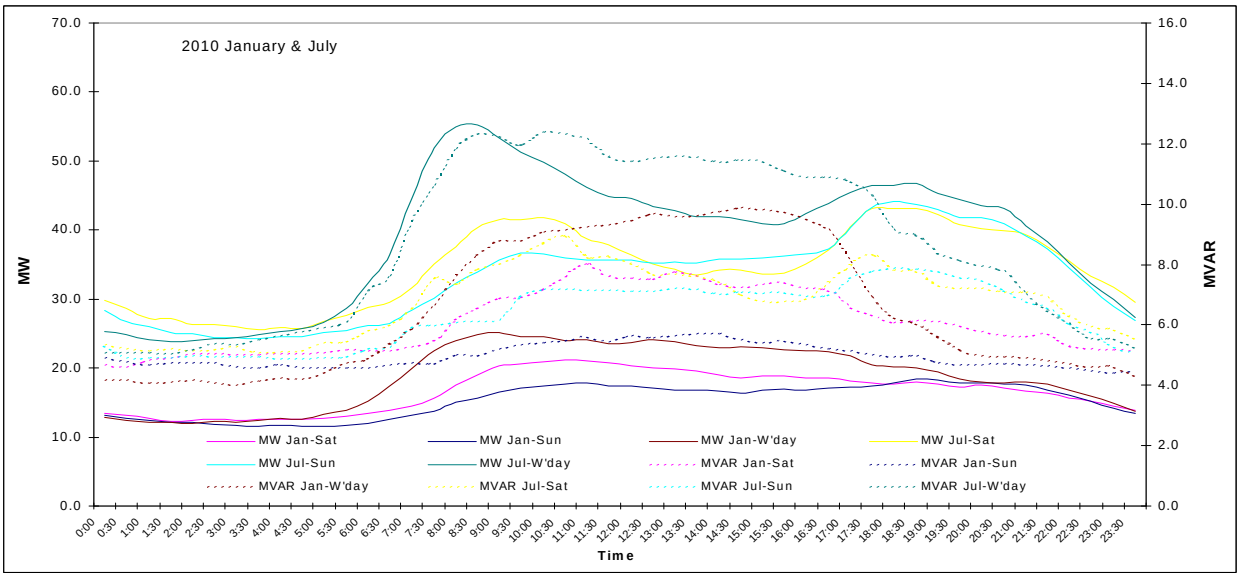
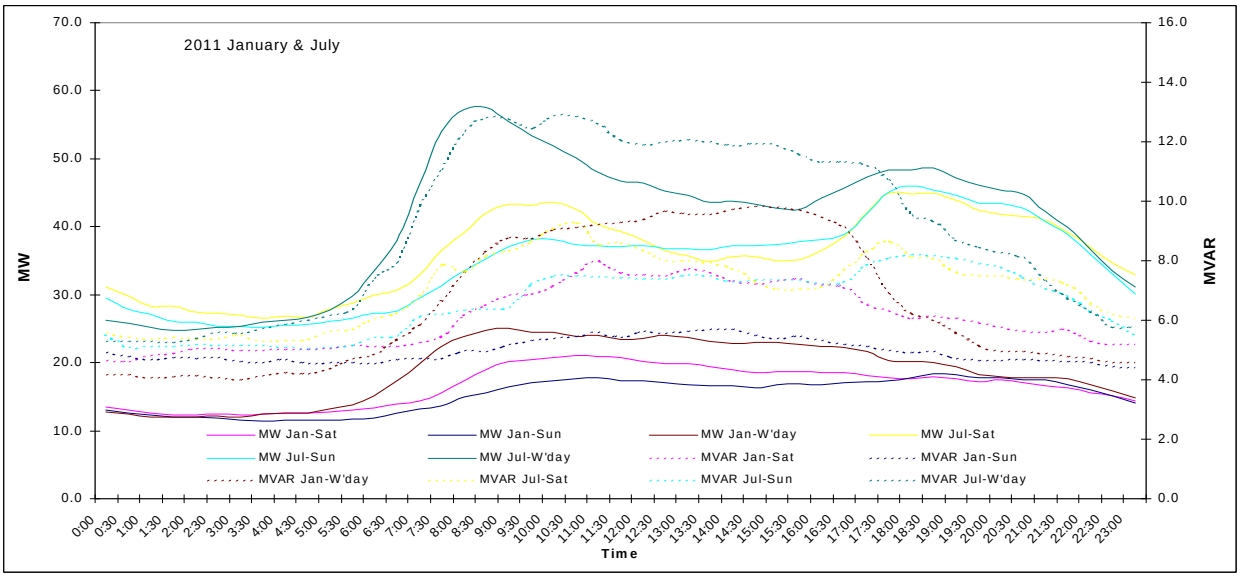
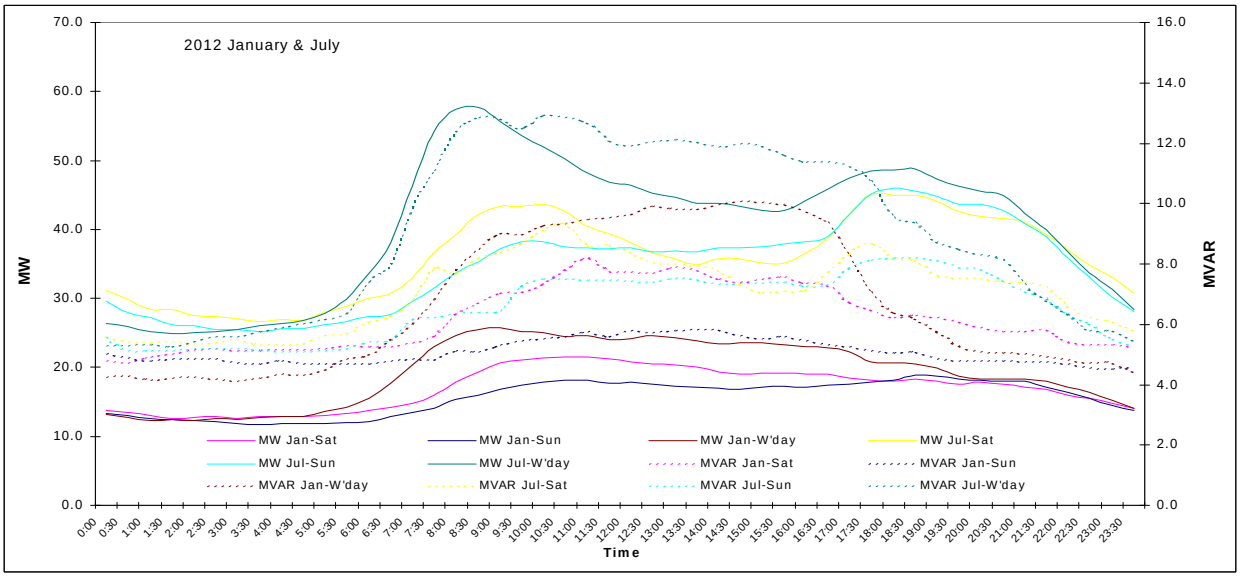
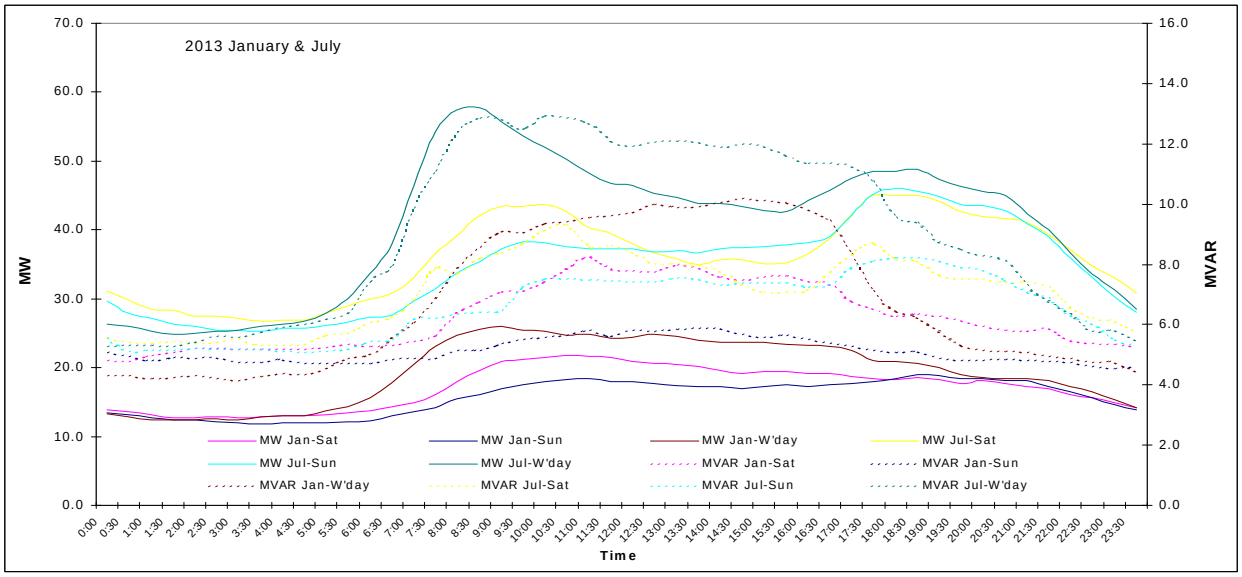

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

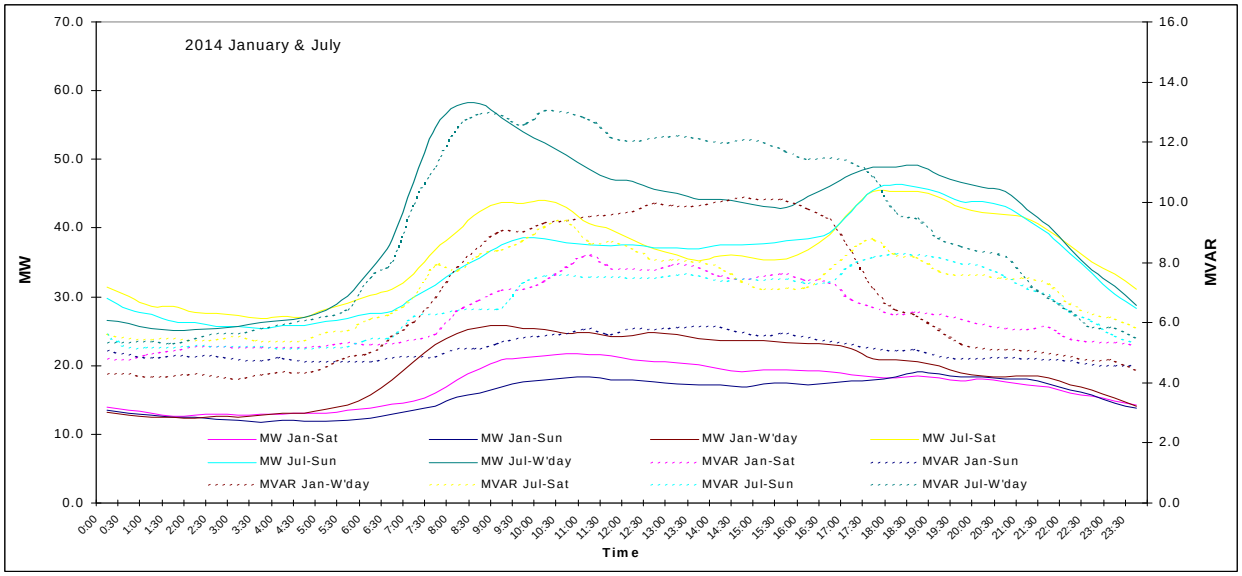
Figure 4-128 Load Profiles: Weekday, Saturday, Sunday for January & July

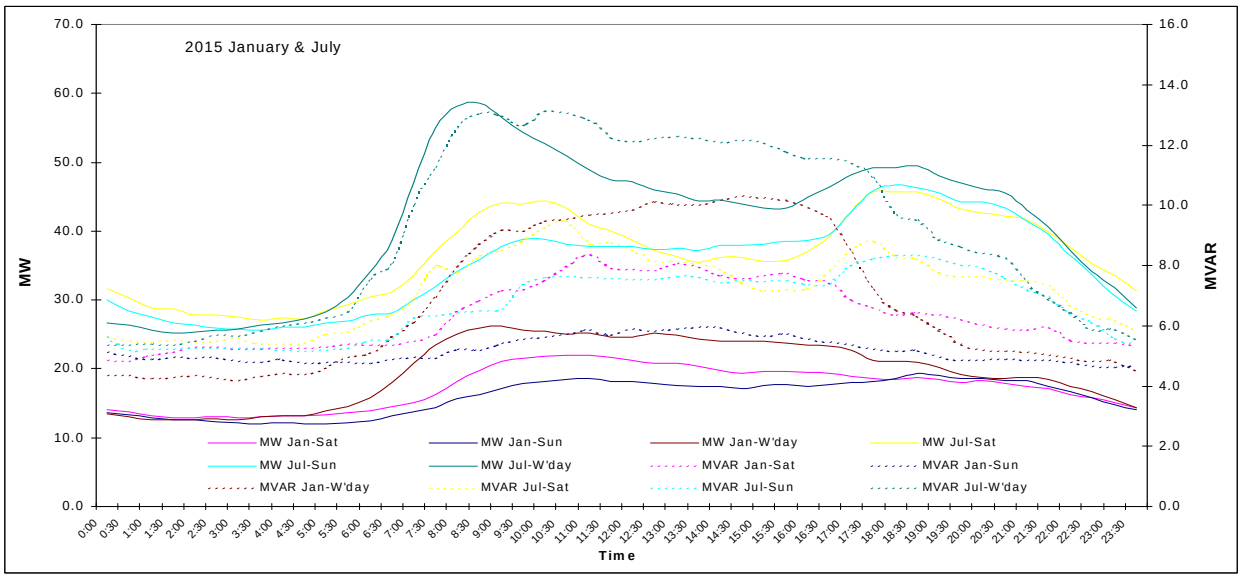







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.24 Norwood

Description:

The Substation is located at Norwood and is known as “Norwood Substation”. The substation is owned by Transend.

Table 4-90 Norwood Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	8	100	50

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-91 Norwood Site Winter load forecast

Norwood	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	75.41	77.68	73.61	75.83	75.41	77.68	76.58	78.89
2006	76.42	78.60	72.47	74.54	76.42	78.60	75.33	77.47
2007	67.67	69.02	65.55	66.86	67.67	69.02	68.32	69.69
2008	68.79	70.03	64.50	65.66	68.79	70.03	67.80	69.02
2009	71.14	72.38	70.28	71.50	71.14	72.38	72.99	74.26
2010	67.64	68.11	64.66	65.11	67.64	68.11	66.28	66.74
2011	70.84	71.33	67.72	68.19	72.11	72.61	68.93	69.41
2012	71.35	71.84	68.21	68.68	72.61	73.12	69.42	69.90
2013	71.69	72.19	68.54	69.01	73.01	73.51	69.79	70.28
2014	72.53	73.03	69.34	69.82	73.81	74.33	70.56	71.05
2015	73.33	73.84	70.10	70.59	74.67	75.19	71.38	71.88
2016	74.34	74.85	71.06	71.56	75.65	76.18	72.32	72.83
2017	75.34	75.86	72.02	72.52	76.70	77.23	73.32	73.83
2018	76.65	77.18	73.27	73.78	77.98	78.52	74.55	75.07
2019	78.16	78.71	74.72	75.24	79.60	80.15	76.10	76.62
2020	79.89	80.45	76.38	76.91	81.31	81.87	77.73	78.27

Table 4-92 Norwood Site Summer load forecast

Norwood	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	39.07	41.27	39.07	41.27	39.07	41.27	39.25	41.46
2006	42.00	44.05	37.90	39.75	42.00	44.05	38.27	40.14
2007	32.72	33.89	30.90	32.01	32.72	33.89	30.98	32.09
2008	34.90	35.79	34.90	35.79	34.90	35.79	35.58	36.48
2009	38.69	39.52	36.78	37.58	38.69	39.52	37.54	38.35
2010	38.83	38.83	36.08	36.08	38.83	38.83	36.24	36.24
2011	39.18	39.18	36.39	36.39	40.03	40.03	37.19	37.19
2012	40.69	40.69	37.80	37.80	41.59	41.59	38.64	38.64
2013	41.50	41.50	38.55	38.55	42.44	42.44	39.42	39.42
2014	41.86	41.86	38.88	38.88	42.74	42.74	39.71	39.71
2015	42.89	42.89	39.84	39.84	43.81	43.81	40.69	40.69
2016	43.10	43.10	40.04	40.04	44.08	44.08	40.94	40.94
2017	44.95	44.95	41.76	41.76	45.92	45.92	42.65	42.65
2018	46.15	46.15	42.87	42.87	47.16	47.16	43.81	43.81
2019	47.39	47.39	44.02	44.02	48.40	48.40	44.96	44.96
2020	48.73	48.73	45.26	45.26	49.75	49.75	46.22	46.22

Figure 4-129 Norwood Site Summer Load Forecast at 50% and 10% POE

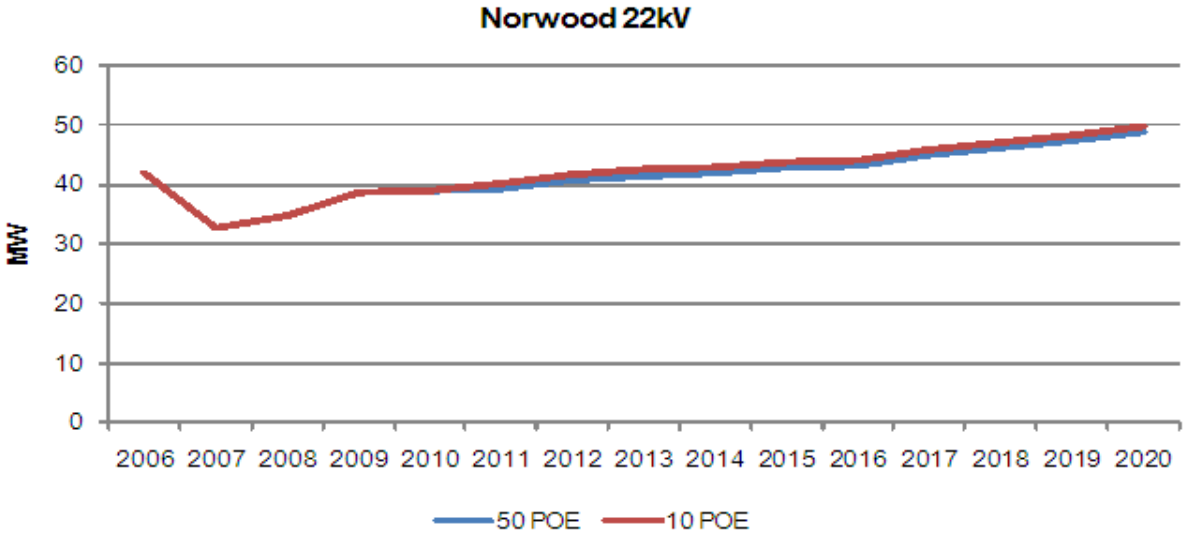
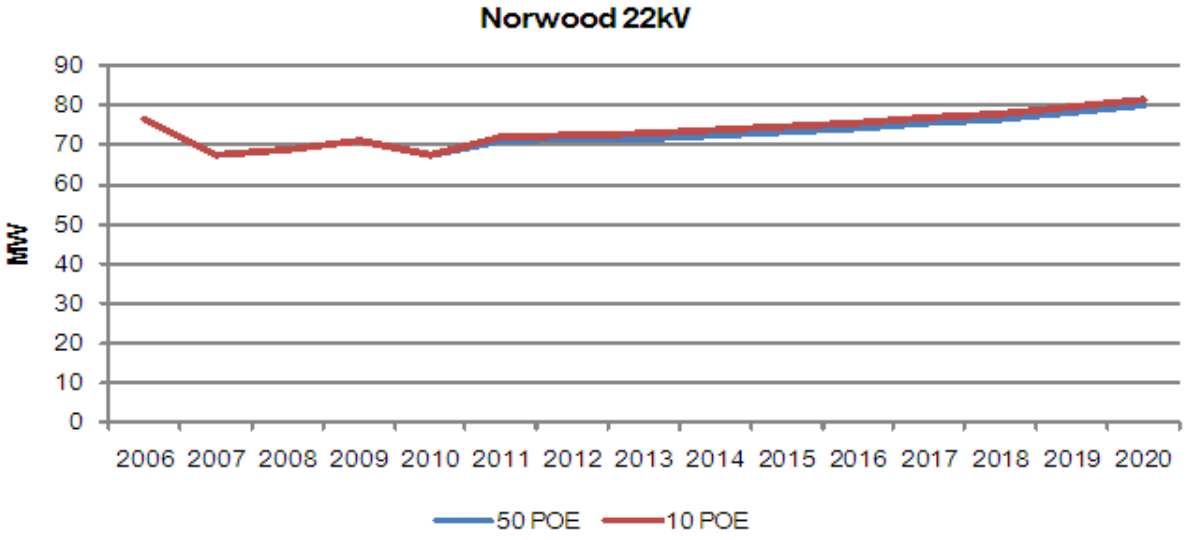
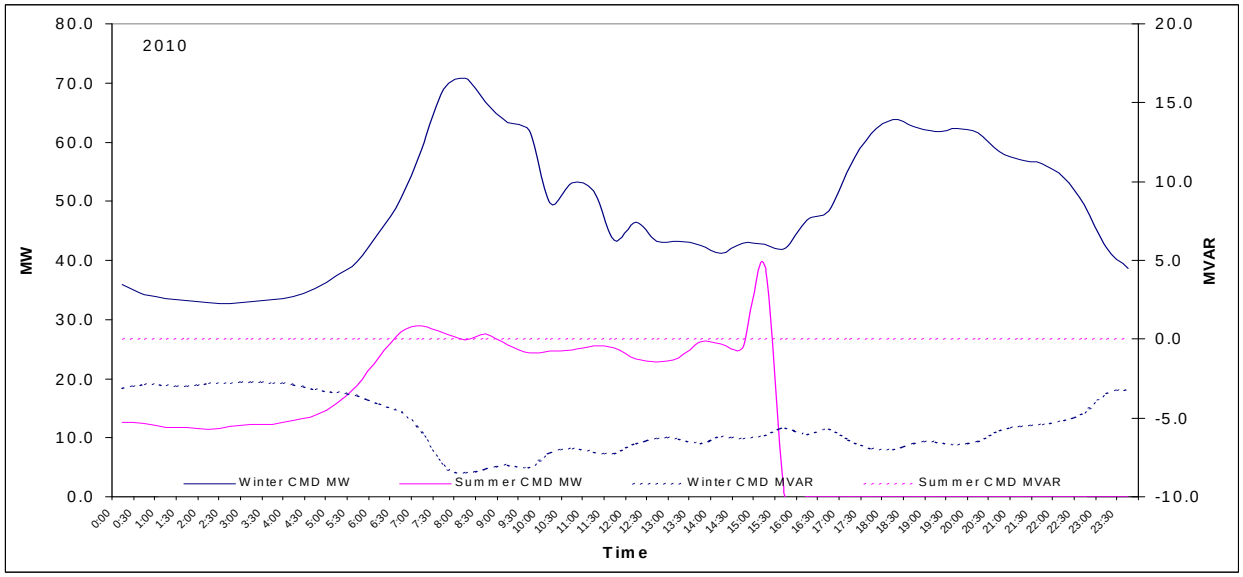


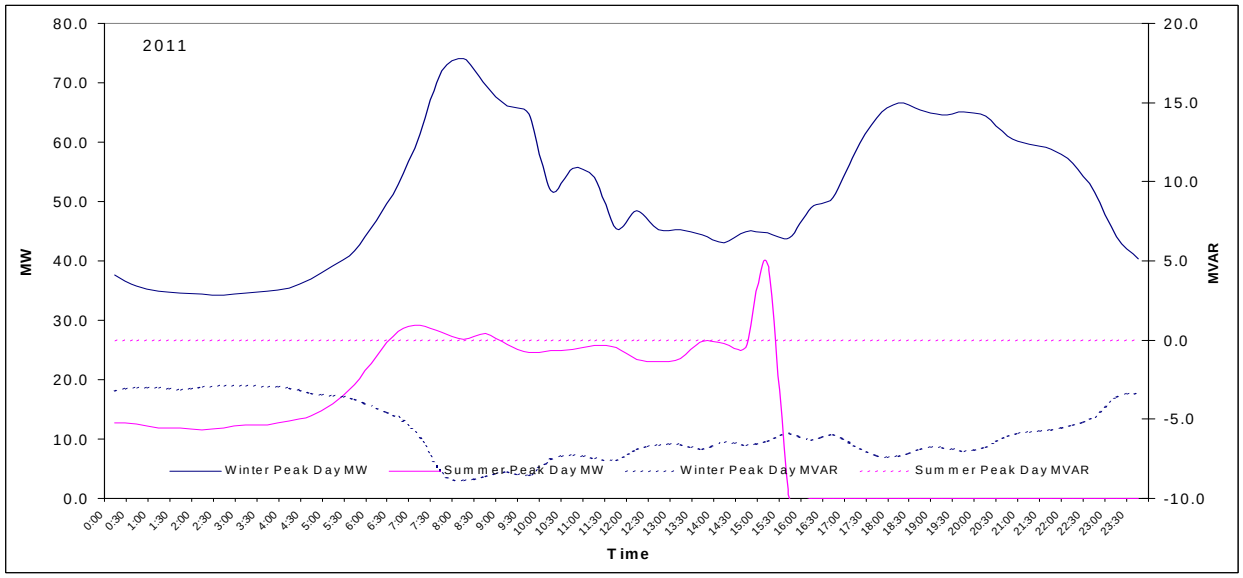
Figure 4-130 Norwood Site Winter Load Forecast at 50% and 10% POE

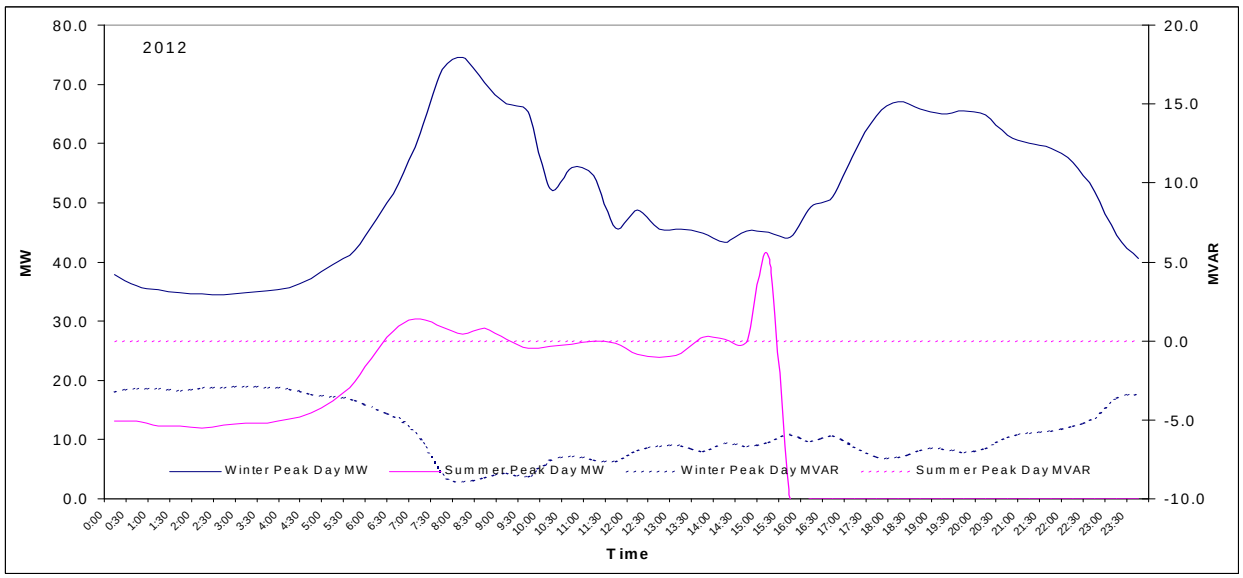


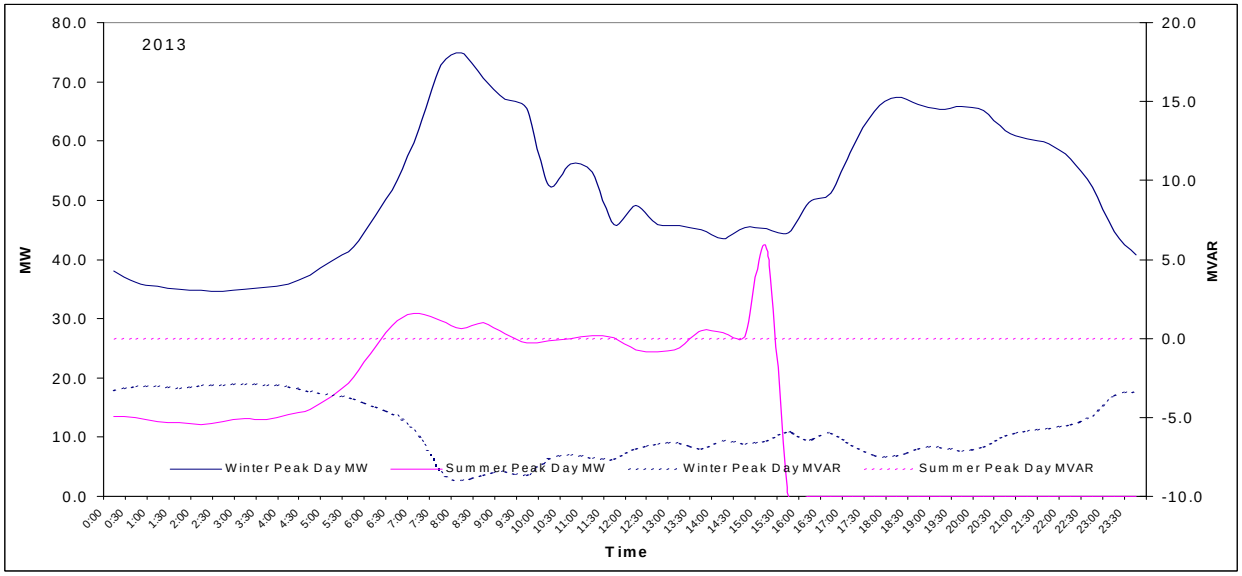
Load Profiles:

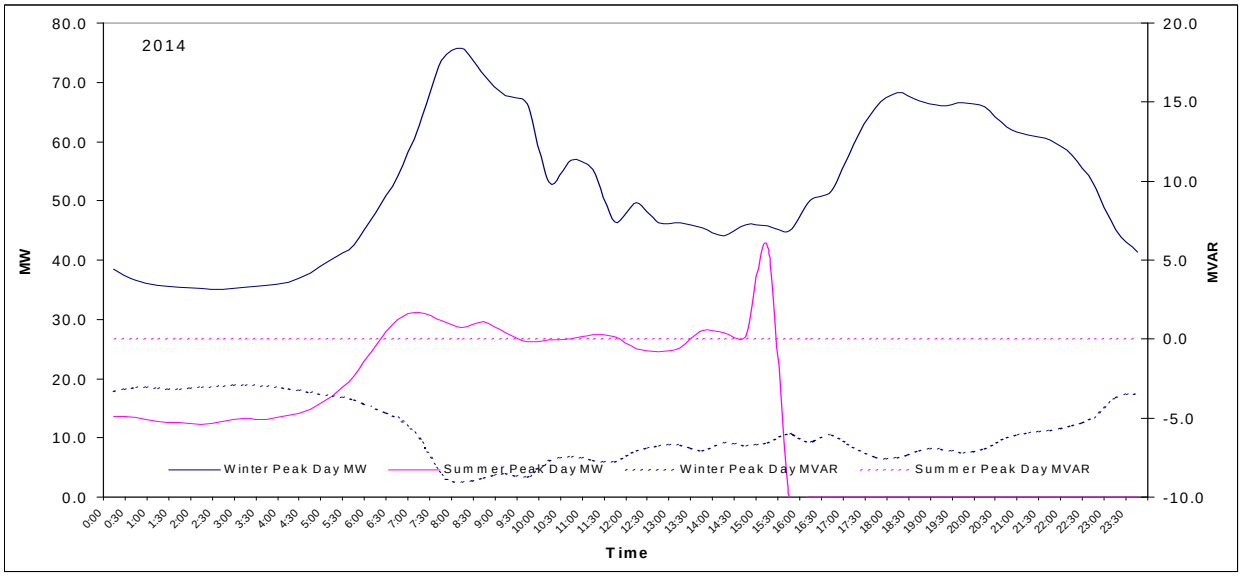
Figure 4-131 Load Profiles: Norwood Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

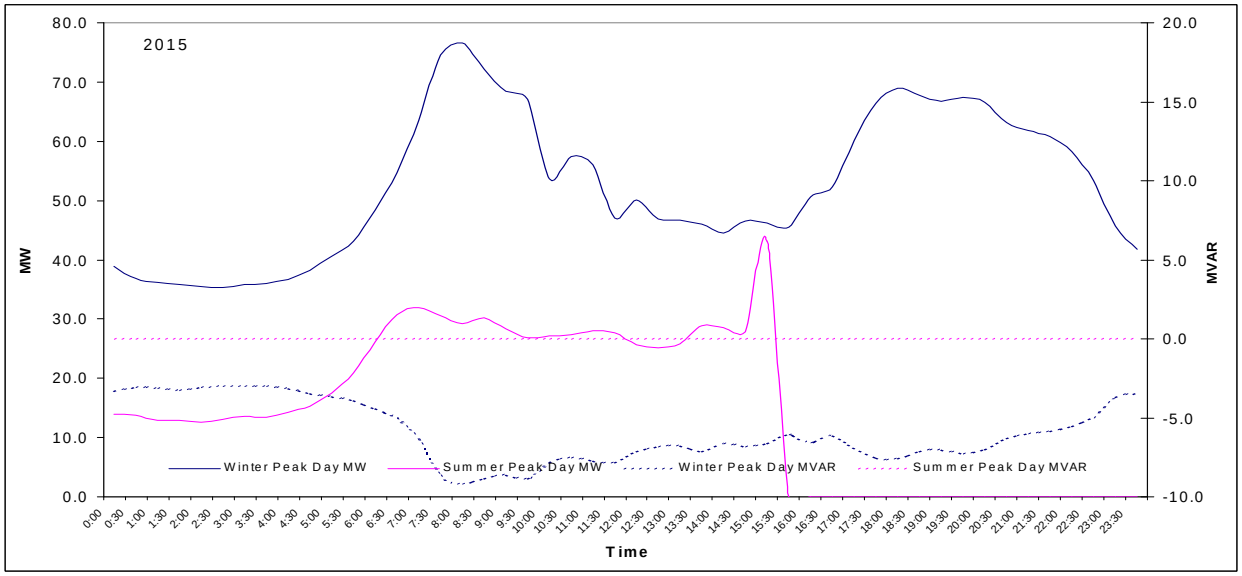
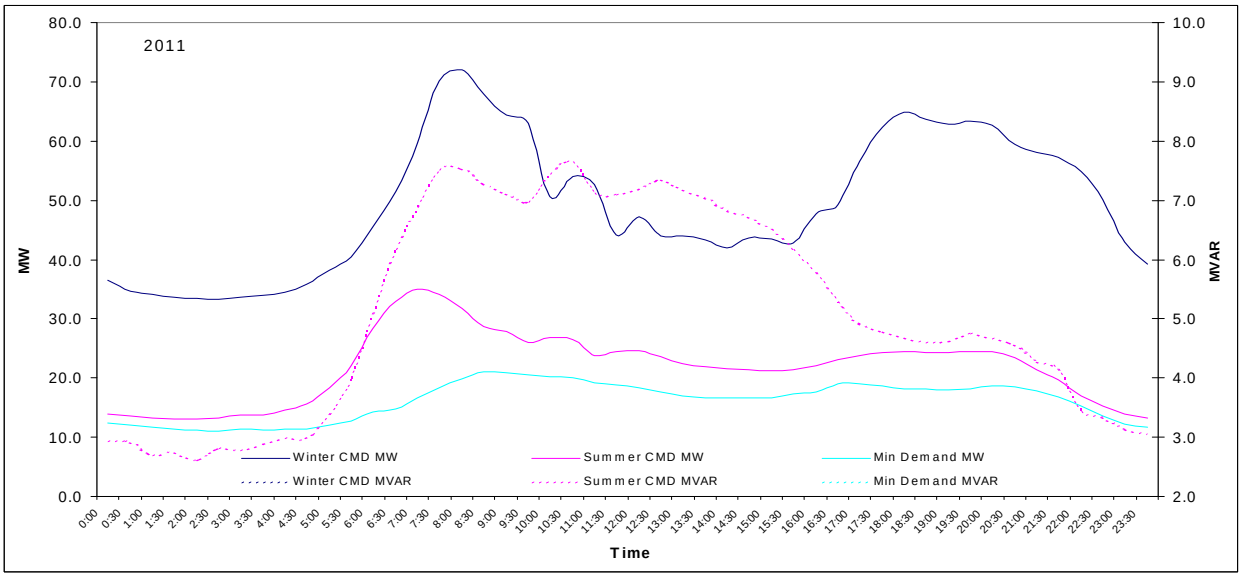
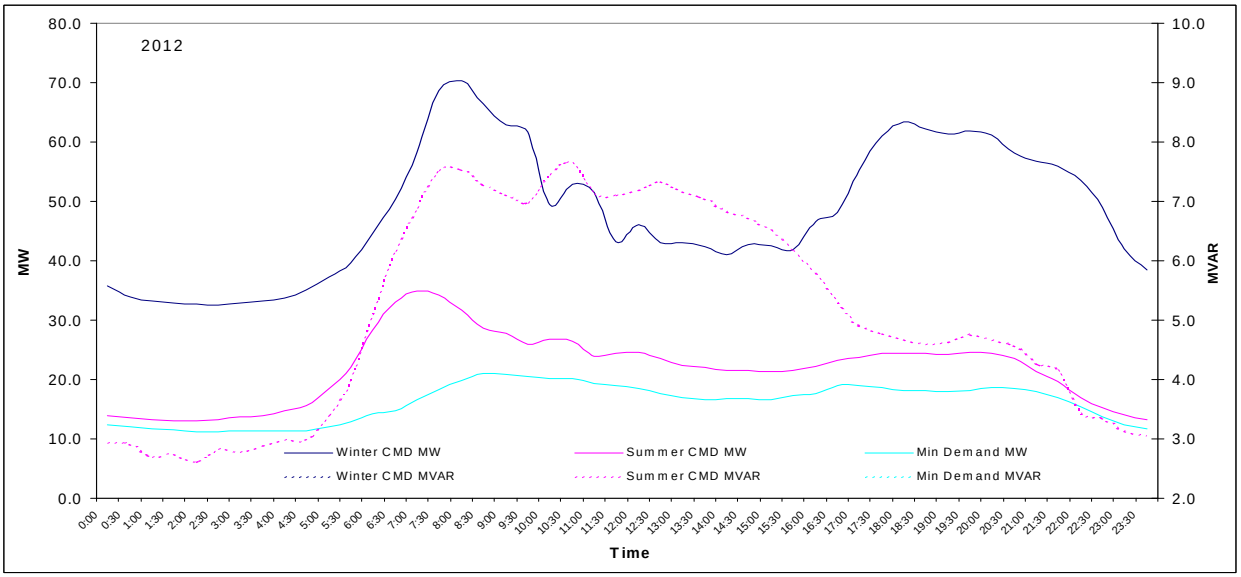
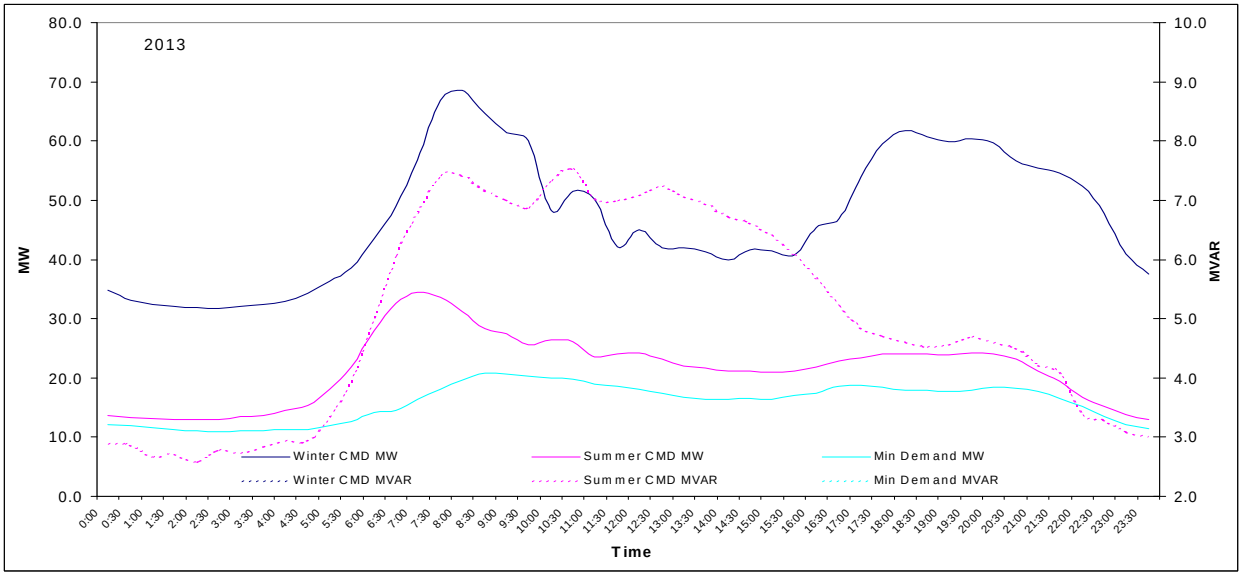
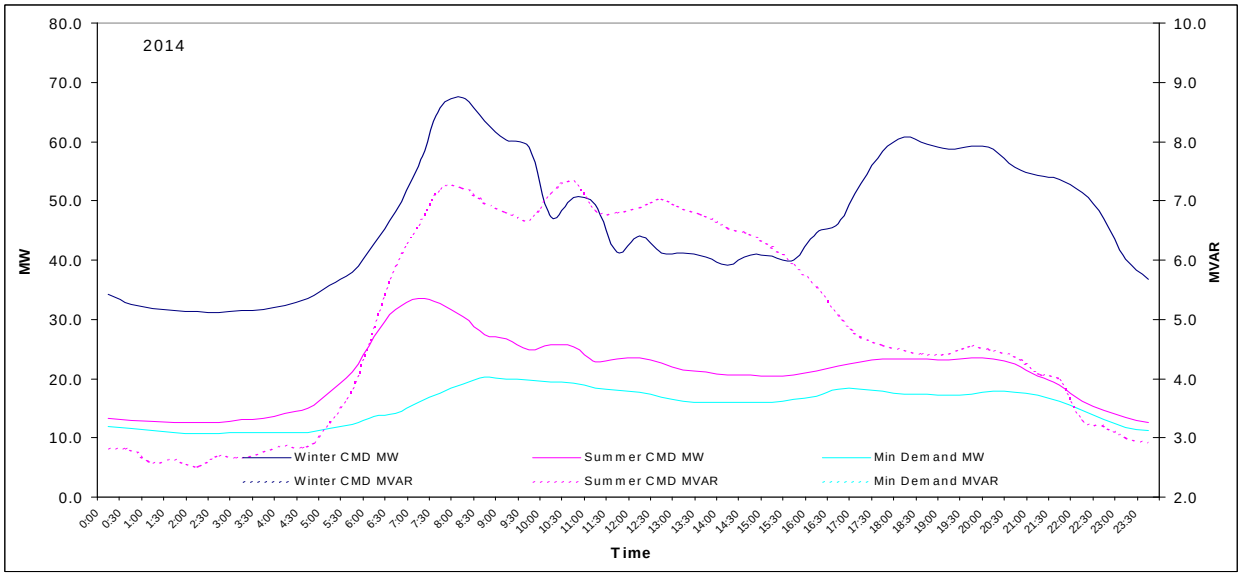

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

Figure 4-132 Load Profiles: Norwood Substation Day of Summer/Winter CMD, Peak & Min Demand



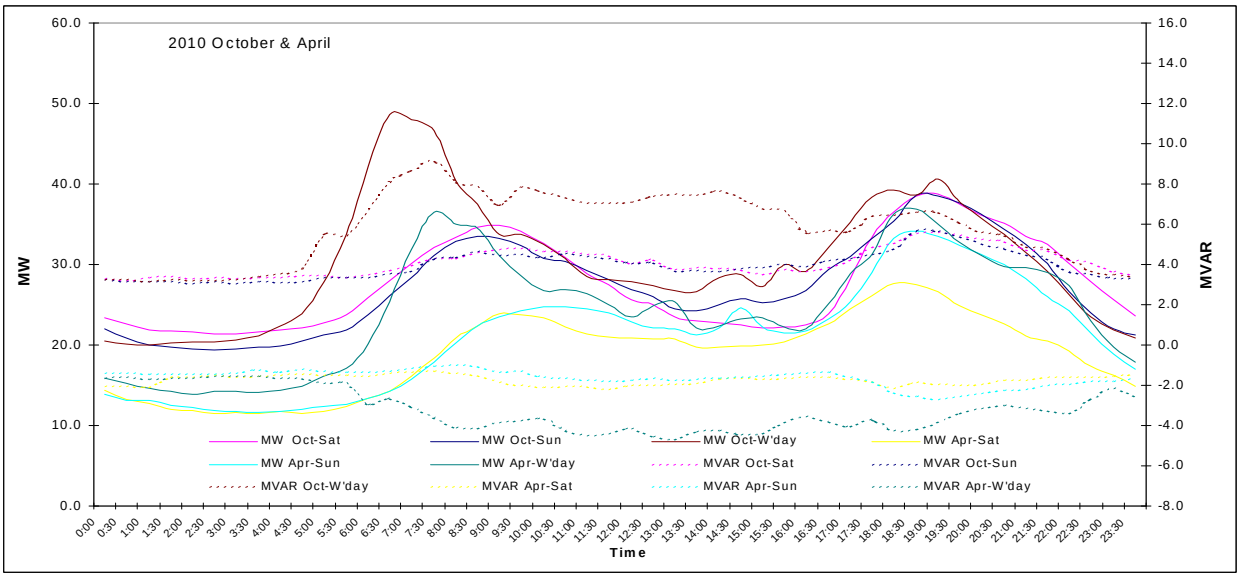


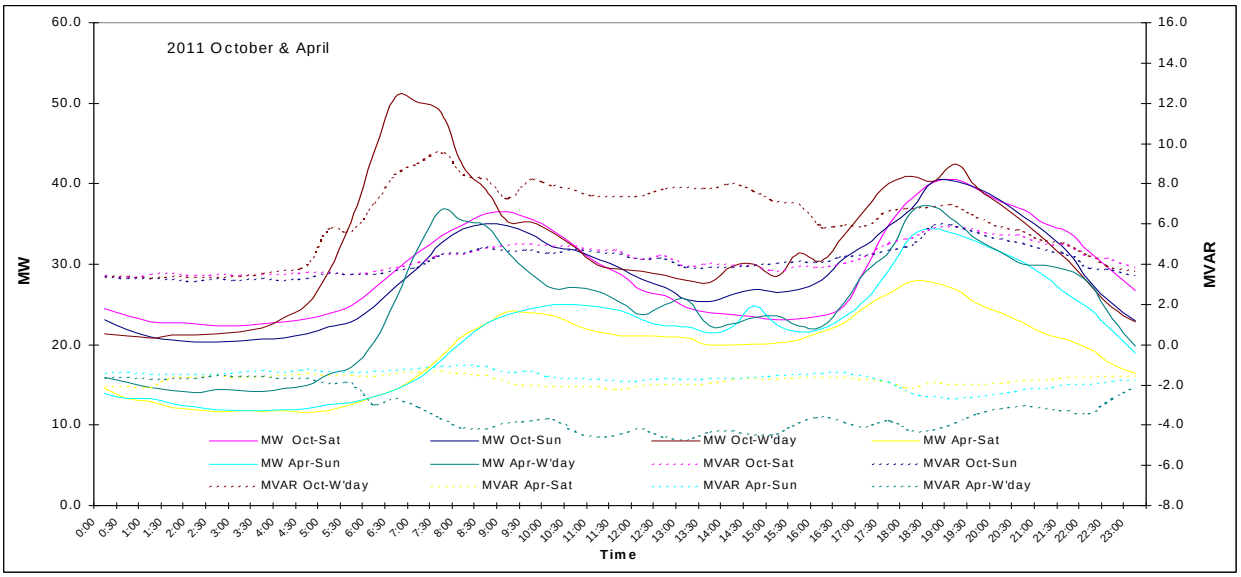

2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

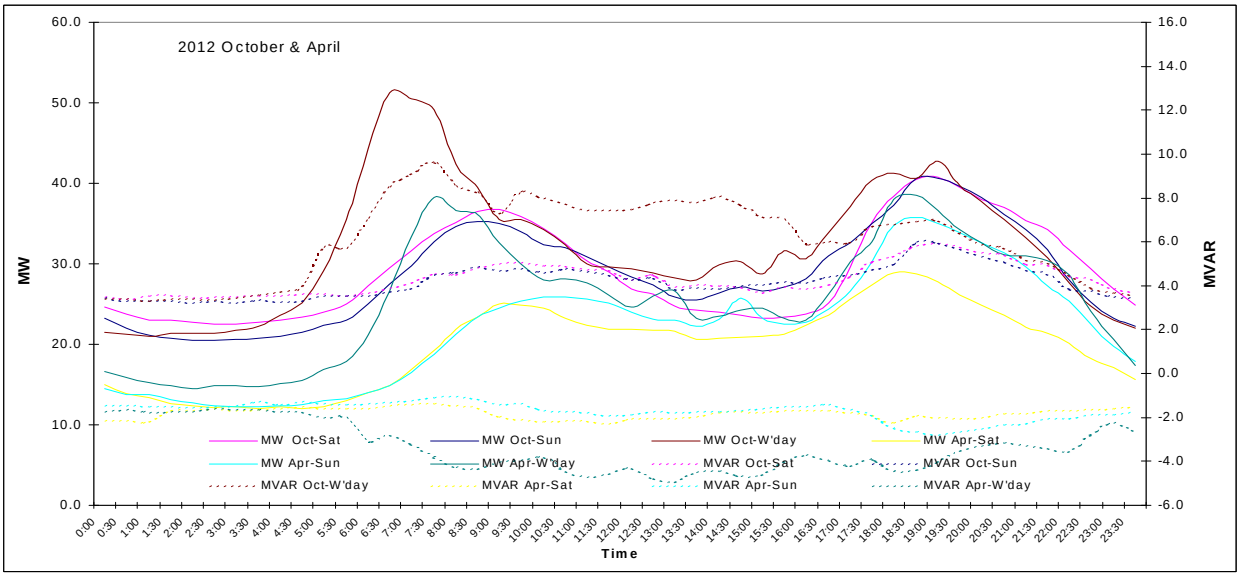

2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

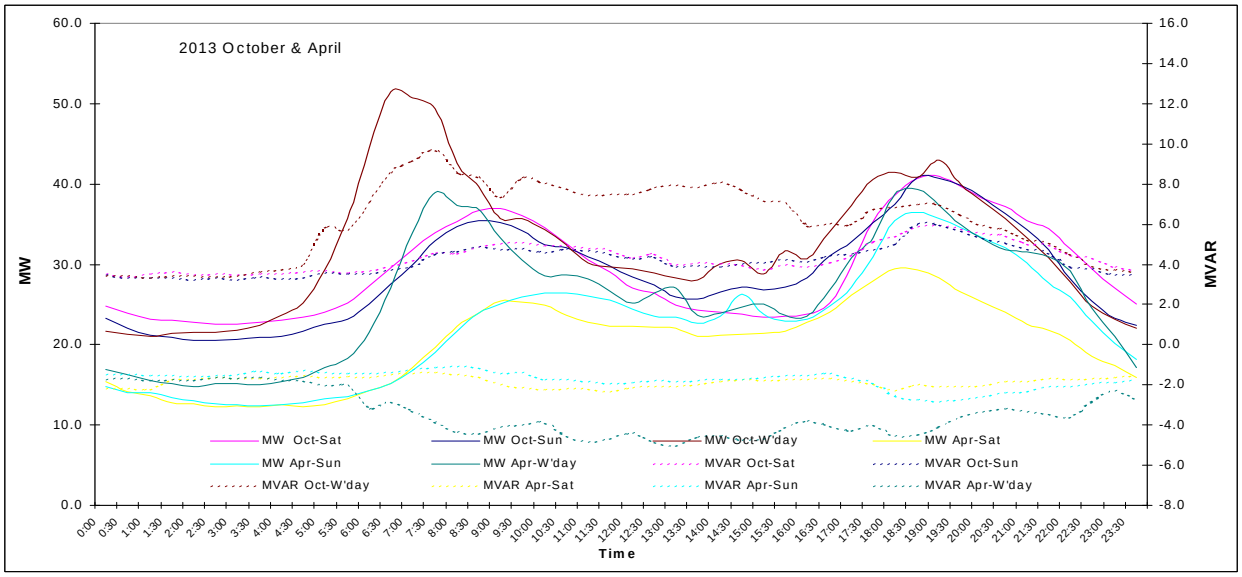

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

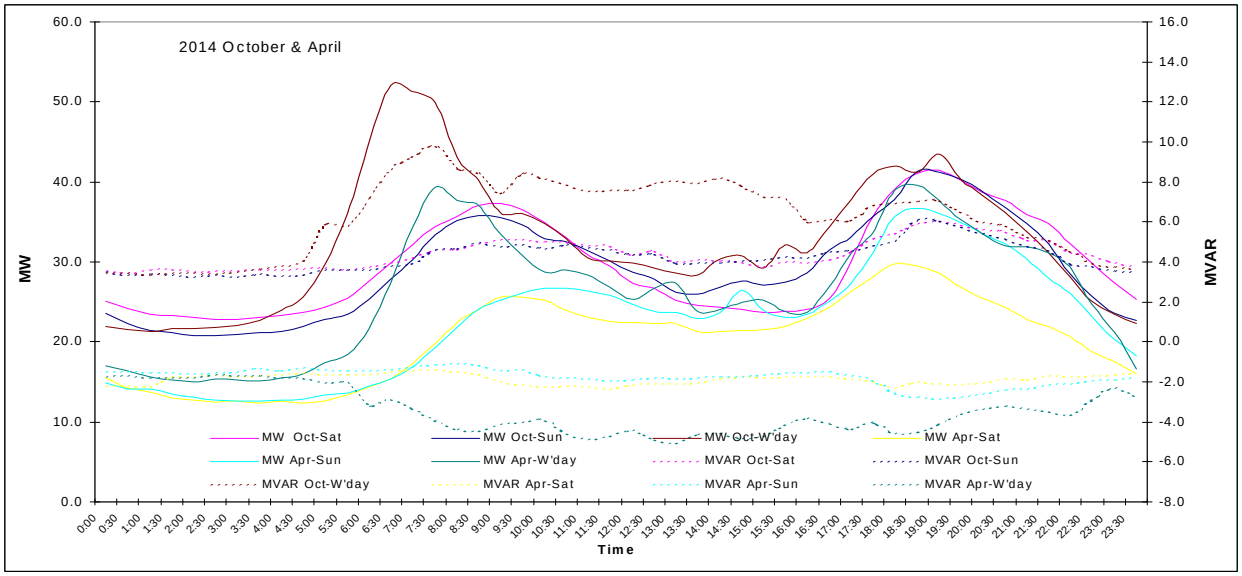
Figure 4-133 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

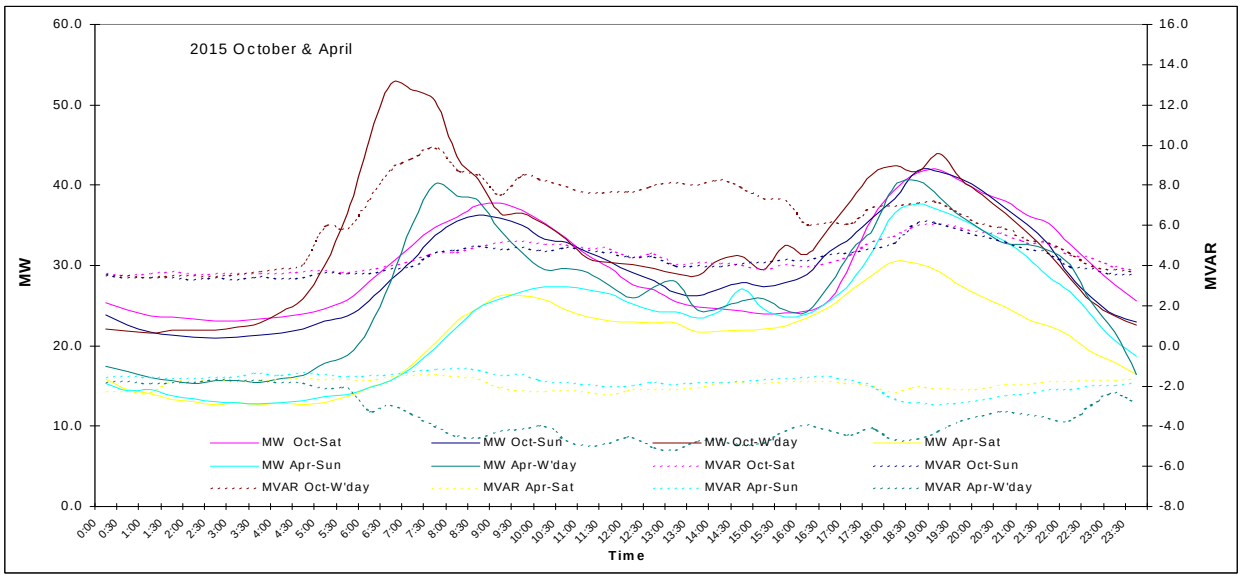
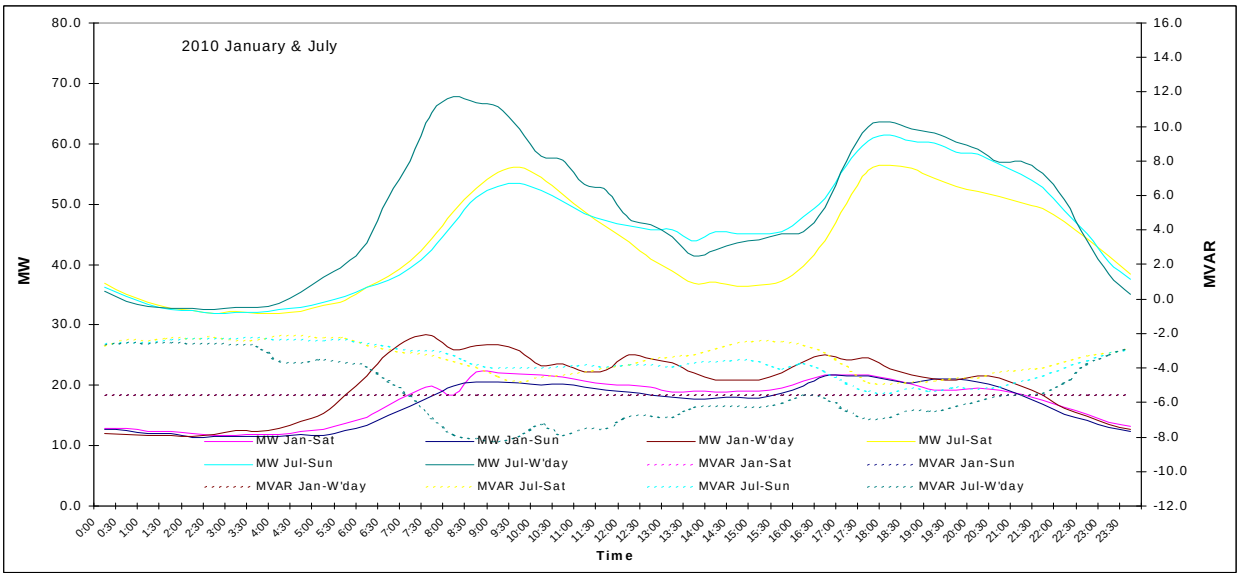
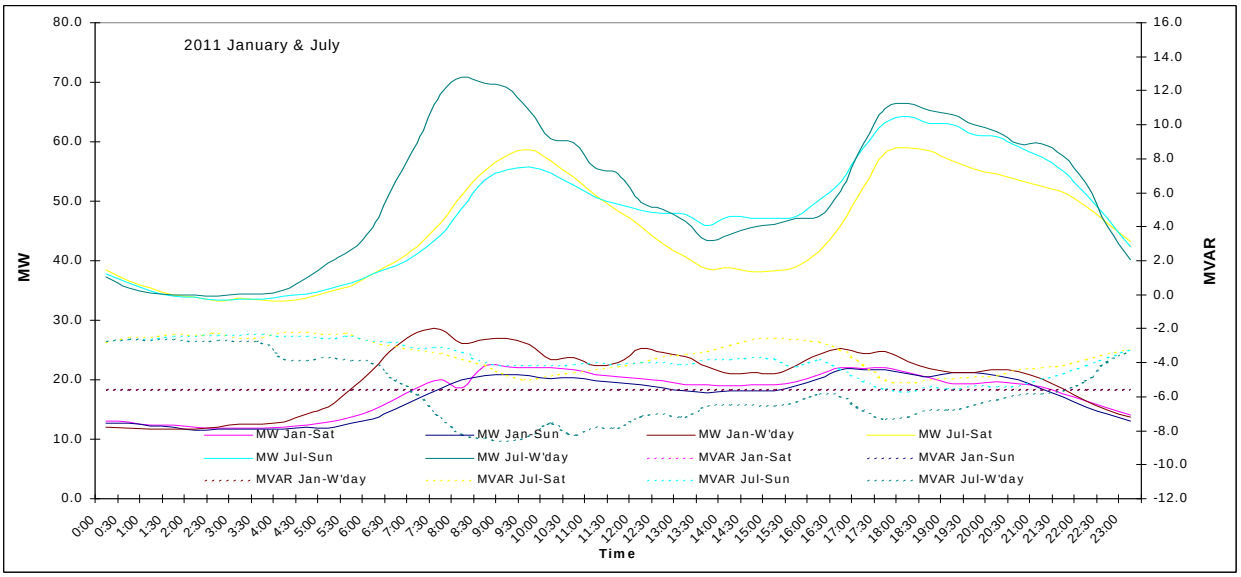
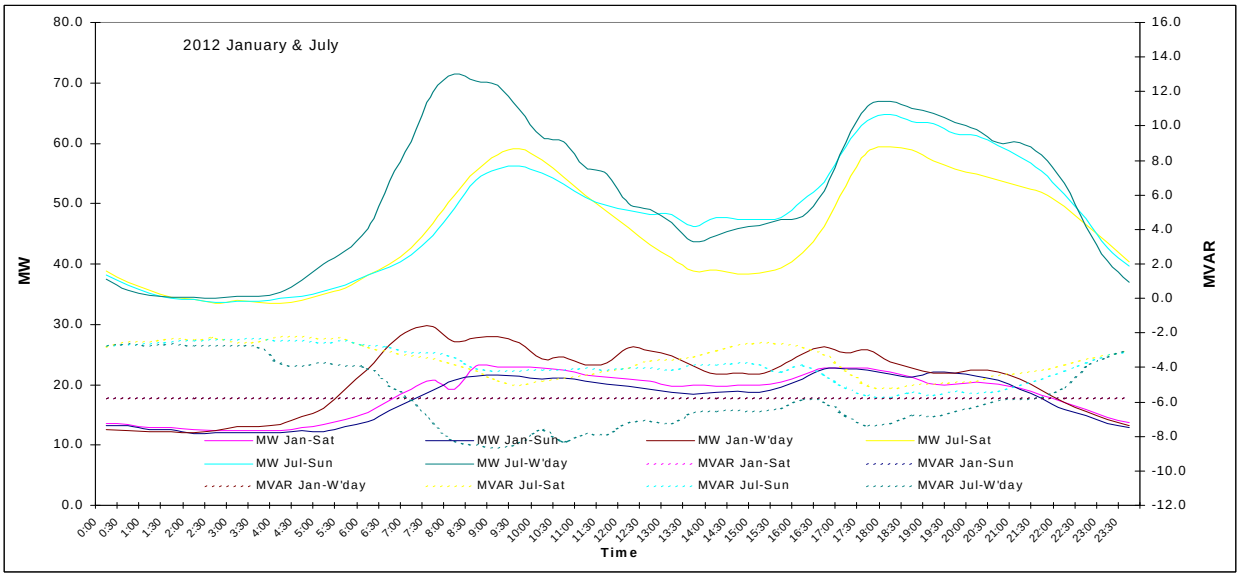
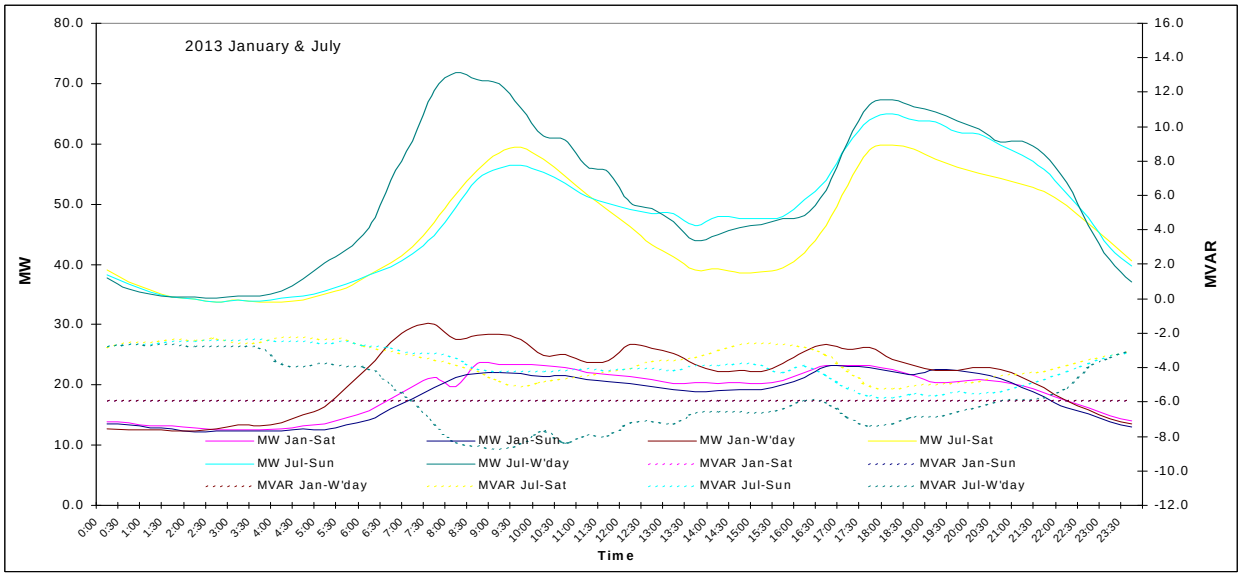

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

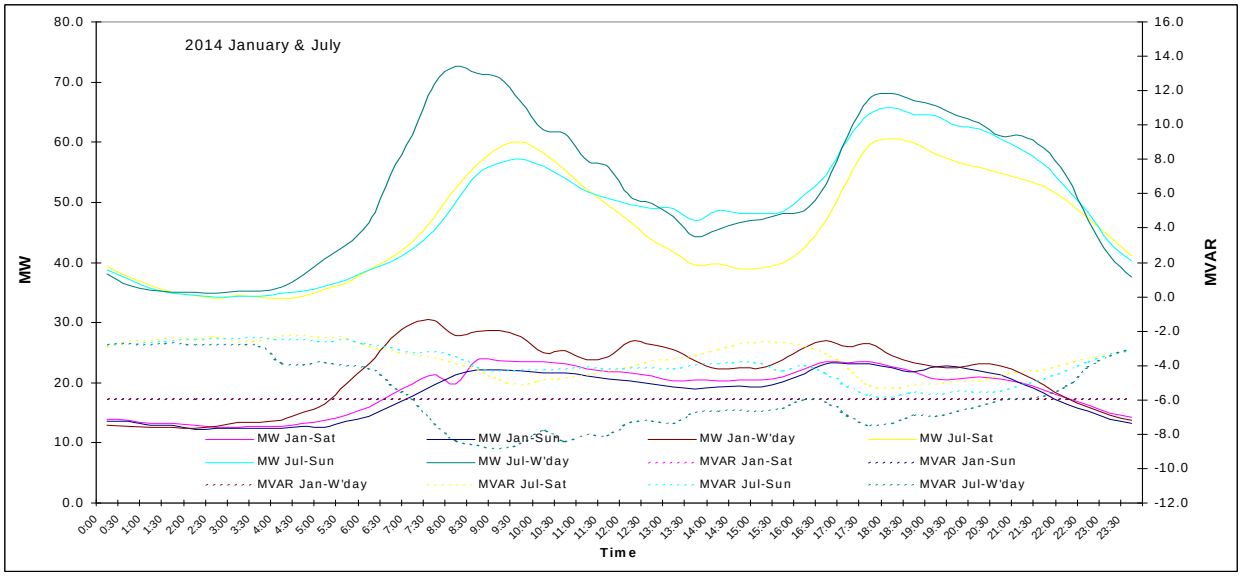
Figure 4-134 Load Profiles: Weekday, Saturday, Sunday for January & July

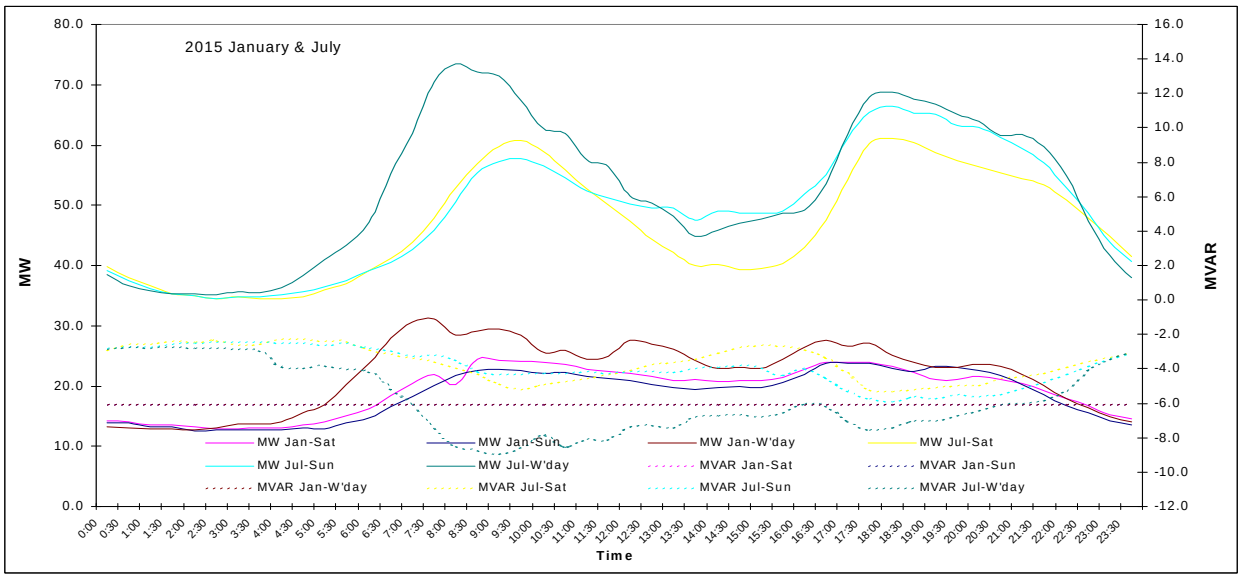







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.25 Palmerston

Description:

The Substation is located Near Poatina and is known as “Palmerston Substation”. The substation is owned by Transend.

Table 4-93 Palmerston Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	3	50	25

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-94 Palmerston Site Winter load demand forecast

Palmerston	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	11.16	11.70	10.80	11.33	11.16	11.70	10.80	11.33
2008	8.89	9.79	7.03	7.74	8.89	9.79	7.12	7.83
2009	7.43	7.68	7.43	7.68	7.43	7.68	7.50	7.76
2010	6.09	6.12	5.65	5.68	6.09	6.12	5.68	5.71
2011	6.29	6.33	5.84	5.87	6.29	6.32	5.83	5.87
2012	6.26	6.29	5.81	5.84	6.25	6.29	5.80	5.83
2013	6.21	6.25	5.76	5.80	6.21	6.25	5.76	5.80
2014	6.21	6.24	5.76	5.79	6.20	6.24	5.76	5.79
2015	6.20	6.23	5.75	5.78	6.20	6.24	5.76	5.79
2016	6.21	6.24	5.76	5.79	6.21	6.25	5.76	5.80
2017	6.22	6.25	5.77	5.80	6.22	6.26	5.78	5.81
2018	6.25	6.29	5.80	5.83	6.26	6.29	5.81	5.84
2019	6.30	6.34	5.85	5.88	6.31	6.35	5.86	5.89
2020	6.37	6.41	5.91	5.94	6.38	6.41	5.92	5.95

Table 4-95 Palmerston Site Summer load forecast

Palmerston	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	10.92	11.94	10.92	11.94	10.92	11.94	11.00	12.02
2008	12.33	13.43	7.86	8.55	12.33	13.43	7.86	8.55
2009	9.97	11.00	8.45	9.32	9.97	11.00	8.45	9.32
2010	13.20	14.66	5.47	6.08	13.20	14.66	5.47	6.08
2011	14.56	16.17	6.04	6.70	14.82	16.45	6.14	6.82
2012	16.35	18.15	6.78	7.53	16.64	18.47	6.90	7.66
2013	17.85	19.82	7.40	8.22	18.18	20.18	7.54	8.37
2014	19.14	21.25	7.93	8.81	19.46	21.61	8.07	8.96
2015	20.71	22.99	8.59	9.53	21.07	23.39	8.74	9.70
2016	21.86	24.27	9.06	10.06	22.27	24.72	9.23	10.25
2017	23.84	26.47	9.89	10.97	24.26	26.93	10.06	11.17
2018	25.50	28.31	10.57	11.74	25.96	28.82	10.76	11.95
2019	27.18	30.18	11.27	12.51	27.66	30.71	11.47	12.73
2020	28.93	32.12	12.00	13.32	29.44	32.68	12.21	13.55

Figure 4-135 Palmerston Site Summer Load Demand Forecast at 50% and 10% POE

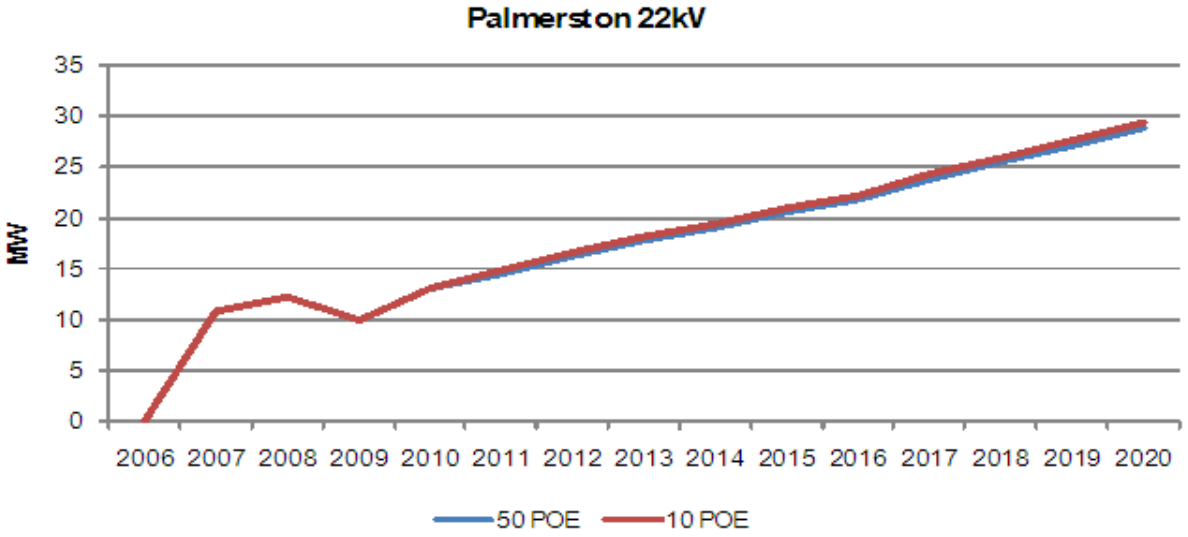
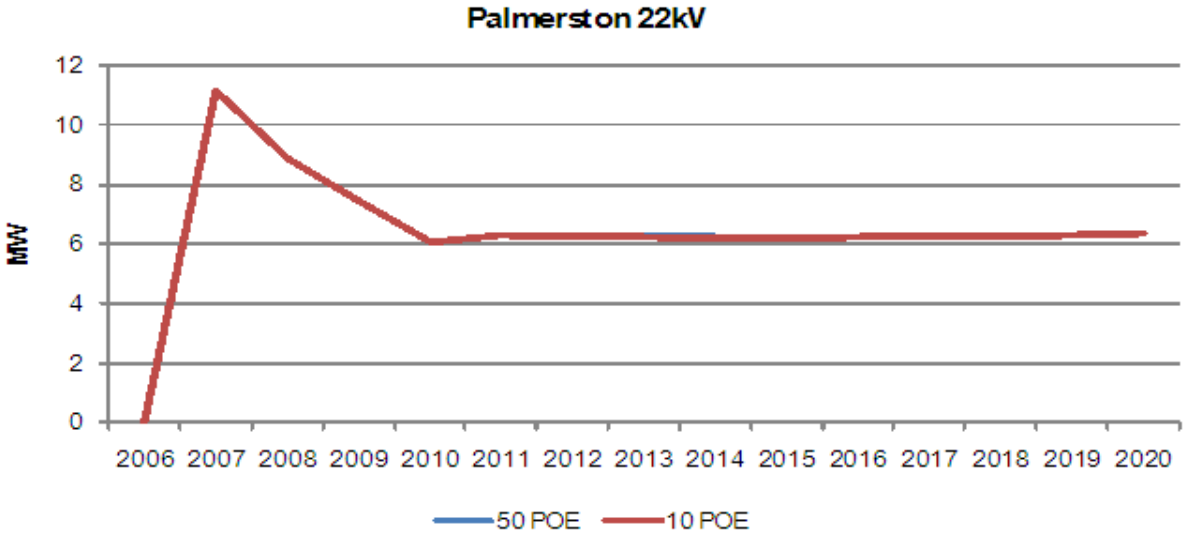
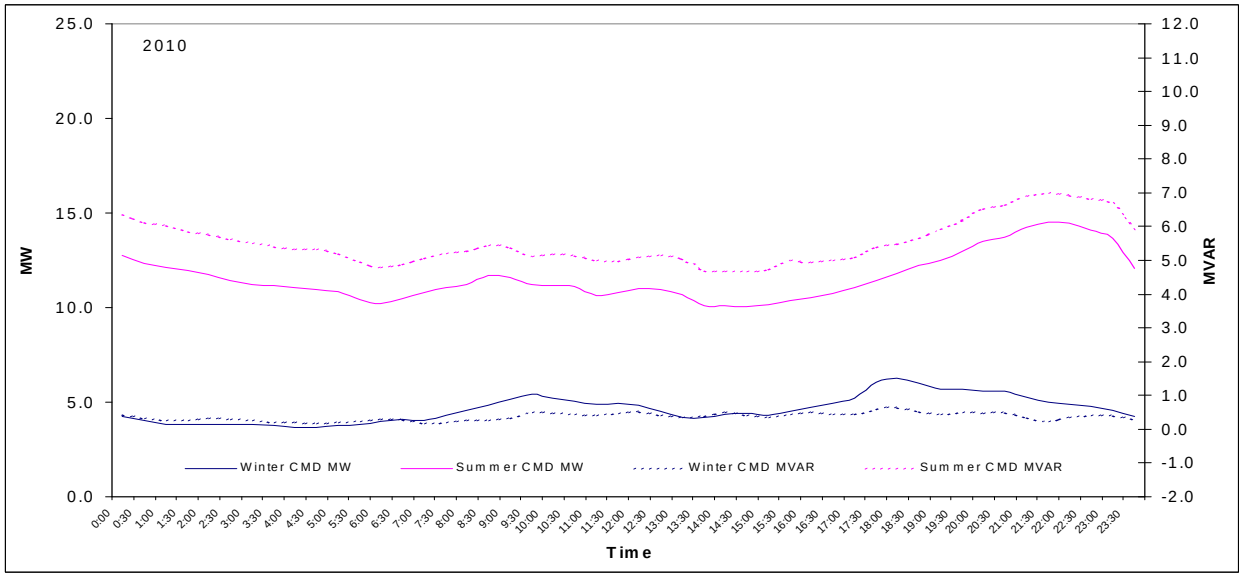


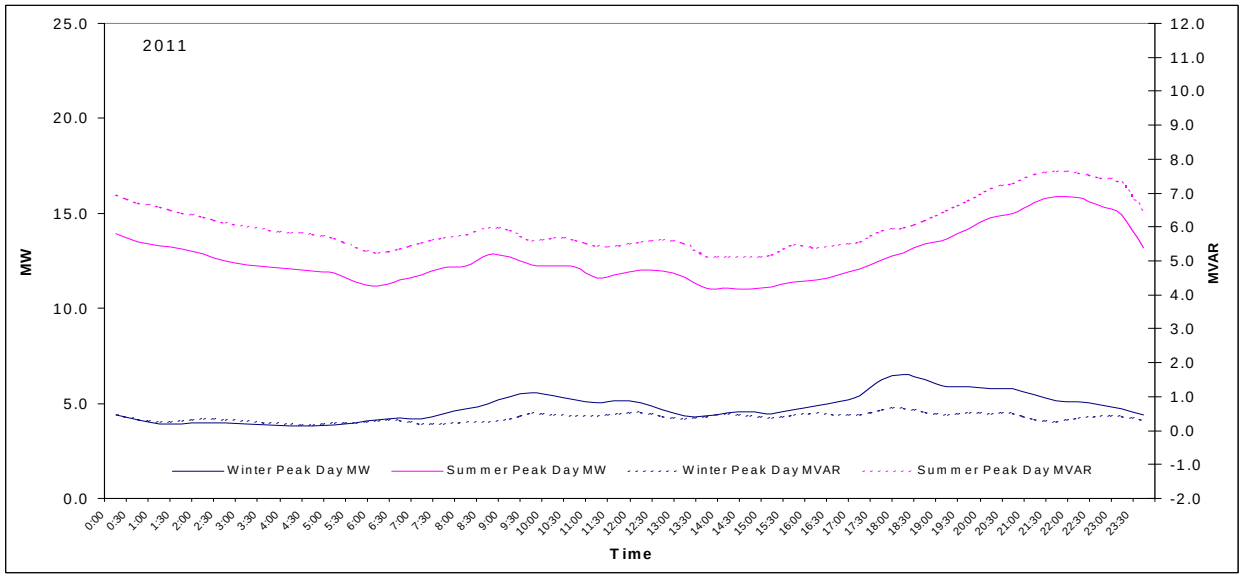
Figure 4-136 Palmerston Site Winter Load Forecast at 50% and 10% POE

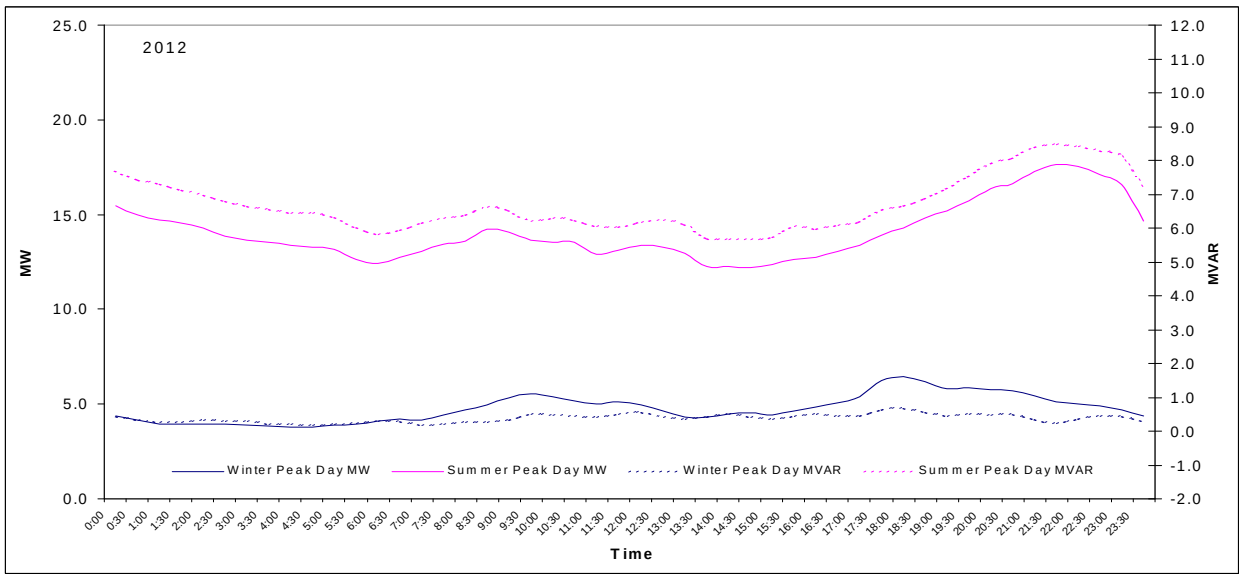


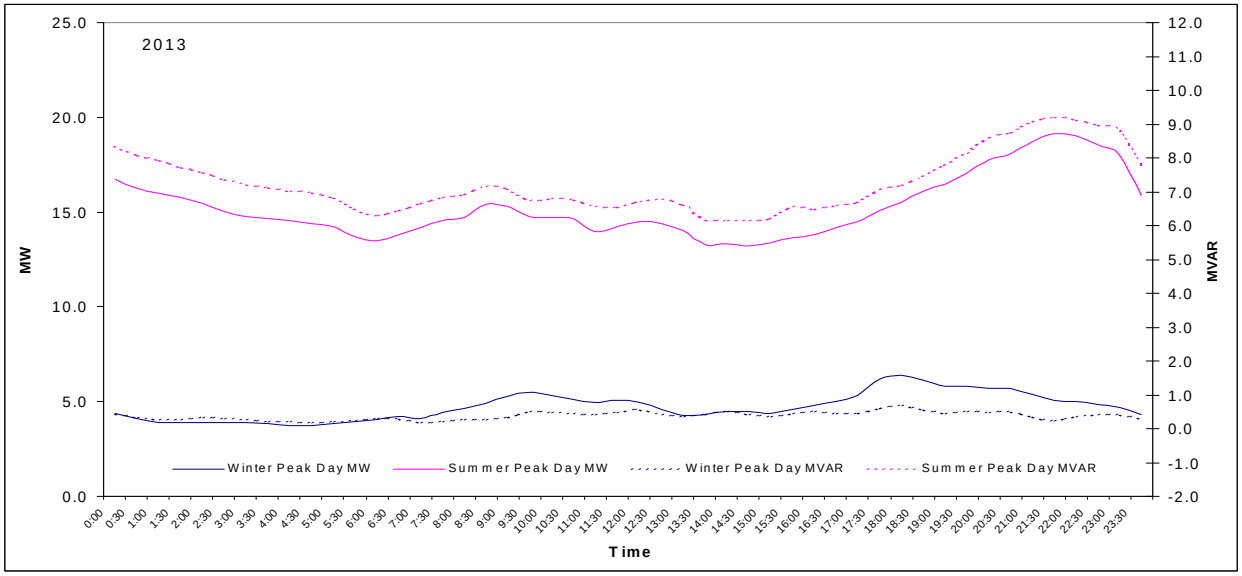
Load Profiles:

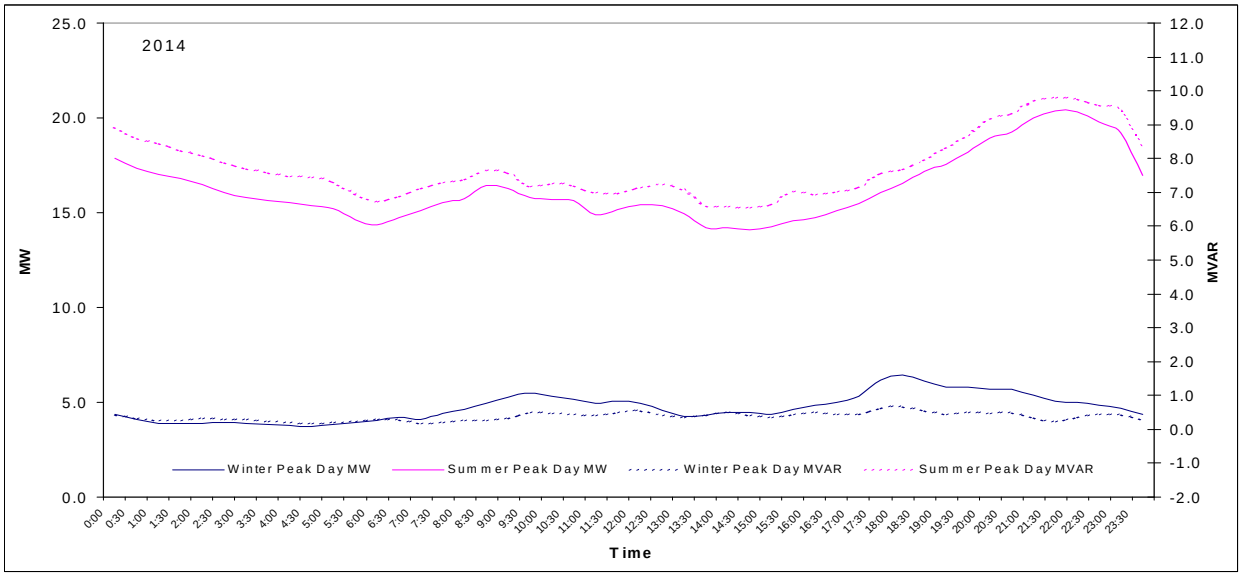
Figure 4-137 Load Profiles: Palmerston Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

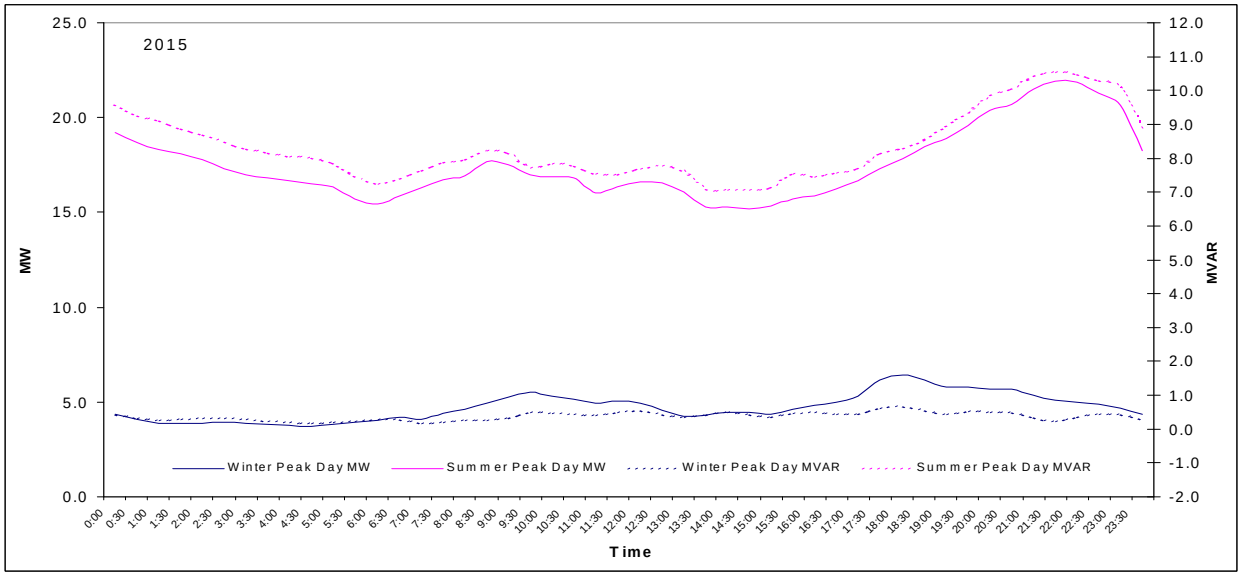
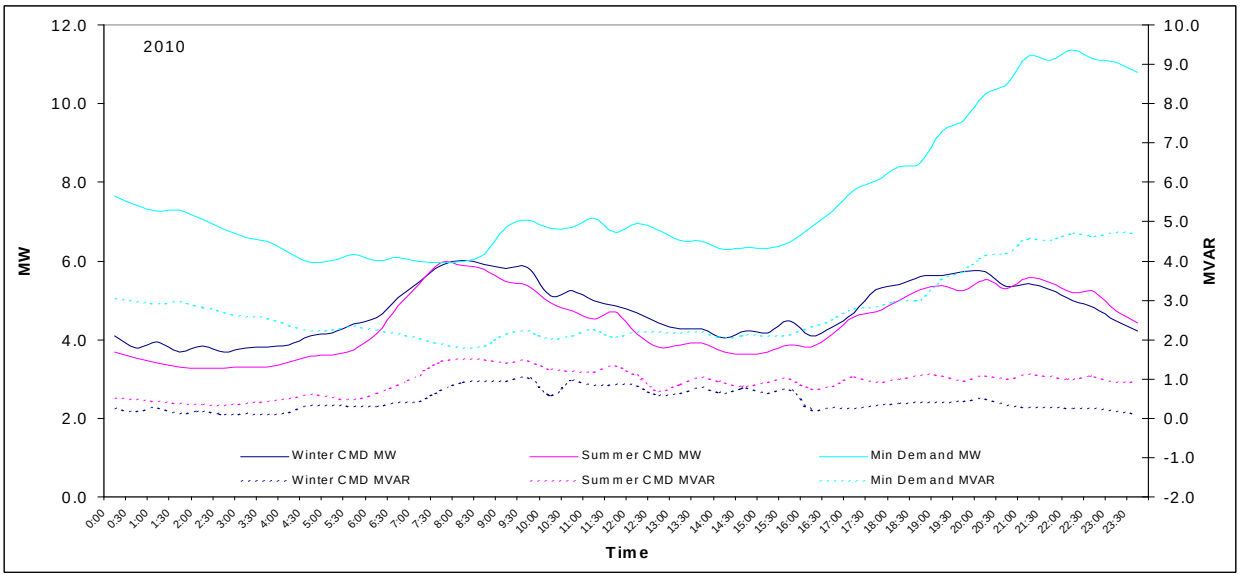
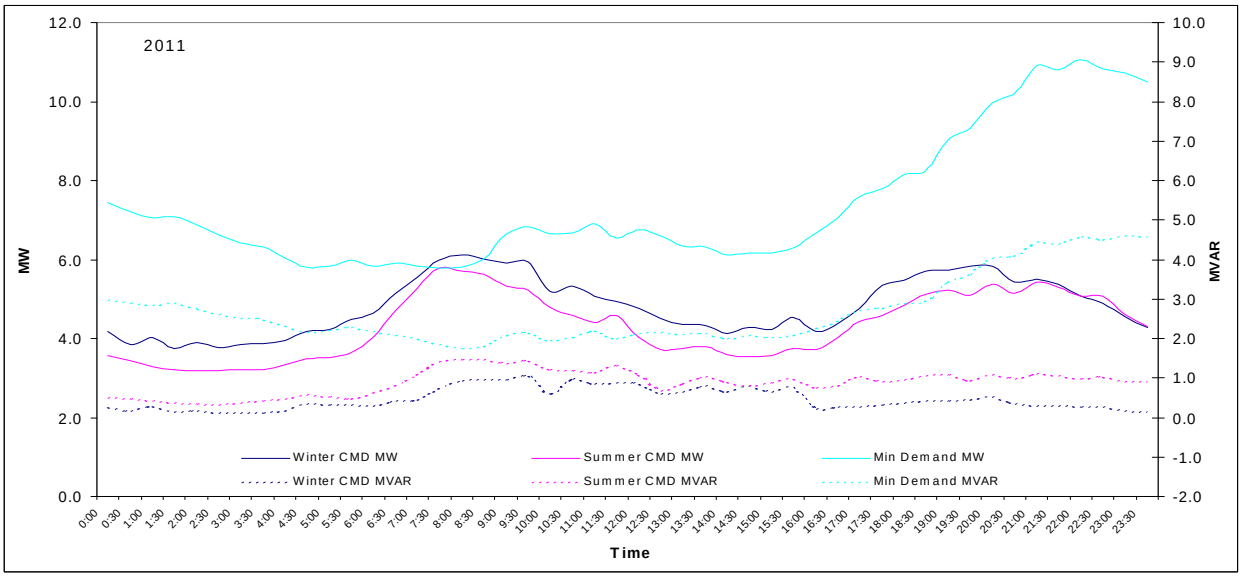
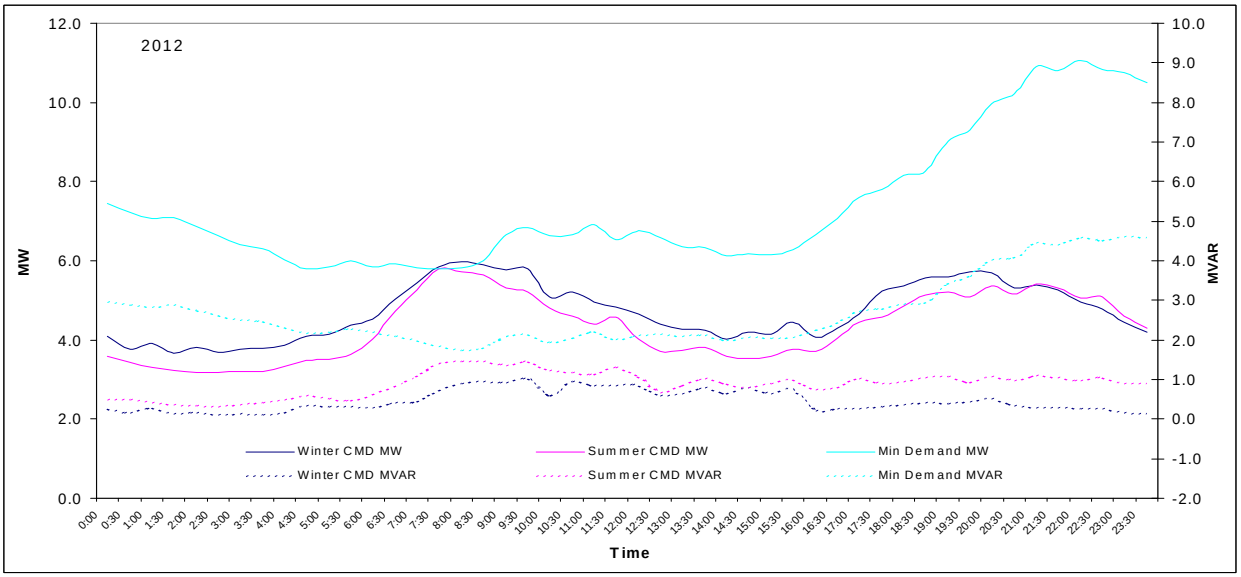
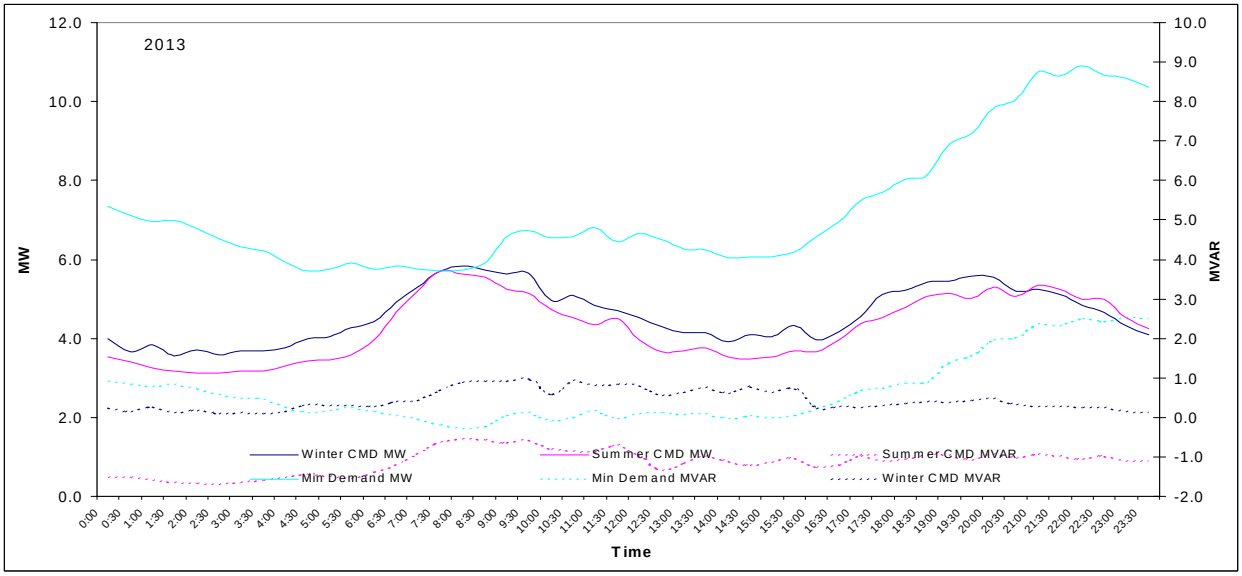

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

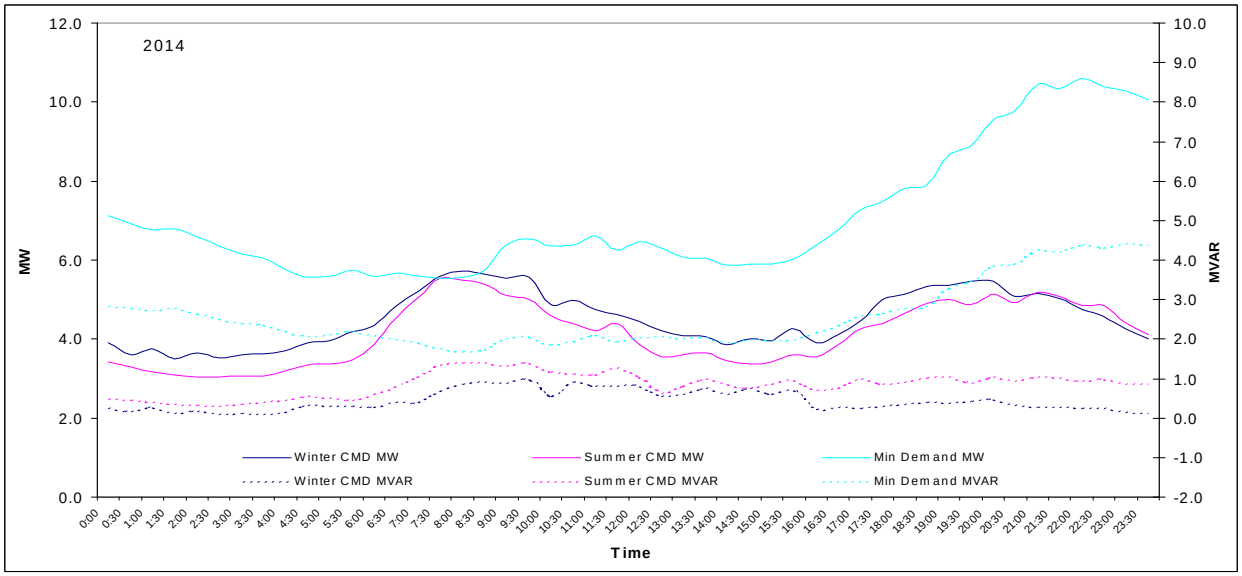
Figure 4-138 Load Profiles: Palmerston Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Summer CMD MVAR
Min Demand MW
Min Demand MVAR
Winter CMD MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

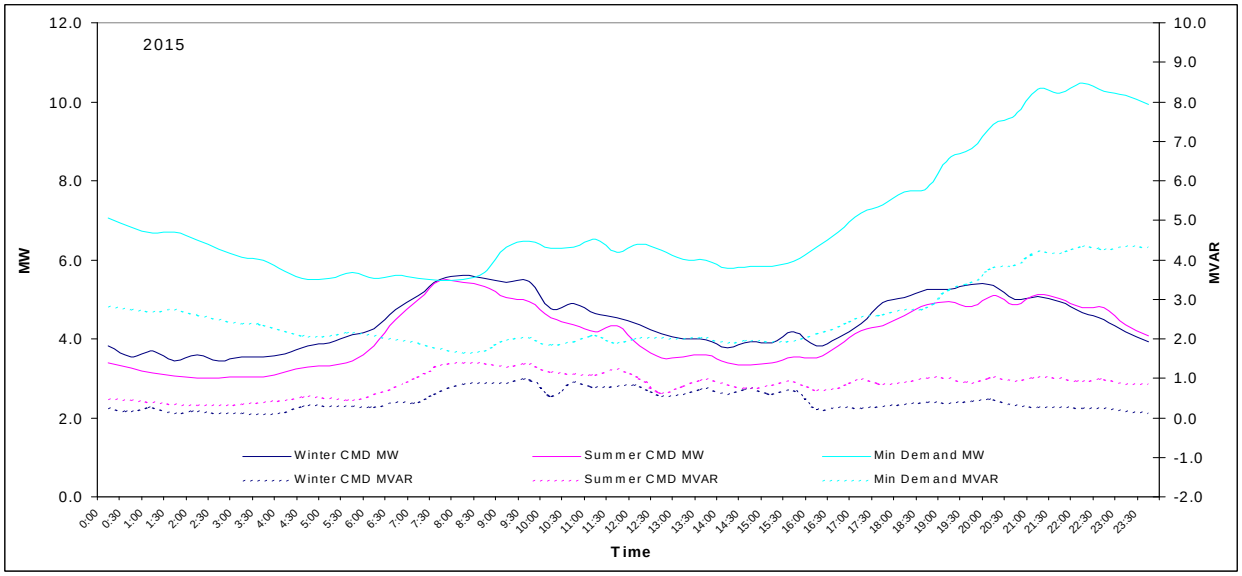
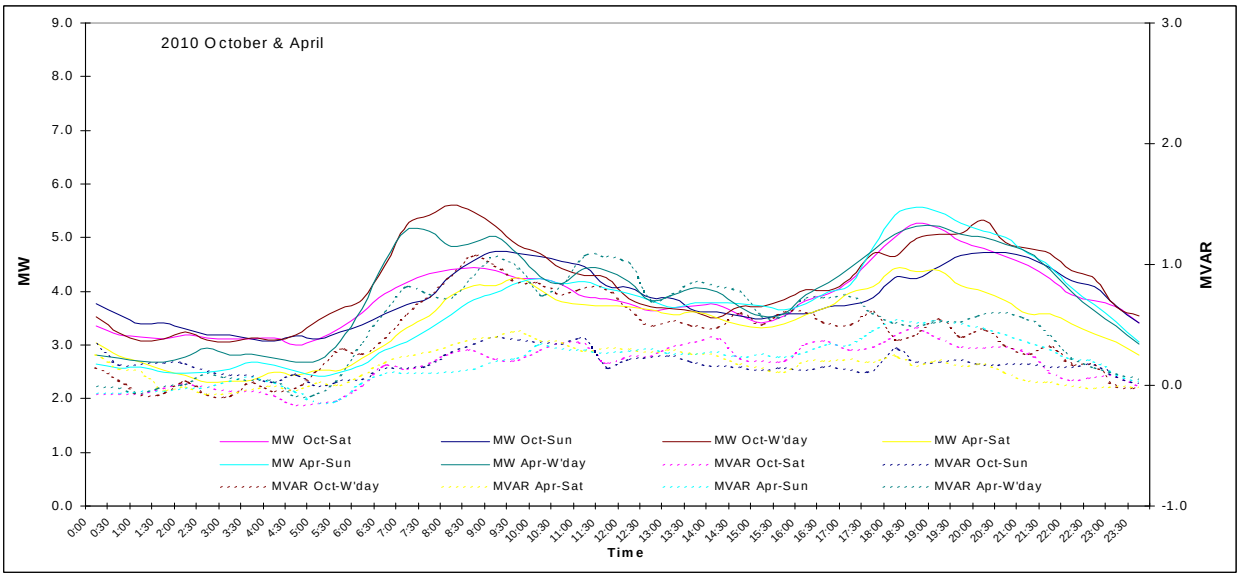
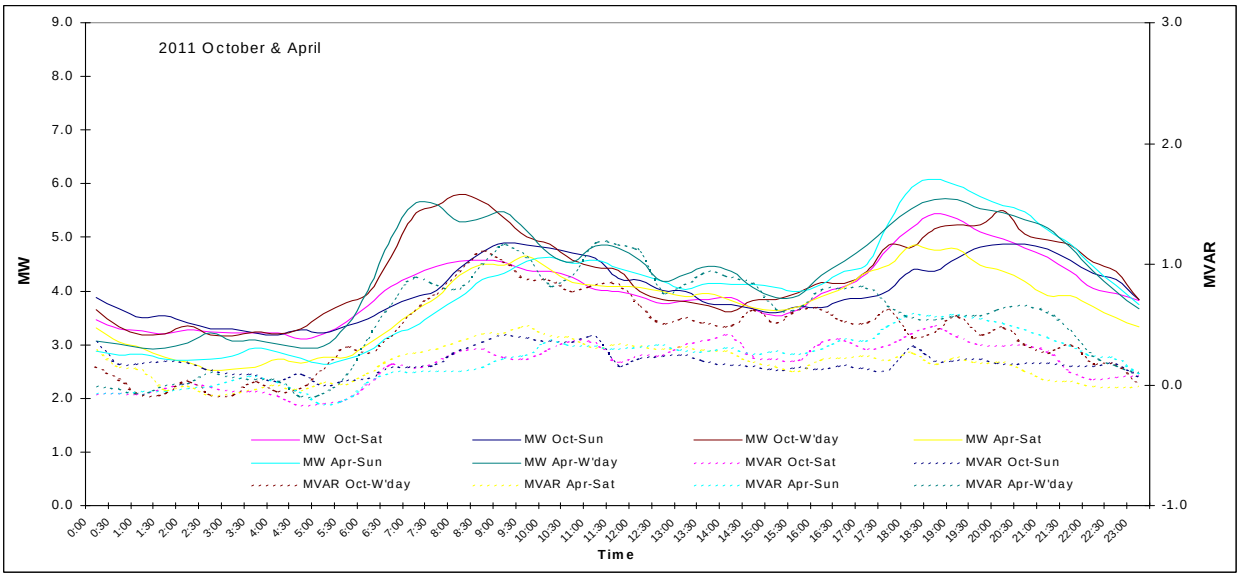
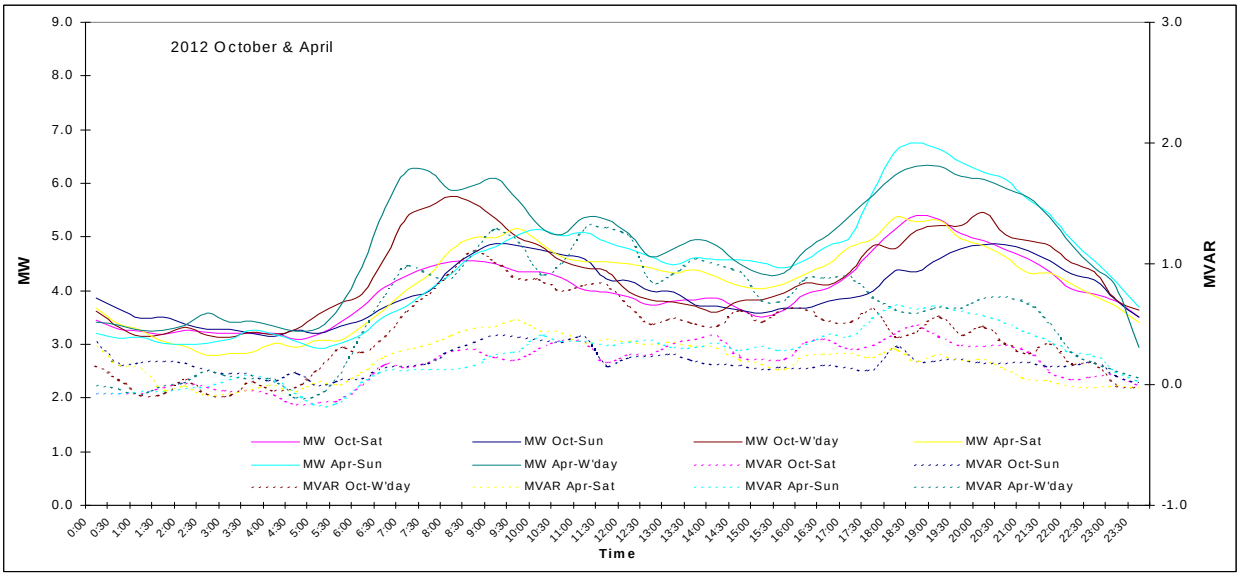
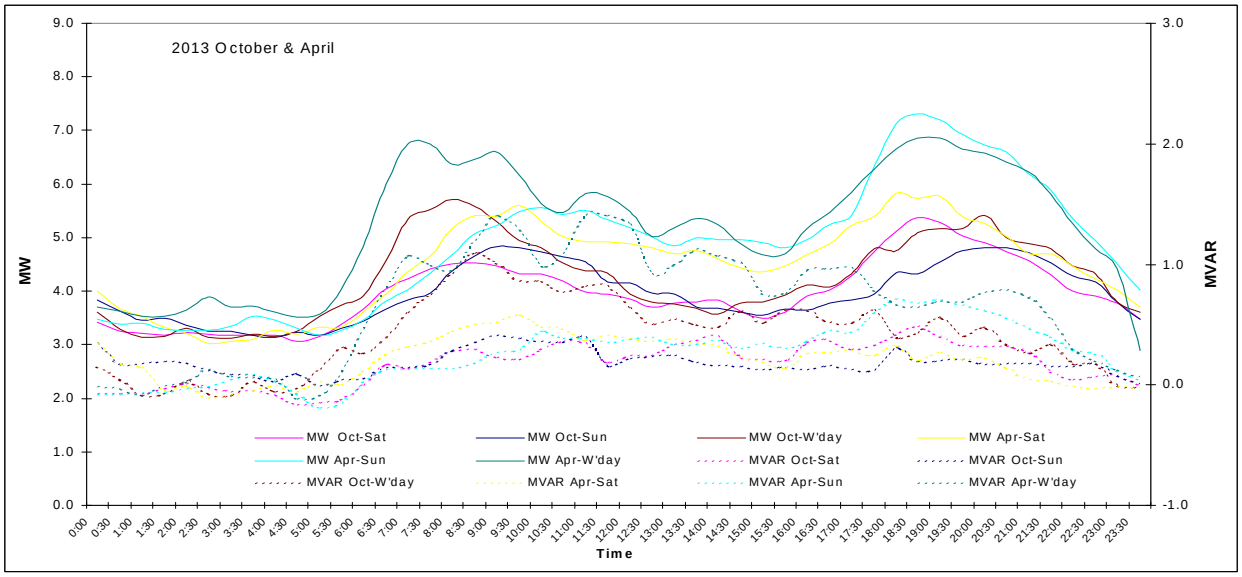

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

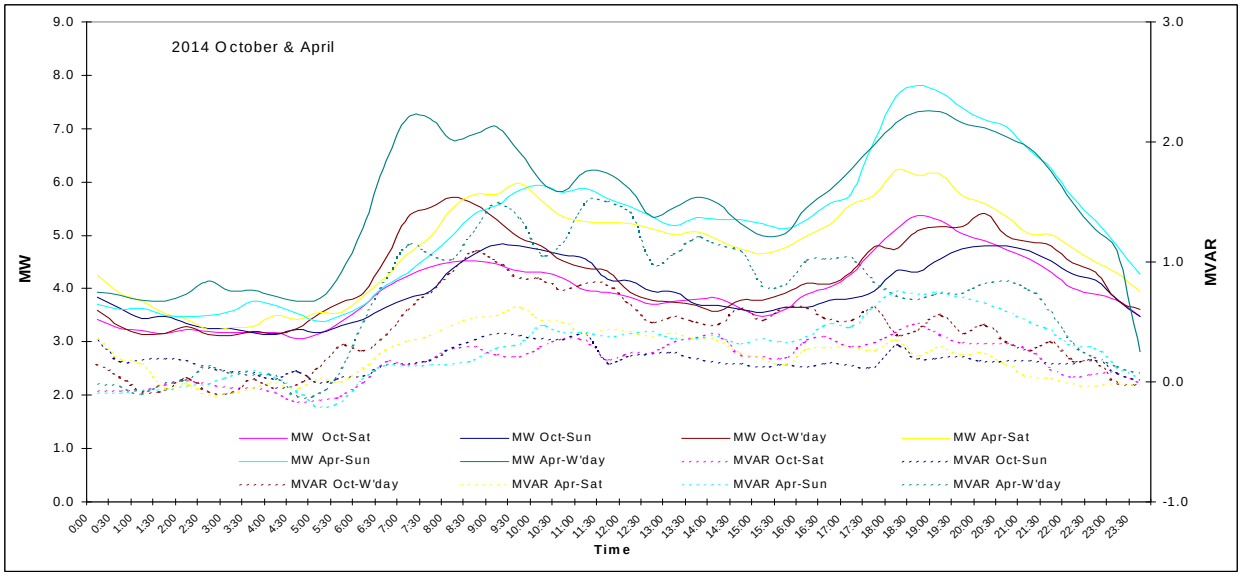
Figure 4-139 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

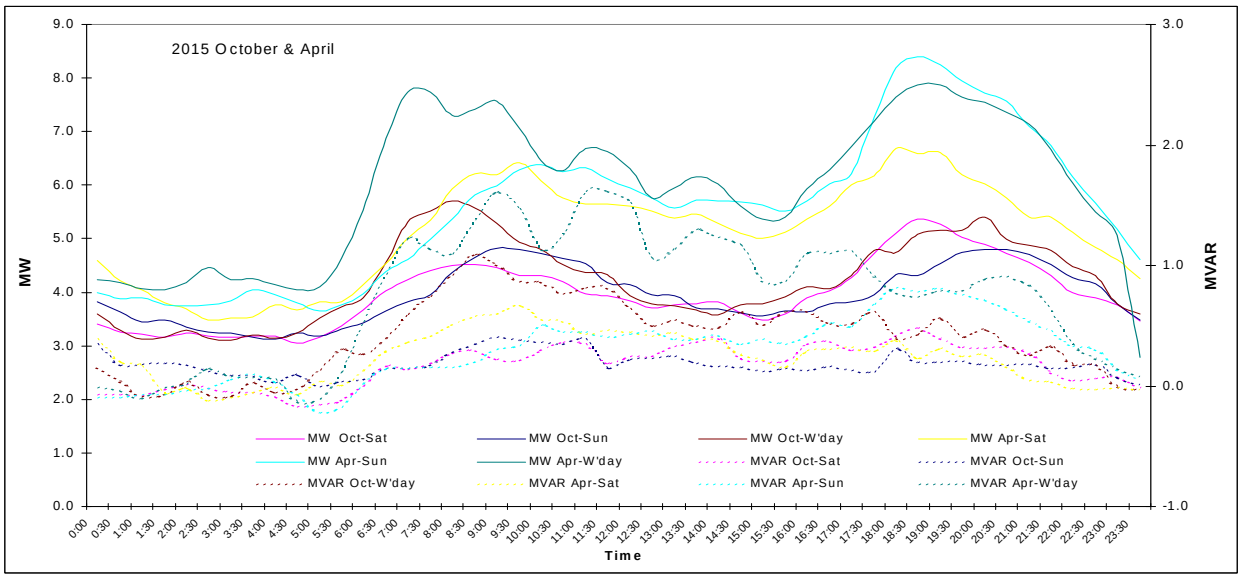
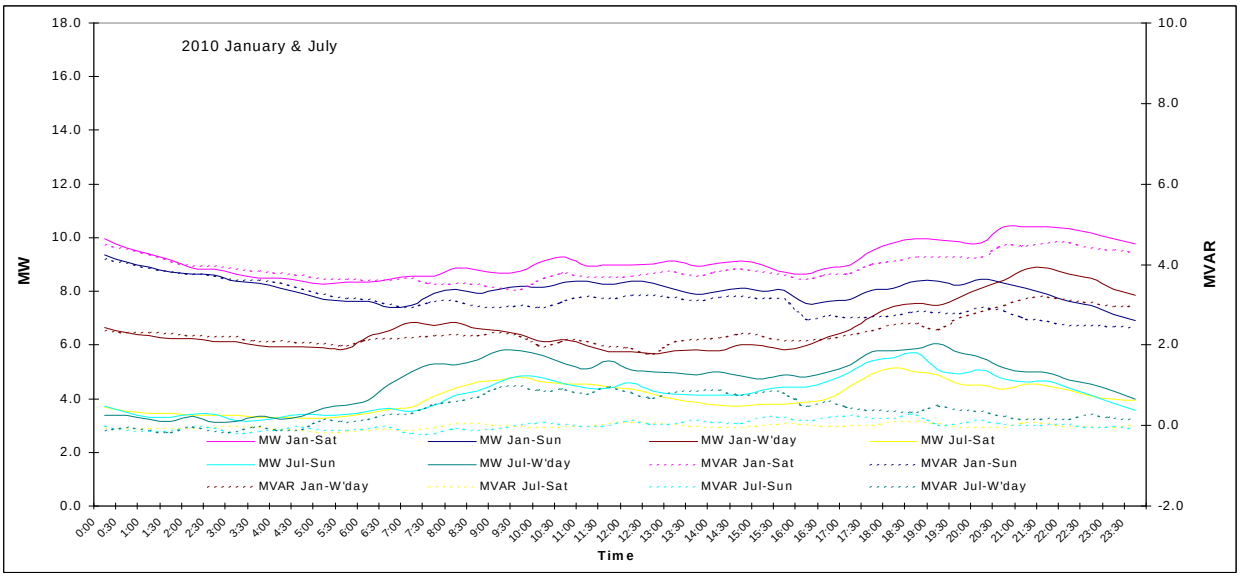
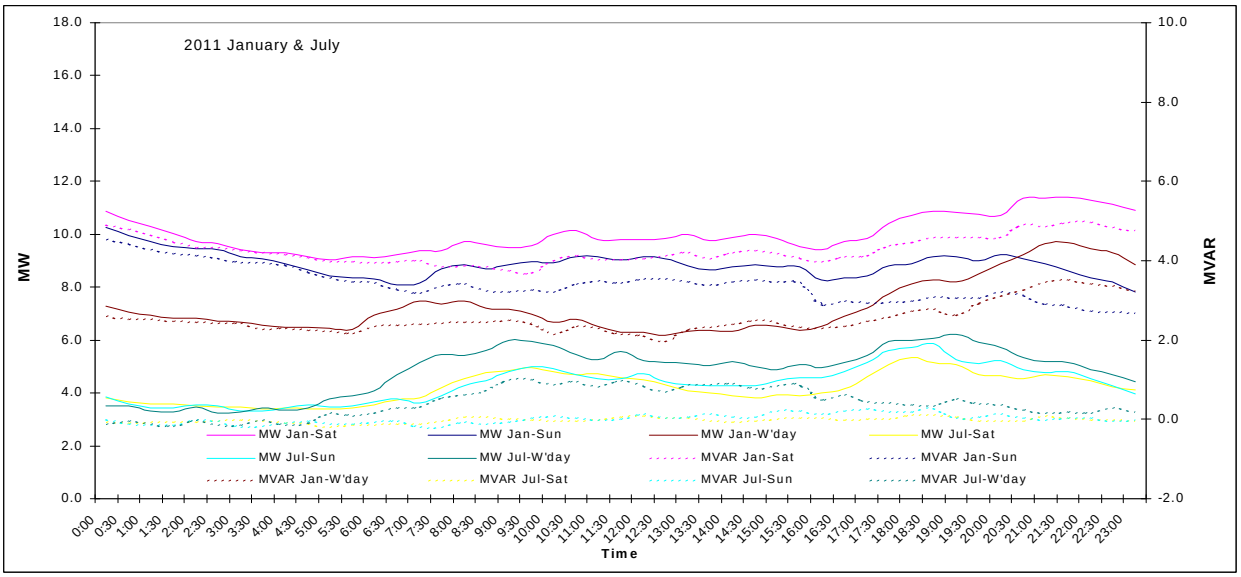
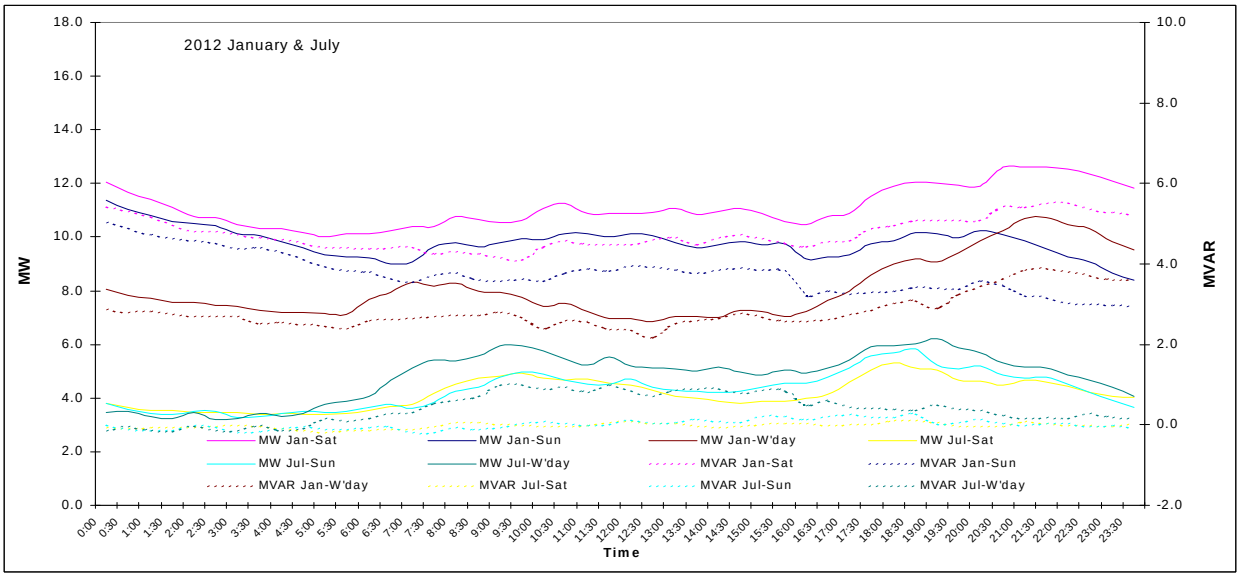
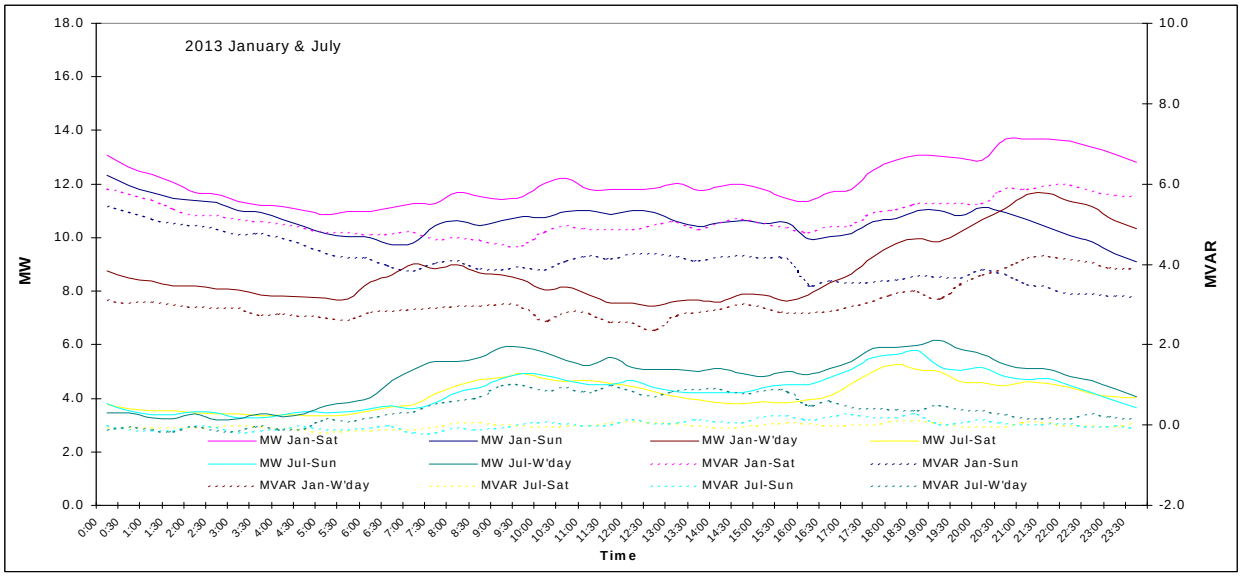

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

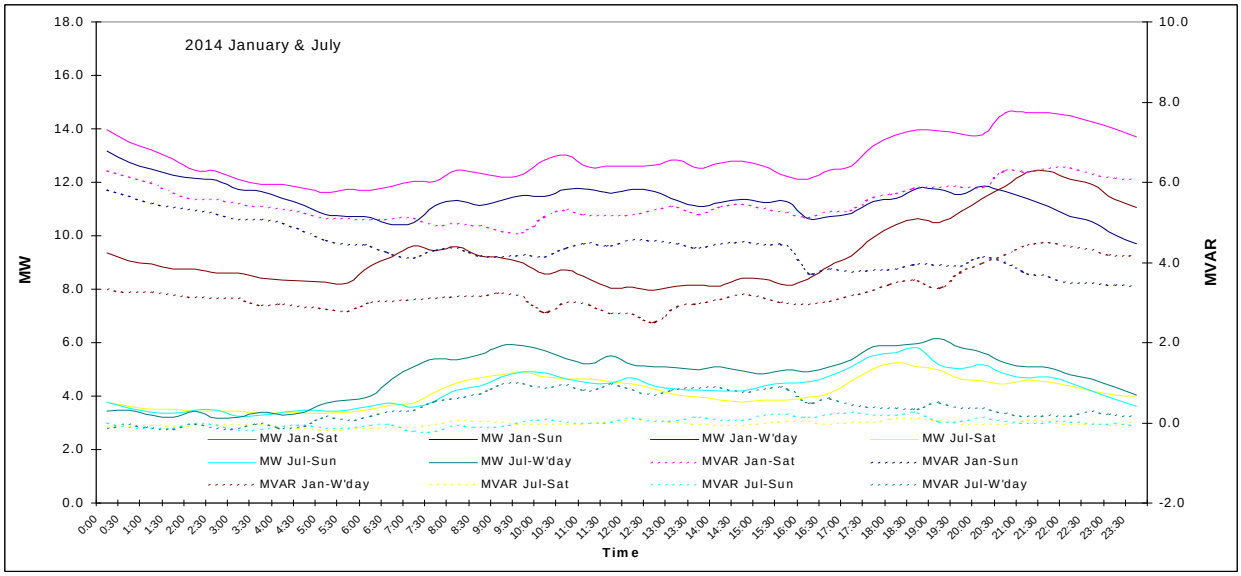
Figure 4-140 Load Profiles: Weekday, Saturday, Sunday for January & July

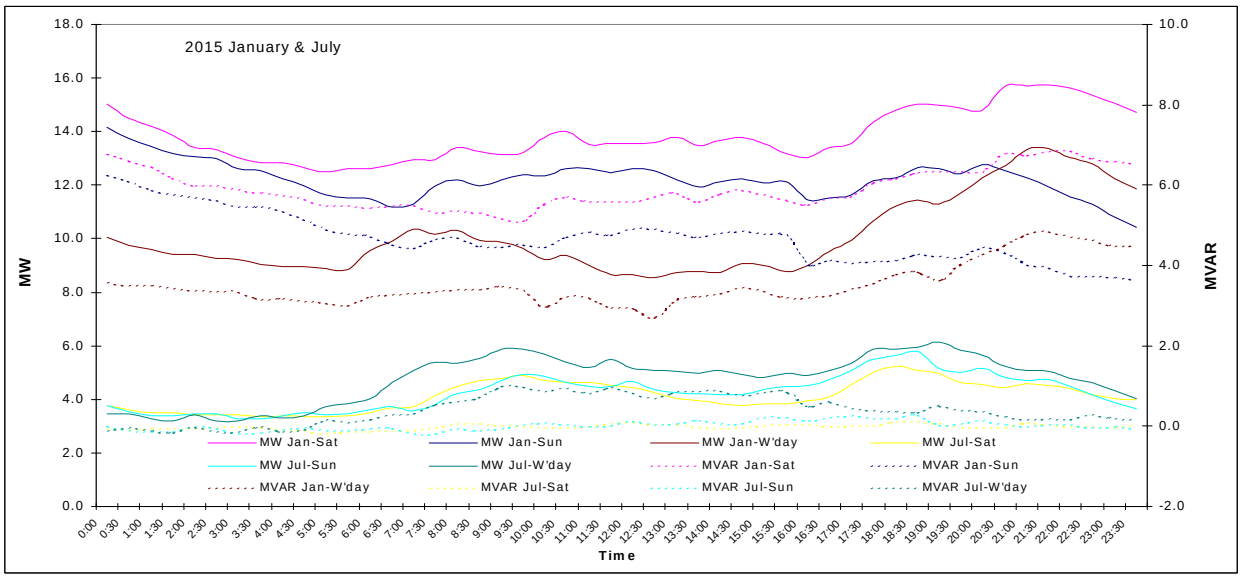







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.26 Port Latta

Description:

The Substation is located at Port Latta and is known as “Port Latta Substation”. The substation is owned by Transend.

Table 4-96 Port Latta Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	2	45	22.5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing management programs included in the forecast for this connection site.

Forecast Results:

Table 4-97 Port Latta Site Winter load forecast

Port Latta	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006	4.94	4.99	4.49	4.53	4.94	4.99	4.50	4.54
2007	4.77	4.81	4.72	4.76	4.77	4.81	4.73	4.77
2008	4.77	4.78	4.77	4.78	4.77	4.78	4.77	4.79
2009	5.94	5.98	4.67	4.70	5.94	5.98	4.69	4.72
2010	4.62	4.65	3.14	3.16	4.62	4.65	3.14	3.16
2011	4.83	4.86	3.28	3.30	4.80	4.83	3.26	3.28
2012	4.86	4.89	3.30	3.32	4.83	4.86	3.28	3.30
2013	4.88	4.91	3.32	3.33	4.85	4.88	3.30	3.31
2014	4.93	4.96	3.35	3.37	4.90	4.93	3.33	3.35
2015	4.98	5.00	3.38	3.40	4.95	4.98	3.37	3.38
2016	5.04	5.07	3.42	3.44	5.01	5.04	3.41	3.42
2017	5.10	5.13	3.47	3.49	5.08	5.11	3.45	3.47
2018	5.18	5.21	3.52	3.54	5.16	5.19	3.50	3.52
2019	5.28	5.31	3.59	3.61	5.26	5.29	3.57	3.59
2020	5.39	5.42	3.66	3.68	5.37	5.40	3.65	3.67

Table 4-98 Port Latta Site Summer load forecast

Port Latta	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006	6.57	7.13	6.52	7.08	6.57	7.13	6.60	7.16
2007	8.79	9.47	8.43	9.08	8.79	9.47	8.50	9.15
2008	8.97	9.70	7.41	8.02	8.97	9.70	7.41	8.02
2009	11.72	15.29	3.72	4.85	11.72	15.29	3.72	4.85
2010	10.55	11.47	3.81	4.14	10.55	11.47	3.89	4.22
2011	11.14	12.11	4.02	4.37	11.54	12.54	4.17	4.53
2012	12.05	13.10	4.35	4.73	12.48	13.56	4.51	4.90
2013	12.76	13.87	4.61	5.01	13.20	14.35	4.77	5.18
2014	13.32	14.47	4.81	5.23	13.75	14.94	4.97	5.40
2015	14.08	15.30	5.08	5.53	14.53	15.79	5.25	5.70
2016	14.57	15.83	5.26	5.72	15.04	16.35	5.43	5.90
2017	15.60	16.96	5.63	6.12	16.08	17.48	5.81	6.31
2018	16.42	17.85	5.93	6.45	16.93	18.40	6.11	6.64
2019	17.26	18.76	6.23	6.77	17.77	19.32	6.42	6.98
2020	18.13	19.71	6.55	7.12	18.66	20.28	6.74	7.32

Figure 4-141 Port Latta Site Summer Load Forecast at 50% and 10% POE

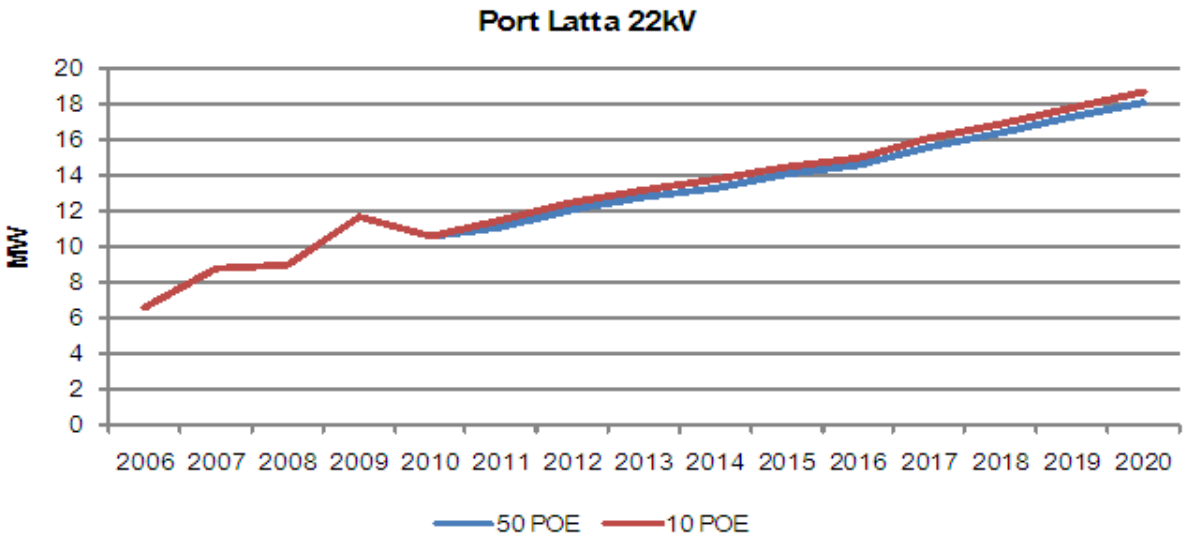
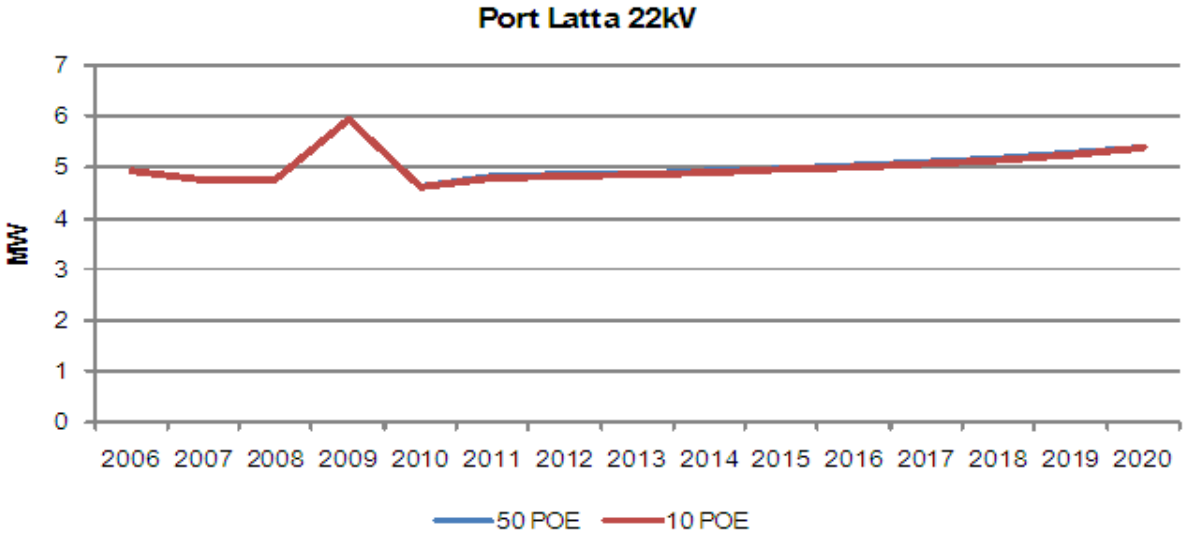
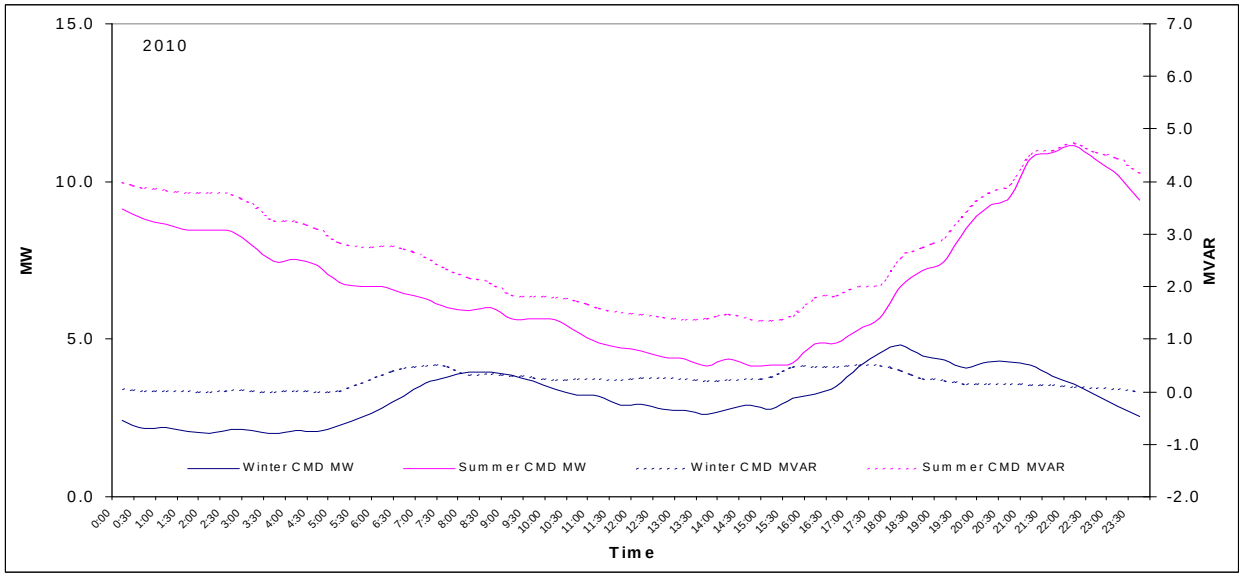


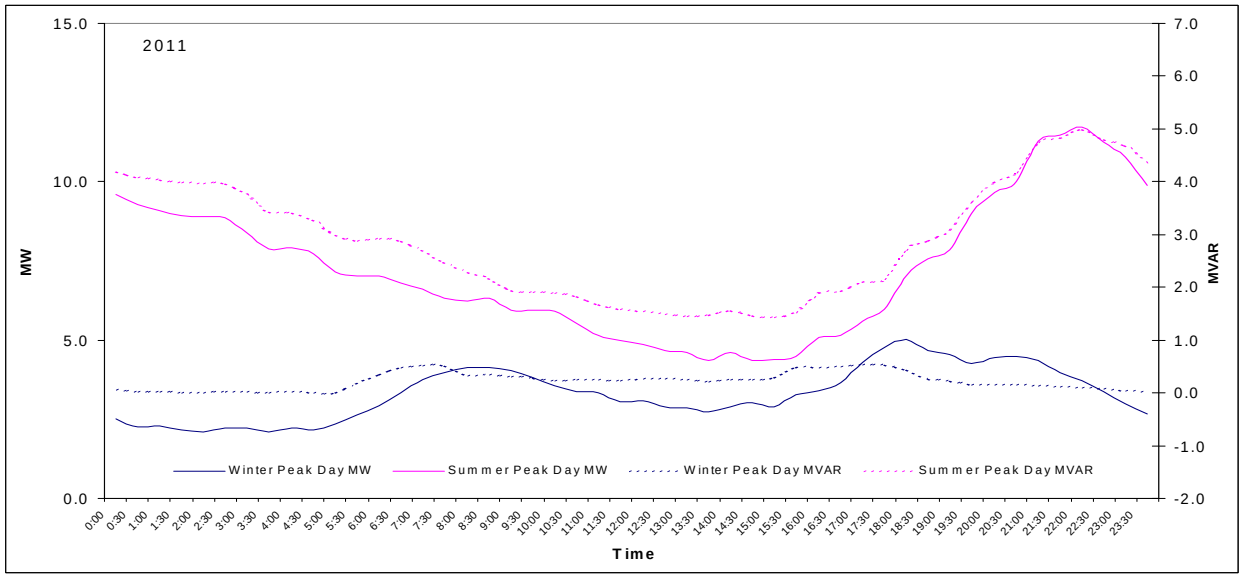
Figure 4-142 Port Latta Site Winter Load Forecast at 50% and 10% POE

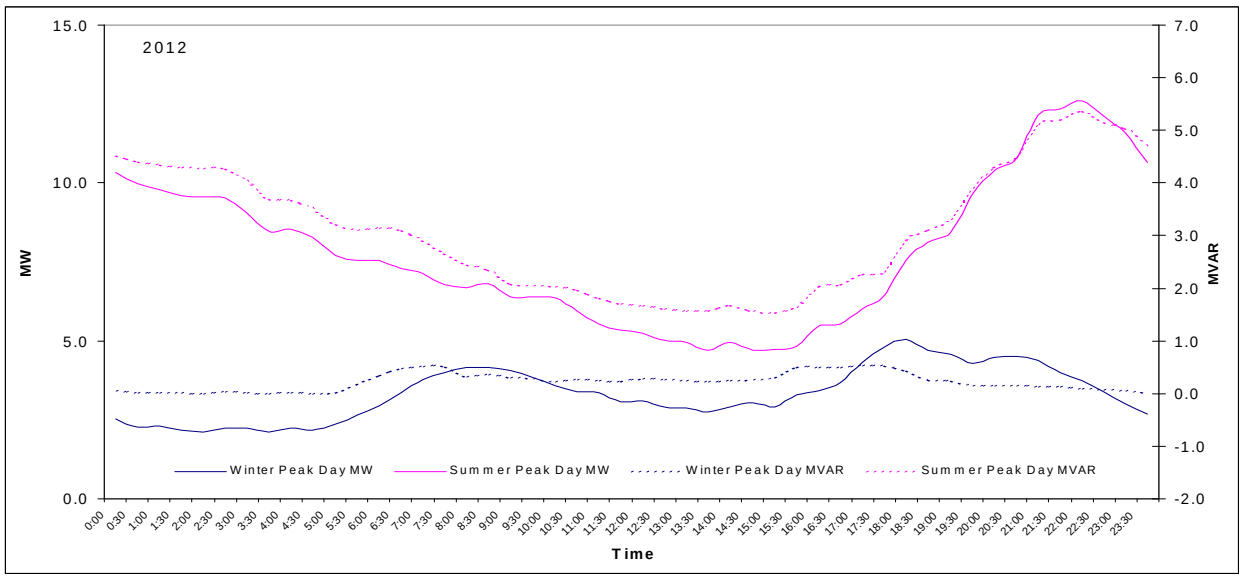


Load Profiles:

Figure 4-143 Load Profiles: Port Latta Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

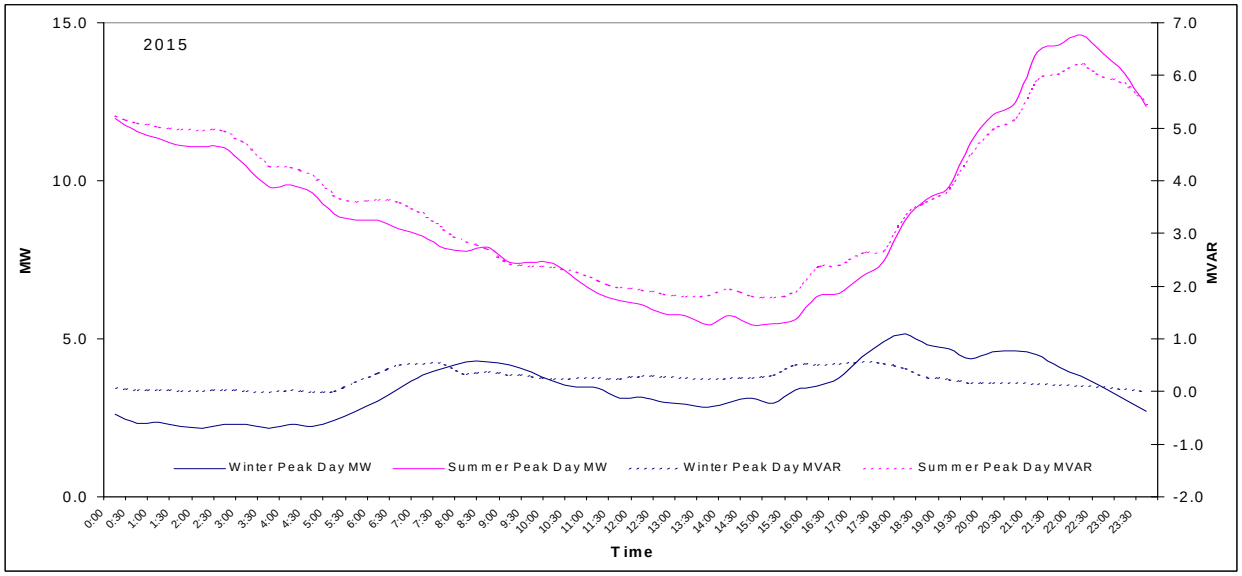
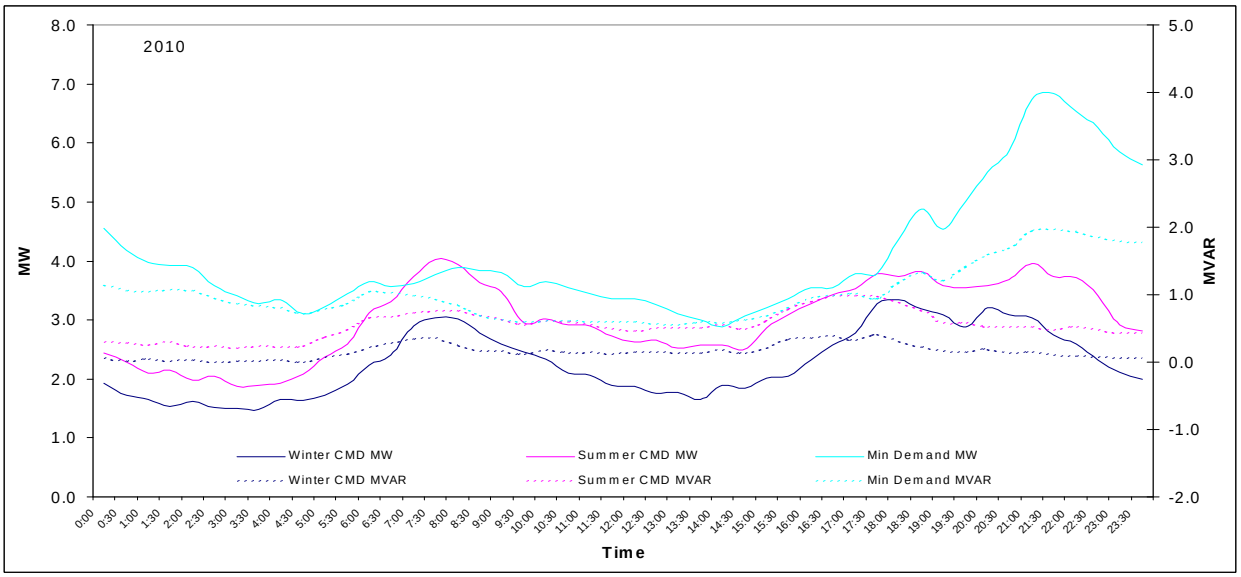
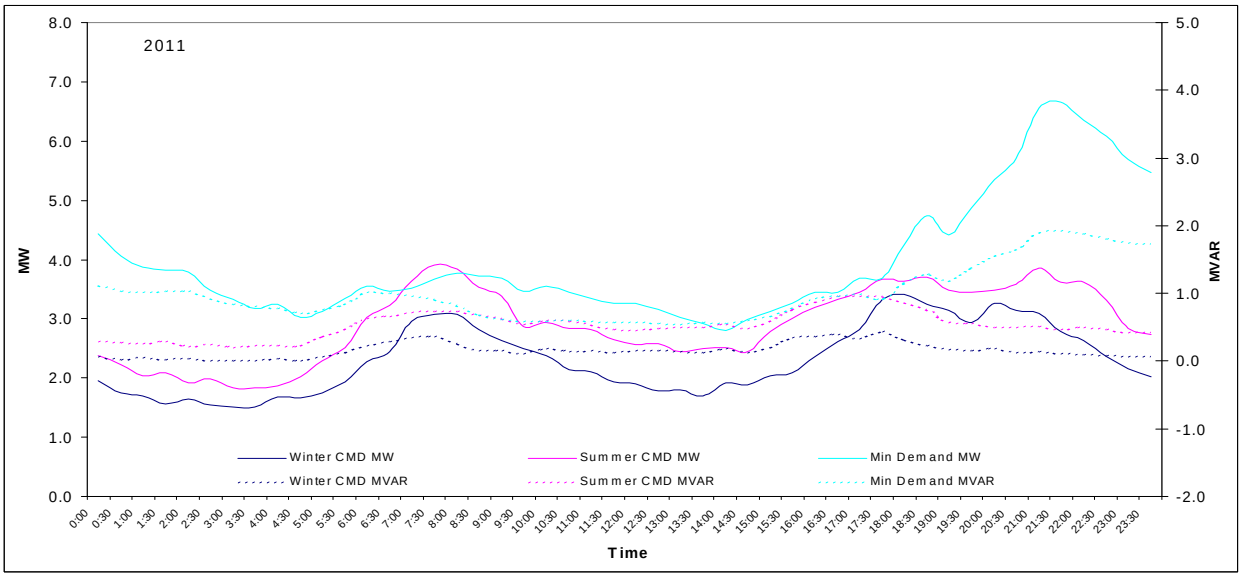
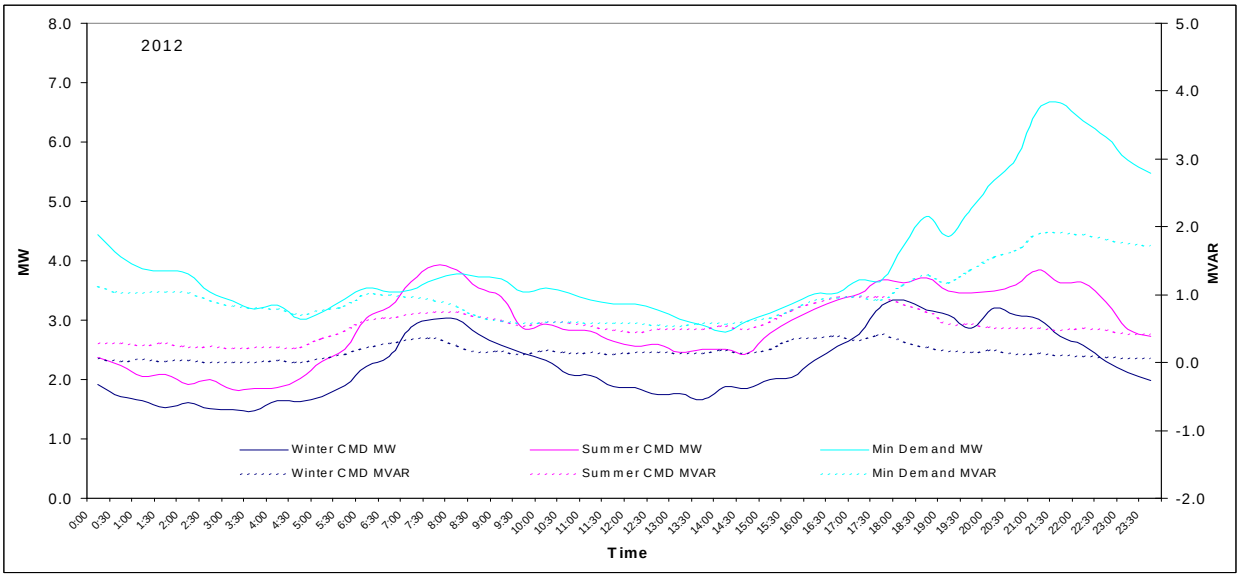
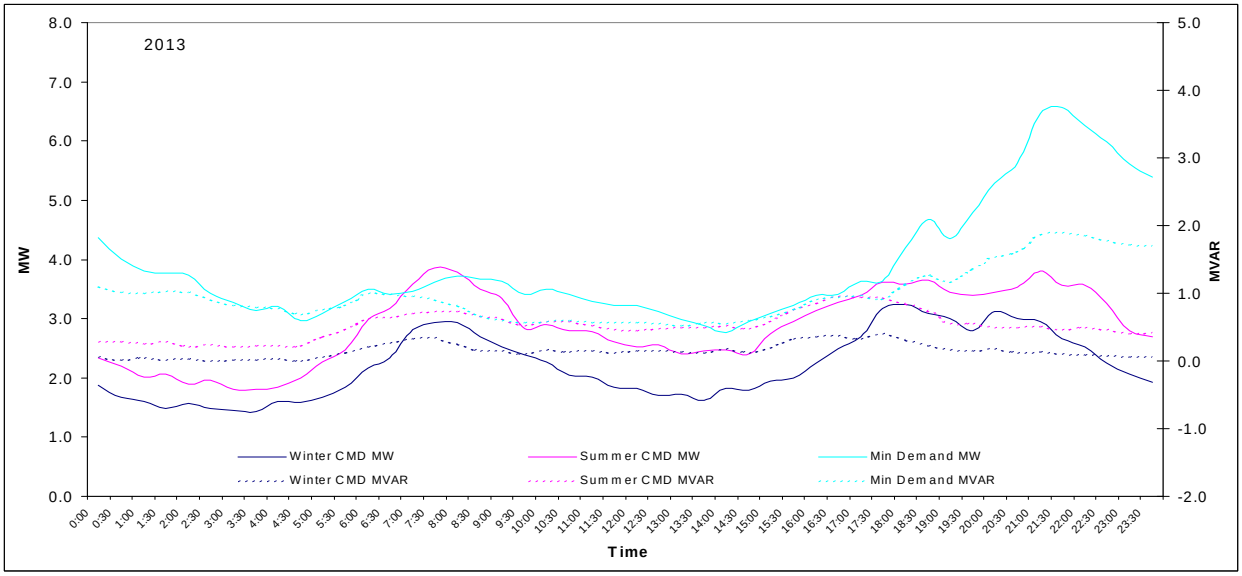

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

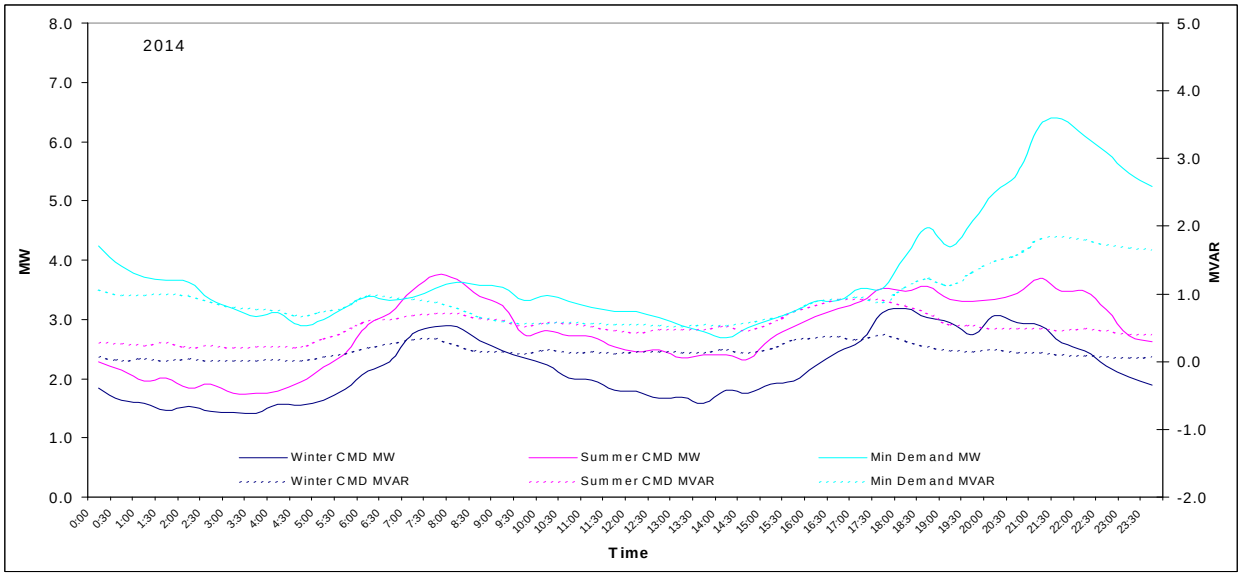
Figure 4-144 Load Profiles: Port Latta Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

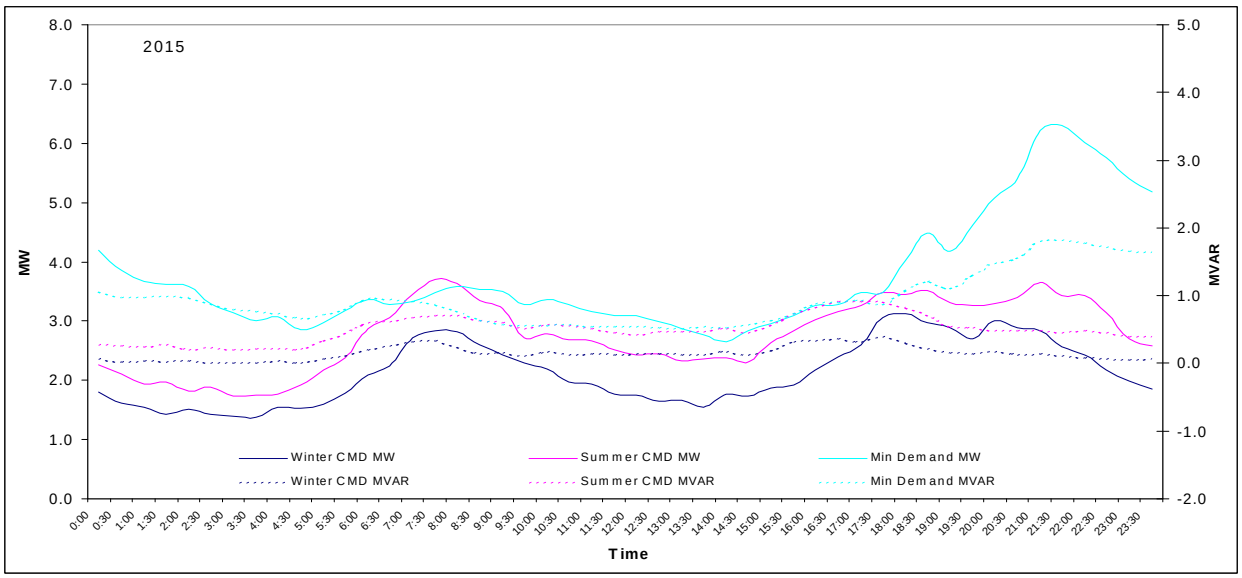
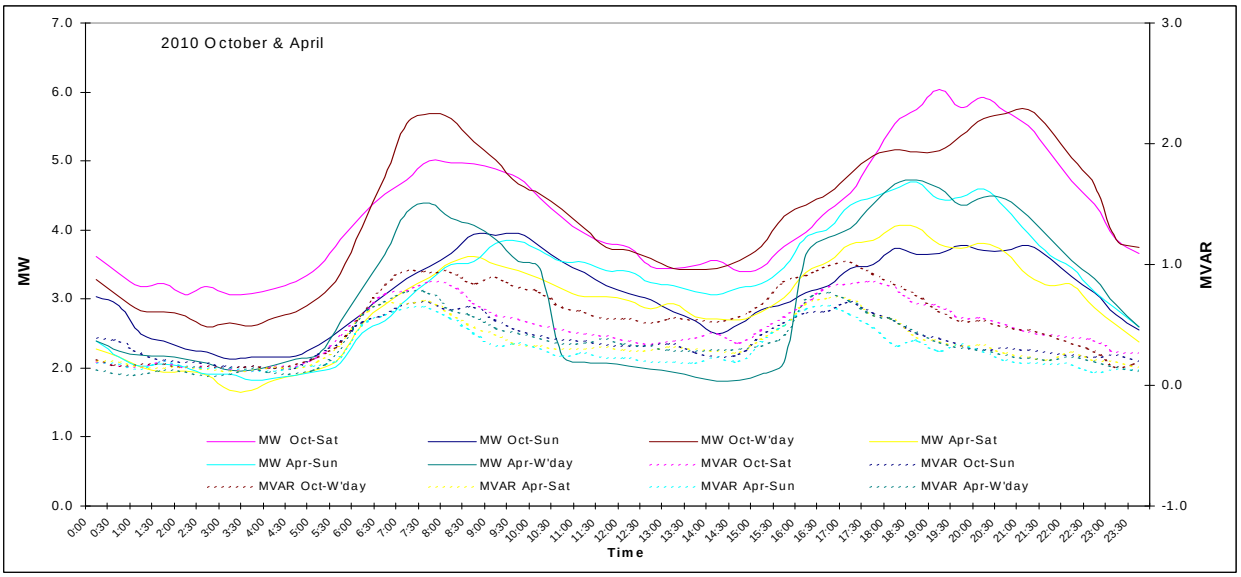
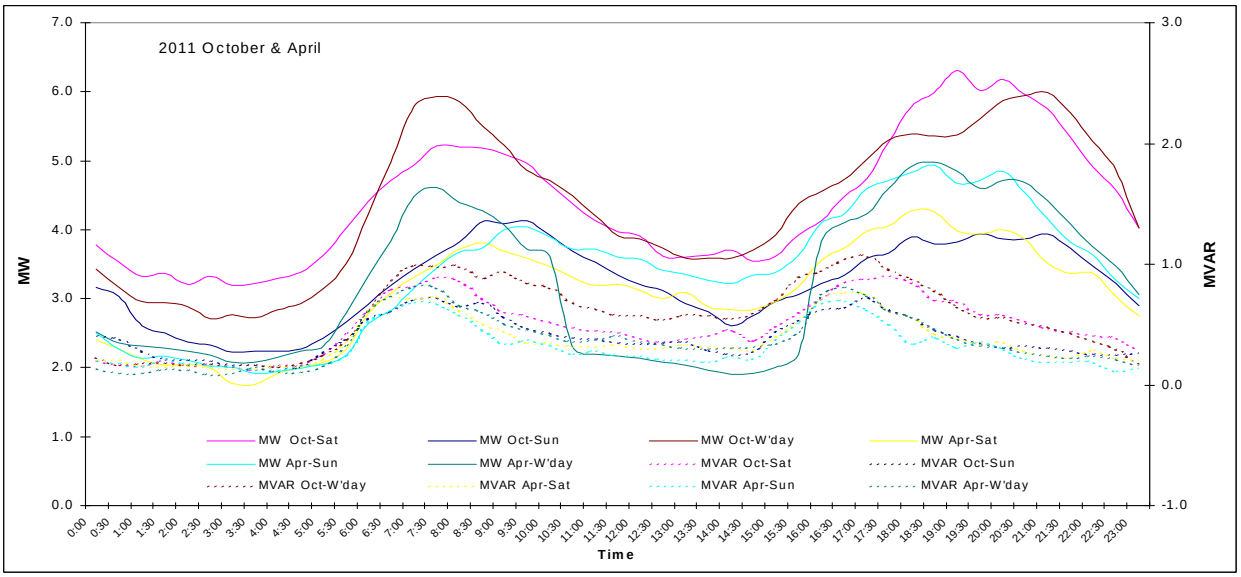
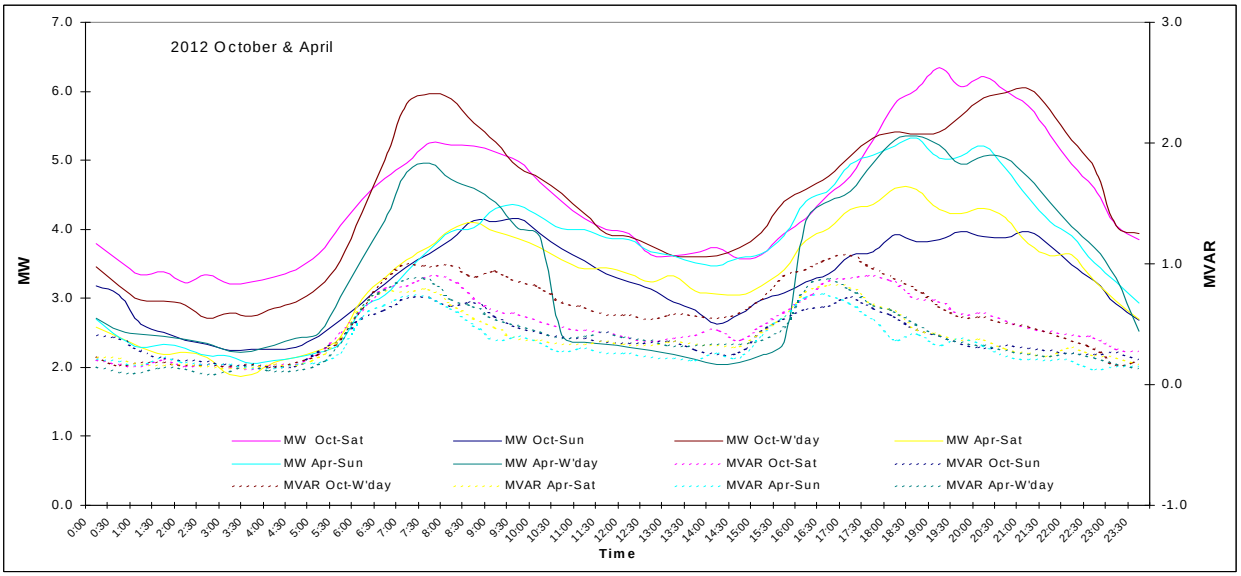
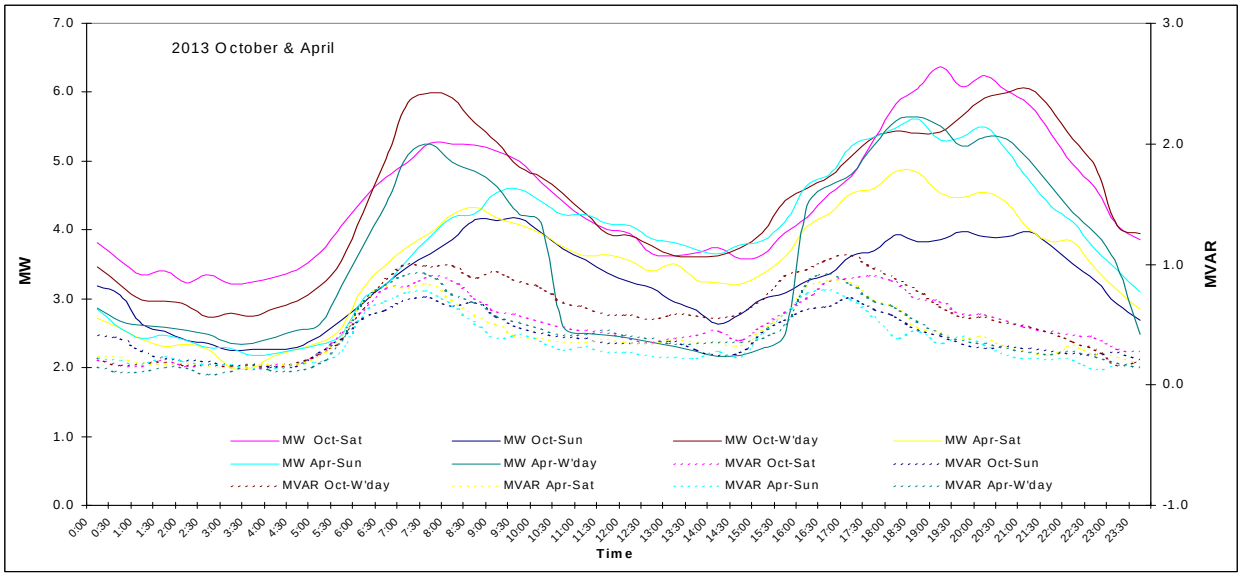

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

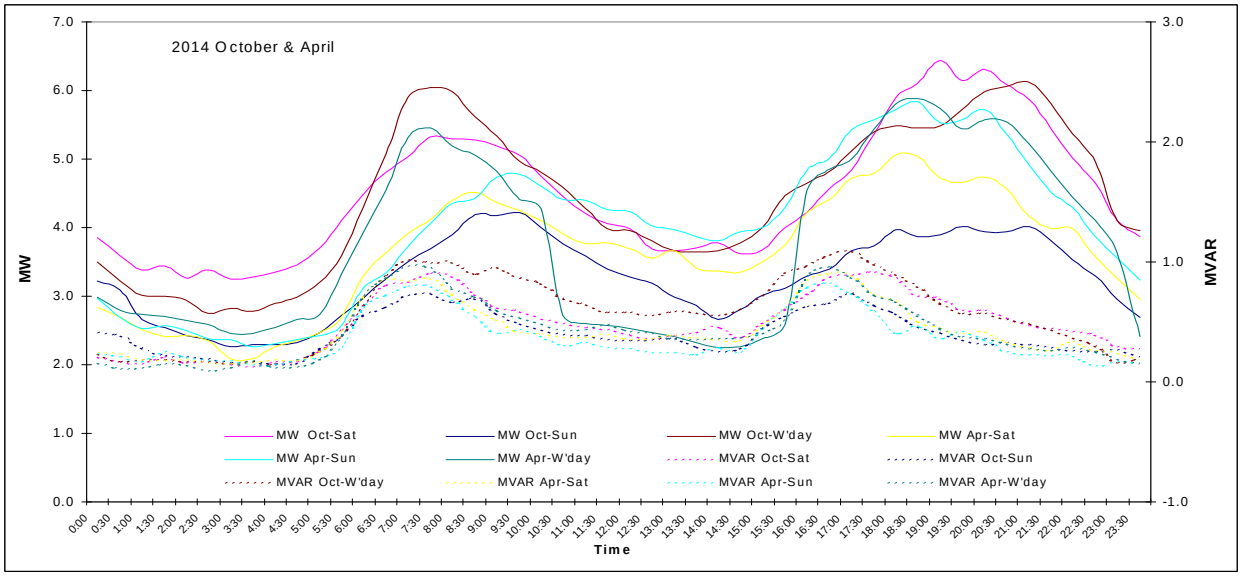
Figure 4-145 Load Profiles: Profile: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

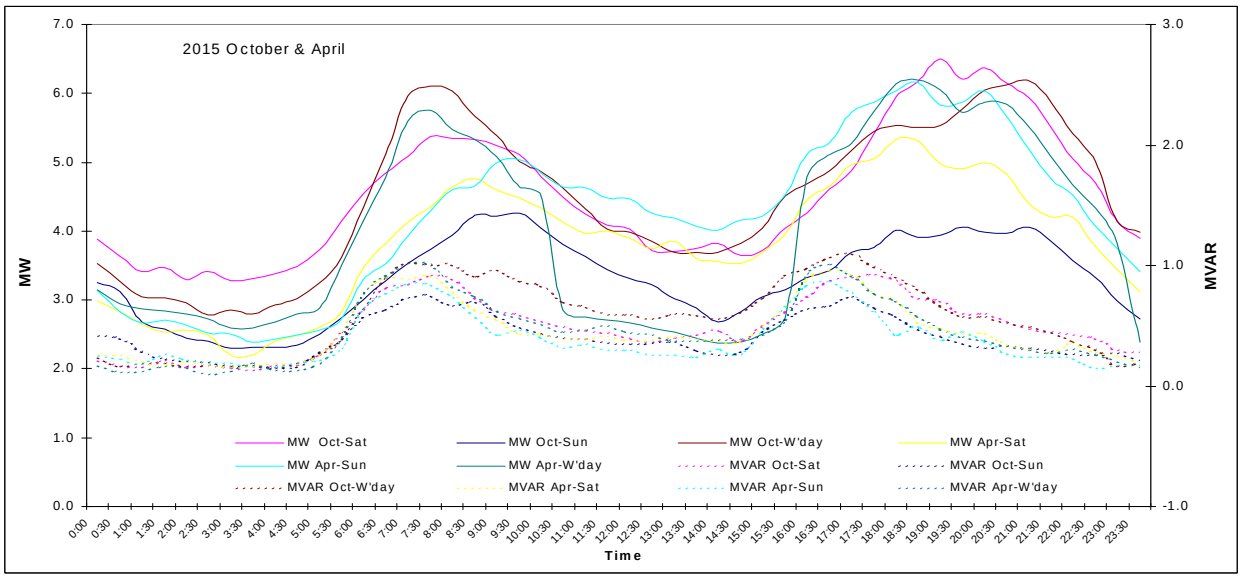
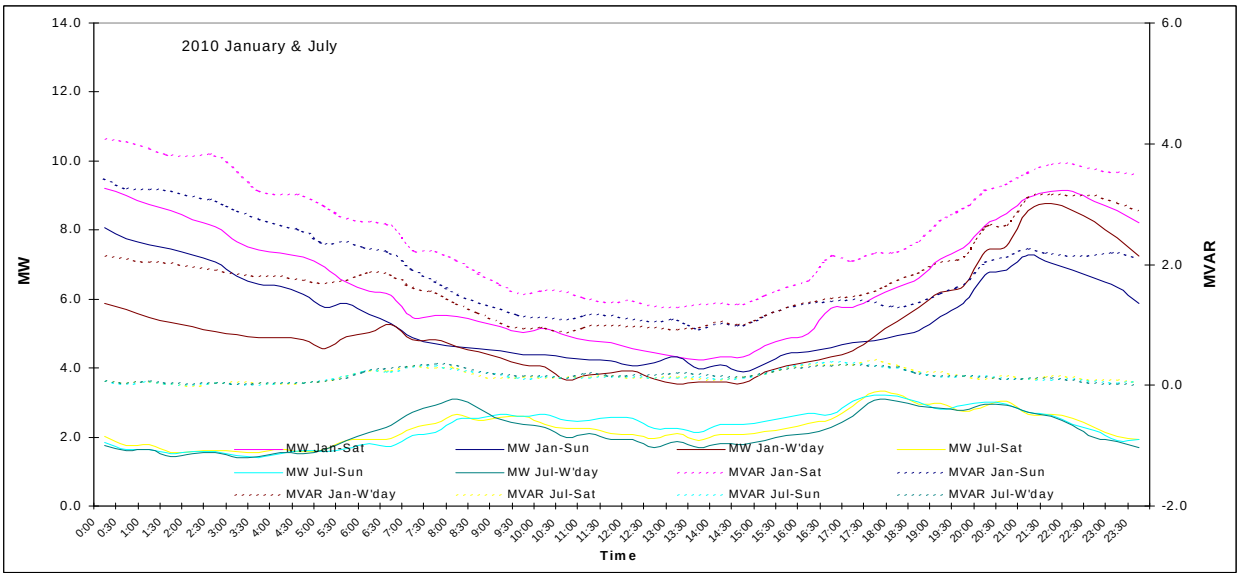
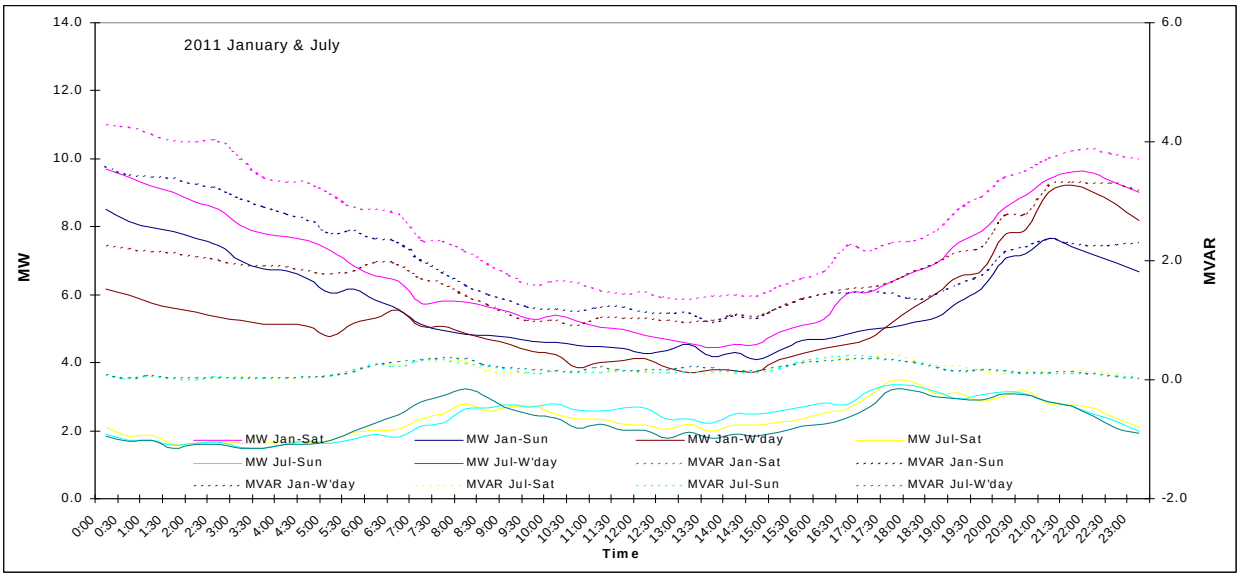
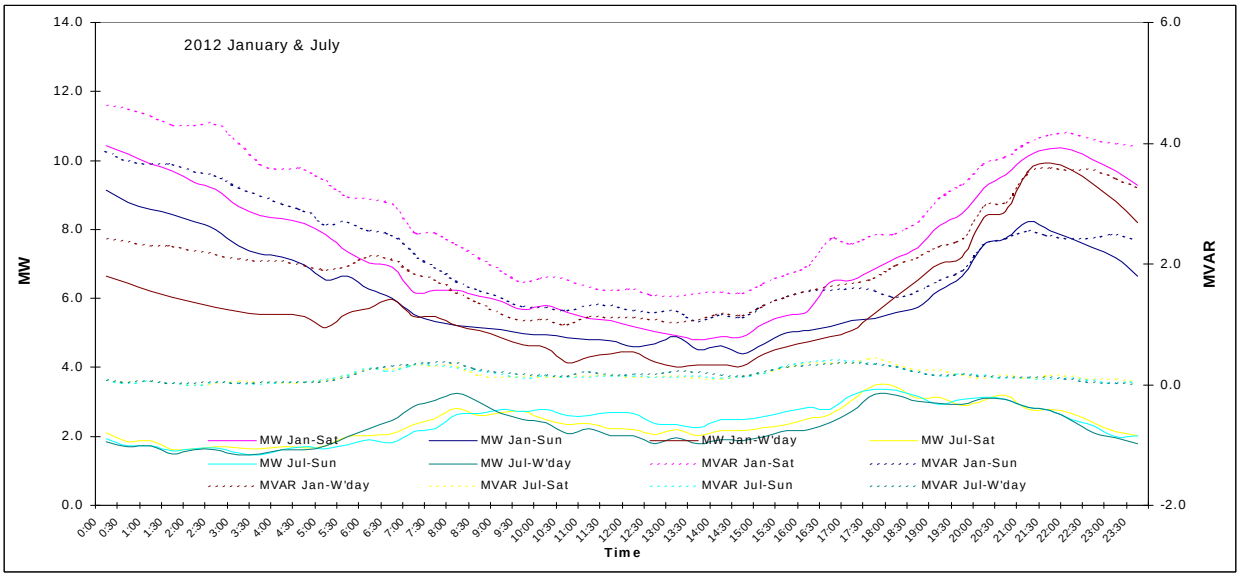
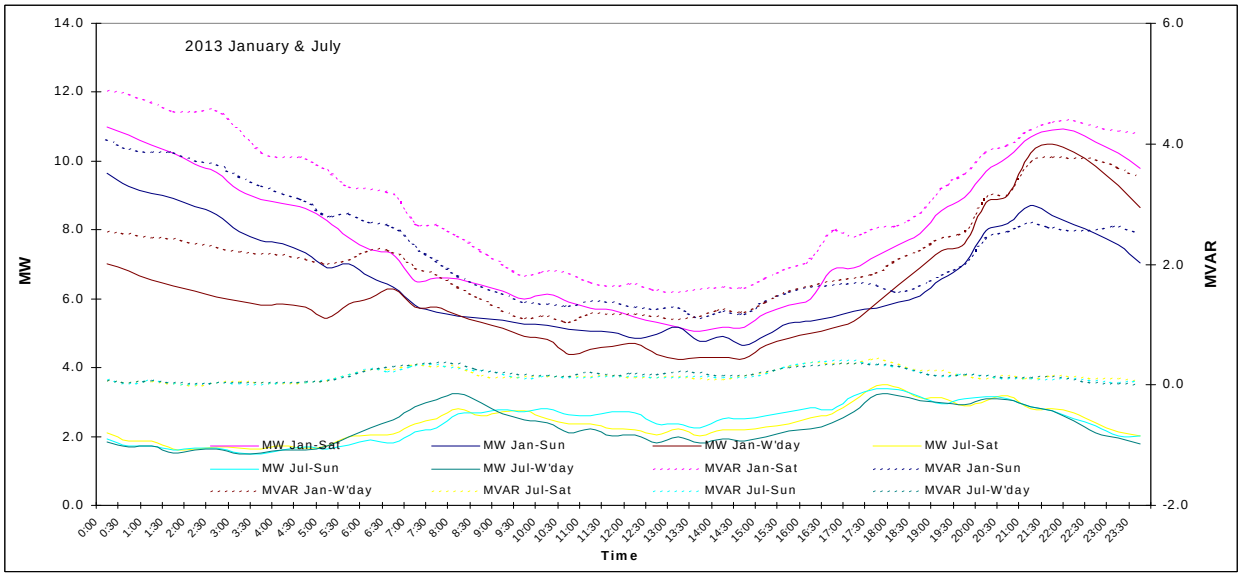

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

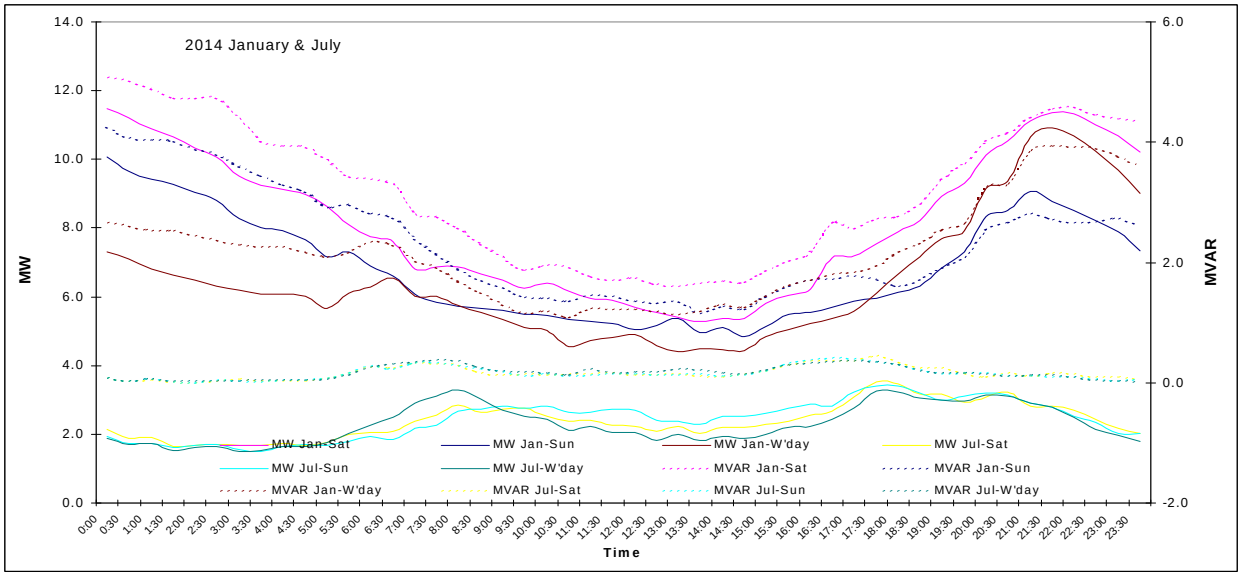
Figure 4-146 Load Profiles: Weekday, Saturday, Sunday for January & July

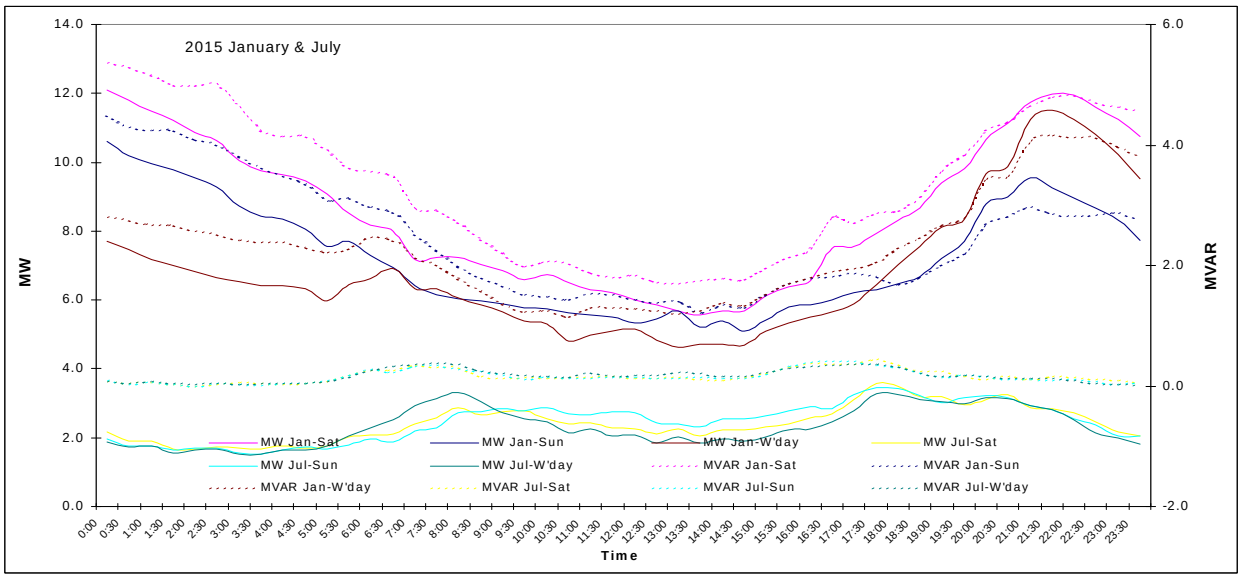







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.27 Queenstown

Description:

The Substation is located at Queenstown and is known as “Queenstown Substation”. The substation is owned by Transend.

Table 4-99 Queenstown Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	4	47.5	22.5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing management programs included in the forecast for this connection site.

Forecast Results:

Table 4-100 Queenstown Site Winter load forecast

Queenstown 22kV	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	7.13	7.22	6.78	6.87	7.13	7.22	6.94	7.03
2006	7.39	7.47	7.34	7.41	7.39	7.47	7.49	7.57
2007	7.46	7.52	6.86	6.92	7.46	7.52	7.02	7.08
2008	7.40	7.50	7.40	7.50	7.40	7.50	7.60	7.71
2009	7.04	7.14	7.04	7.14	7.04	7.14	7.25	7.35
2010	6.55	6.60	6.36	6.41	6.55	6.60	6.53	6.58
2011	6.77	6.82	6.57	6.63	6.90	6.96	6.70	6.76
2012	6.73	6.79	6.54	6.59	6.87	6.92	6.67	6.72
2013	6.68	6.74	6.49	6.54	6.82	6.88	6.62	6.68
2014	6.68	6.73	6.48	6.54	6.81	6.87	6.62	6.67
2015	6.67	6.72	6.48	6.53	6.81	6.87	6.62	6.67
2016	6.68	6.73	6.49	6.54	6.82	6.88	6.62	6.68
2017	6.69	6.74	6.50	6.55	6.84	6.89	6.64	6.69
2018	6.73	6.78	6.53	6.58	6.87	6.93	6.67	6.73
2019	6.78	6.84	6.59	6.64	6.93	6.99	6.73	6.79
2020	6.85	6.91	6.65	6.71	7.00	7.06	6.80	6.86

Table 4-101 Queenstown Site Summer load forecast

Queenstown 22kV	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007								
2008	5.99	6.07	5.99	6.07	5.99	6.07	6.13	6.21
2009	5.42	5.53	5.42	5.53	5.42	5.53	5.58	5.70
2010	4.65	4.72	3.64	3.69	4.65	4.72	3.72	3.78
2011	4.56	4.63	3.57	3.62	4.75	4.82	3.71	3.77
2012	4.61	4.68	3.61	3.66	4.80	4.87	3.75	3.81
2013	4.58	4.65	3.58	3.63	4.77	4.84	3.73	3.78
2014	4.50	4.57	3.52	3.57	4.68	4.75	3.66	3.71
2015	4.50	4.56	3.51	3.57	4.67	4.74	3.65	3.71
2016	4.41	4.47	3.45	3.50	4.59	4.66	3.59	3.64
2017	4.49	4.55	3.51	3.56	4.67	4.74	3.65	3.70
2018	4.50	4.56	3.52	3.57	4.68	4.75	3.66	3.71
2019	4.51	4.58	3.53	3.58	4.70	4.76	3.67	3.72
2020	4.54	4.60	3.55	3.60	4.72	4.79	3.69	3.74

Figure 4-147 Queenstown Site Summer Load Forecast at 50% and 10% POE

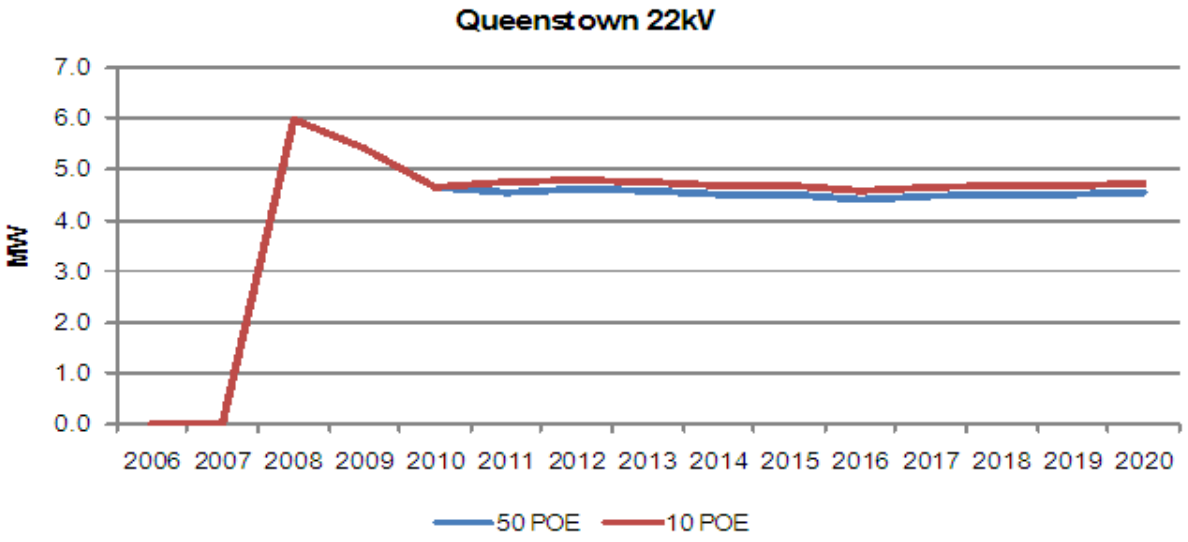
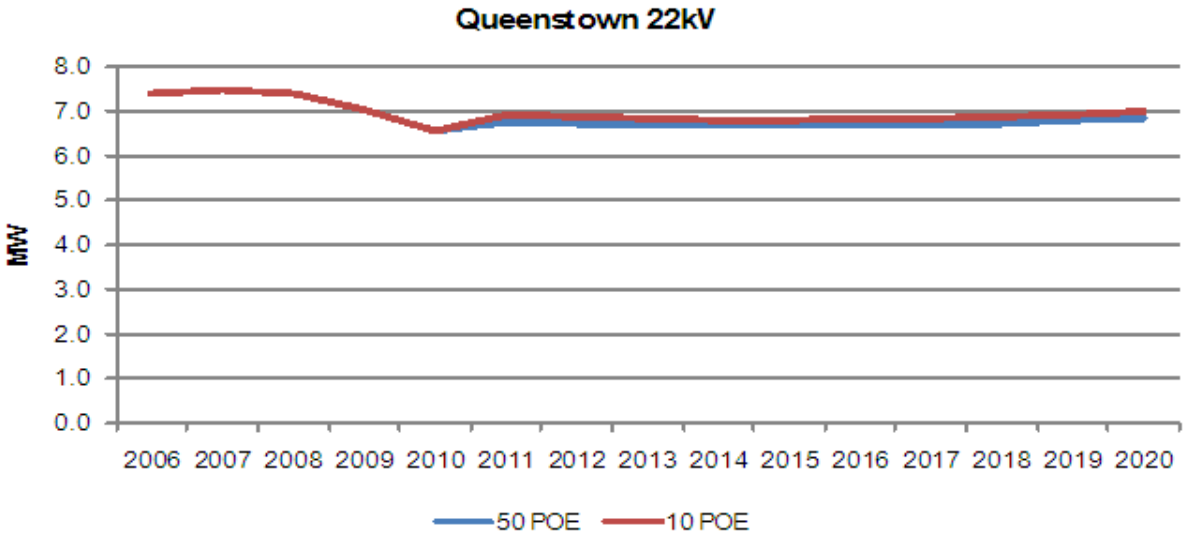
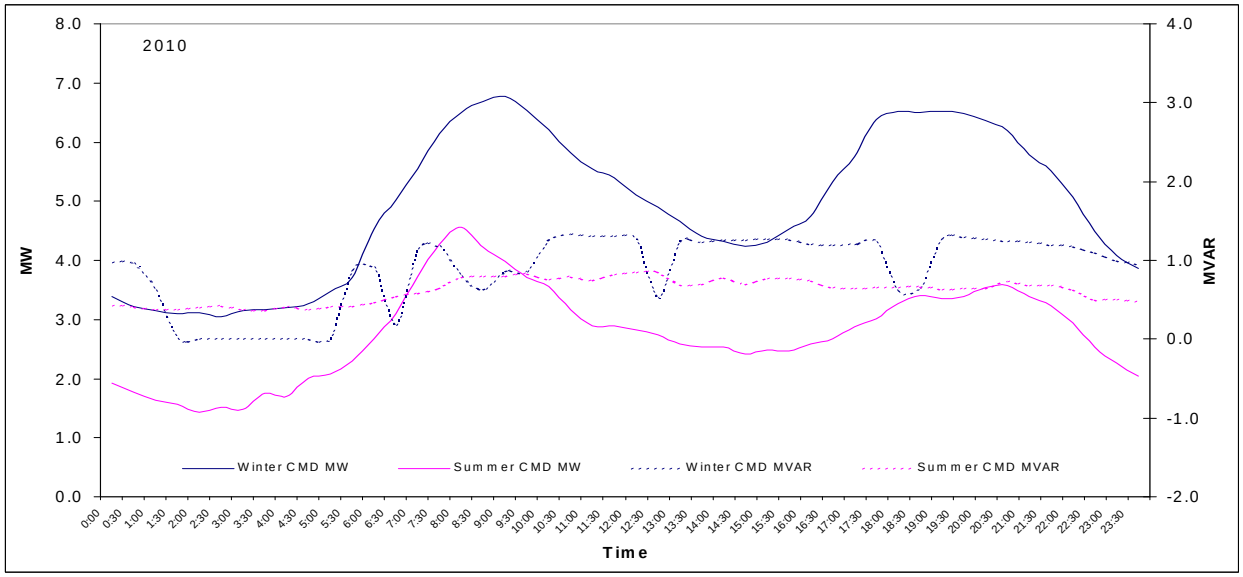


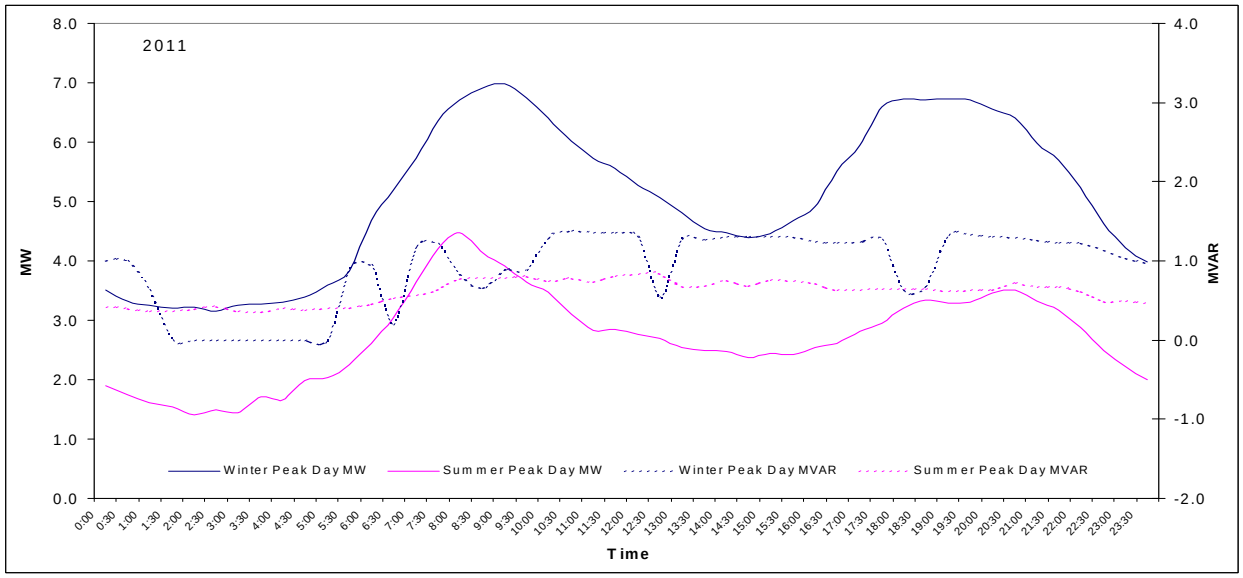
Figure 4-148 Queenstown Site Winter Load Forecast at 50% and 10% POE

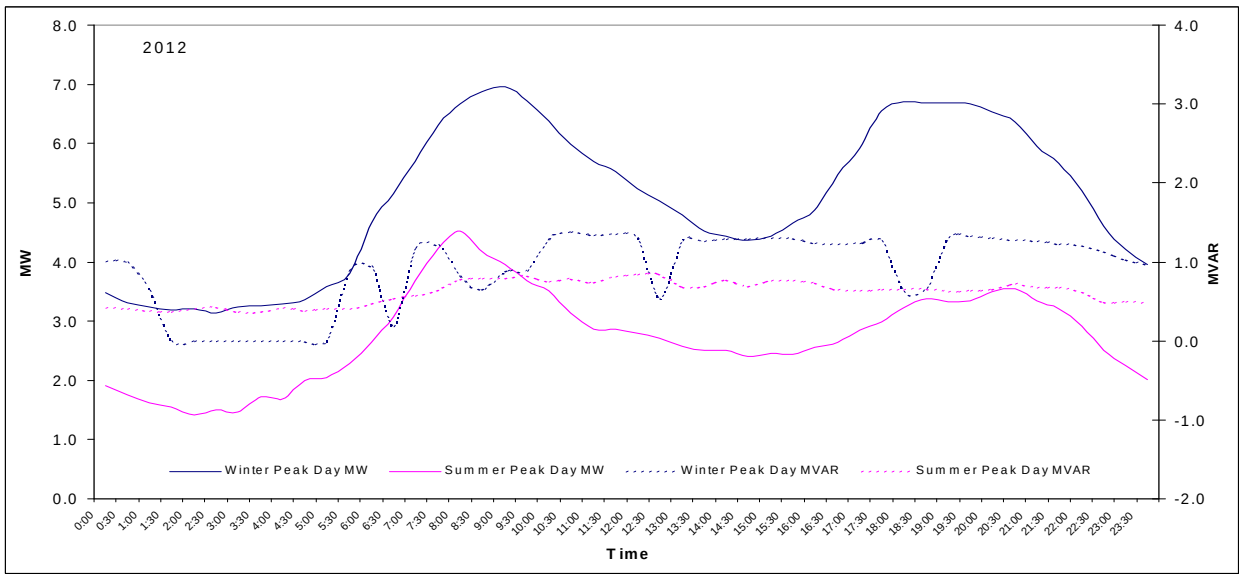


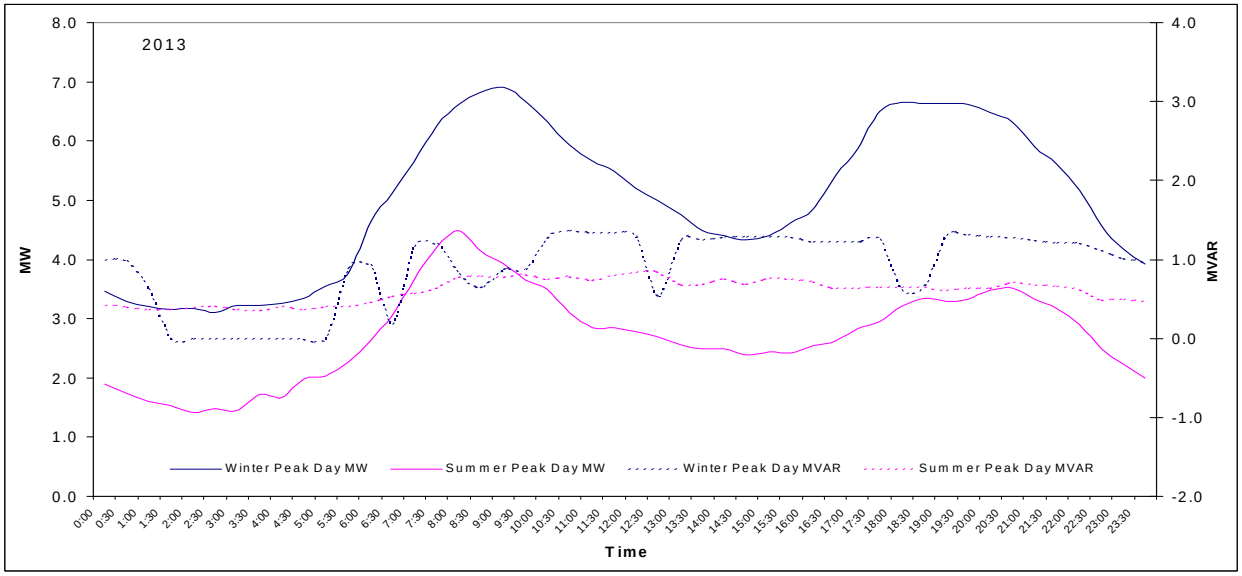
Load Profiles:

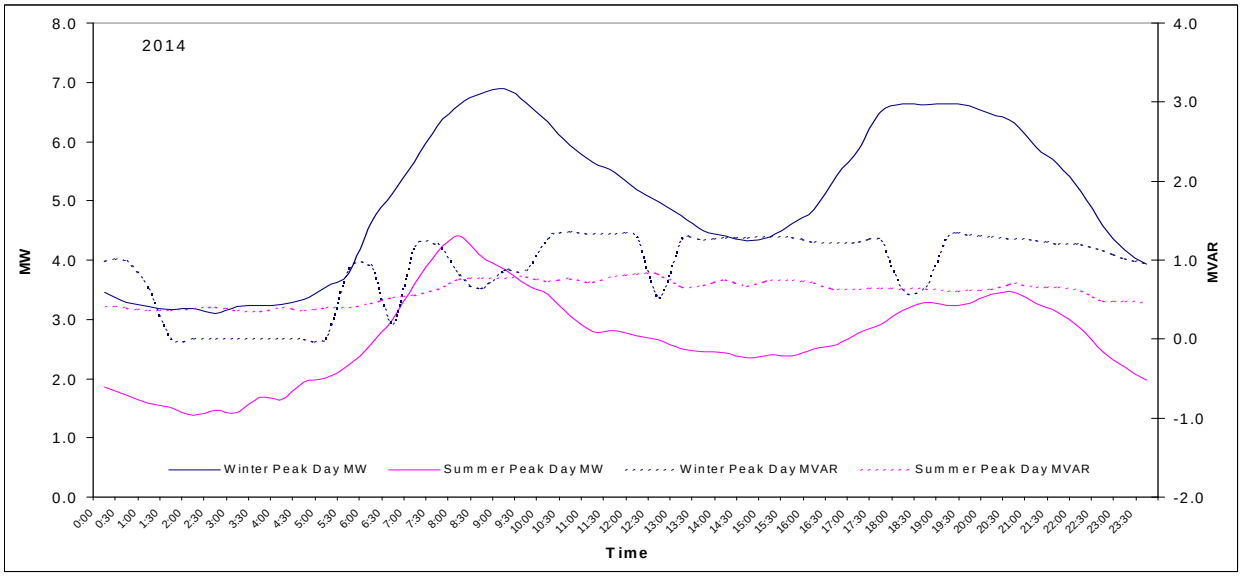
Figure 4-149 Load Profiles: Queenstown Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

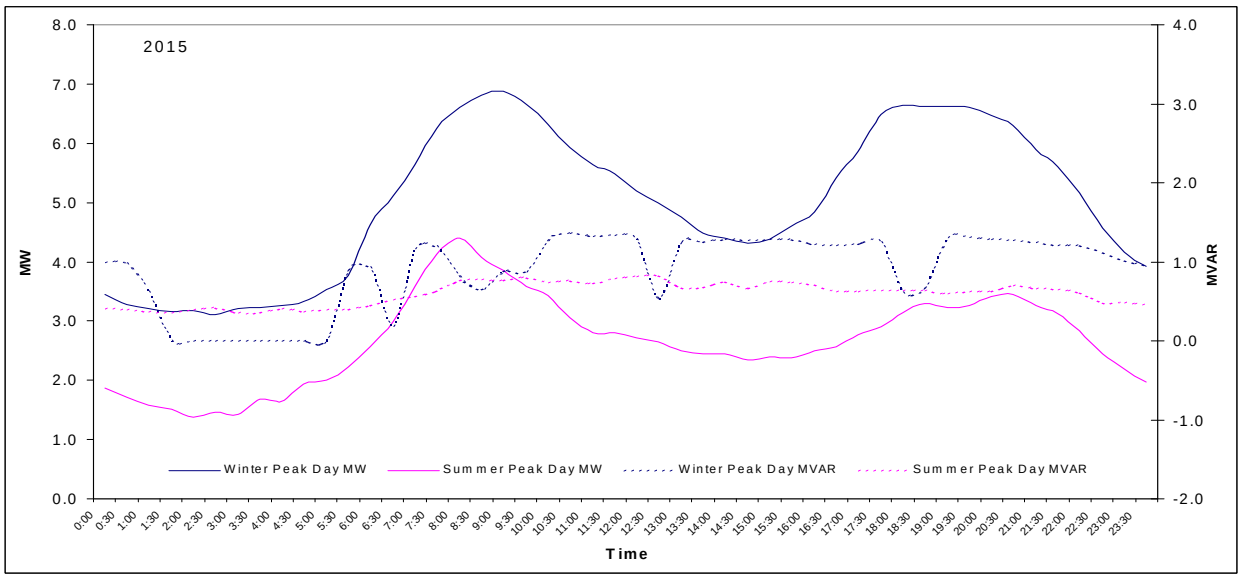
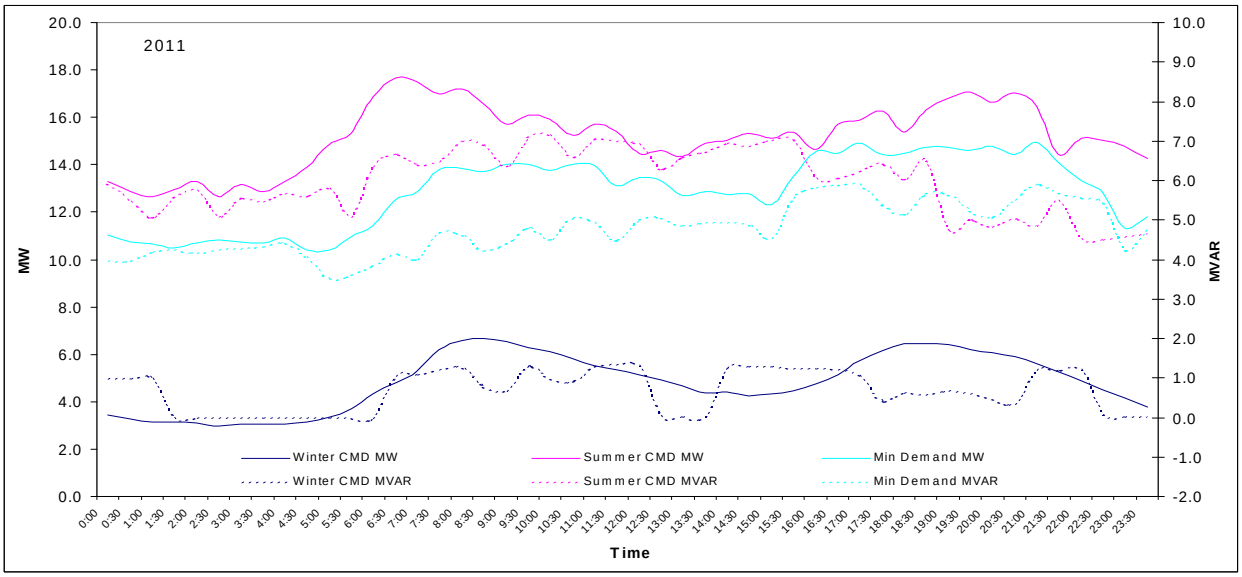
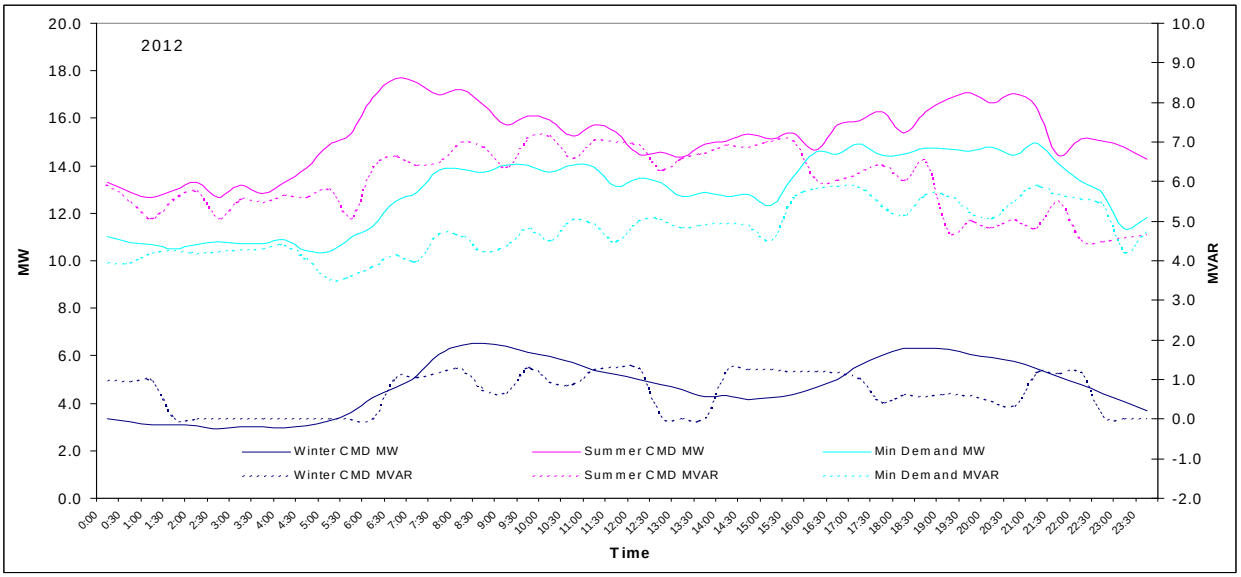
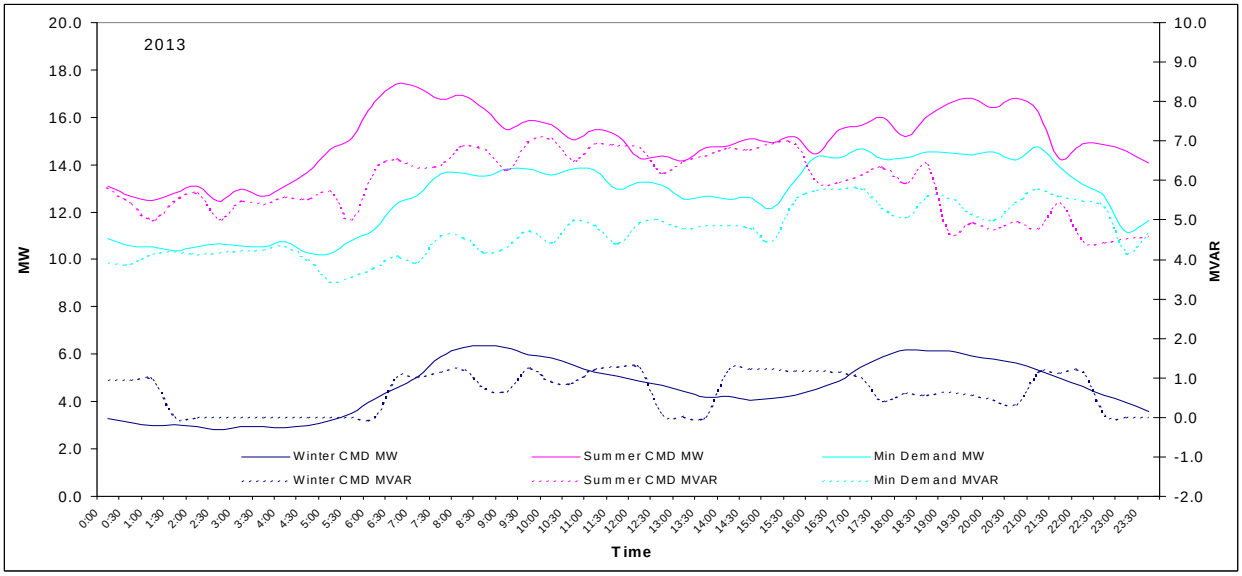
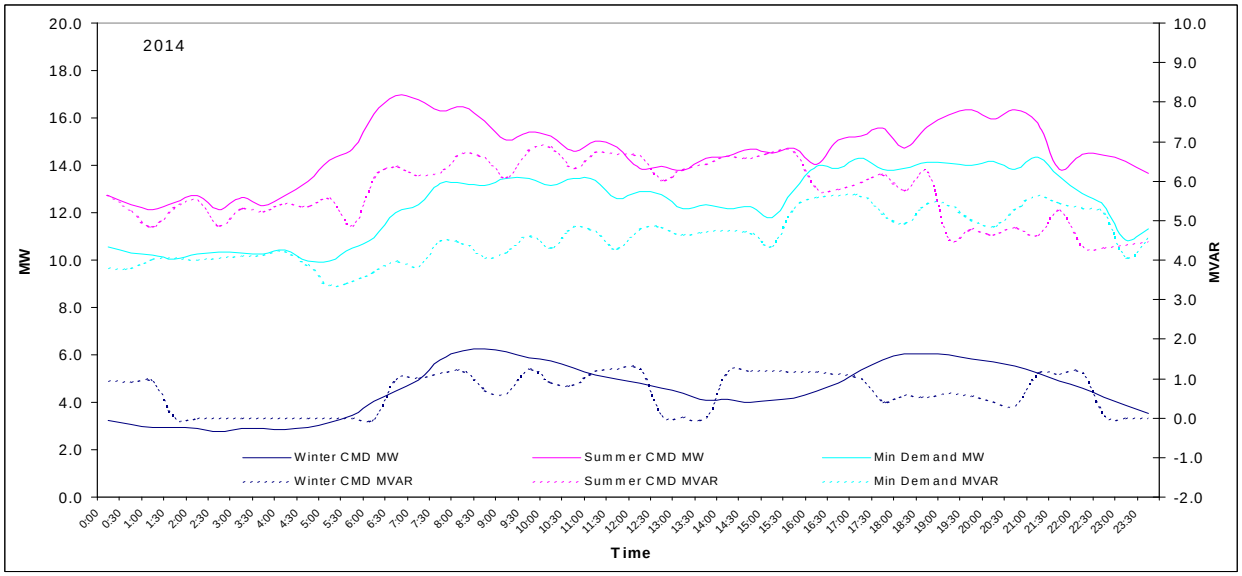

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

Figure 4-150 Load Profiles: Queenstown Substation Day of Summer/Winter CMD, Peak & Min Demand






2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

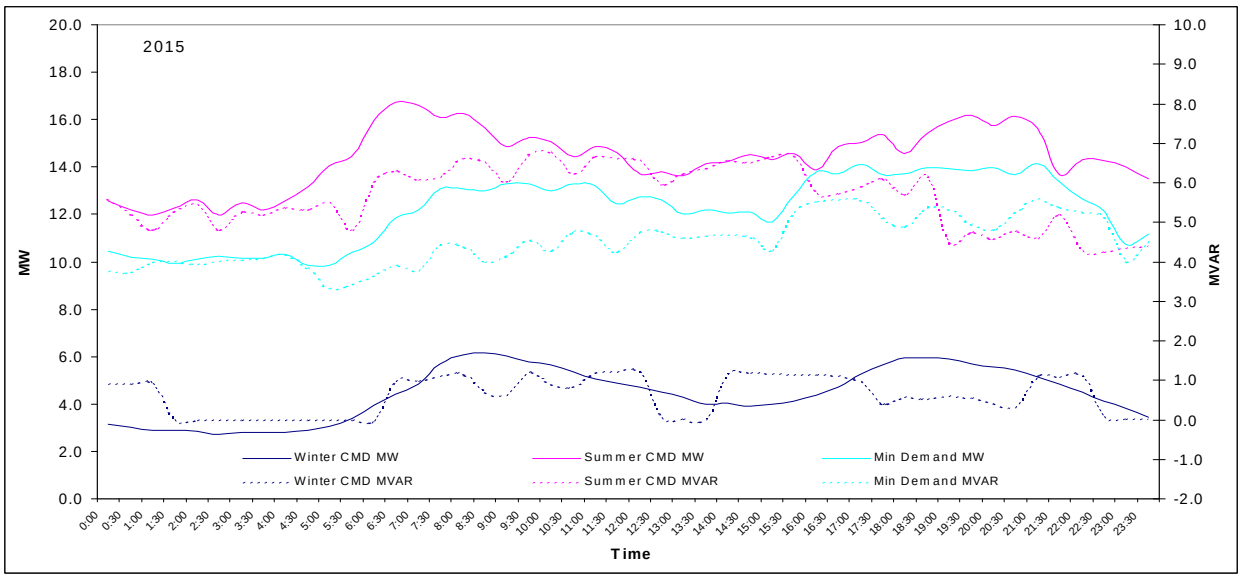
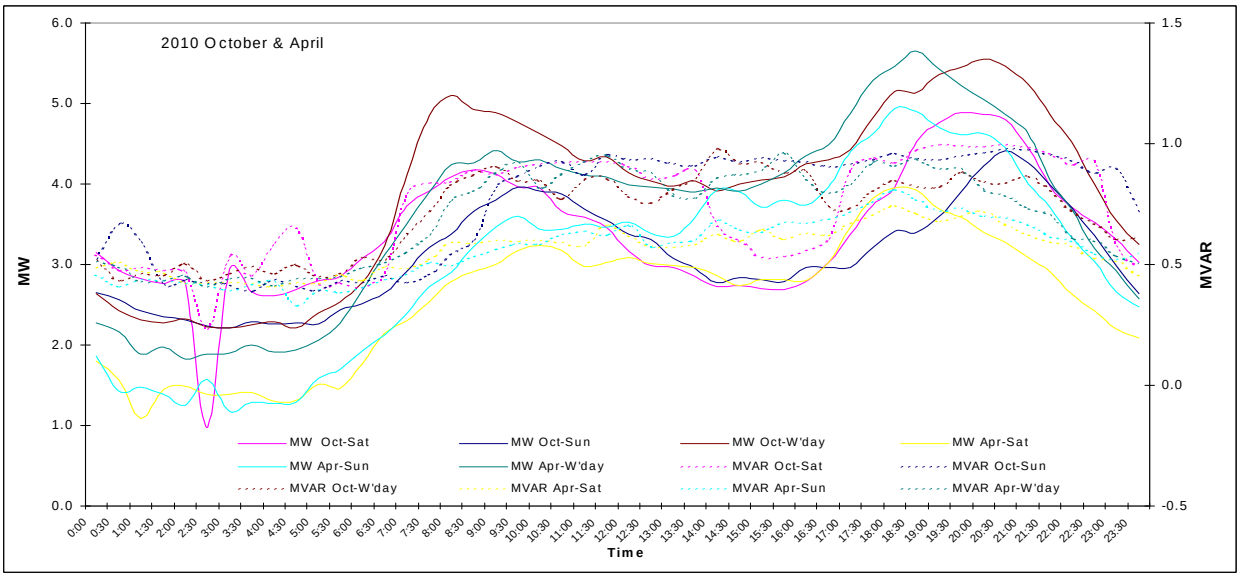
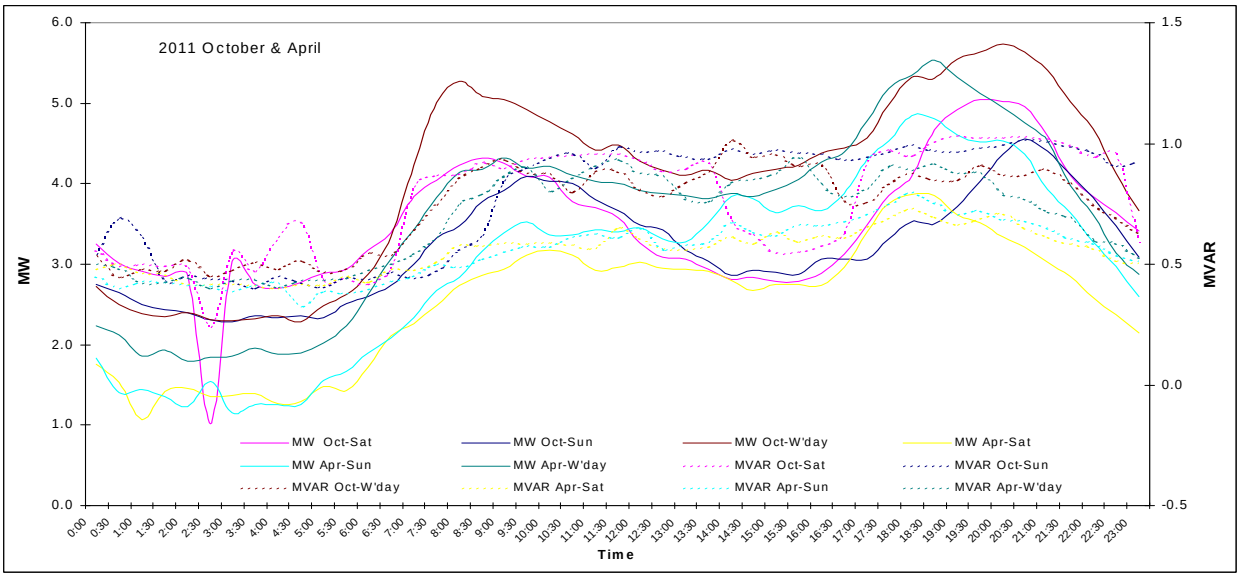
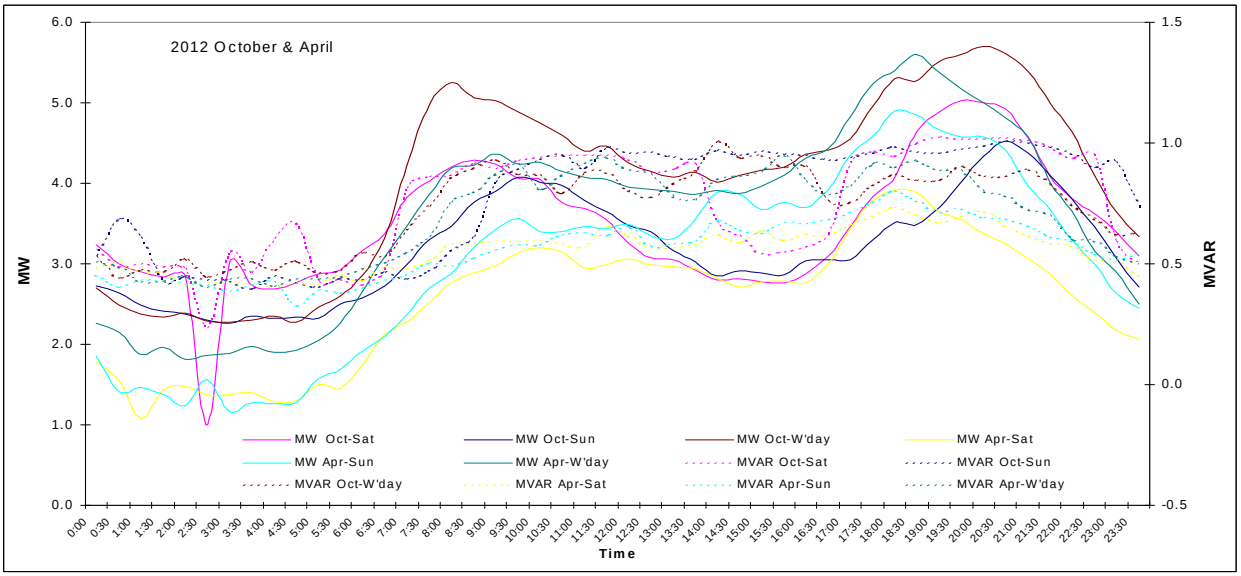
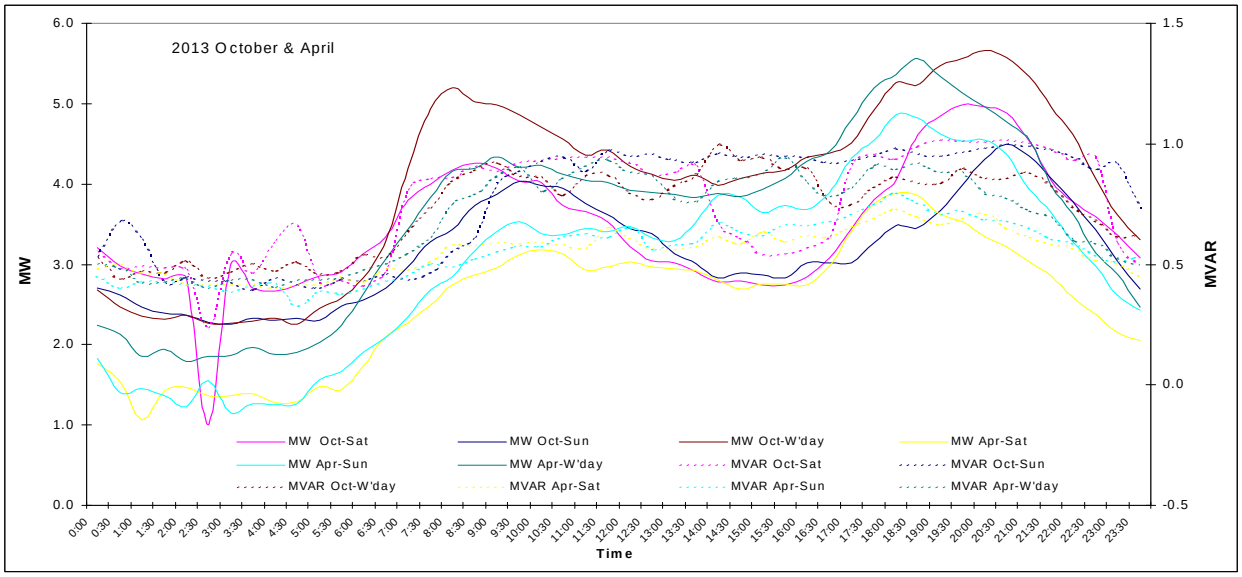

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

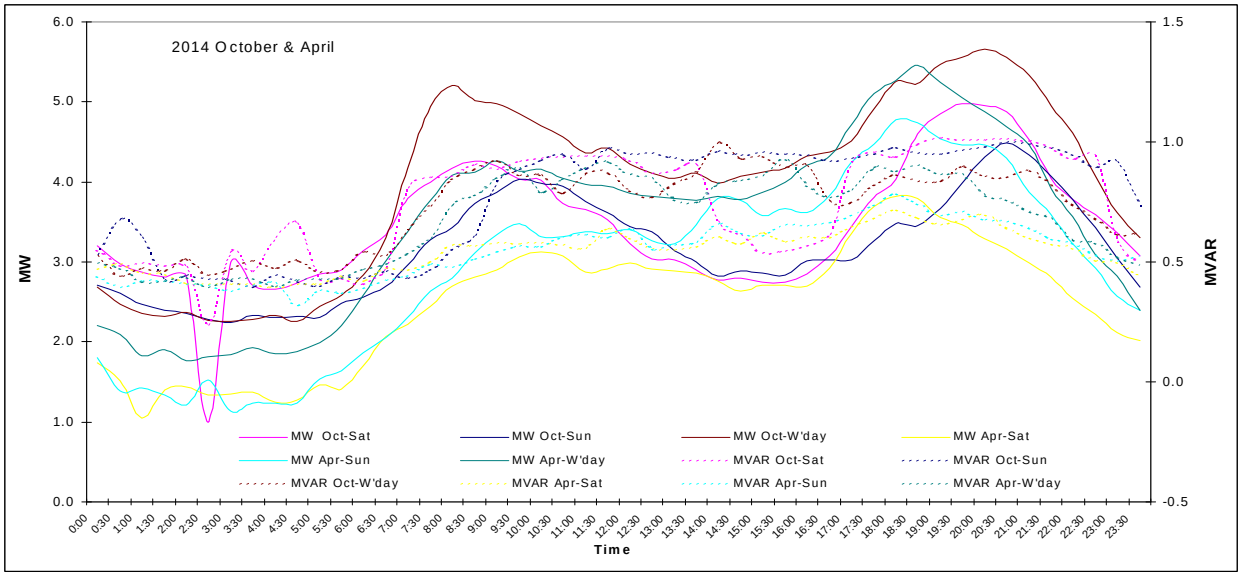
Figure 4-151 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

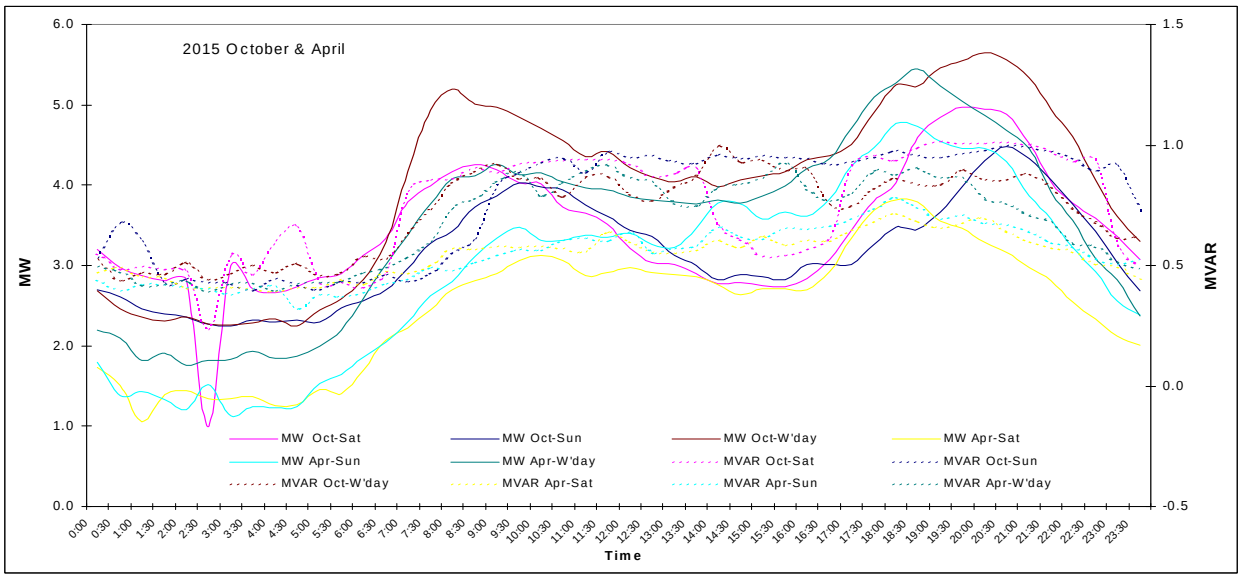
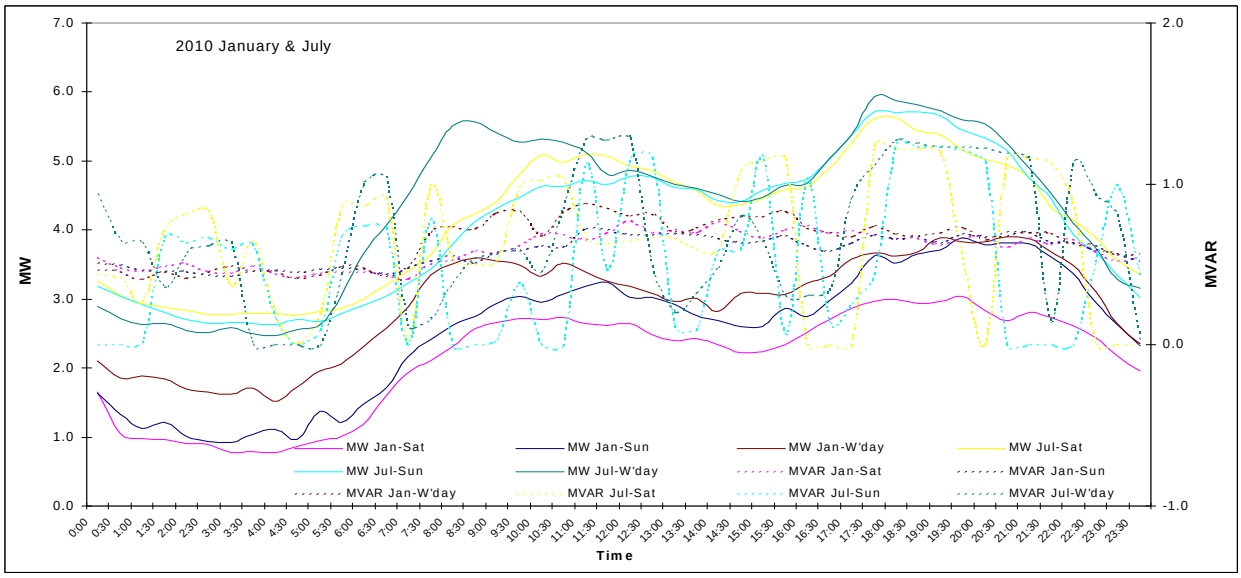
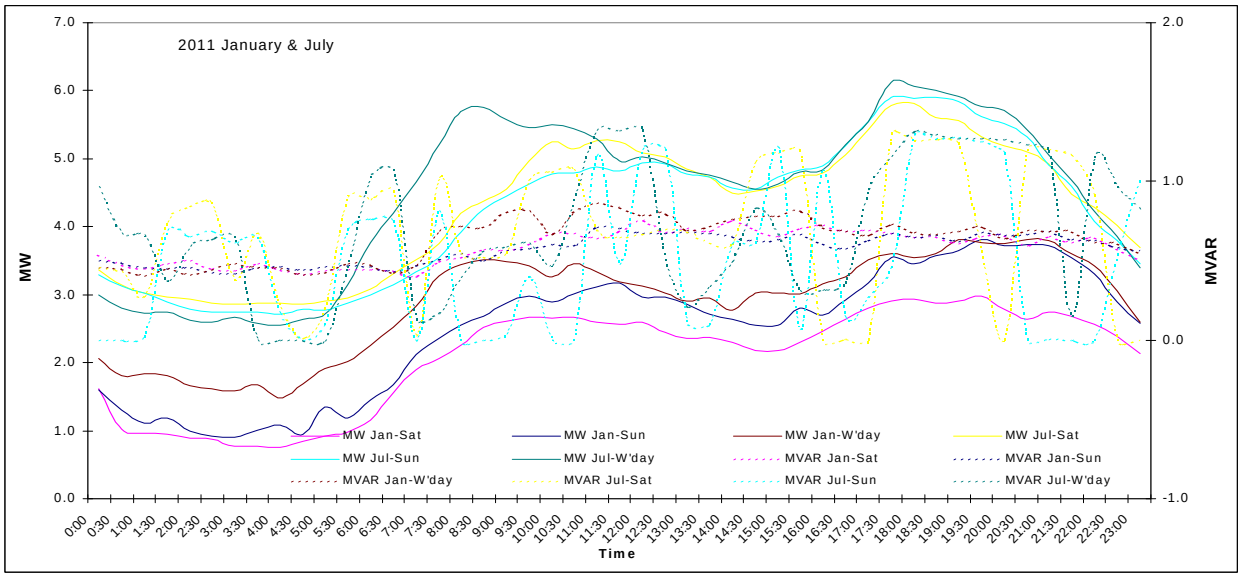
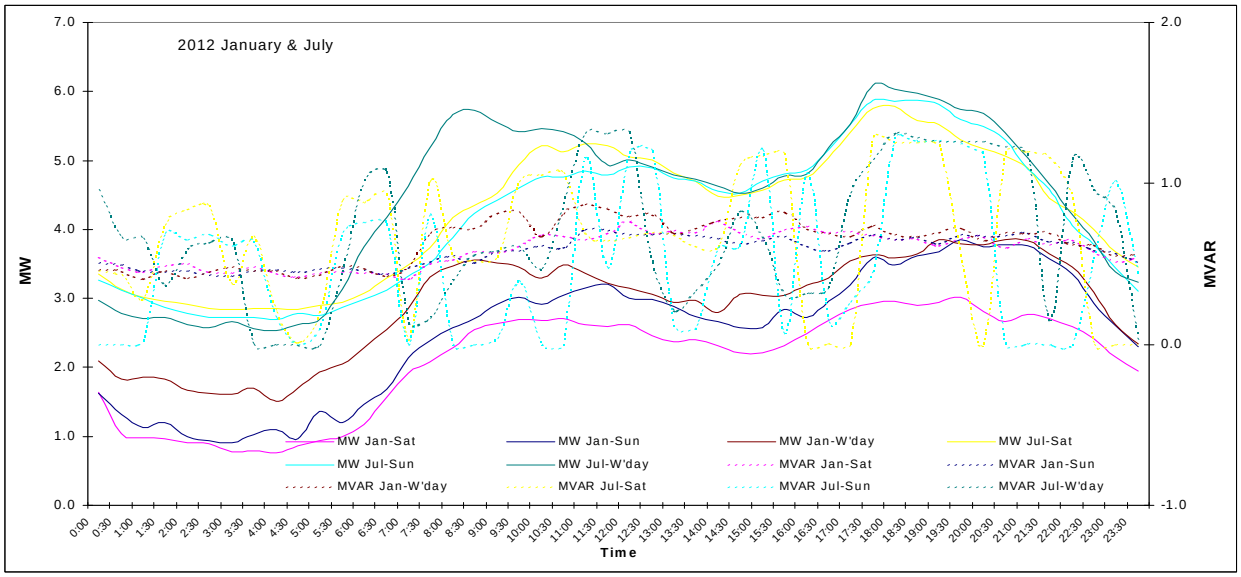
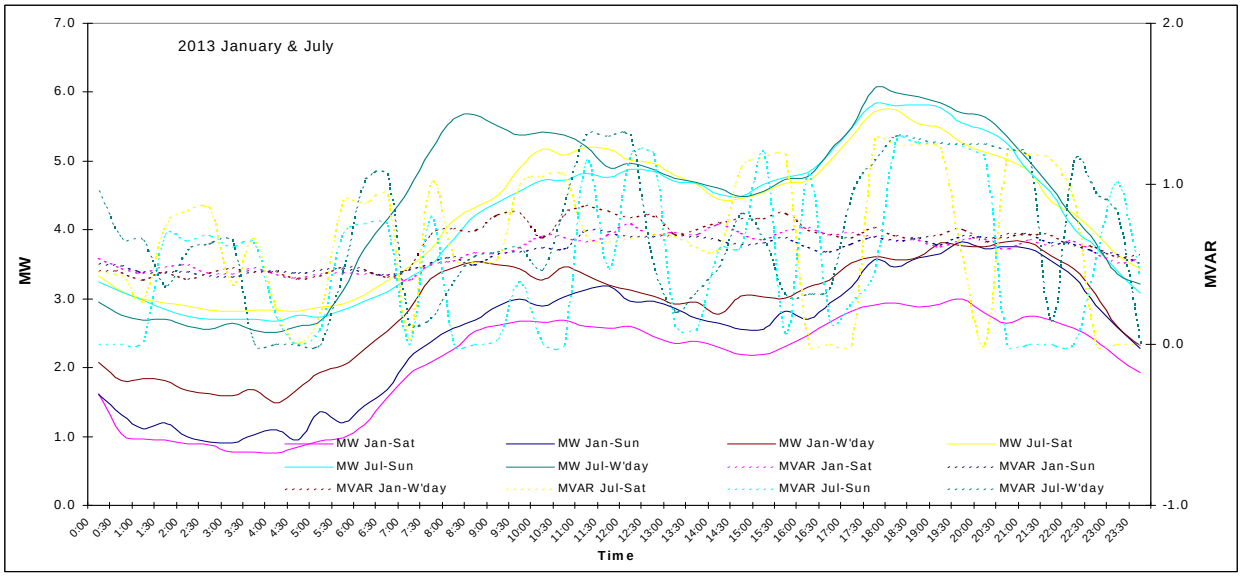

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

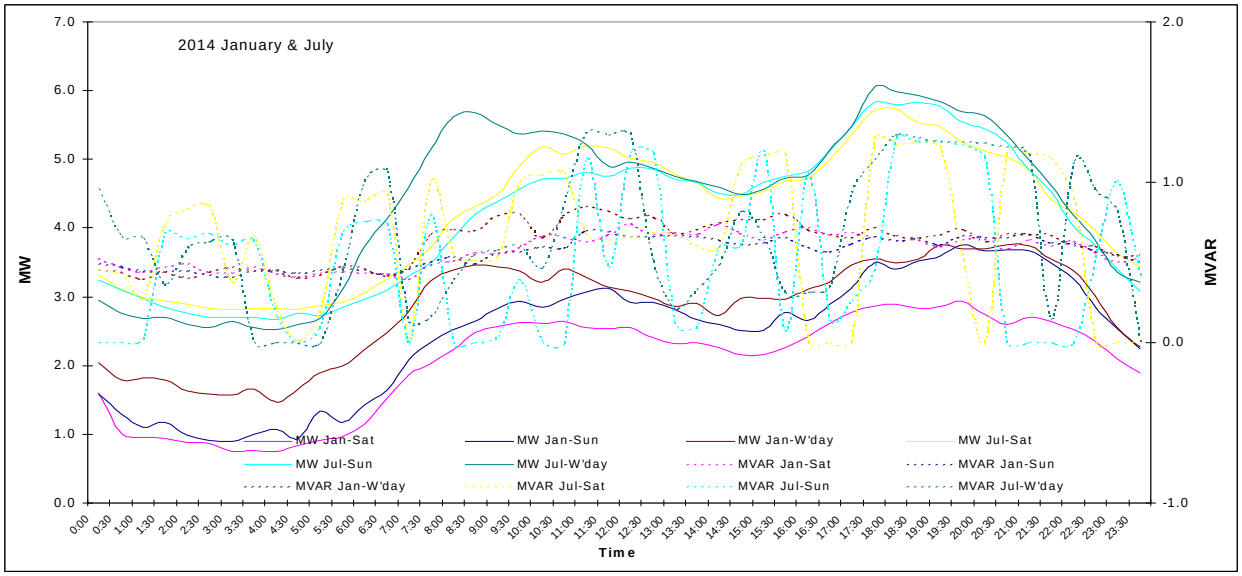
Figure 4-152 Load Profiles: Weekday, Saturday, Sunday for January & July

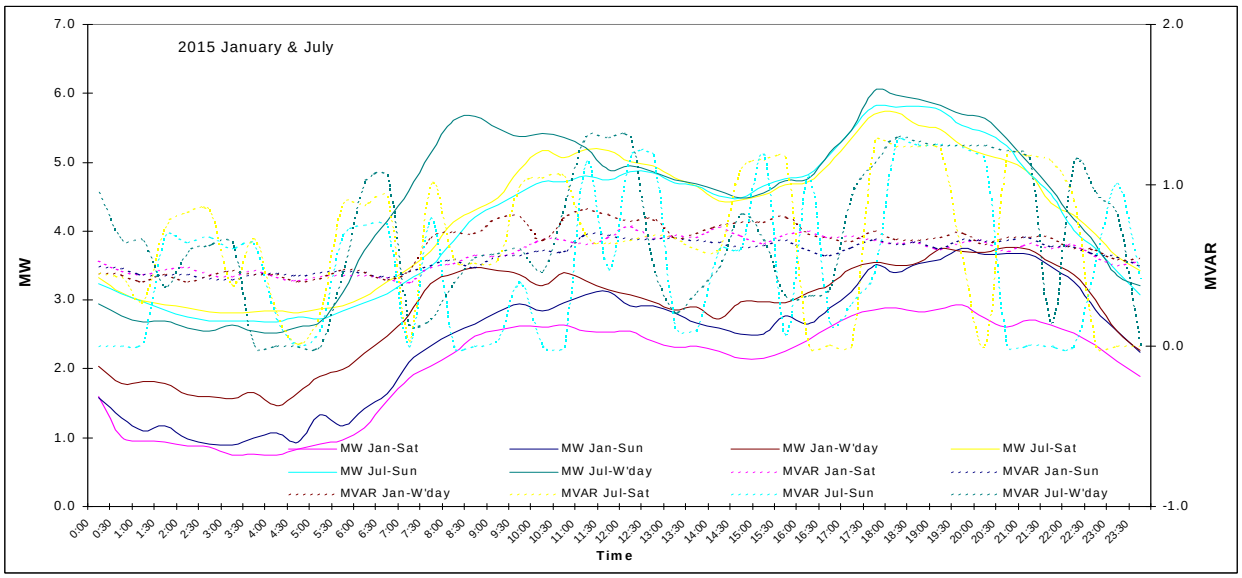







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.28 Railton

Description:

The Substation is located at Railton and is known as "Railton Substation". The substation is owned by Transend.

Table 4-102 Railton Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	8	100	50

Embedded Generation:

Two undispatched embedded generators are connected to this substation. The first unit was connected prior to 1998 and the second unit in summer 2009. The operational profile for the units is anticipated to be as per the following table. The effect of the units on the peak summer and winter demand has been included in the demand forecast for this connection site.

A third 0.24 MW wind turbine is also connected to this site, due to the small size and intermittent operation, the effect of the unit on the peak summer and winter demand has **not** been included in the demand forecast for this connection site.

Unit 1	**2011**	**2012**	**2013**	**2014**	**2015**
Rating (MW)	2.1	2.1	2.1	2.1	2.1
Output – Summer (MW)	2.0	2.0	2.0	2.0	2.0
Output – Winter (MW)	1.0	1.0	1.0	1.0	1.0
Operating characteristics	Water turbine unit associated lake storage and water release in summer for irrigation, 24 hour operation.				
Unit 2	**2011**	**2012**	**2013**	**2014**	**2015**
Rating (MW)	0.7	0.7	0.7	0.7	0.7
Output – Summer (MW)	0.5	0.5	0.5	0.5	0.5
Output – Winter (MW)	0.5	0.5	0.5	0.5	0.5
Operating characteristics	Water turbine unit, 24 hour operation.				

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing management programs included in the forecast for this connection site.

Forecast Results:

Table 4-103 Railton Site Winter load forecast

Railton	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	49.22	51.53	49.10	51.40	49.22	51.53	49.55	51.88
2006	52.55	54.98	43.99	46.02	52.55	54.98	44.26	46.31
2007	49.31	51.73	48.70	51.09	49.31	51.73	49.17	51.58
2008	50.96	53.52	50.31	52.83	50.96	53.52	50.88	53.44
2009	47.68	49.84	47.52	49.68	47.68	49.84	48.30	50.50
2010	49.46	49.55	48.70	48.79	49.46	49.55	49.13	49.22
2011	50.79	50.88	50.01	50.10	50.91	51.00	50.13	50.22
2012	50.17	50.26	49.40	49.49	50.29	50.39	49.52	49.62
2013	49.44	49.54	48.69	48.78	49.61	49.71	48.85	48.94
2014	49.07	49.16	48.31	48.40	49.22	49.31	48.47	48.56
2015	48.67	48.76	47.92	48.01	48.86	48.95	48.11	48.20
2016	48.40	48.49	47.66	47.75	48.59	48.68	47.84	47.93
2017	48.13	48.22	47.39	47.48	48.35	48.44	47.61	47.70
2018	48.05	48.14	47.31	47.40	48.25	48.34	47.51	47.60
2019	48.08	48.17	47.35	47.43	48.35	48.44	47.61	47.70
2020	48.23	48.32	47.50	47.58	48.49	48.58	47.74	47.83

Table 4-104 Railton Site Summer load forecast

Railton	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	44.09	48.18	35.39	38.67	44.09	48.18	35.39	38.67
2006	44.11	47.84	42.17	45.74	44.11	47.84	42.17	45.74
2007	49.52	53.34	48.49	52.23	49.52	53.34	50.51	54.41
2008	43.27	47.53	36.30	39.88	43.27	47.53	36.30	39.88
2009	44.55	49.07	41.59	45.81	44.55	49.07	41.71	45.94
2010	45.01	45.57	38.29	38.77	45.01	45.57	38.29	38.77
2011	44.12	44.67	37.54	38.01	44.89	45.45	38.19	38.67
2012	44.57	45.13	37.92	38.39	45.37	45.94	38.60	39.08
2013	44.24	44.80	37.64	38.11	45.06	45.62	38.33	38.81
2014	43.47	44.01	36.98	37.44	44.21	44.76	37.61	38.08
2015	43.41	43.95	36.93	37.39	44.17	44.72	37.58	38.04
2016	42.55	43.08	36.20	36.65	43.34	43.88	36.88	37.33
2017	43.30	43.84	36.84	37.30	44.07	44.61	37.49	37.96
2018	43.41	43.95	36.93	37.39	44.19	44.74	37.60	38.07
2019	43.55	44.09	37.05	37.51	44.32	44.87	37.71	38.17
2020	43.77	44.31	37.24	37.70	44.53	45.08	37.88	38.36

Figure 4-153 Railton Site Summer Load Forecast at 50% and 10% POE

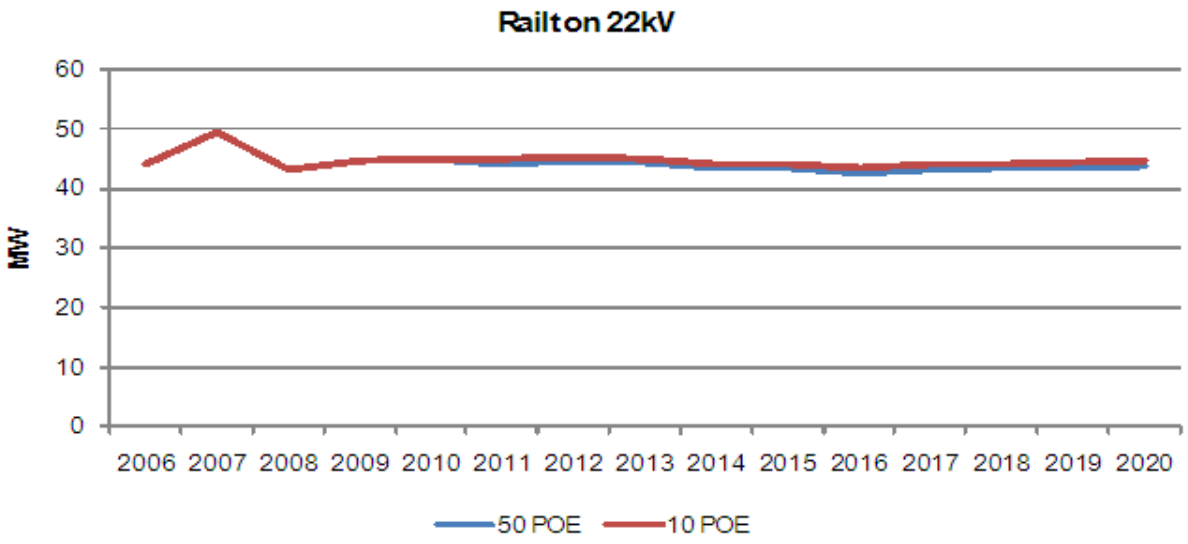
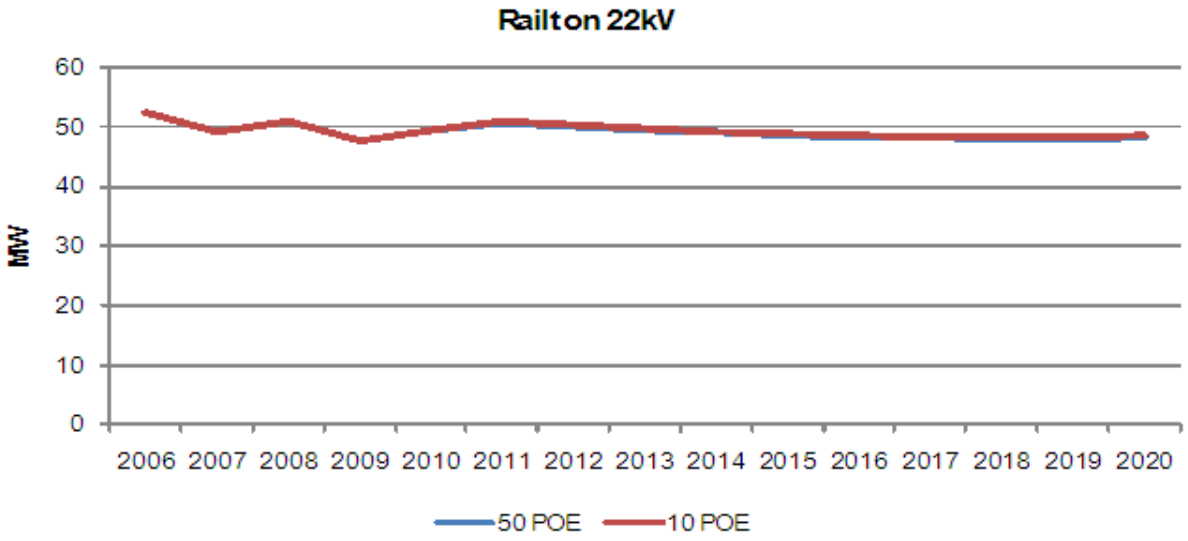
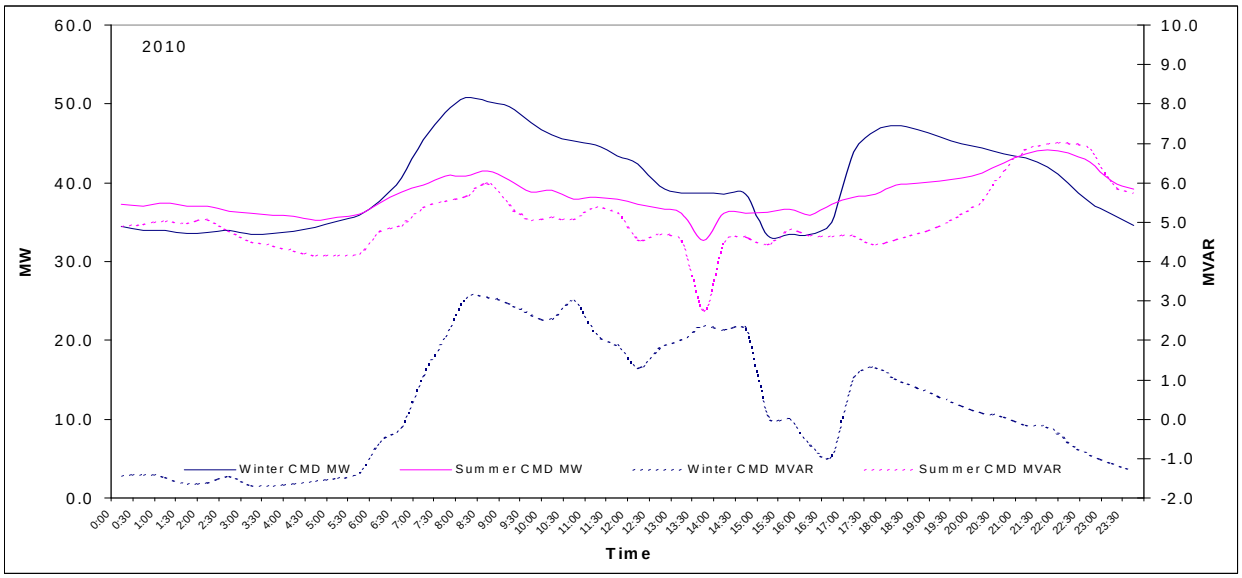


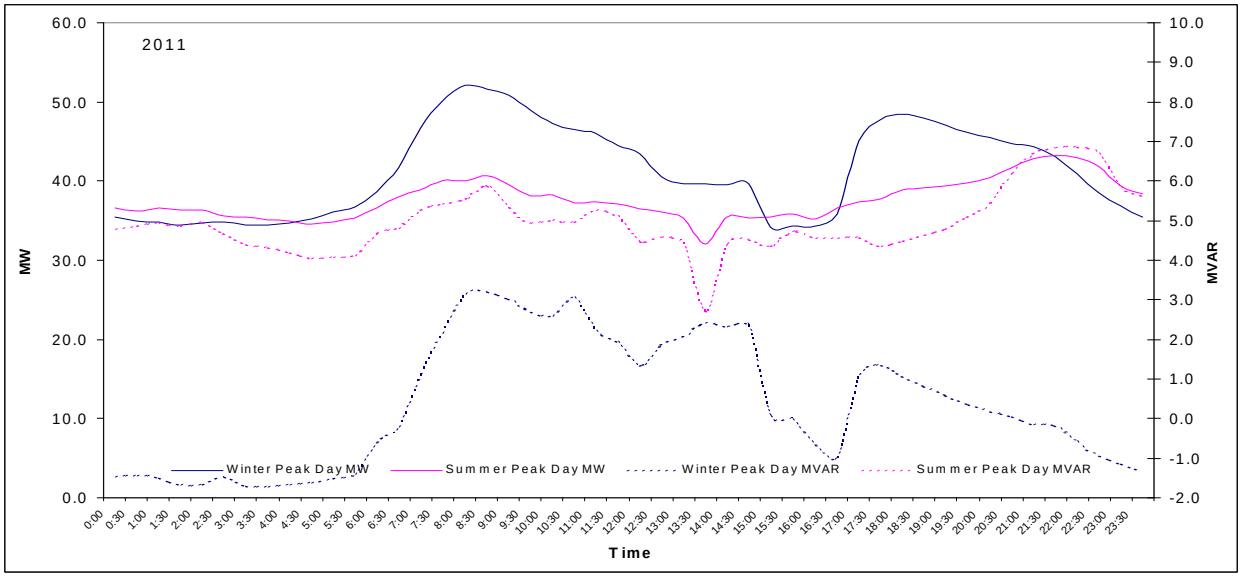
Figure 4-154 Railton Site Winter Load Forecast at 50% and 10% POE

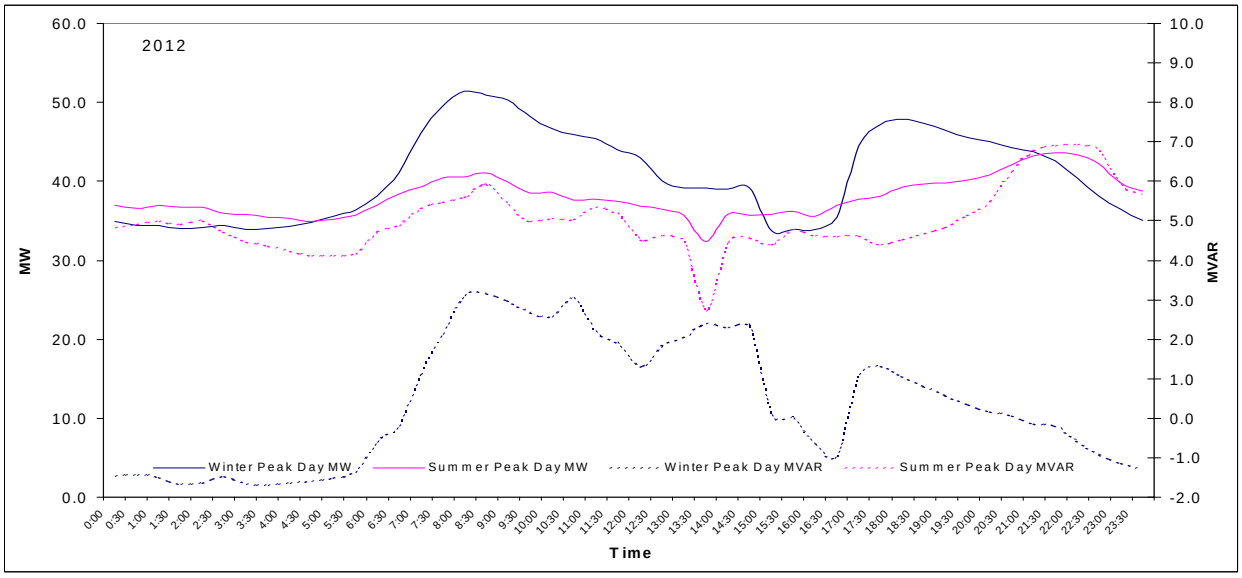


Load Profiles:

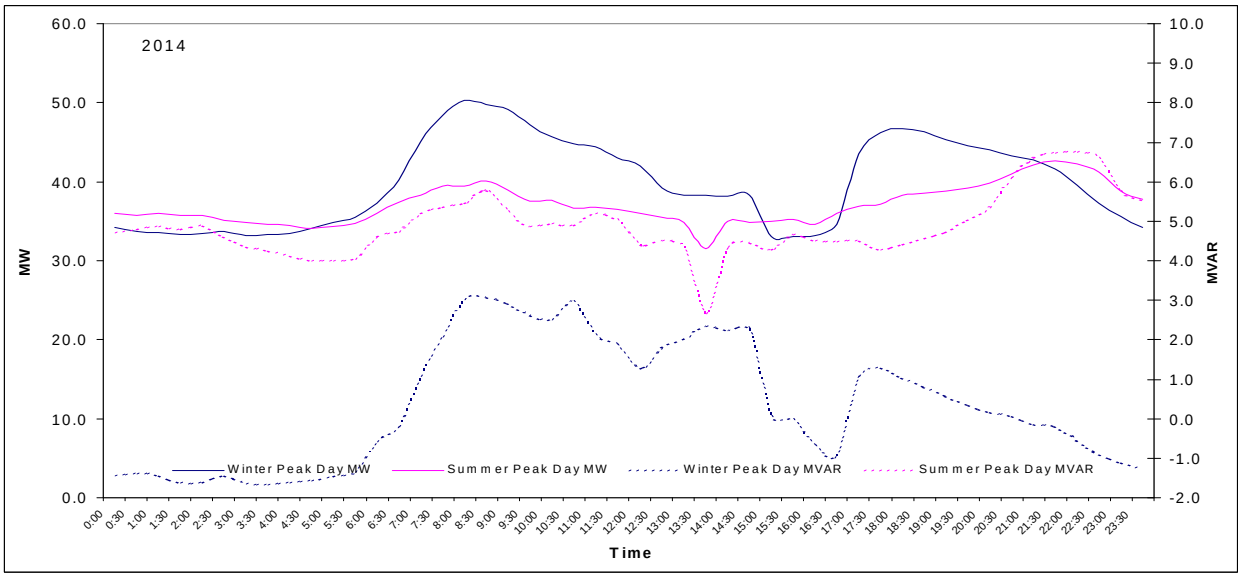
Figure 4-155 Load Profiles: Railton Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

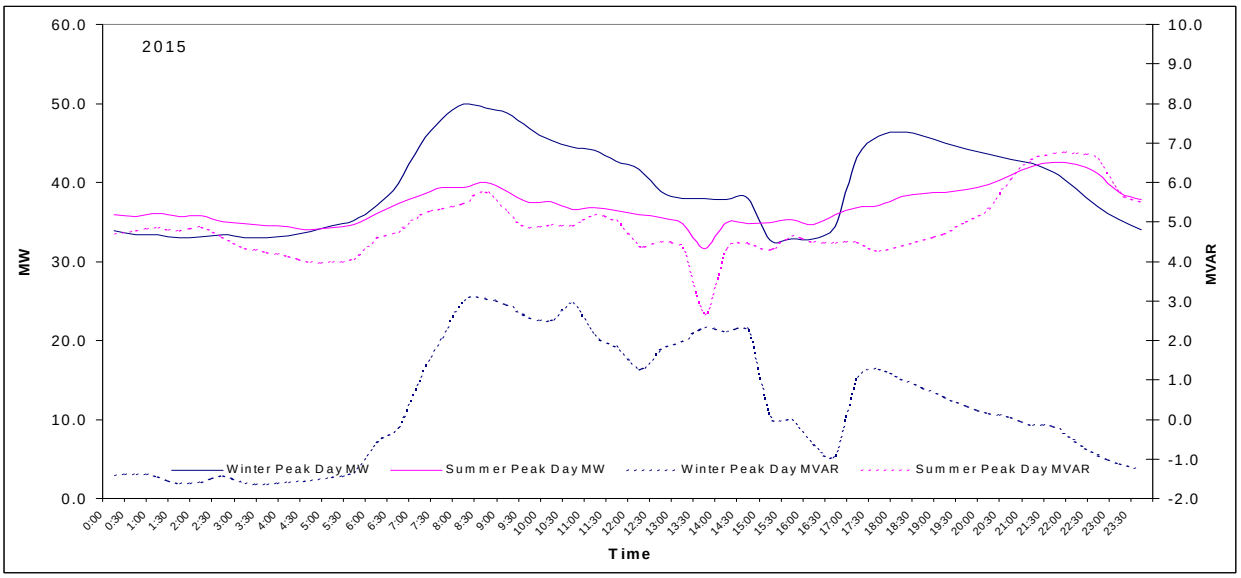
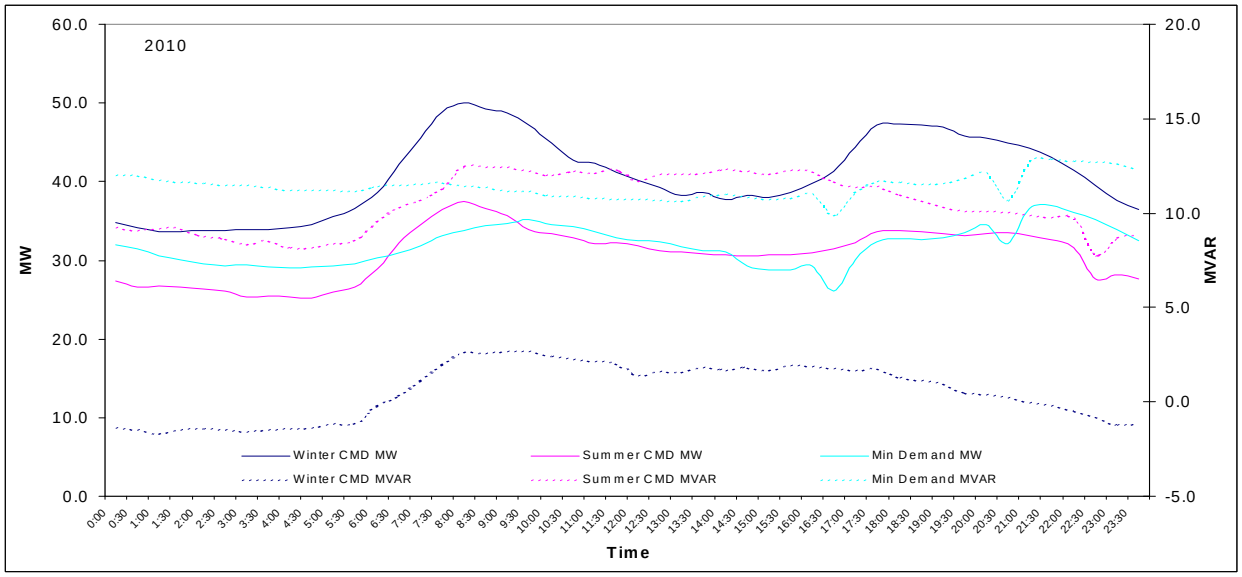
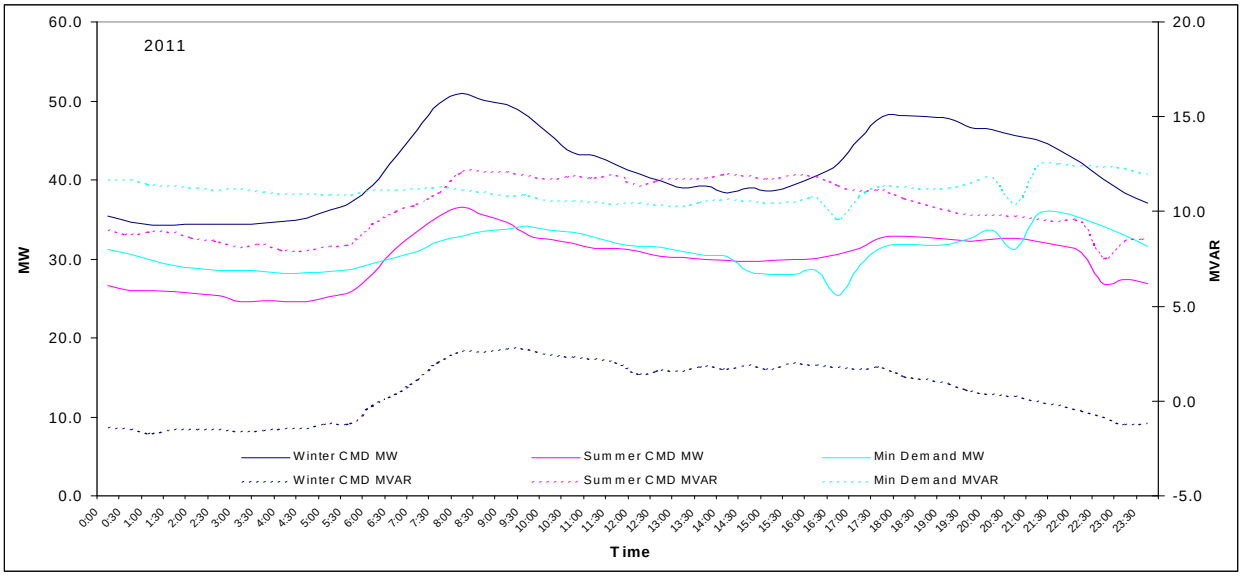
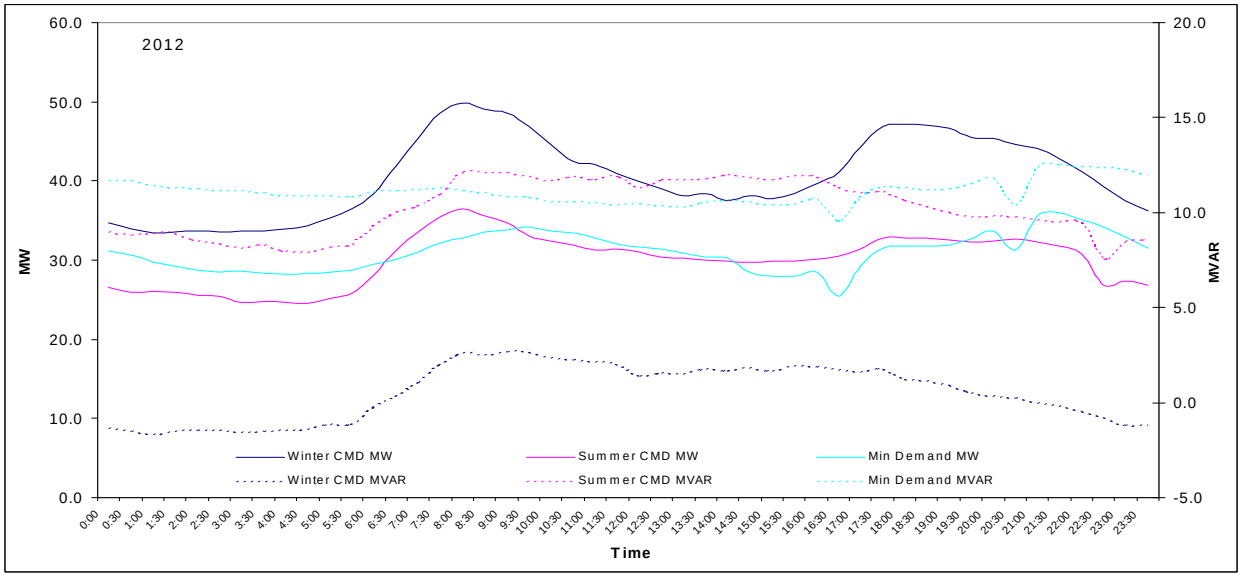
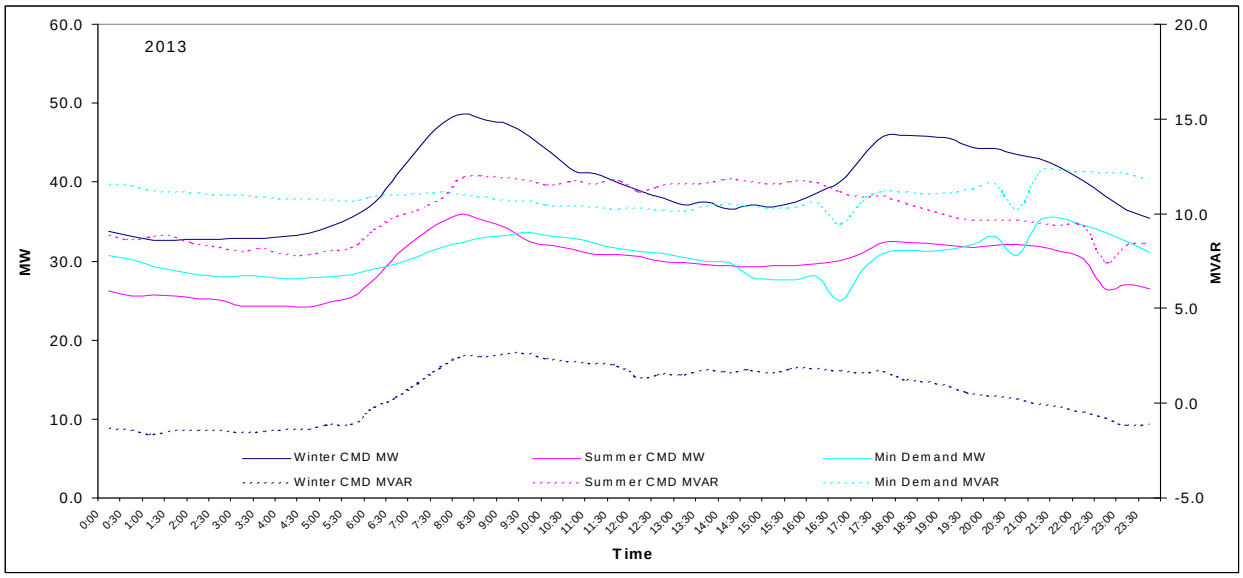

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

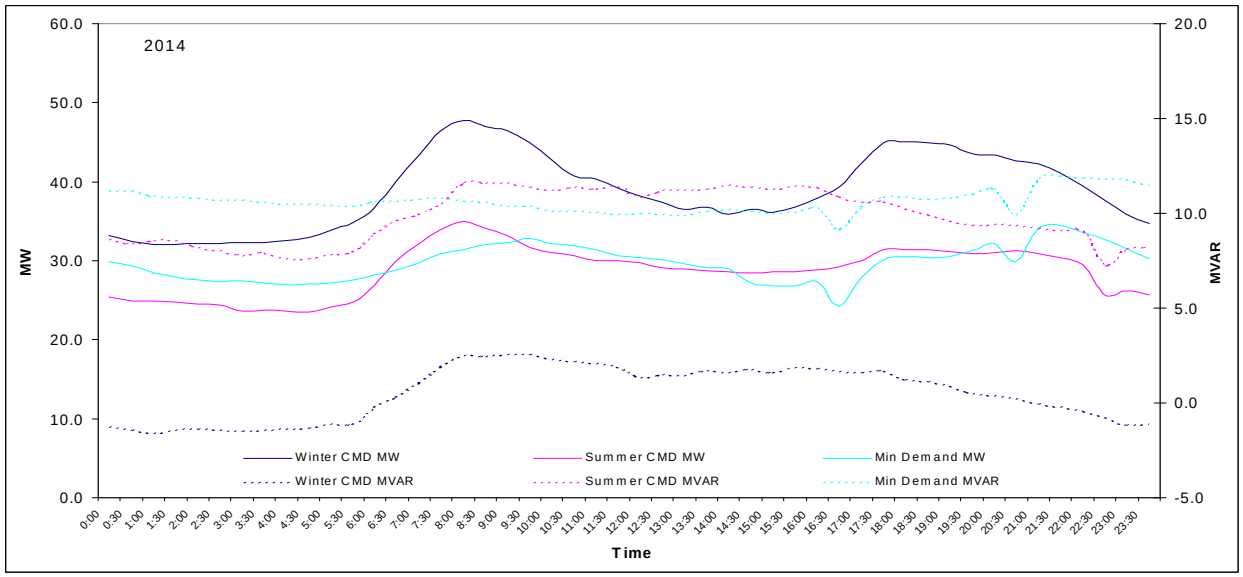
Figure 4-156 Load Profiles: Railton Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

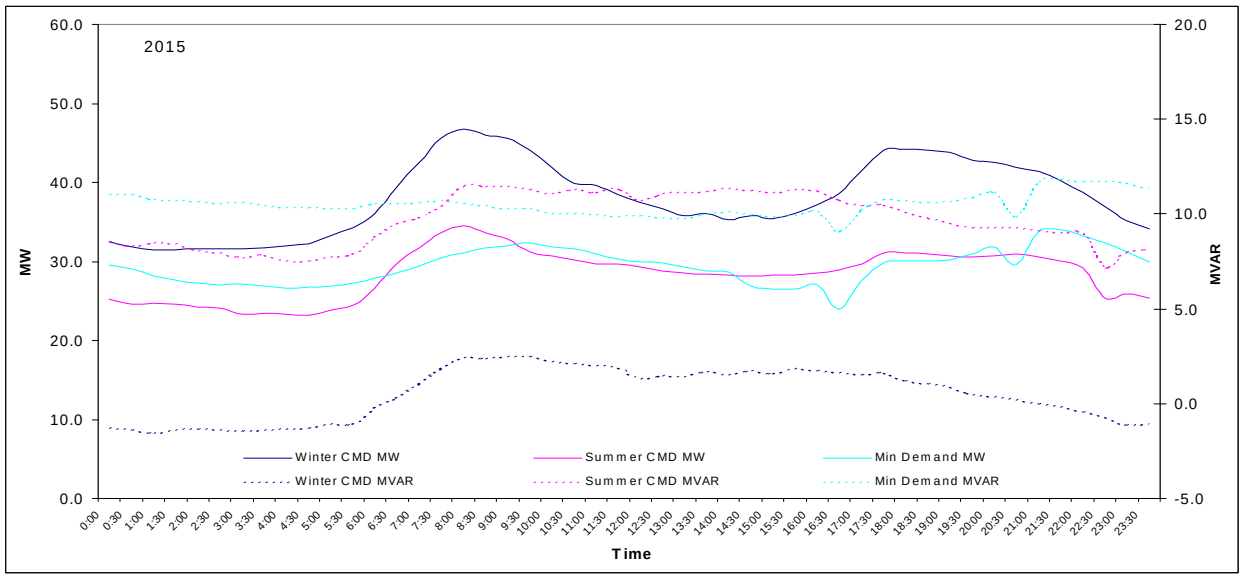
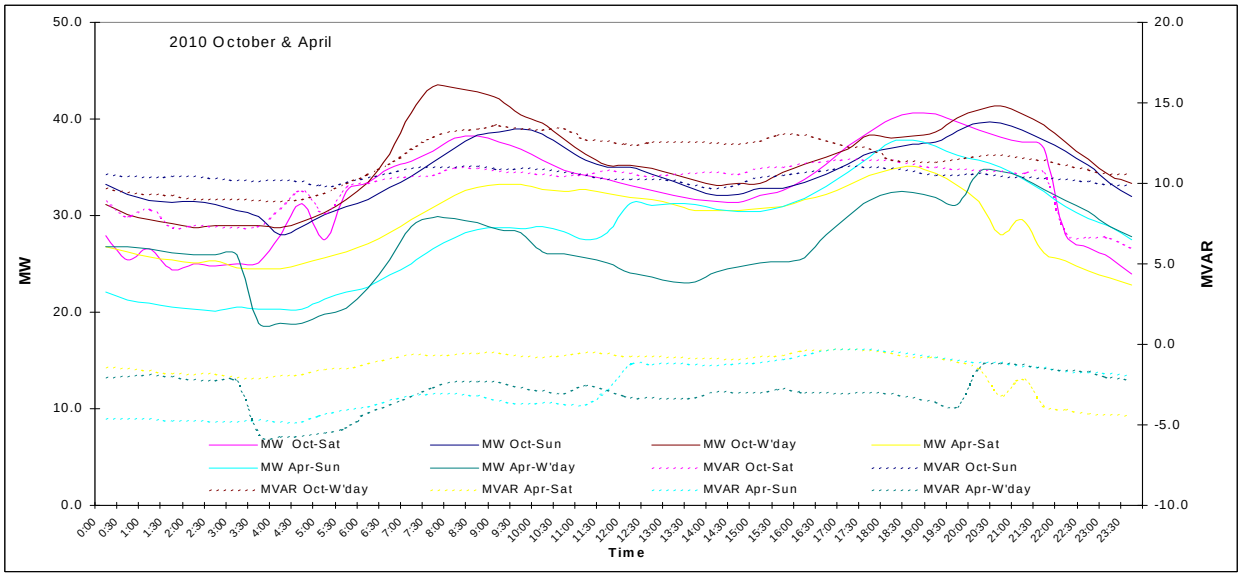
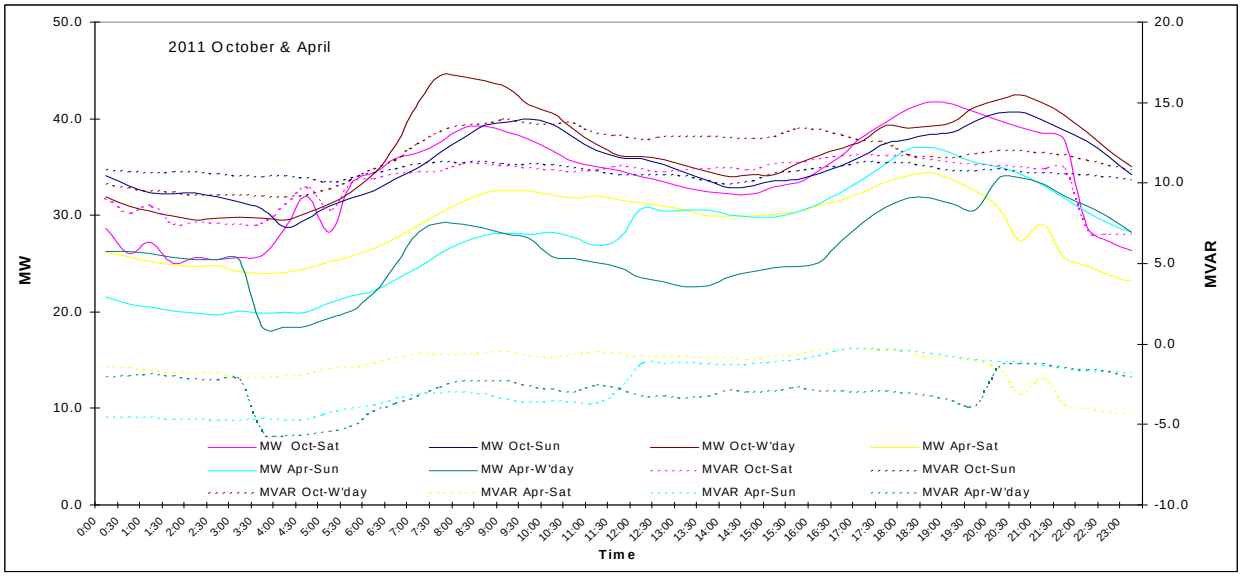
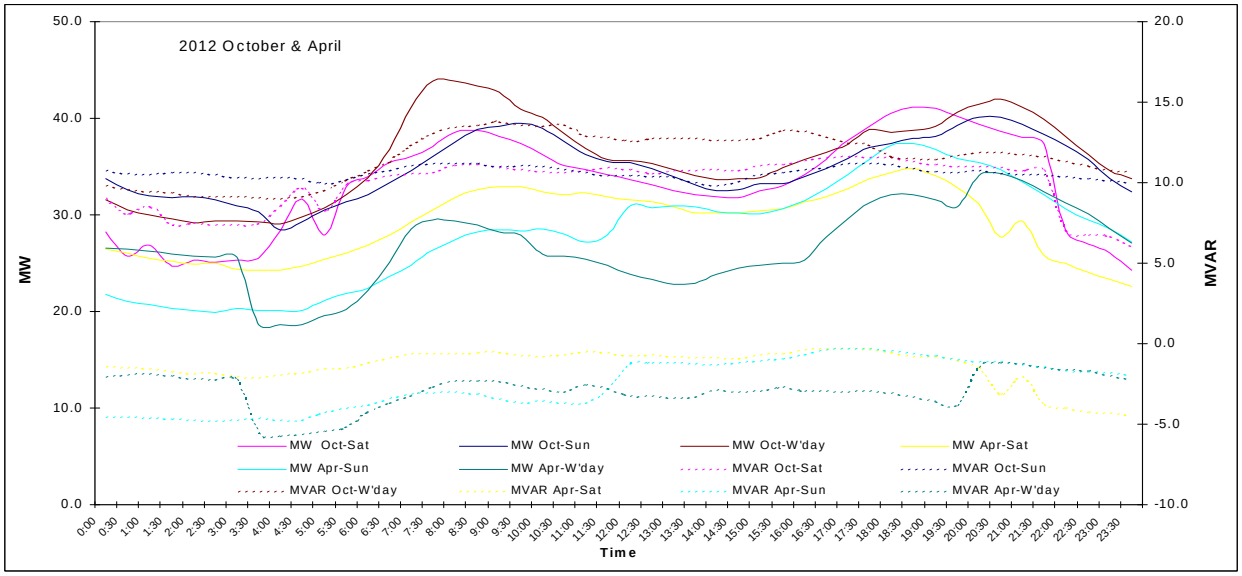
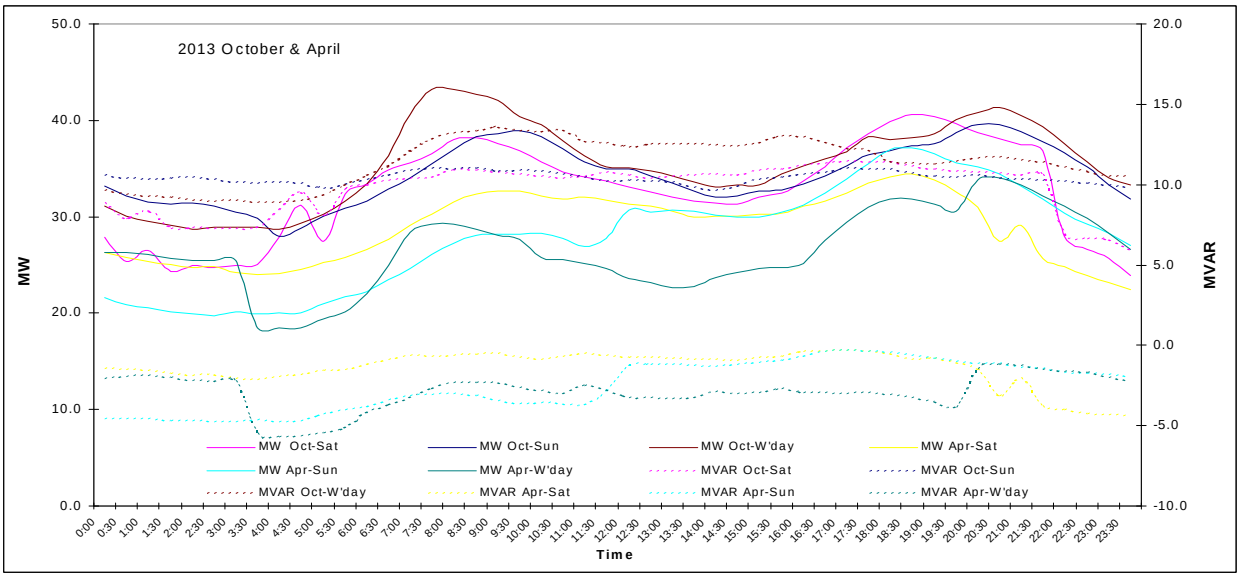

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

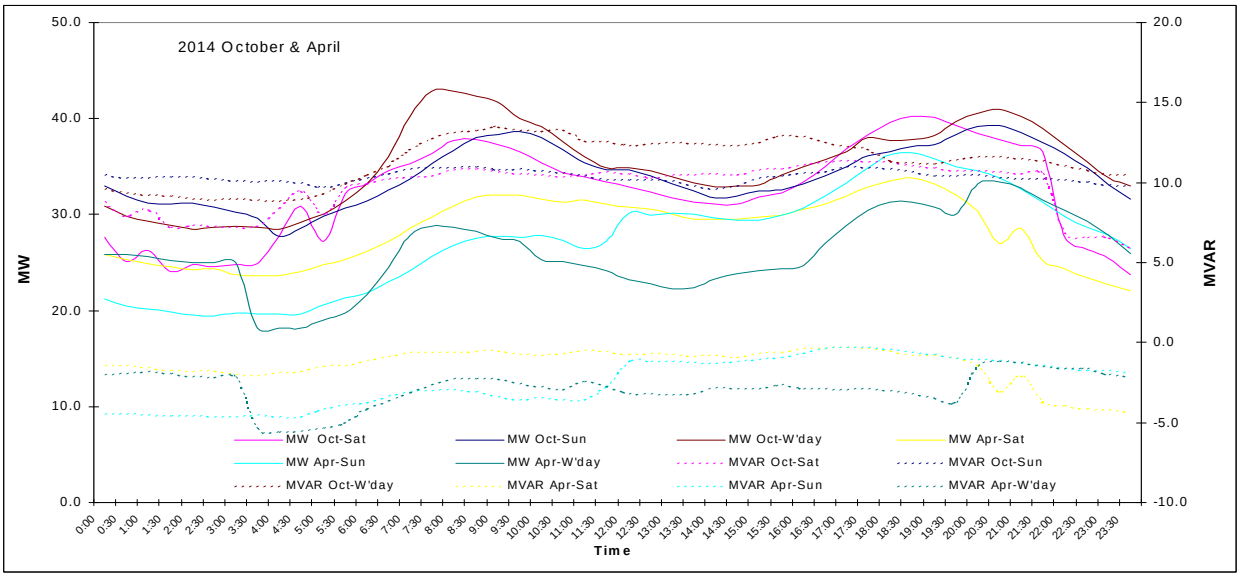
Figure 4-157 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

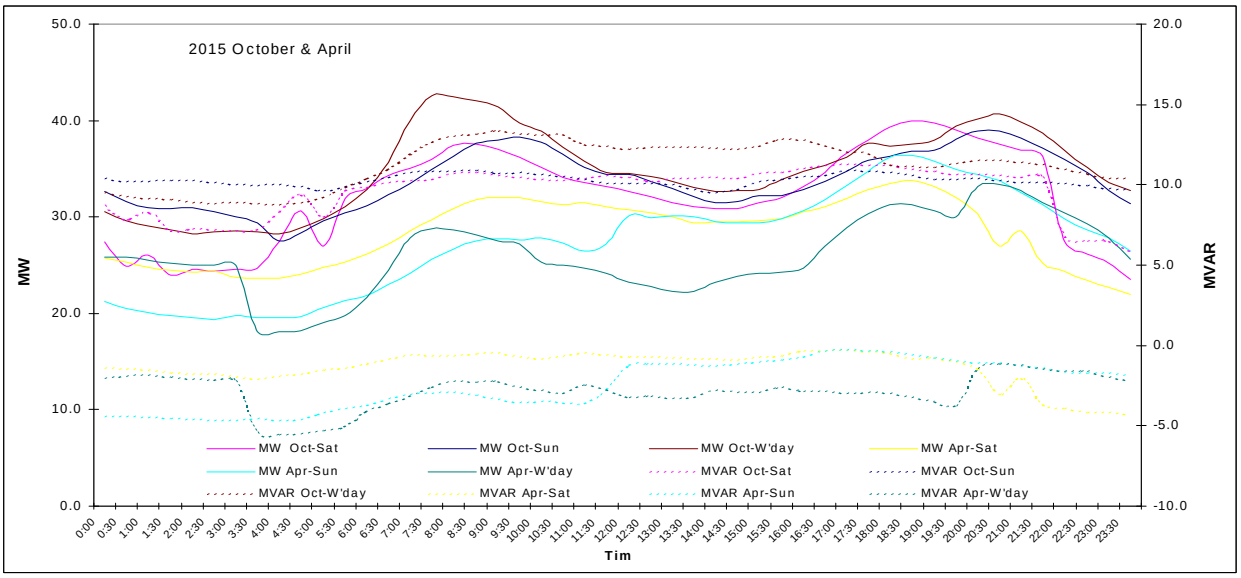
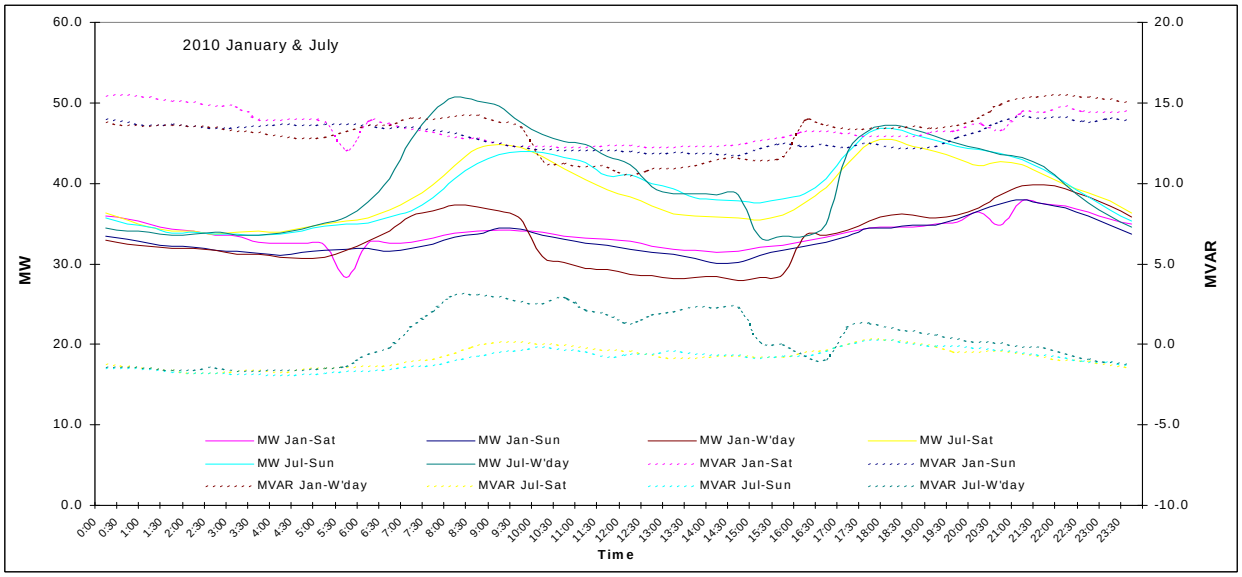
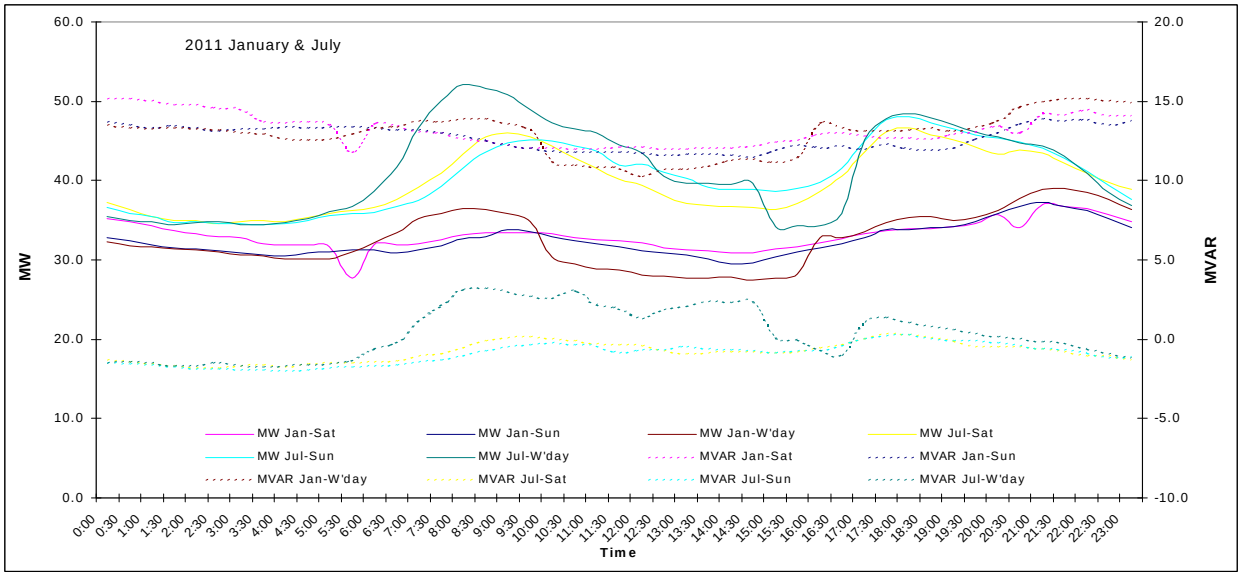
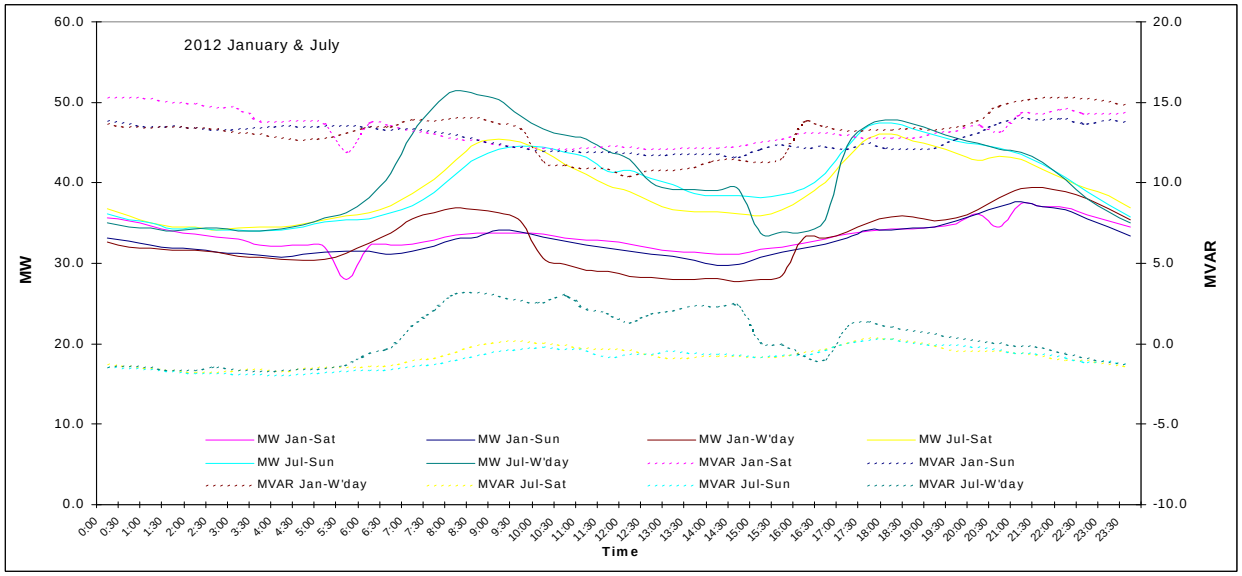
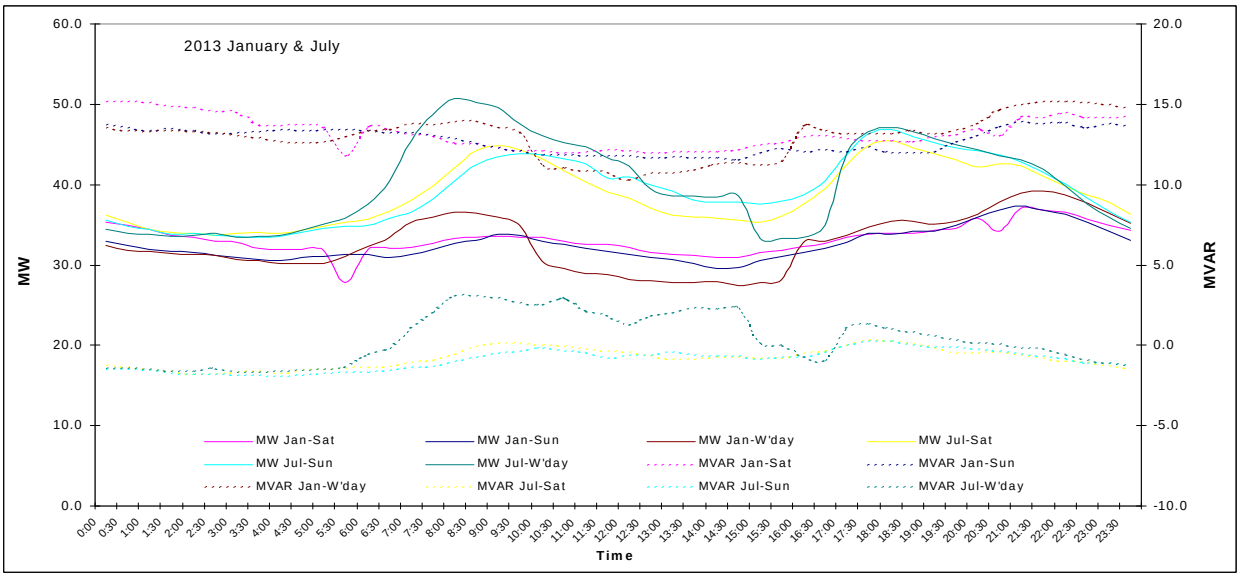

2015 October & April
MW
MVAR
Tim
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

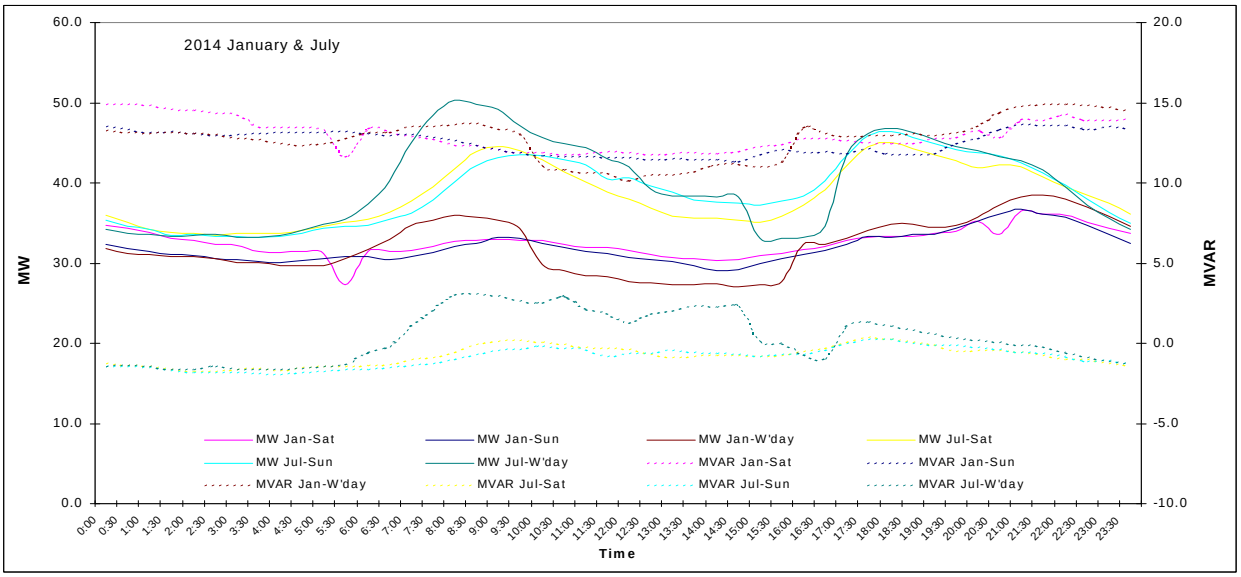
Figure 4-158 Load Profiles: Weekday, Saturday, Sunday for January & July

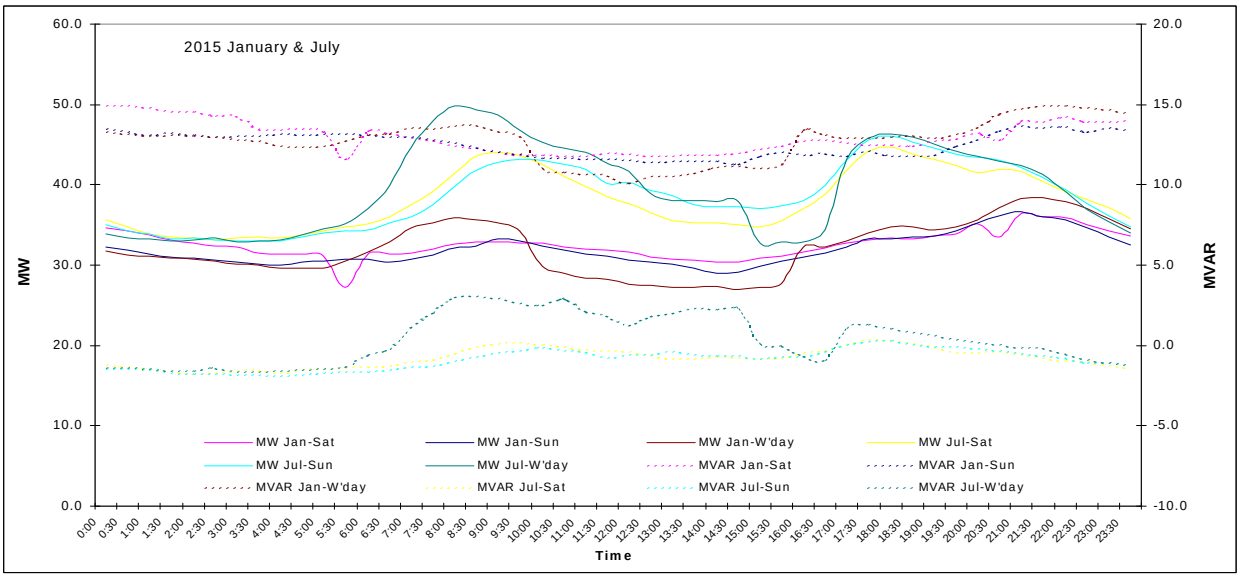







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.29 Risdon

Description:

The Substation is located at Risdon and is known as “Risdon Substation”. The substation is own by Transend.

Table 4-105 Risdon Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
3	33	7	150	100

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-106 Risdon Site Winter load forecast

Risdon	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	44.97	47.55	41.09	43.45	44.97	47.55	41.83	44.23
2006	45.92	49.18	19.03	20.37	45.92	49.18	19.25	20.62
2007	70.93	75.33	67.63	71.83	70.93	75.33	69.60	73.92
2008	70.89	75.16	70.89	75.16	70.89	75.16	72.77	77.16
2009	74.98	79.33	74.08	78.38	74.98	79.33	76.05	80.47
2010	67.66	71.97	59.96	63.79	67.66	71.97	61.31	65.22
2011	69.97	74.43	62.01	65.97	71.08	75.62	62.99	67.01
2012	69.61	74.05	61.69	65.62	70.72	75.23	62.67	66.67
2013	69.10	73.51	61.24	65.14	70.26	74.74	62.27	66.24
2014	69.07	73.47	61.21	65.11	70.20	74.68	62.22	66.19
2015	69.00	73.40	61.15	65.05	70.20	74.67	62.21	66.18
2016	69.13	73.54	61.26	65.17	70.31	74.79	62.31	66.28
2017	69.25	73.66	61.37	65.28	70.48	74.97	62.46	66.44
2018	69.65	74.09	61.72	65.66	70.85	75.37	62.79	66.80
2019	70.22	74.70	62.23	66.20	71.52	76.09	63.39	67.43
2020	70.98	75.50	62.90	66.91	72.26	76.87	64.04	68.13

Table 4-107 Risdon Site Summer load forecast

Risdon	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	29.56	0.00	25.76	0.00	29.56	0.00	25.93	0.00
2006	25.86	0.00	22.35	0.00	25.86	0.00	22.41	0.00
2007	43.94	47.94	36.75	40.09	43.94	47.94	36.75	40.09
2008	45.48	48.83	45.48	48.83	45.48	48.83	45.67	49.03
2009	51.14	55.80	46.68	50.94	51.14	55.80	46.84	51.11
2010	47.73	51.05	47.73	51.05	47.73	51.05	48.16	51.51
2011	47.70	51.03	47.70	51.03	48.96	52.37	48.96	52.37
2012	49.11	52.53	49.11	52.53	50.43	53.94	50.43	53.94
2013	49.67	53.13	49.67	53.13	51.01	54.57	51.01	54.57
2014	49.70	53.16	49.70	53.16	50.97	54.52	50.97	54.52
2015	50.53	54.05	50.53	54.05	51.83	55.44	51.83	55.44
2016	50.41	53.92	50.41	53.92	51.77	55.37	51.77	55.37
2017	52.20	55.84	52.20	55.84	53.55	57.28	53.55	57.28
2018	53.23	56.94	53.23	56.94	54.62	58.42	54.62	58.42
2019	54.30	58.09	54.30	58.09	55.69	59.57	55.69	59.57
2020	55.49	59.35	55.49	59.35	56.88	60.85	56.88	60.85

Figure 4-159 Risdon Site Summer Load Forecast at 50% and 10% POE

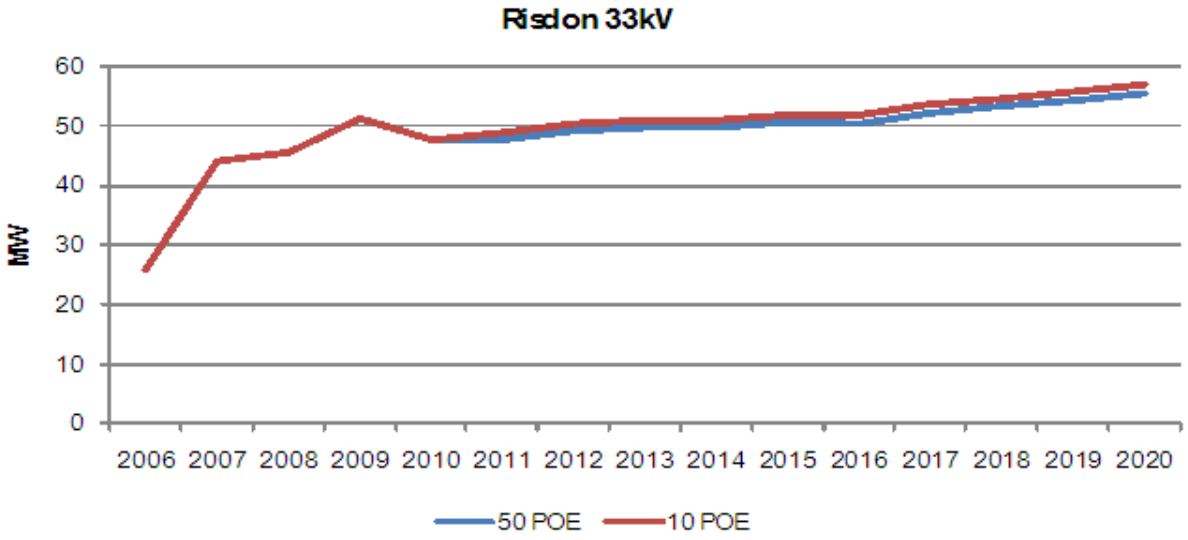
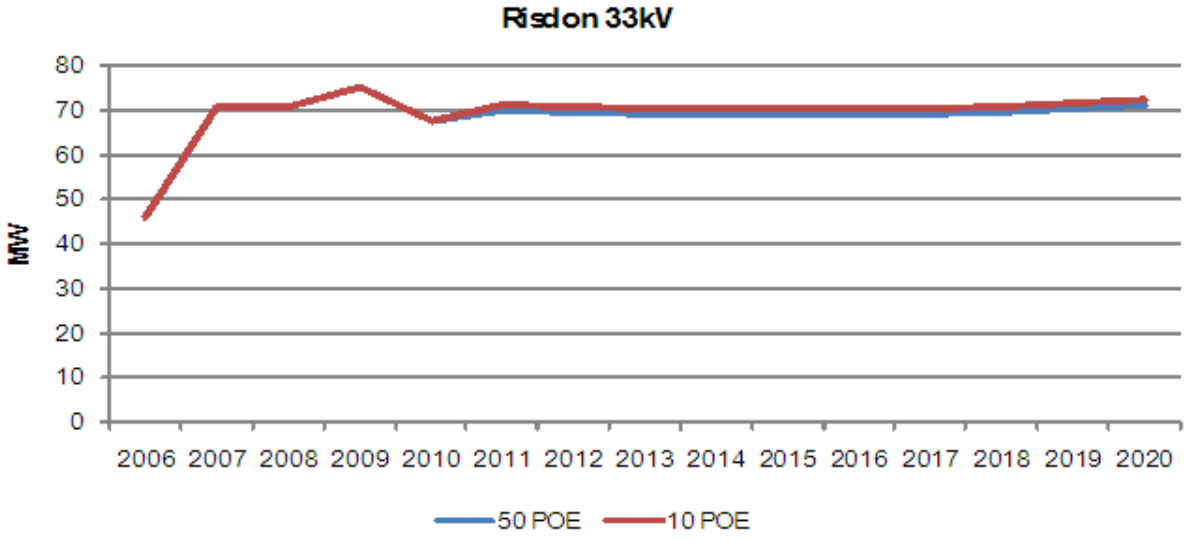
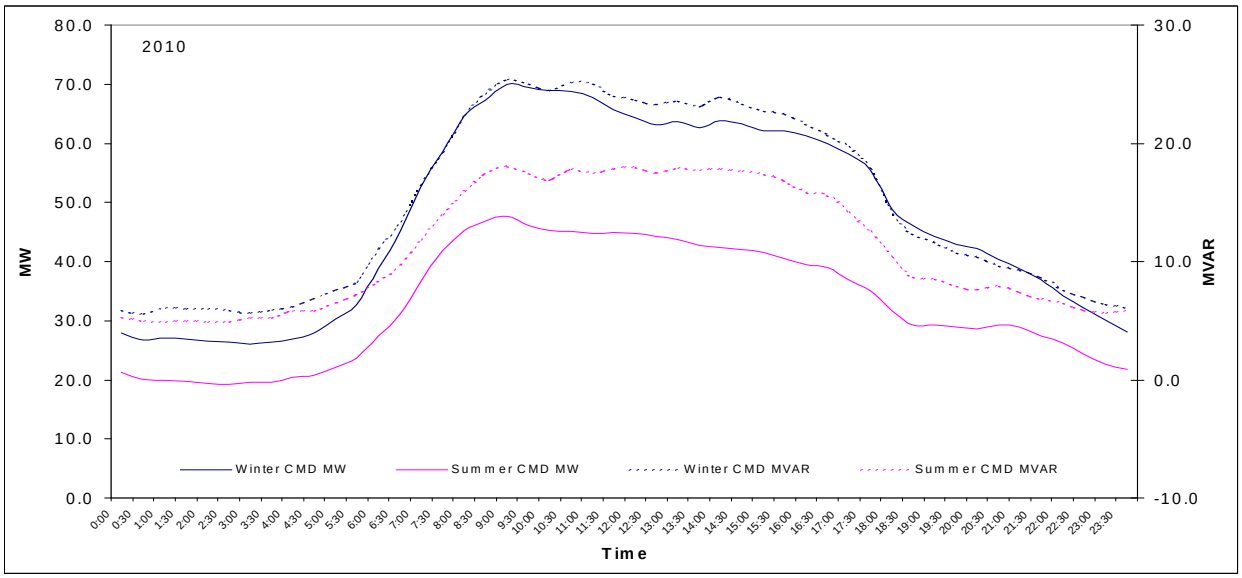


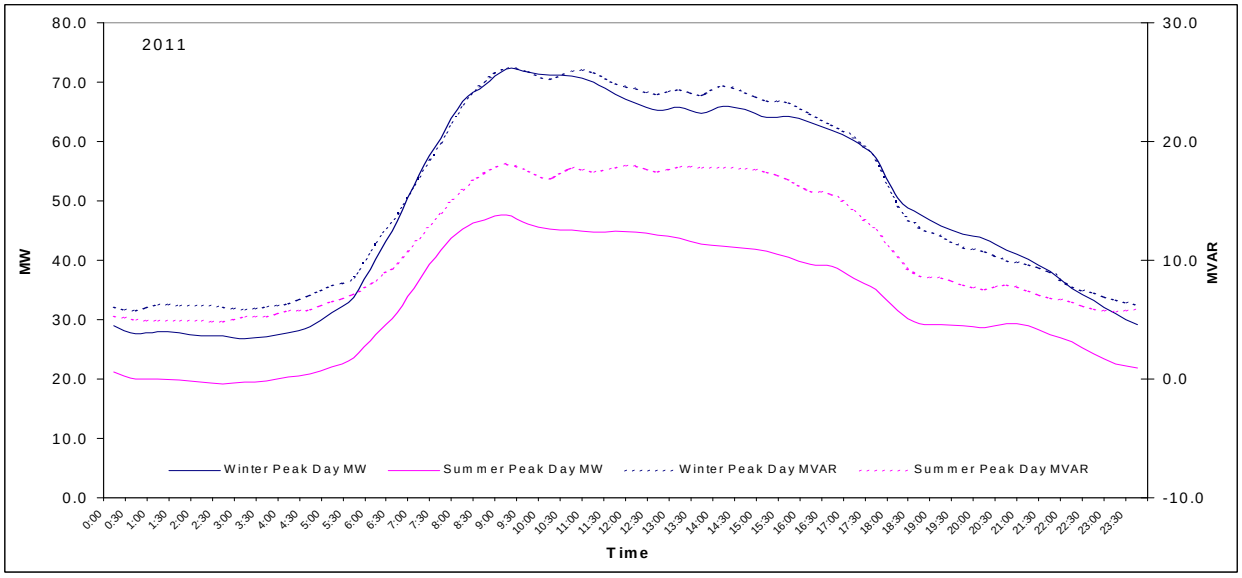
Figure 4-160 Risdon Site Winter Load Forecast at 50% and 10% POE

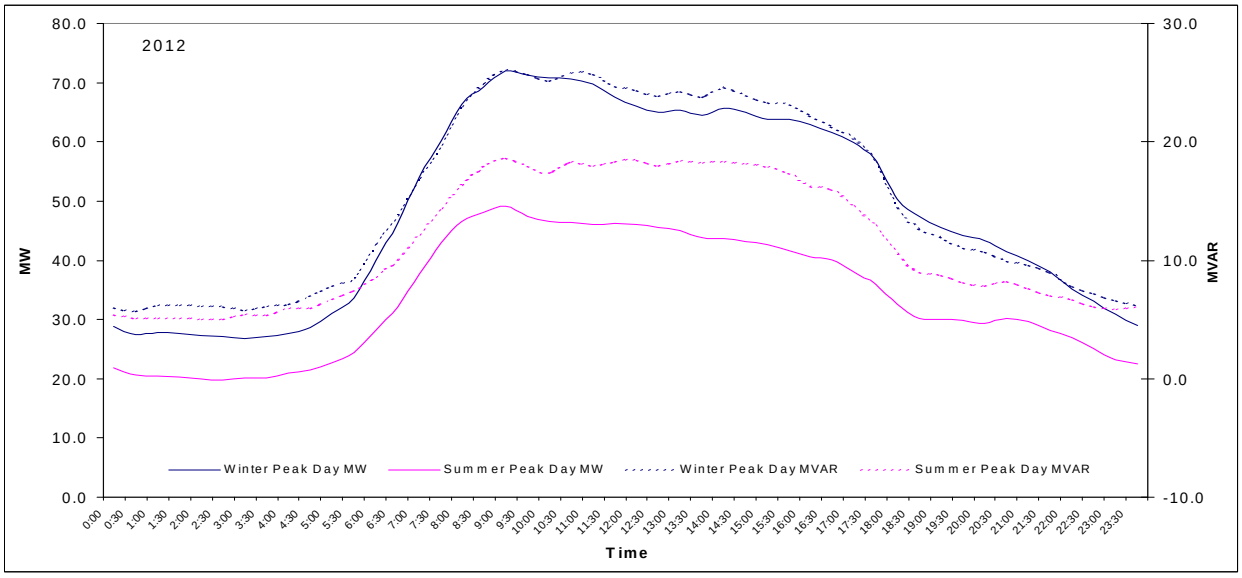


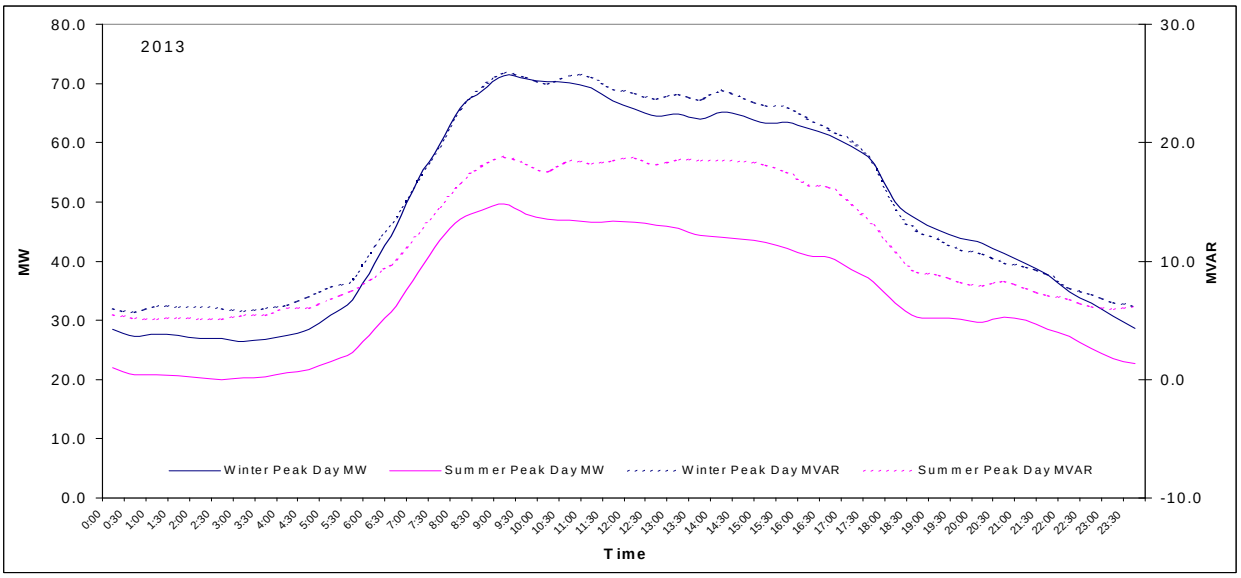
Load Profiles:

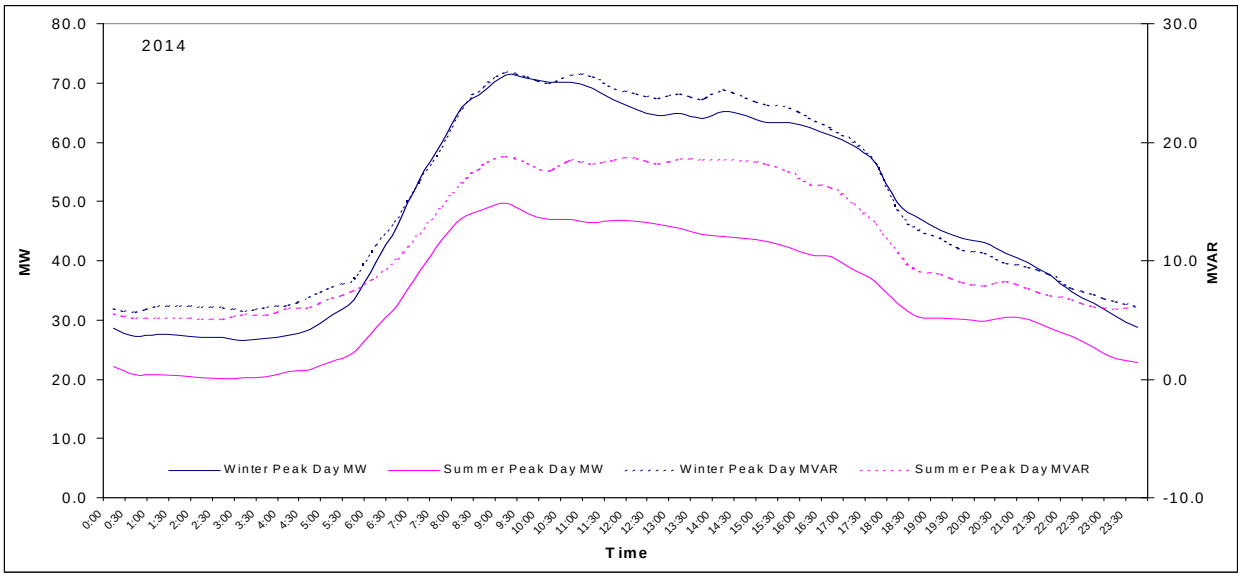
Figure 4-161 Load Profiles: Risdon Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

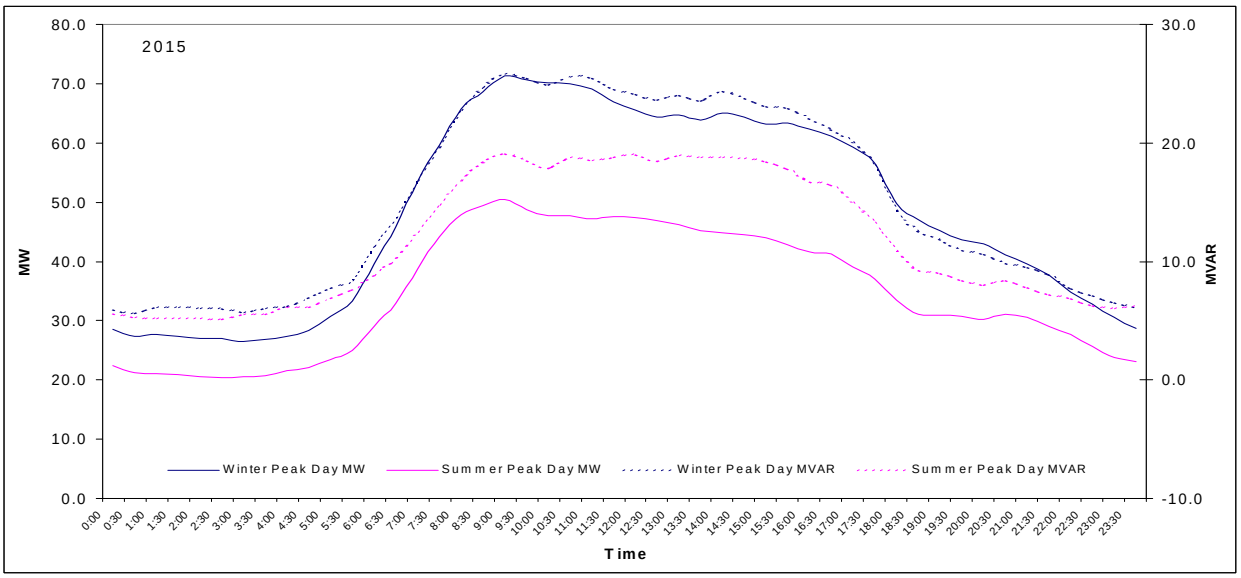
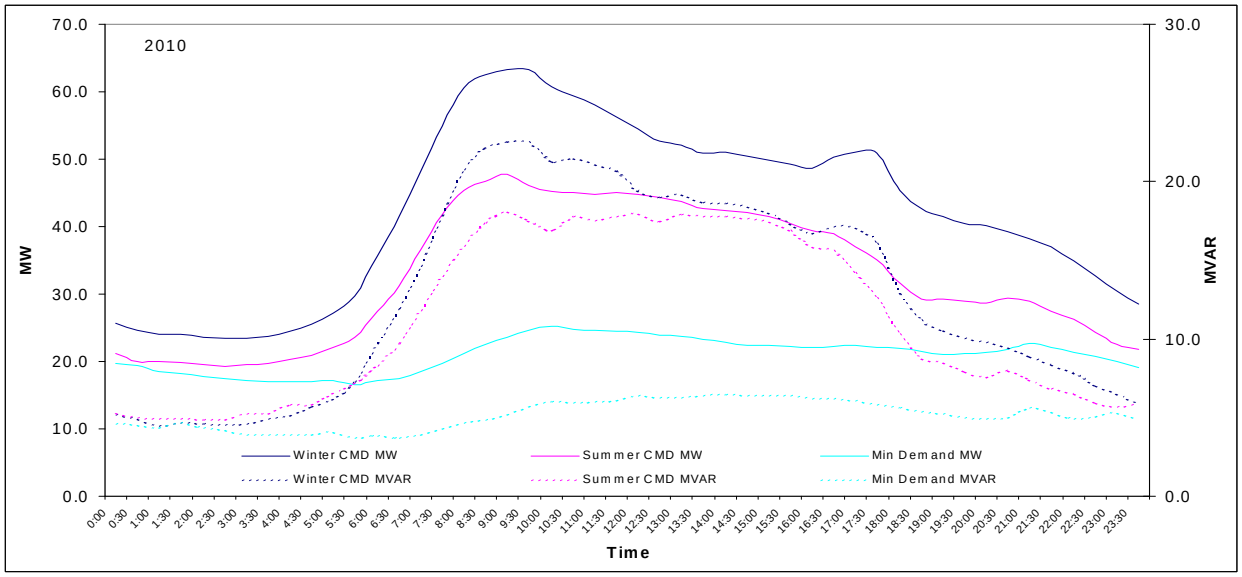
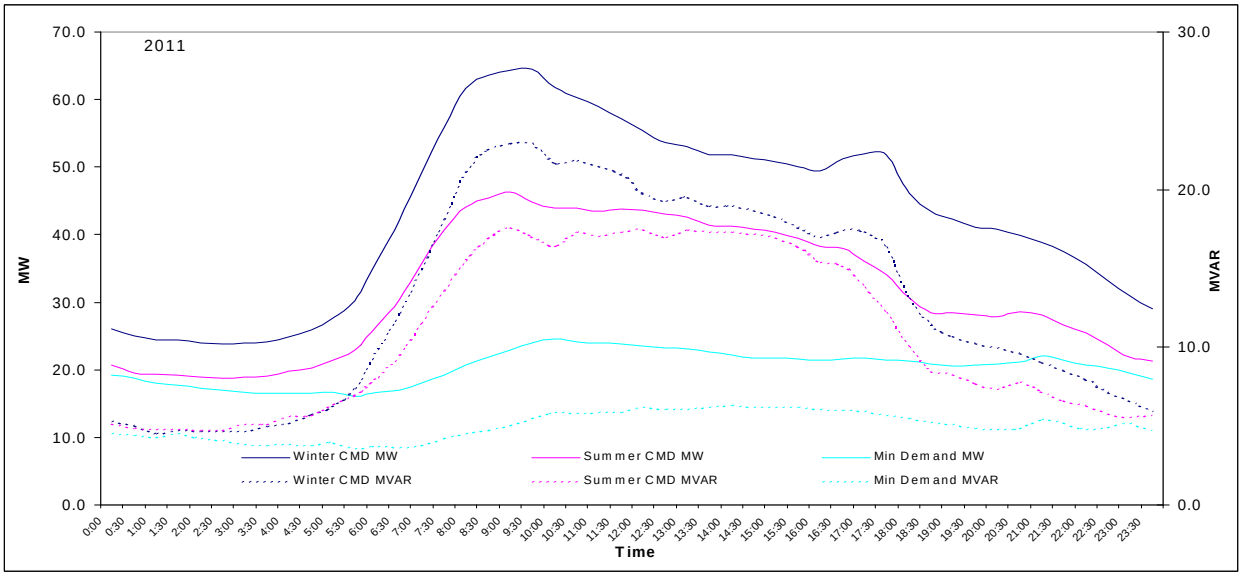
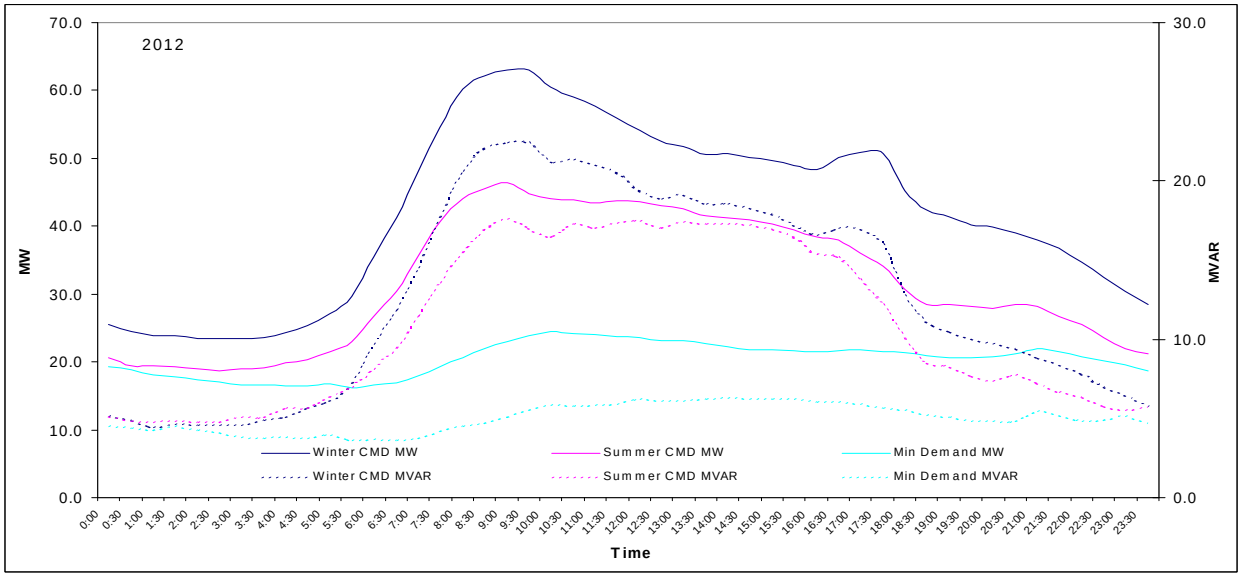
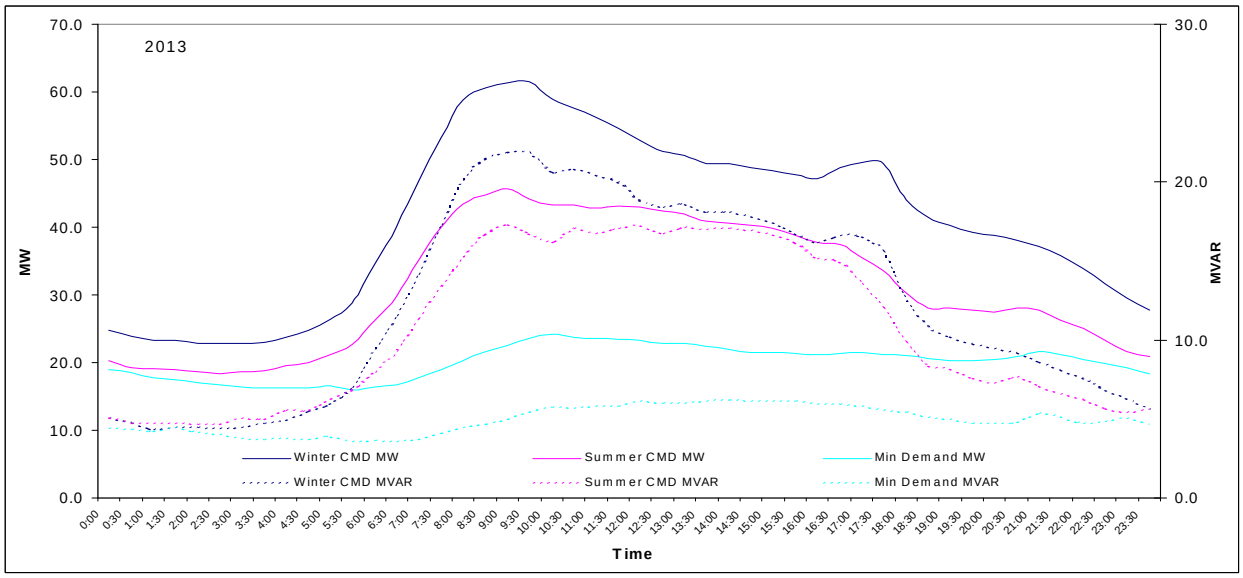

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

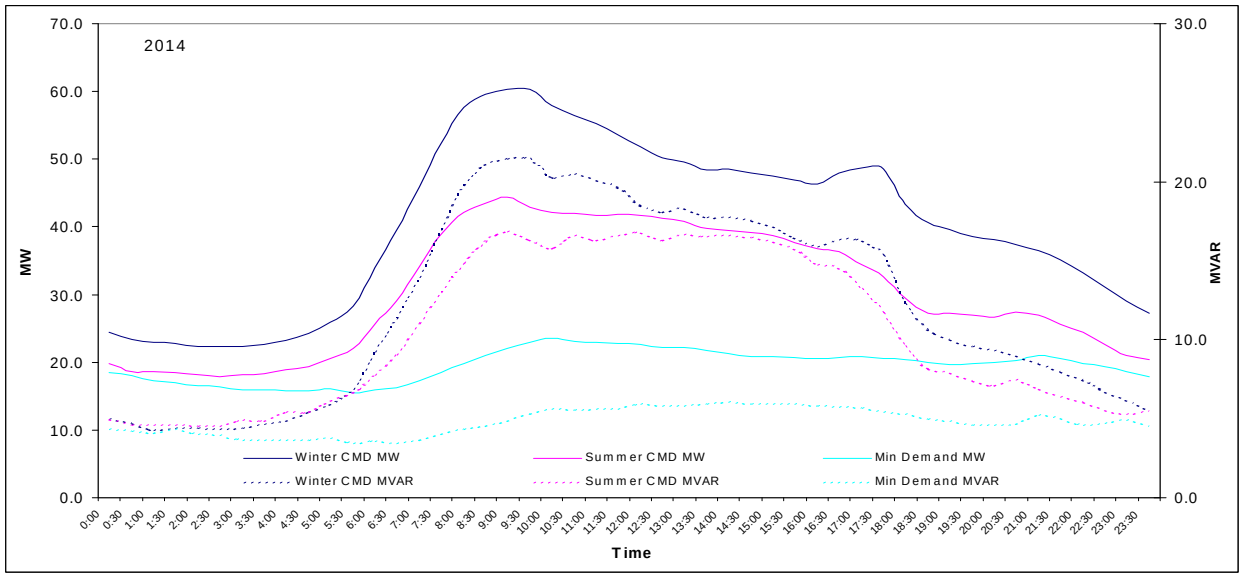
Figure 4-162 Load Profiles: Risdon Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

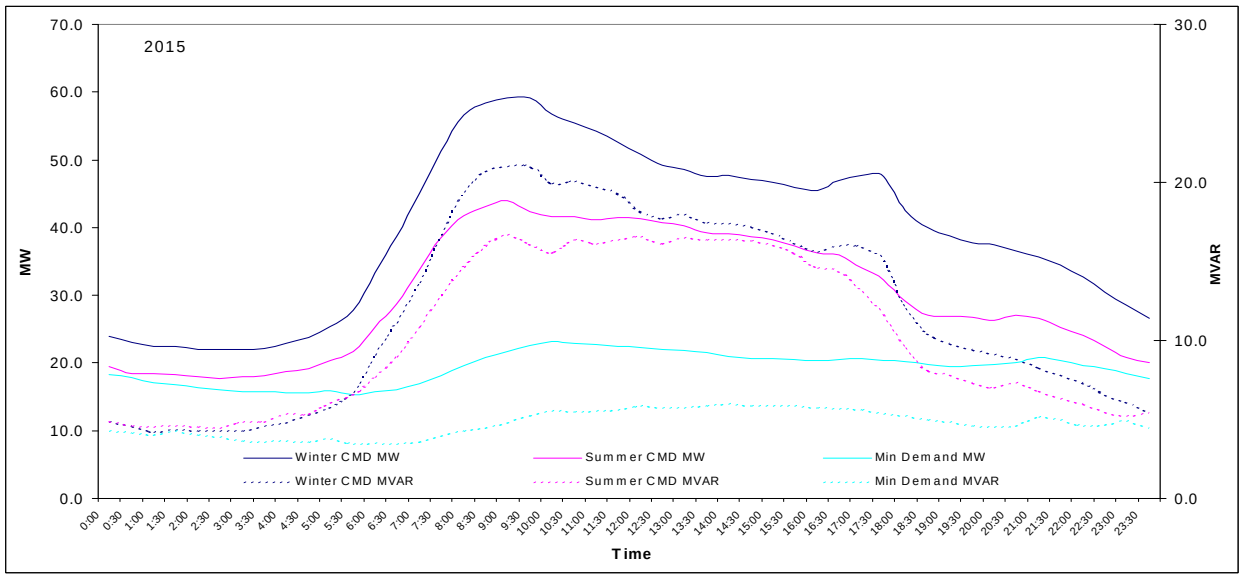
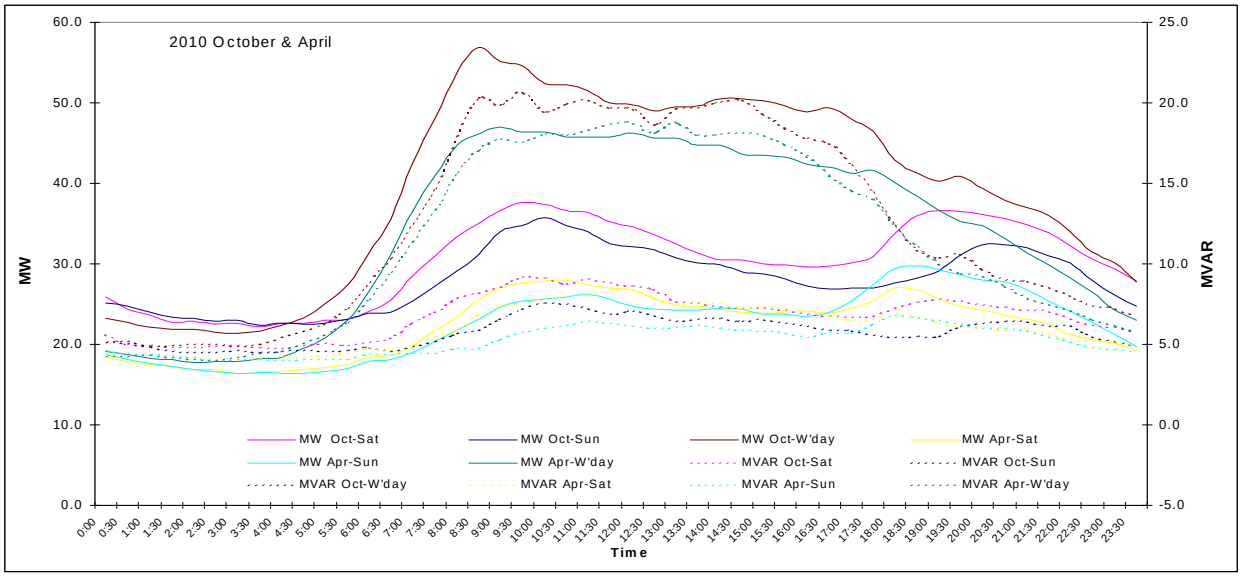
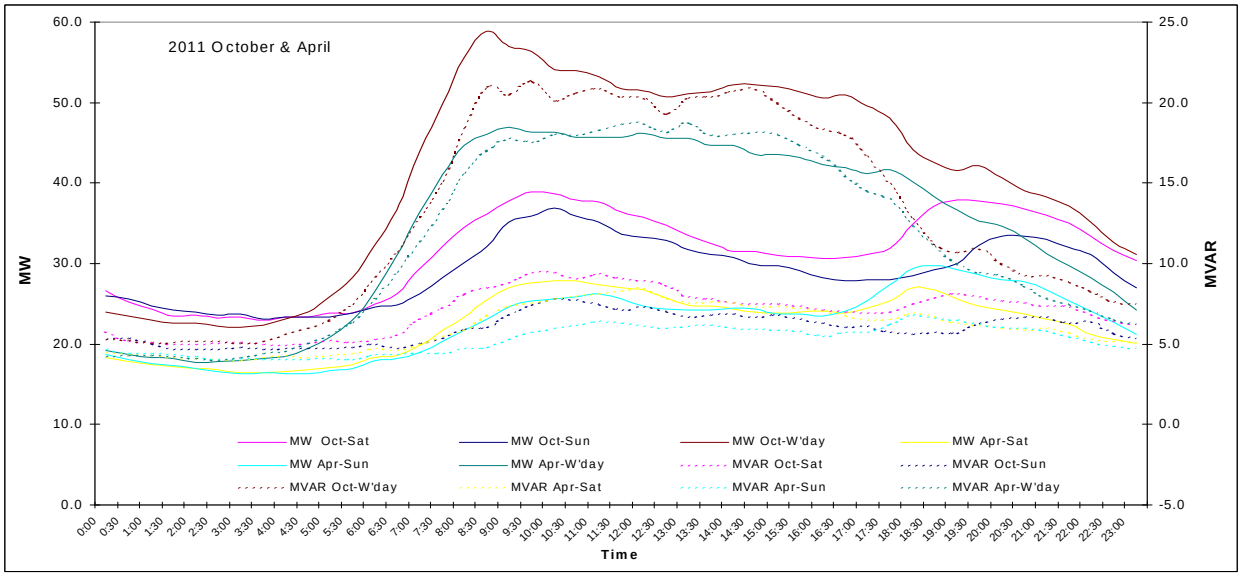
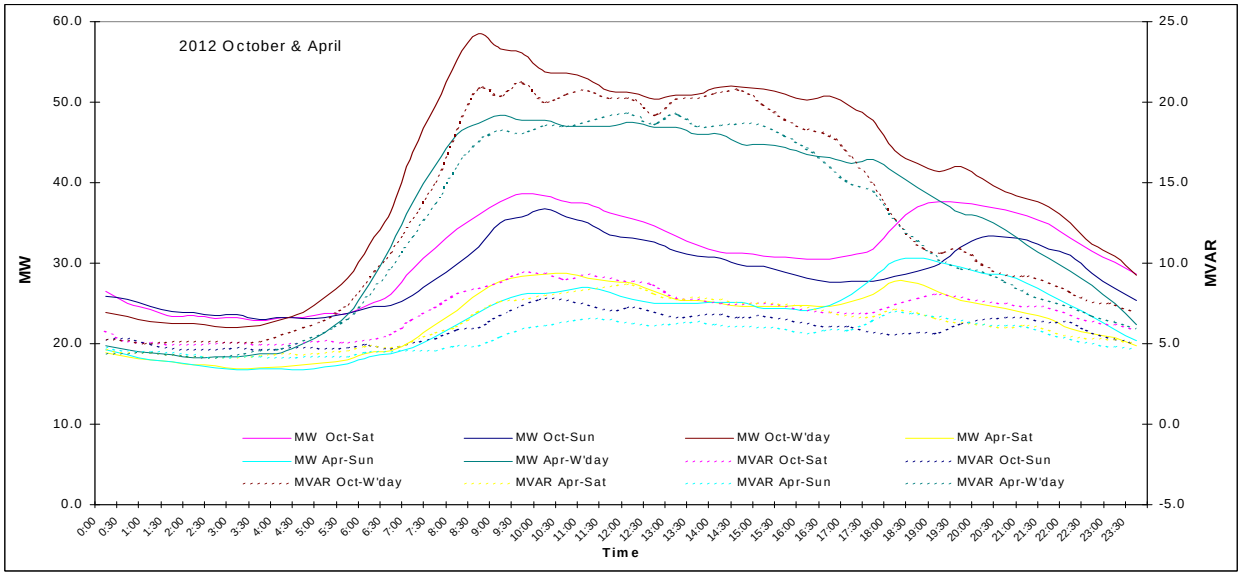
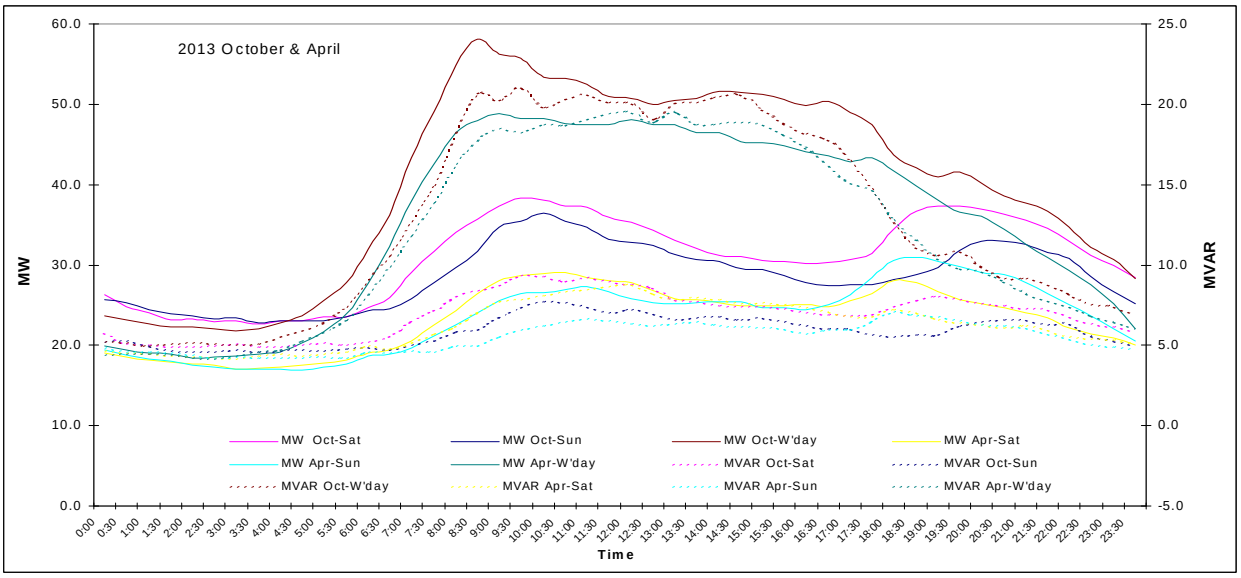

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

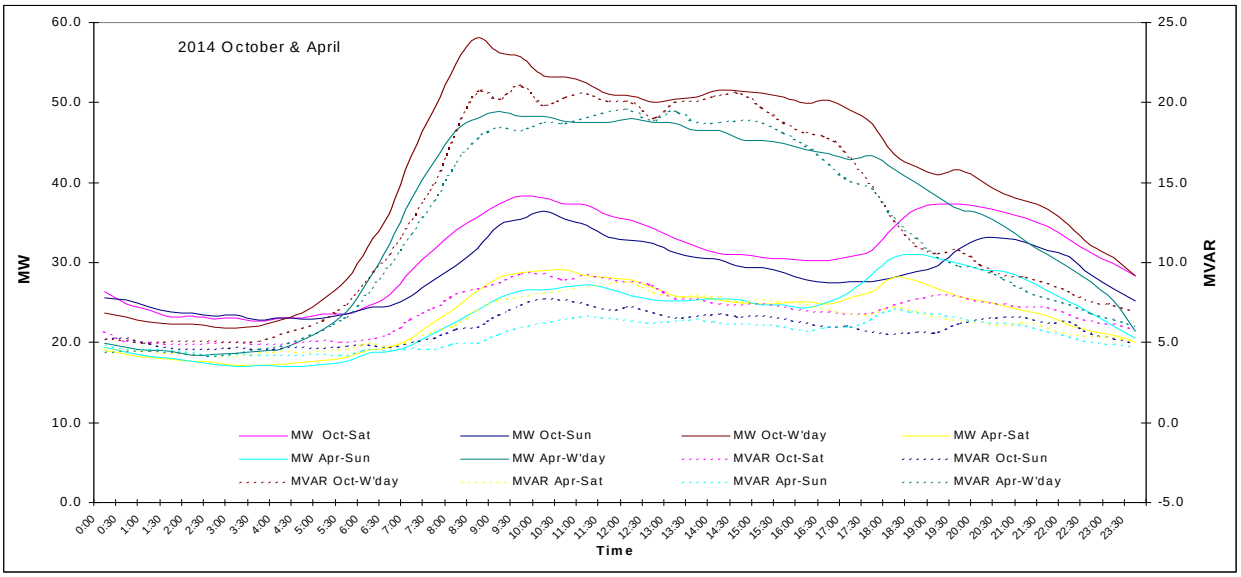
Figure 4-163 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

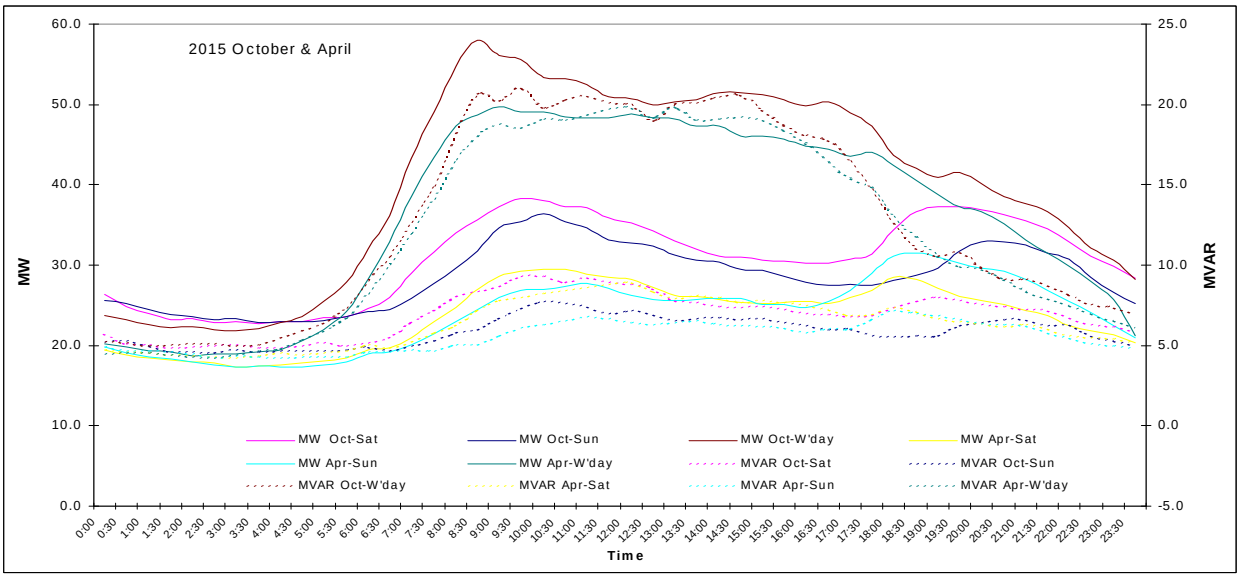
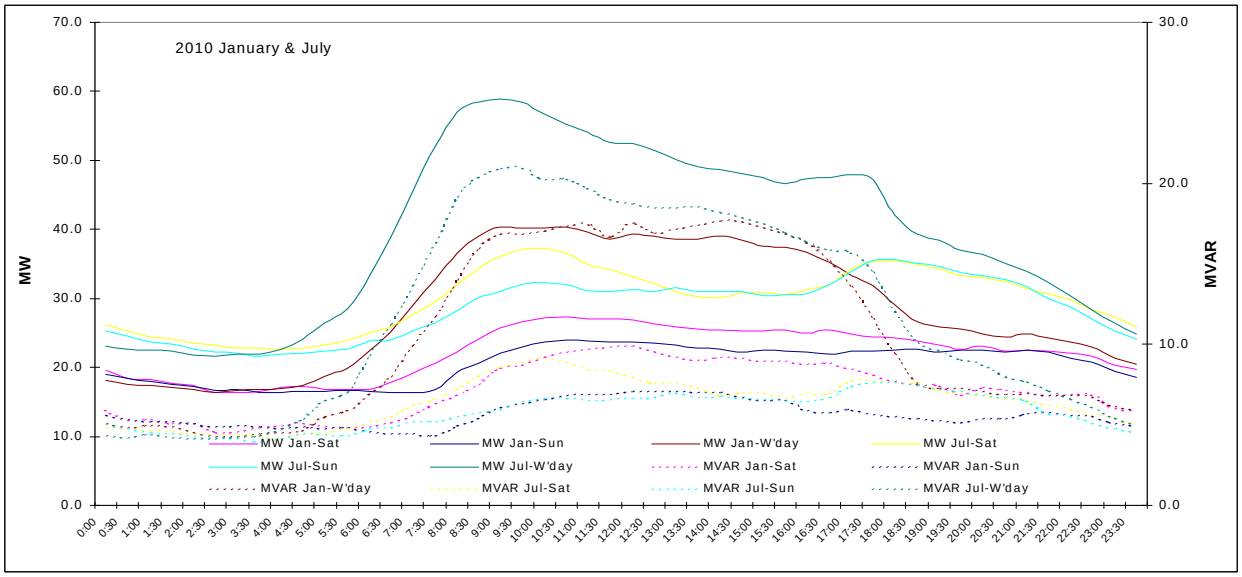
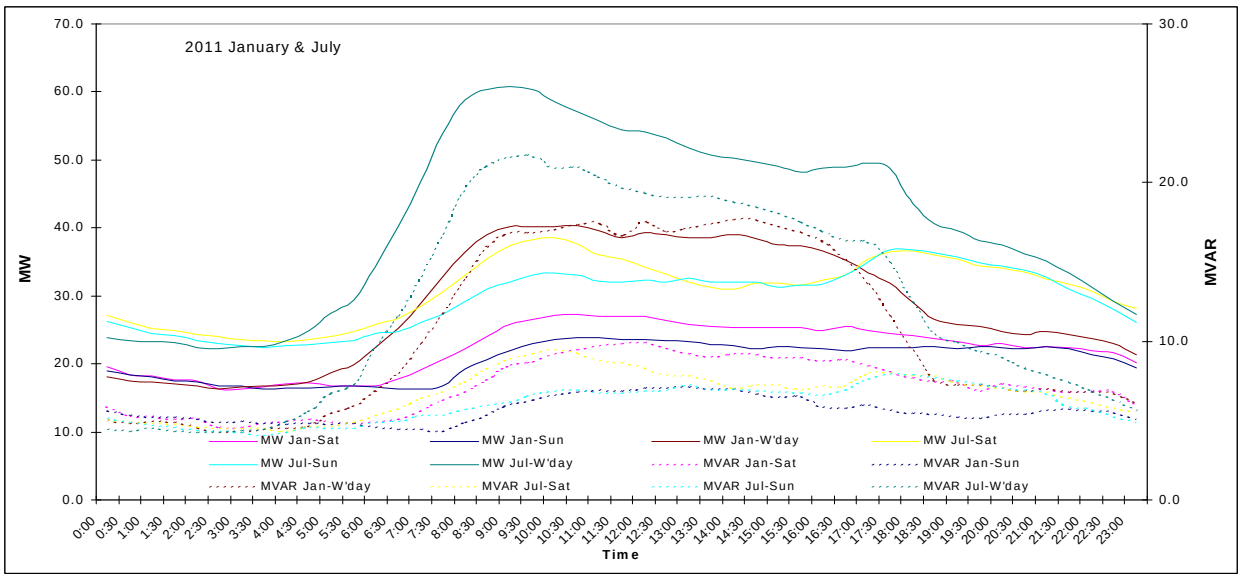
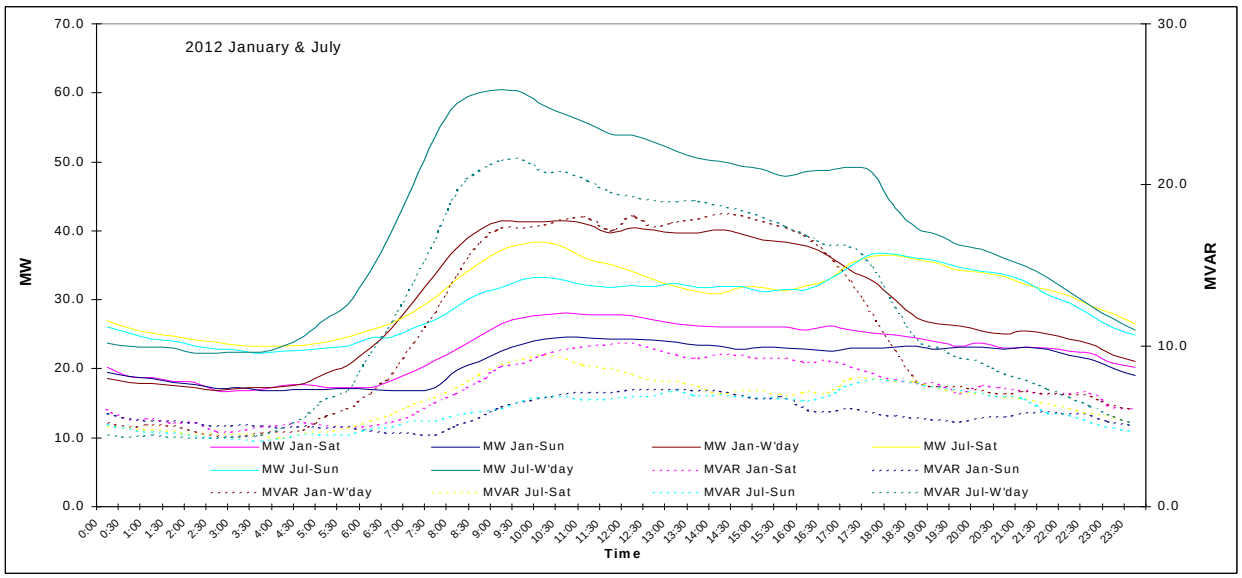
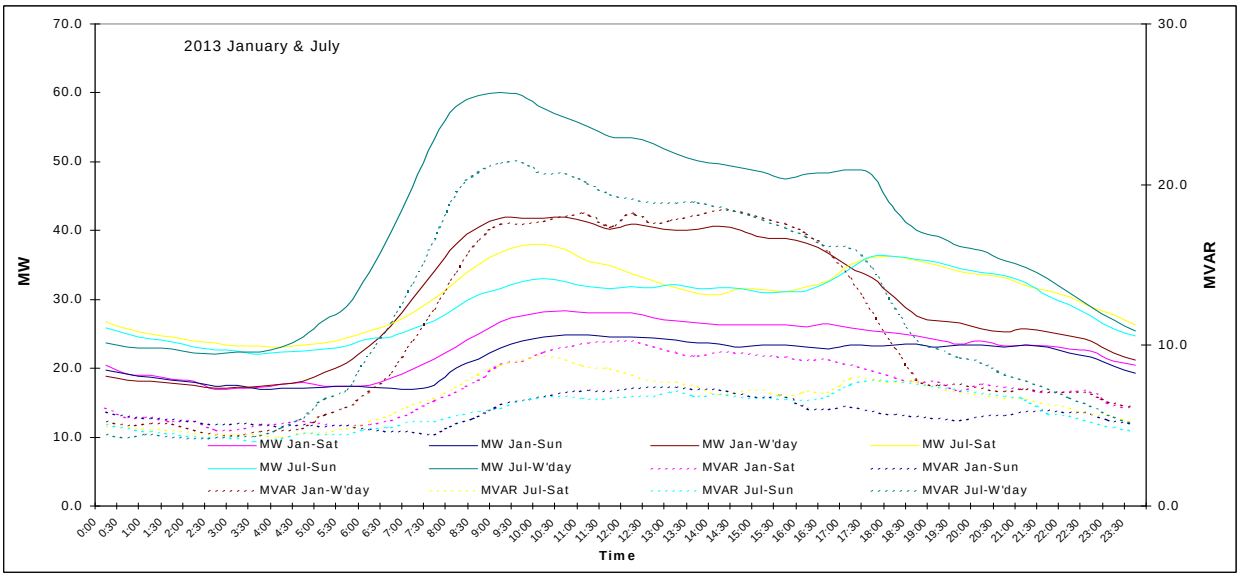

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

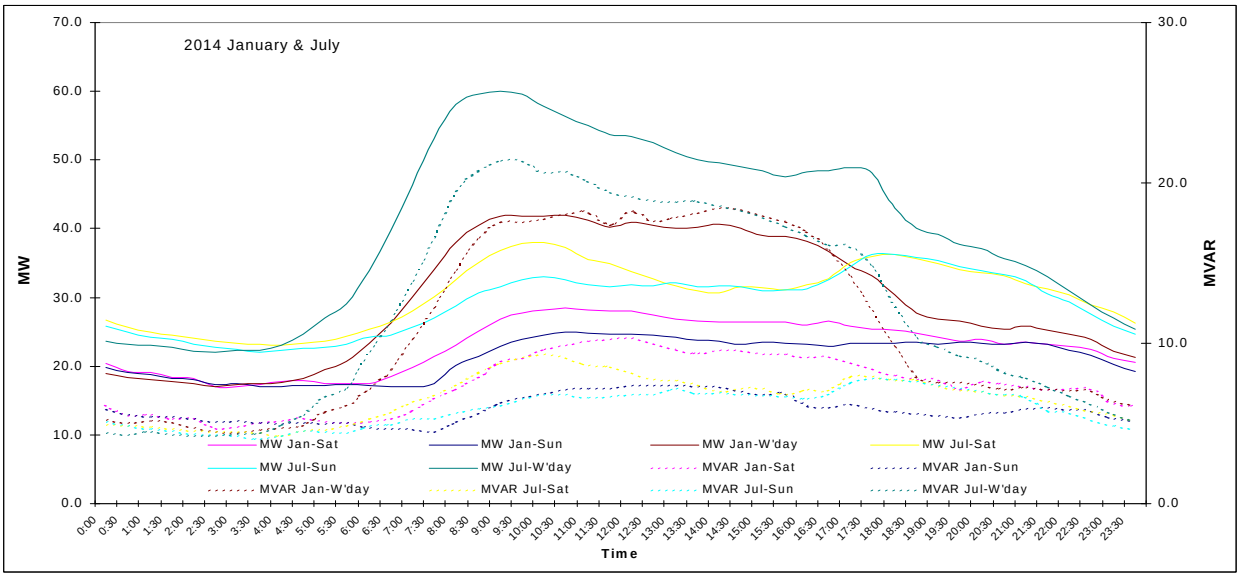
Figure 4-164 Load Profiles: Weekday, Saturday, Sunday for January & July

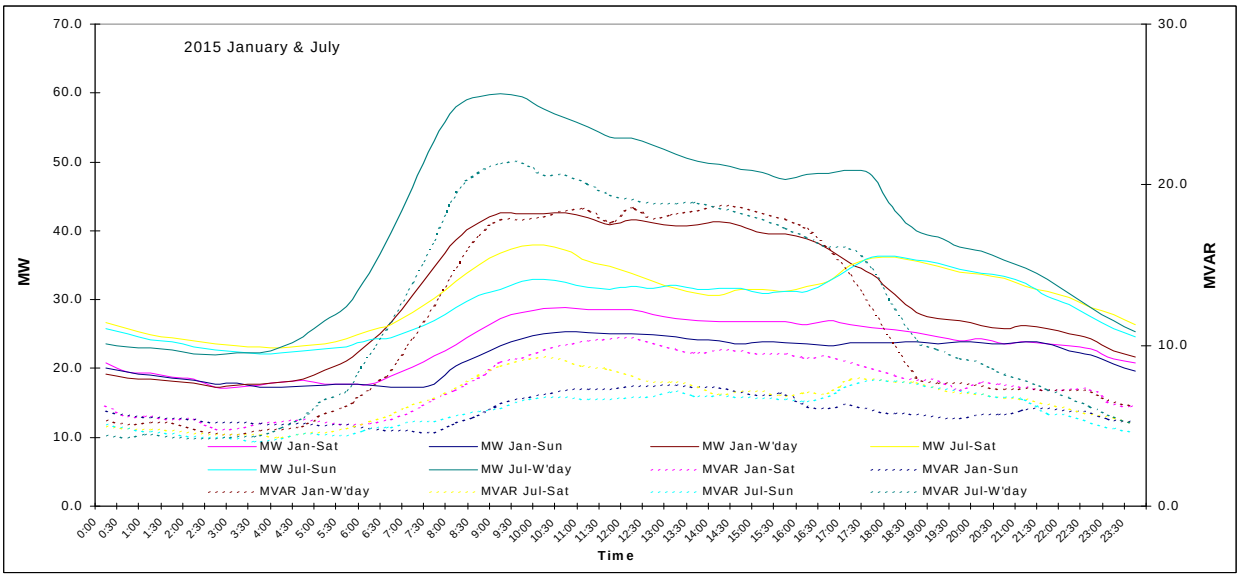







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.30 Rokeby

Description:

The Substation is located at Rokeby and is known as “Rokeby Substation”. The substation is owned by Transend.

Table 4-108 Rokeby Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	10	70	35

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-109 Rokeby Site Winter load forecast

Rokeby	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	35.87	36.39	31.97	32.43	35.87	36.39	32.83	33.31
2006	41.07	41.70	36.41	36.97	41.07	41.70	37.20	37.76
2007	40.87	41.43	38.55	39.08	40.87	41.43	39.74	40.29
2008	45.78	46.36	45.78	46.36	45.78	46.36	47.22	47.82
2009	41.34	41.78	39.26	39.68	41.34	41.78	40.38	40.81
2010	42.52	42.87	36.42	36.71	42.52	42.87	37.47	37.78
2011	46.06	46.44	39.45	39.77	47.02	47.41	40.27	40.60
2012	47.90	48.29	41.02	41.35	48.85	49.25	41.83	42.17
2013	49.60	50.01	42.48	42.83	50.58	50.99	43.31	43.67
2014	51.64	52.06	44.22	44.58	52.58	53.01	45.03	45.40
2015	53.64	54.08	45.94	46.31	54.61	55.06	46.77	47.16
2016	55.80	56.25	47.78	48.18	56.75	57.21	48.60	49.00
2017	57.95	58.42	49.63	50.04	58.93	59.41	50.47	50.88
2018	60.36	60.85	51.69	52.11	61.31	61.81	52.50	52.93
2019	62.94	63.46	53.90	54.34	63.96	64.49	54.78	55.23
2020	65.72	66.26	56.28	56.75	66.72	67.27	57.14	57.61

Table 4-110 Rokeby Site Summer load forecast

Rokeby	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	19.83	20.05	19.83	20.05	19.83	20.05	20.10	20.33
2006	19.92	20.18	19.92	20.18	19.92	20.18	20.17	20.43
2007	25.15	25.39	19.43	19.62	25.15	25.39	19.84	20.03
2008	24.93	25.17	24.93	25.17	24.93	25.17	25.59	25.83
2009	24.86	25.03	24.86	25.03	24.86	25.03	25.57	25.75
2010	21.92	22.03	21.92	22.03	21.92	22.03	22.56	22.68
2011	22.76	22.87	22.76	22.87	23.79	23.91	23.79	23.91
2012	24.27	24.39	24.27	24.39	25.35	25.48	25.35	25.48
2013	25.36	25.49	25.36	25.49	26.47	26.61	26.47	26.61
2014	26.17	26.30	26.17	26.30	27.24	27.39	27.24	27.39
2015	27.38	27.52	27.38	27.52	28.49	28.63	28.49	28.63
2016	28.06	28.21	28.06	28.21	29.20	29.35	29.20	29.35
2017	29.81	29.96	29.81	29.96	30.96	31.12	30.96	31.12
2018	31.13	31.29	31.13	31.29	32.32	32.49	32.32	32.49
2019	32.48	32.65	32.48	32.65	33.69	33.87	33.69	33.87
2020	33.91	34.08	33.91	34.08	35.14	35.32	35.14	35.32

Figure 4-165 Rokeby Site Summer Load Forecast at 50% and 10% POE

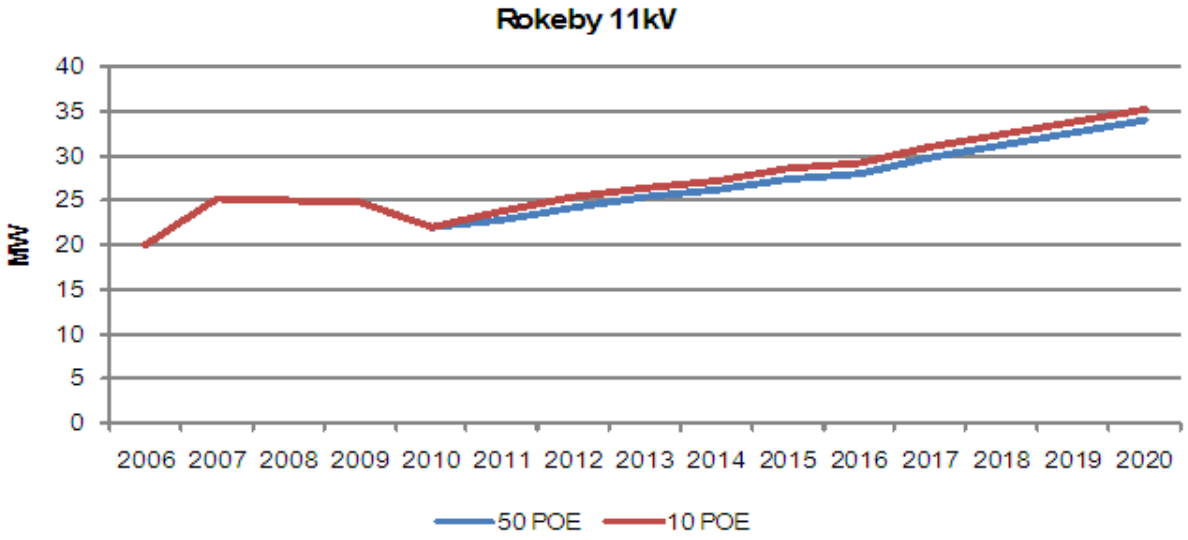
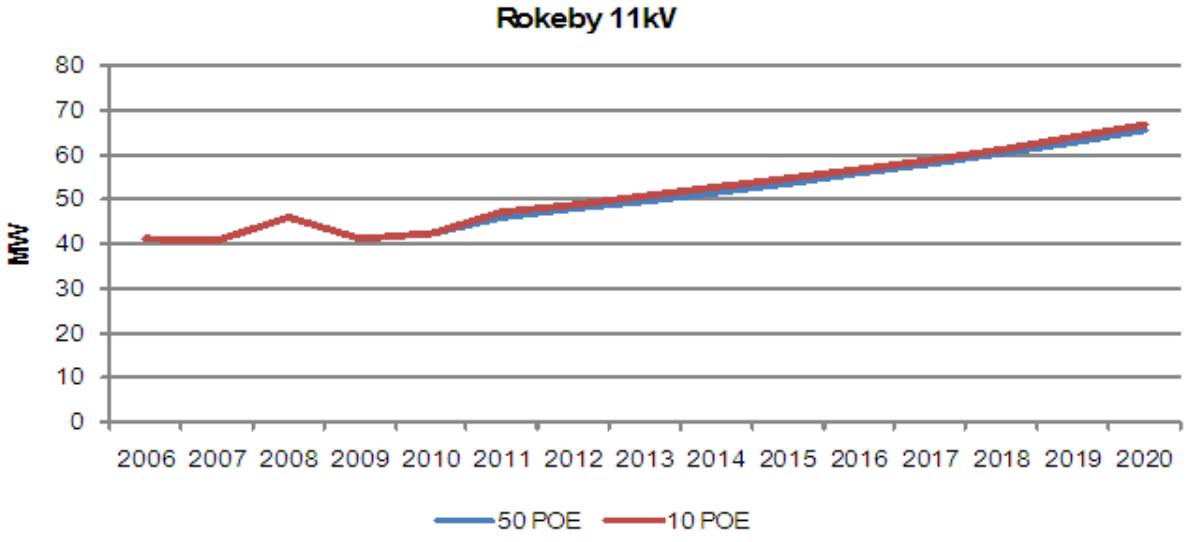
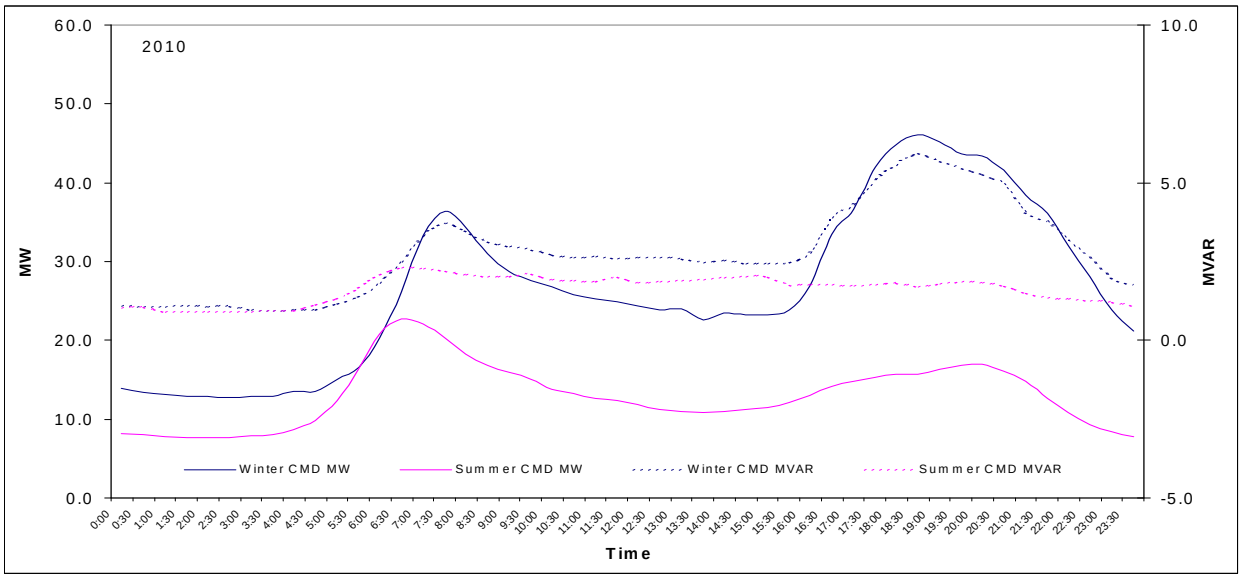


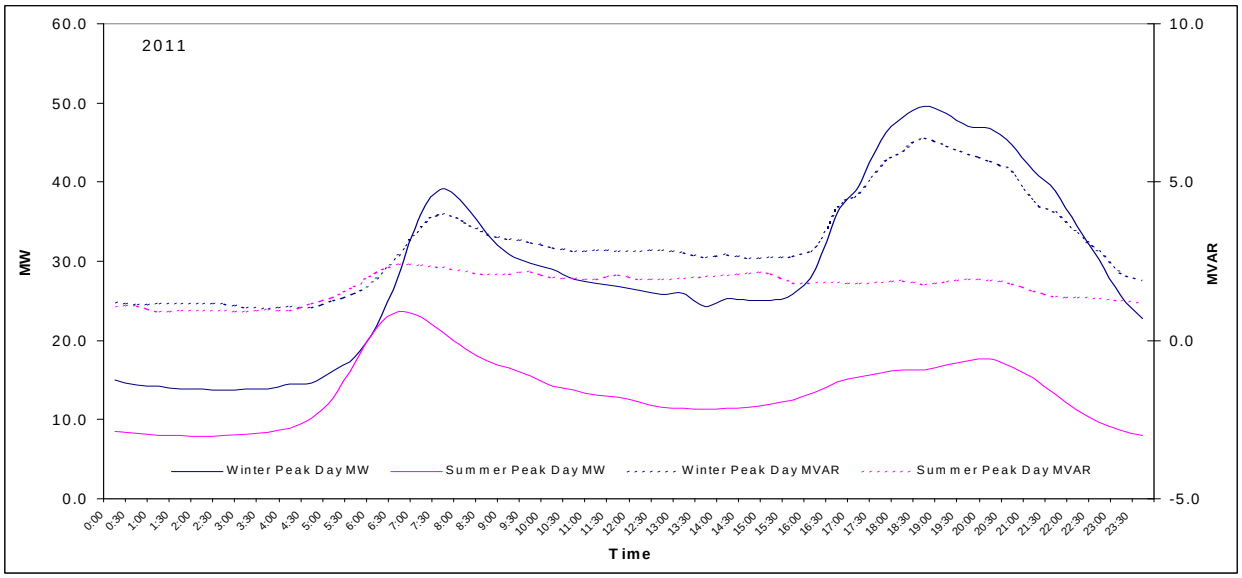
Figure 4-166 Rokeby Site Winter Load Forecast at 50% and 10% POE

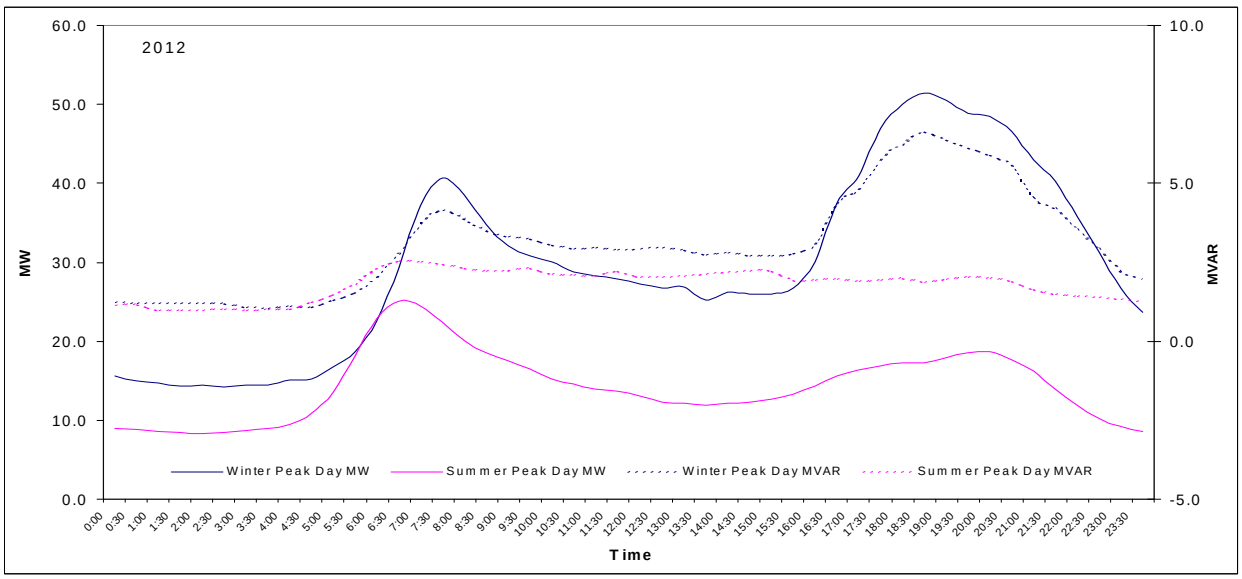


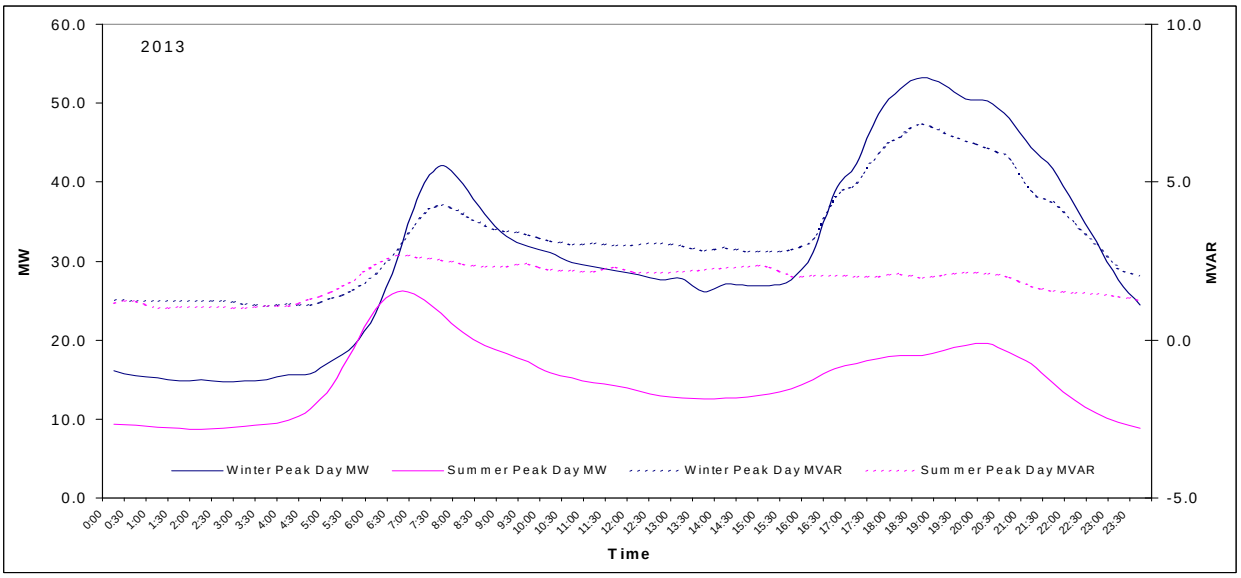
Load Profiles:

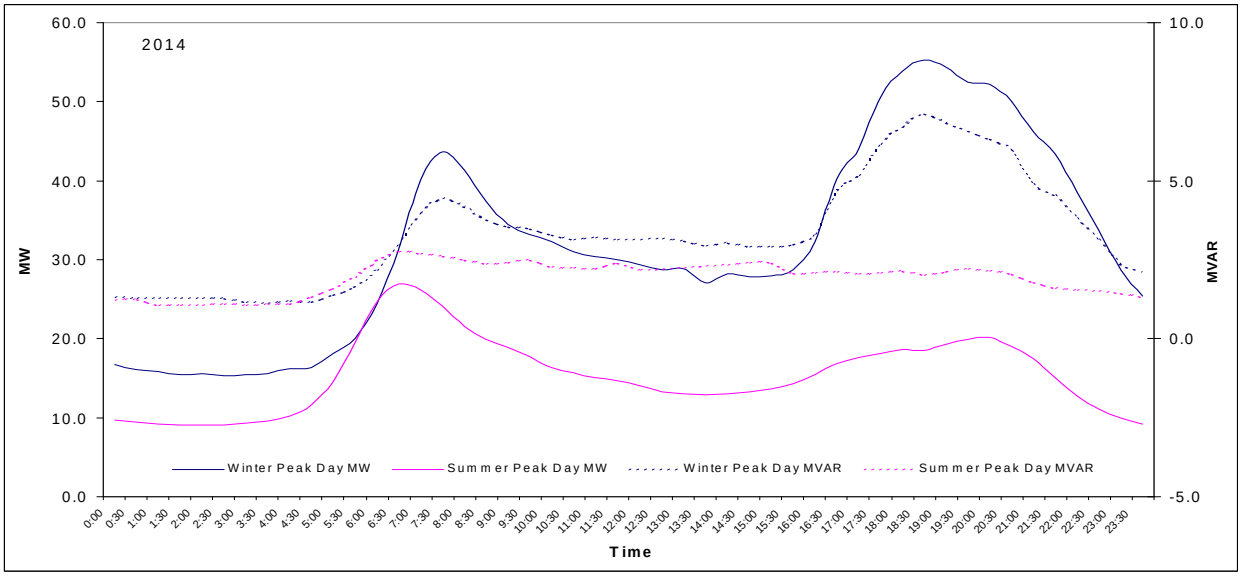
Figure 4-167 Load Profiles: Rokeby Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

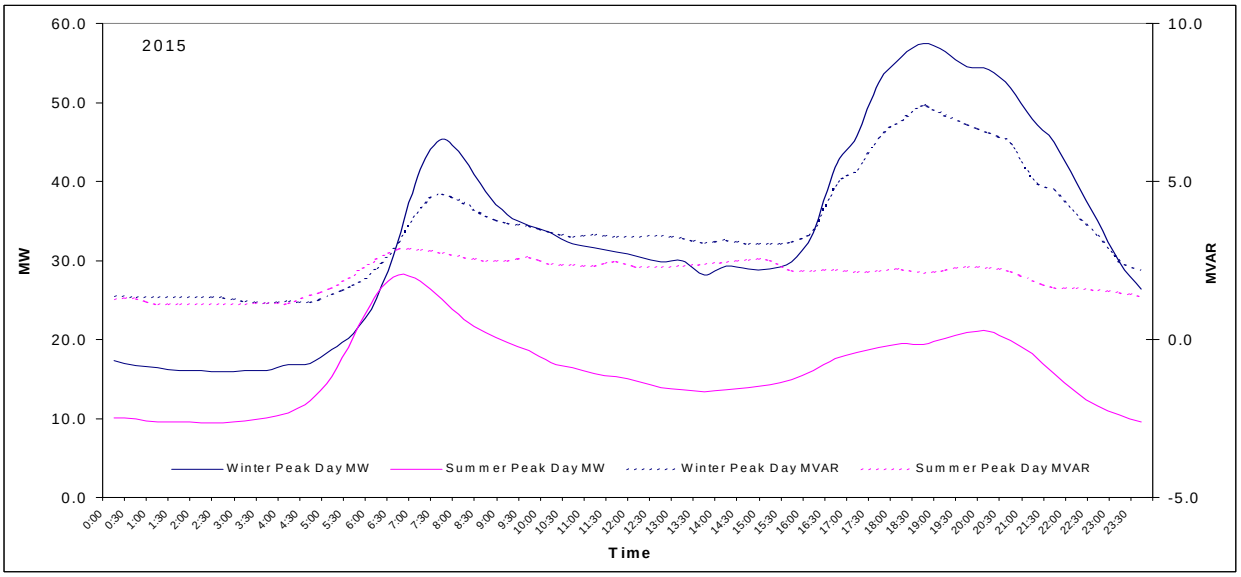
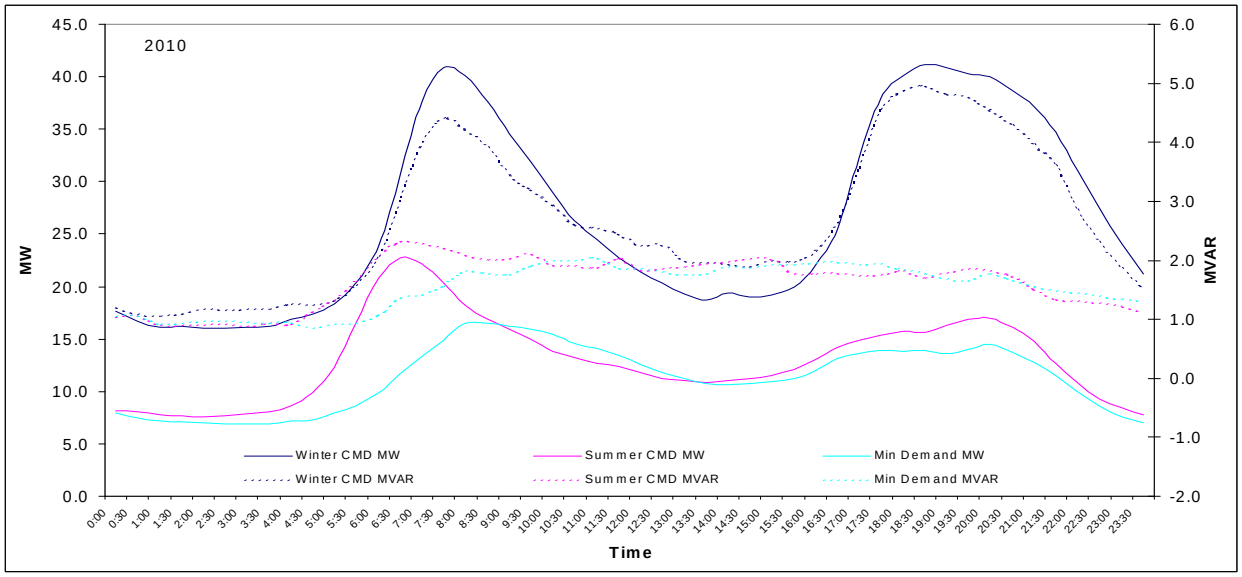
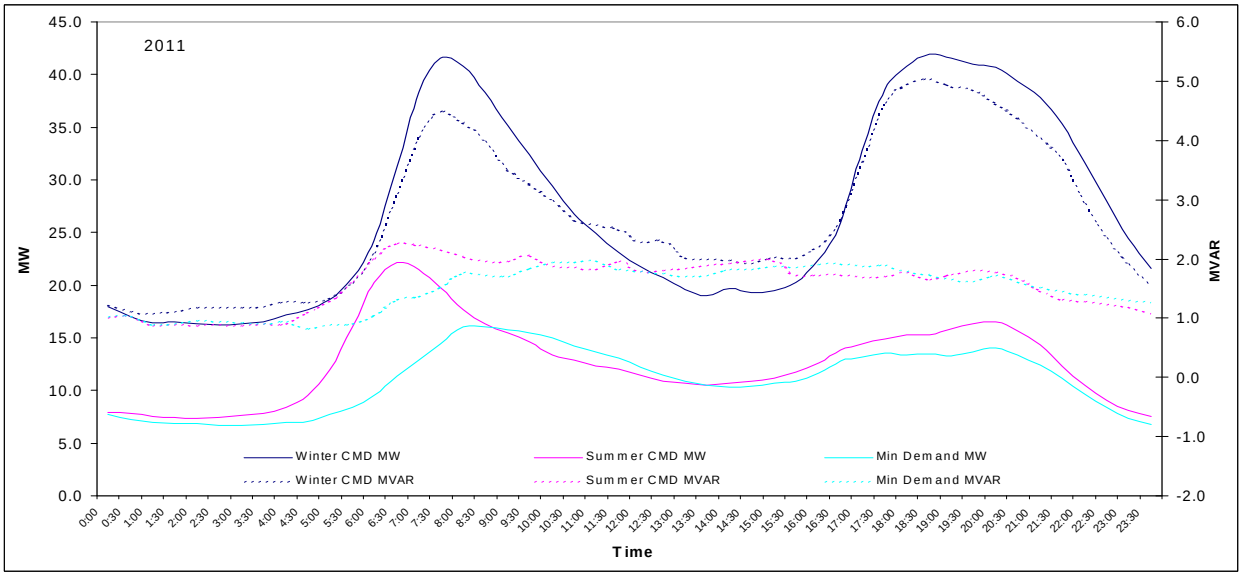
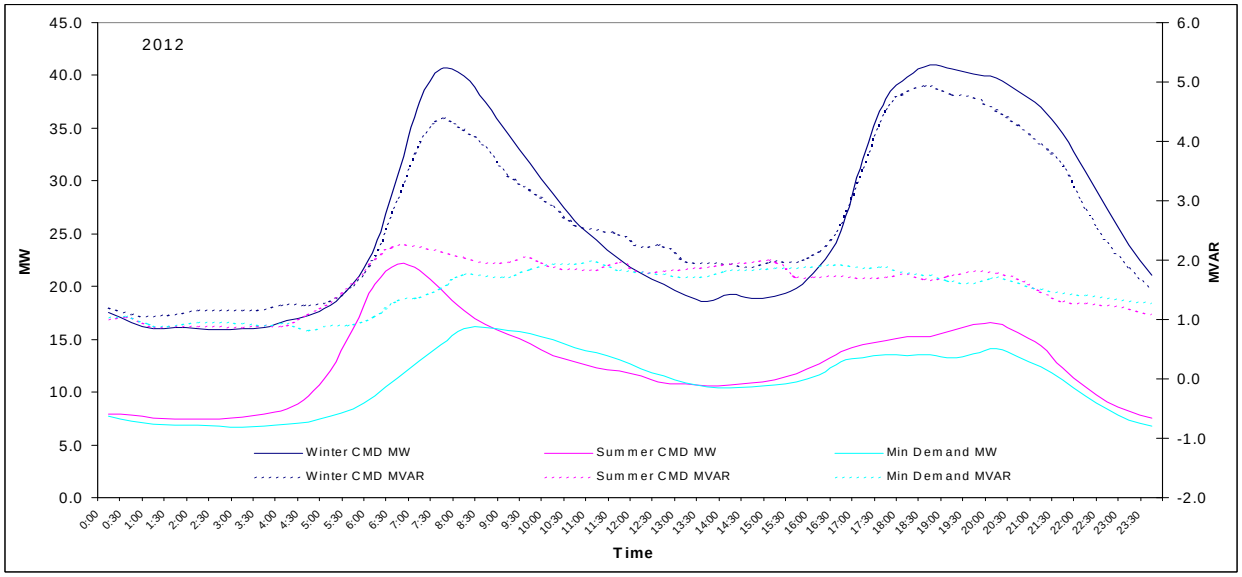
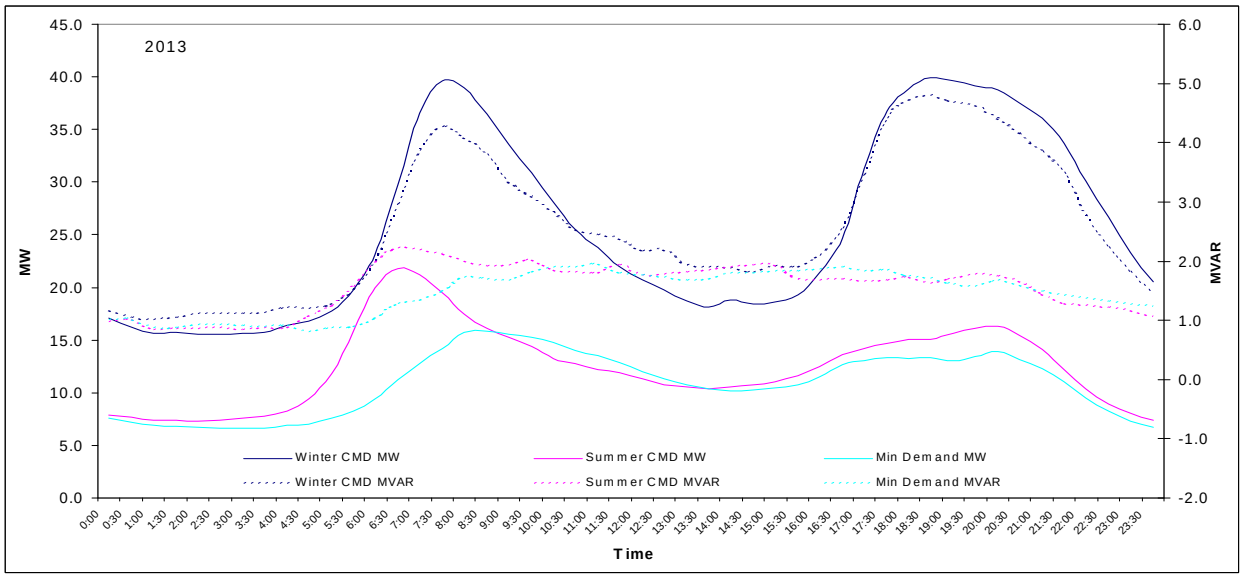

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

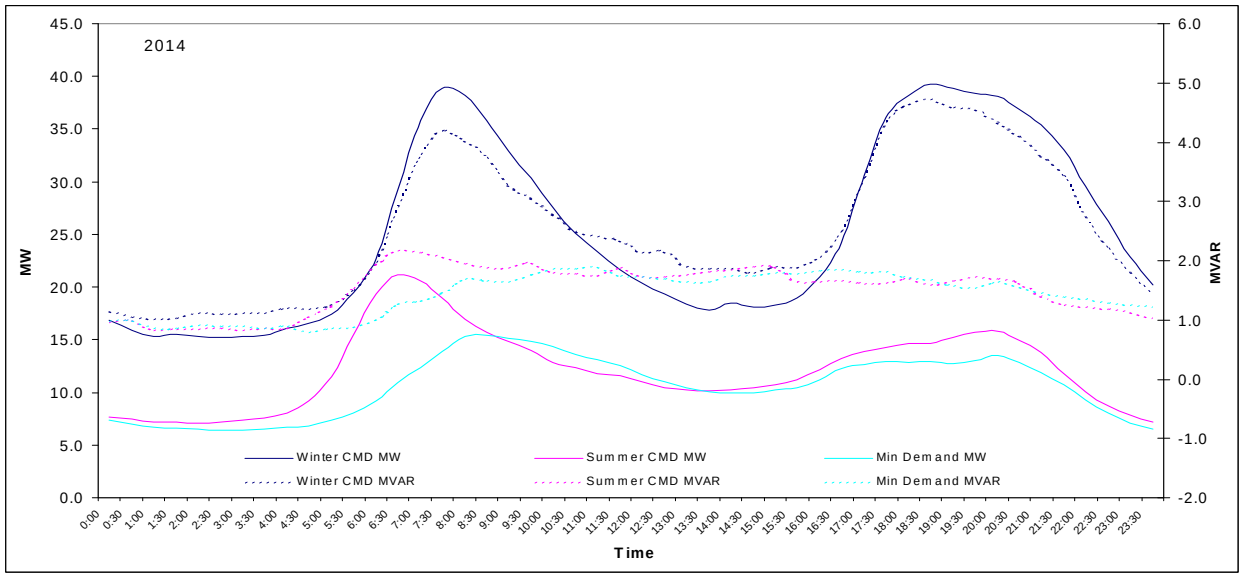
Figure 4-168 Load Profiles: Rokeby Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

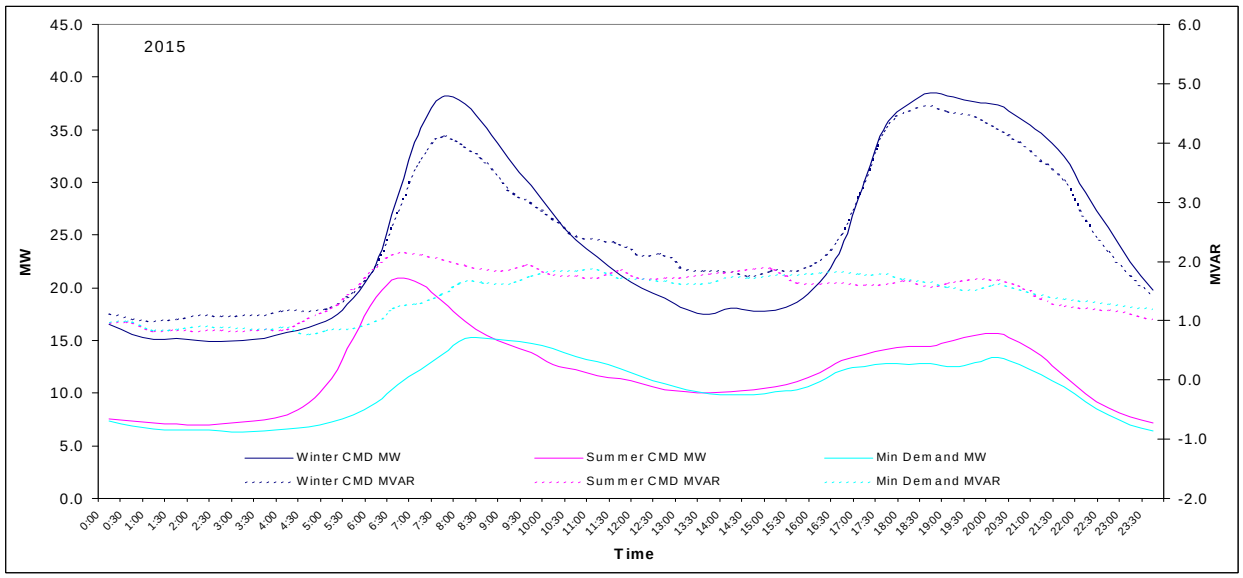
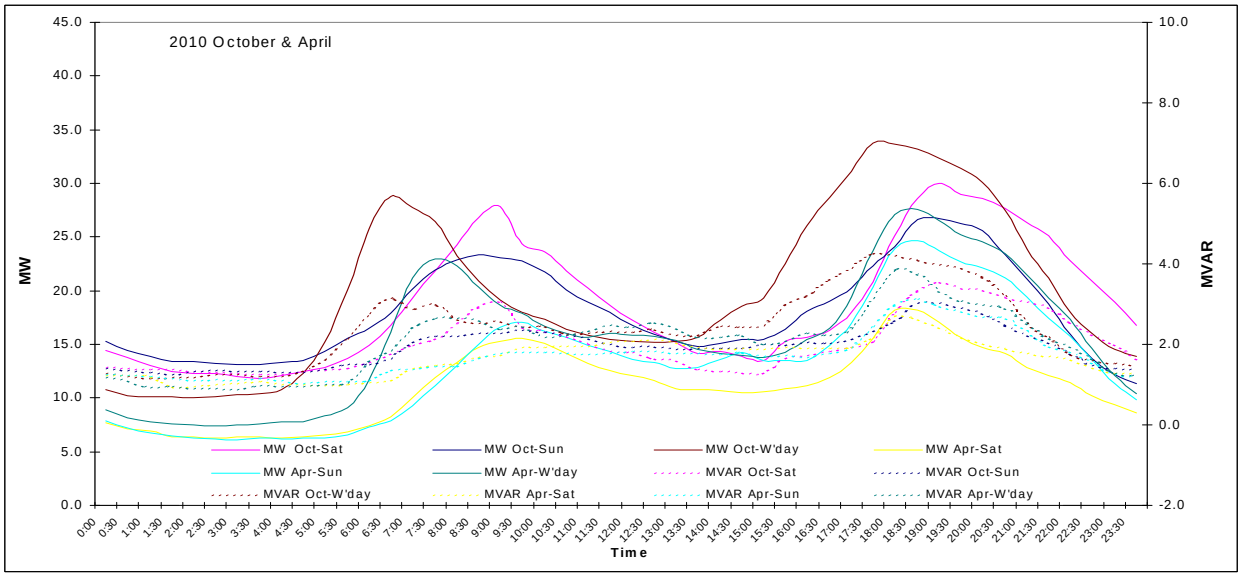
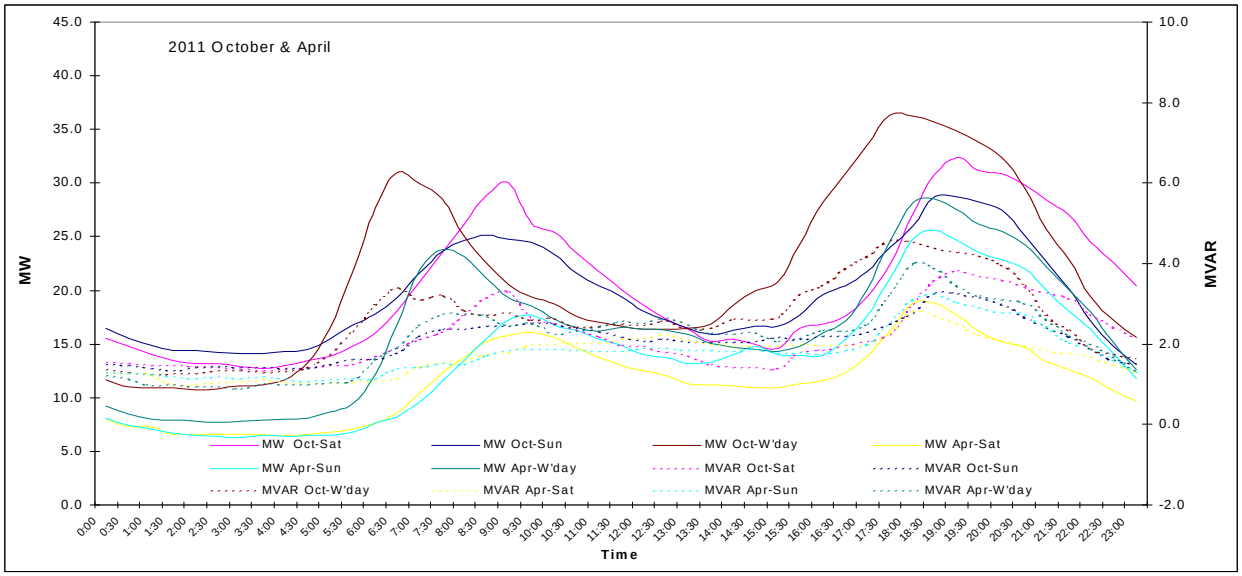
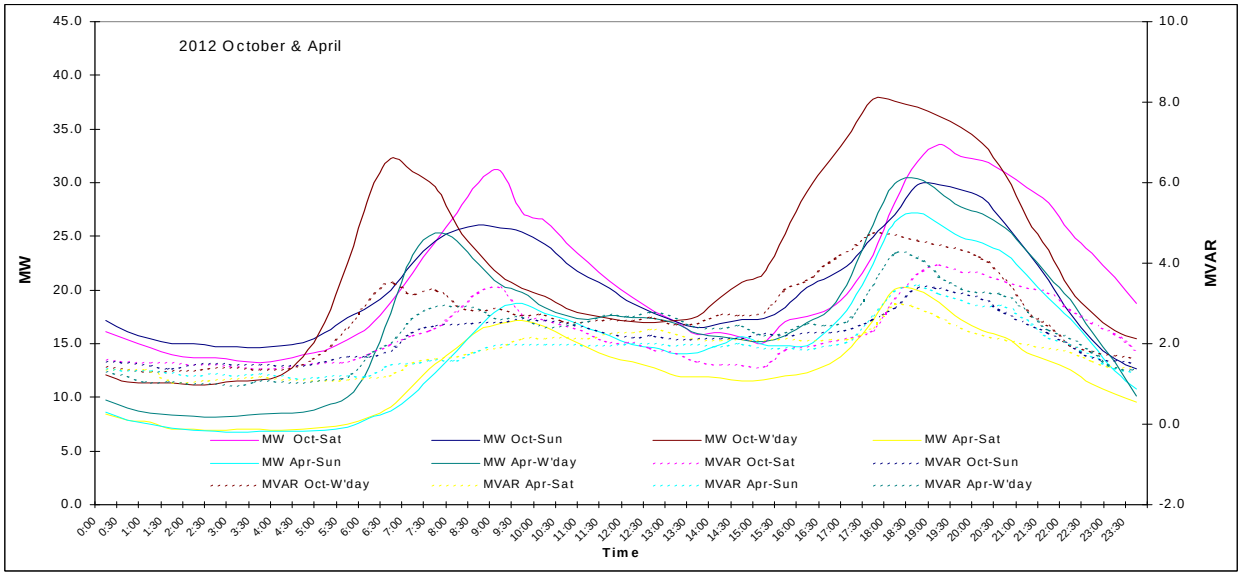
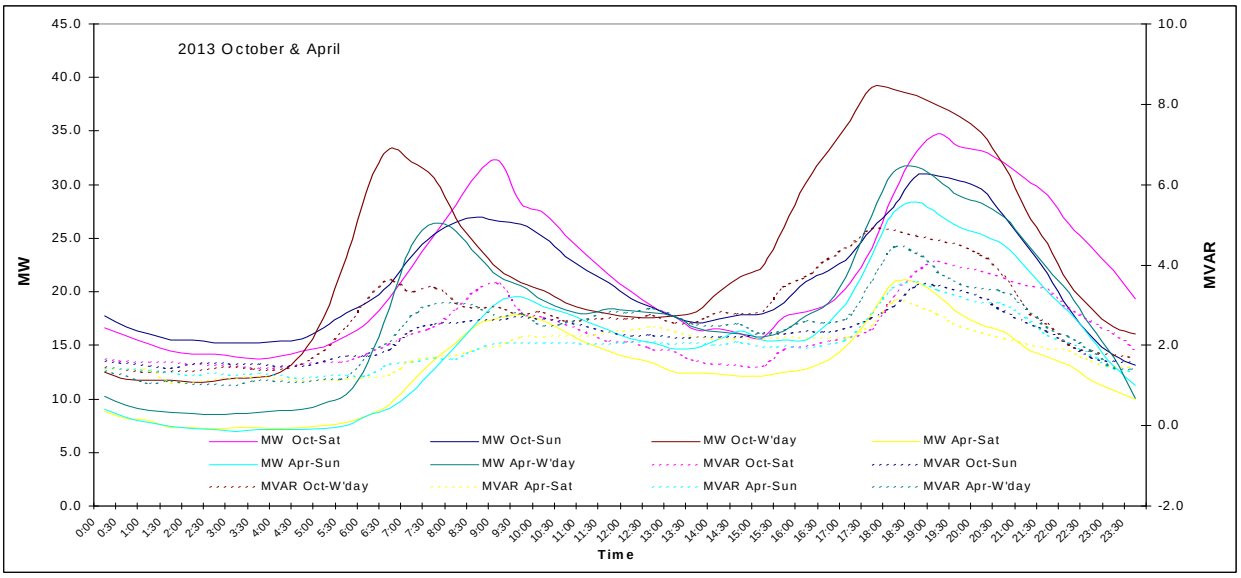

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

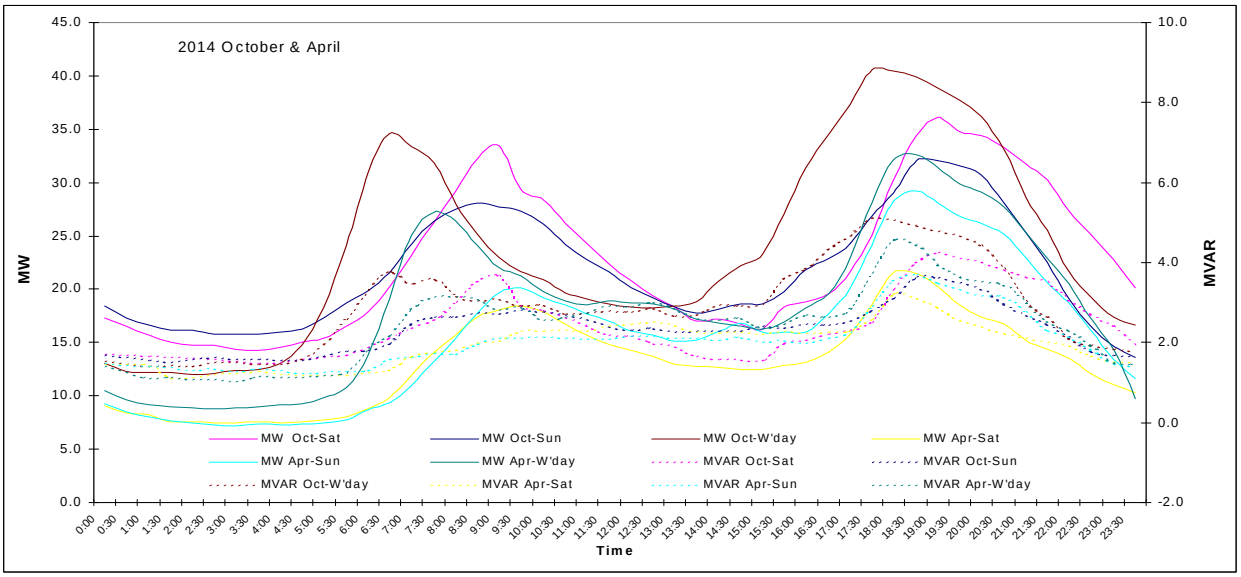
Figure 4-169 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

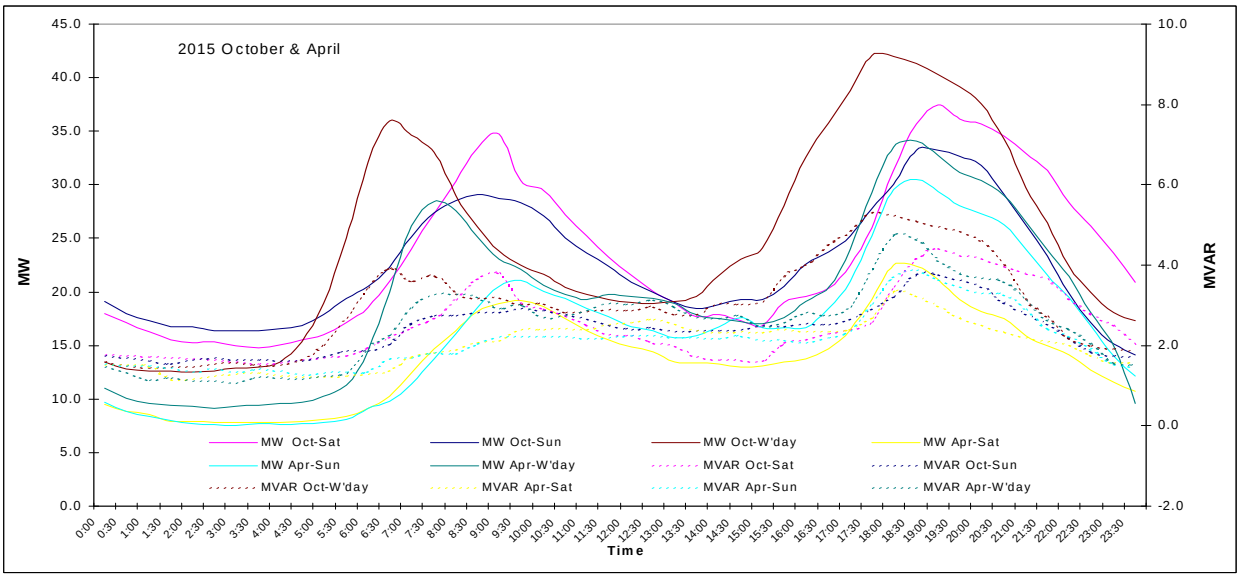
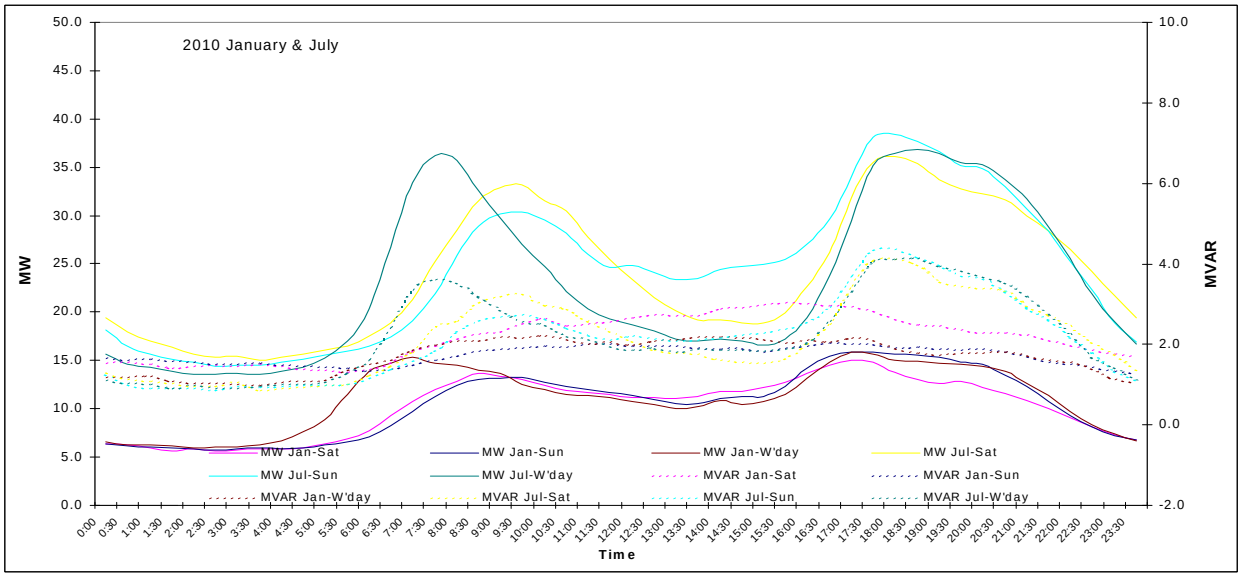
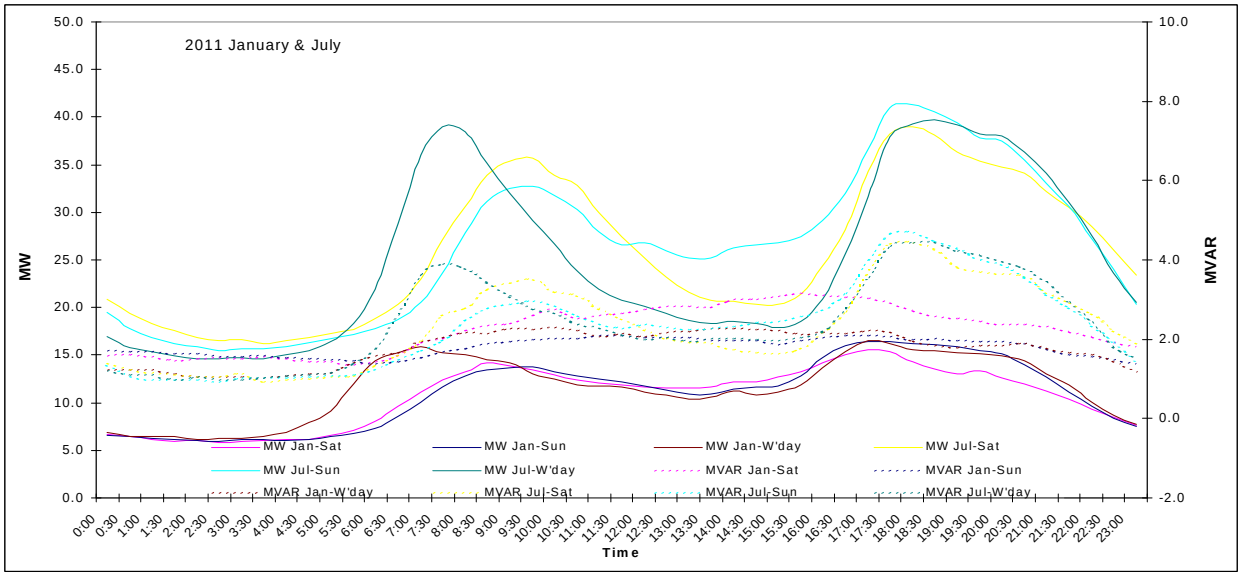
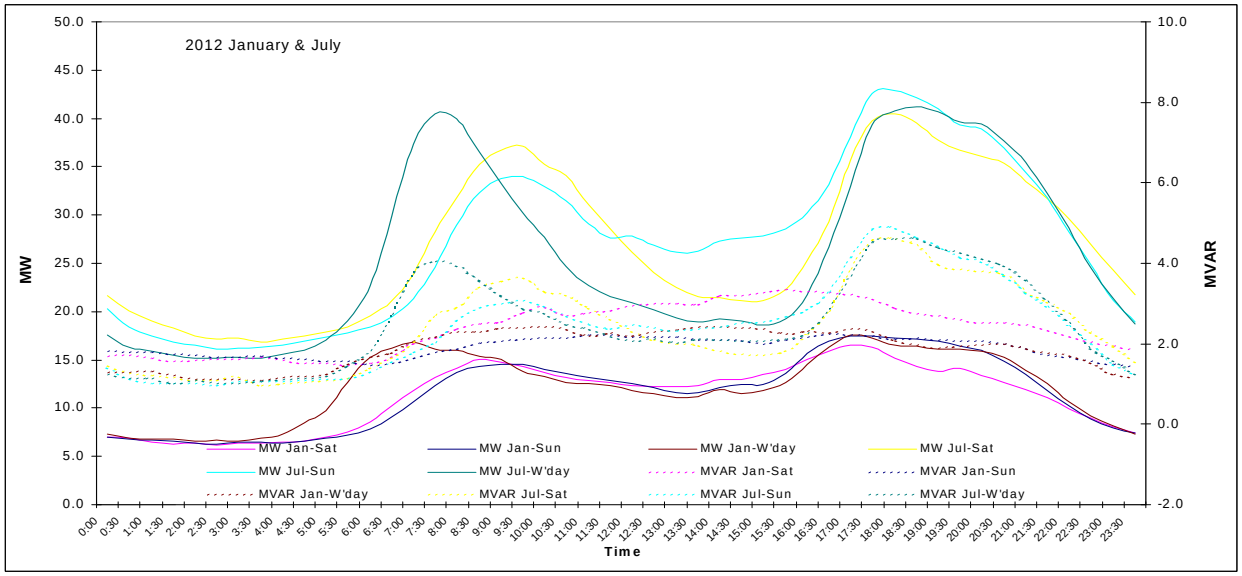
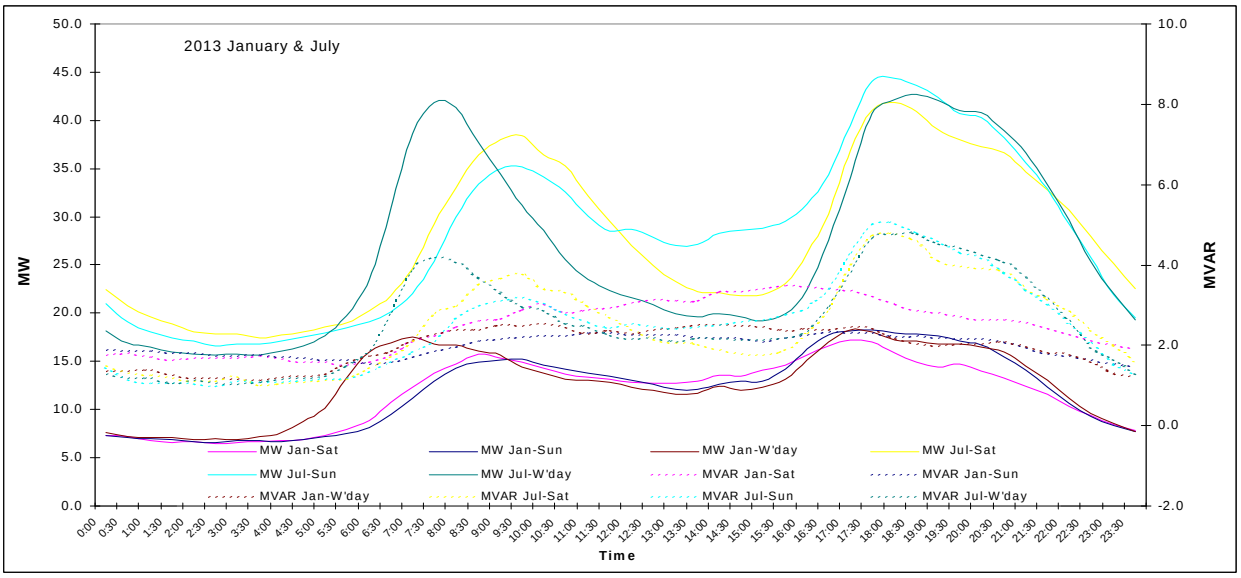

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

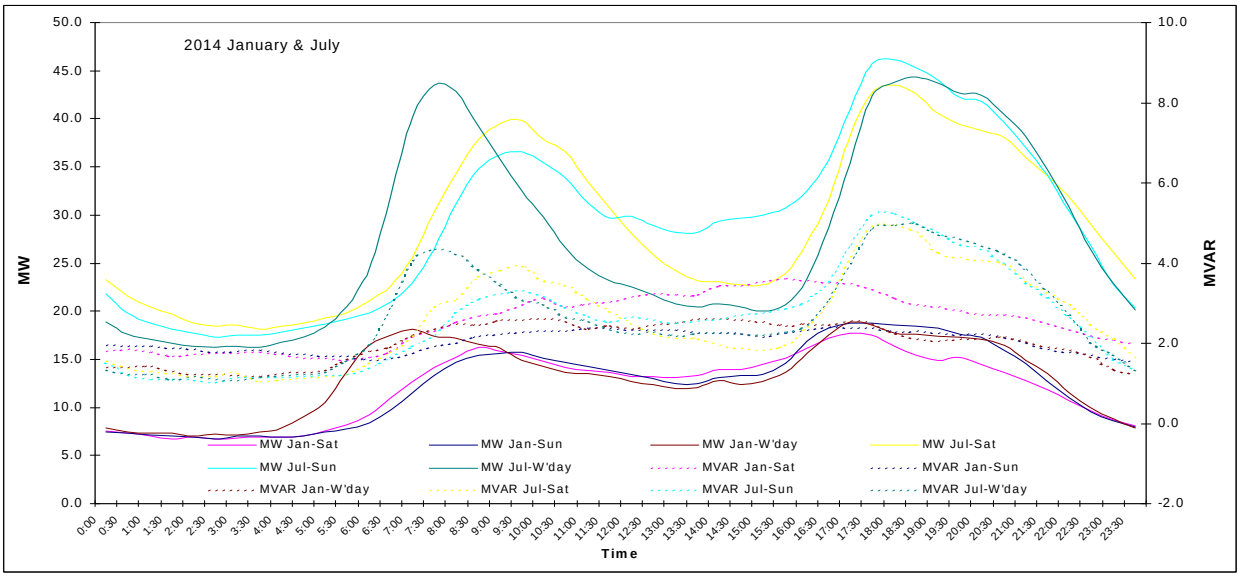
Figure 4-170 Load Profiles: Weekday, Saturday, Sunday for January & July

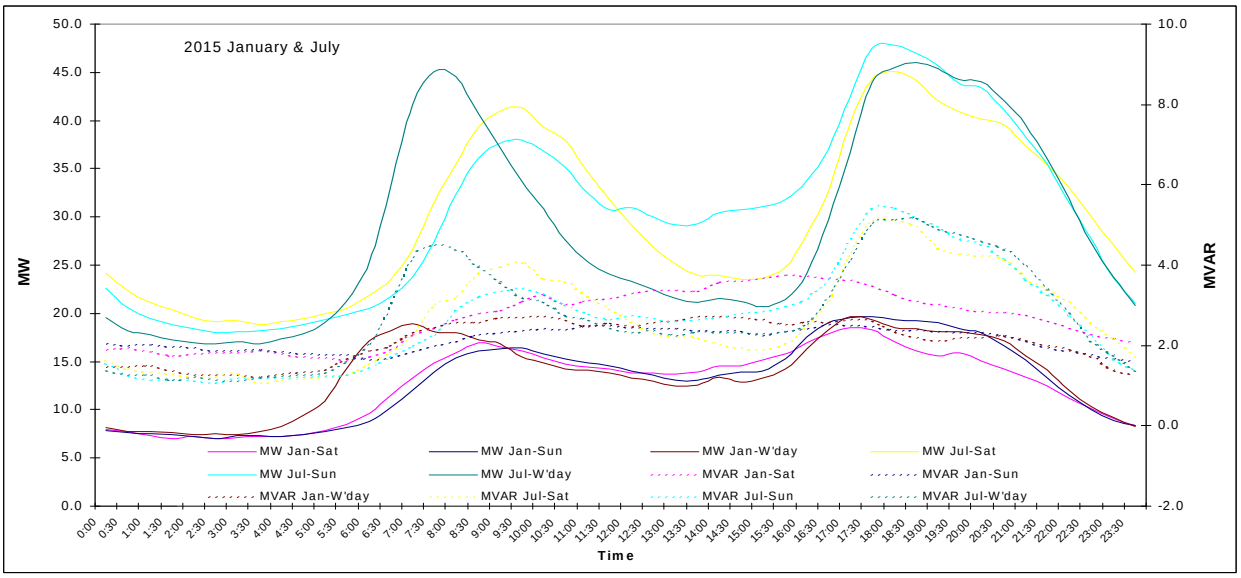







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.31 Rosebery 22kV

Description:

The Substation is located at Rosebery and is known as “Rosebery 22kV Substation”. The substation is owned by Transend.

Note that as Aurora takes supply at both 22 kV and 44 kV at Rosebery Substation, for clarity the 22 kV supply point is referenced as the Rosebery 22 kV connection site and the 44 kV supply point is referenced as the Rosebery 44 kV connection site.

Table 4-111 Rosebery 22 kV Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	3	20	10

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing management programs included in the forecast for this connection site.

Forecast Results:

Table 4-112 Rosebery 22kV Site Winter load forecast

Rosebery 22kV	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	3.04	3.10	3.01	3.07	3.04	3.10	3.07	3.13
2006	2.89	2.95	2.85	2.91	2.89	2.95	2.90	2.96
2007	3.04	3.10	3.00	3.06	3.04	3.10	3.06	3.12
2008	3.41	3.48	3.41	3.48	3.41	3.48	3.49	3.56
2009	2.86	2.92	2.83	2.89	2.86	2.92	2.89	2.95
2010	2.71	2.77	2.59	2.64	2.71	2.77	2.63	2.68
2011	2.76	2.82	2.64	2.69	2.79	2.85	2.66	2.72
2012	2.71	2.76	2.58	2.64	2.74	2.79	2.61	2.67
2013	2.65	2.70	2.53	2.58	2.68	2.74	2.56	2.61
2014	2.61	2.66	2.49	2.54	2.64	2.69	2.52	2.57
2015	2.56	2.62	2.45	2.50	2.60	2.65	2.48	2.53
2016	2.53	2.58	2.41	2.46	2.56	2.61	2.44	2.49
2017	2.49	2.54	2.38	2.43	2.53	2.58	2.41	2.46
2018	2.47	2.52	2.35	2.40	2.50	2.55	2.39	2.44
2019	2.45	2.50	2.33	2.38	2.48	2.54	2.37	2.42
2020	2.43	2.48	2.32	2.37	2.47	2.52	2.36	2.40

Table 4-113 Rosebery 22kV Site Summer load forecast

Rosebery 22kV	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	2.09	2.13	1.85	1.89	2.09	2.13	1.88	1.92
2006	2.18	2.23	1.79	1.82	2.18	2.23	1.81	1.85
2007	2.36	2.41	1.95	1.99	2.36	2.41	1.97	2.01
2008	2.08	2.12	2.08	2.12	2.08	2.12	2.12	2.16
2009	2.15	2.19	2.07	2.11	2.15	2.19	2.13	2.17
2010	1.66	1.69	1.21	1.23	1.66	1.69	1.23	1.25
2011	1.63	1.66	1.19	1.21	1.68	1.71	1.22	1.25
2012	1.64	1.68	1.20	1.22	1.70	1.73	1.24	1.26
2013	1.63	1.67	1.19	1.21	1.69	1.72	1.23	1.25
2014	1.60	1.64	1.17	1.19	1.65	1.69	1.21	1.23
2015	1.60	1.64	1.17	1.19	1.65	1.69	1.21	1.23
2016	1.57	1.60	1.15	1.17	1.62	1.66	1.18	1.21
2017	1.60	1.63	1.17	1.19	1.65	1.68	1.20	1.23
2018	1.60	1.64	1.17	1.19	1.66	1.69	1.21	1.23
2019	1.61	1.64	1.17	1.20	1.66	1.69	1.21	1.24
2020	1.62	1.65	1.18	1.20	1.67	1.70	1.22	1.24

Figure 4-171 Rosebery 22kV Site Summer Load Forecast at 50% and 10% POE

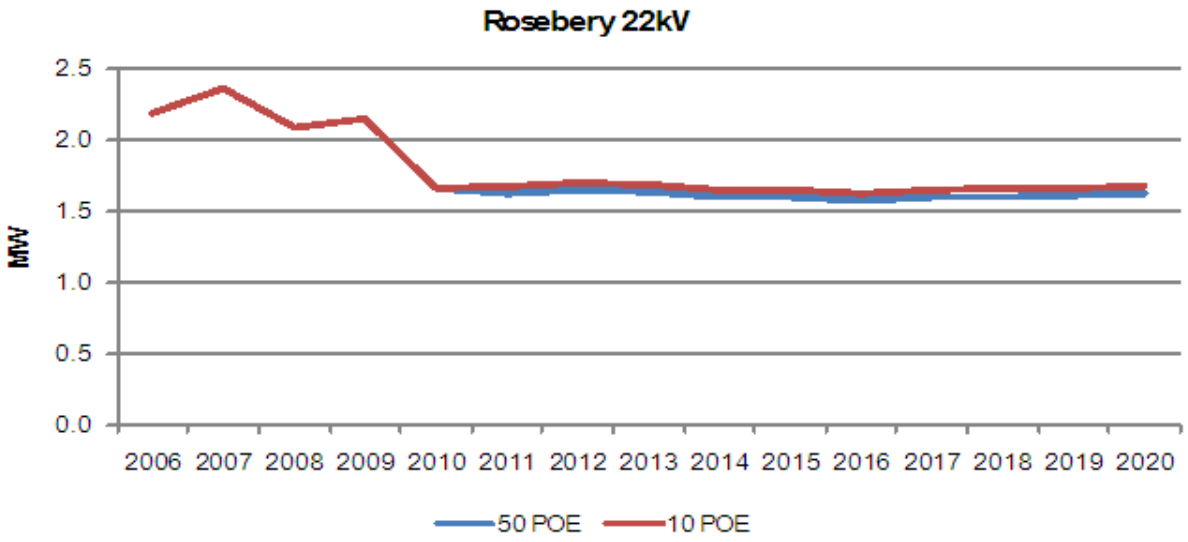
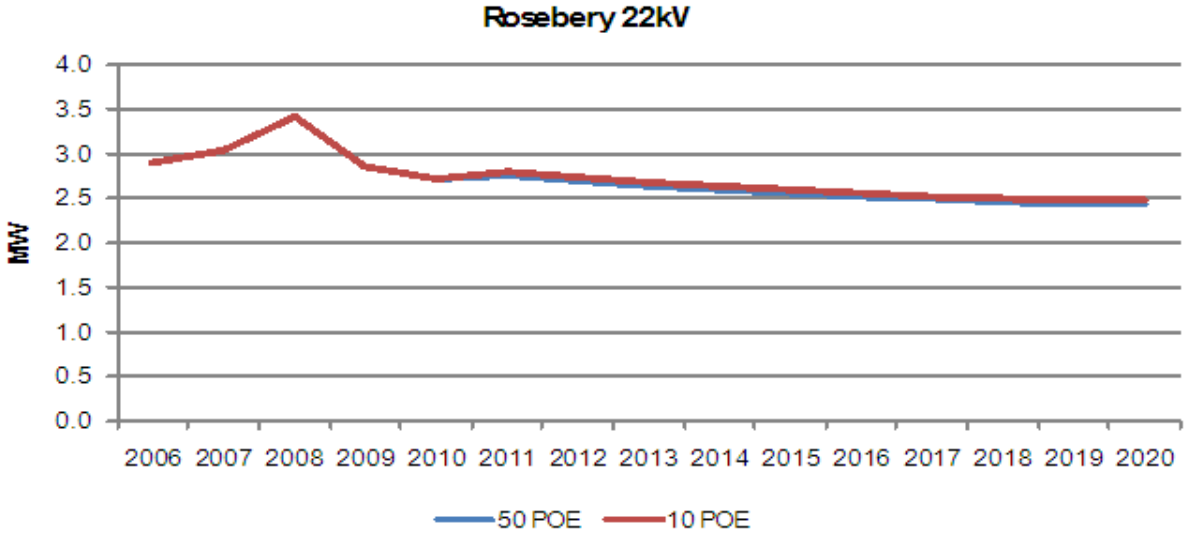


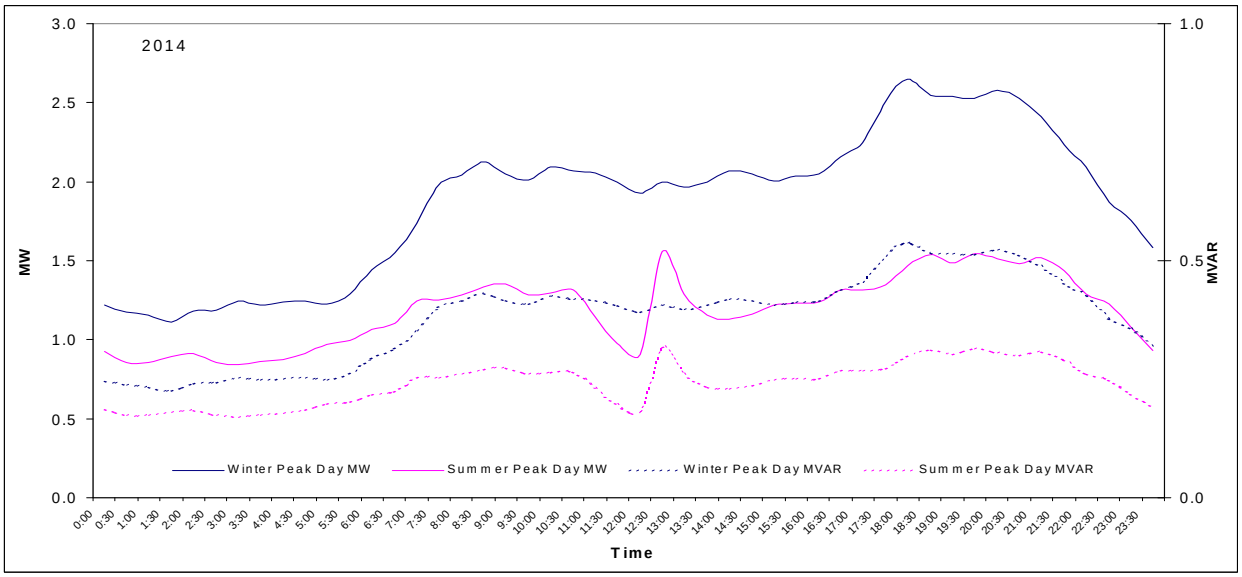
Figure 4-172 Rosebery 22kV Site Winter Load Forecast at 50% and 10% POE



Load Profiles:

Figure 4-173 Load Profiles: Rosebery 22kV Substation Day of Summer/Winter Peak Demand


2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

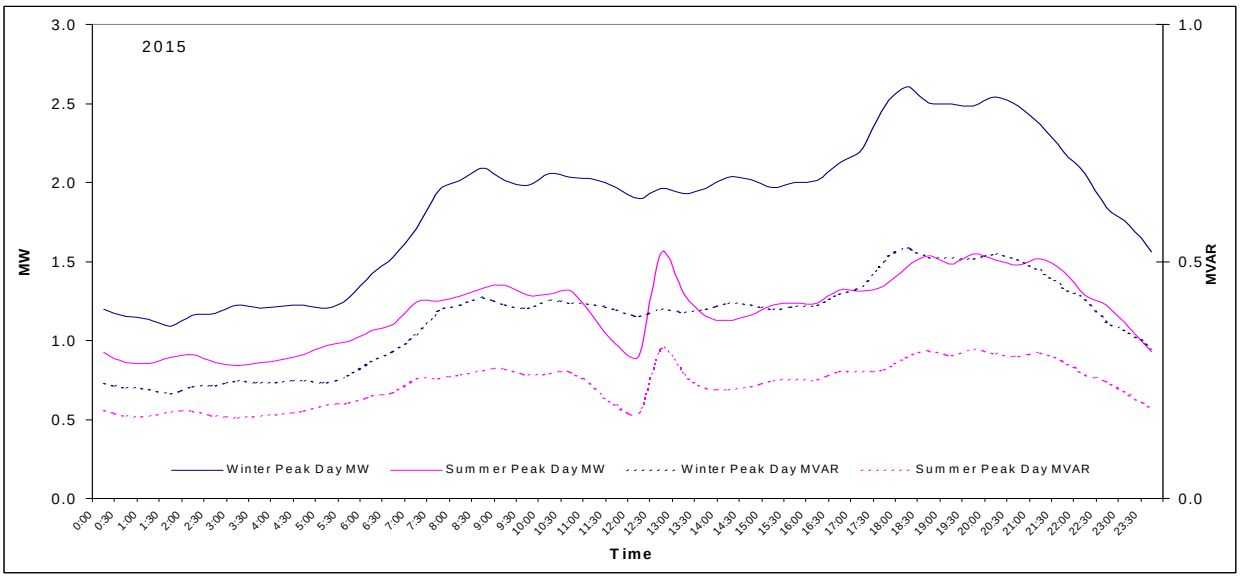
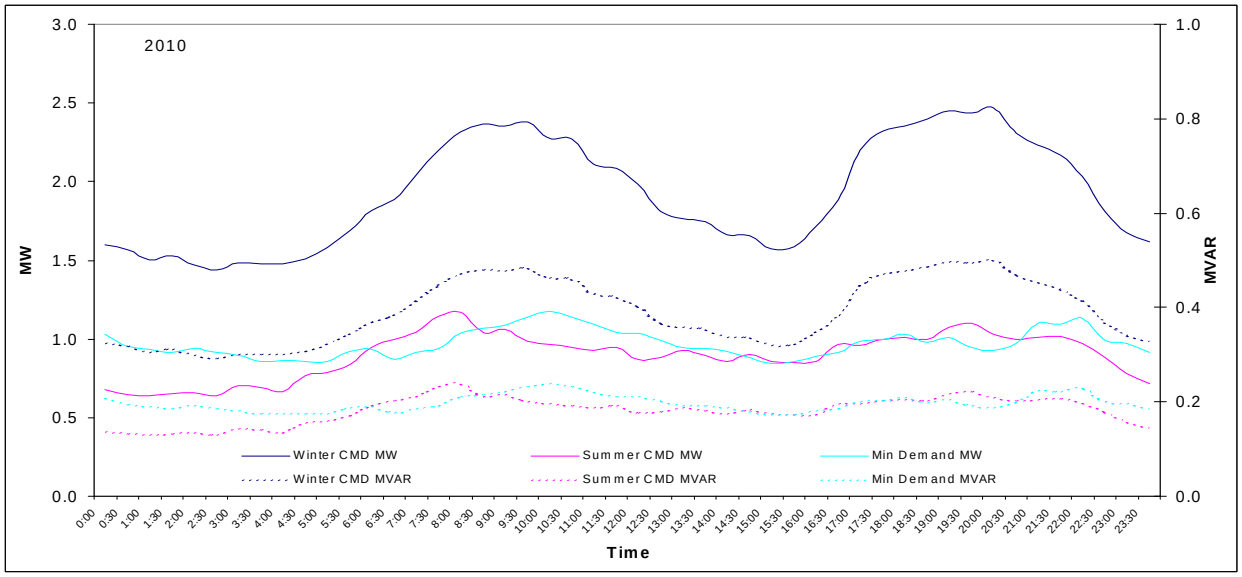
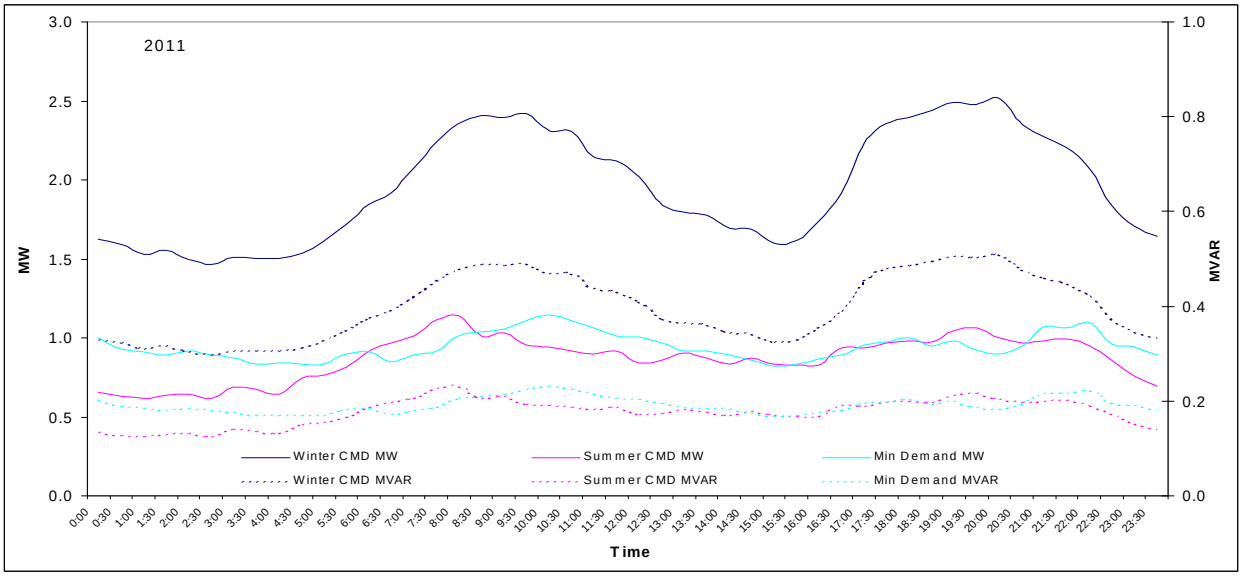
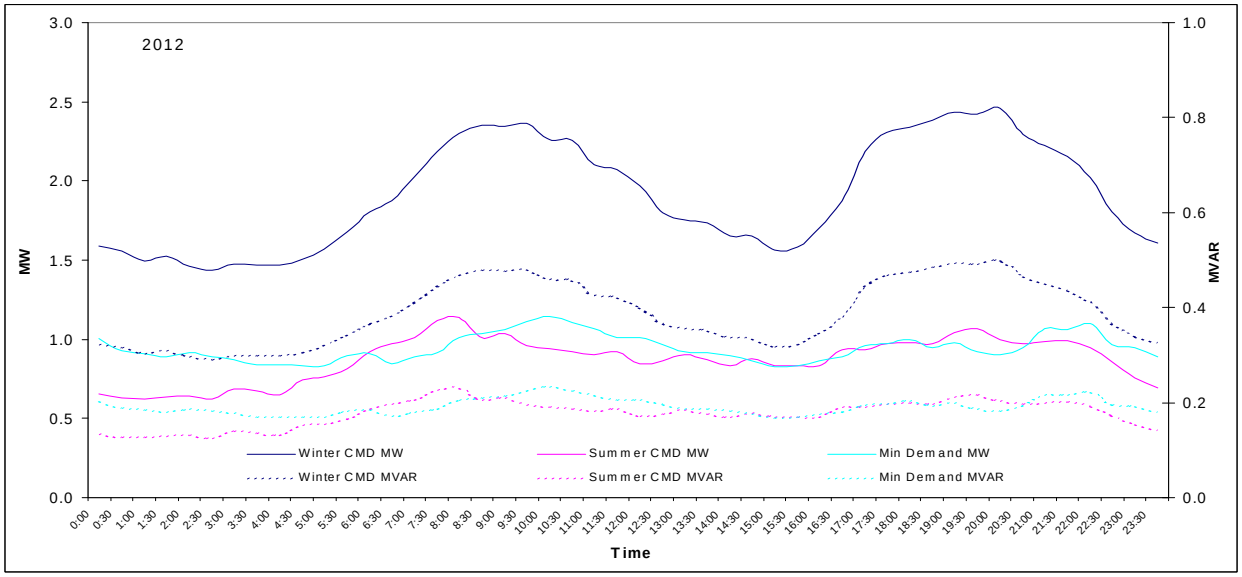
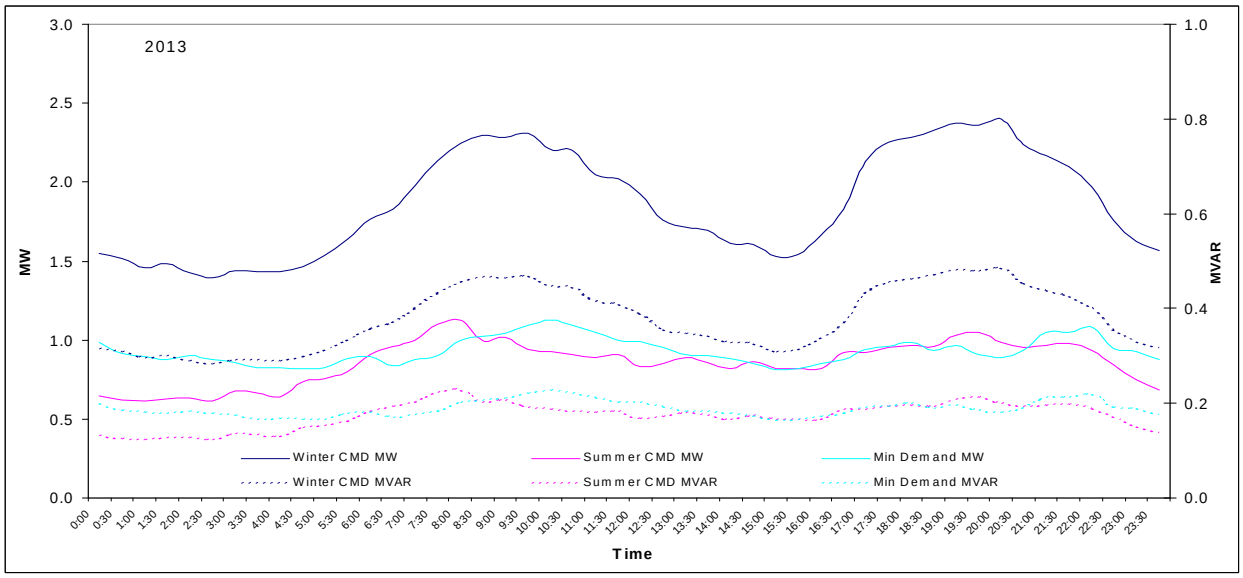

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

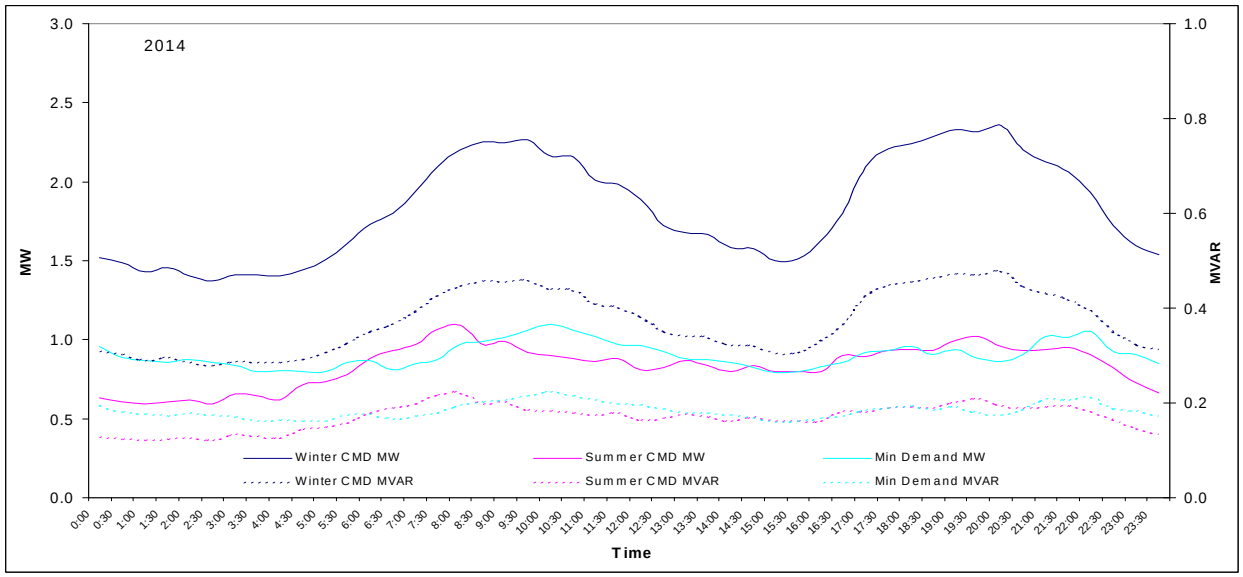
Figure 4-174 Load Profiles: Rosebery 22kV Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

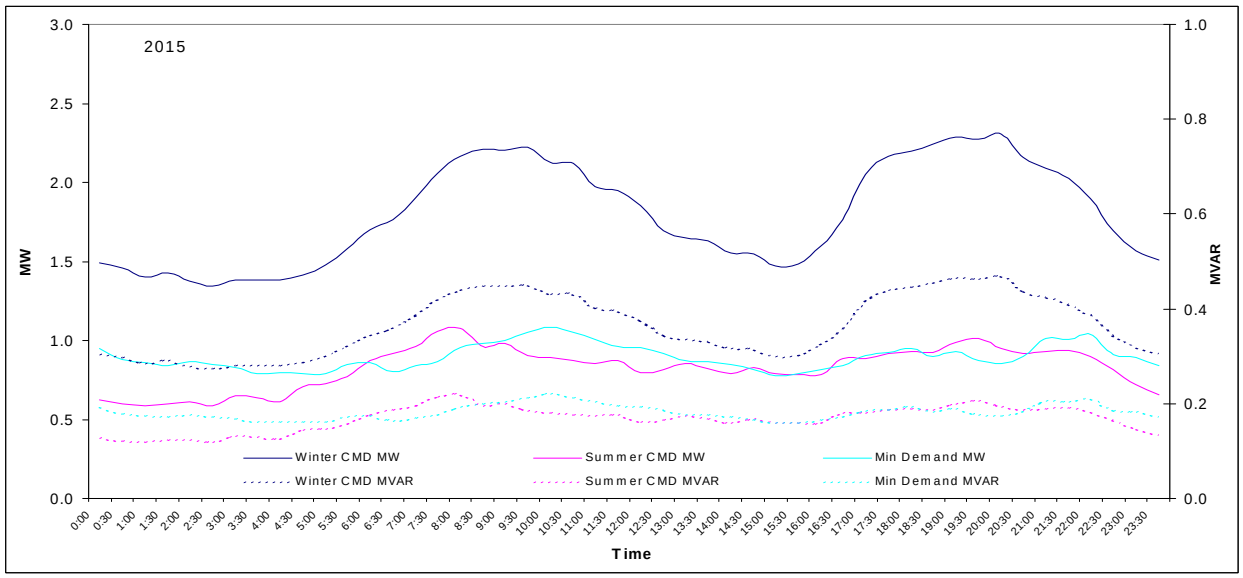
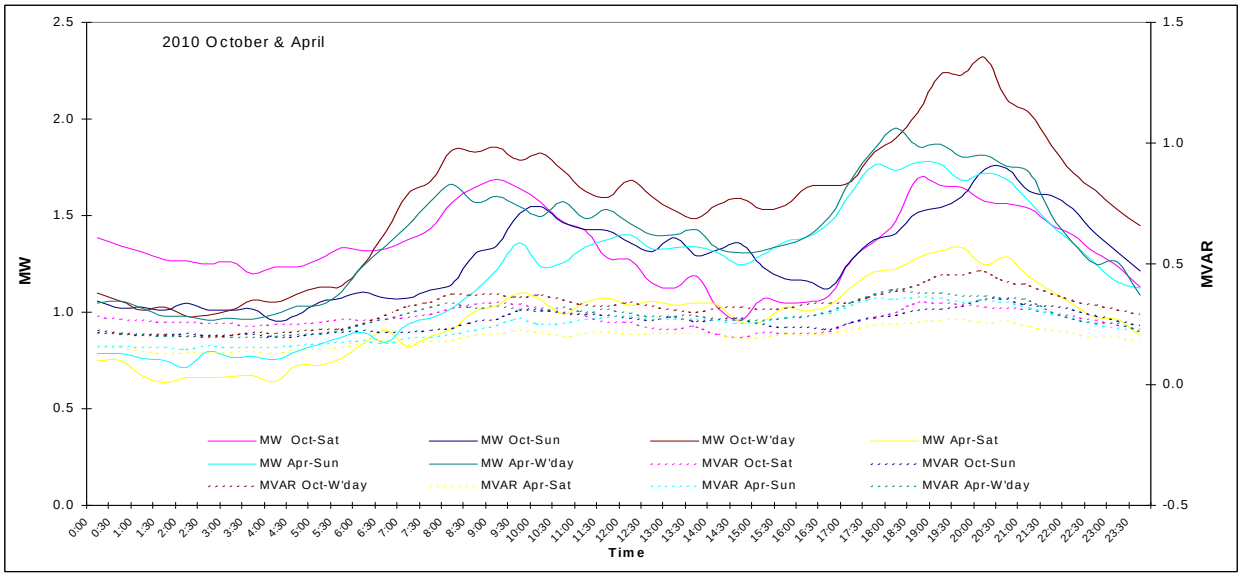
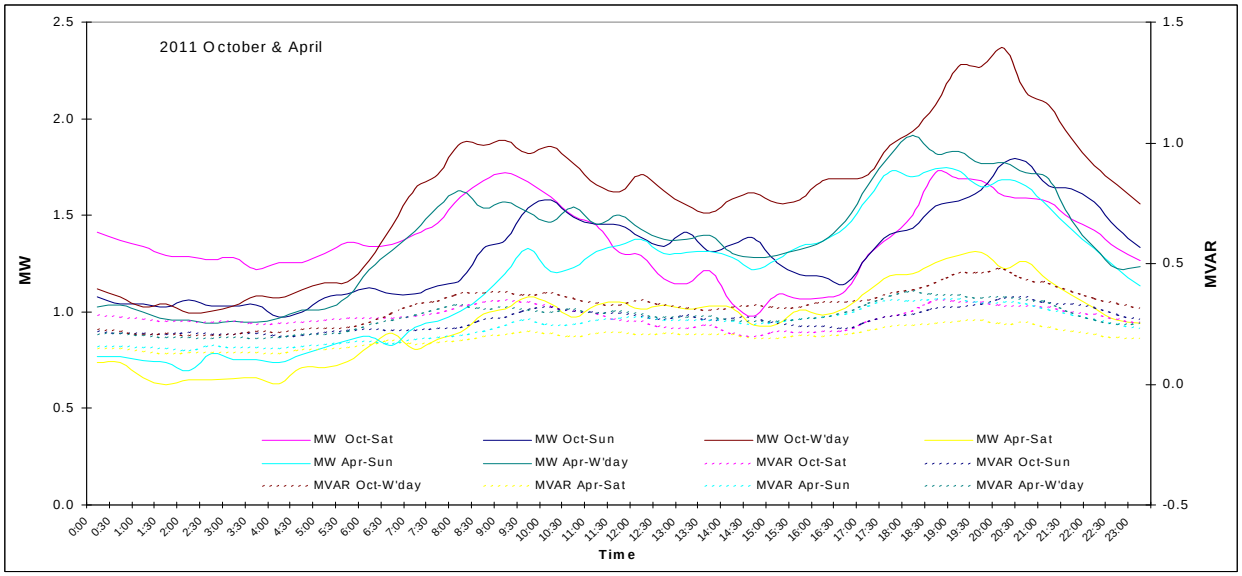
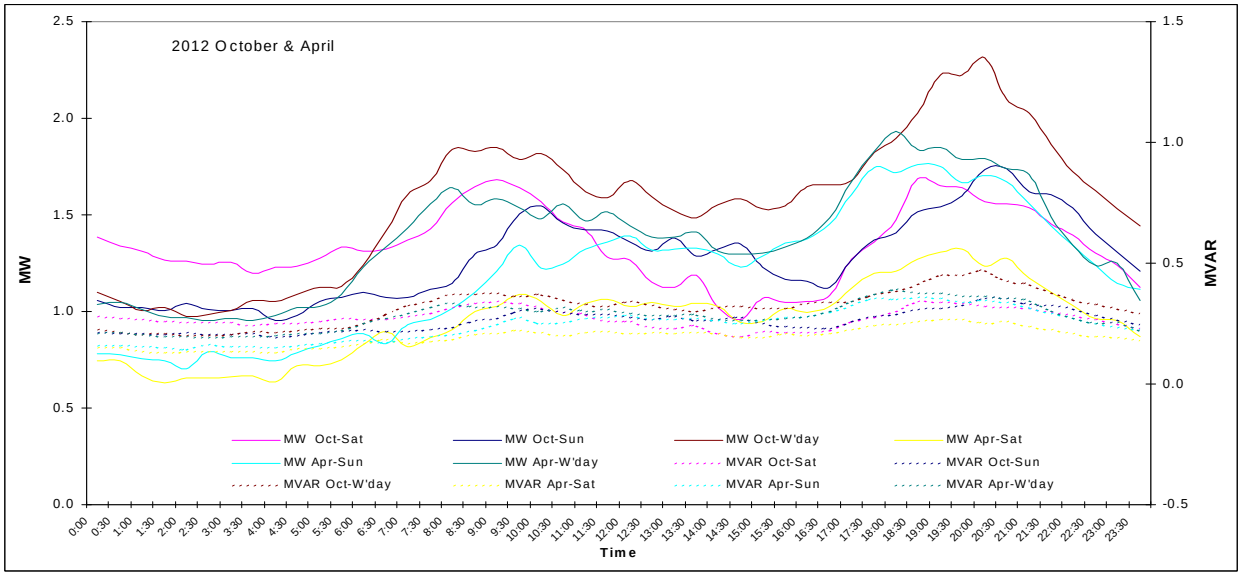
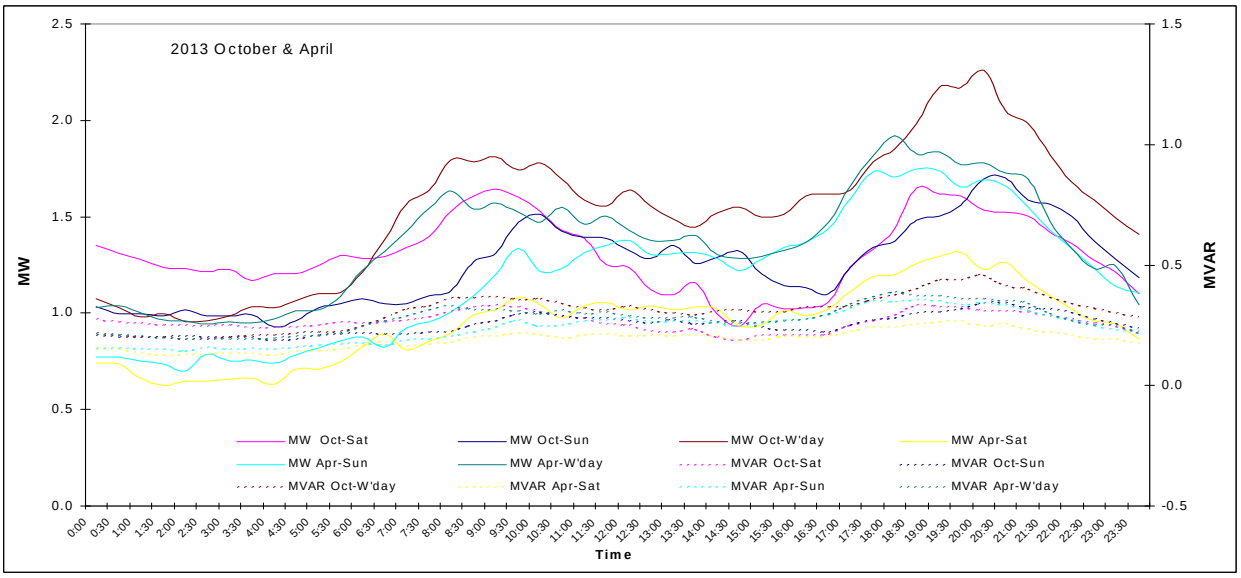

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

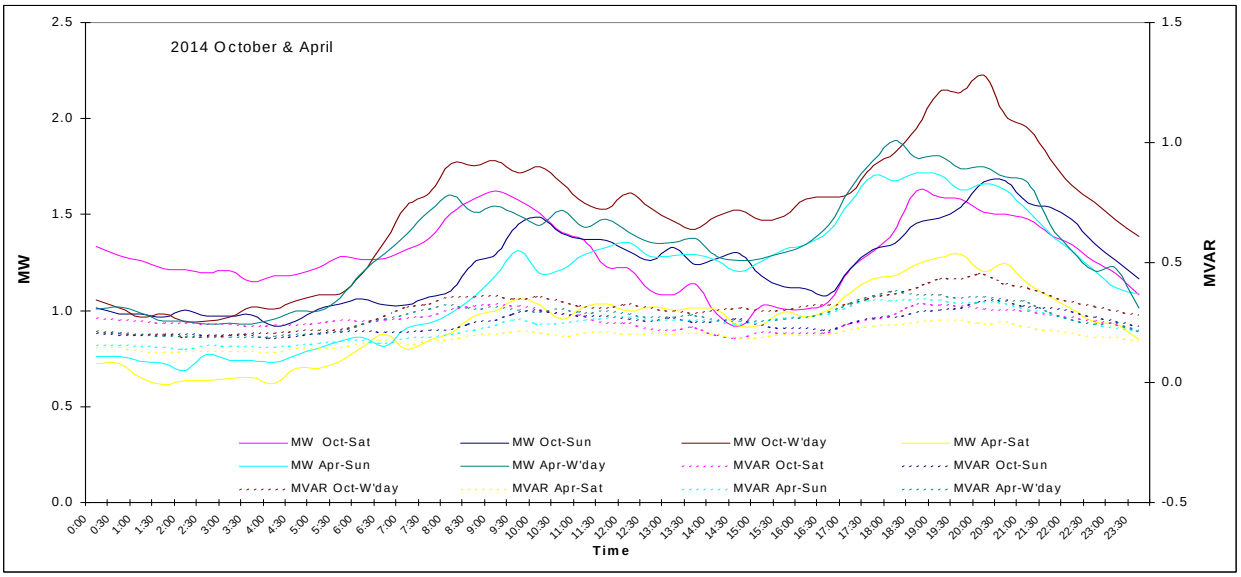
Figure 4-175 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

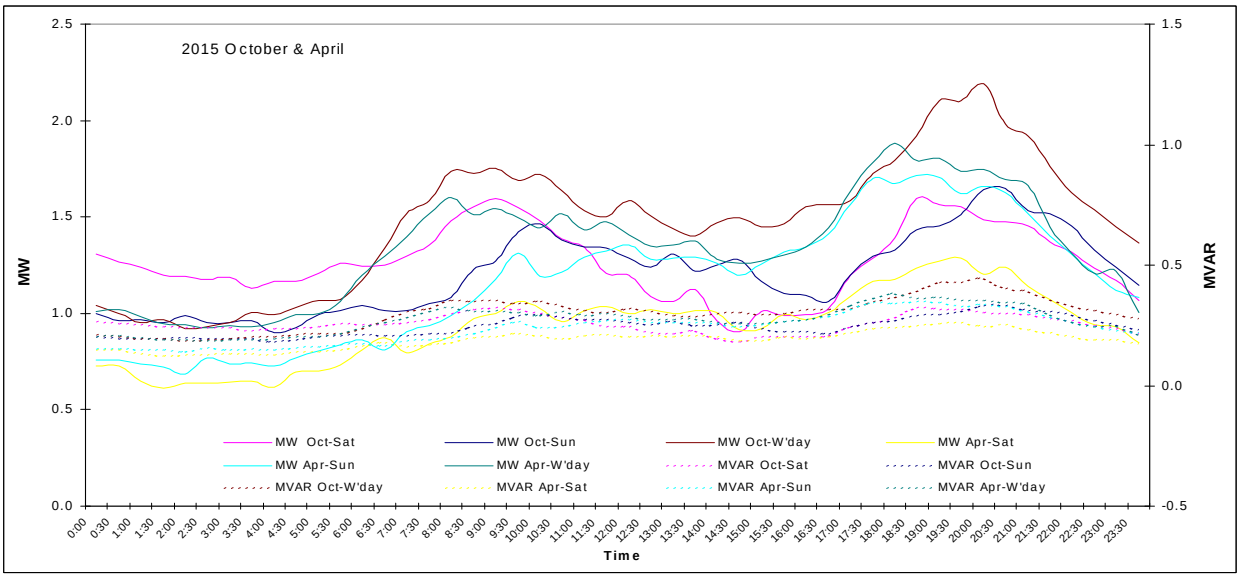
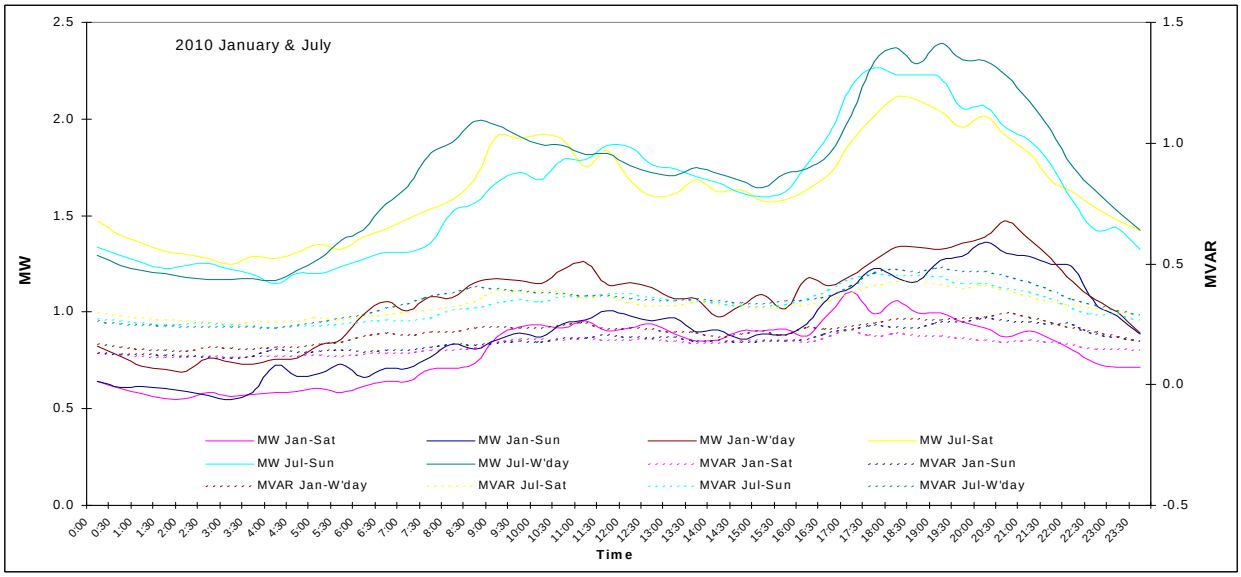
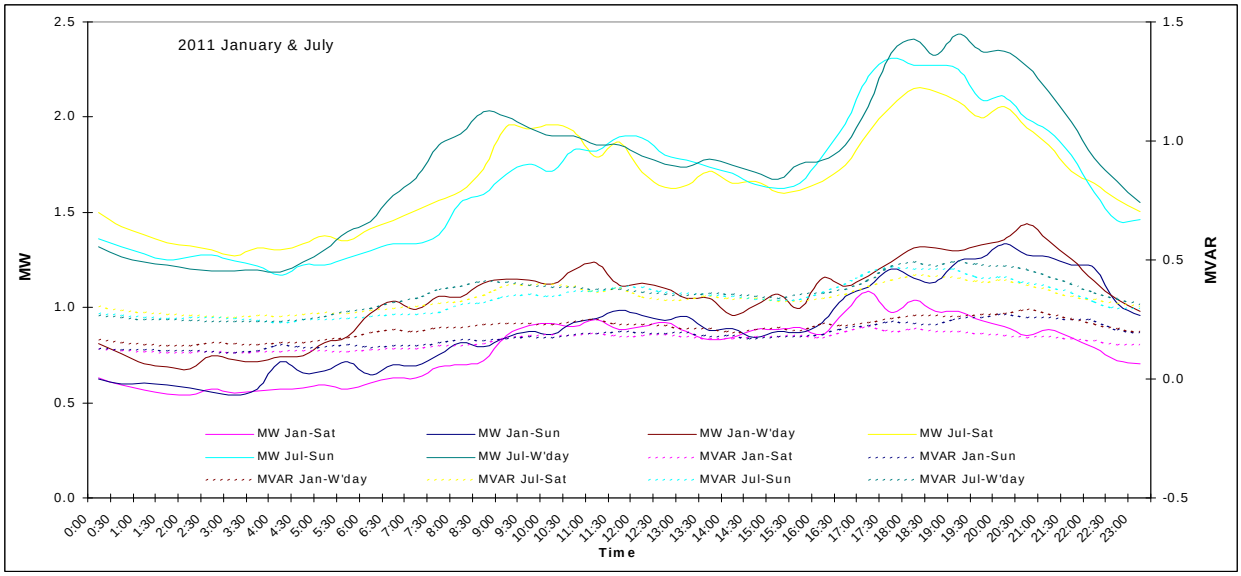
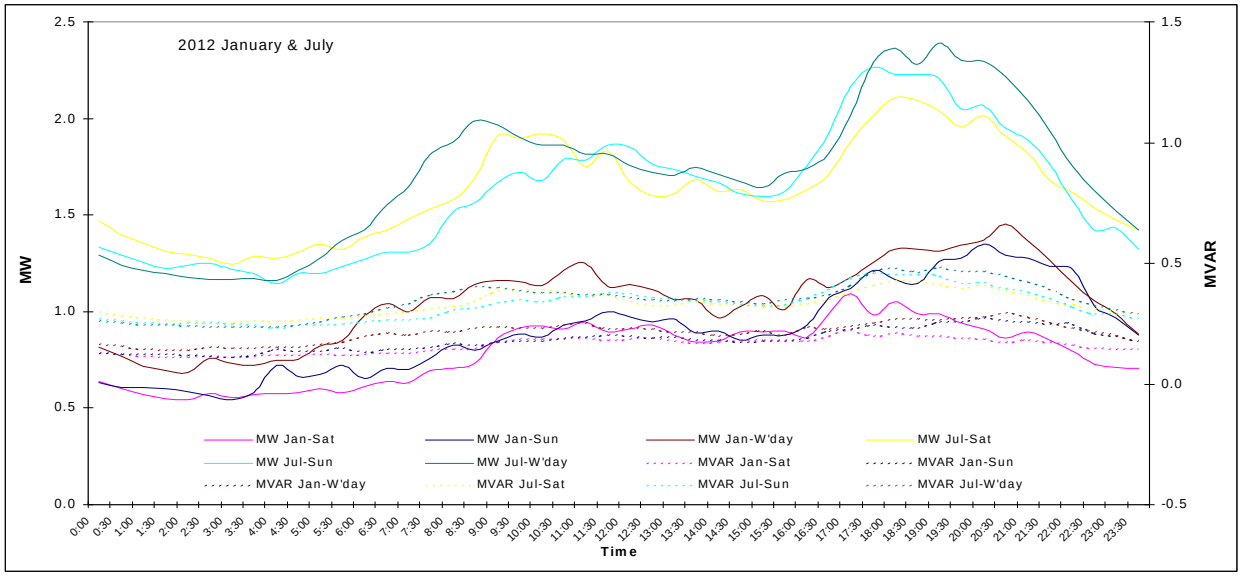
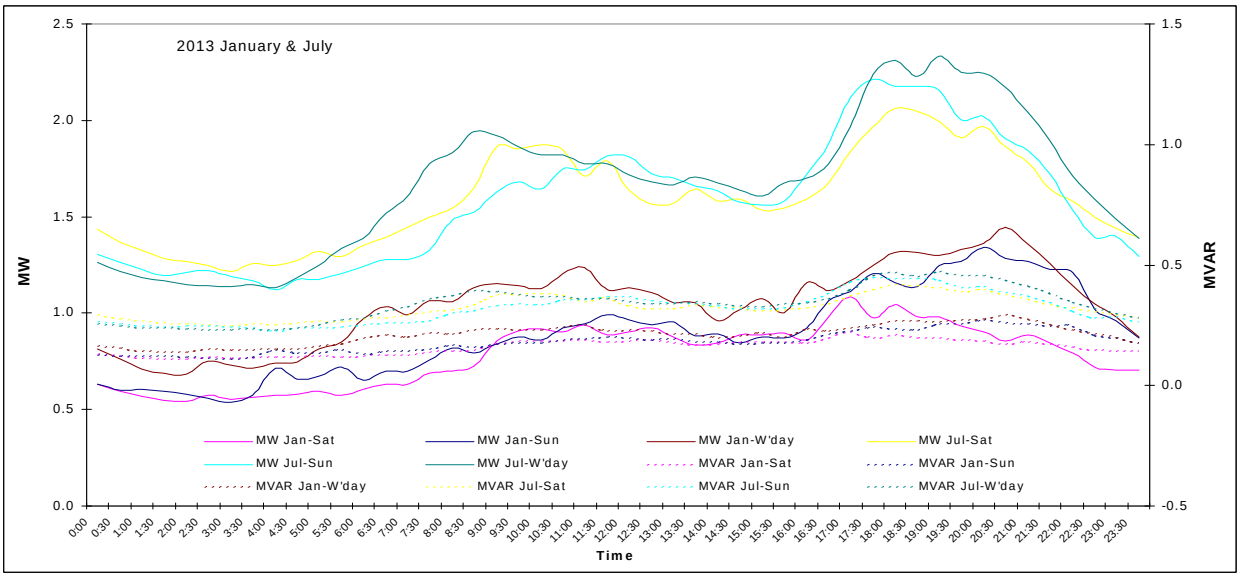

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

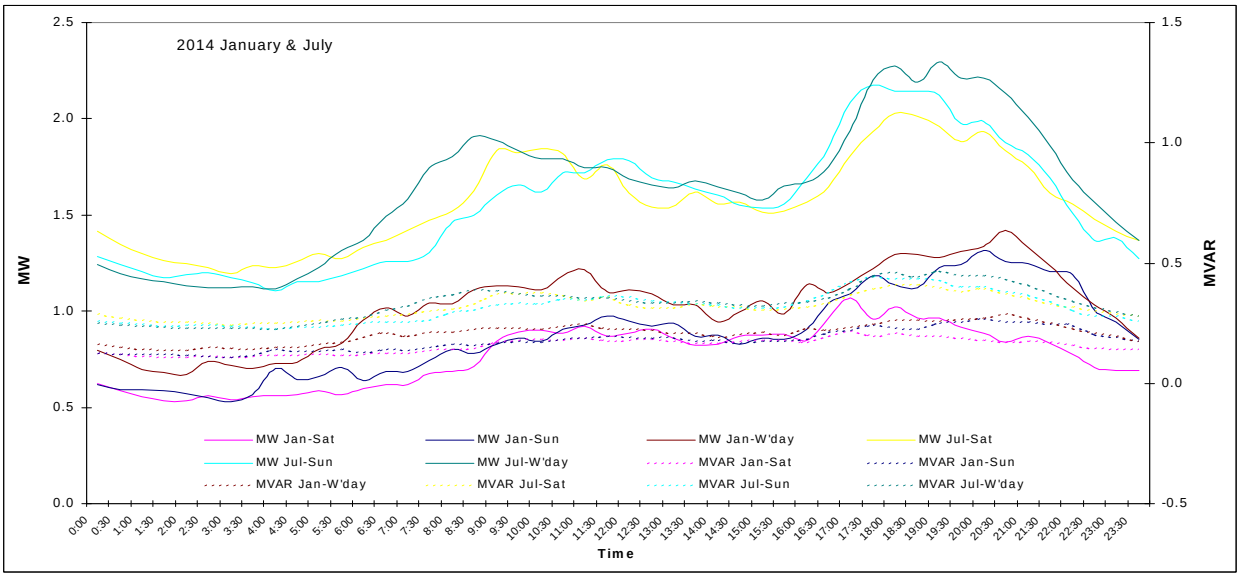
Figure 4-176 Load Profiles: Weekday, Saturday, Sunday for January & July

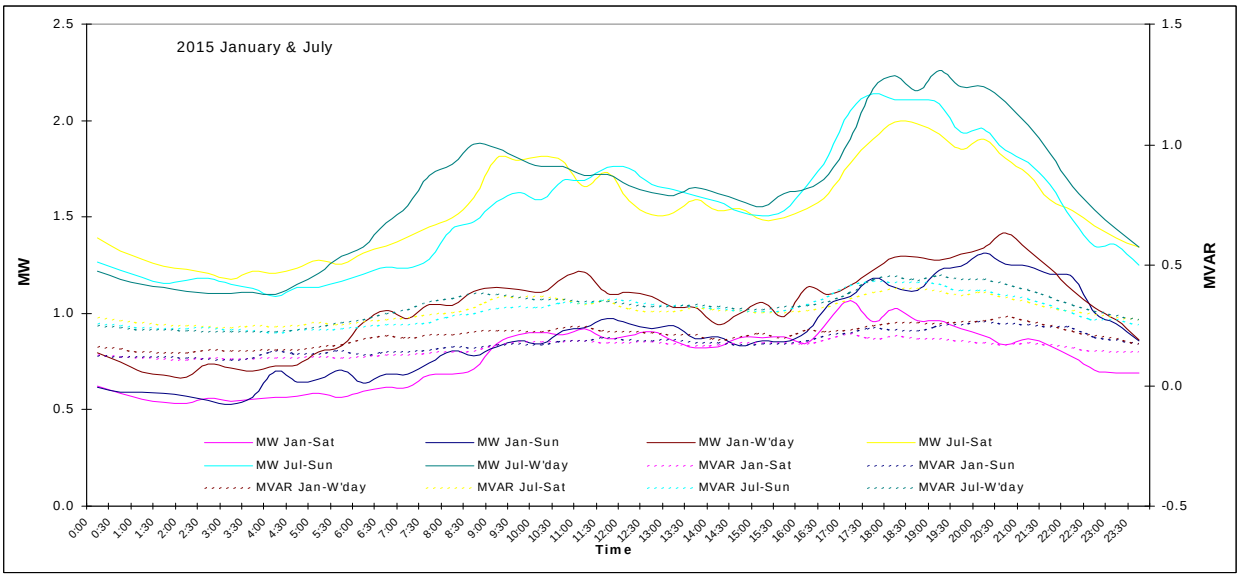







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.32 Rosebery 44kV

Description:

The Substation is located at Rosebery and is known as “Rosebery 44 kV Substation”. The substation is owned by Transend.

Note that as Aurora takes supply at both 22 kV and 44 kV at Rosebery Substation, for clarity the 22 kV supply point is referenced as the Rosebery 22 kV connection site and the 44 kV supply point is referenced as the Rosebery 44 kV connection site.

Table 4-114 Rosebery 44 kV Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	44	2	60	30

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-115 Rosebery 44kV Site Winter load forecast

Rosebery 44kV	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	11.12	11.34	10.24	10.45	11.12	11.34	10.27	10.48
2006	5.31	5.42	3.53	3.60	5.31	5.42	3.53	3.60
2007	6.68	6.82	4.46	4.55	6.68	6.82	4.50	4.60
2008	21.68	22.12	16.48	16.81	21.68	22.12	17.25	17.60
2009	10.07	10.27	8.89	9.08	10.07	10.27	8.91	9.09
2010	13.48	13.76	12.74	13.00	13.48	13.76	12.74	13.00
2011	14.36	14.65	13.57	13.84	14.27	14.56	13.48	13.75
2012	14.70	15.00	13.88	14.17	14.60	14.90	13.80	14.08
2013	15.00	15.30	14.17	14.46	14.91	15.22	14.09	14.38
2014	15.40	15.71	14.55	14.84	15.31	15.62	14.46	14.76
2015	15.79	16.11	14.92	15.22	15.71	16.03	14.84	15.14
2016	16.23	16.56	15.33	15.64	16.14	16.47	15.25	15.56
2017	16.66	17.00	15.74	16.06	16.58	16.92	15.67	15.99
2018	17.17	17.52	16.22	16.55	17.08	17.43	16.14	16.47
2019	17.72	18.09	16.75	17.09	17.65	18.02	16.68	17.02
2020	18.33	18.71	17.32	17.67	18.25	18.63	17.25	17.60

Table 4-116 Rosebery 44kV Site Summer load forecast

Rosebery 44kV	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	11.12	11.35	8.92	9.10	11.12	11.35	8.92	9.10
2006	3.98	4.06	3.75	3.82	3.98	4.06	3.77	3.85
2007	3.50	3.57	2.79	2.84	3.50	3.57	2.79	2.85
2008	5.18	5.29	4.11	4.20	5.18	5.29	4.13	4.21
2009	15.59	15.91	8.61	8.79	15.59	15.91	8.61	8.79
2010	11.98	12.22	10.94	11.16	11.98	12.22	11.00	11.23
2011	11.91	12.15	10.88	11.10	12.18	12.43	11.13	11.36
2012	12.20	12.44	11.14	11.37	12.48	12.74	11.40	11.64
2013	12.27	12.52	11.21	11.44	12.57	12.82	11.48	11.71
2014	12.22	12.47	11.16	11.39	12.50	12.75	11.42	11.65
2015	12.37	12.62	11.30	11.53	12.65	12.91	11.56	11.79
2016	12.28	12.53	11.22	11.45	12.58	12.83	11.49	11.72
2017	12.66	12.92	11.57	11.80	12.95	13.22	11.83	12.07
2018	12.86	13.12	11.74	11.98	13.16	13.43	12.02	12.26
2019	13.06	13.33	11.93	12.17	13.36	13.63	12.21	12.45
2020	13.29	13.56	12.14	12.39	13.59	13.87	12.42	12.67

Figure 4-177 Rosebery 44kV Site Summer Load Forecast at 50% and 10% POE

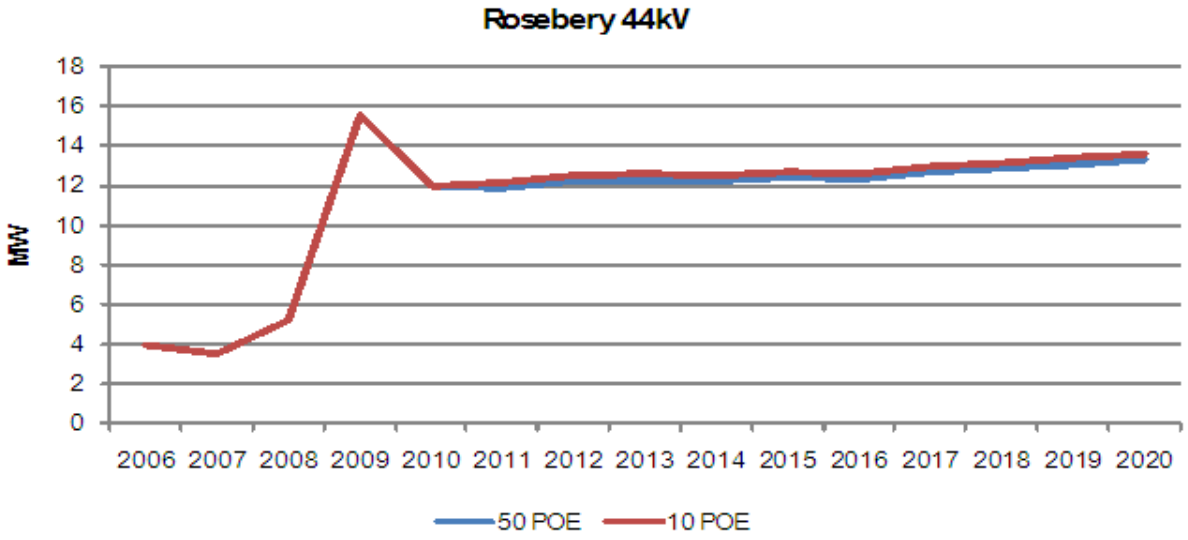
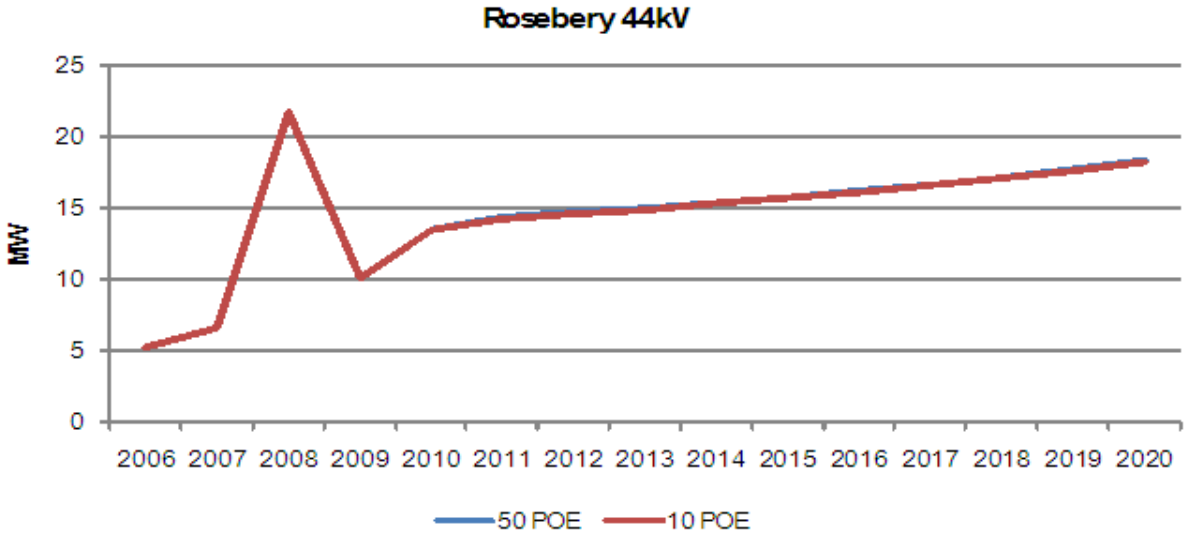
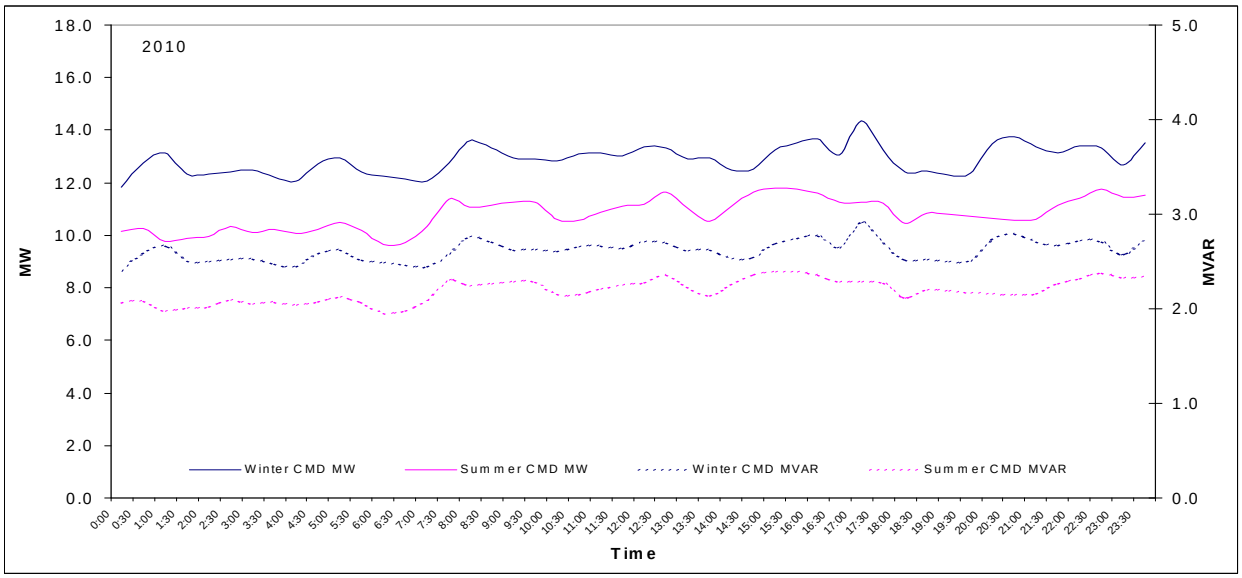


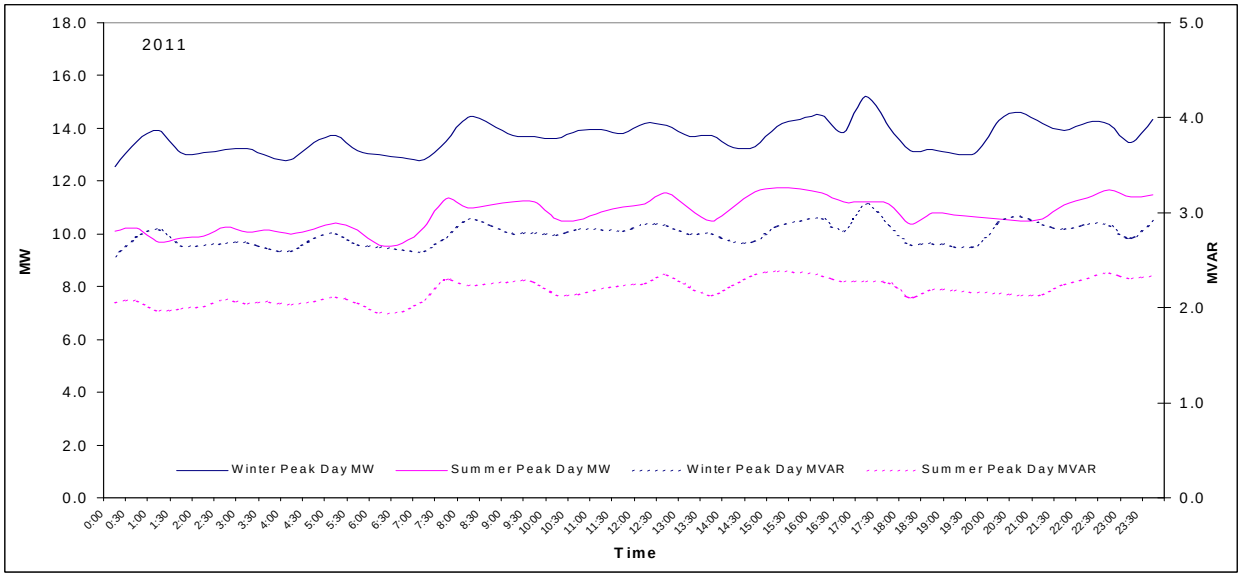
Figure 4-178 Rosebery 44kV Site Winter Load Forecast at 50% and 10% POE

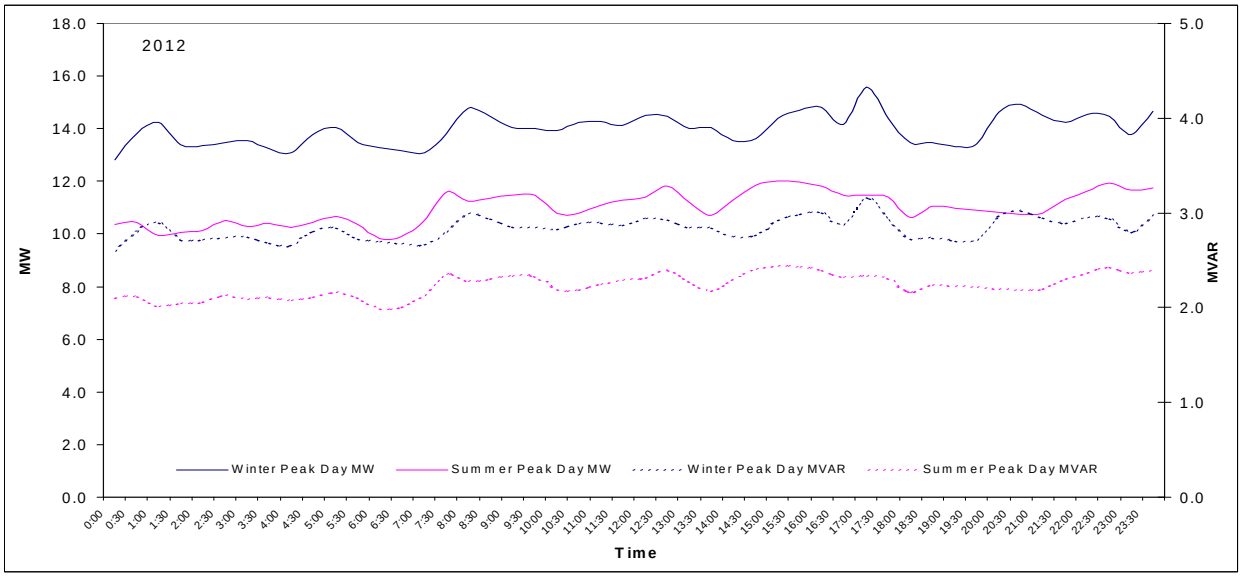


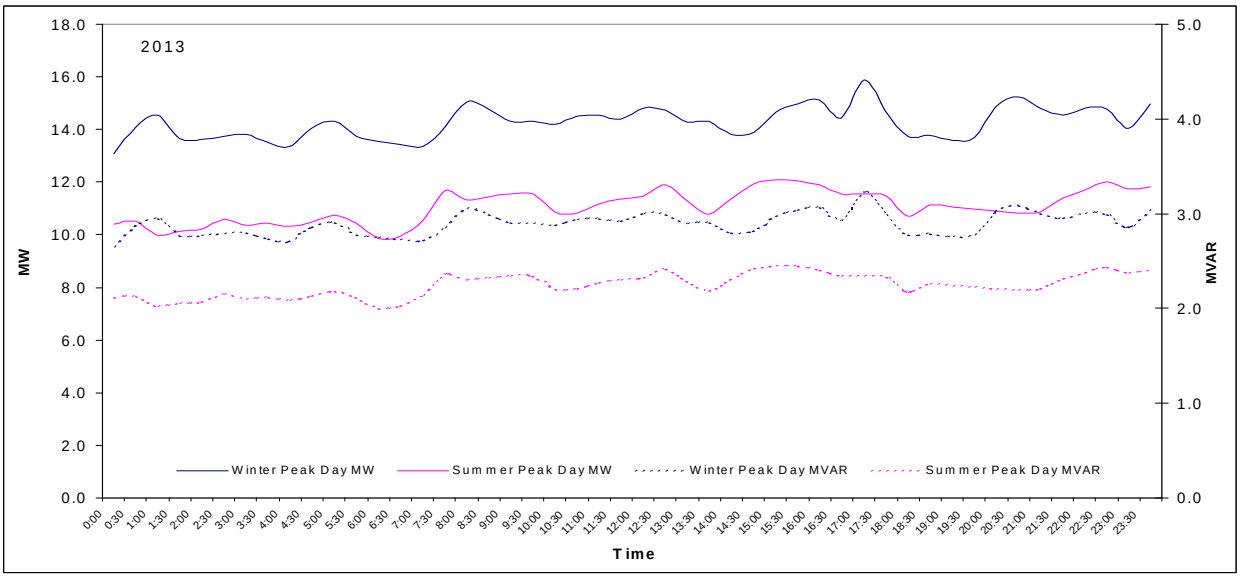
Load Profiles:

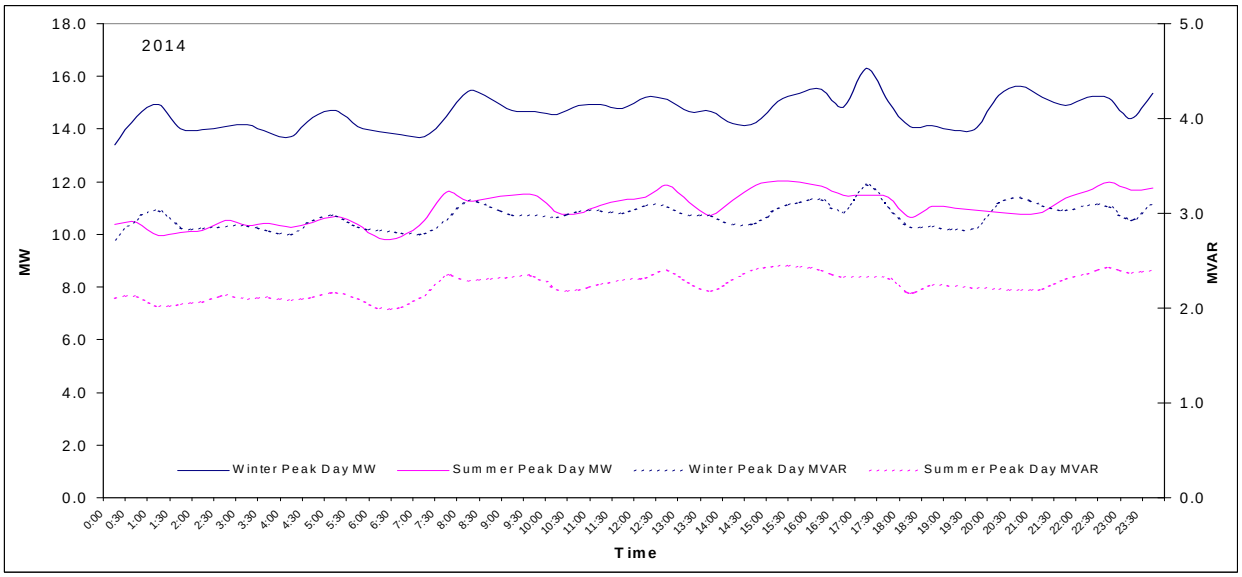
Figure 4-179 Load Profiles: Rosebery 44kV Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

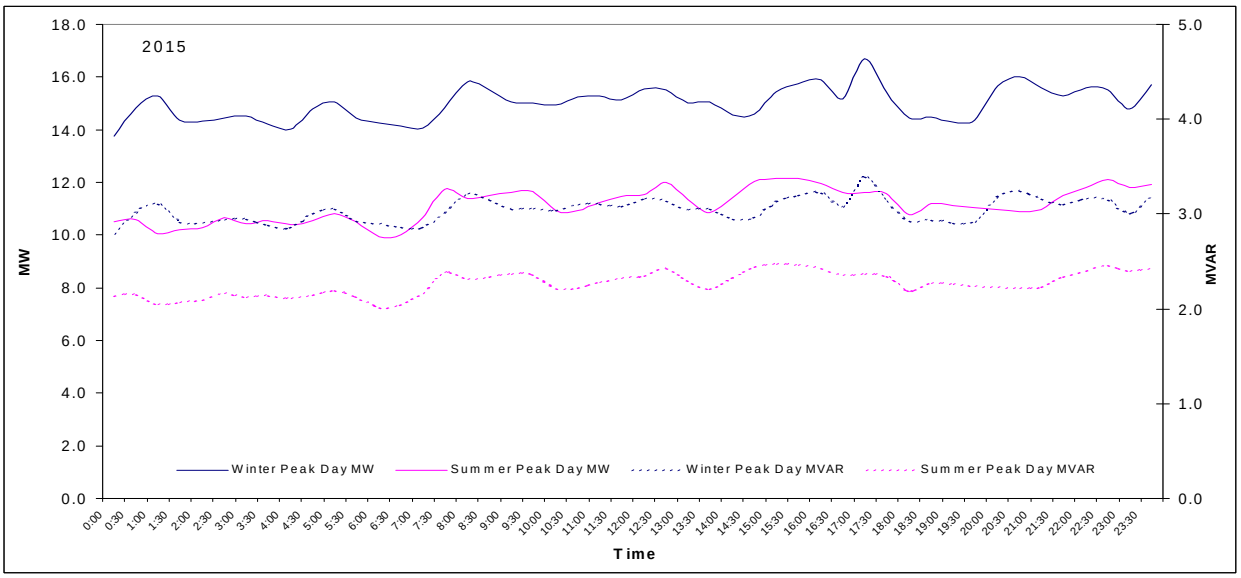
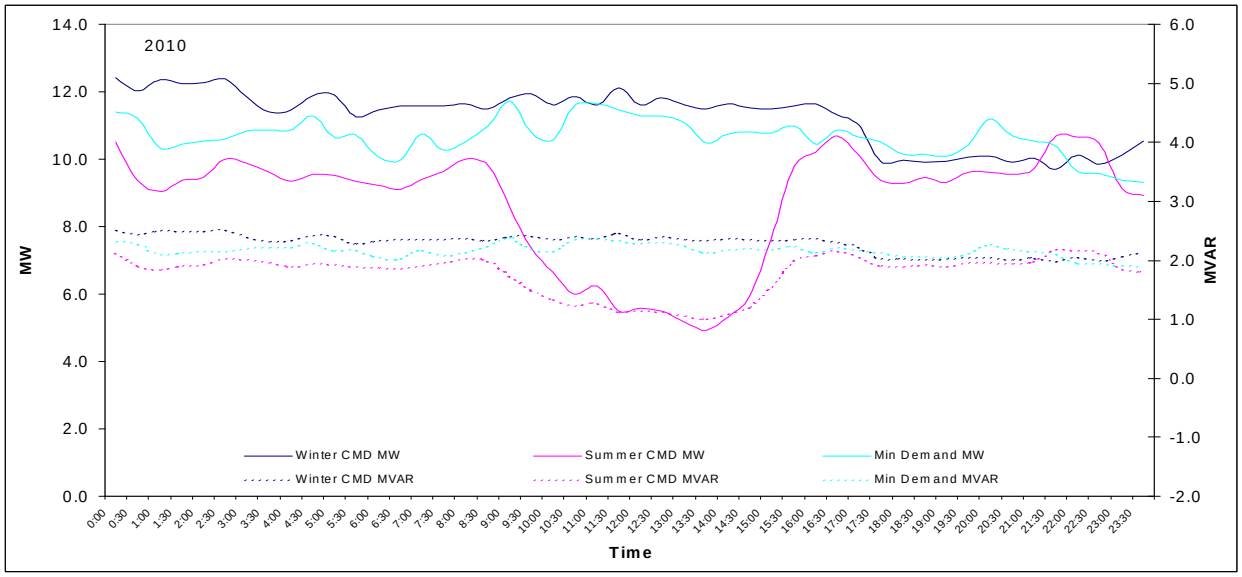
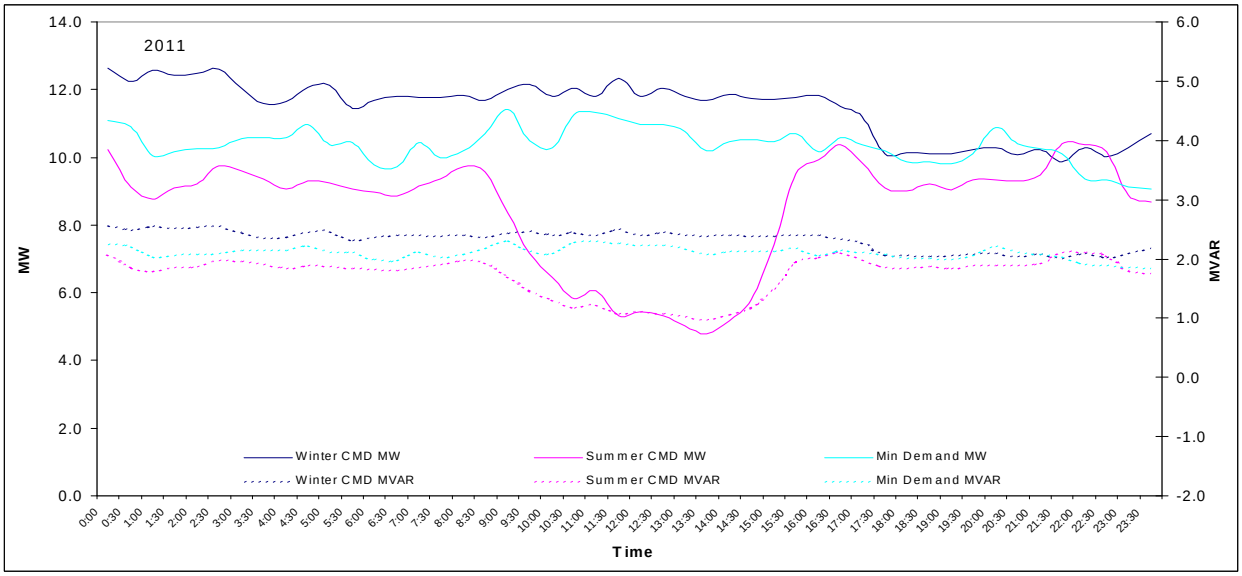
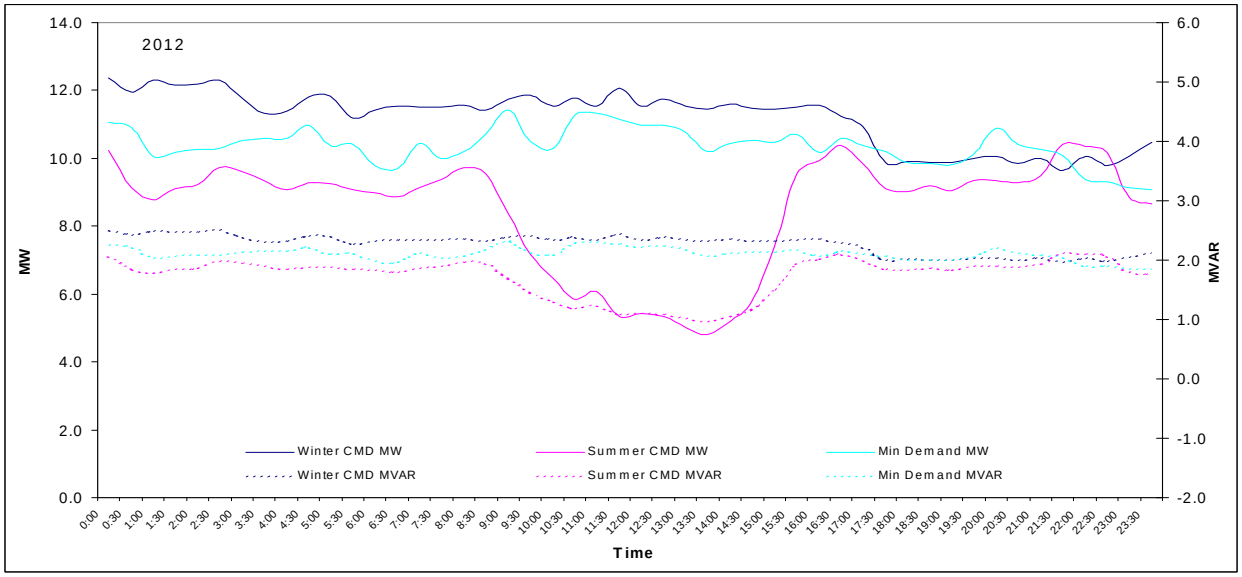
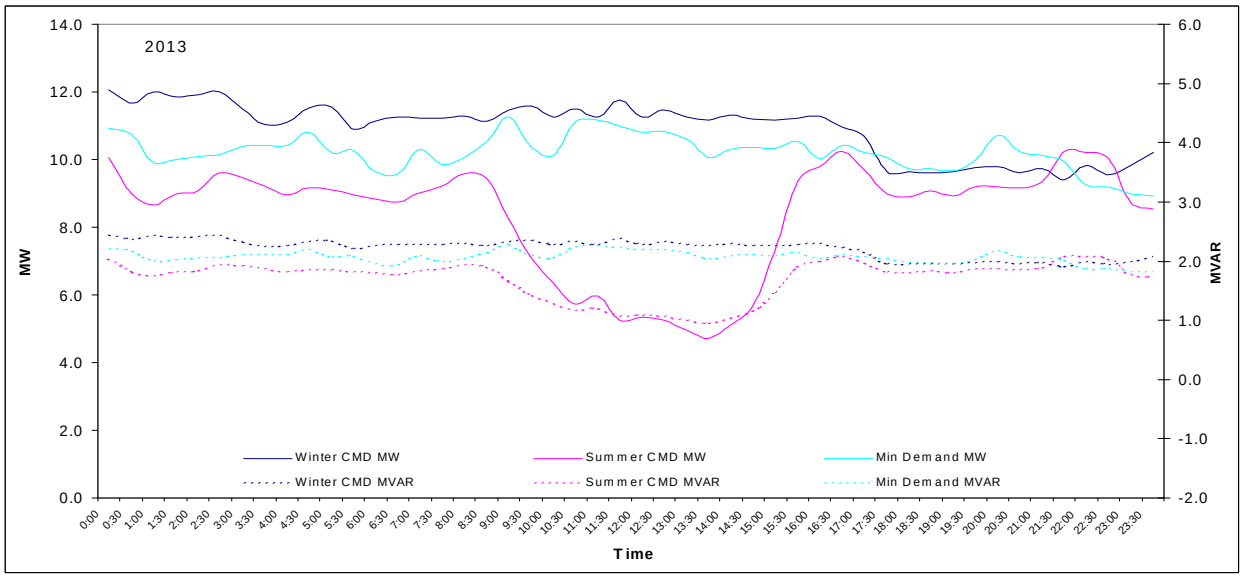

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

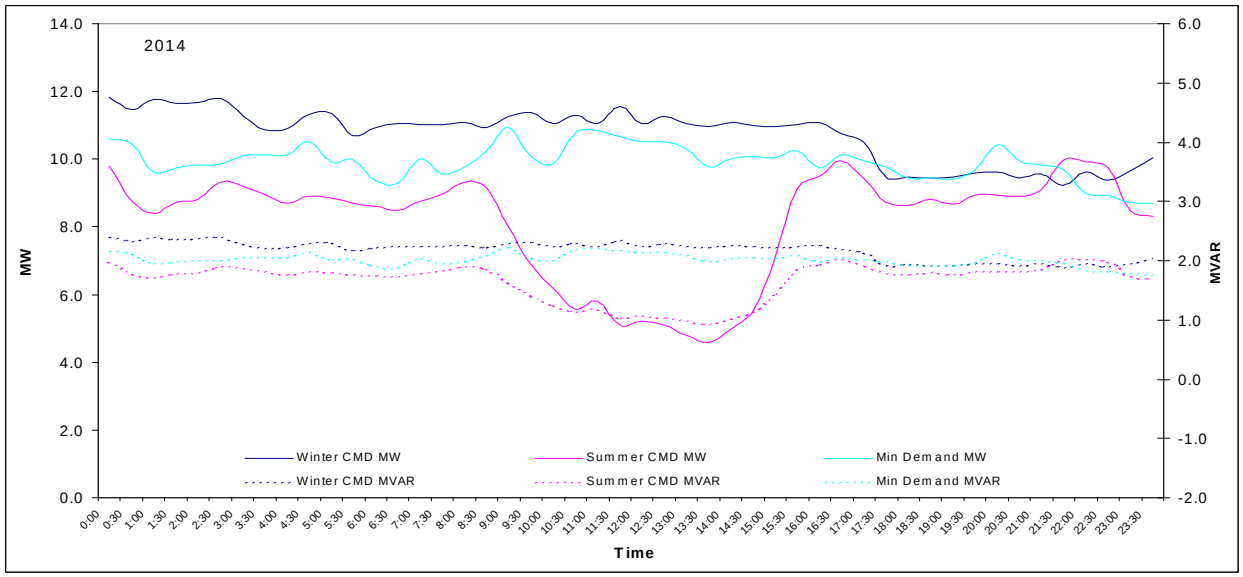
Figure 4-180 Load Profiles: Rosebery 44kV Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

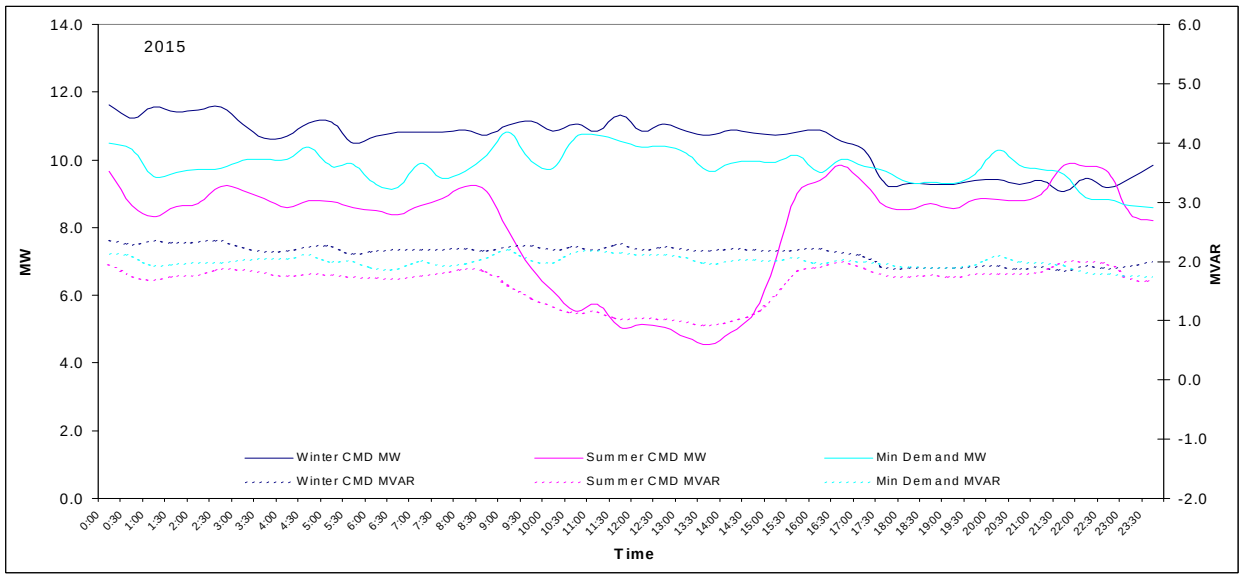
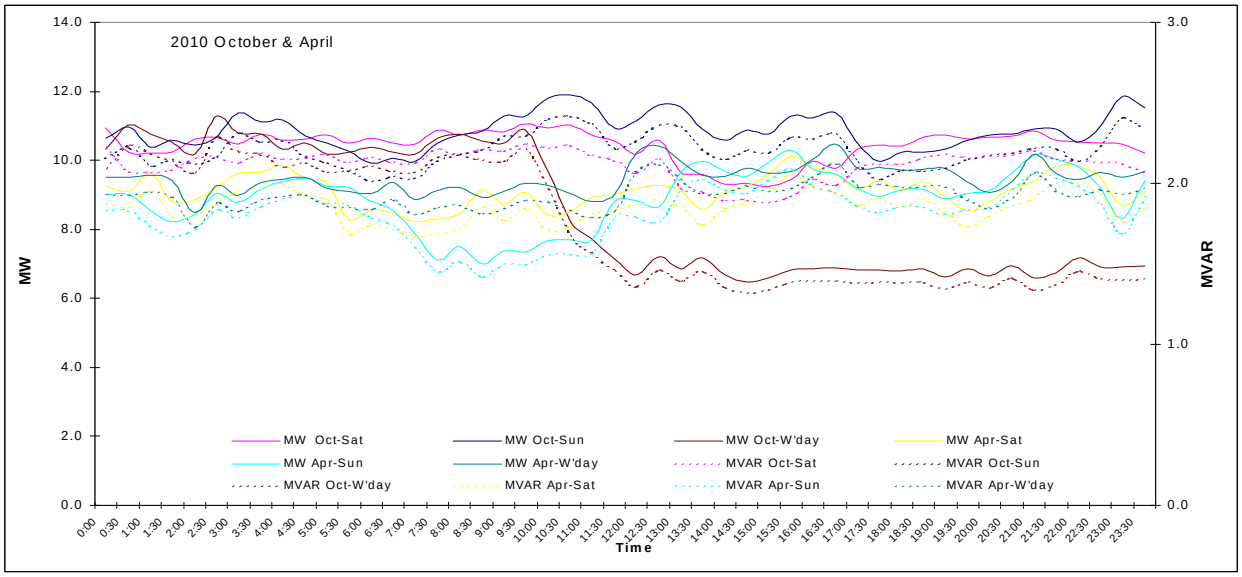
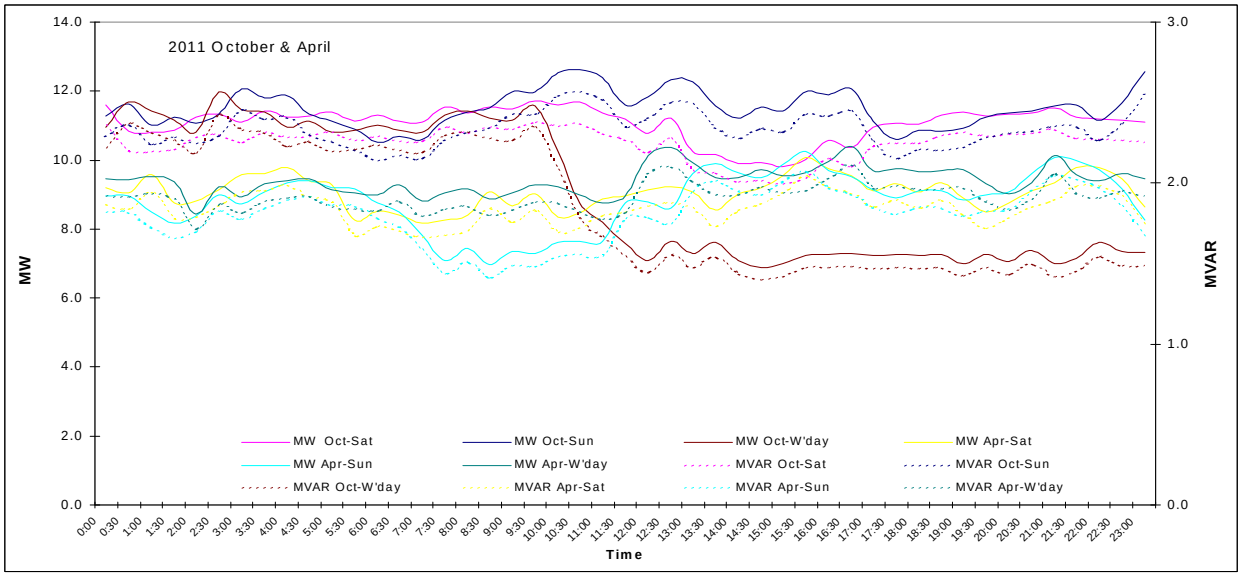
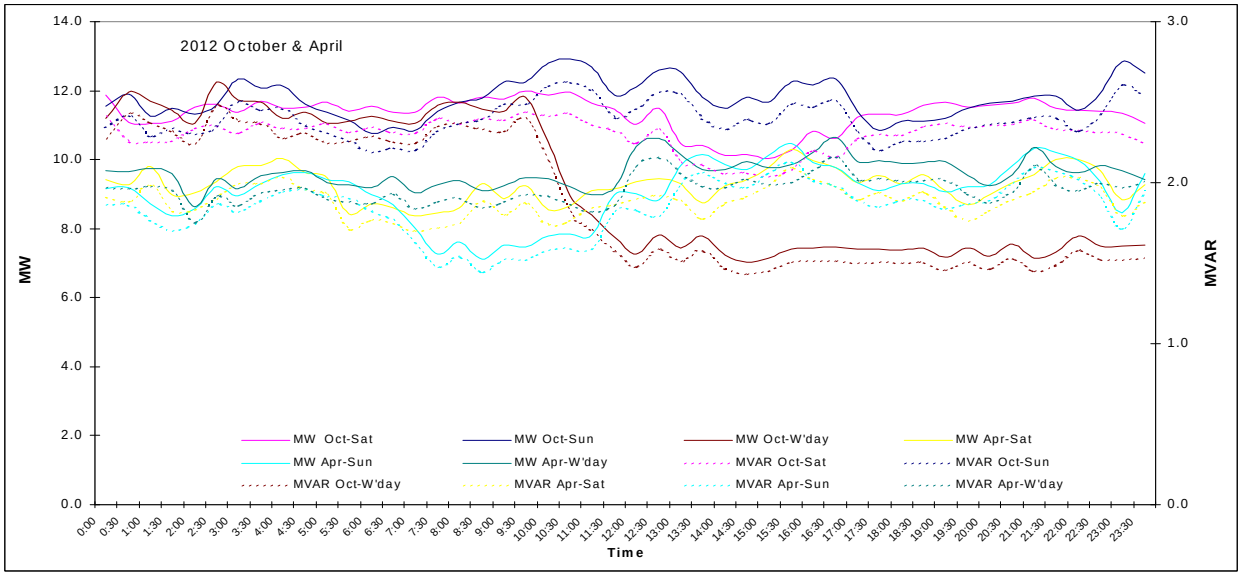
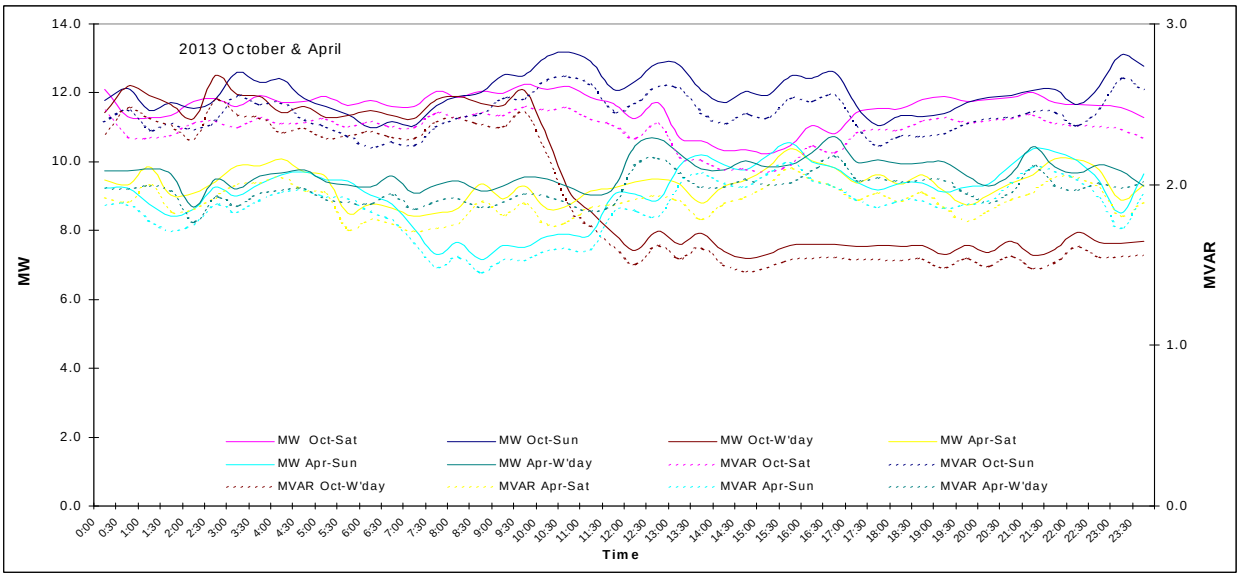

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

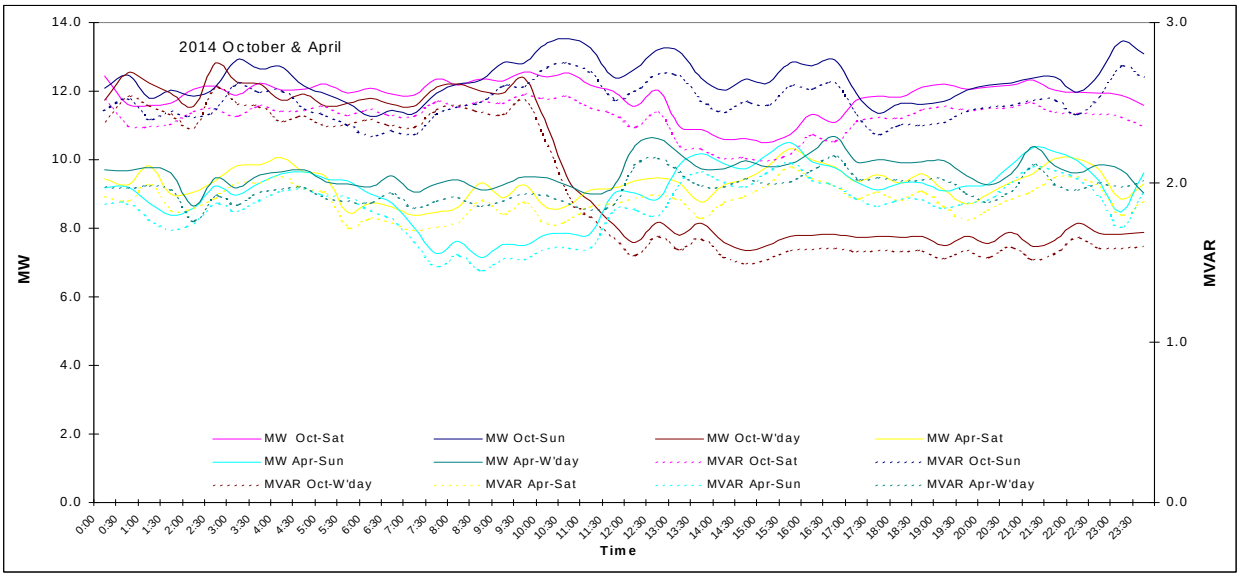
Figure 4-181 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

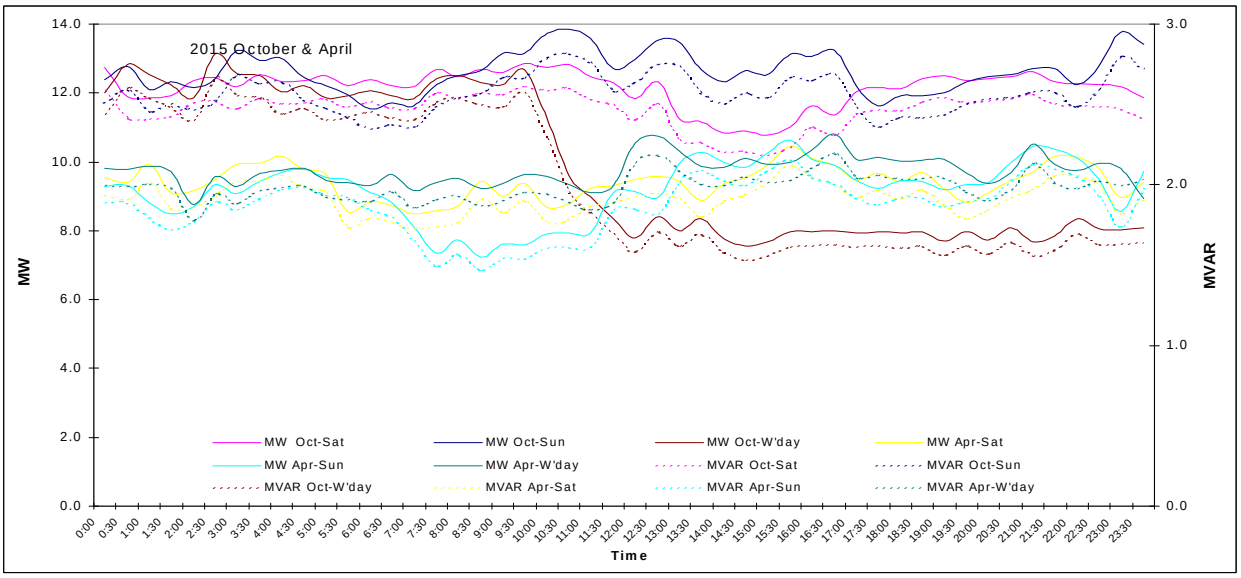
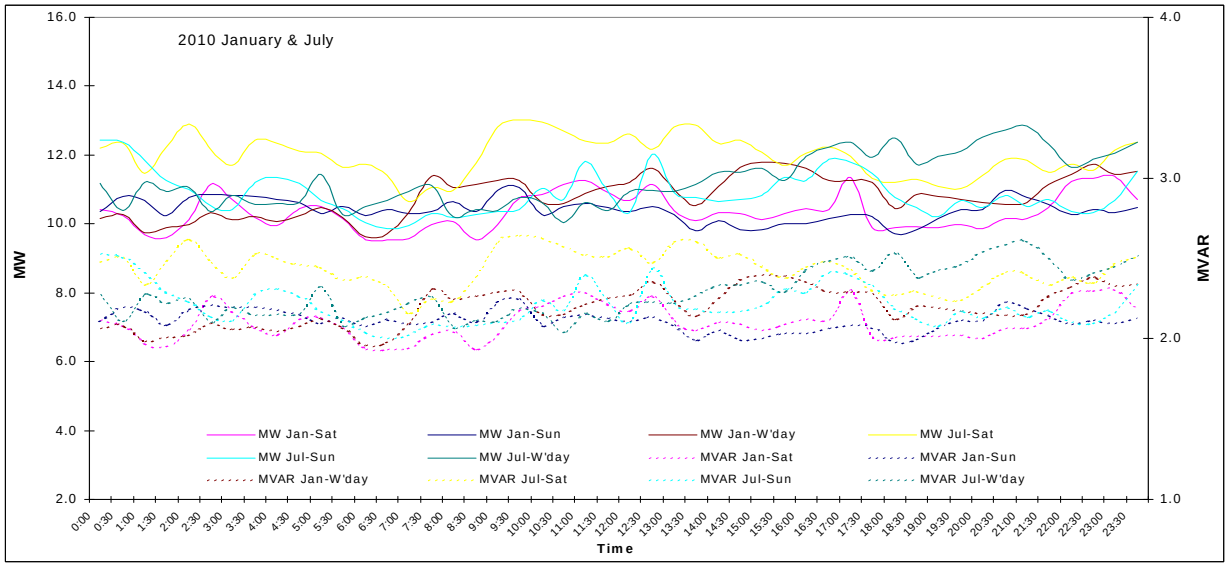
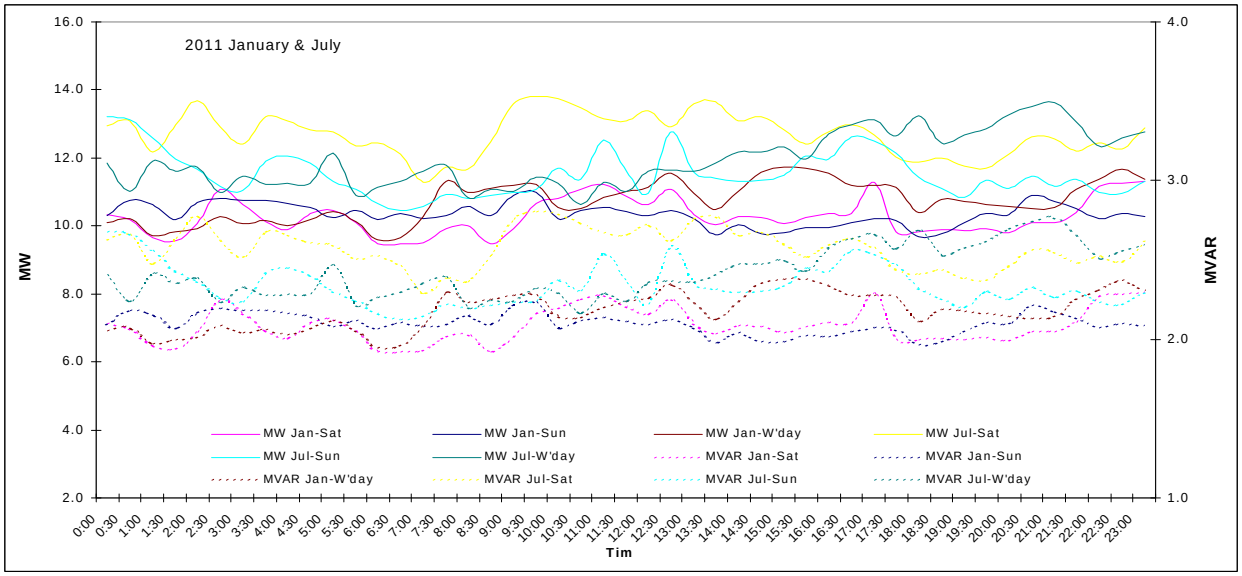
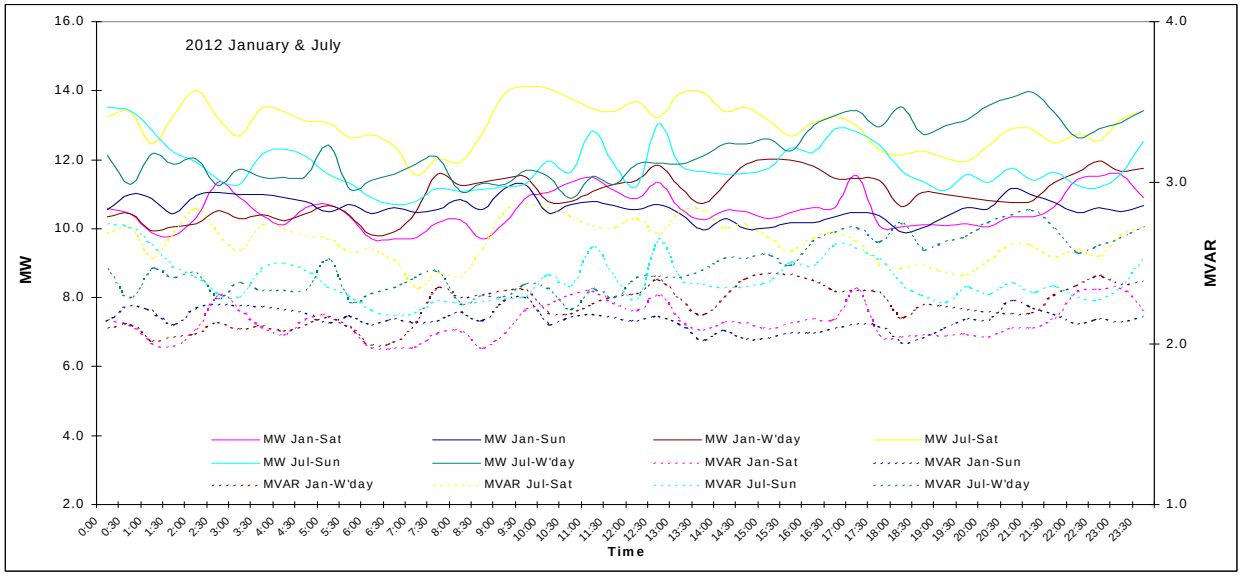
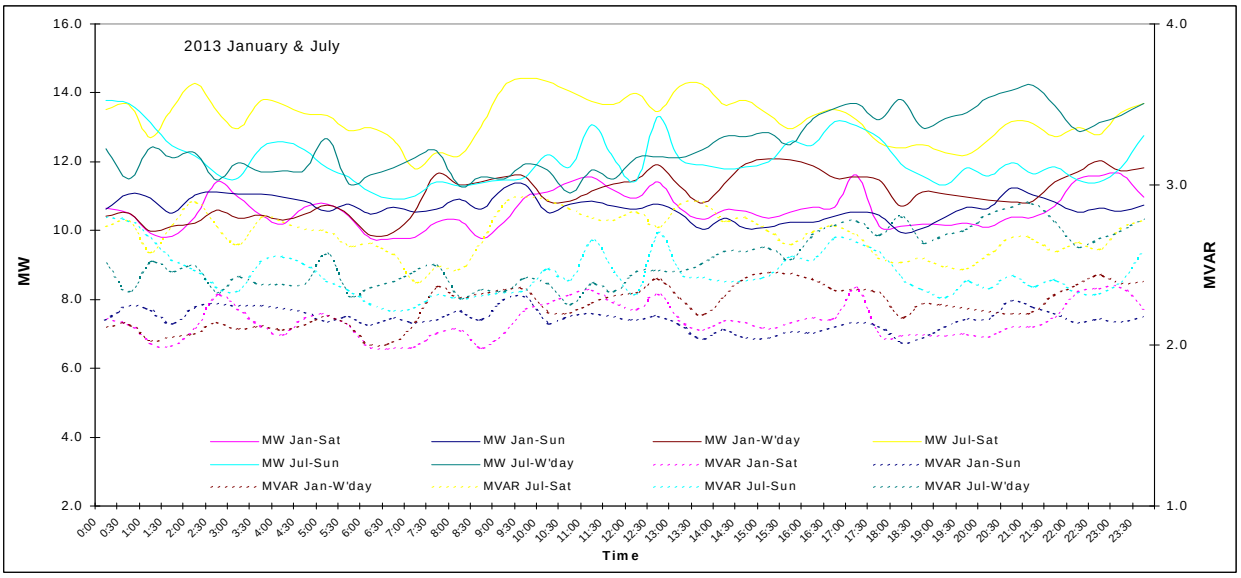

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

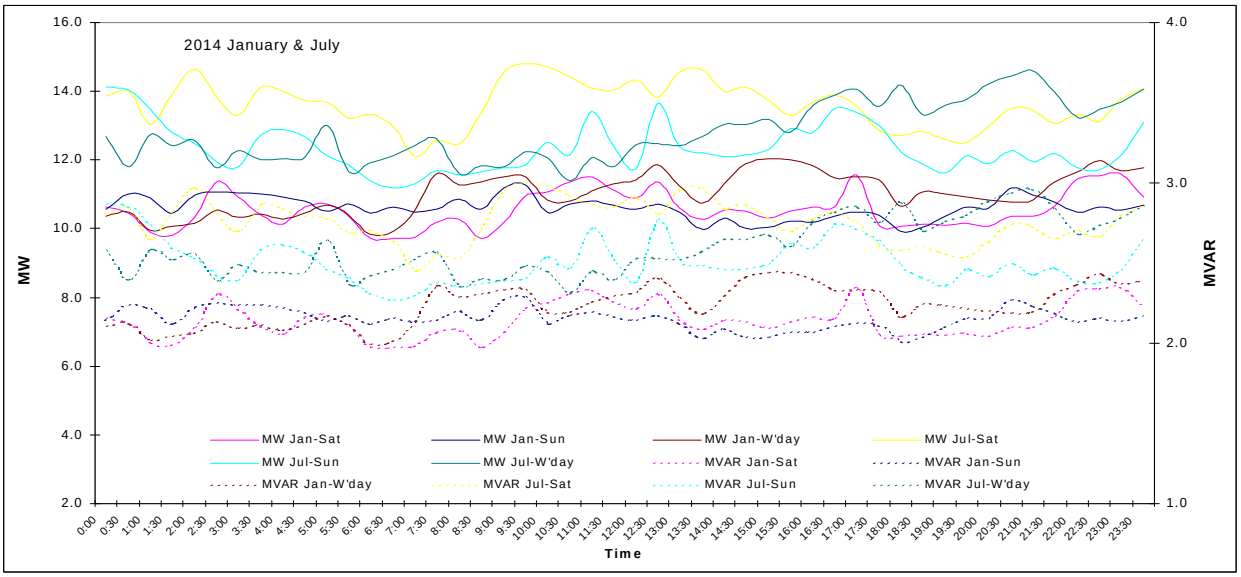
Figure 4-182 Load Profiles: Weekday, Saturday, Sunday for January & July

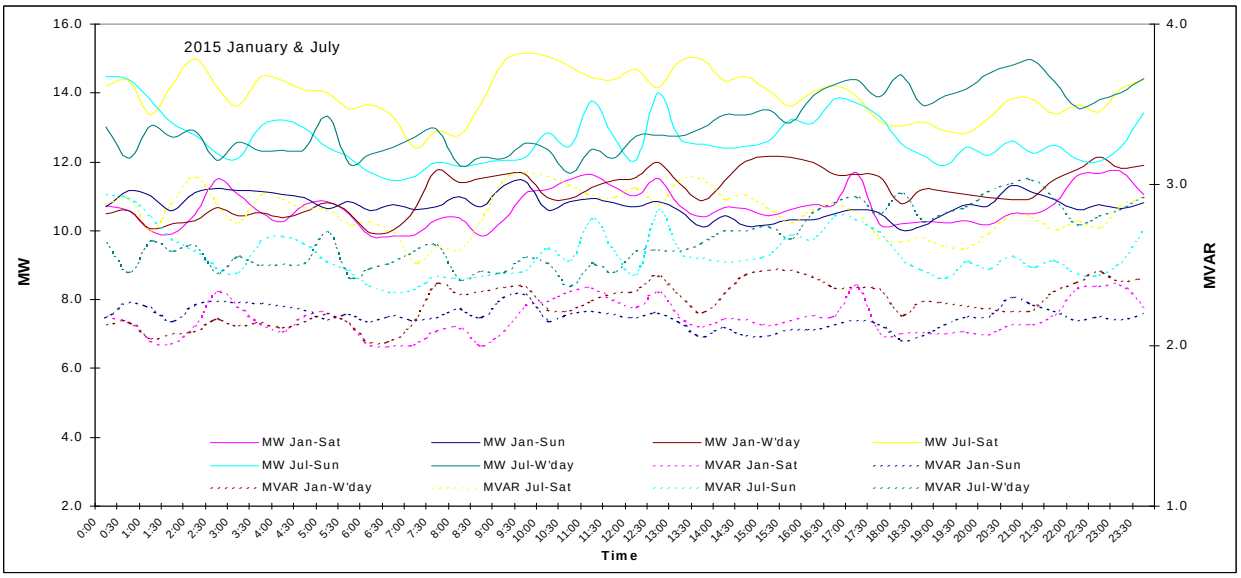







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.33 Savage River

Description:

The Substation is located at Savage River and is known as “Savage River Substation”. The substation is owned by Transend.

Table 4-117 Savage River Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	1	45	22.5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-118 Savage River Site Winter load forecast

Savage River	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006	1.17	1.17	1.07	1.07	1.17	1.17	1.09	1.09
2007	1.31	1.31	1.10	1.11	1.31	1.31	1.12	1.12
2008	1.43	1.43	1.43	1.43	1.43	1.43	1.46	1.46
2009	2.43	2.81	1.24	1.43	2.43	2.81	1.25	1.45
2010	1.35	1.35	1.18	1.18	1.35	1.35	1.19	1.19
2011	1.39	1.39	1.22	1.22	1.40	1.40	1.23	1.23
2012	1.38	1.38	1.21	1.21	1.39	1.39	1.22	1.22
2013	1.37	1.37	1.20	1.20	1.38	1.38	1.21	1.21
2014	1.37	1.37	1.20	1.20	1.38	1.38	1.21	1.21
2015	1.37	1.37	1.20	1.20	1.38	1.38	1.21	1.21
2016	1.37	1.37	1.20	1.20	1.38	1.38	1.21	1.21
2017	1.37	1.37	1.20	1.20	1.39	1.39	1.21	1.21
2018	1.38	1.38	1.21	1.21	1.39	1.39	1.22	1.22
2019	1.39	1.39	1.22	1.22	1.41	1.41	1.23	1.23
2020	1.41	1.41	1.23	1.23	1.42	1.42	1.24	1.24

Table 4-119 Savage River Site Summer load forecast

Savage River	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	1.93	4.01	0.64	1.34	1.93	4.01	0.65	1.36
2008	0.81	0.81	0.78	0.78	0.81	0.81	0.79	0.79
2009	2.03	2.63	0.87	1.13	2.03	2.63	0.88	1.14
2010	1.01	1.01	0.63	0.63	1.01	1.01	0.64	0.64
2011	0.99	0.99	0.62	0.62	1.03	1.03	0.64	0.64
2012	1.00	1.00	0.62	0.62	1.04	1.04	0.65	0.65
2013	1.00	1.00	0.62	0.62	1.03	1.03	0.64	0.64
2014	0.98	0.98	0.61	0.61	1.01	1.01	0.63	0.63
2015	0.98	0.98	0.61	0.61	1.01	1.01	0.63	0.63
2016	0.96	0.96	0.60	0.60	0.99	0.99	0.62	0.62
2017	0.98	0.98	0.61	0.61	1.01	1.01	0.63	0.63
2018	0.98	0.98	0.61	0.61	1.01	1.01	0.63	0.63
2019	0.98	0.98	0.61	0.61	1.02	1.02	0.63	0.63
2020	0.99	0.99	0.61	0.61	1.02	1.02	0.64	0.64

Figure 4-183 Savage River Site Summer Load Forecast at 50% and 10% POE

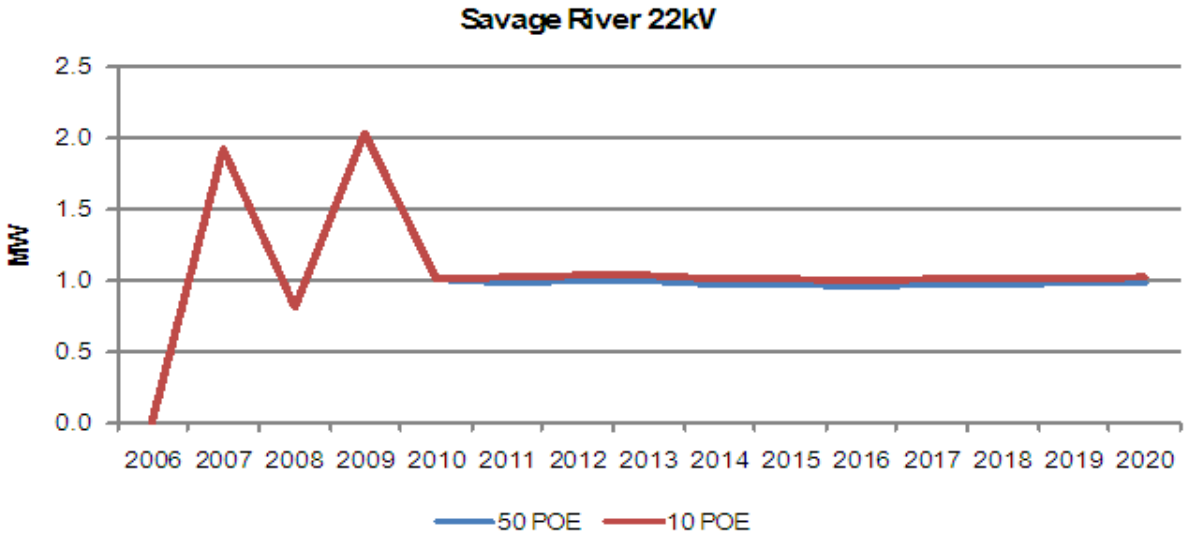
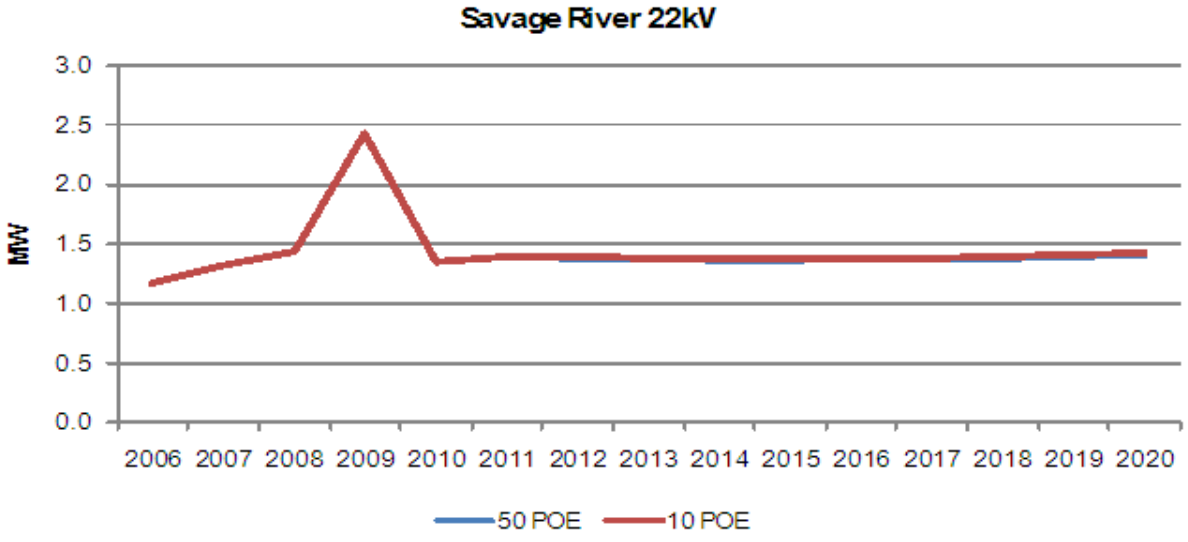
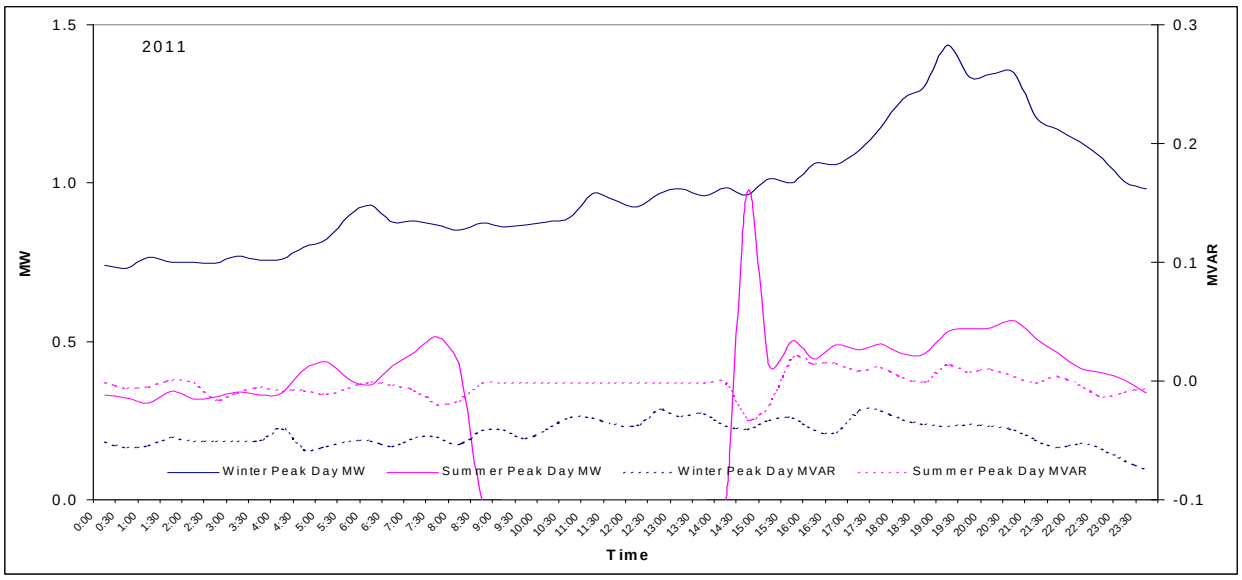


Figure 4-184 Savage River Site Winter Load Forecast at 50% and 10% POE

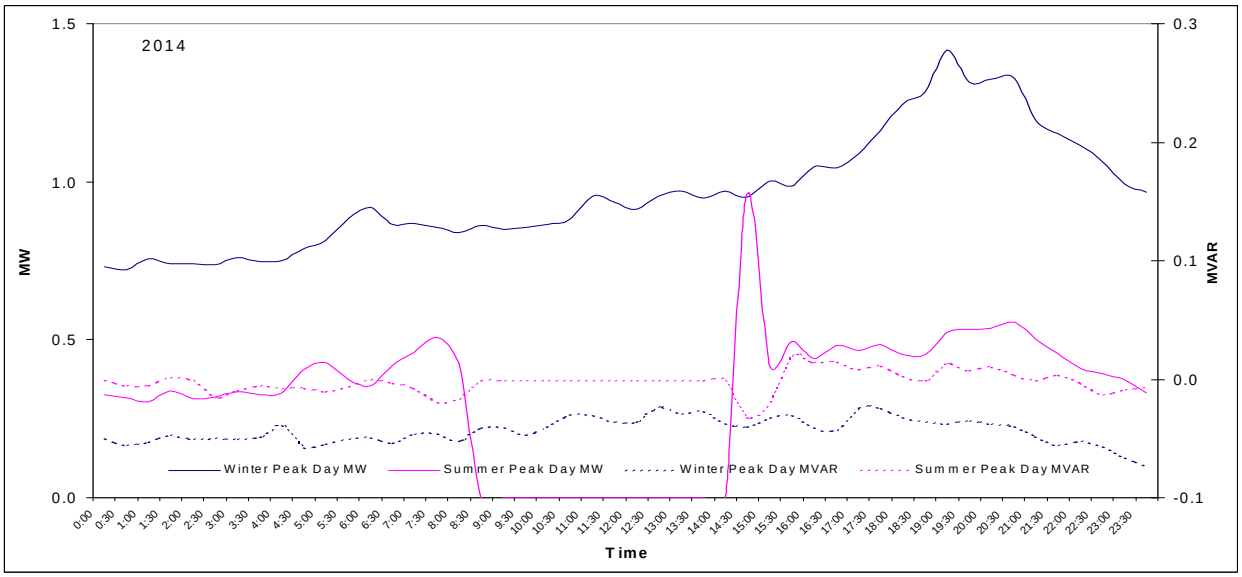


Load Profiles:

Figure 4-185 Load Profiles: Savage River Substation Day of Summer/Winter Peak Demand

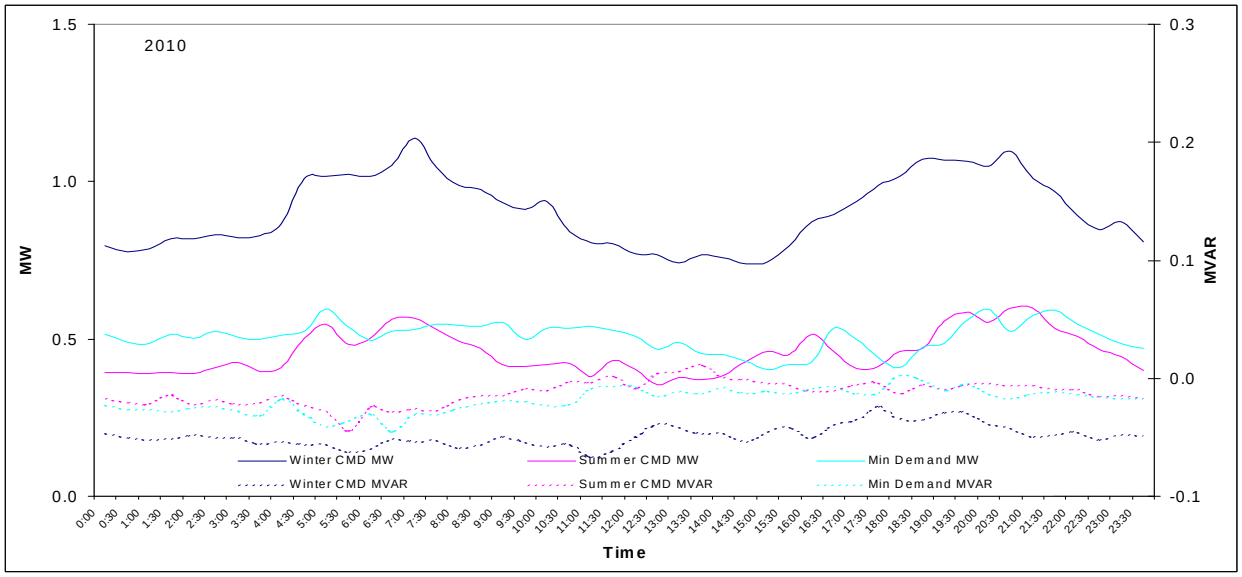


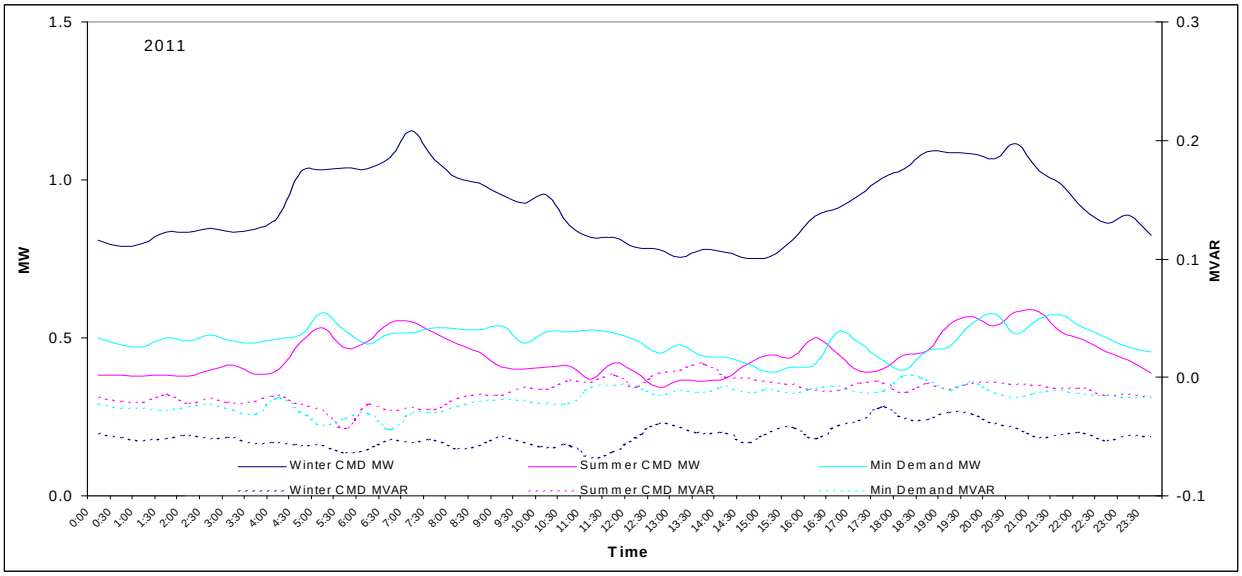

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

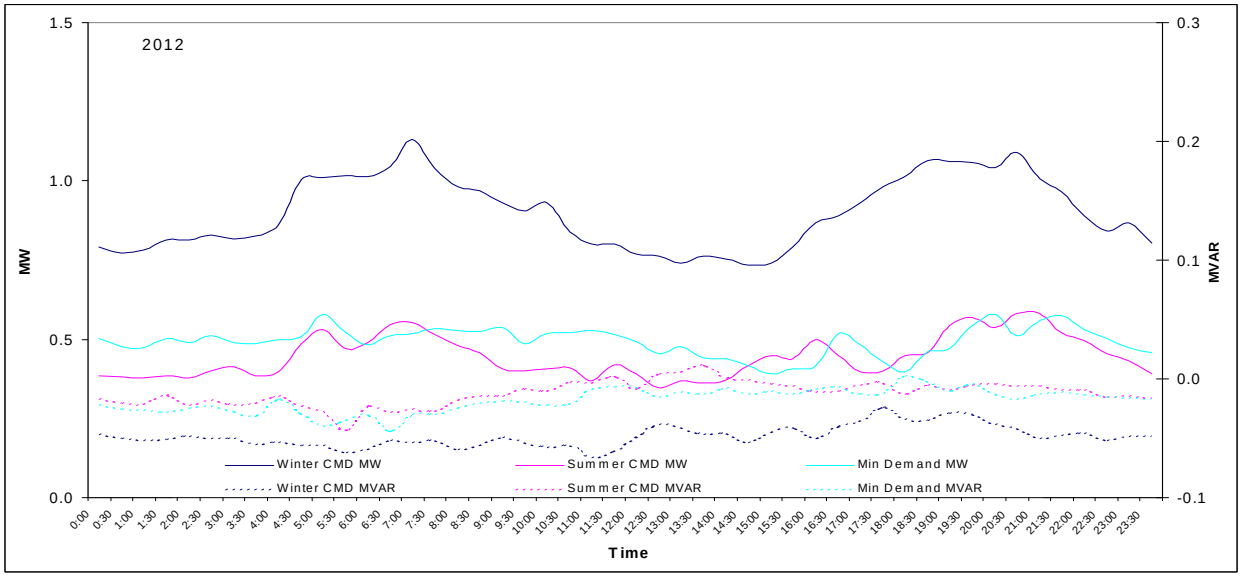

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

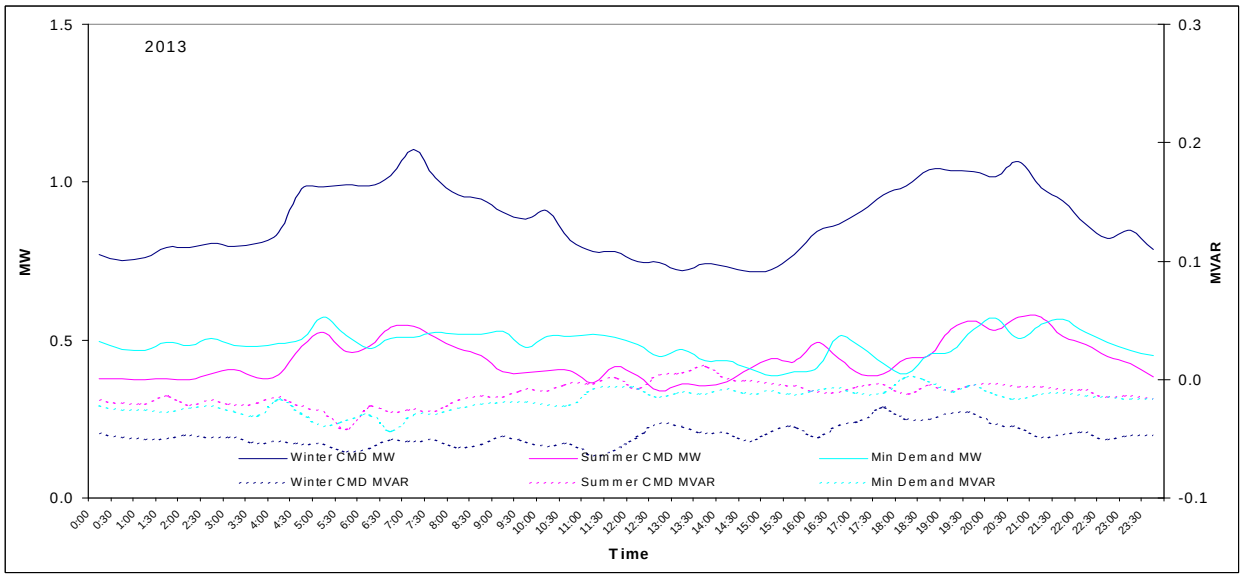

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

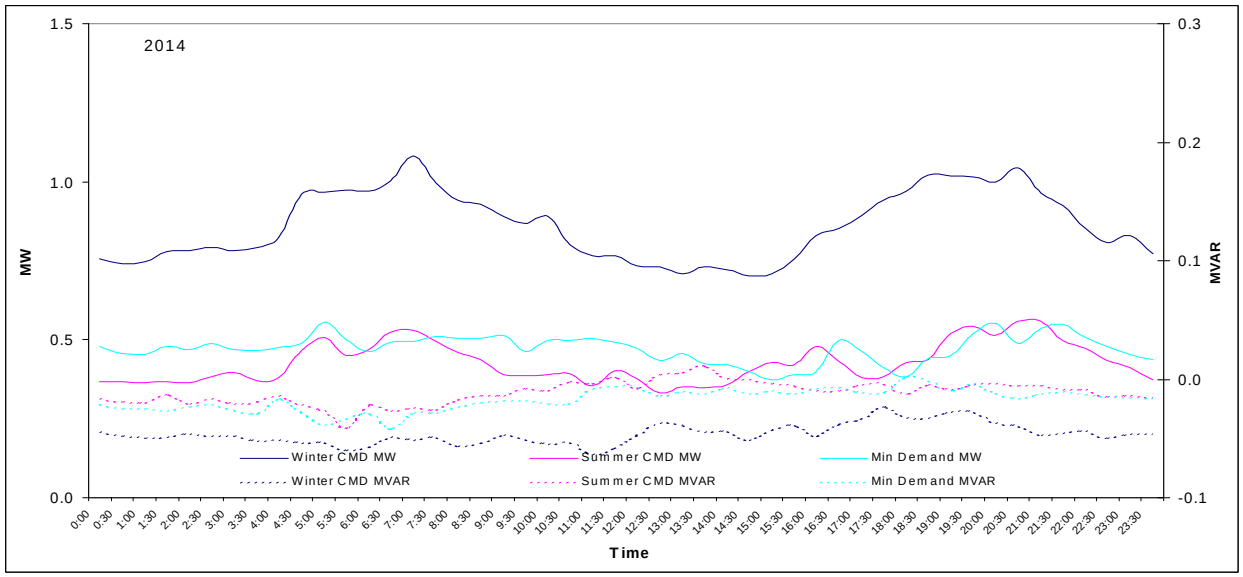
Figure 4-186 Load Profiles: Savage River Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

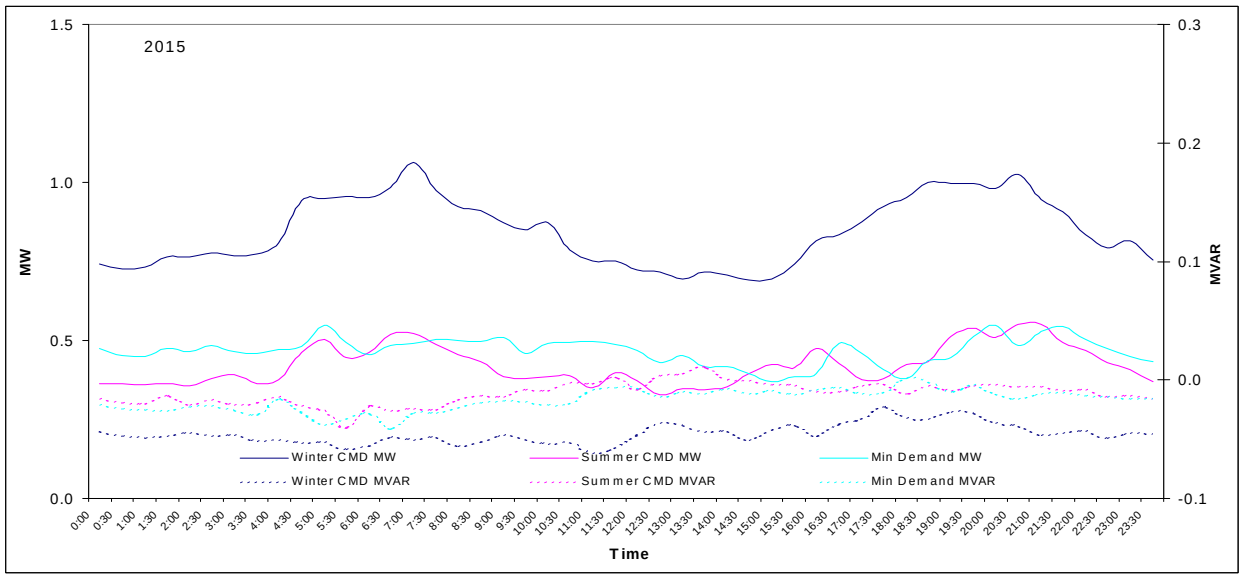
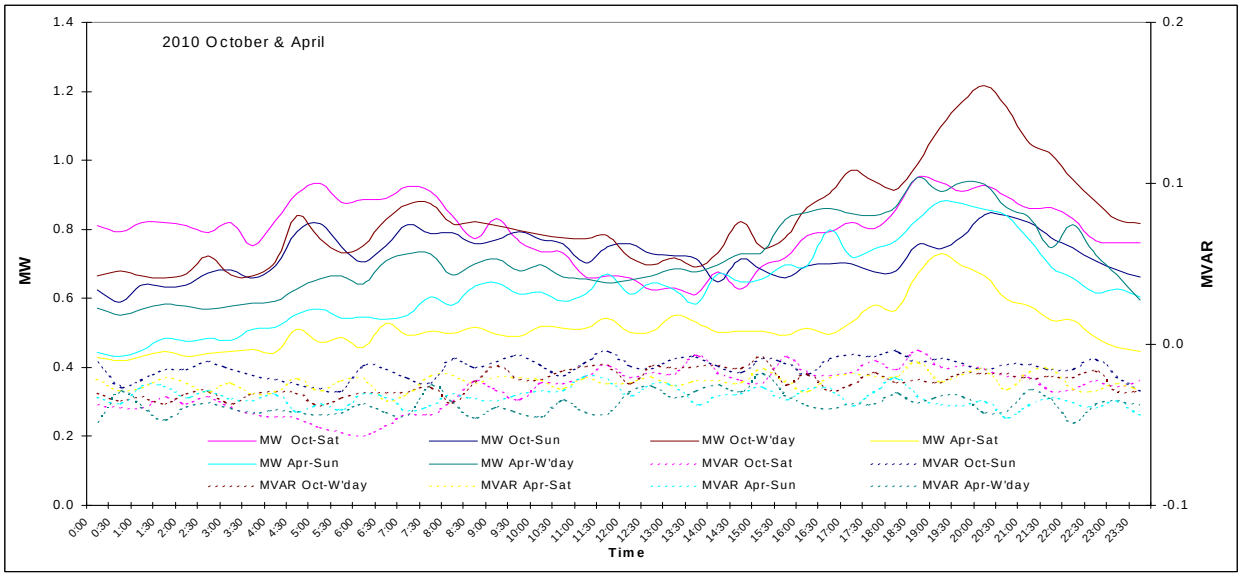
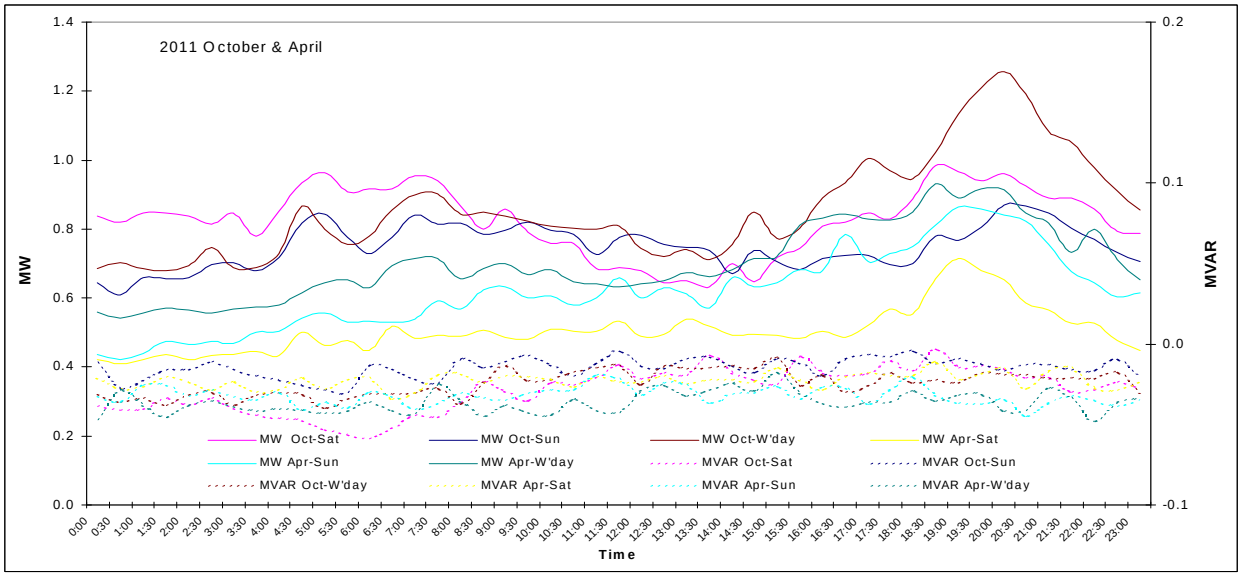
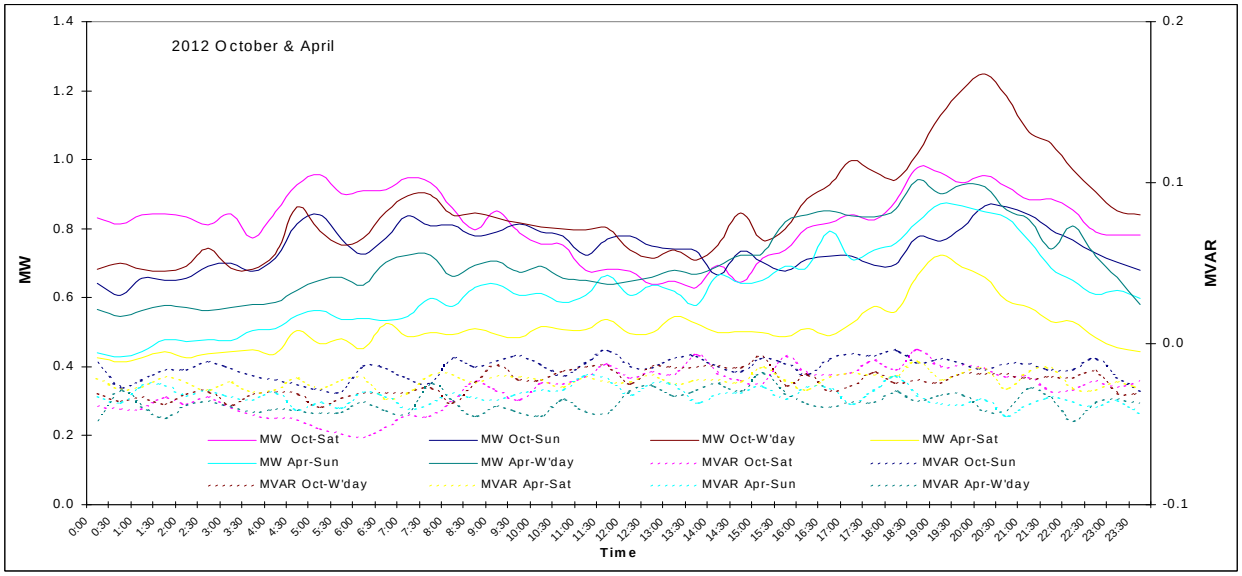
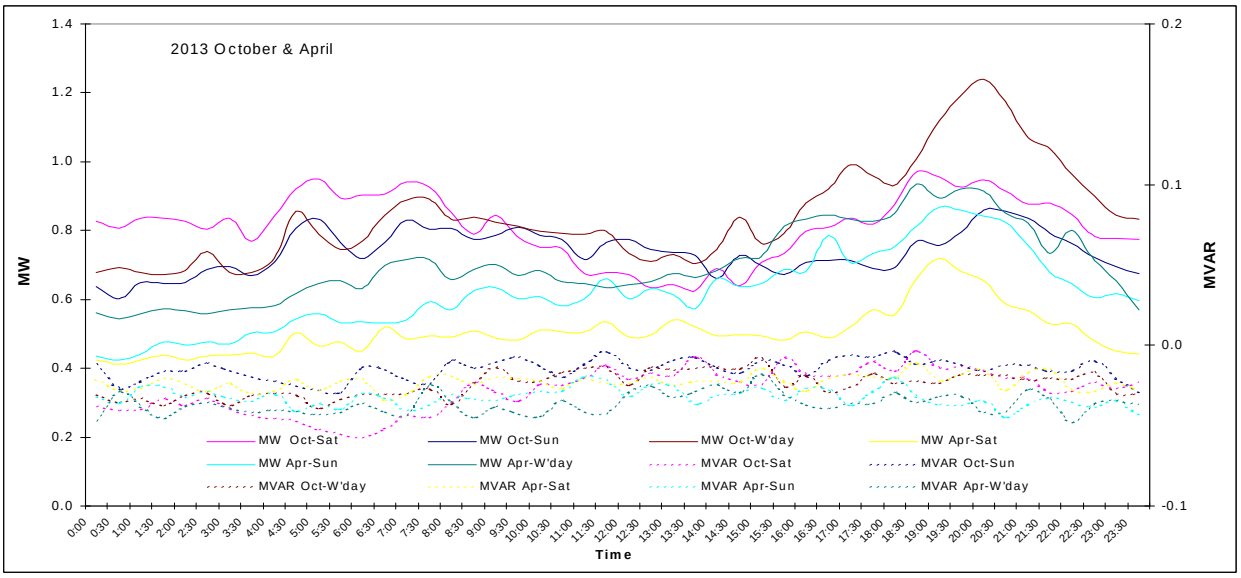

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

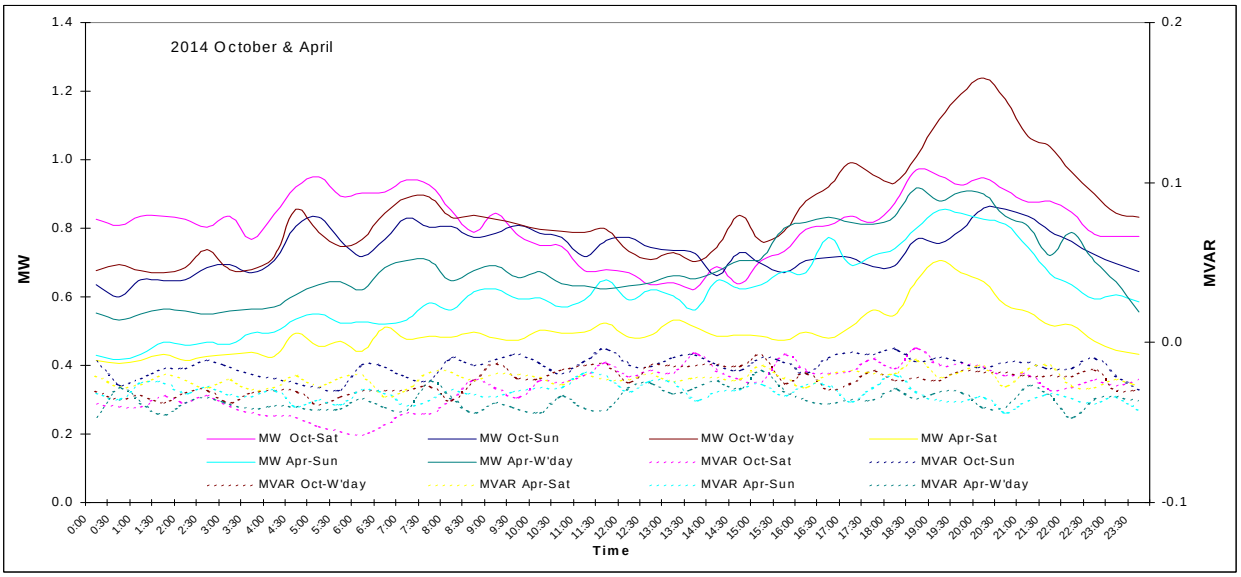
Figure 4-187 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

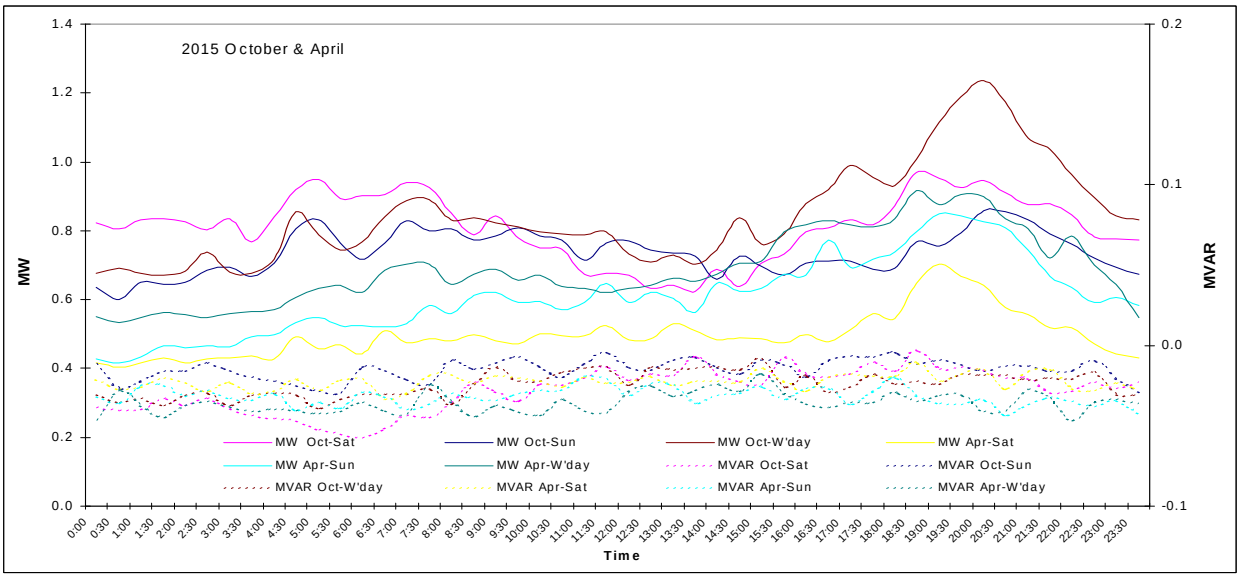
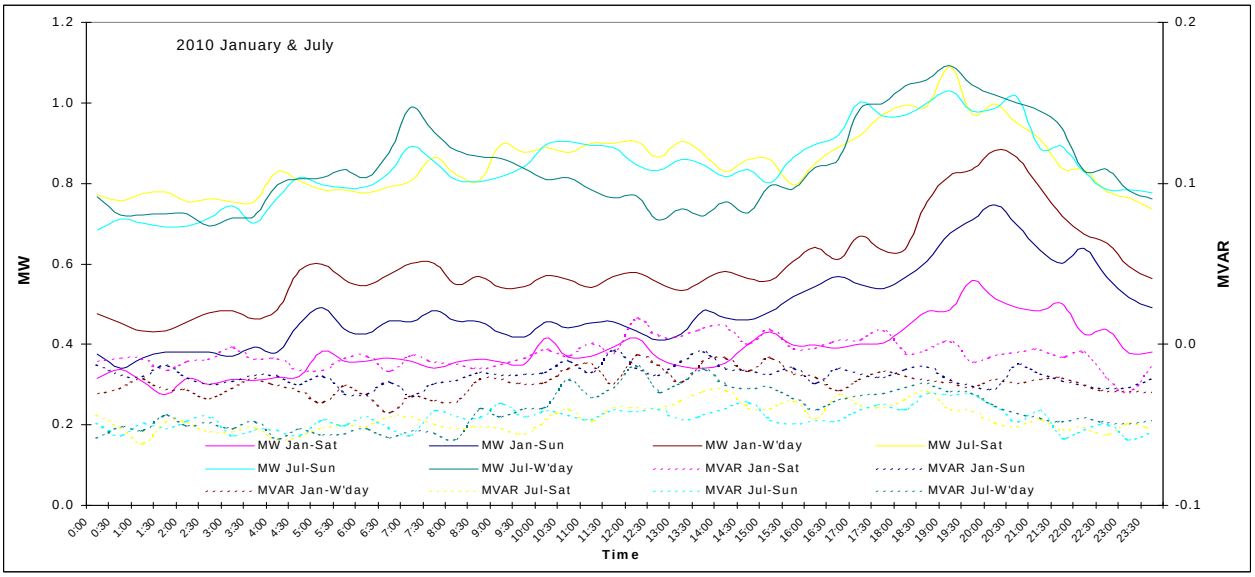
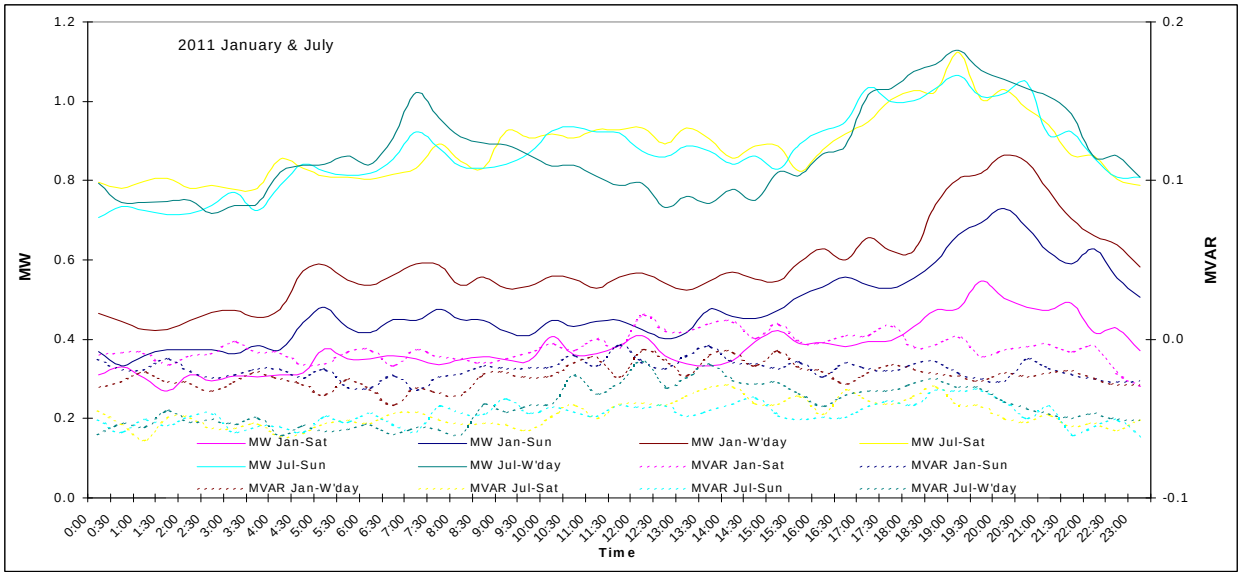
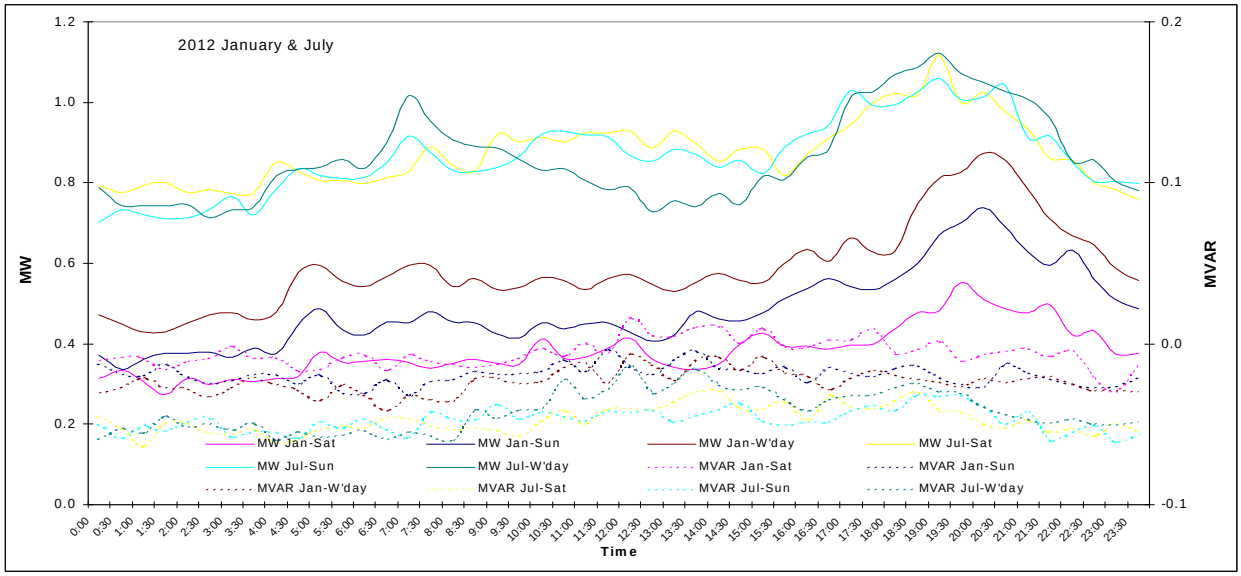
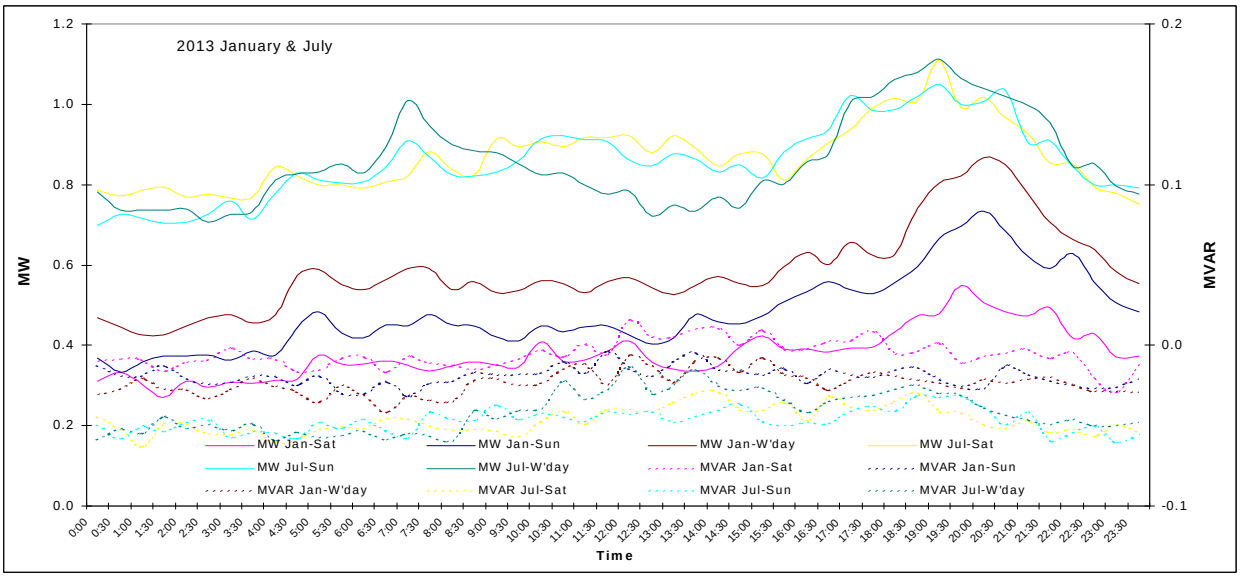

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

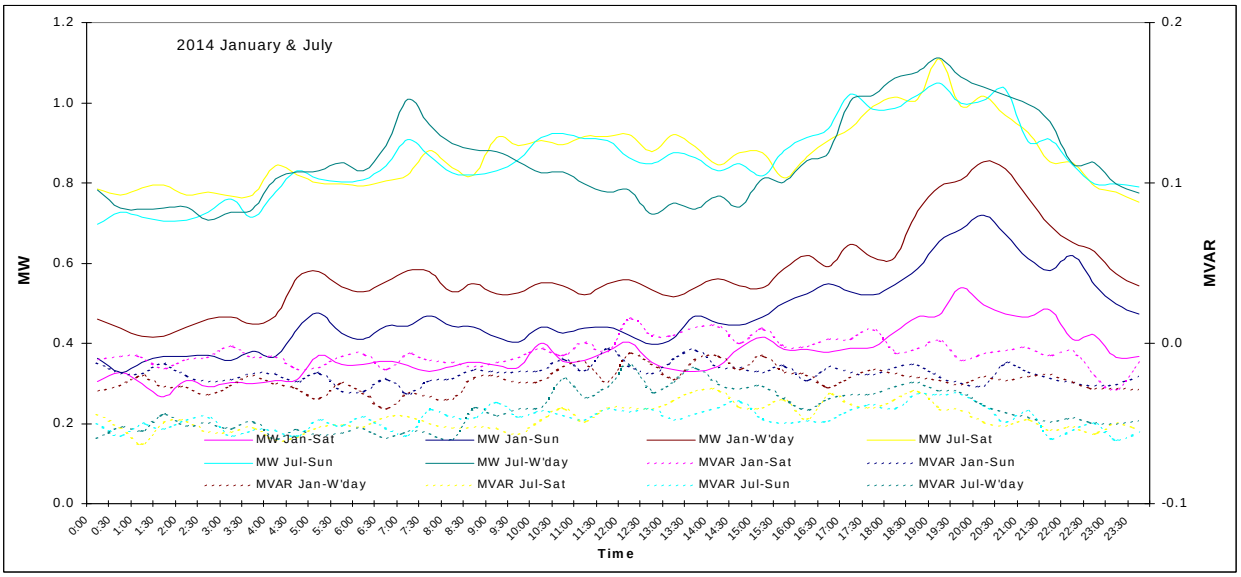
Figure 4-188 Load Profiles: Weekday, Saturday, Sunday for January & July

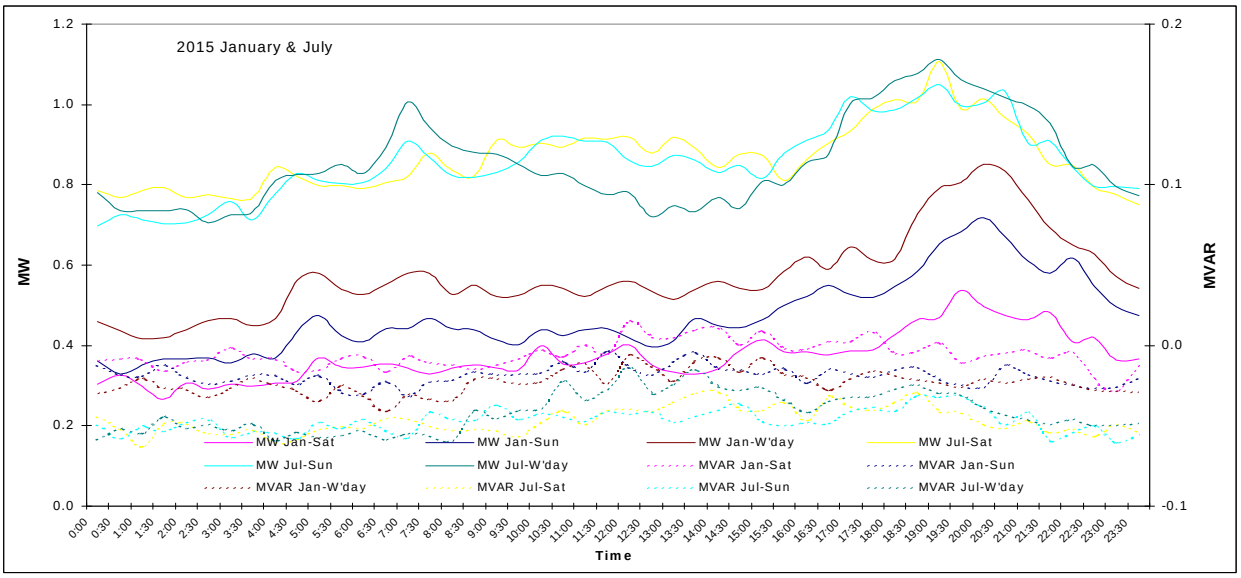







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.34 Scottsdale

Description:

The Substation is located at Scottsdale and is known as “Scottsdale Substation”. The substation is owned by Transend.

Table 4-120 Scottsdale Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	5	63	31.5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-121 Scottsdale Site Winter load demand forecast

Scottsdale	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007	16.63	17.25	15.99	16.58	16.63	17.25	16.86	17.49
2008	15.34	15.84	13.04	13.46	15.34	15.84	13.81	14.26
2009	13.55	13.86	13.55	13.85	13.55	13.86	14.24	14.55
2010	13.82	14.01	13.46	13.64	13.82	14.01	14.16	14.35
2011	14.57	14.77	14.19	14.38	15.22	15.42	14.82	15.01
2012	14.77	14.97	14.38	14.58	15.41	15.62	15.01	15.21
2013	14.94	15.14	14.54	14.74	15.58	15.79	15.17	15.38
2014	15.20	15.41	14.80	15.00	15.84	16.06	15.42	15.63
2015	15.46	15.67	15.05	15.26	16.11	16.33	15.69	15.90
2016	15.76	15.97	15.35	15.55	16.41	16.63	15.98	16.19
2017	16.06	16.28	15.64	15.85	16.72	16.94	16.28	16.50
2018	16.43	16.65	16.00	16.21	17.08	17.31	16.63	16.85
2019	16.84	17.07	16.40	16.62	17.52	17.76	17.06	17.29
2020	17.30	17.54	16.85	17.07	17.98	18.22	17.50	17.74

Table 4-122 Scottsdale Site Summer load forecast

Scottsdale	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	12.91	0.00	9.71	0.00	12.91	14.34	9.71	10.78
2006								
2007	16.39	17.81	13.51	14.67	16.39	17.81	13.51	14.67
2008	13.33	14.48	12.13	13.18	13.33	14.48	12.18	13.23
2009	11.10	11.91	9.73	10.44	11.10	11.91	9.73	10.44
2010	13.10	14.18	9.24	10.00	13.10	14.18	9.24	10.00
2011	13.04	14.11	9.19	9.95	13.26	14.36	9.35	10.12
2012	13.36	14.46	9.42	10.20	13.60	14.72	9.59	10.38
2013	13.45	14.56	9.48	10.27	13.70	14.83	9.66	10.46
2014	13.40	14.51	9.45	10.23	13.63	14.76	9.61	10.40
2015	13.57	14.69	9.57	10.36	13.81	14.95	9.74	10.54
2016	13.48	14.60	9.51	10.29	13.74	14.87	9.69	10.48
2017	13.91	15.06	9.81	10.62	14.15	15.32	9.98	10.80
2018	14.13	15.30	9.96	10.79	14.39	15.57	10.14	10.98
2019	14.36	15.55	10.13	10.96	14.62	15.82	10.31	11.16
2020	14.62	15.83	10.31	11.16	14.88	16.11	10.49	11.36

Figure 4-189 Scottsdale Site Summer Load Forecast at 50% and 10% POE

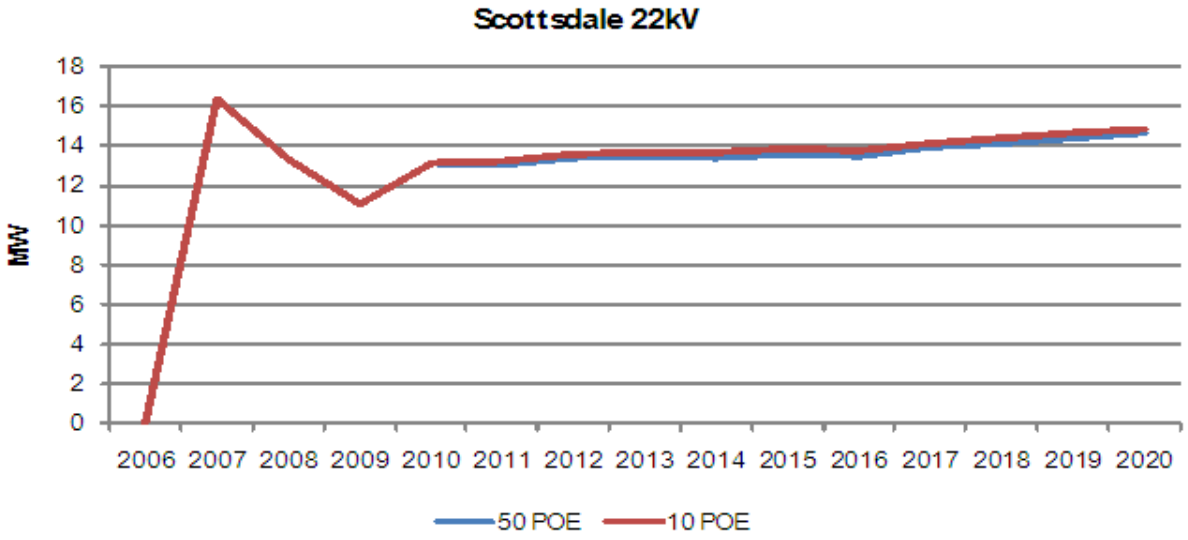
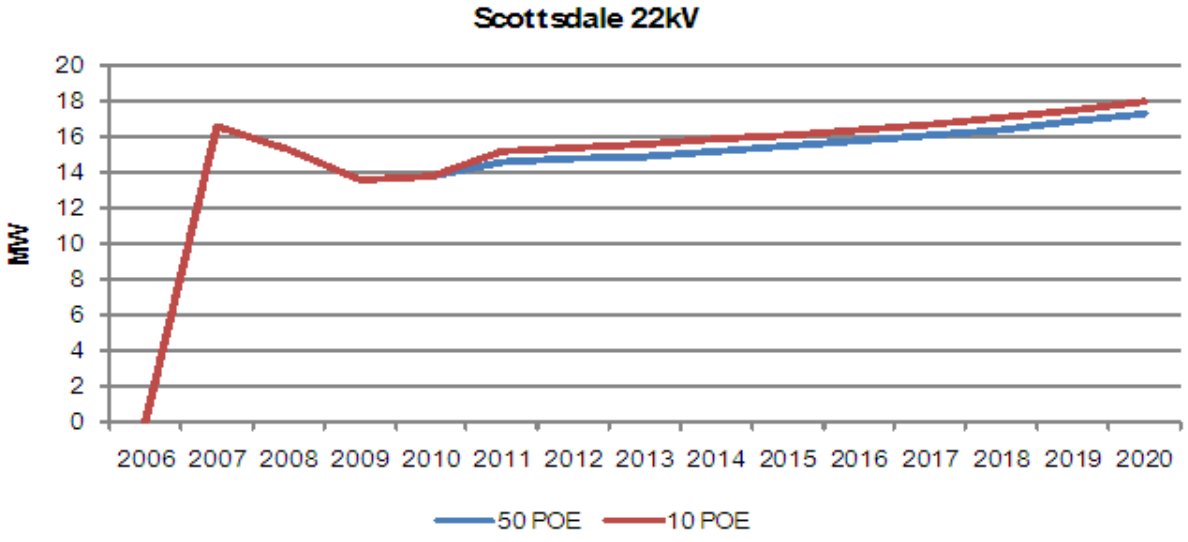
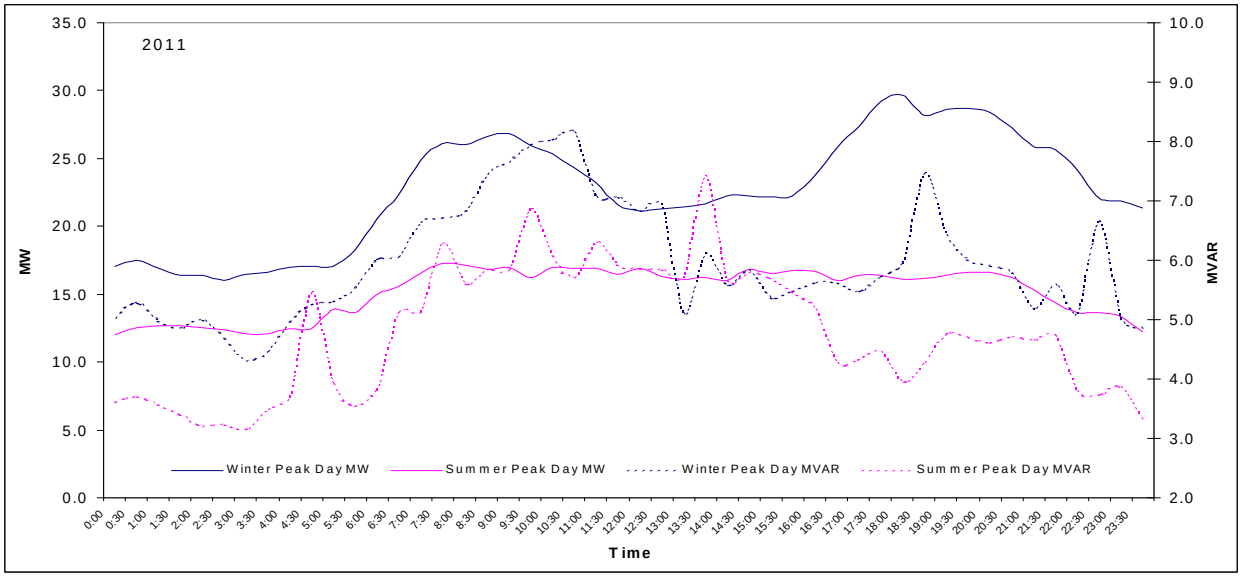


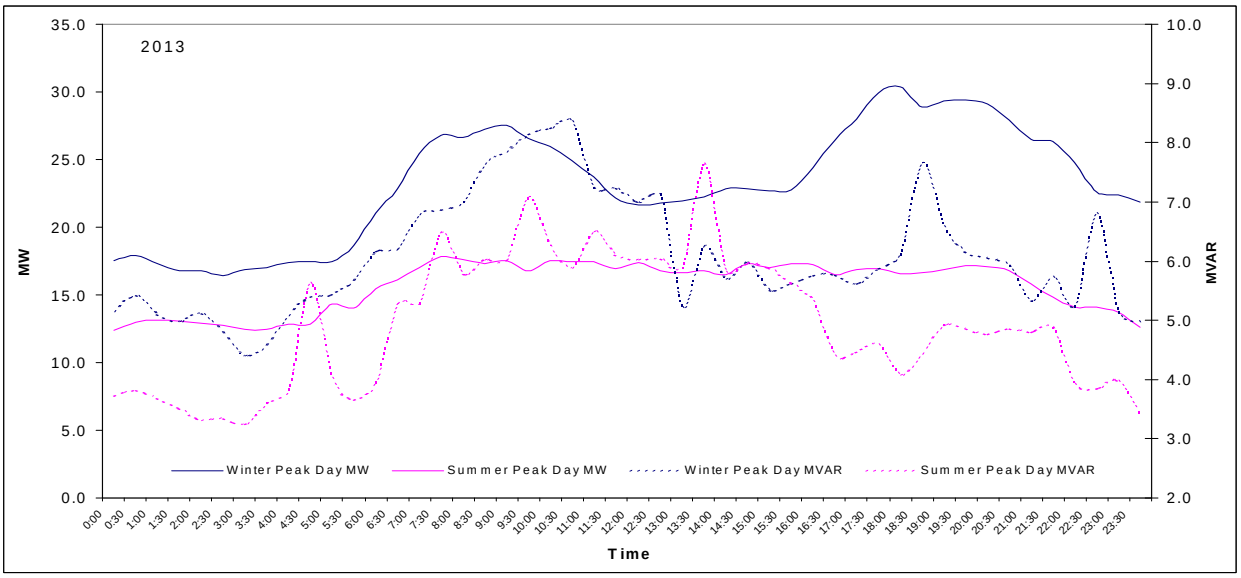
Figure 4-190 Scottsdale Site Winter Load Forecast at 50% and 10% POE



Load Profiles:

Figure 4-191 Load Profiles: Scottsdale Substation Day of Summer/Winter Peak Demand




2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

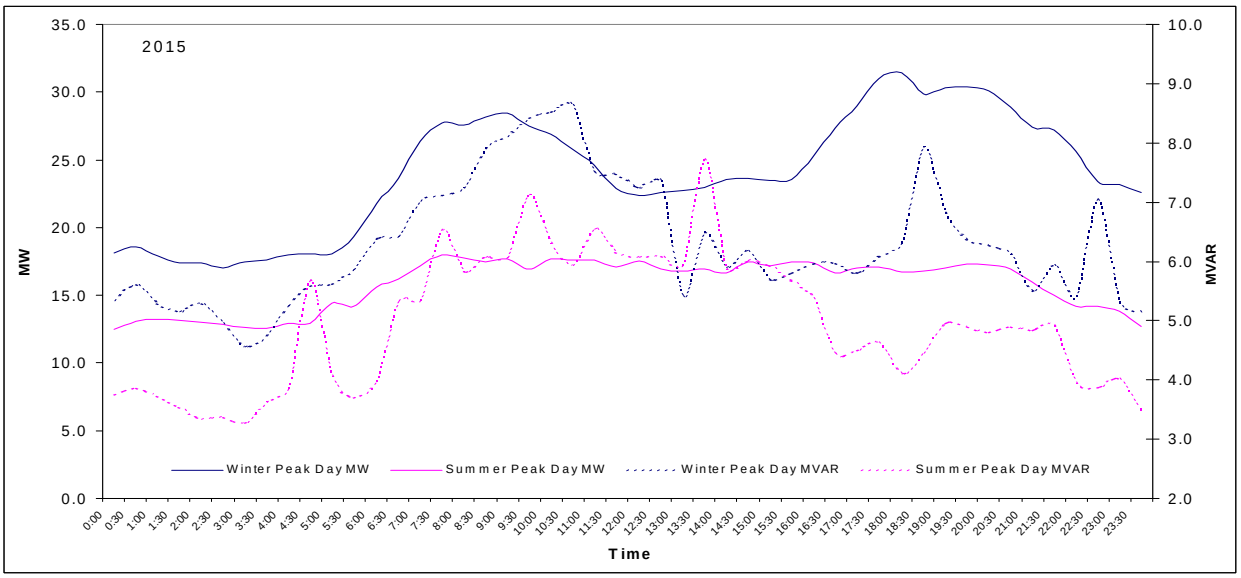
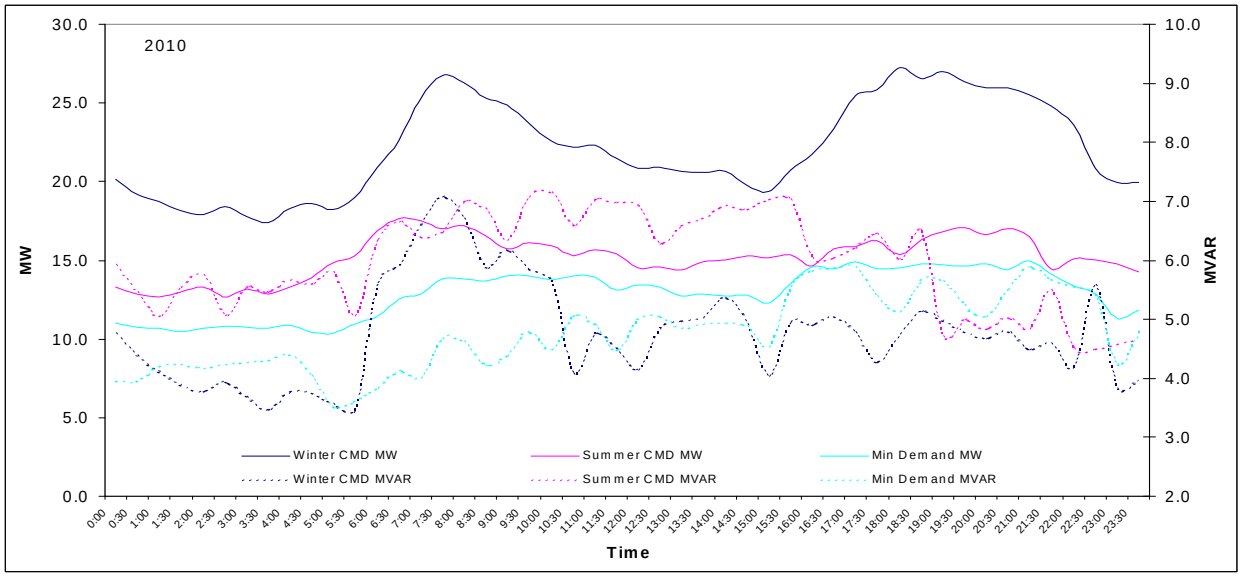
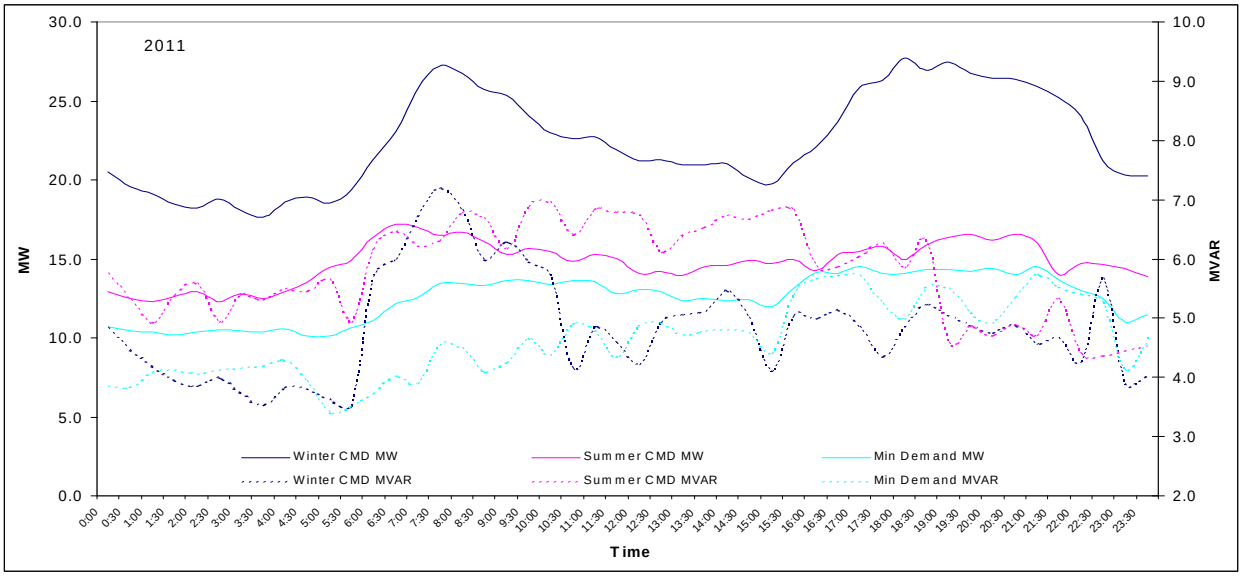
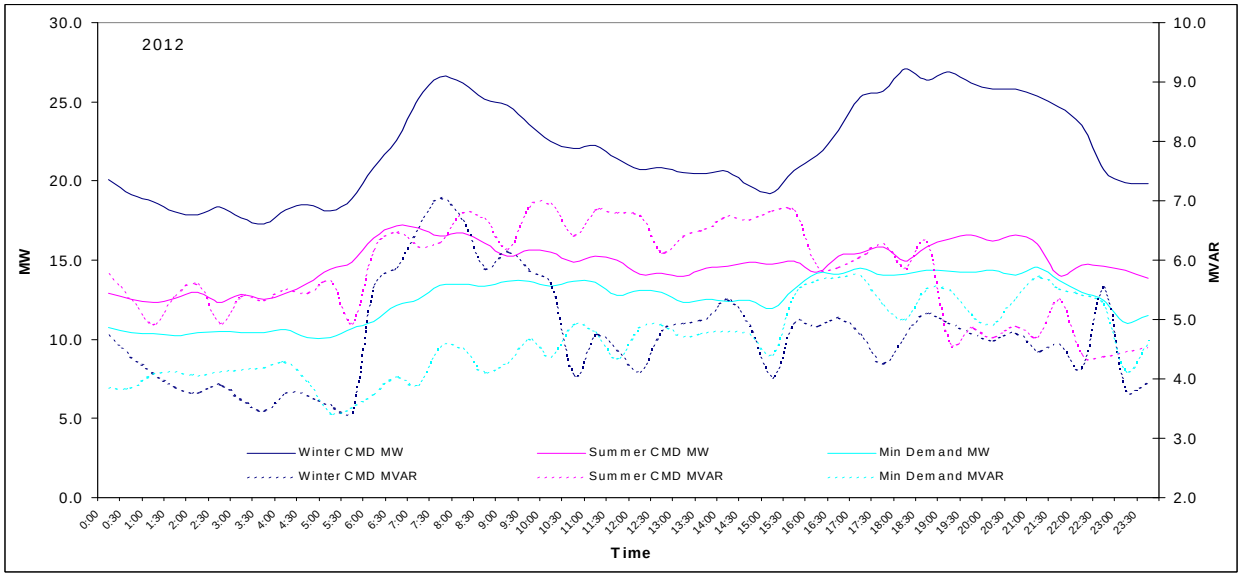
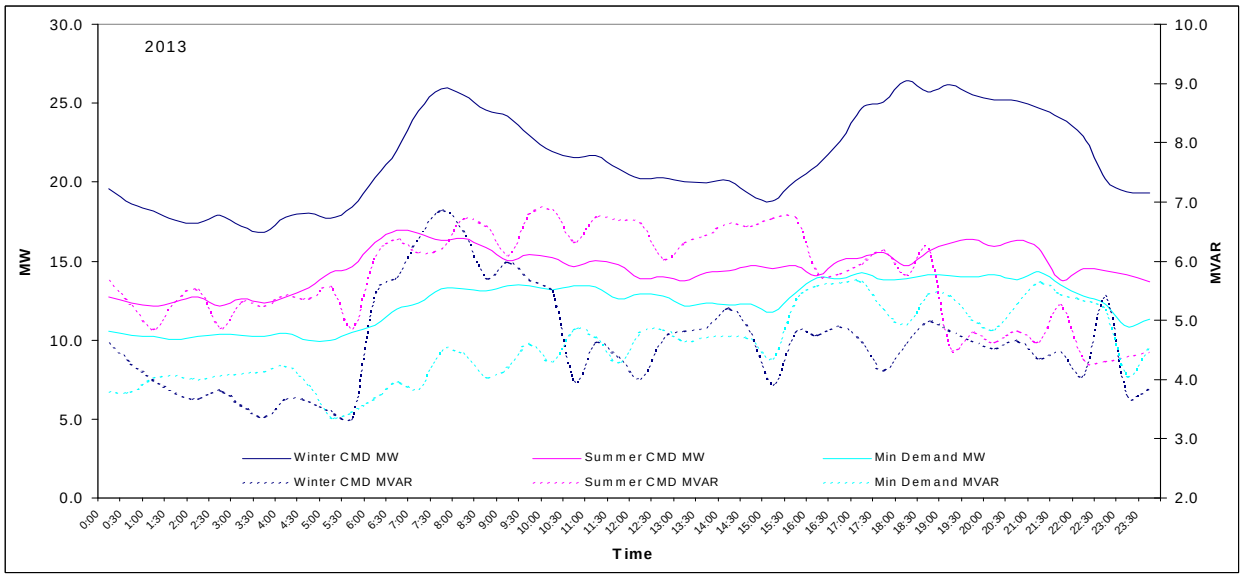

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

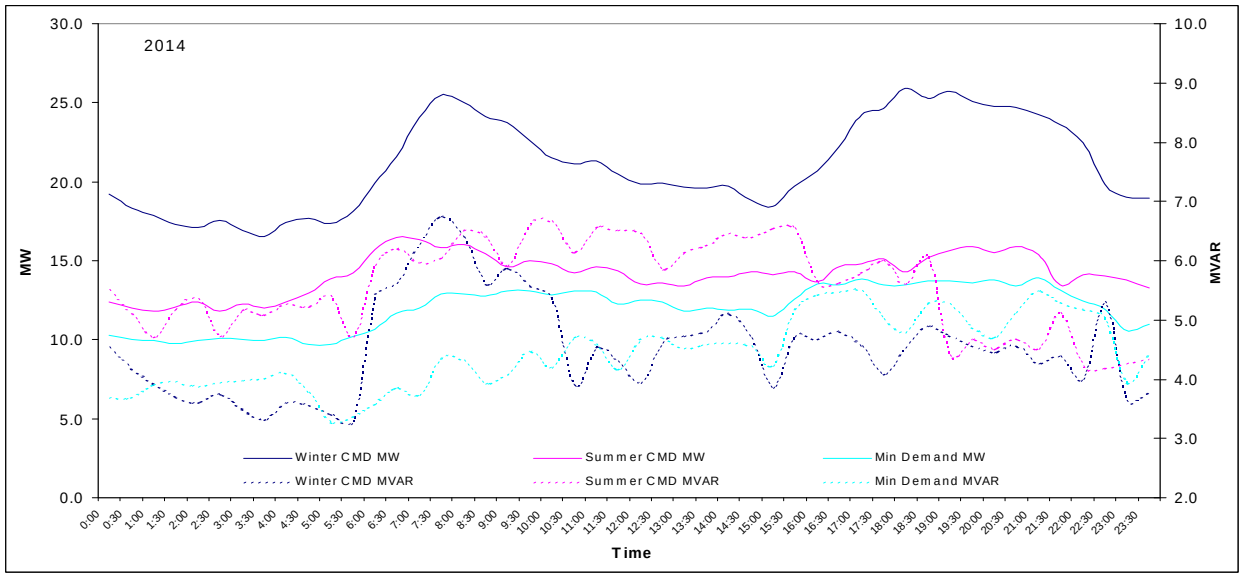
Figure 4-192 Load Profiles: Scottsdale Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

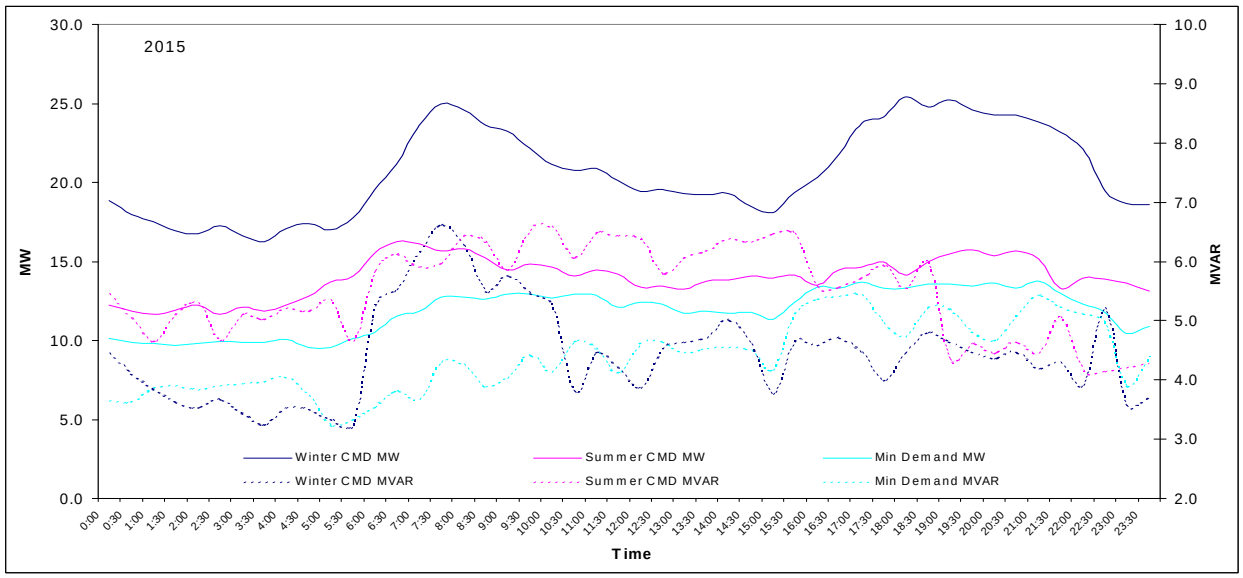
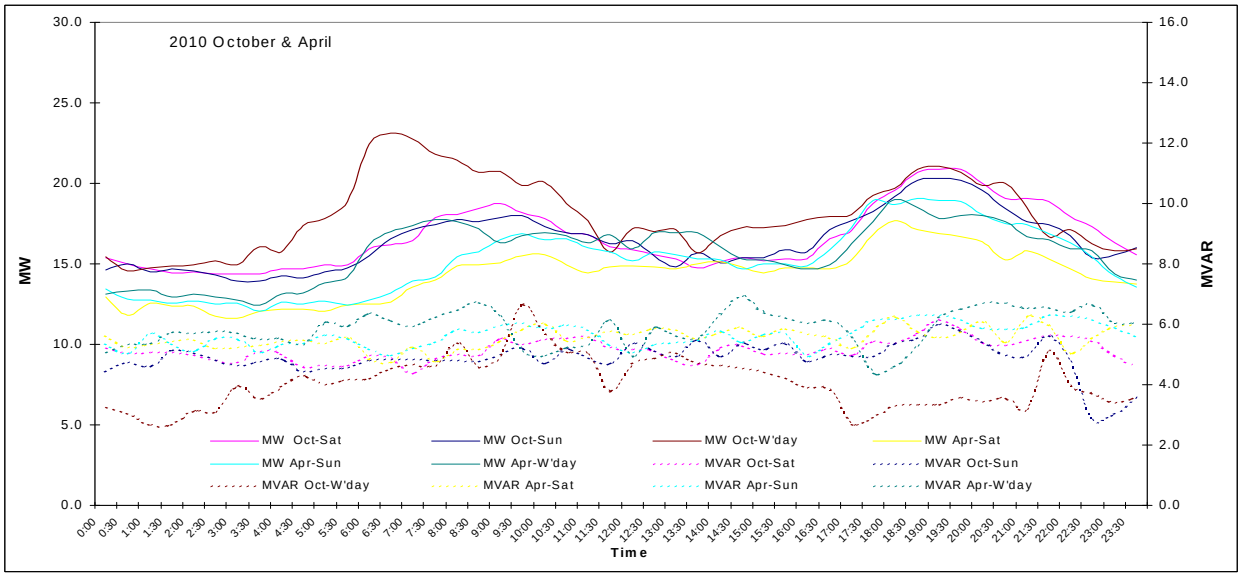
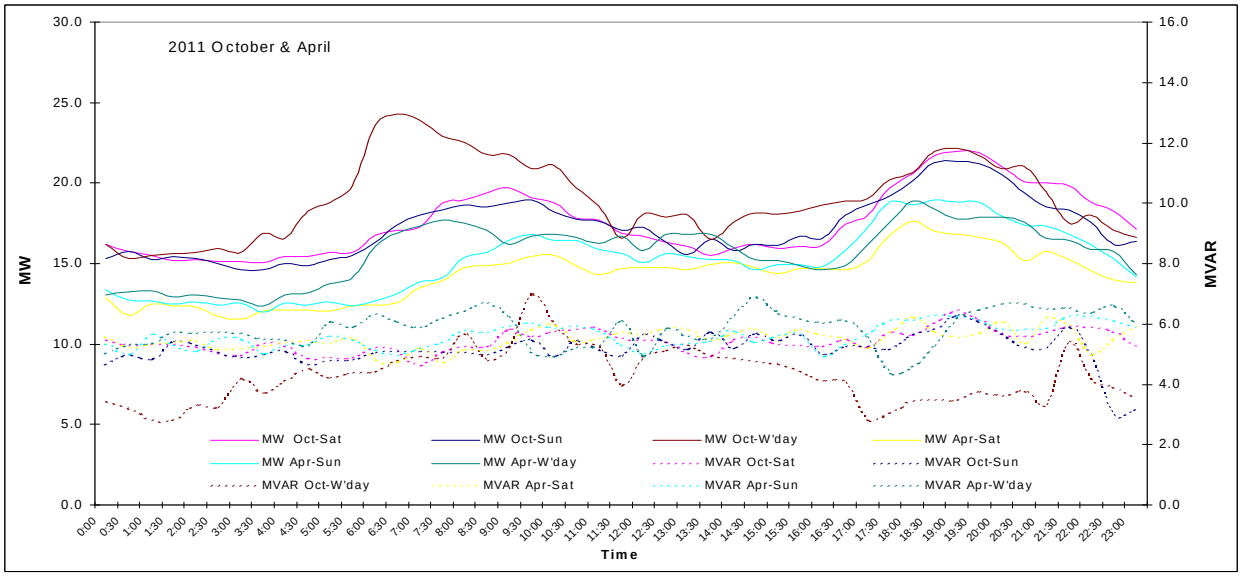
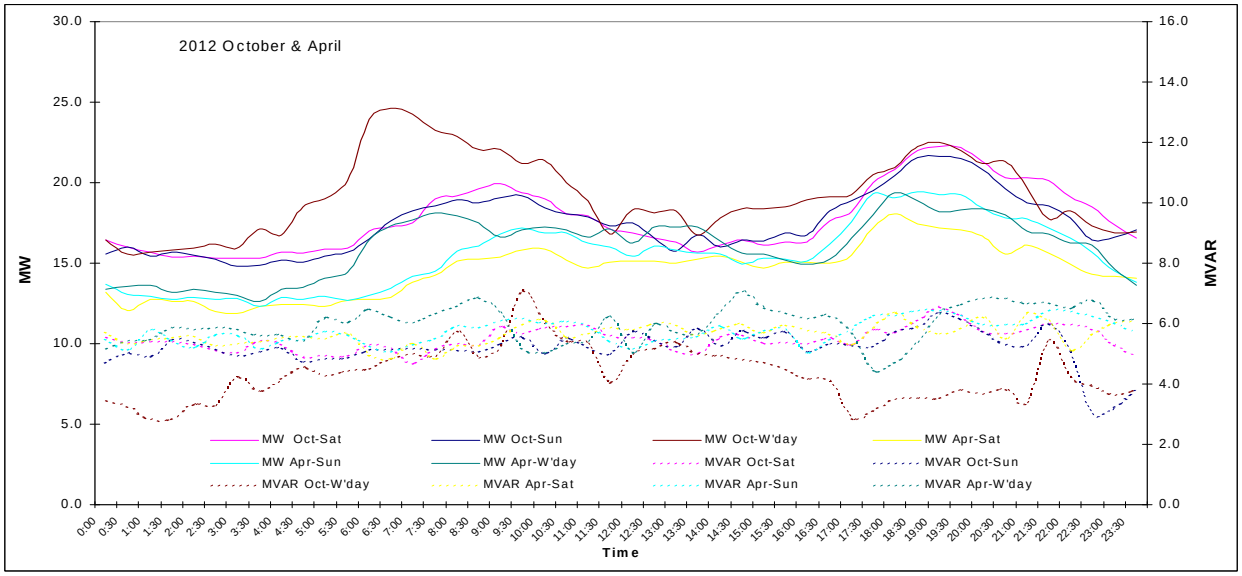
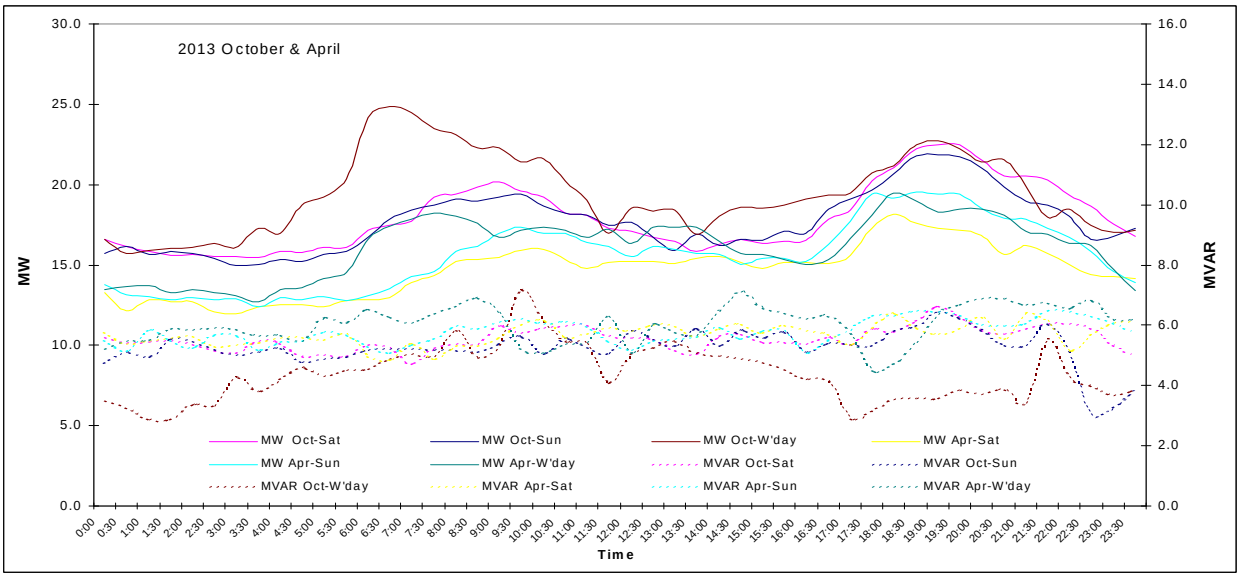

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

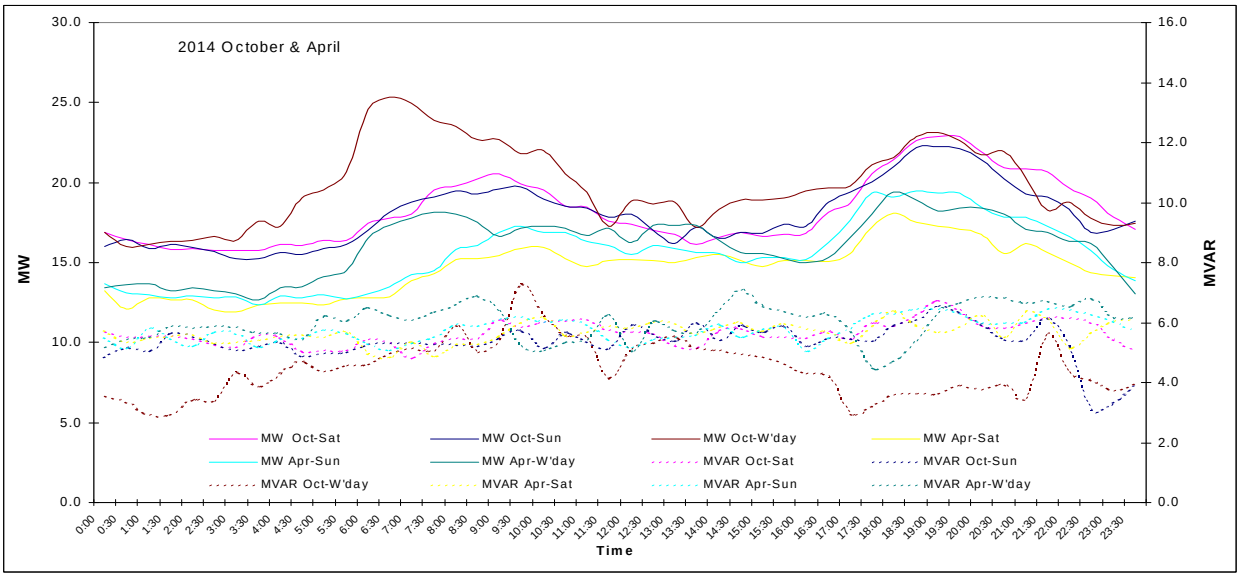
Figure 4-193 Load Profiles: Weekday, Saturday, Sunday for October & April











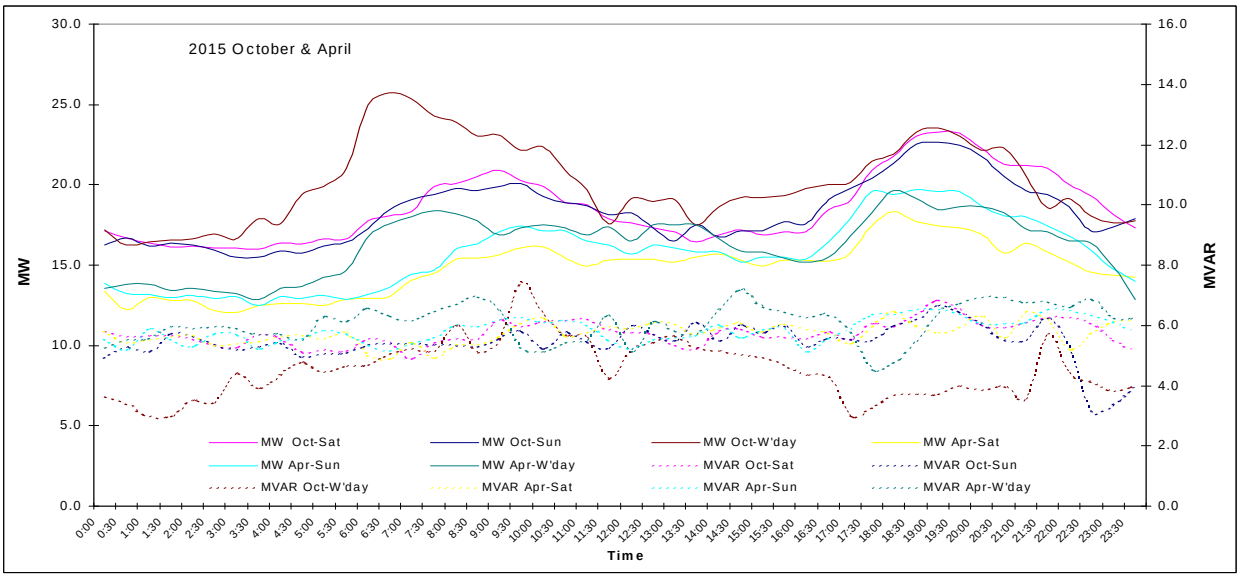
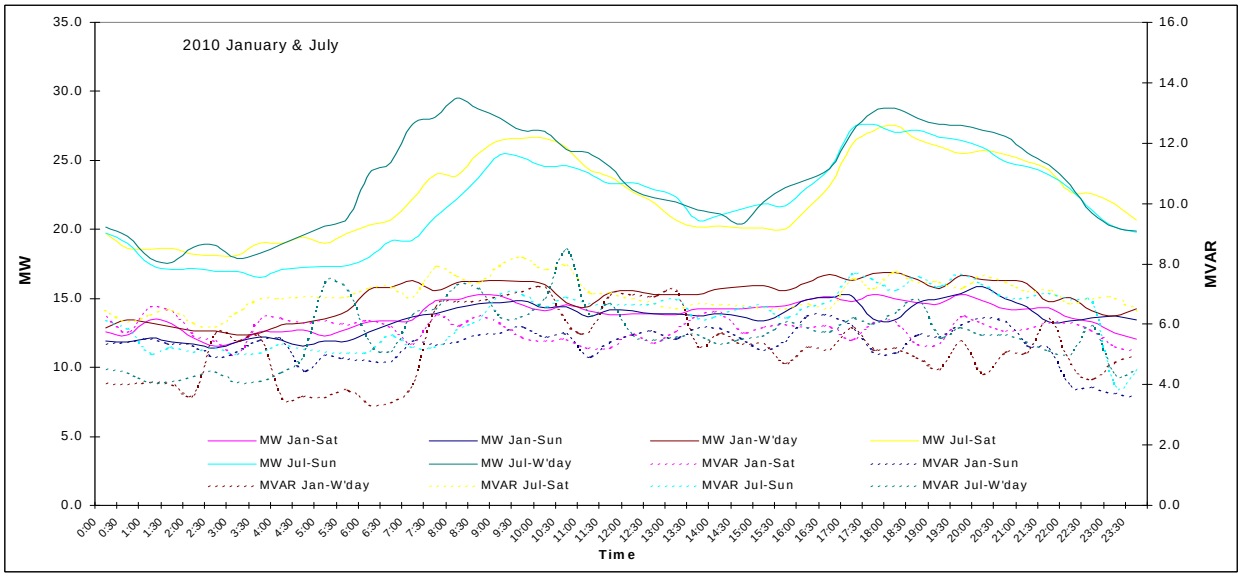
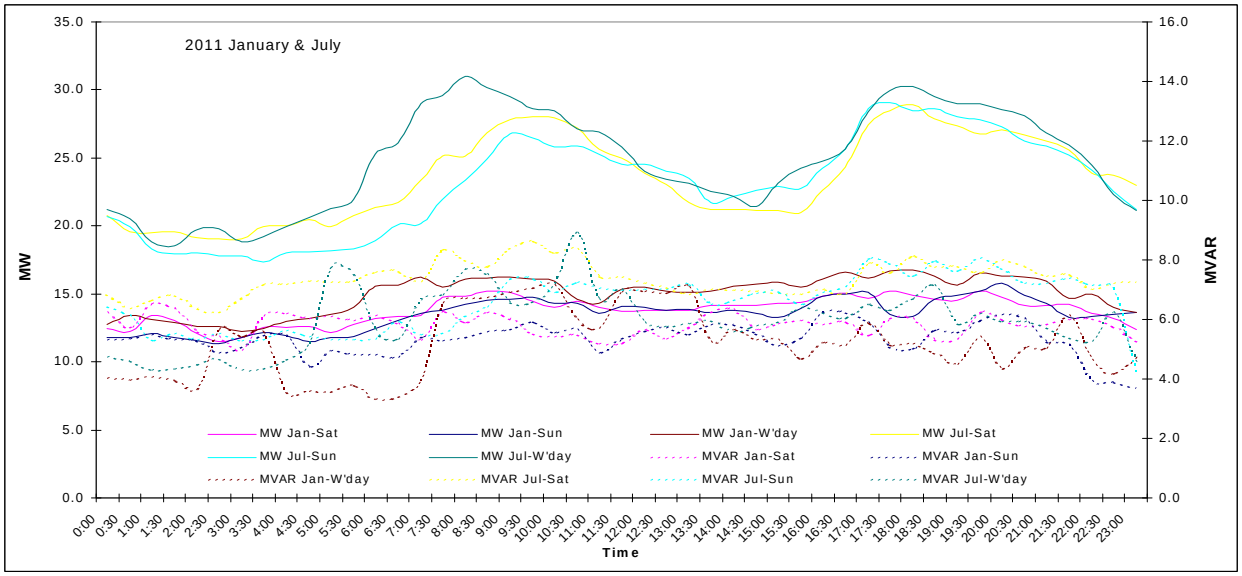
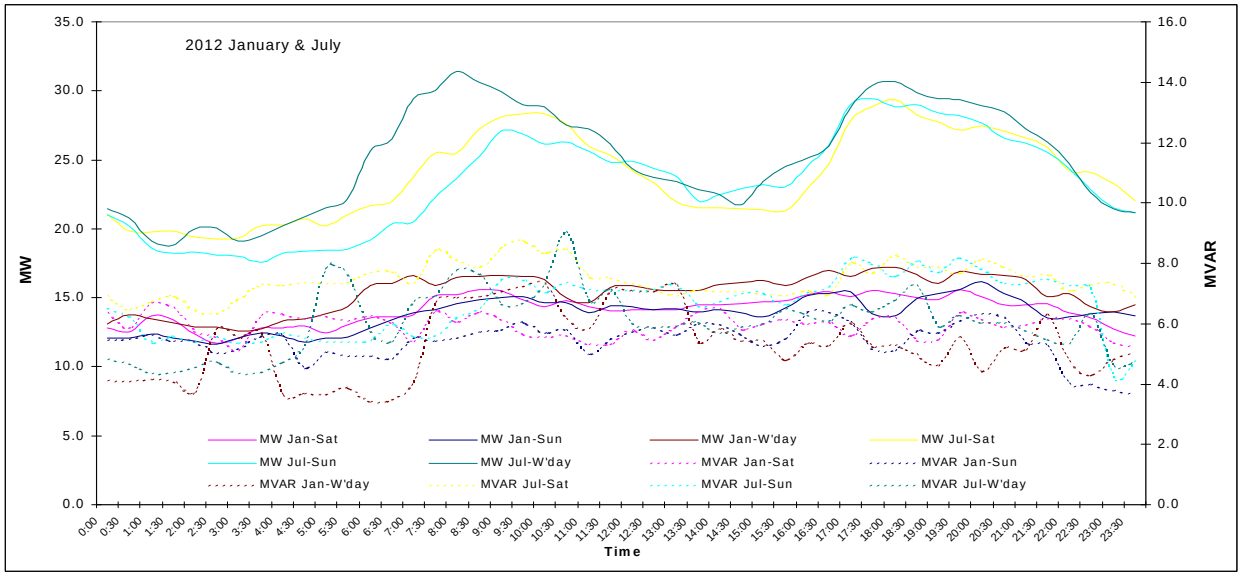
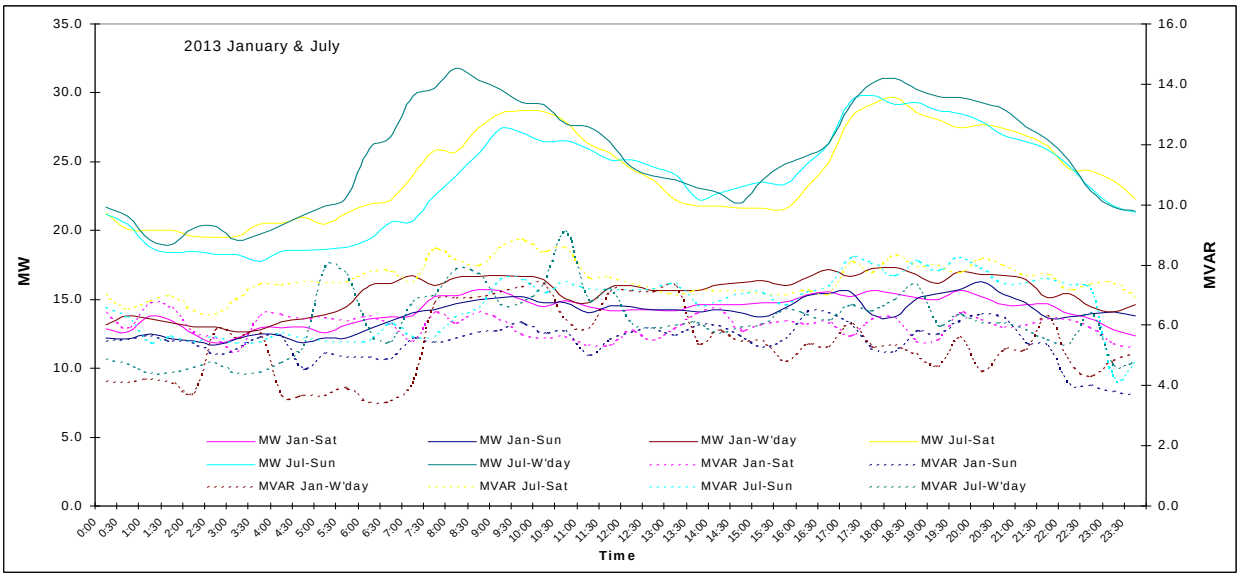


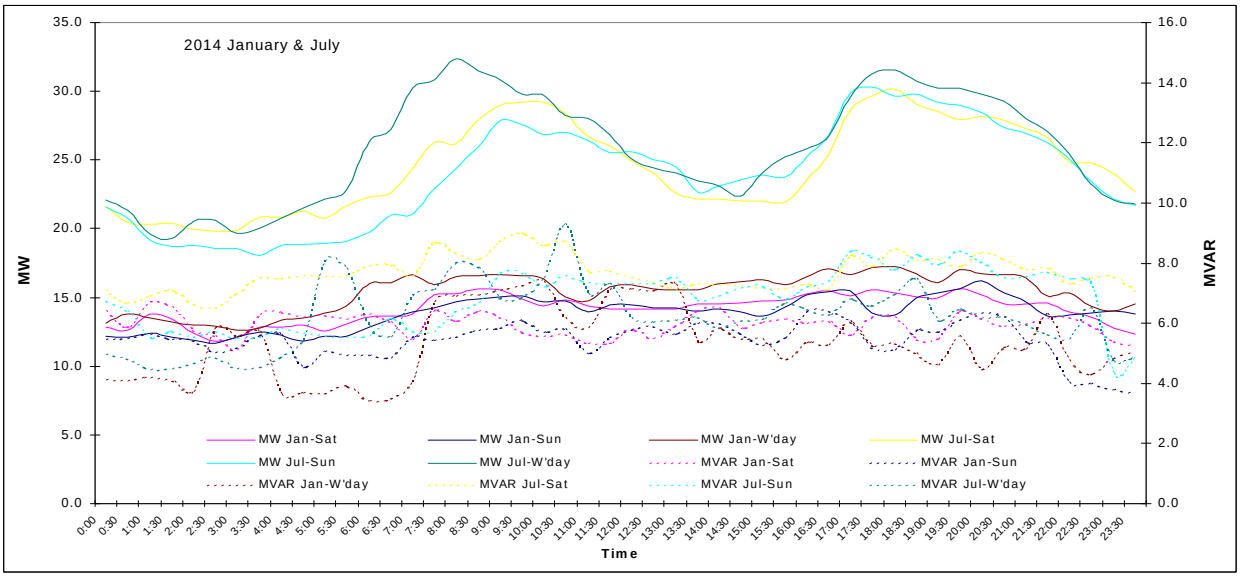
Figure 4-194 Load Profiles: Weekday, Saturday, Sunday for January & July

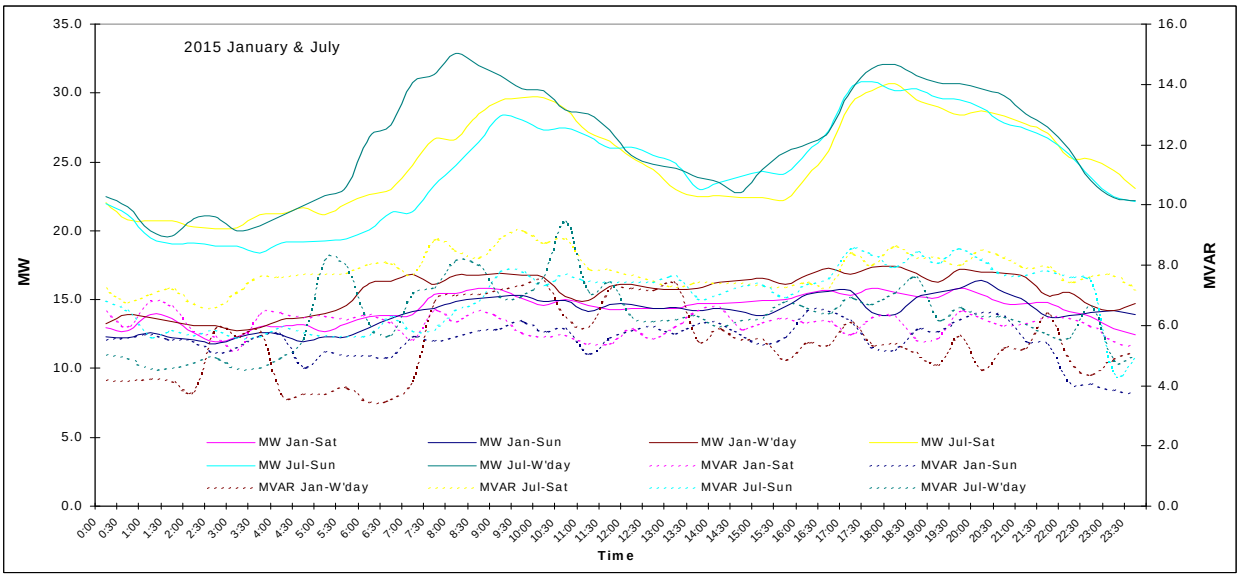







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.35 Smithton

Description:

The Substation is located at Smithton and is known as “Smithton Substation”. The substation is owned by Transend.

Table 4-123 Smithton Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	5	70	35

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing management programs included in the forecast for this connection site.

Forecast Results:

Table 4-124 Smithton Site Winter load forecast

Smithton	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	21.48	22.41	18.69	19.50	21.48	22.41	18.77	19.58
2006	21.07	21.87	21.07	21.87	21.07	21.87	21.10	21.90
2007	22.22	23.24	21.55	22.54	22.22	23.24	21.59	22.58
2008	22.72	24.00	18.24	19.27	22.72	24.00	18.28	19.30
2009	23.16	24.07	21.09	21.92	23.16	24.07	21.14	21.97
2010	21.36	22.22	20.04	20.85	21.36	22.22	20.08	20.89
2011	22.27	23.17	20.89	21.74	22.16	23.06	20.79	21.64
2012	22.33	23.23	20.95	21.80	22.22	23.12	20.85	21.70
2013	22.34	23.24	20.96	21.81	22.25	23.15	20.88	21.72
2014	22.50	23.41	21.11	21.97	22.41	23.32	21.02	21.88
2015	22.65	23.57	21.25	22.11	22.58	23.49	21.18	22.04
2016	22.87	23.79	21.45	22.32	22.79	23.71	21.38	22.25
2017	23.08	24.02	21.66	22.53	23.01	23.95	21.59	22.47
2018	23.39	24.34	21.94	22.83	23.31	24.26	21.87	22.76
2019	23.76	24.72	22.29	23.20	23.71	24.67	22.24	23.15
2020	24.19	25.17	22.70	23.62	24.13	25.11	22.64	23.56

Table 4-125 Smithton Site Summer load forecast

Smithton	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	21.33	22.21	19.57	20.39	21.33	22.21	19.57	20.39
2006	21.17	22.93	19.94	21.60	21.17	22.93	19.94	21.60
2007	22.76	24.68	20.95	22.72	22.76	24.68	20.95	22.72
2008	22.41	24.71	21.55	23.76	22.41	24.71	21.55	23.76
2009	23.50	25.87	19.64	21.62	23.50	25.87	19.64	21.62
2010	23.10	24.62	20.60	21.96	23.10	24.62	20.60	21.96
2011	23.08	24.60	20.59	21.94	23.48	25.03	20.95	22.33
2012	23.76	25.33	21.19	22.59	24.19	25.78	21.57	22.99
2013	24.03	25.61	21.43	22.84	24.47	26.08	21.82	23.26
2014	24.04	25.62	21.44	22.85	24.45	26.06	21.81	23.24
2015	24.44	26.05	21.80	23.23	24.86	26.50	22.18	23.64
2016	24.38	25.98	21.74	23.18	24.83	26.47	22.15	23.61
2017	25.24	26.90	22.51	24.00	25.69	27.38	22.91	24.42
2018	25.74	27.43	22.96	24.47	26.20	27.93	23.37	24.91
2019	26.25	27.98	23.42	24.96	26.72	28.48	23.83	25.40
2020	26.82	28.59	23.92	25.50	27.29	29.09	24.34	25.94

Figure 4-195 Smithton Site Summer Load Forecast at 50% and 10% POE

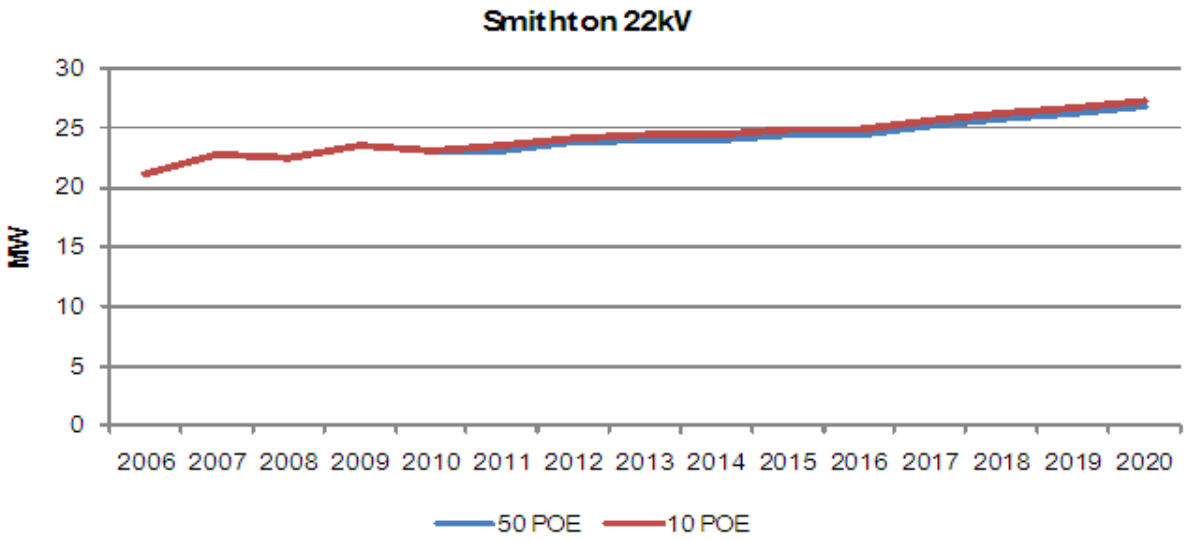
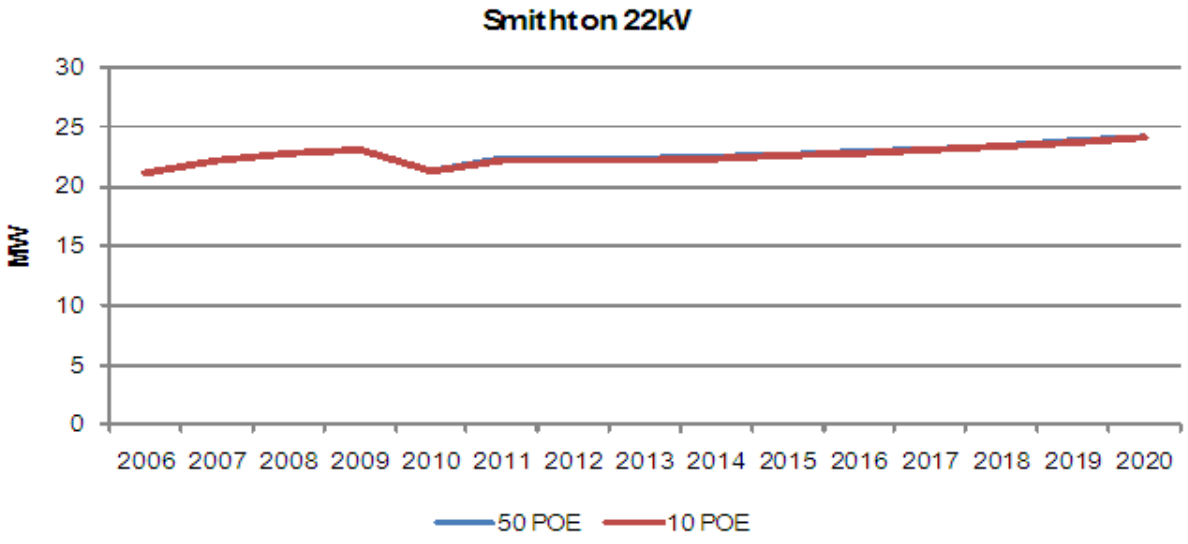
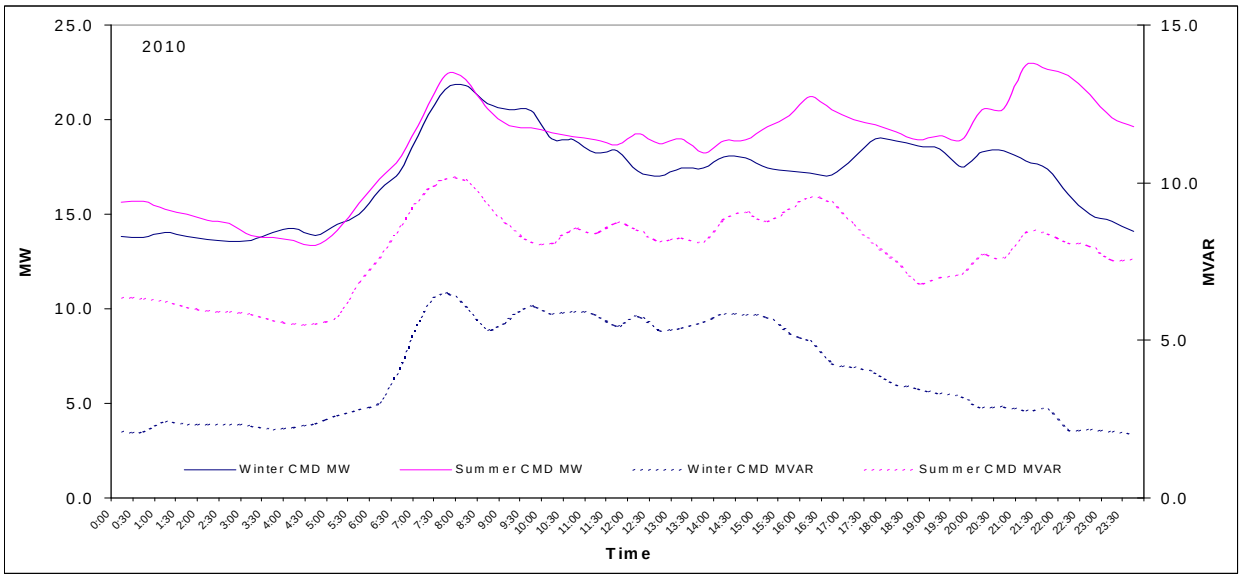


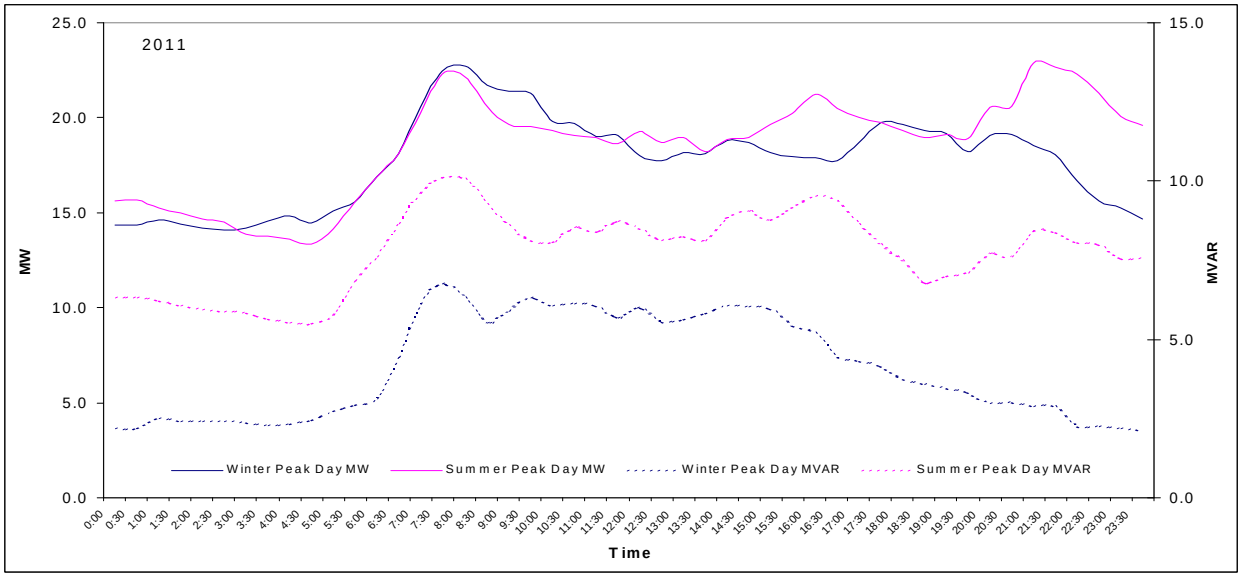
Figure 4-196 Smithton Site Winter Load Forecast at 50% and 10% POE



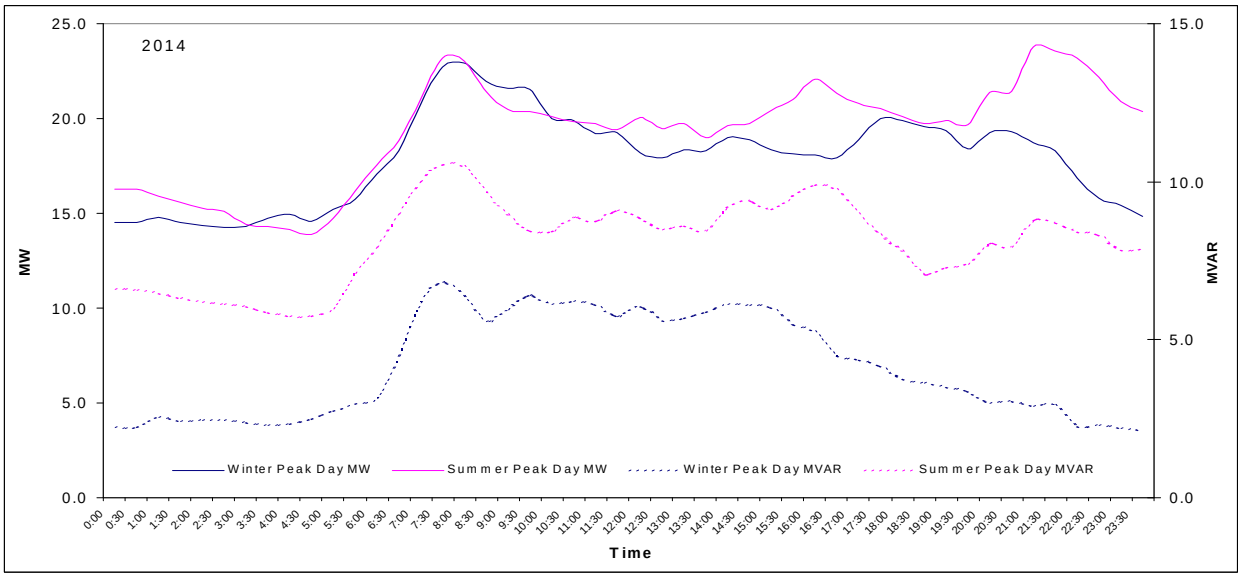
Load Profiles:

Figure 4-197 Load Profiles: Smithton Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

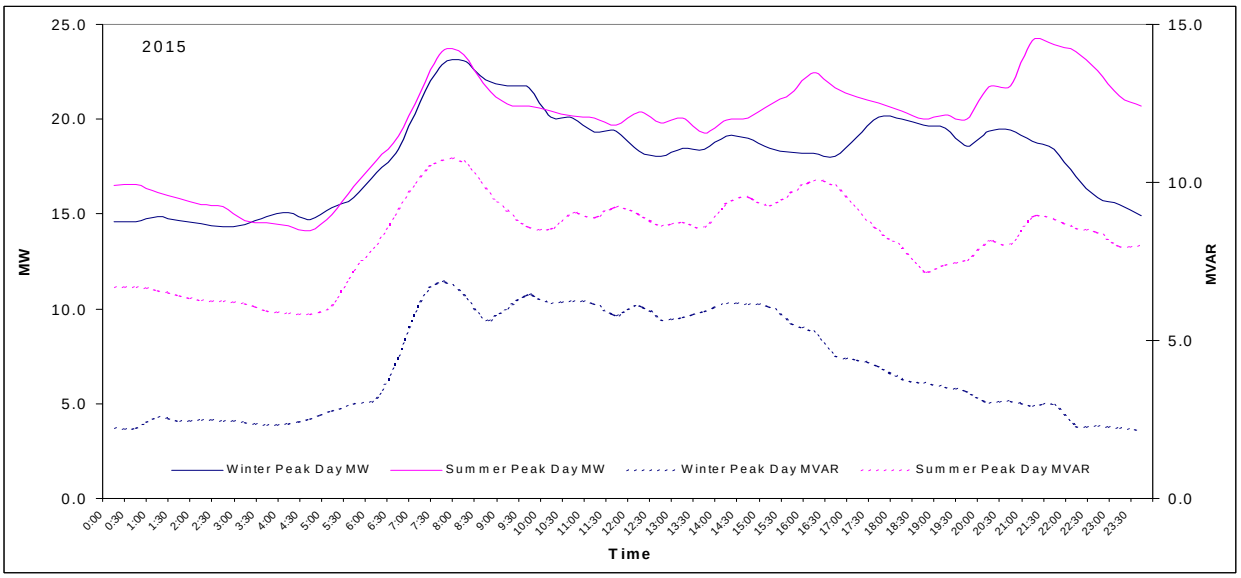
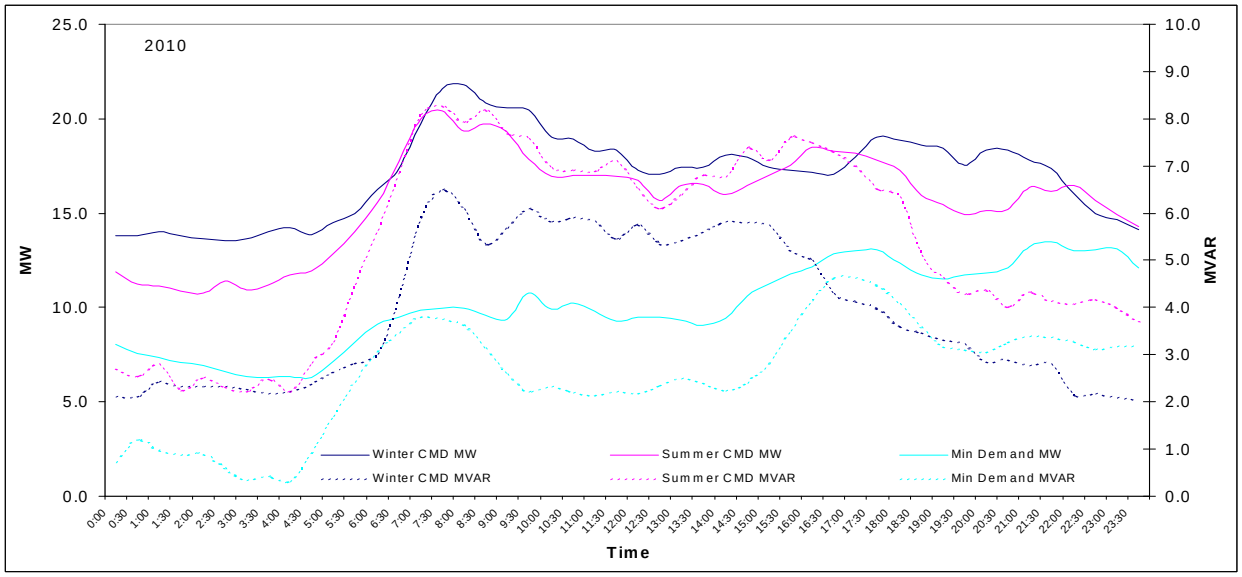
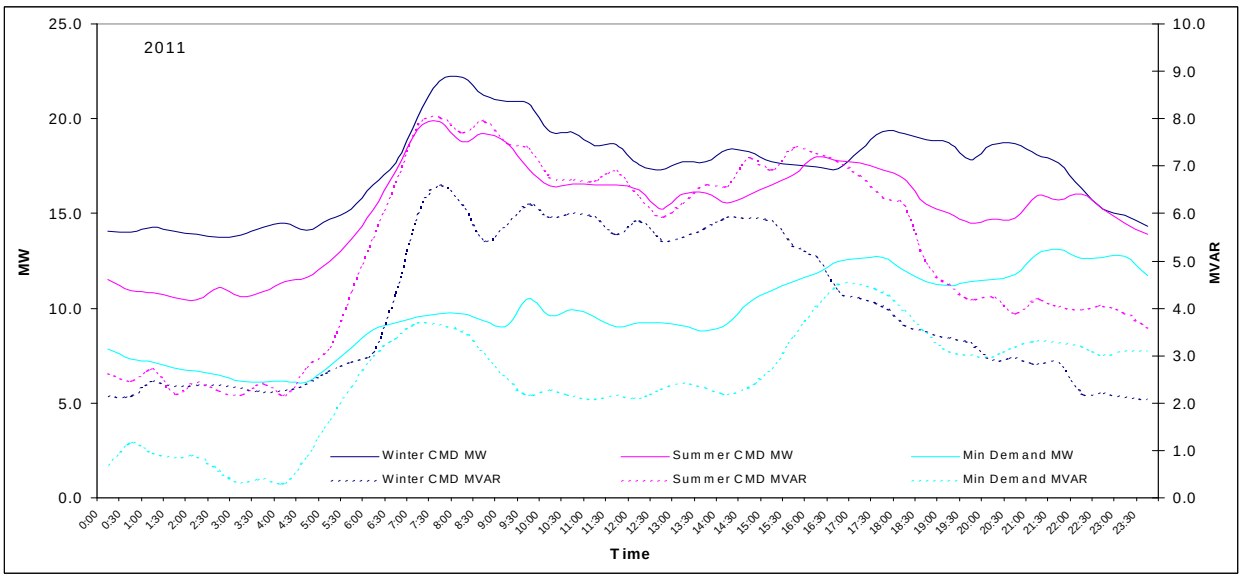
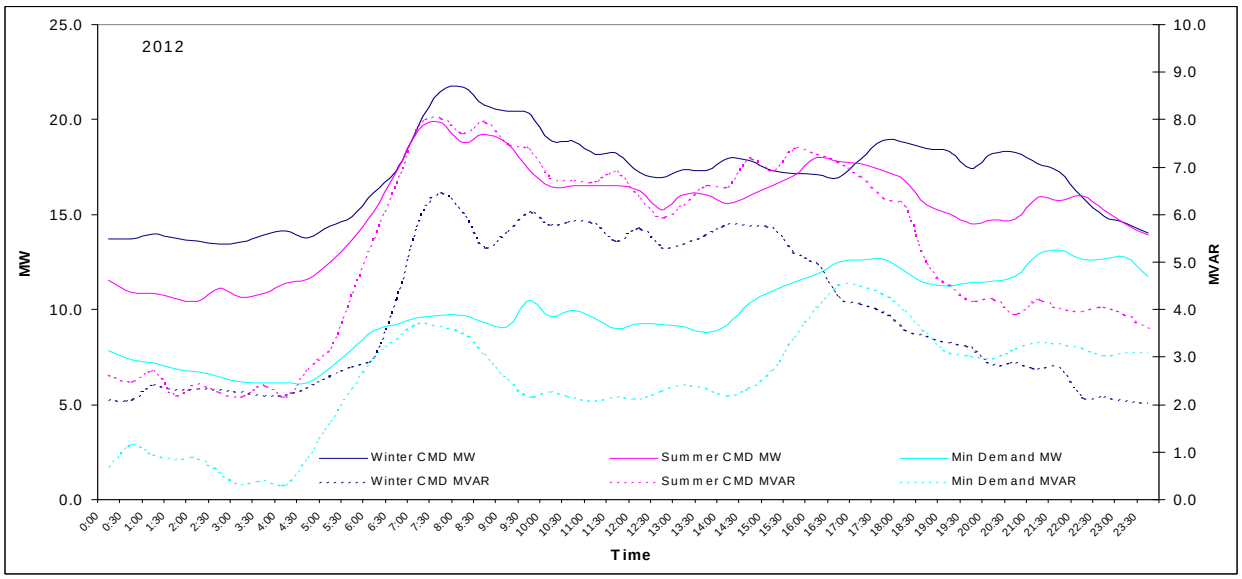
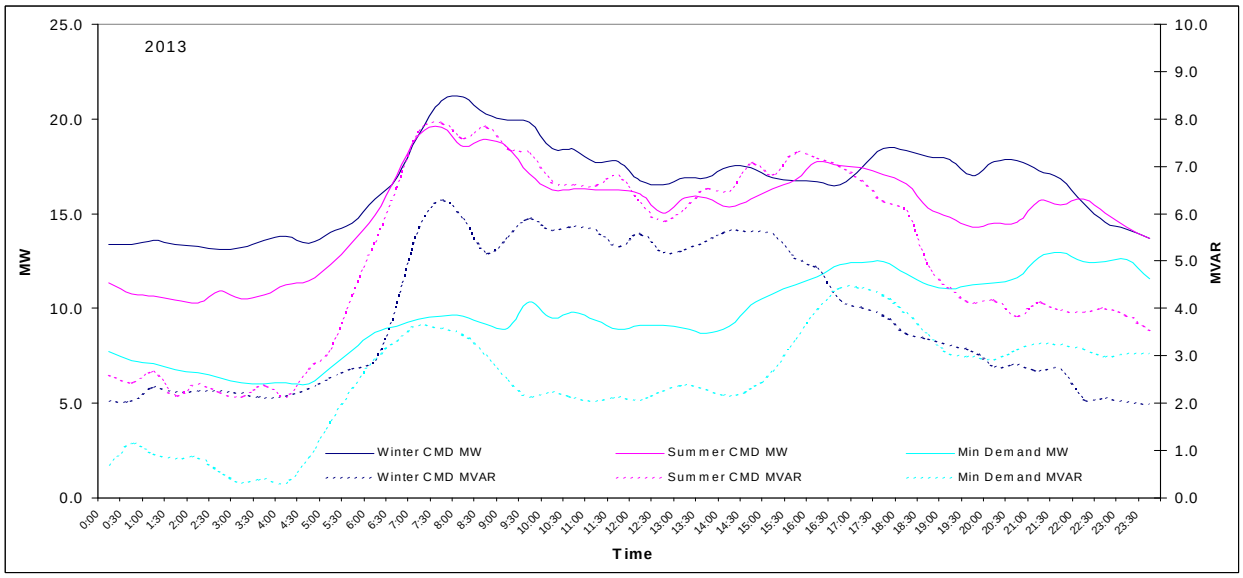

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

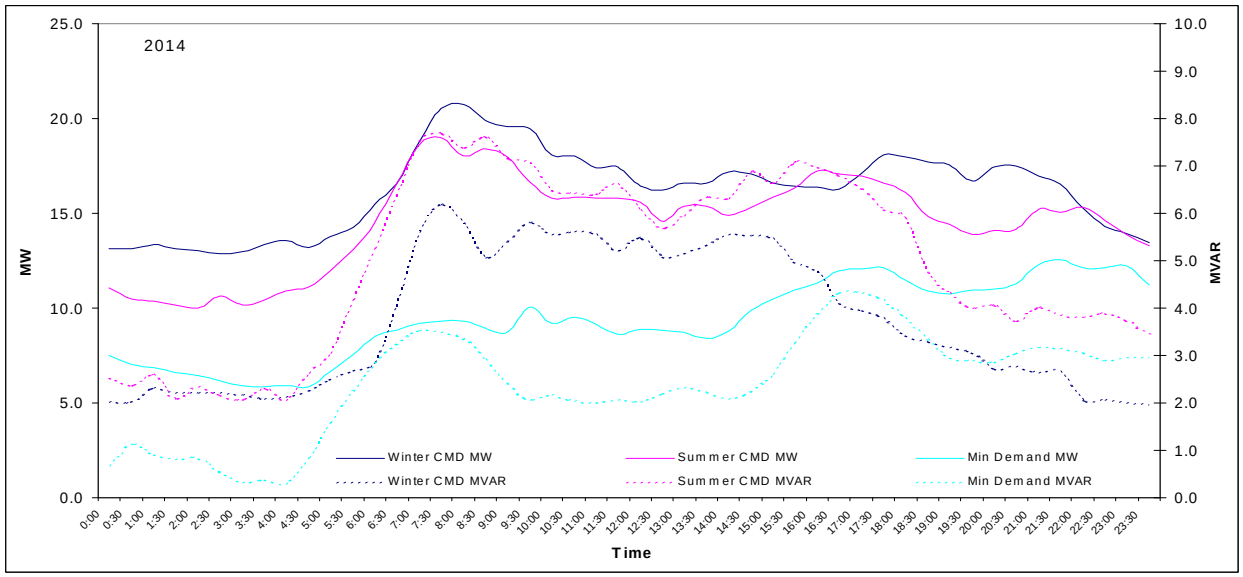
Figure 4-198 Load Profiles: Smithton Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

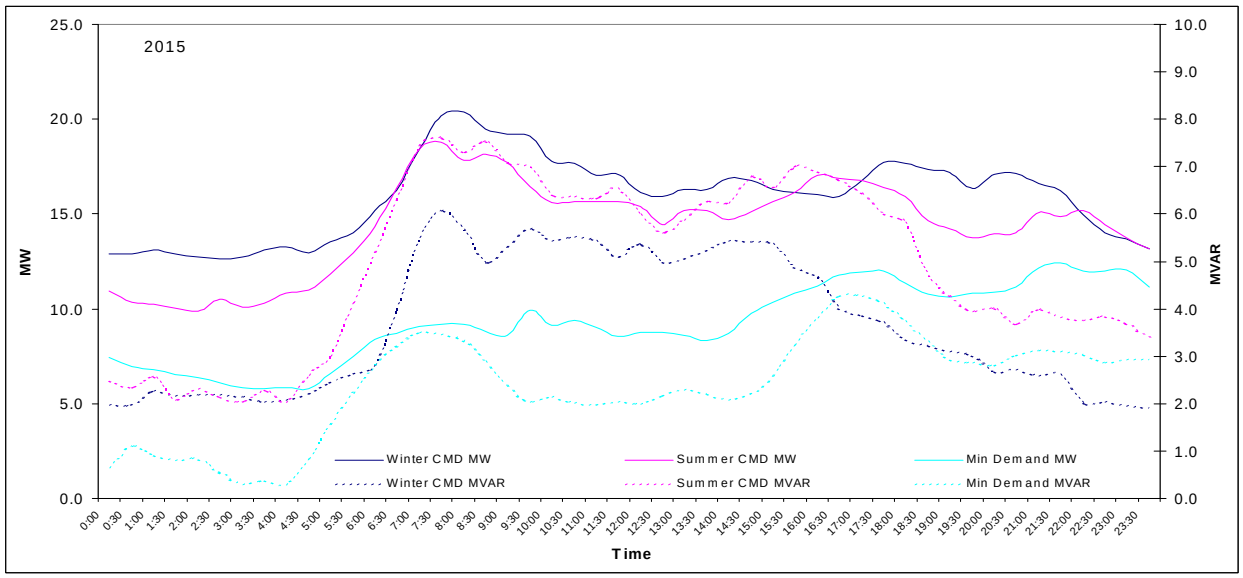
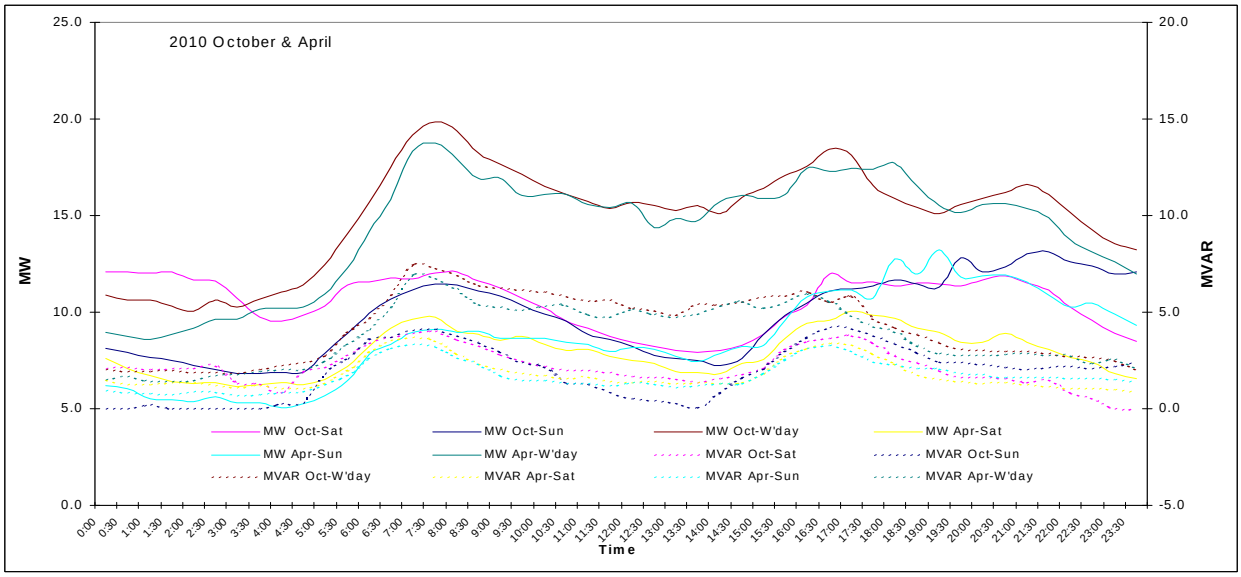
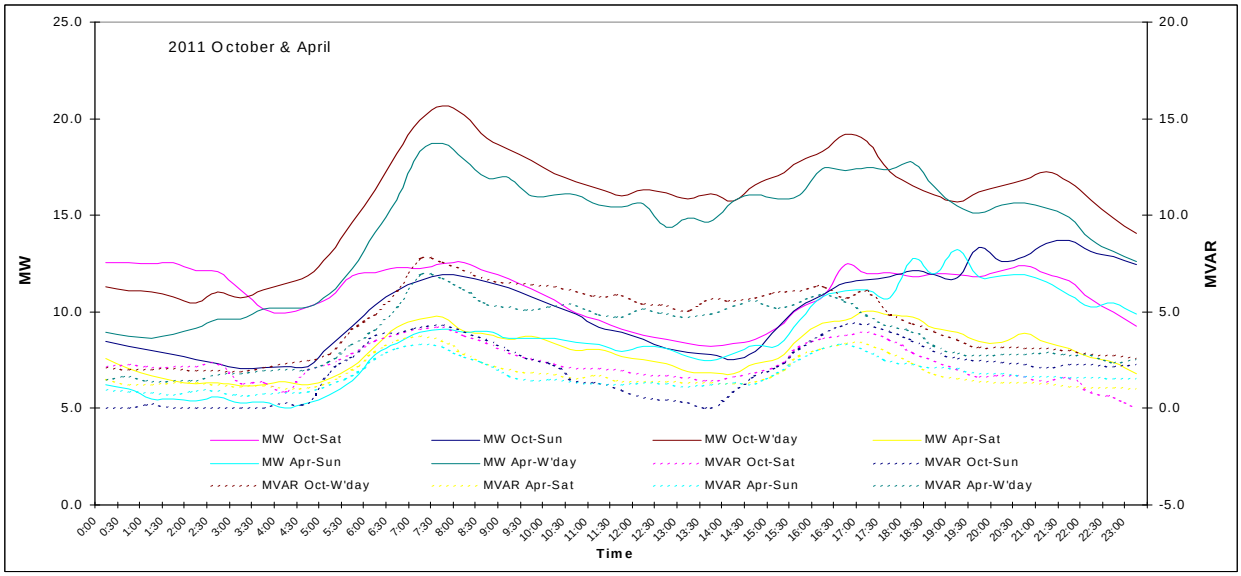
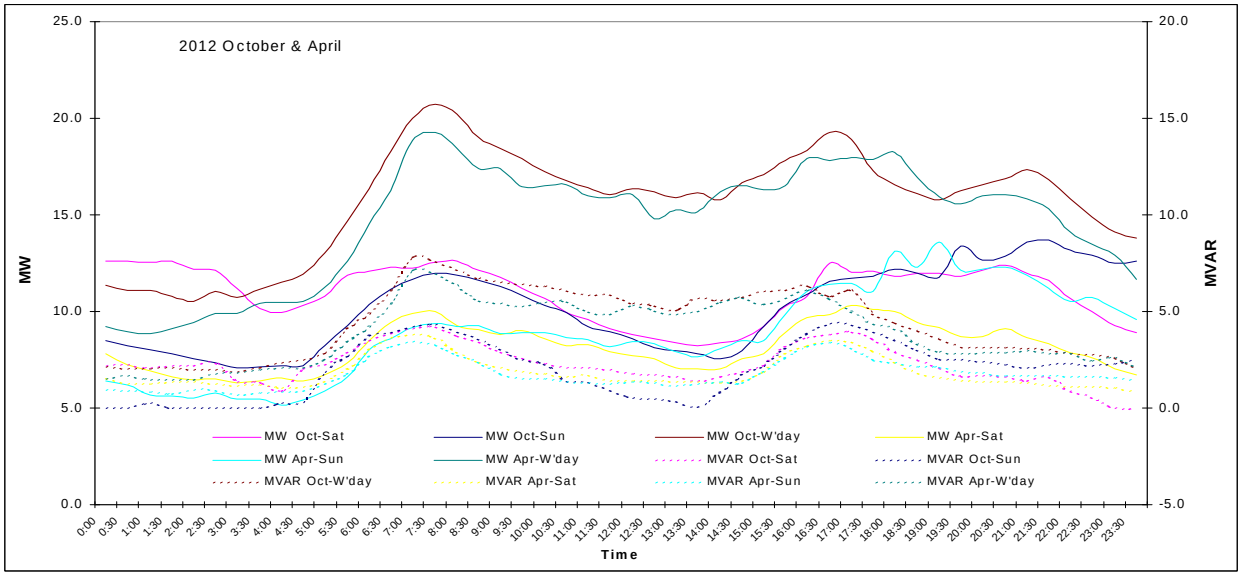
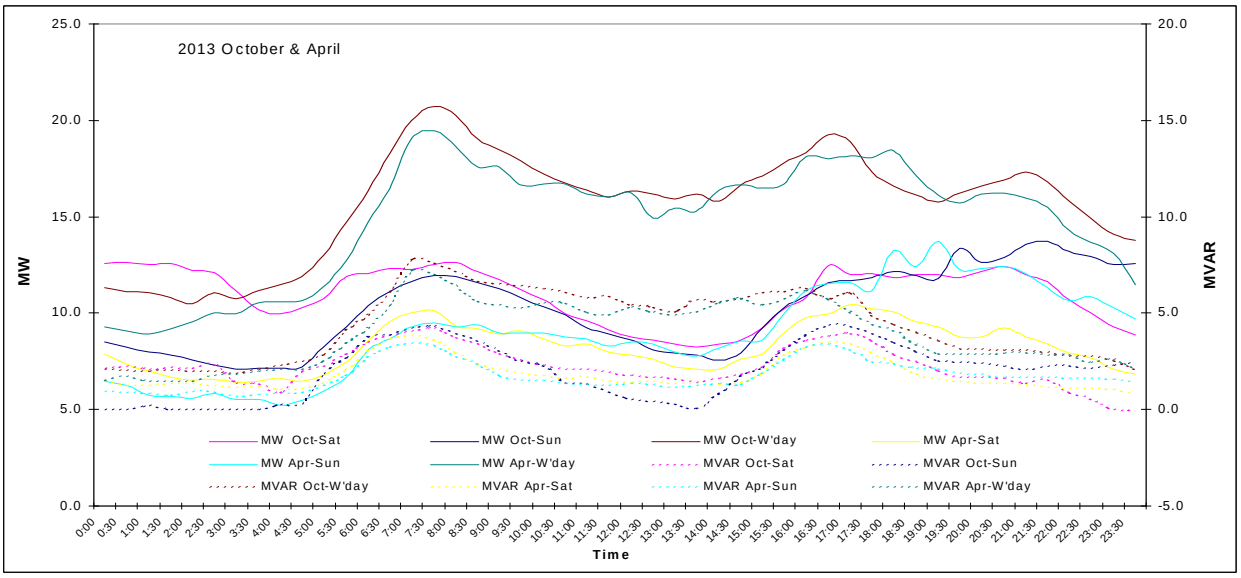

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

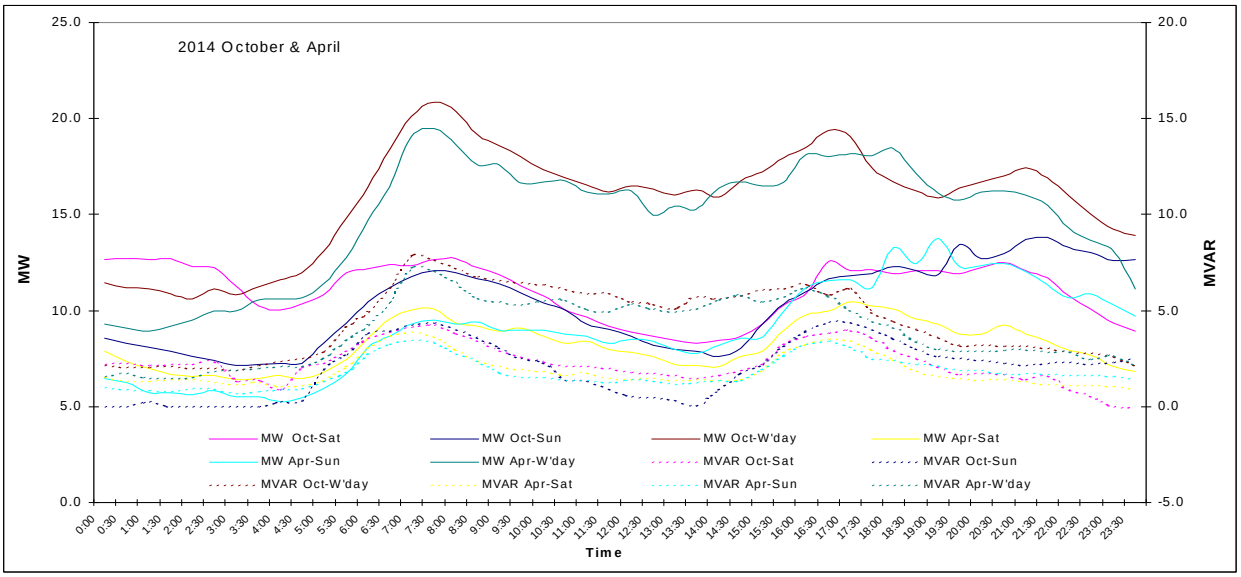
Figure 4-199 Load Profiles:- Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

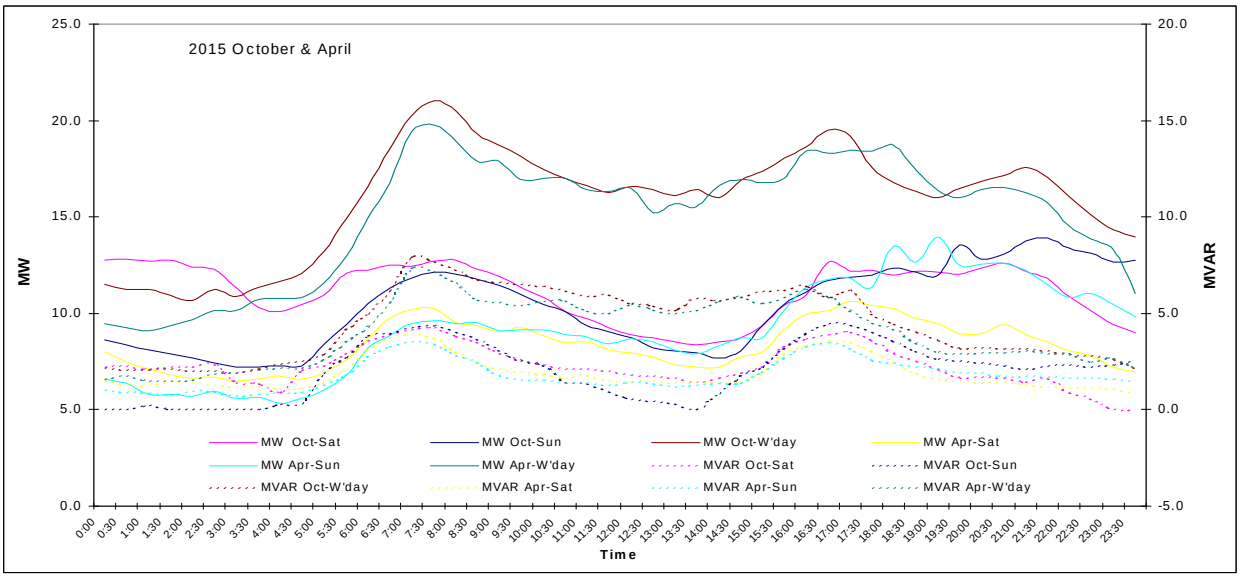
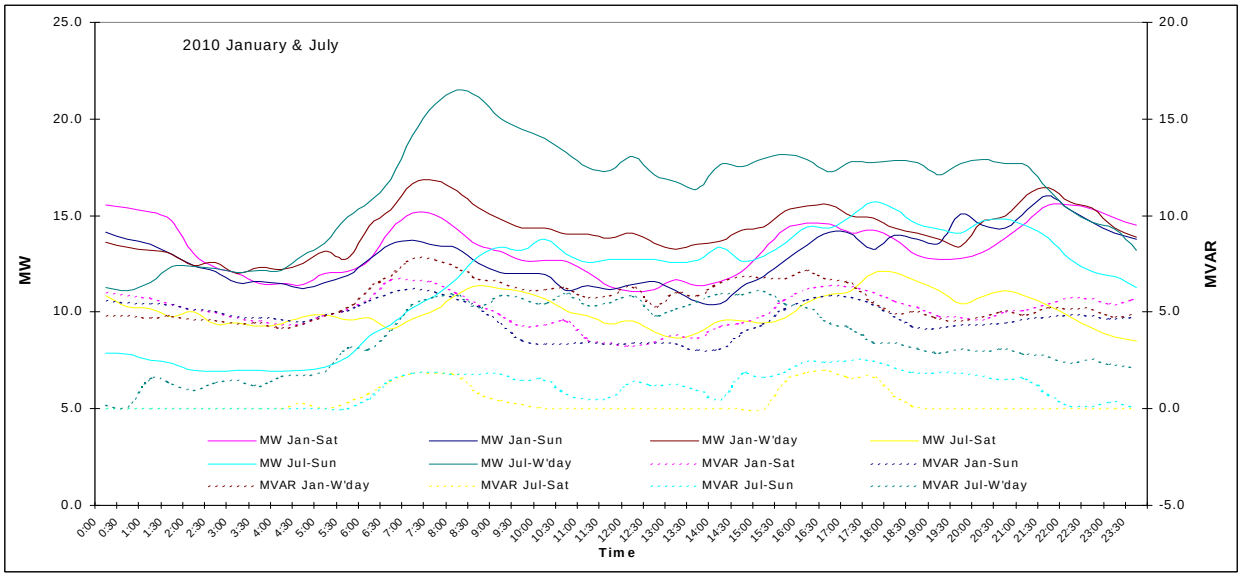
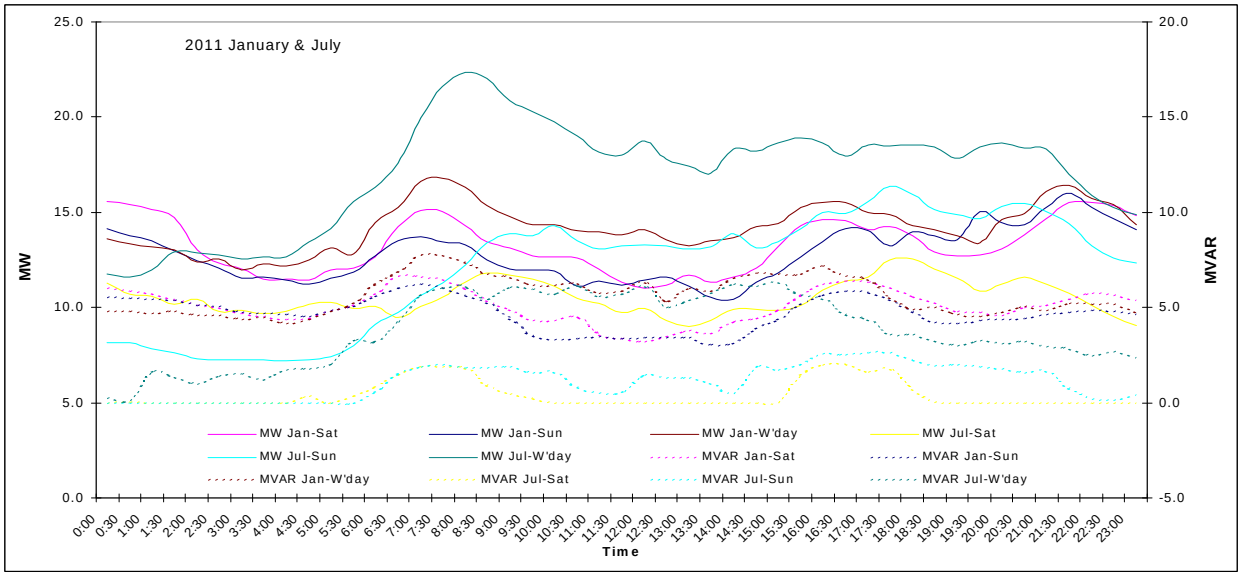
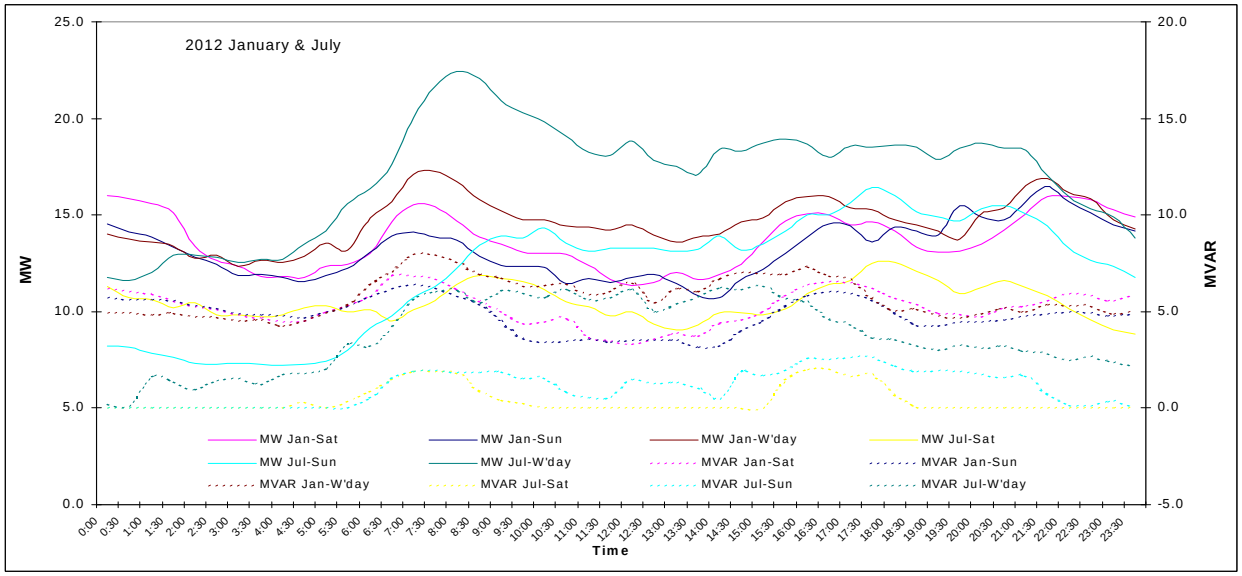
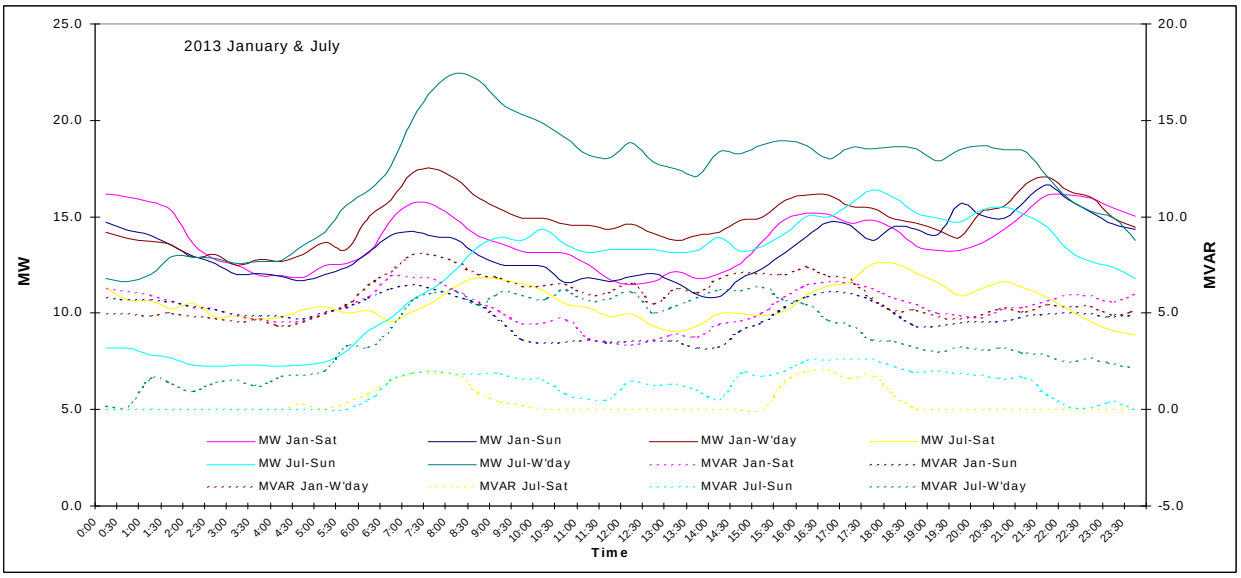

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

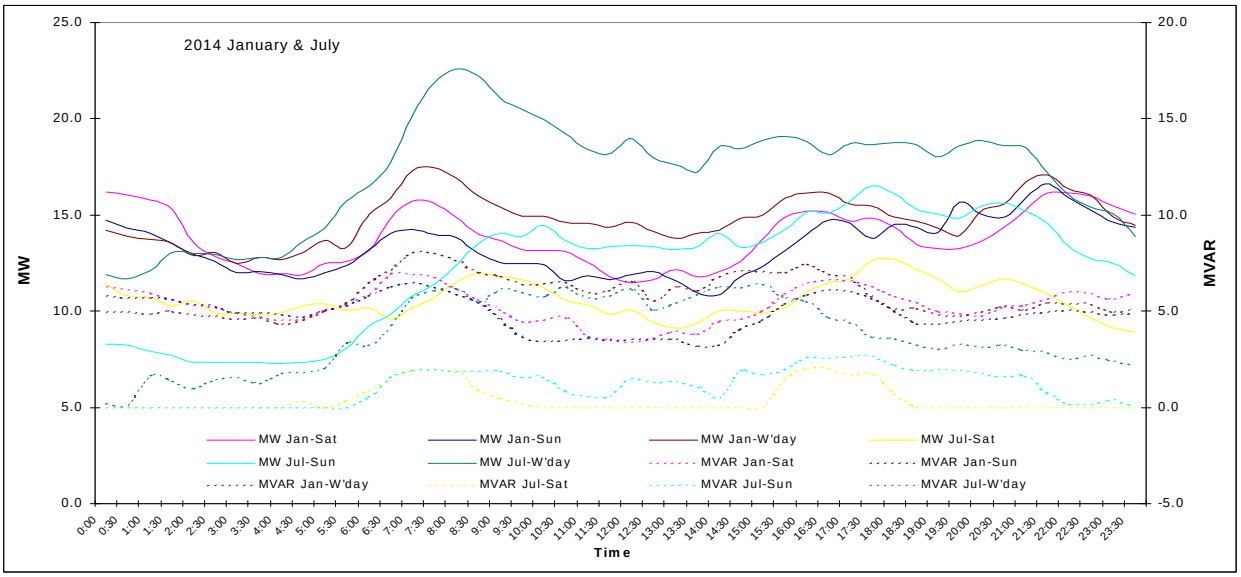
Figure 4-200 Load Profiles: Weekday, Saturday, Sunday for January & July

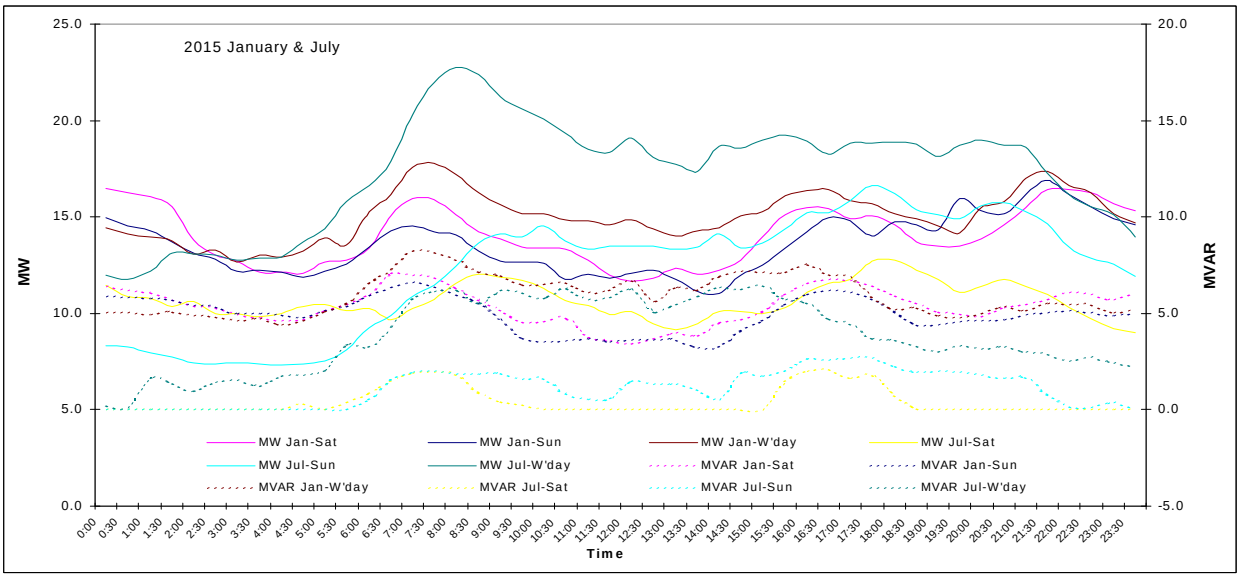







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.36 Sorell

Description:

The Substation is located at Sorell and is known as “Sorell Substation”. The substation is owned by Transend.

Table 4-126 Sorell Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	8	45	22.5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-127 Sorell Site Winter load forecast

Sorell	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	27.58	27.98	25.05	25.40	27.58	27.98	25.60	25.96
2006	33.04	33.82	29.37	30.06	33.04	33.82	29.71	30.41
2007	30.08	30.47	29.80	30.19	30.08	30.47	30.60	31.00
2008	31.66	31.93	31.66	31.93	31.66	31.93	32.44	32.71
2009	32.52	32.82	32.32	32.62	32.52	32.82	33.06	33.37
2010	33.58	33.76	30.20	30.36	33.58	33.76	30.87	31.03
2011	35.61	35.79	32.02	32.19	36.15	36.33	32.50	32.67
2012	36.30	36.49	32.64	32.81	36.83	37.02	33.12	33.29
2013	36.90	37.09	33.18	33.35	37.45	37.65	33.68	33.86
2014	37.75	37.94	33.95	34.12	38.29	38.48	34.43	34.61
2015	38.58	38.78	34.69	34.87	39.14	39.34	35.20	35.38
2016	39.52	39.72	35.53	35.72	40.07	40.27	36.03	36.22
2017	40.45	40.66	36.38	36.56	41.02	41.24	36.89	37.08
2018	41.56	41.77	37.37	37.56	42.11	42.33	37.87	38.06
2019	42.78	43.00	38.47	38.67	43.38	43.61	39.01	39.22
2020	44.13	44.35	39.68	39.89	44.72	44.95	40.21	40.42

Table 4-128 Sorell Site Summer load forecast

Sorell	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	18.80	19.15	17.34	17.66	18.80	19.15	17.50	17.82
2006	19.50	19.92	18.04	18.43	19.50	19.92	18.19	18.59
2007	21.93	22.16	17.64	17.82	21.93	22.16	17.89	18.08
2008	21.40	21.62	21.40	21.62	21.40	21.62	21.72	21.95
2009	20.93	21.12	20.47	20.67	20.93	21.12	20.87	21.07
2010	21.37	21.49	19.46	19.56	21.37	21.49	19.68	19.79
2011	21.43	21.54	19.50	19.61	22.05	22.16	20.07	20.17
2012	22.12	22.24	20.13	20.24	22.77	22.89	20.72	20.83
2013	22.43	22.55	20.41	20.52	23.09	23.21	21.02	21.13
2014	22.50	22.62	20.48	20.59	23.13	23.25	21.05	21.16
2015	22.93	23.05	20.87	20.99	23.57	23.70	21.46	21.57
2016	22.93	23.05	20.87	20.98	23.60	23.72	21.48	21.60
2017	23.80	23.93	21.66	21.78	24.46	24.59	22.27	22.39
2018	24.32	24.45	22.14	22.26	25.01	25.14	22.76	22.88
2019	24.86	25.00	22.63	22.75	25.55	25.69	23.26	23.38
2020	25.46	25.59	23.17	23.30	26.15	26.29	23.80	23.93

Figure 4-201 Sorell Site Summer Load Forecast at 50% and 10% POE

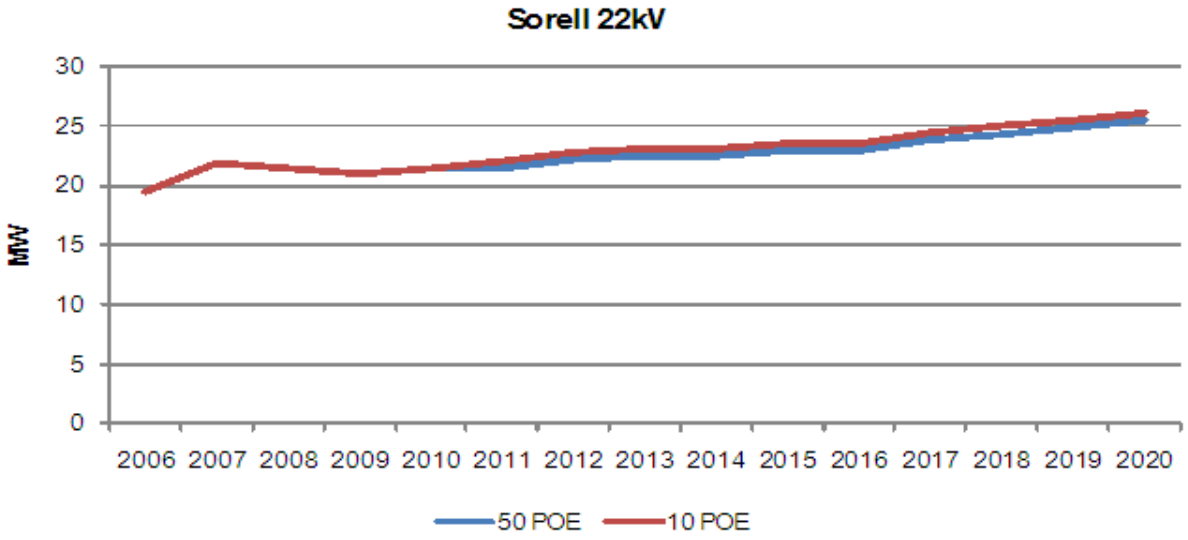
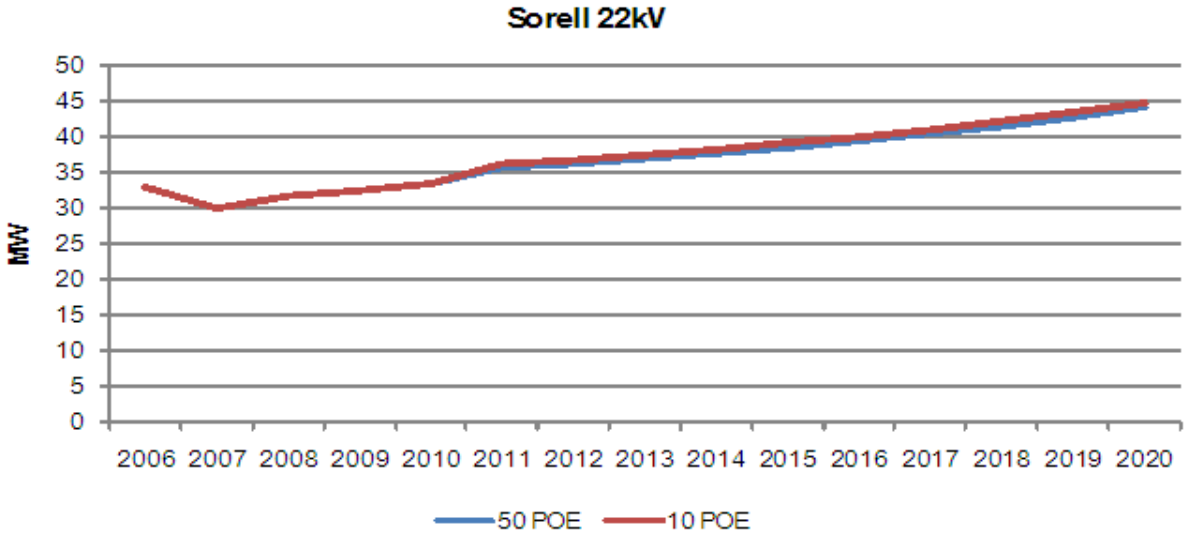
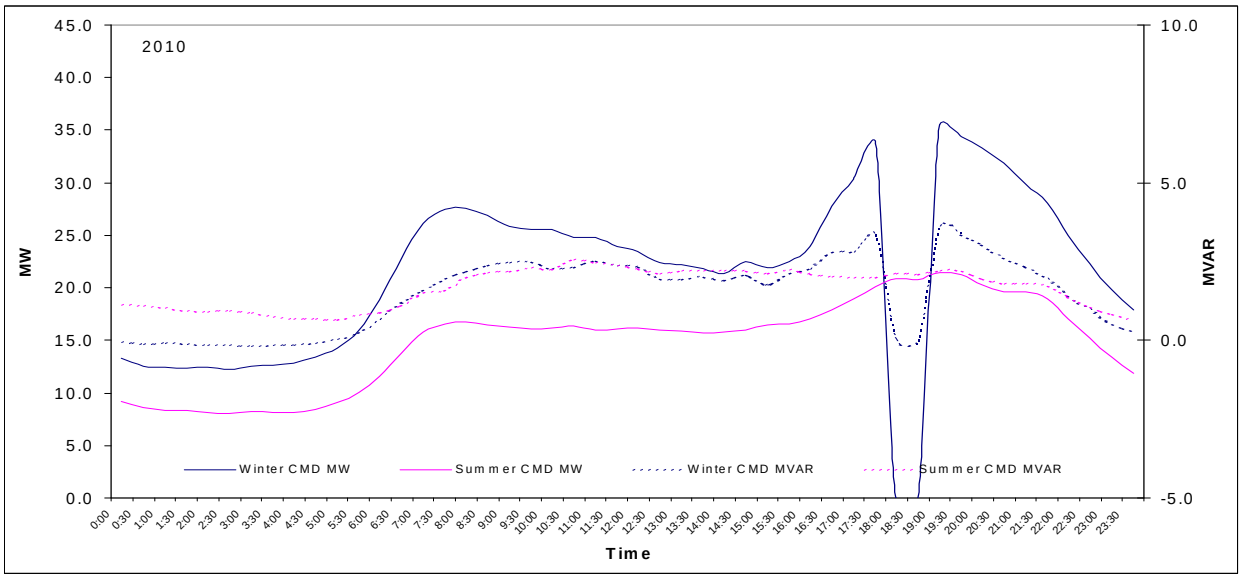


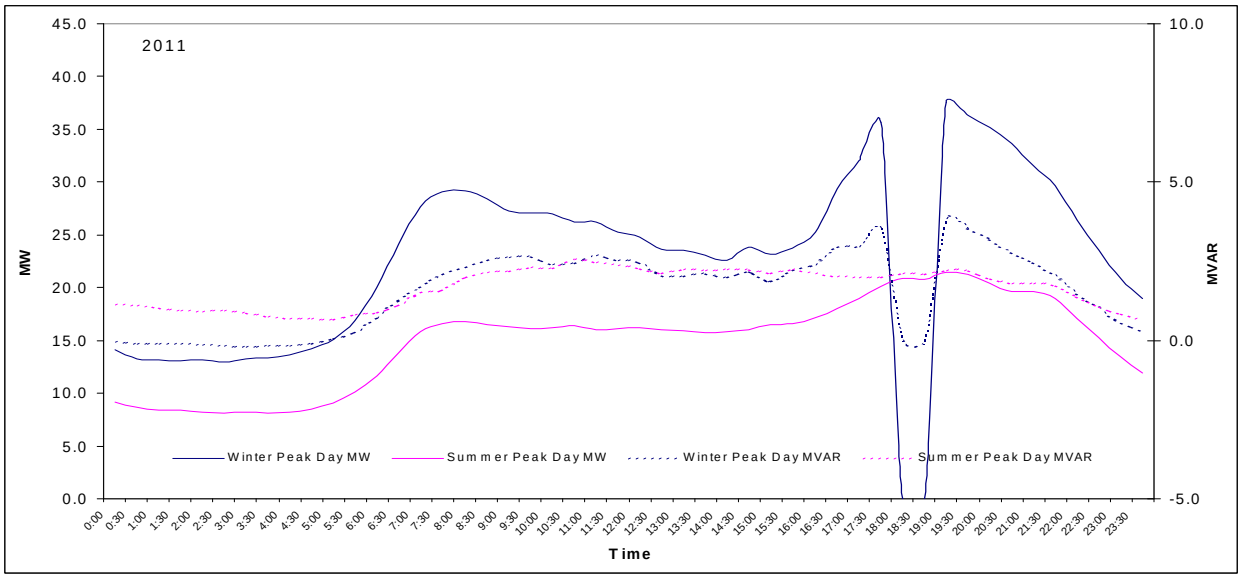
Figure 4-202 Sorell Site Winter Load Forecast at 50% and 10% POE

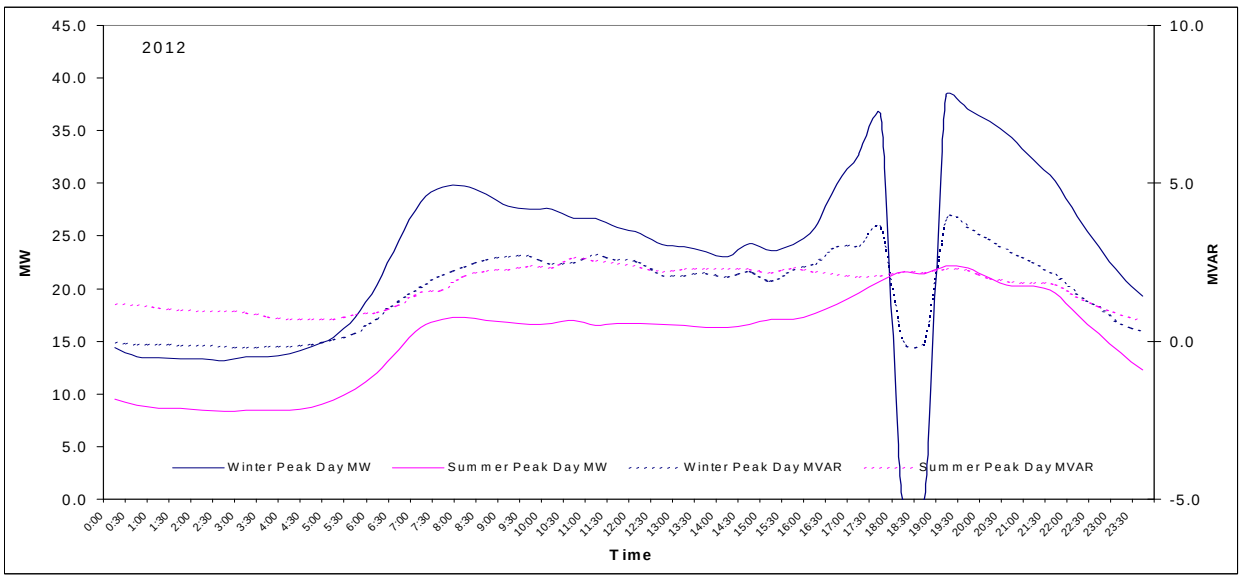


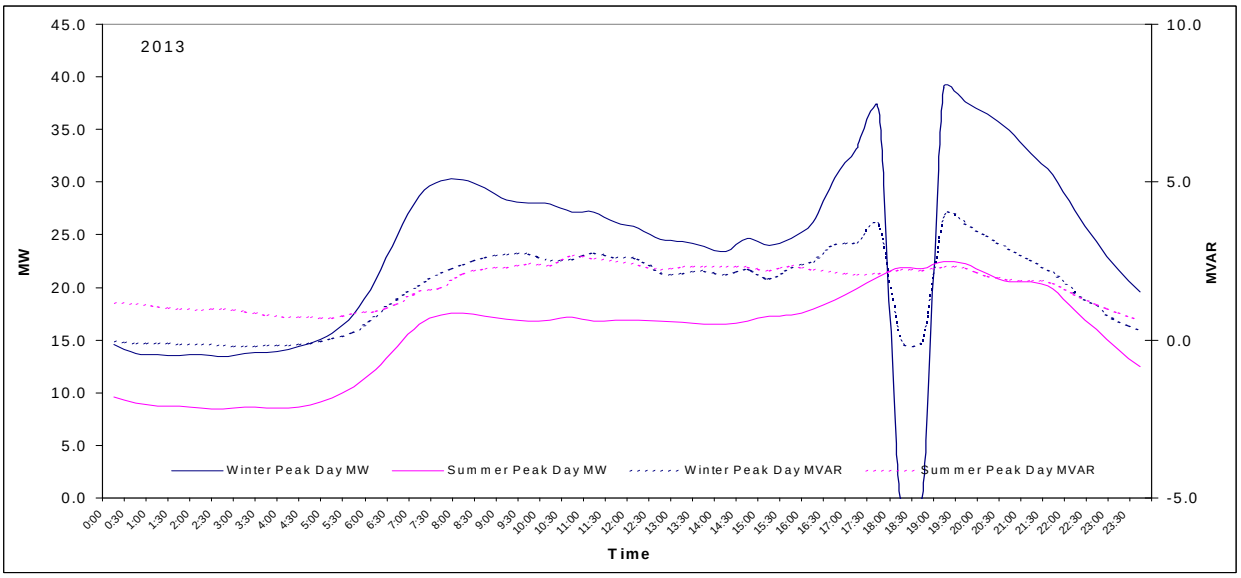
Load Profiles:

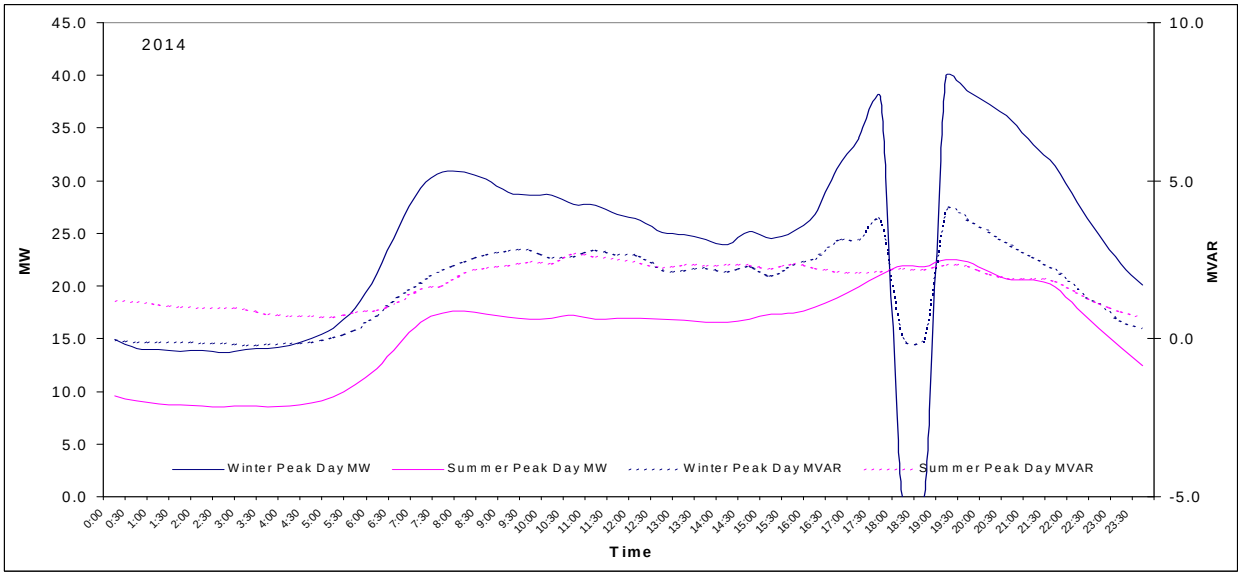
Figure 4-203 Load Profiles: Sorell Substation Day of Summer/Winter Peak Demand





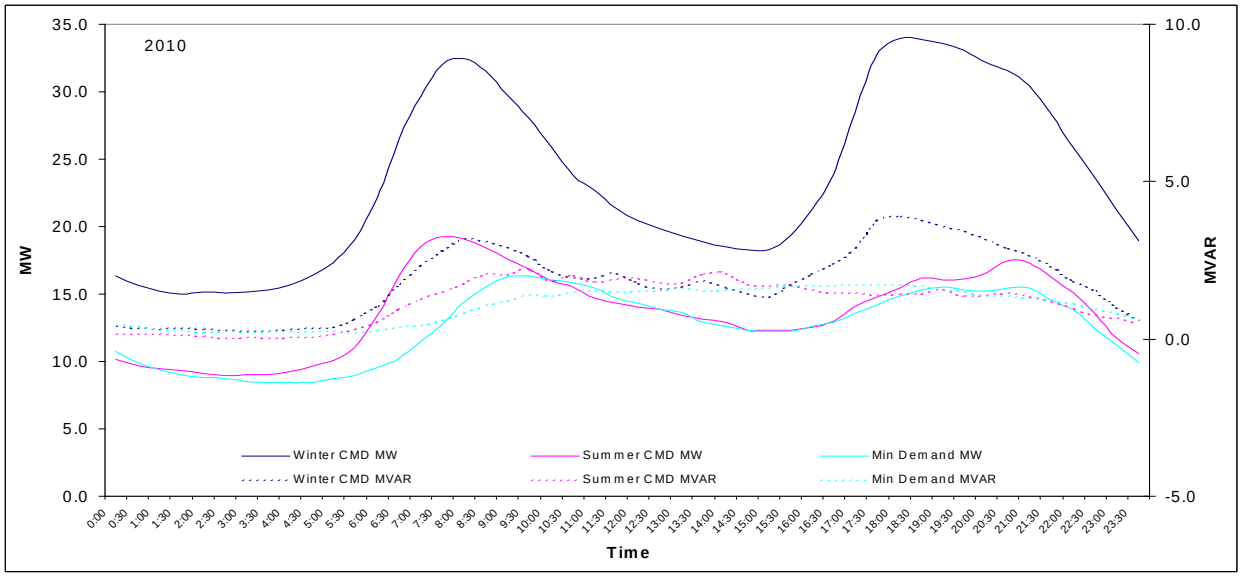


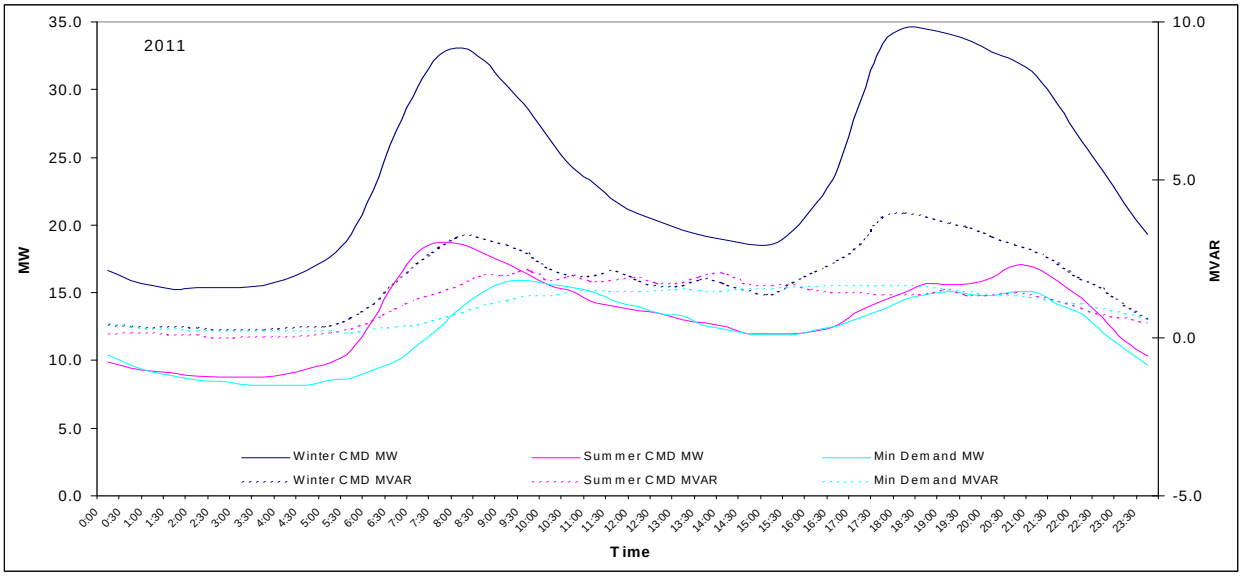

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

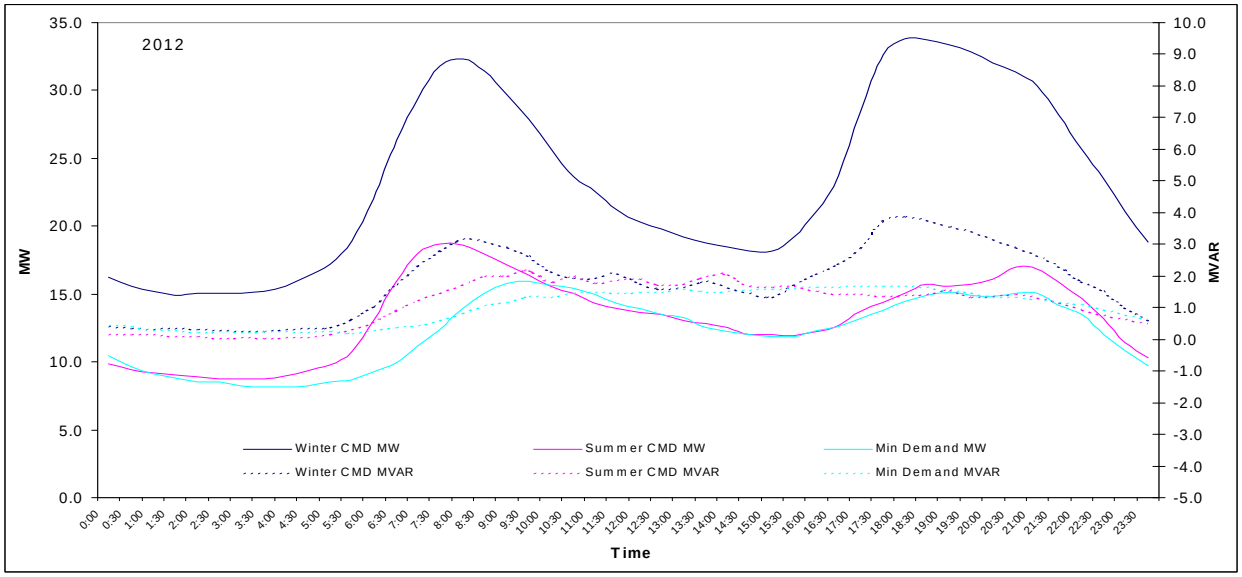

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

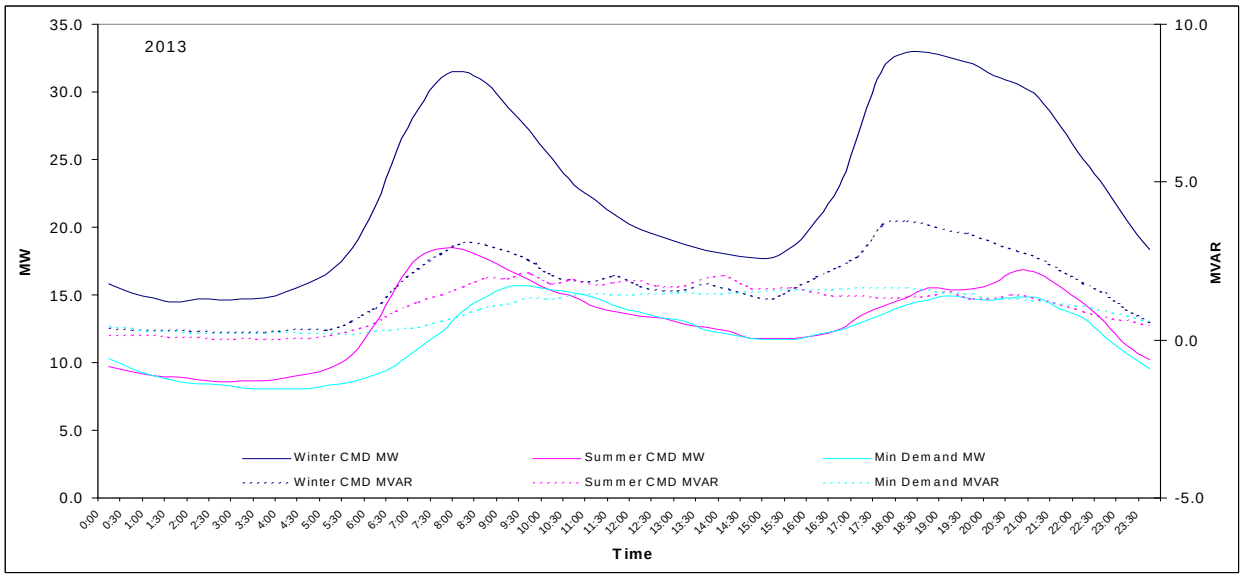

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

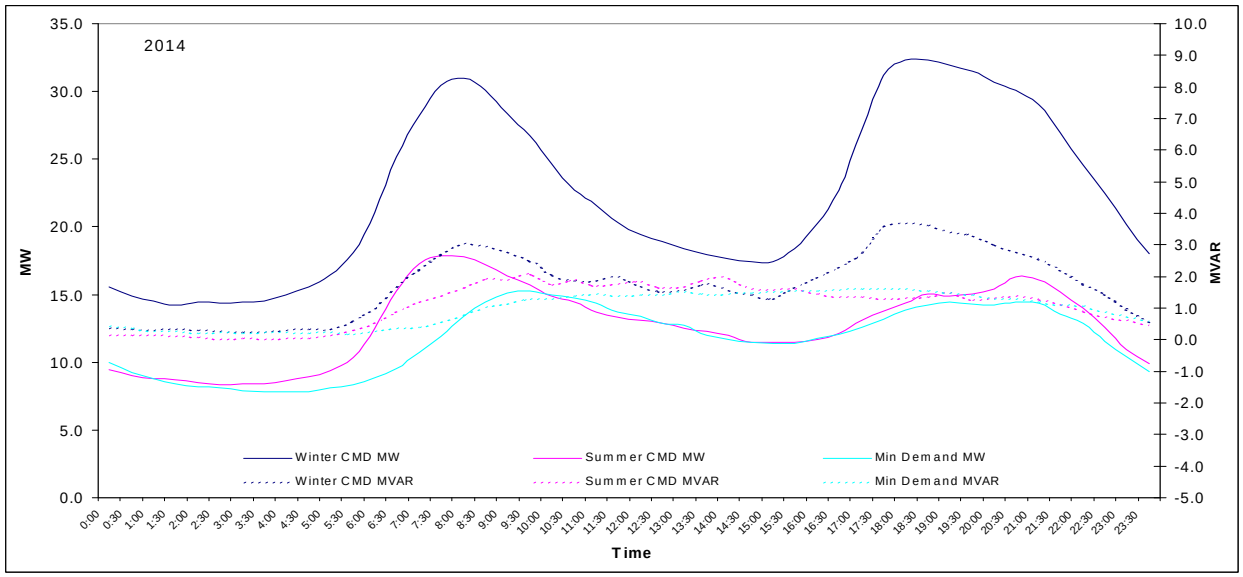
Figure 4-204 Load Profiles: Sorell Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

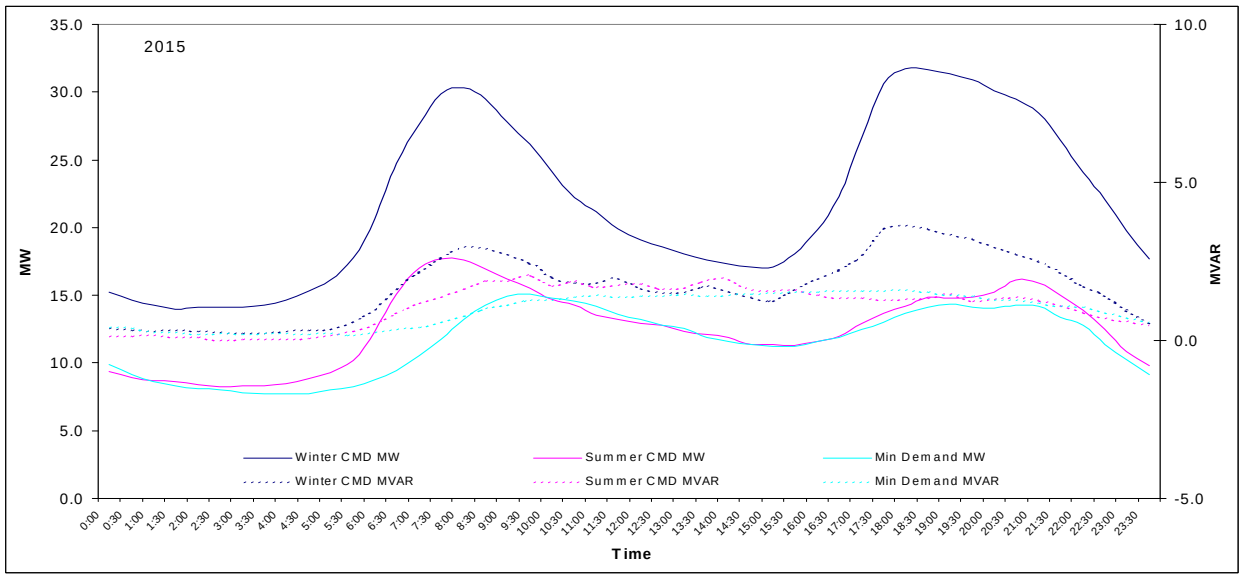
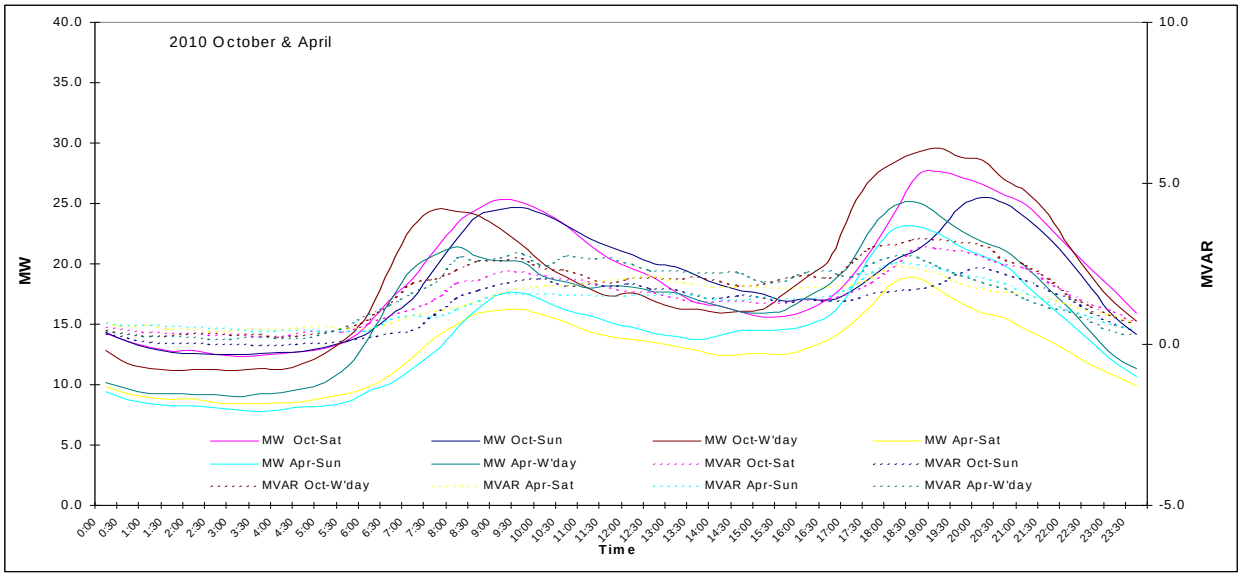
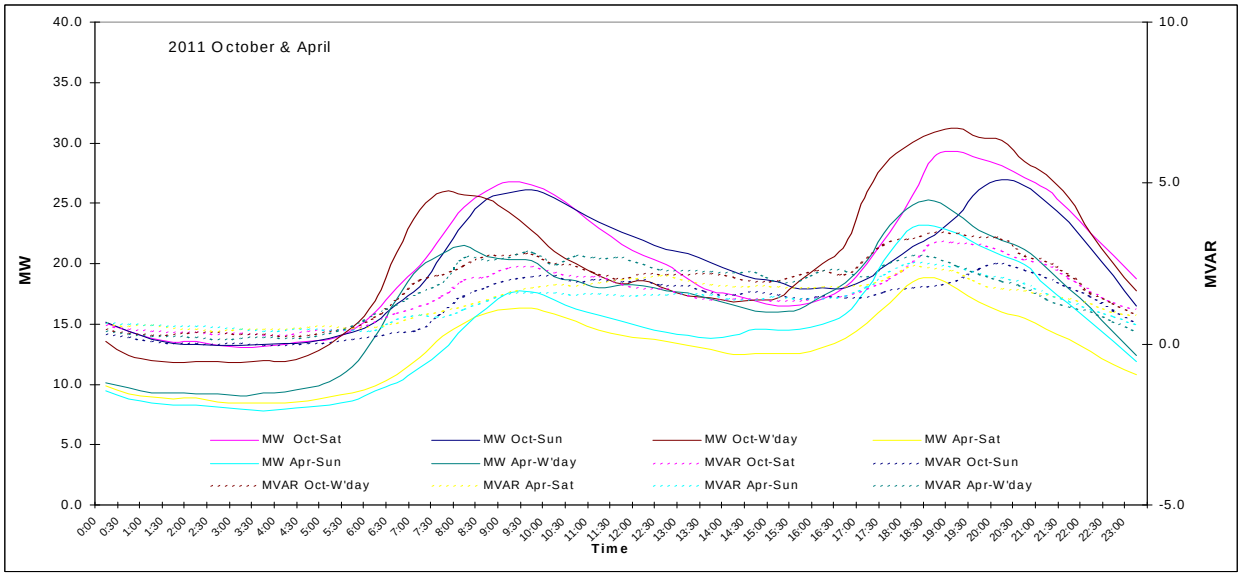
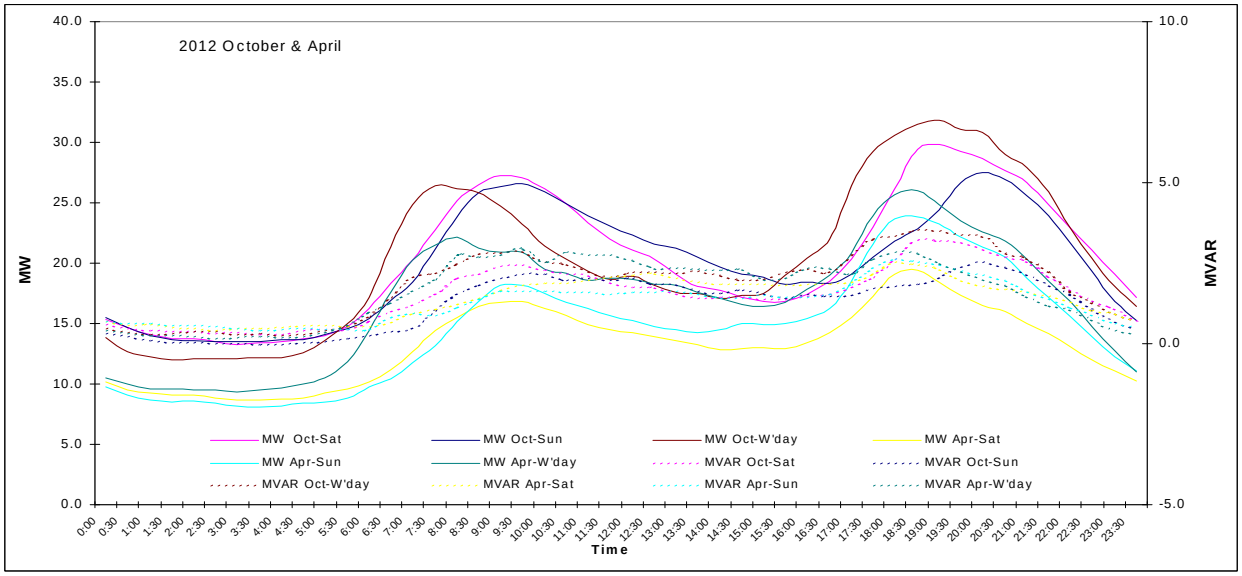
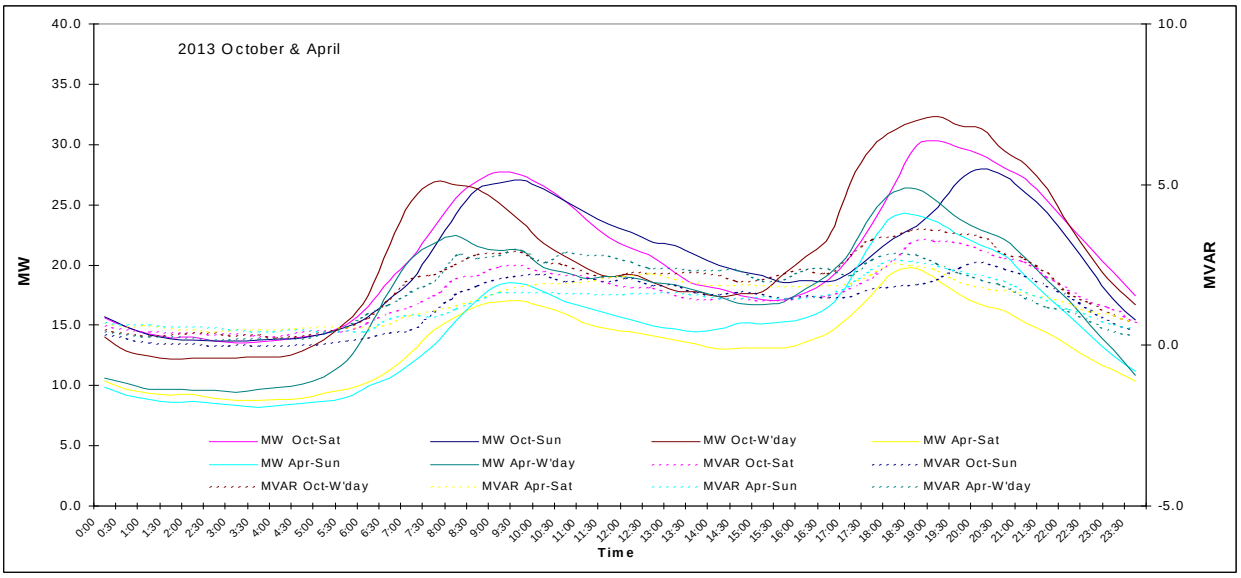

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

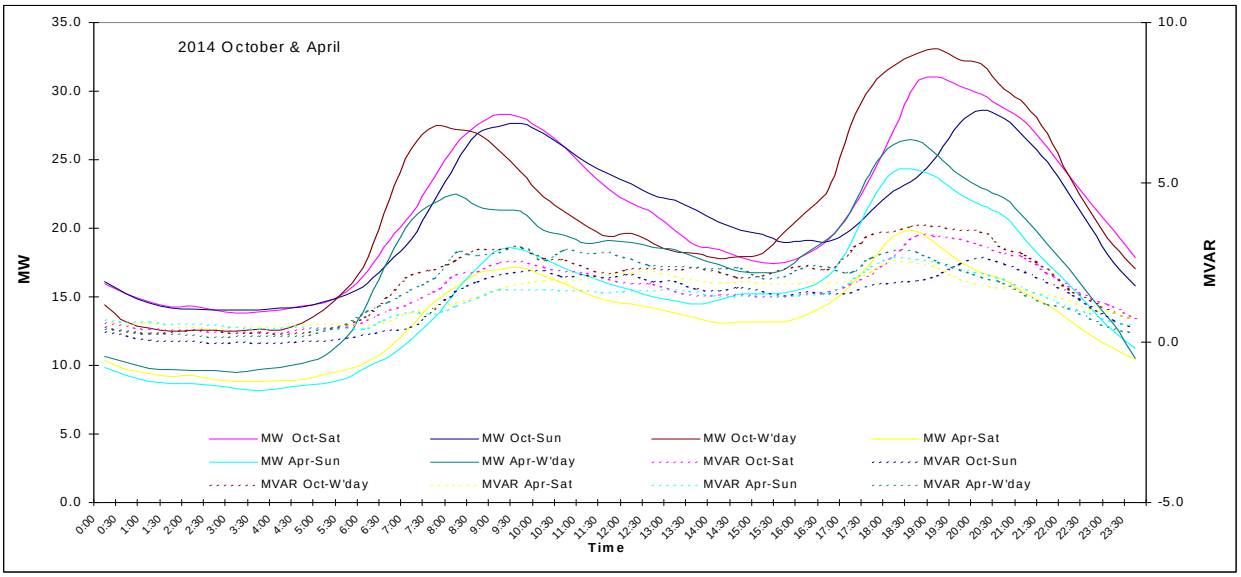
Figure 4-205 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

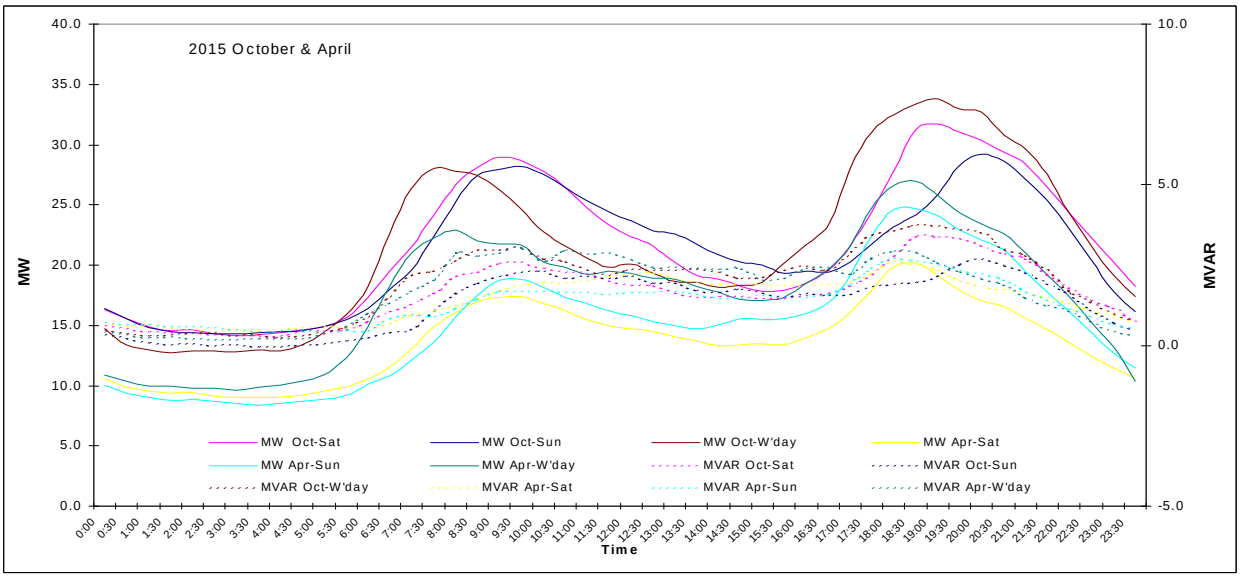
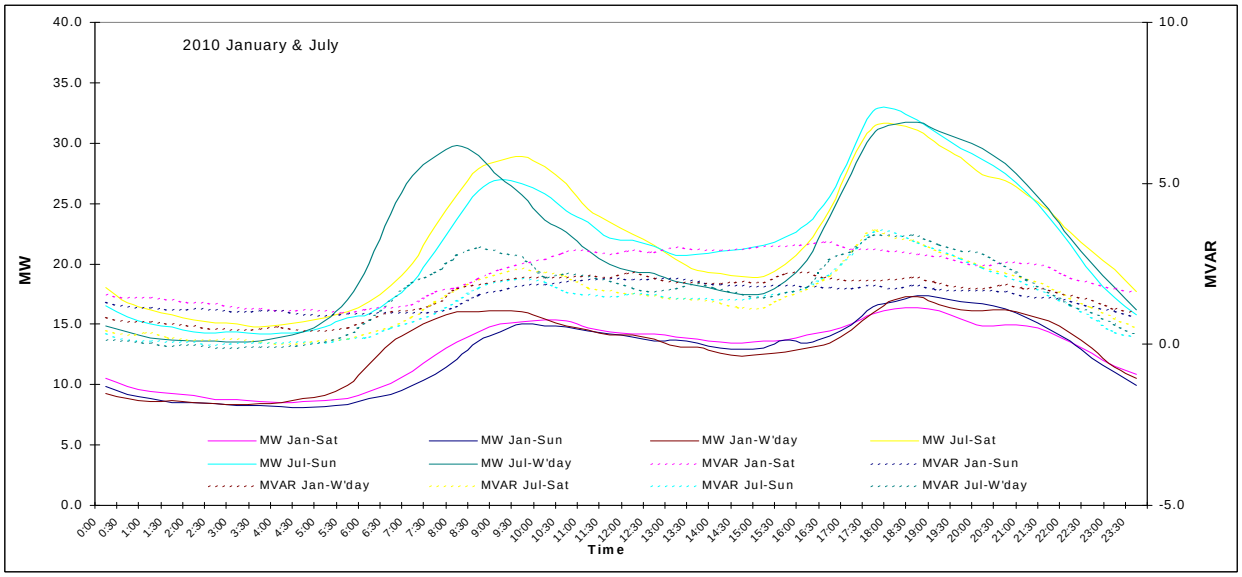
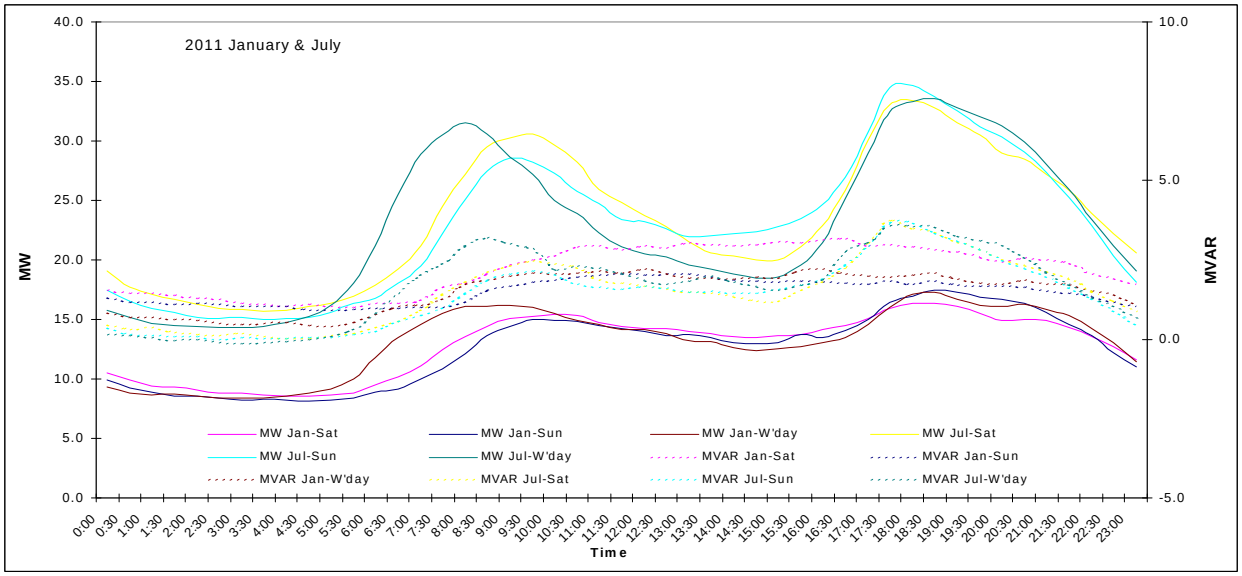
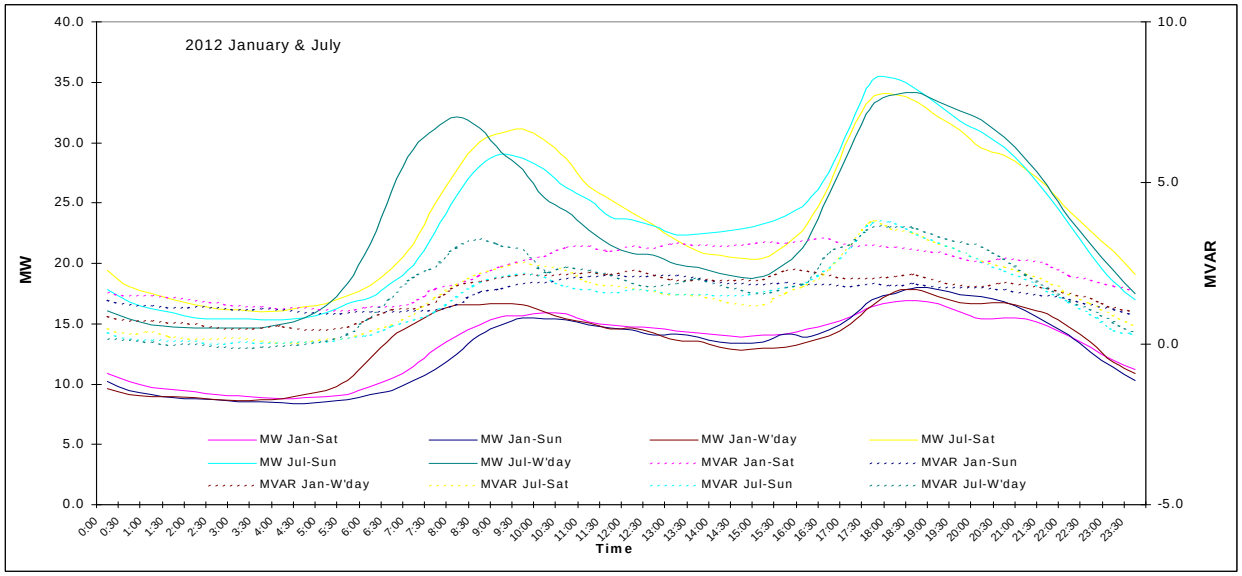
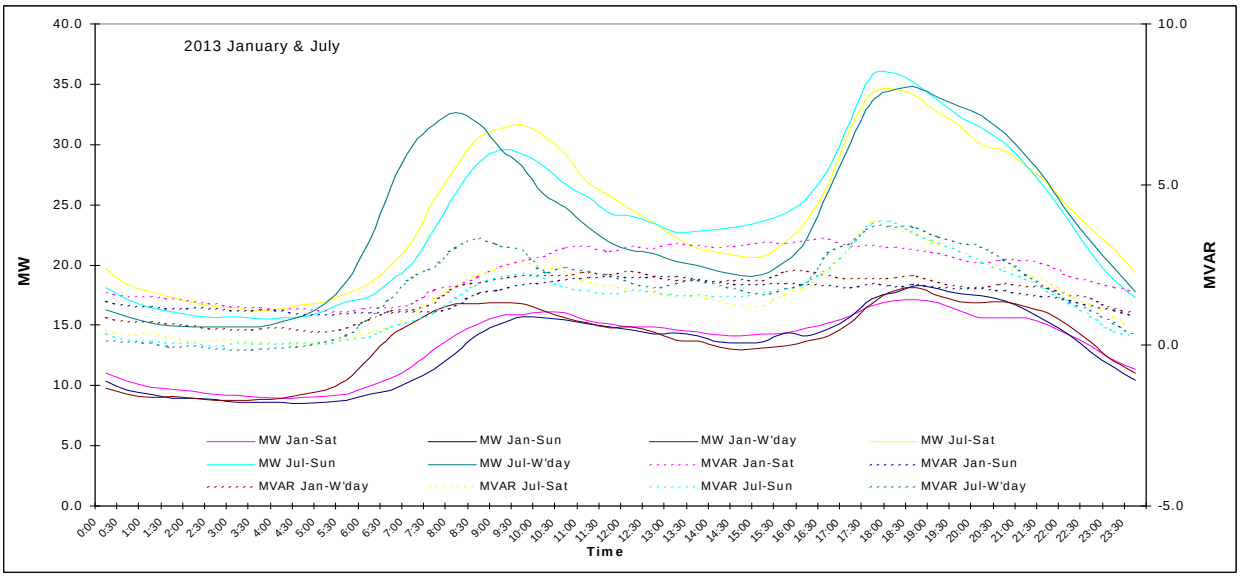

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

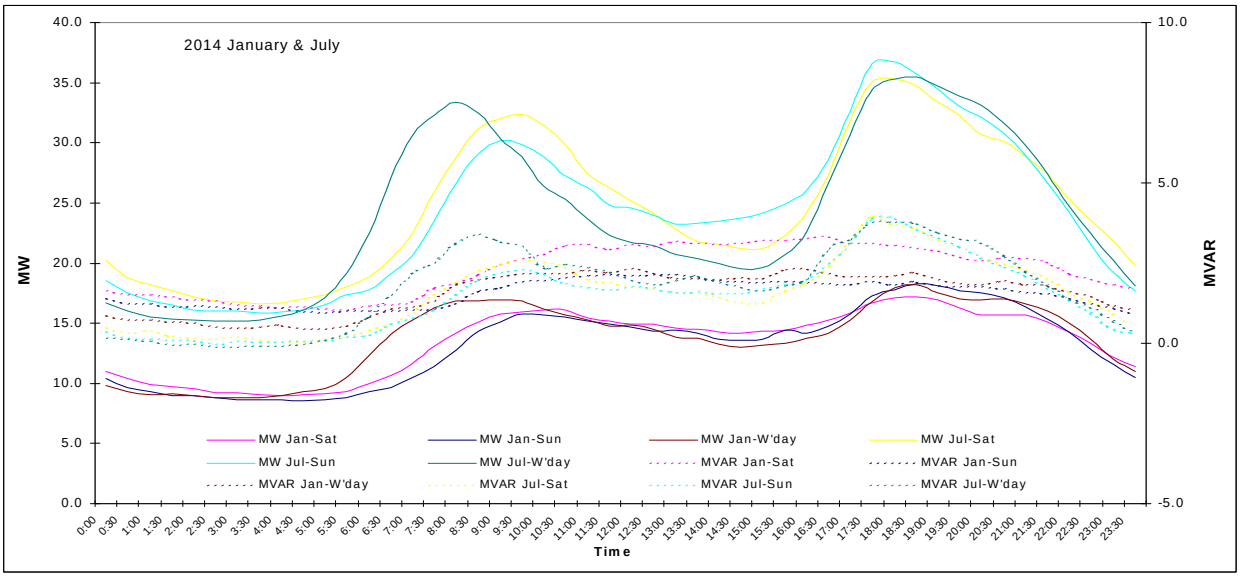
Figure 4-206 Load Profiles:- Weekday, Saturday, Sunday for January & July

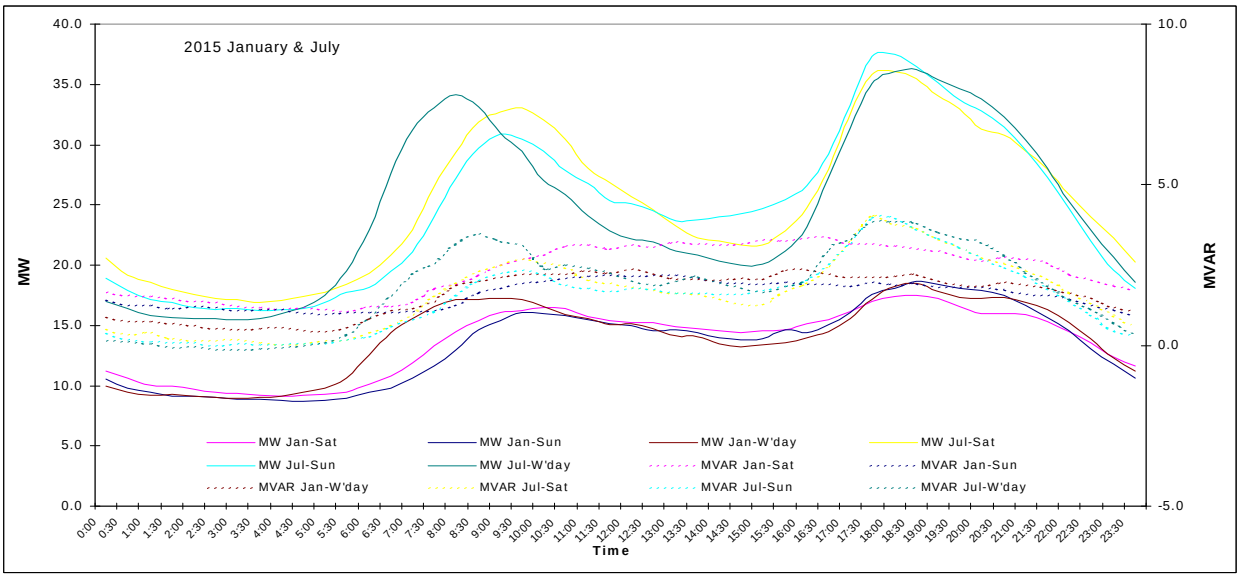







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.37 St Marys

Description:

The Substation is located at St Marys and is known as “St Marys Substation”. The substation is owned by Transend.

Table 4-129 St Marys Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	4	20	10

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-130 St Marys Site Winter load forecast

St Marys	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	12.34	12.89	11.13	11.62	12.34	12.89	11.33	11.83
2006	15.66	16.40	11.03	11.56	15.66	16.40	11.12	11.65
2007	16.06	16.67	12.79	13.27	16.06	16.67	13.08	13.58
2008	14.32	16.61	12.56	14.57	14.32	16.61	12.68	14.71
2009	15.87	16.08	14.48	14.67	15.87	16.08	14.73	14.92
2010	15.48	15.50	12.54	12.56	15.48	15.50	12.76	12.78
2011	16.43	16.46	13.32	13.34	16.60	16.63	13.46	13.48
2012	16.77	16.80	13.59	13.61	16.94	16.97	13.73	13.75
2013	17.07	17.10	13.83	13.86	17.25	17.28	13.98	14.00
2014	17.48	17.51	14.17	14.19	17.66	17.69	14.31	14.33
2015	17.89	17.92	14.49	14.52	18.07	18.10	14.64	14.67
2016	18.34	18.37	14.86	14.89	18.52	18.55	15.01	15.03
2017	18.79	18.83	15.23	15.25	18.98	19.01	15.38	15.41
2018	19.32	19.36	15.66	15.69	19.50	19.54	15.80	15.83
2019	19.91	19.95	16.13	16.16	20.11	20.15	16.30	16.33
2020	20.56	20.59	16.66	16.69	20.75	20.79	16.81	16.84

Table 4-131 St Marys Site Summer load forecast

St Marys	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	11.52	12.03	7.52	7.86	11.52	12.03	7.61	7.95
2006	9.90	10.75	7.62	8.28	9.90	10.75	7.62	8.28
2007	9.48	9.84	7.60	7.89	9.48	9.84	7.60	7.89
2008	9.98	10.26	9.98	10.26	9.98	10.26	10.10	10.37
2009	10.94	11.13	8.38	8.53	10.94	11.13	8.38	8.53
2010	10.16	10.28	8.71	8.81	10.16	10.28	8.71	8.81
2011	10.16	10.27	8.70	8.80	10.33	10.45	8.85	8.96
2012	10.46	10.58	8.96	9.07	10.65	10.77	9.12	9.23
2013	10.58	10.70	9.06	9.17	10.77	10.90	9.23	9.34
2014	10.59	10.71	9.07	9.18	10.77	10.89	9.23	9.33
2015	10.77	10.89	9.23	9.33	10.95	11.08	9.39	9.49
2016	10.74	10.87	9.20	9.31	10.94	11.07	9.38	9.48
2017	11.13	11.25	9.53	9.64	11.32	11.45	9.70	9.81
2018	11.35	11.48	9.72	9.83	11.55	11.68	9.90	10.01
2019	11.58	11.71	9.92	10.03	11.78	11.92	10.09	10.21
2020	11.83	11.97	10.14	10.25	12.04	12.17	10.31	10.43

Figure 4-207 St Marys Site Summer Load Forecast at 50% and 10% POE

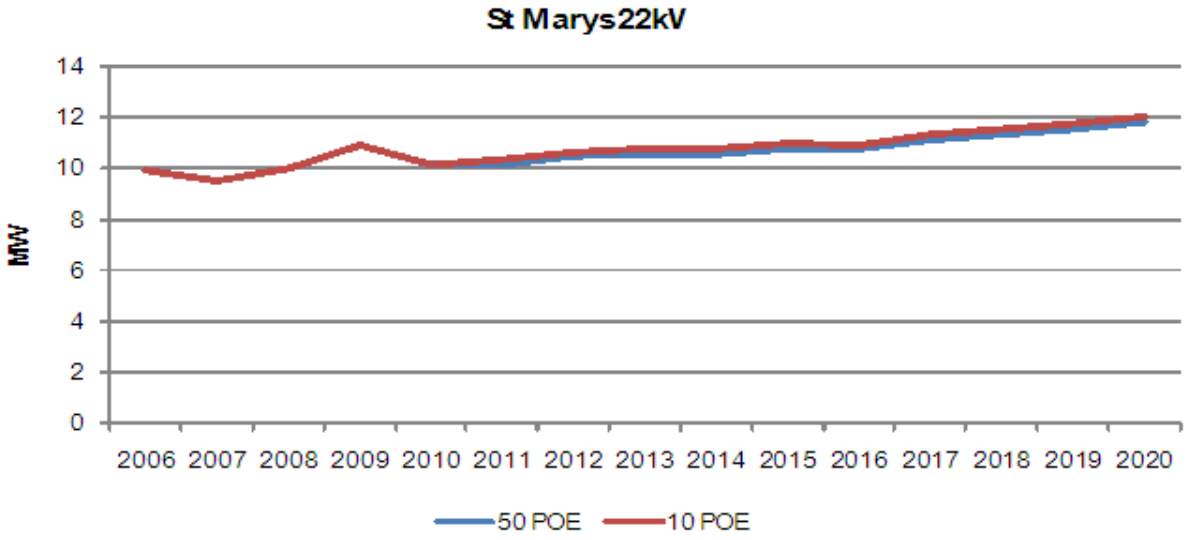
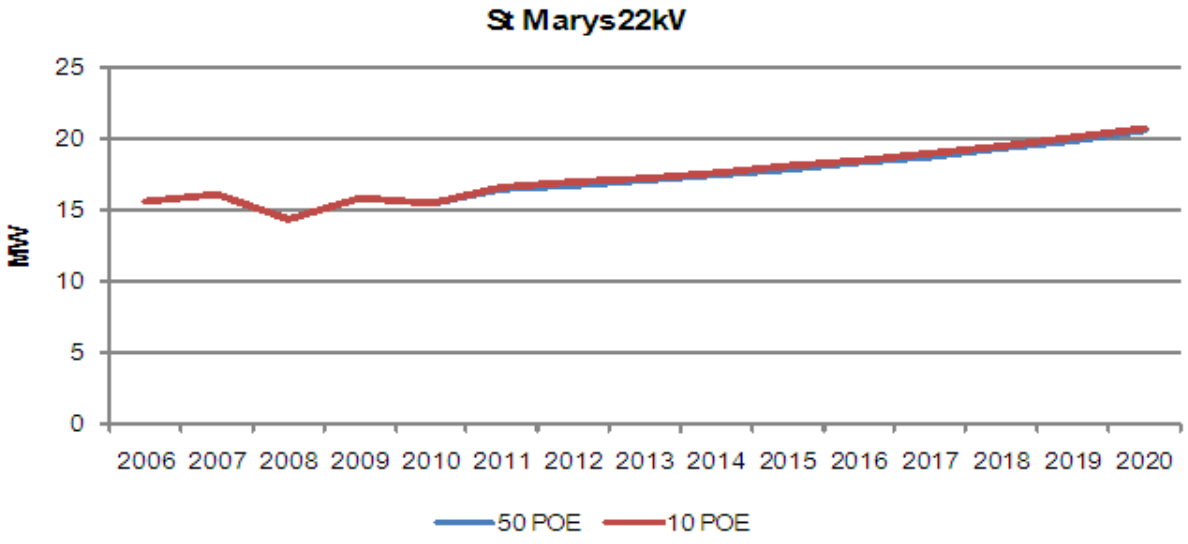
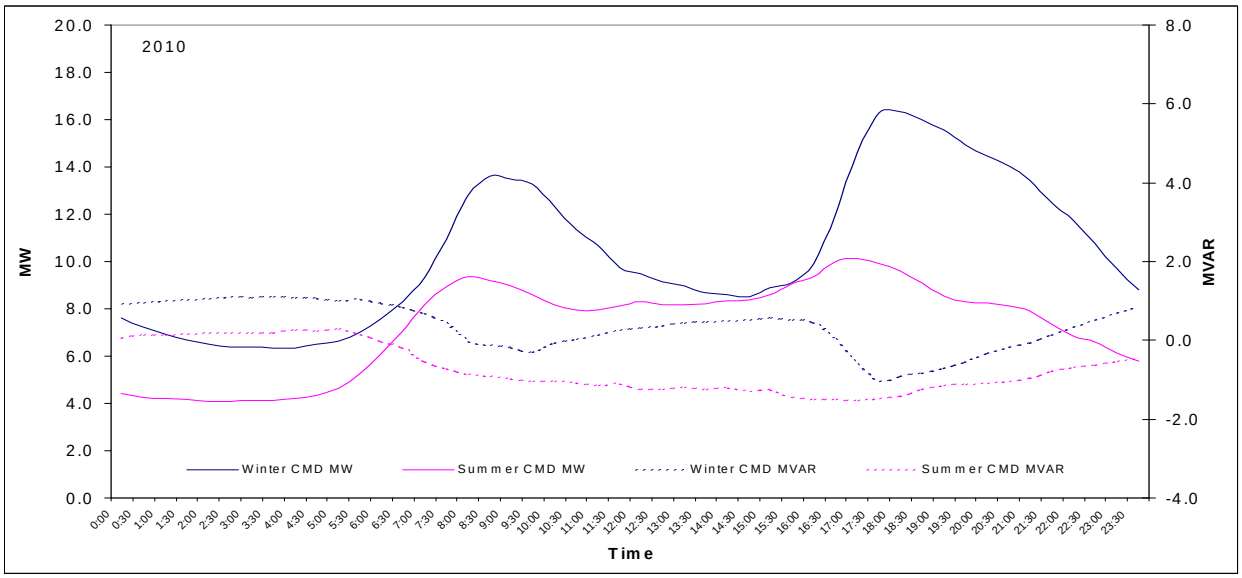


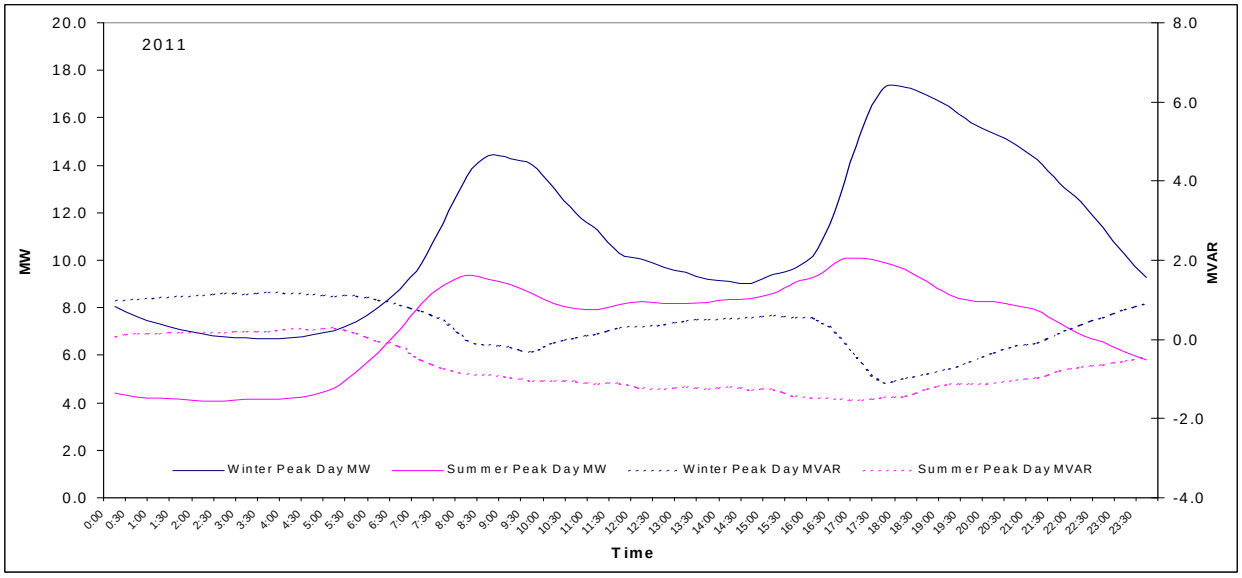
Figure 4-208 St Marys Site Winter Load Forecast at 50% and 10% POE

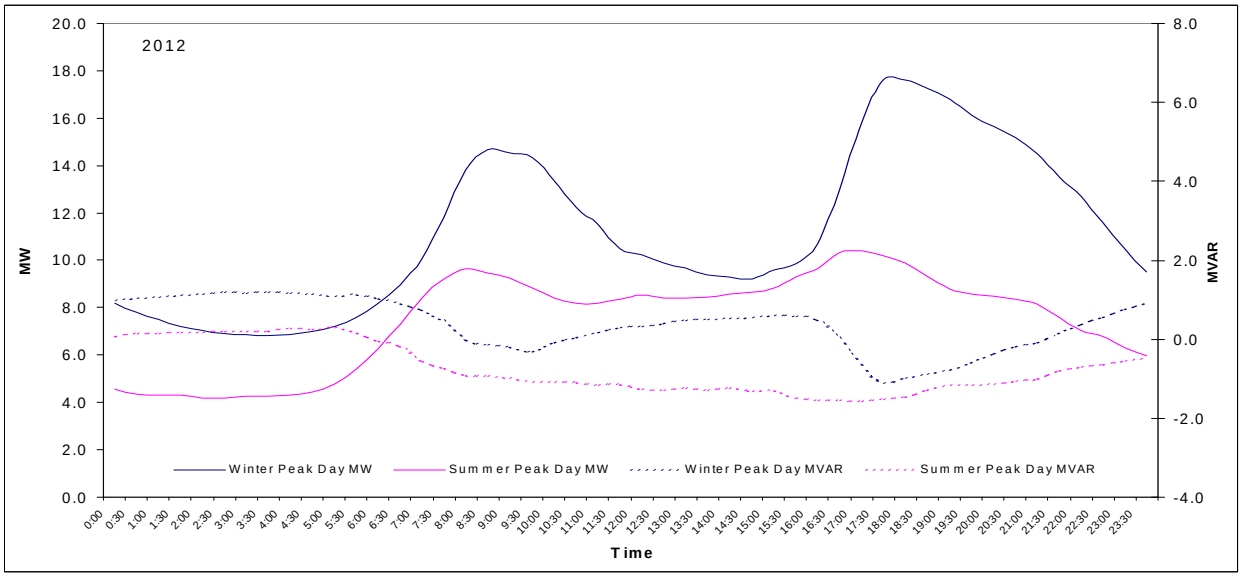


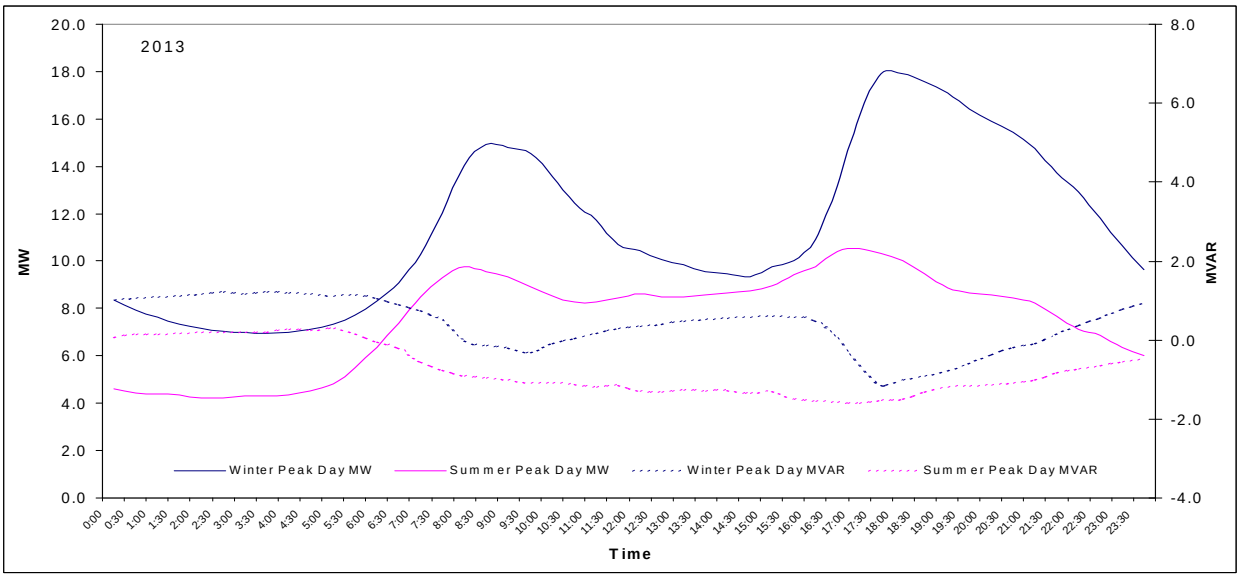
Load Profiles:

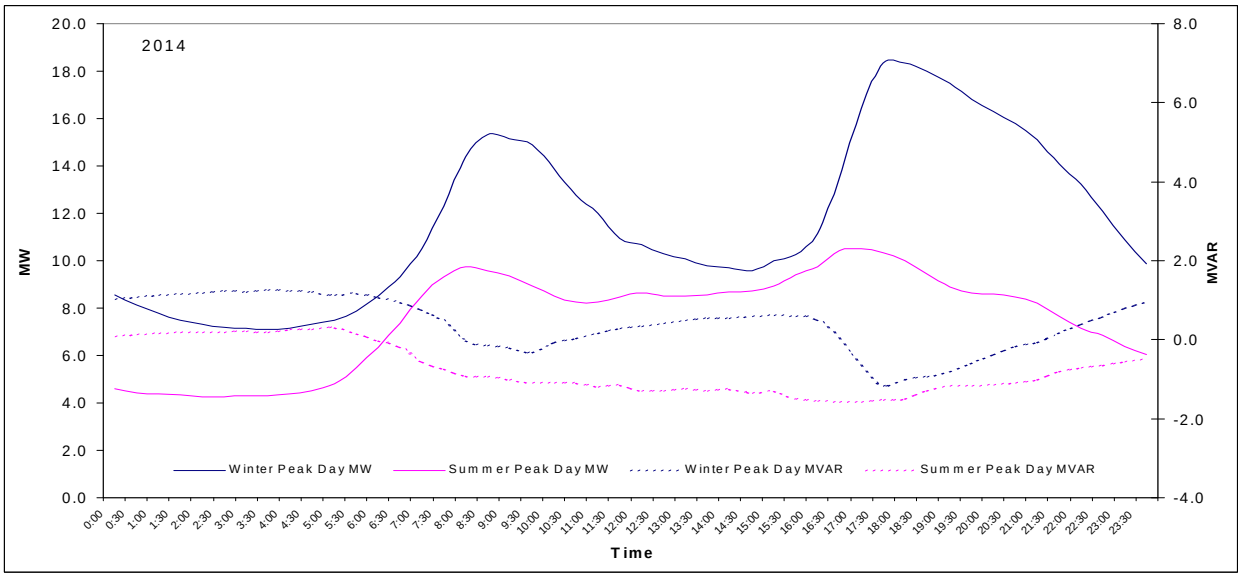
Figure 4-209 Load Profiles: St Marys Substation Day of Summer/Winter Peak Demand





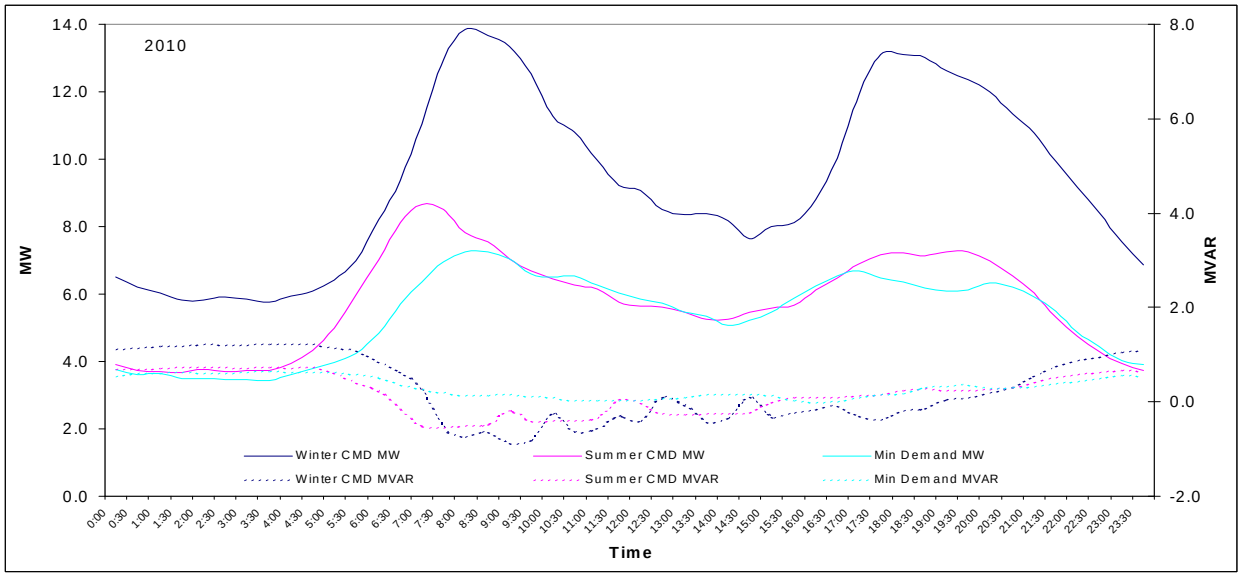


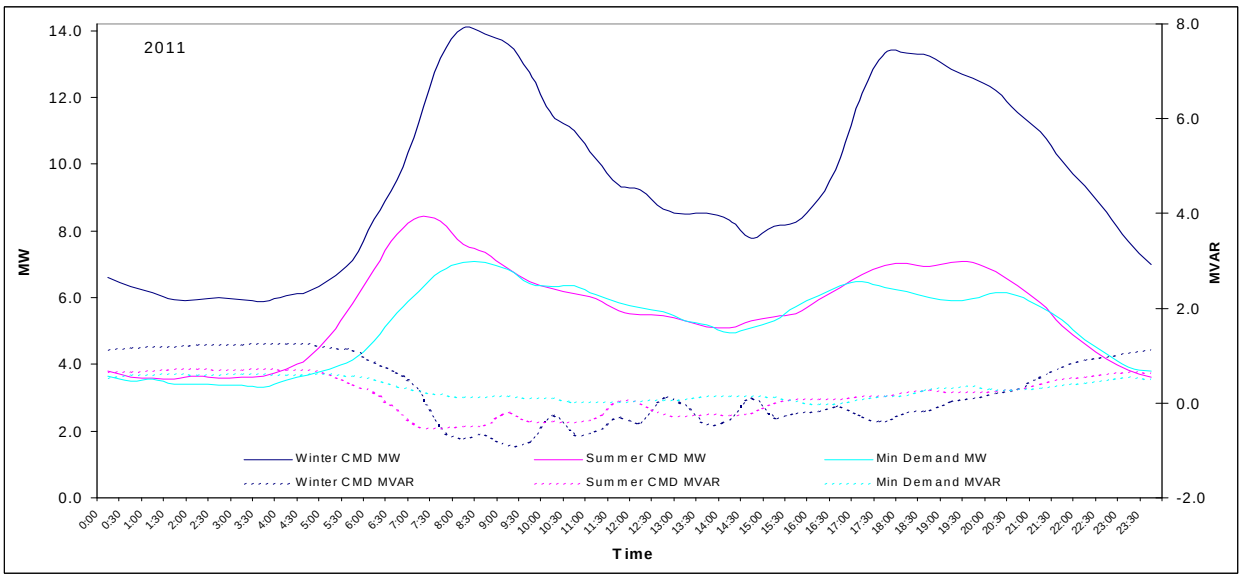

2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

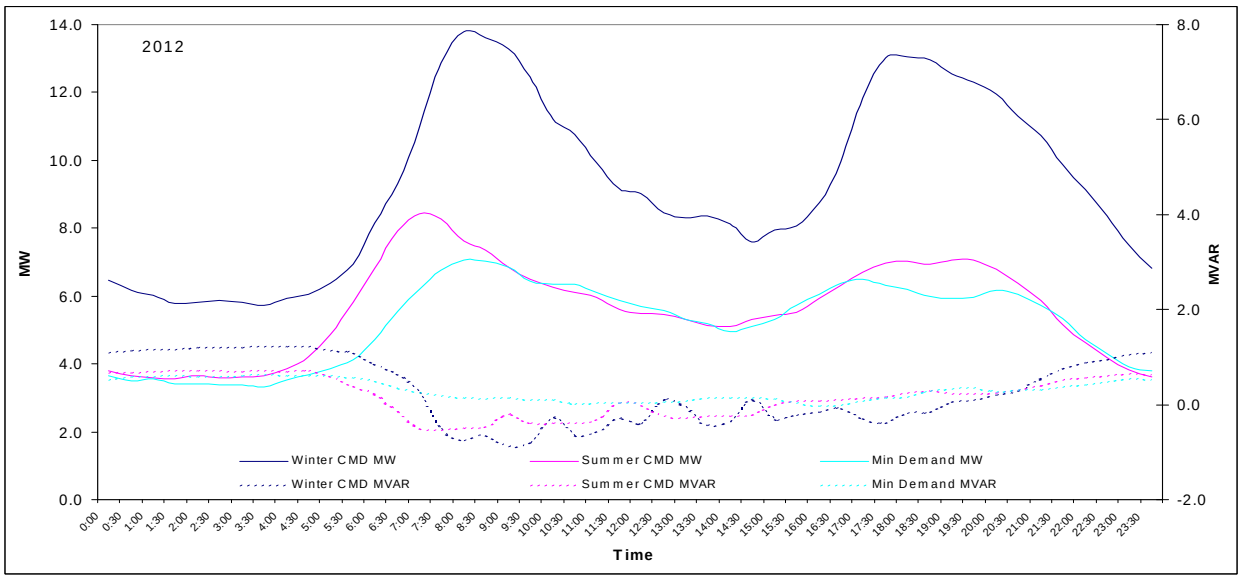

2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

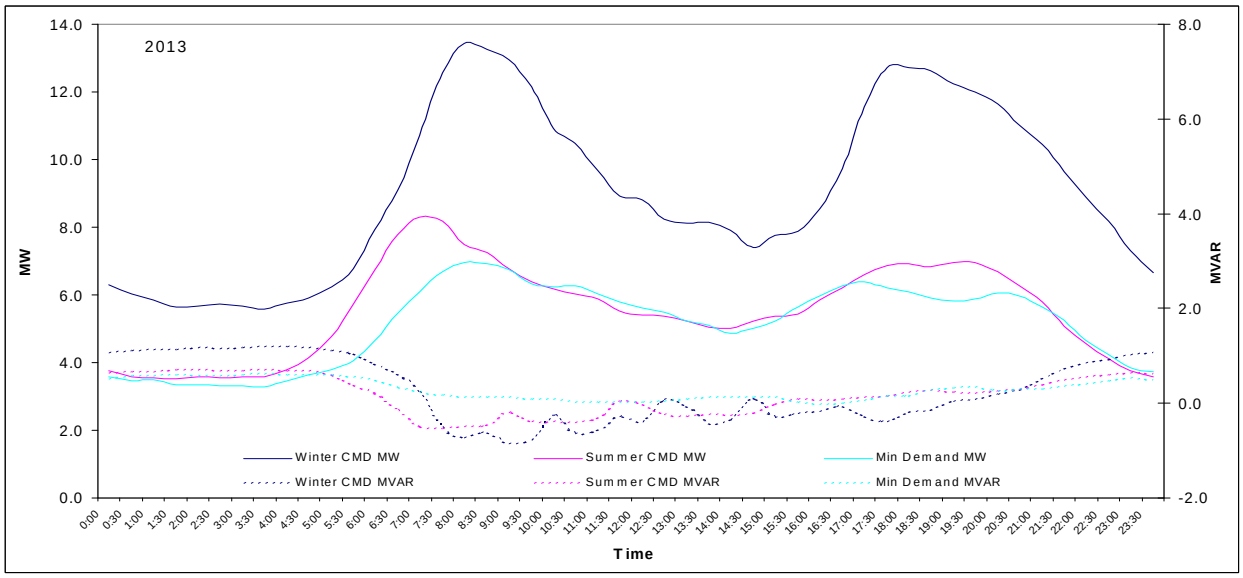

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

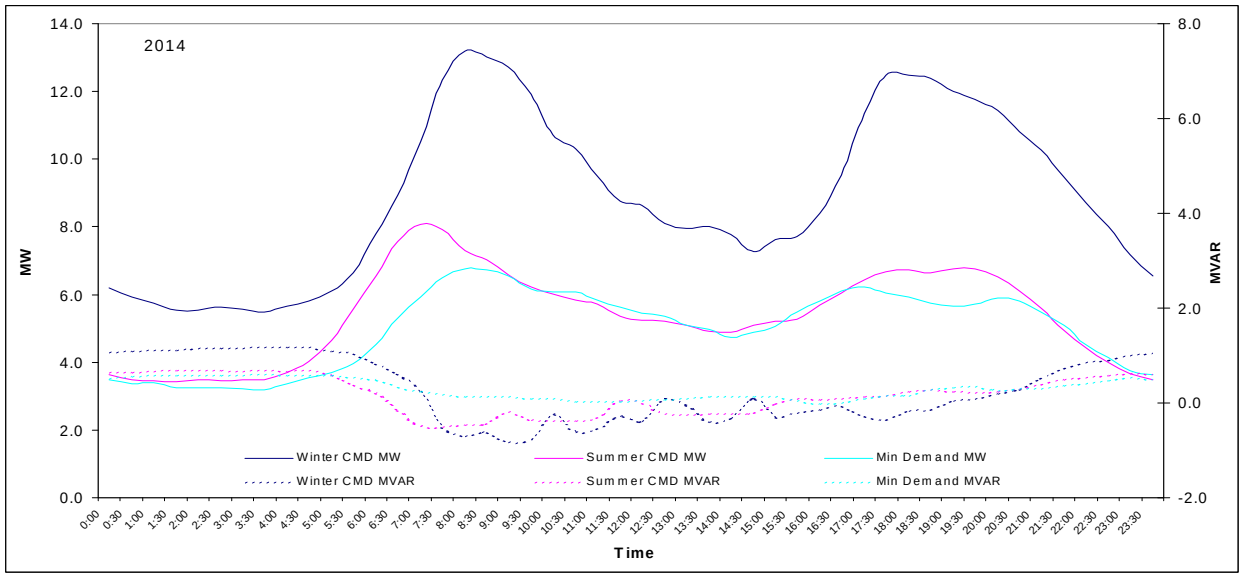
Figure 4-210 Load Profiles: St Marys Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

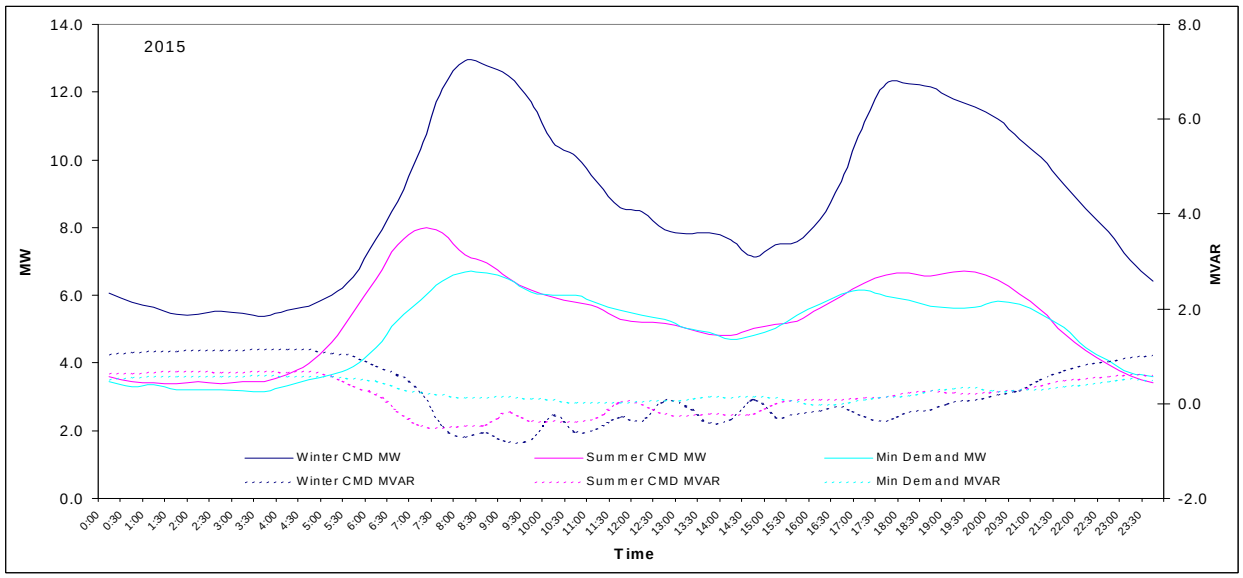
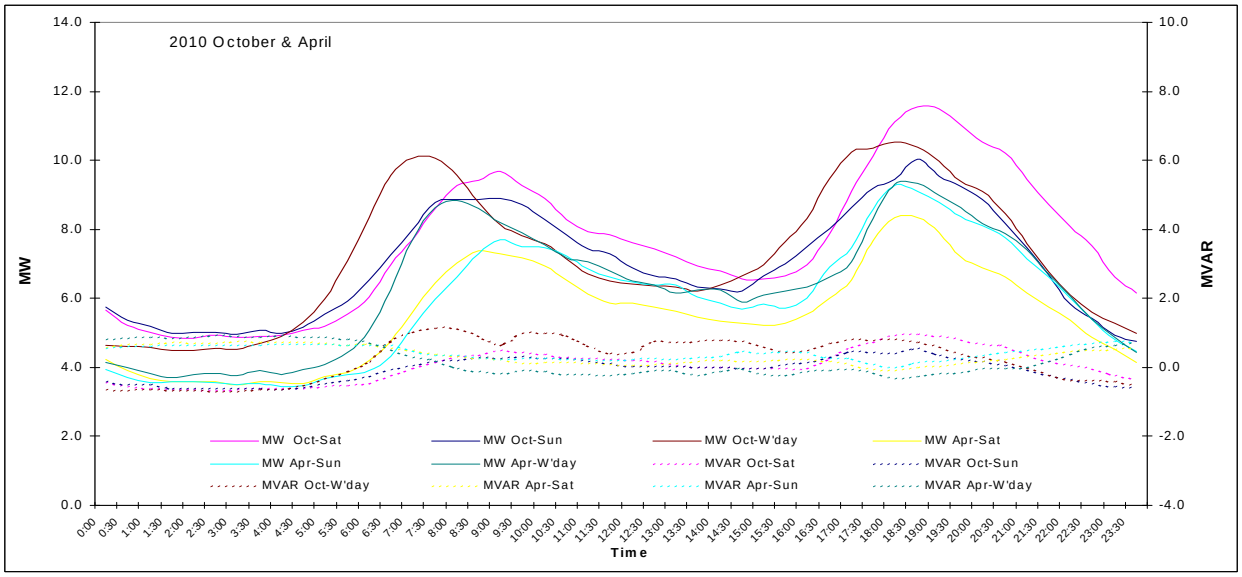
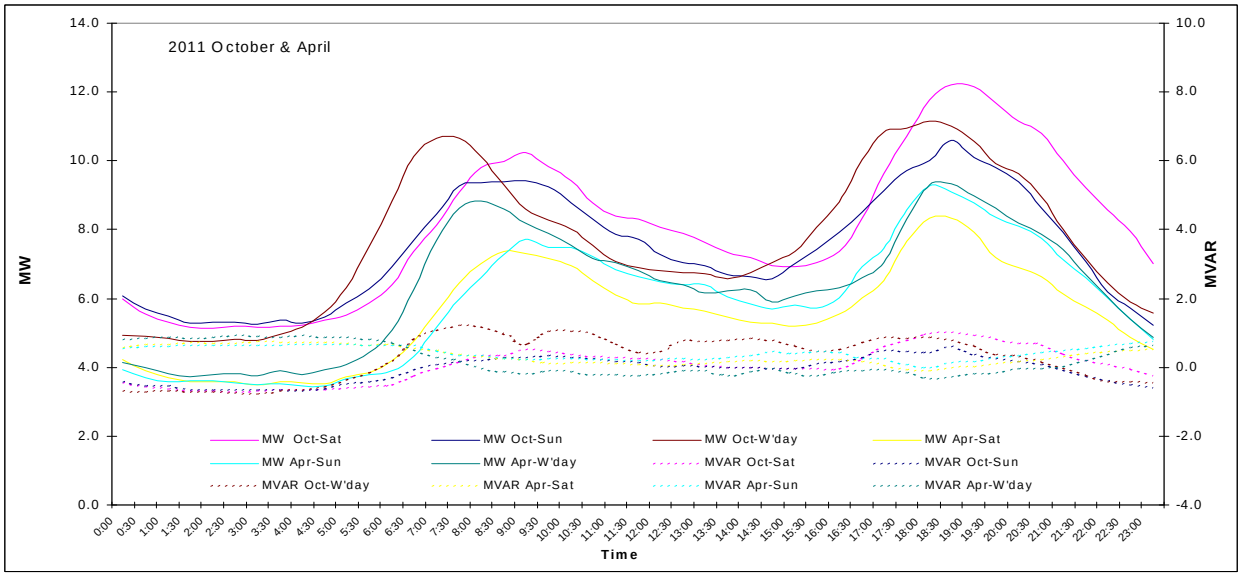
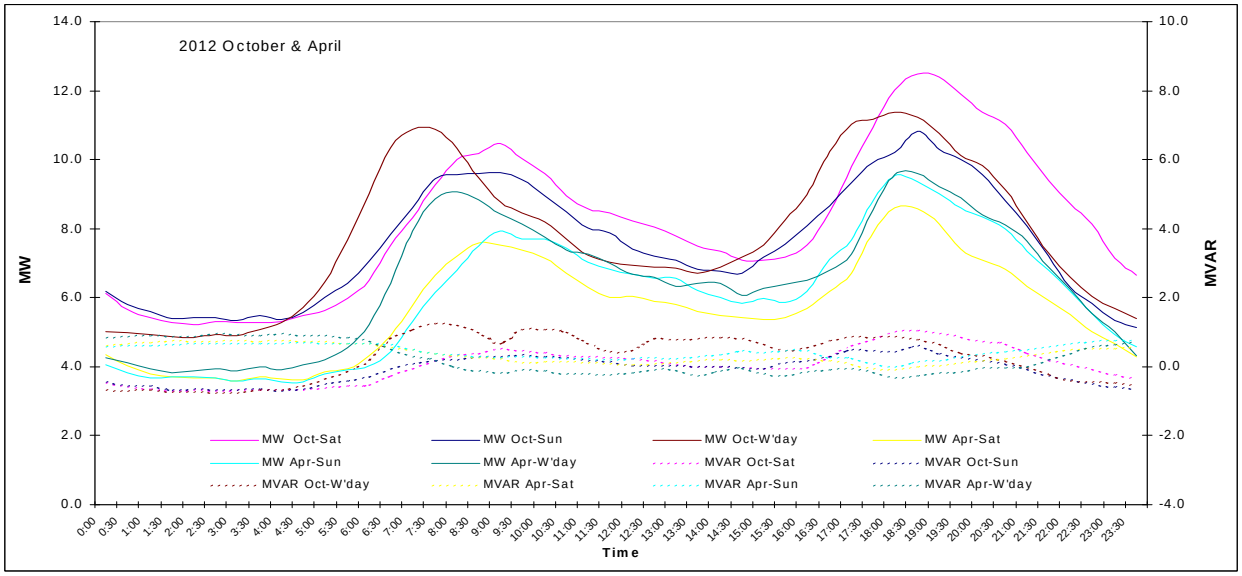
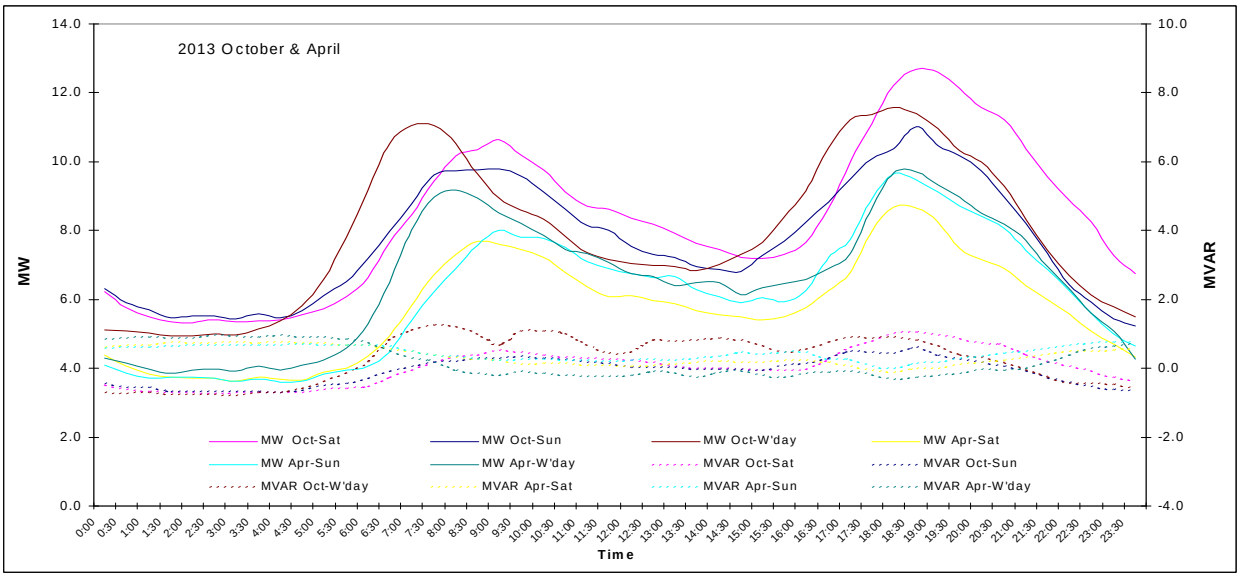

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

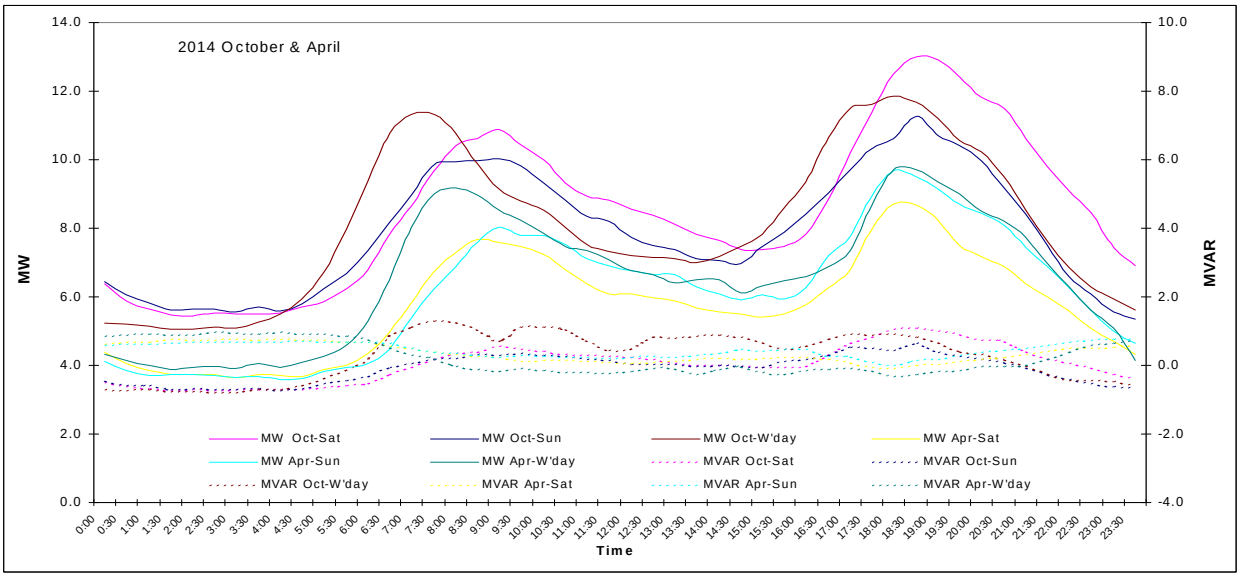
Figure 4-211 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

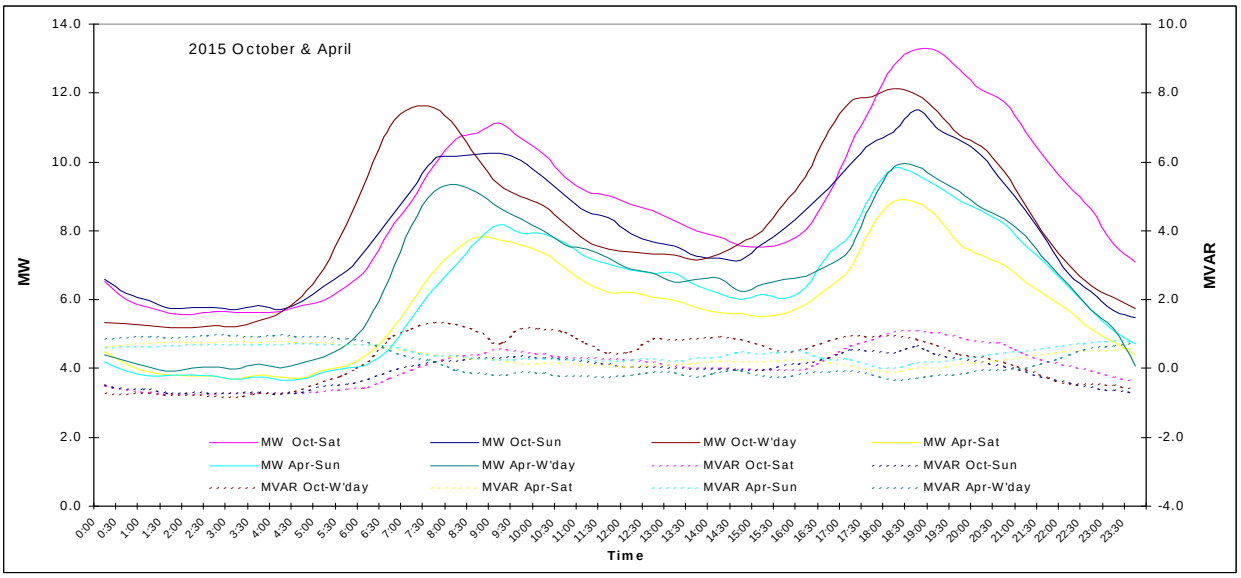
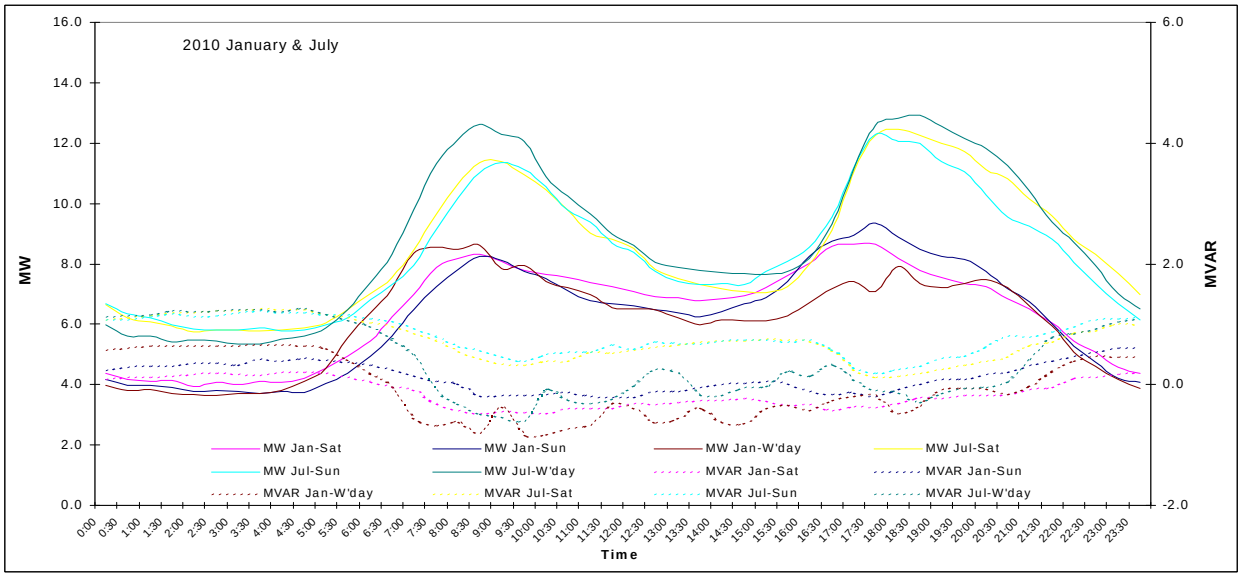
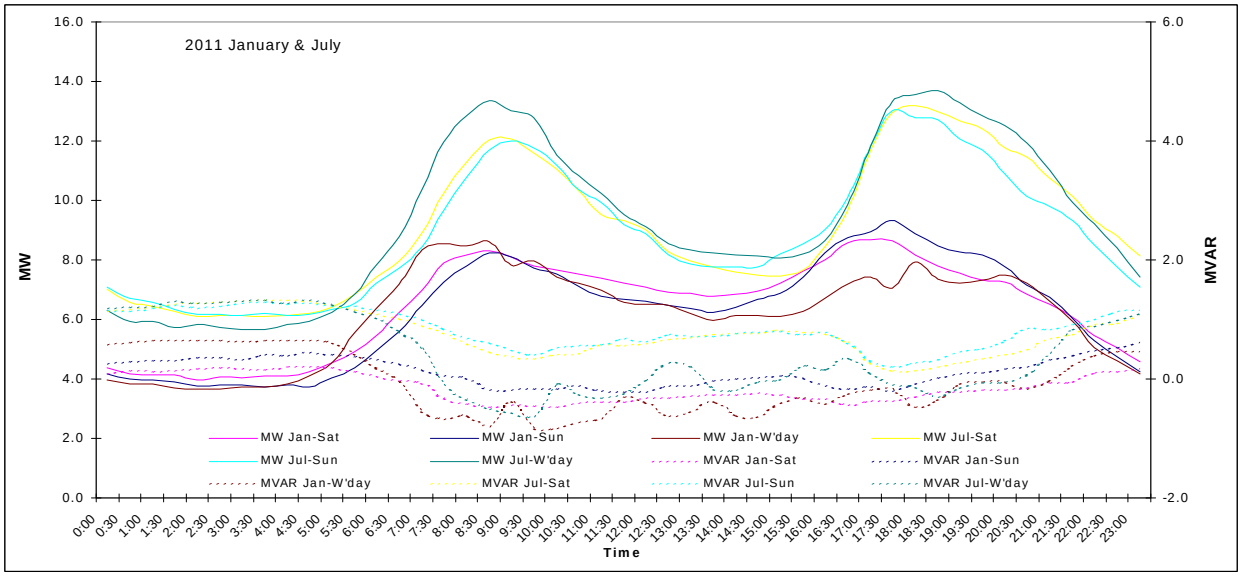
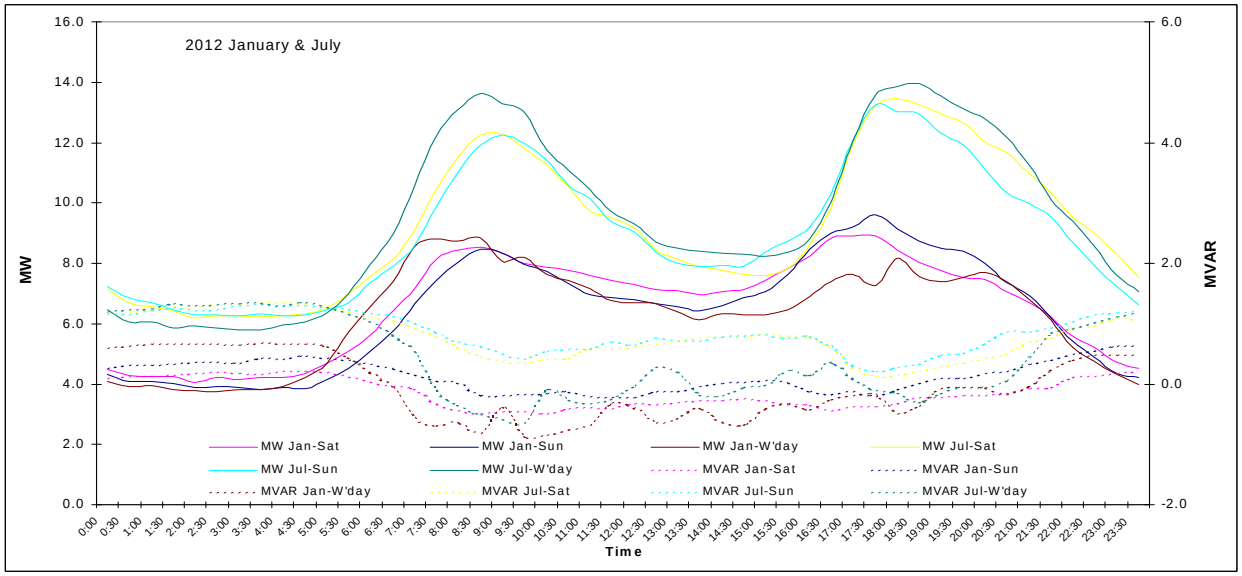
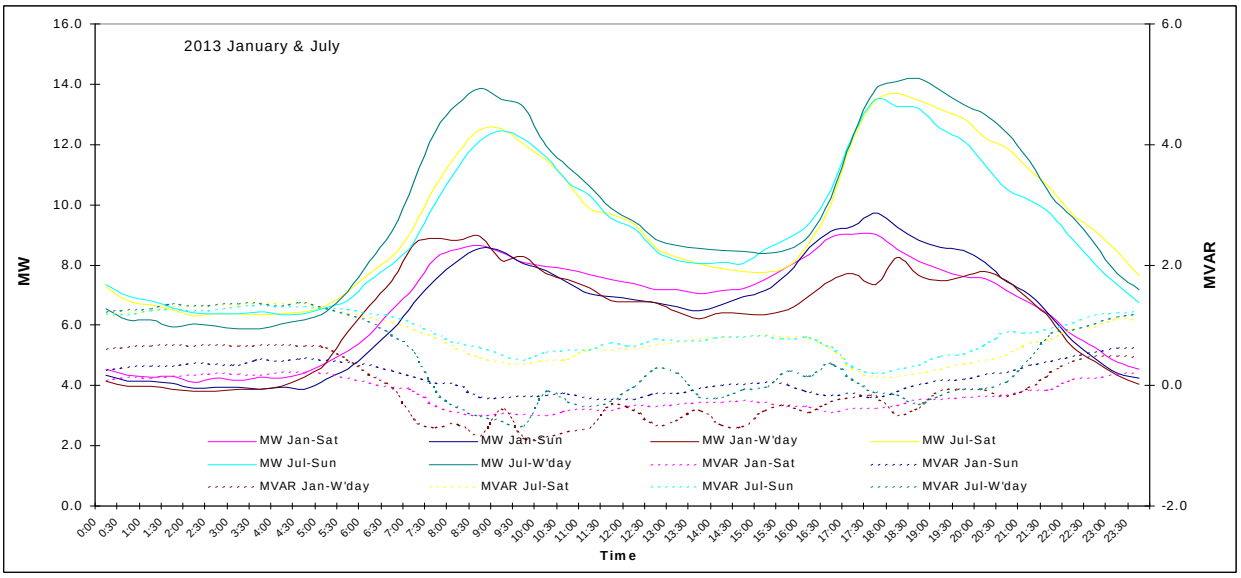

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

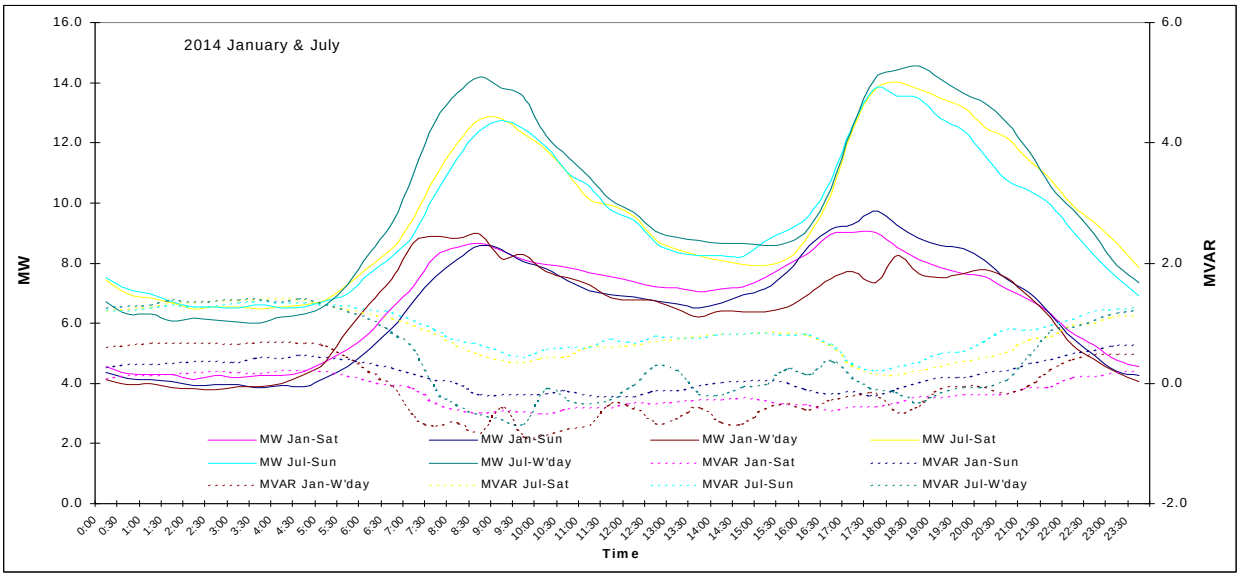
Figure 4-212 Load Profiles: Weekday, Saturday, Sunday for January & July

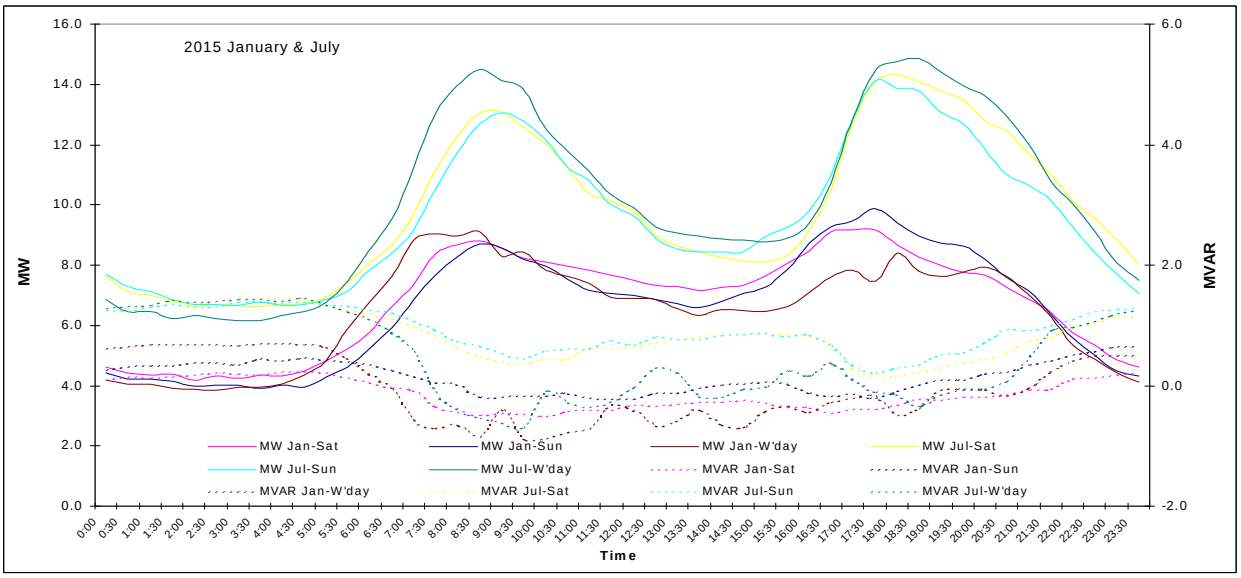







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.38 Trevallyn

Description:

The Substation is located at Trevallyn and is known as “Trevallyn Substation”. The substation is owned by Transend.

Table 4-132 Trevallyn Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
3	22	17	150	100

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-133 Trevallyn Site Winter load forecast

Trevallyn	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	151.60	156.11	151.60	156.11	151.60	156.11	157.58	162.26
2006	95.91	100.00	94.66	98.70	95.91	100.00	98.12	102.31
2007	97.21	100.48	96.70	99.96	97.21	100.48	100.77	104.17
2008	97.59	100.60	89.55	92.32	97.59	100.60	93.99	96.89
2009	104.03	107.18	92.48	95.27	104.03	107.18	95.70	98.59
2010	95.46	99.88	89.89	94.05	95.46	99.88	94.02	98.38
2011	103.10	107.88	97.08	101.58	106.94	111.89	100.70	105.36
2012	104.87	109.72	98.75	103.32	108.68	113.71	102.34	107.07
2013	105.35	110.23	99.21	103.80	109.23	114.28	102.85	107.61
2014	106.56	111.50	100.34	104.99	110.39	115.50	103.95	108.76
2015	107.72	112.71	101.43	106.13	111.62	116.79	105.11	109.97
2016	109.18	114.23	102.80	107.56	113.05	118.29	106.46	111.38
2017	110.62	115.75	104.17	108.99	114.57	119.88	107.89	112.88
2018	112.53	117.74	105.96	110.87	116.45	121.84	109.65	114.73
2019	114.74	120.05	108.04	113.04	118.82	124.32	111.88	117.06
2020	117.25	122.68	110.41	115.52	121.33	126.95	114.25	119.54

Table 4-134 Trevallyn Site Summer load forecast

Trevallyn	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	83.87	87.83	83.87	87.83	83.87	87.83	83.87	87.83
2006	84.63	88.93	80.13	84.21	84.63	88.93	80.27	84.36
2007	51.70	55.83	48.02	51.86	51.70	55.83	48.02	51.86
2008	51.95	54.54	51.95	54.54	51.95	54.54	52.36	54.97
2009	59.18	68.67	55.59	64.50	59.18	68.67	56.17	65.18
2010	52.32	59.69	49.26	56.20	52.32	59.69	49.26	56.20
2011	51.22	58.43	48.23	55.01	52.11	59.44	49.06	55.97
2012	51.66	58.93	48.64	55.49	52.59	59.99	49.51	56.48
2013	52.19	59.53	49.14	56.05	53.15	60.63	50.04	57.09
2014	52.16	59.51	49.11	56.03	53.05	60.52	49.95	56.99
2015	52.98	60.44	49.89	56.91	53.90	61.49	50.75	57.90
2016	52.80	60.24	49.72	56.72	53.79	61.36	50.64	57.77
2017	54.63	62.32	51.44	58.68	55.59	63.41	52.34	59.71
2018	55.65	63.49	52.40	59.78	56.66	64.63	53.35	60.86
2019	56.72	64.71	53.41	60.93	57.73	65.85	54.35	62.00
2020	57.91	66.06	54.52	62.20	58.92	67.21	55.47	63.28

Figure 4-213 Trevallyn Site Summer Load Forecast at 50% and 10% POE

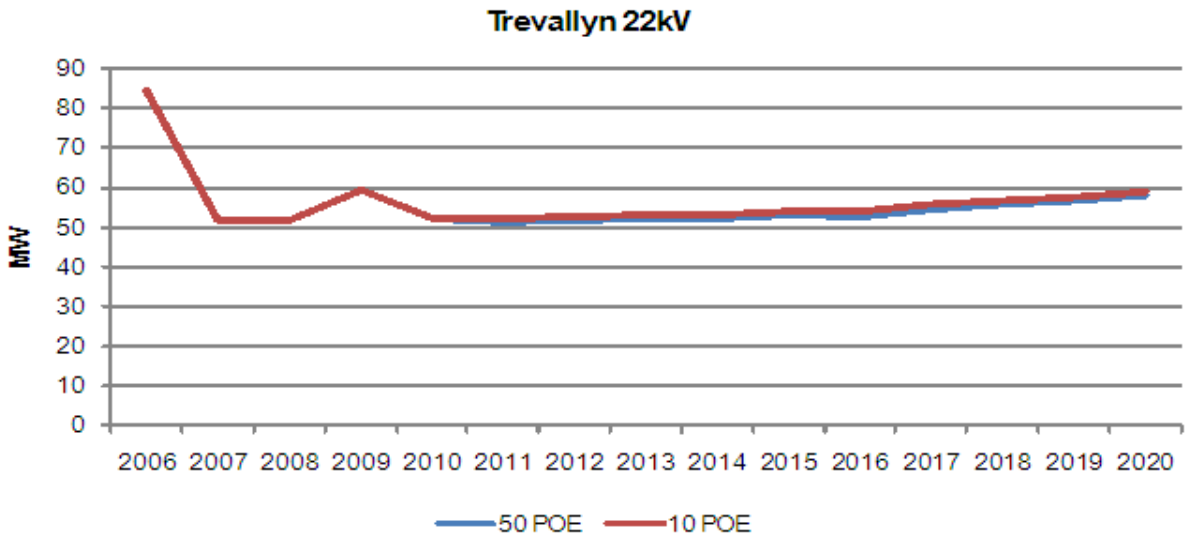
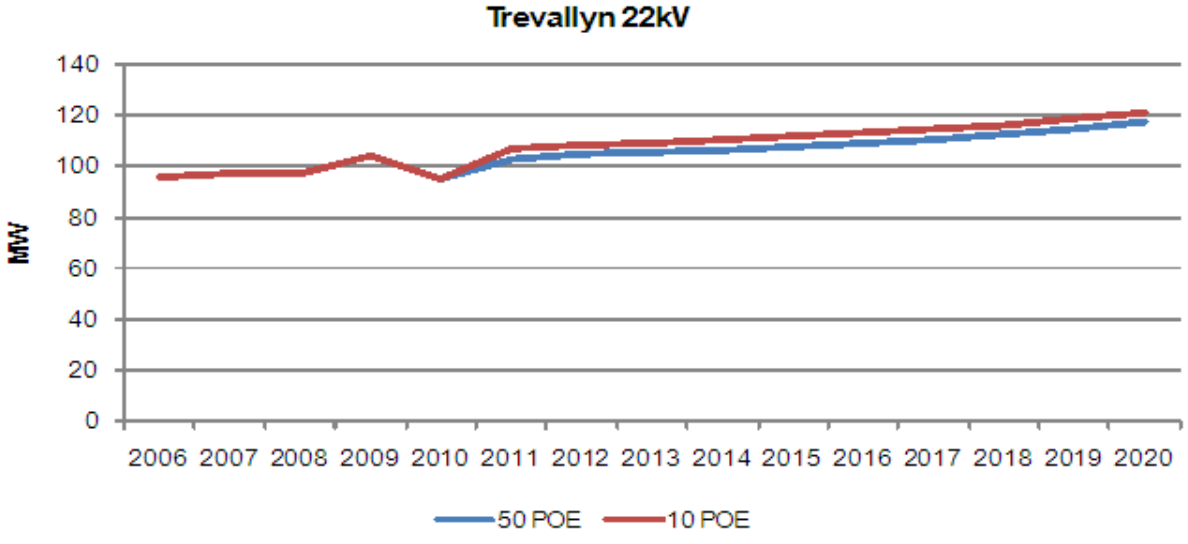
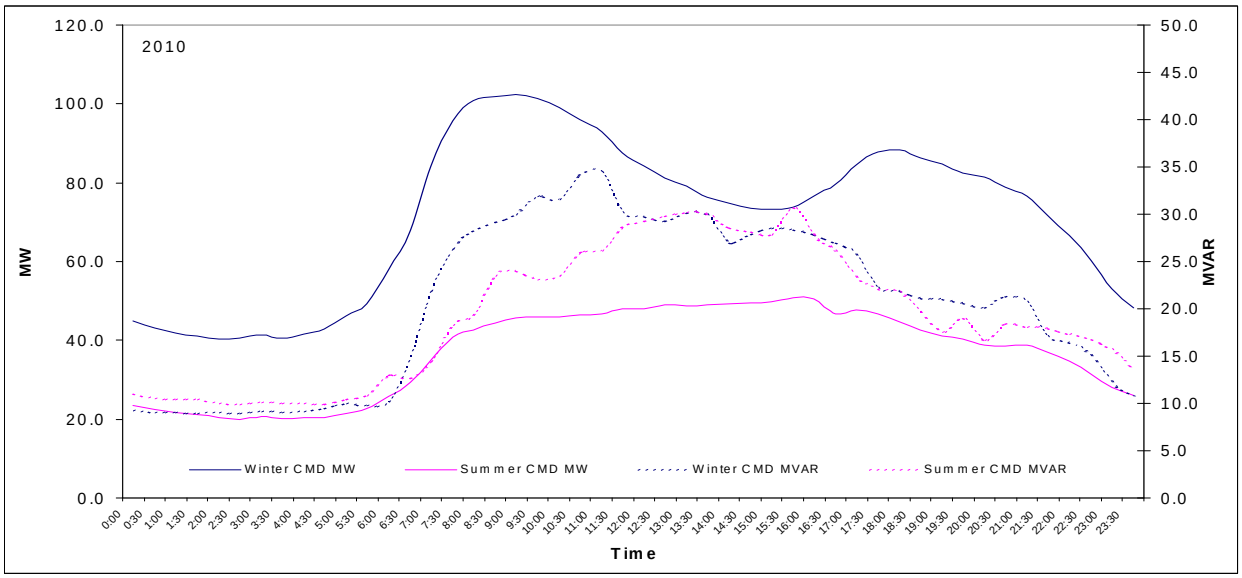


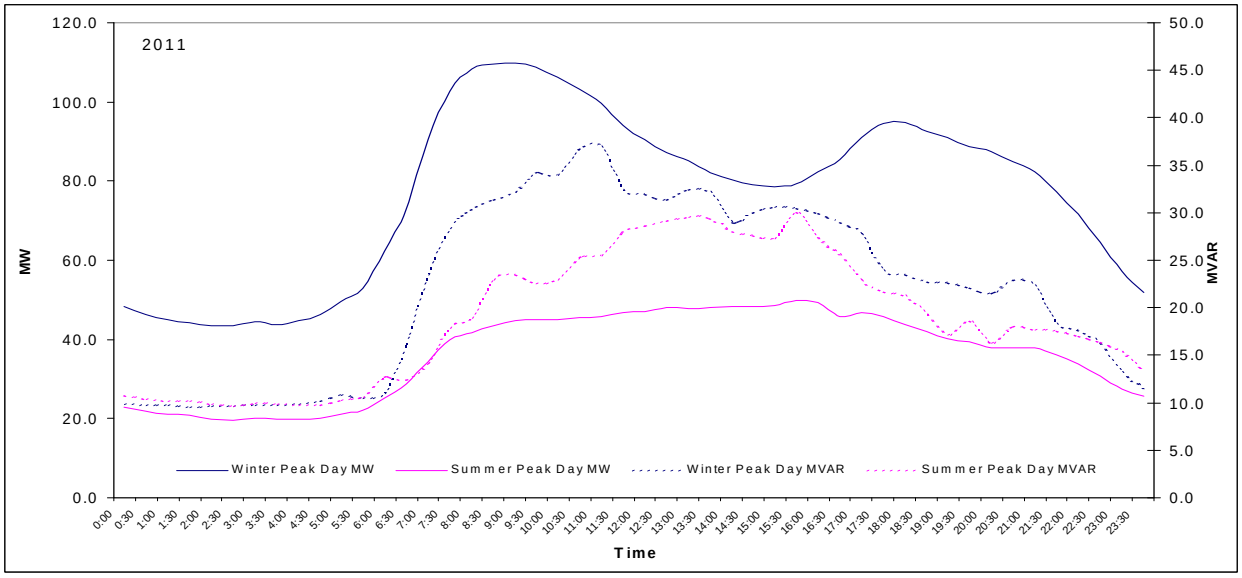
Figure 4-214 Trevallyn Site Winter Load Forecast at 50% and 10% POE

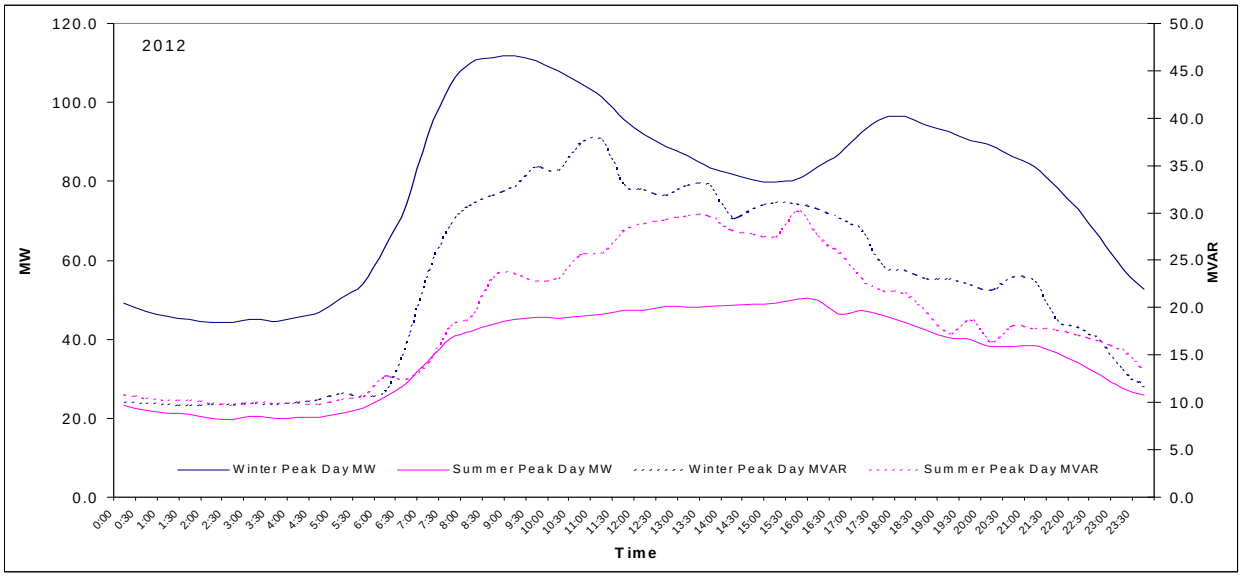


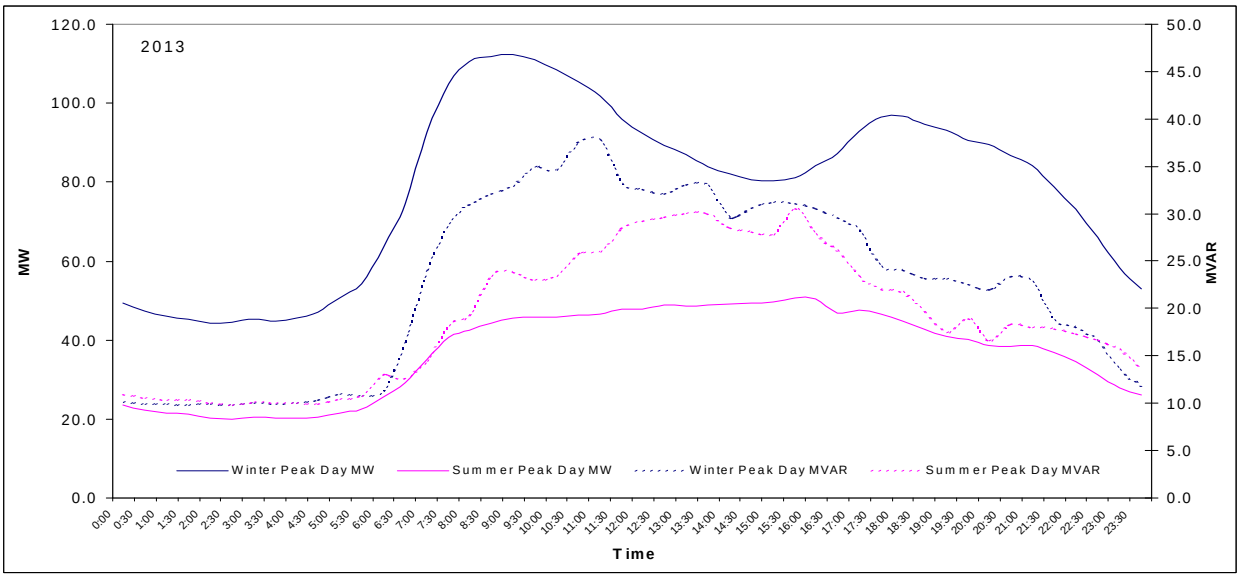
Load Profiles:

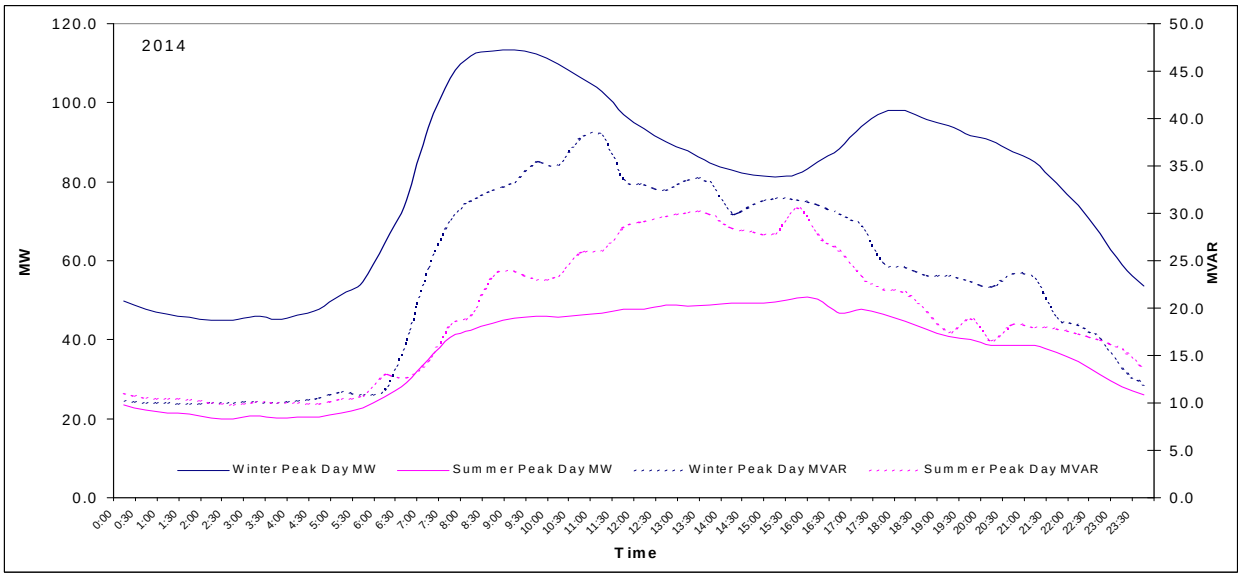
Figure 4-215 Load Profiles: Trevallyn Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

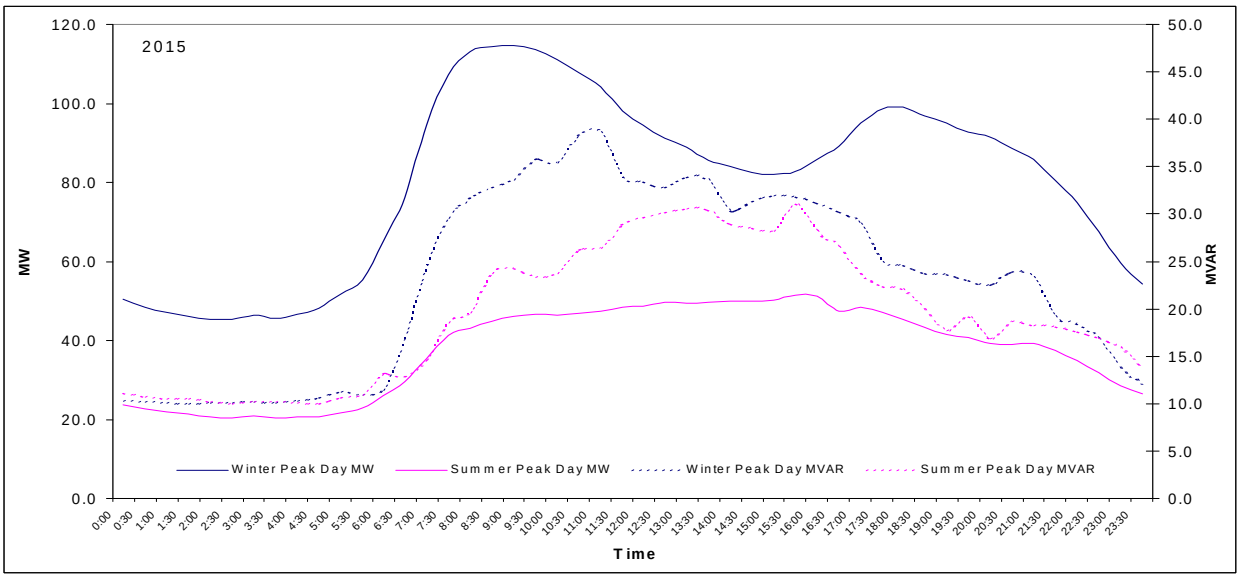
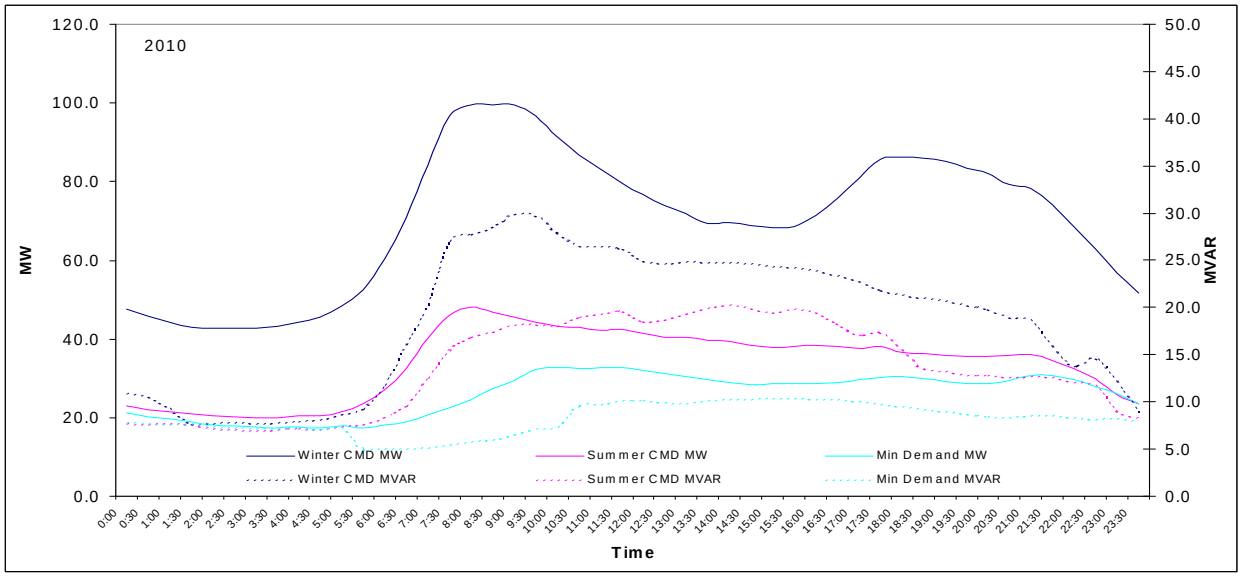
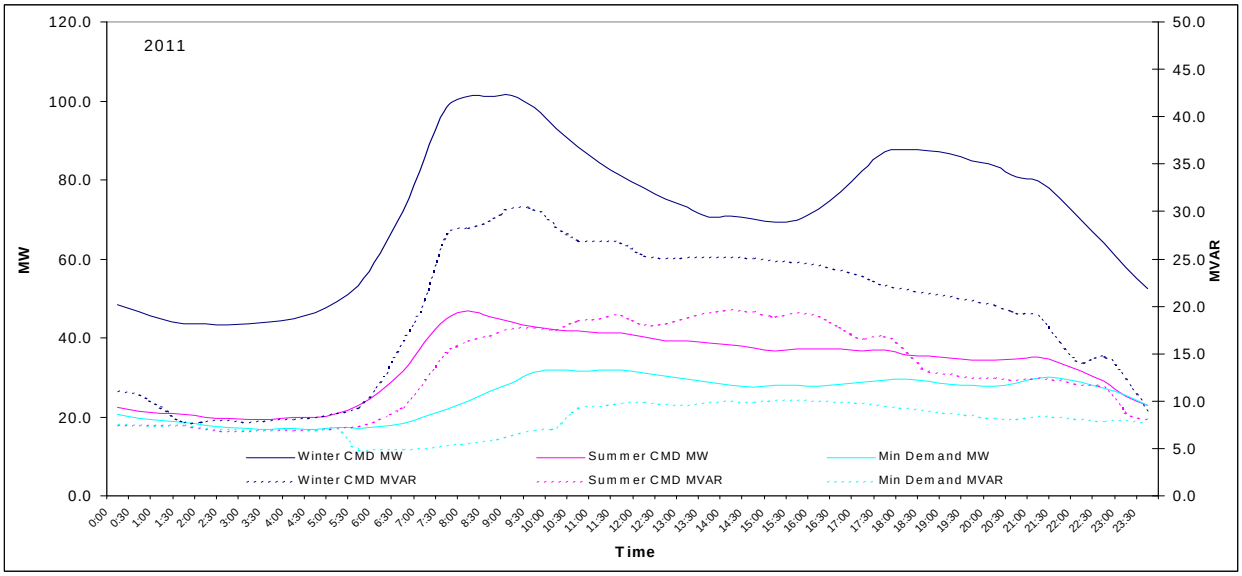
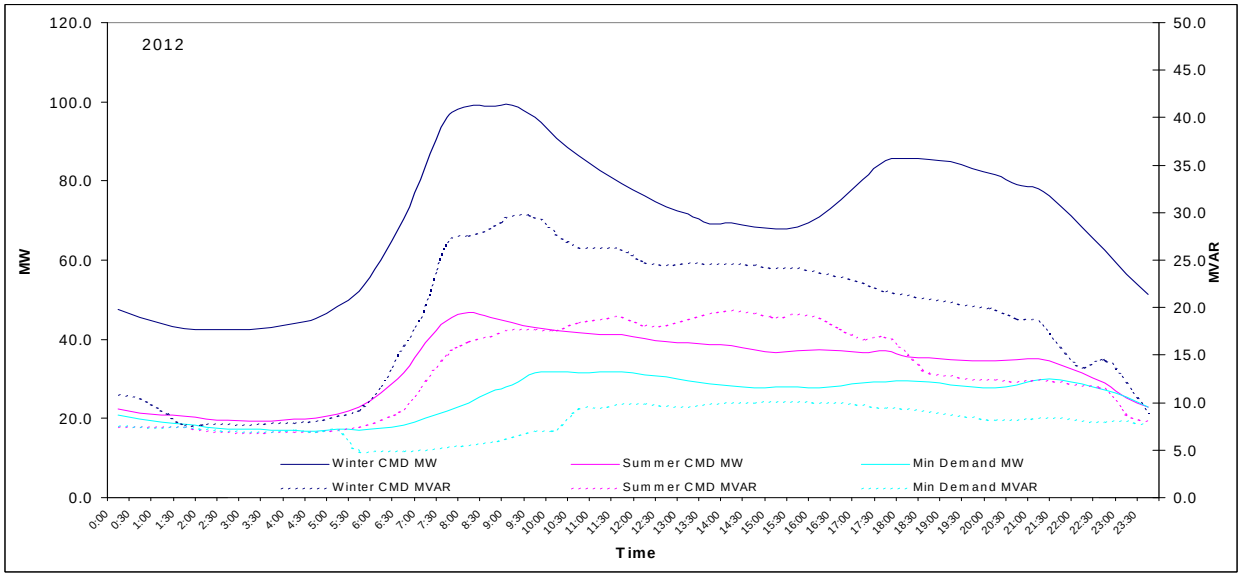
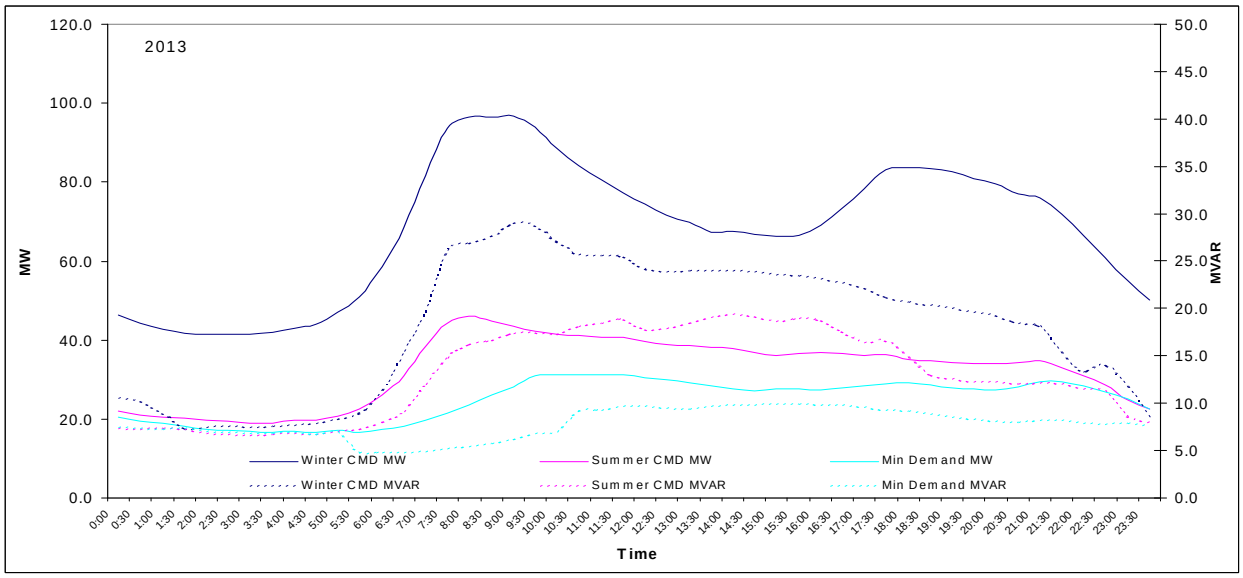

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

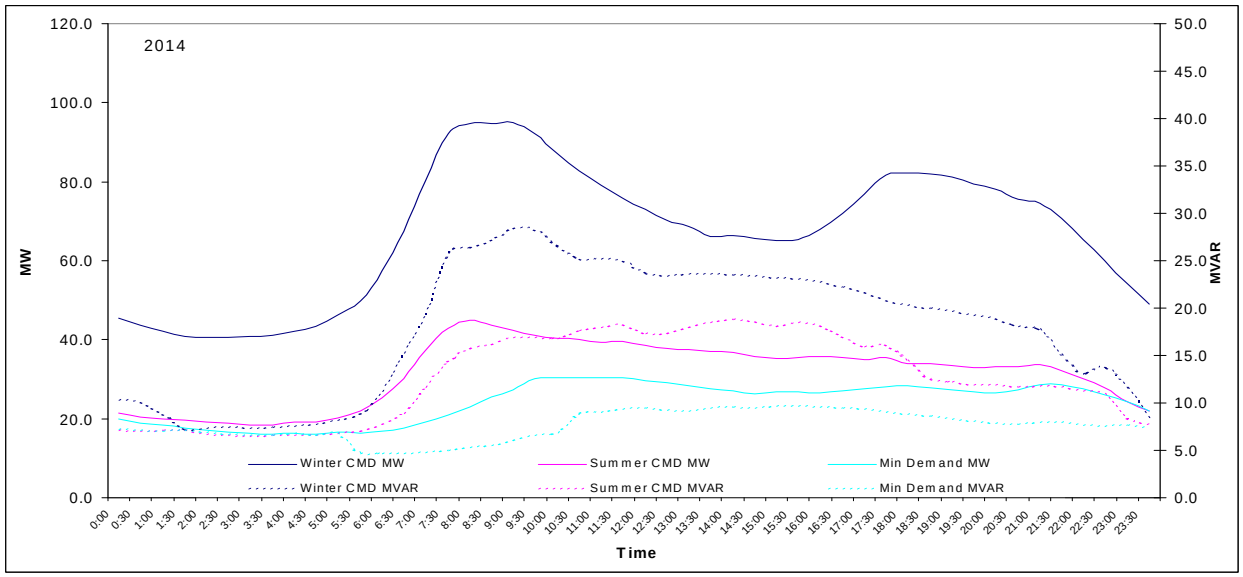
Figure 4-216 Load Profiles: Trevallyn Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

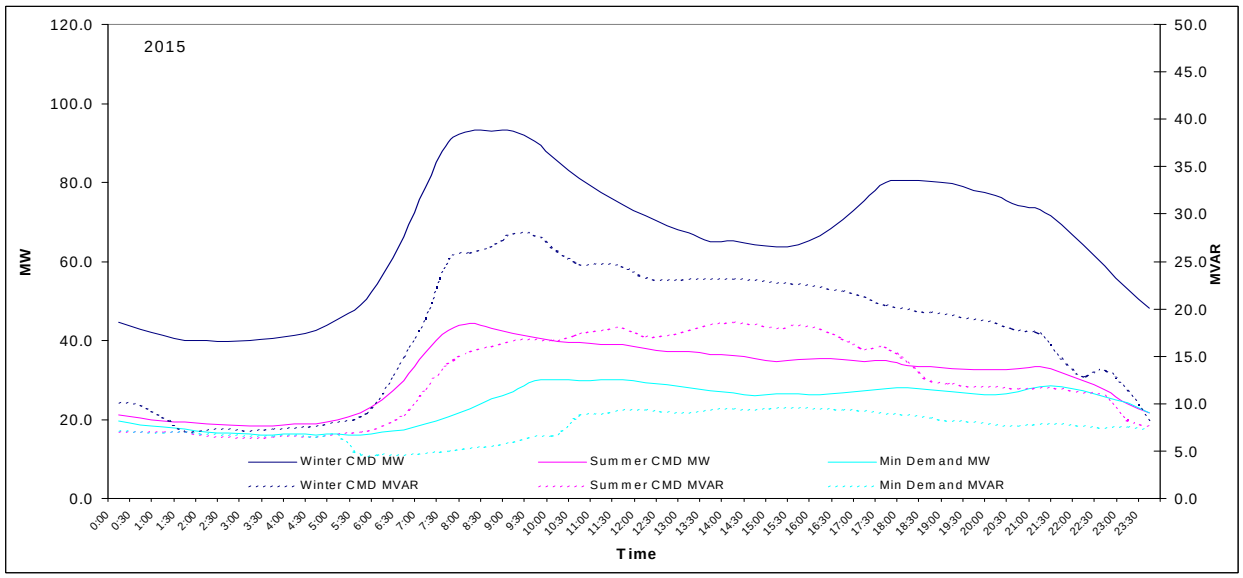
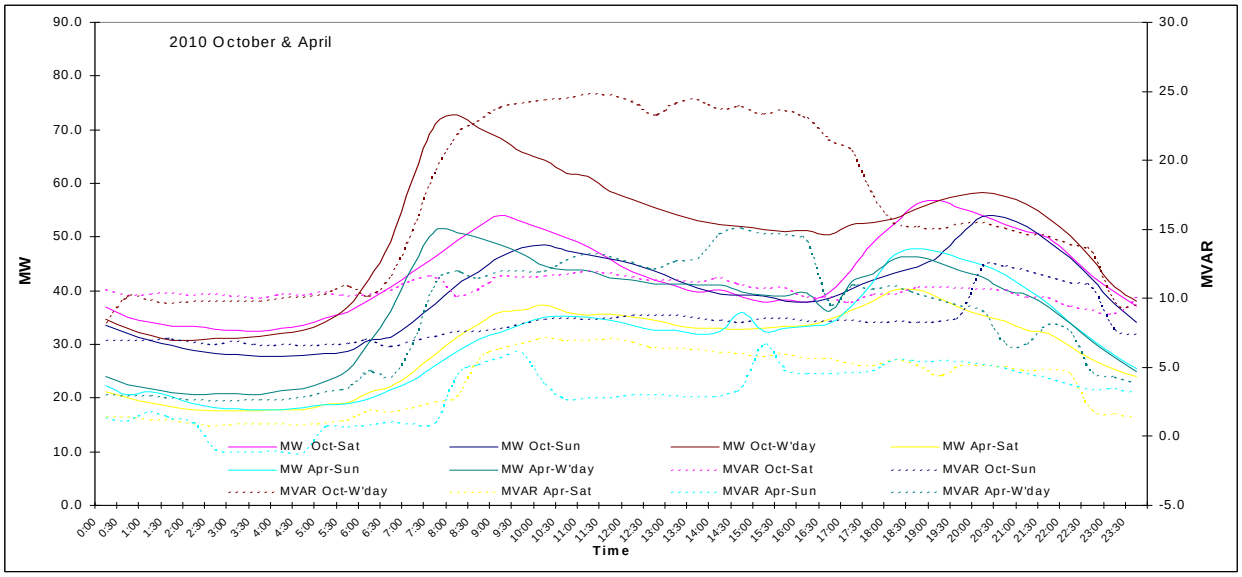
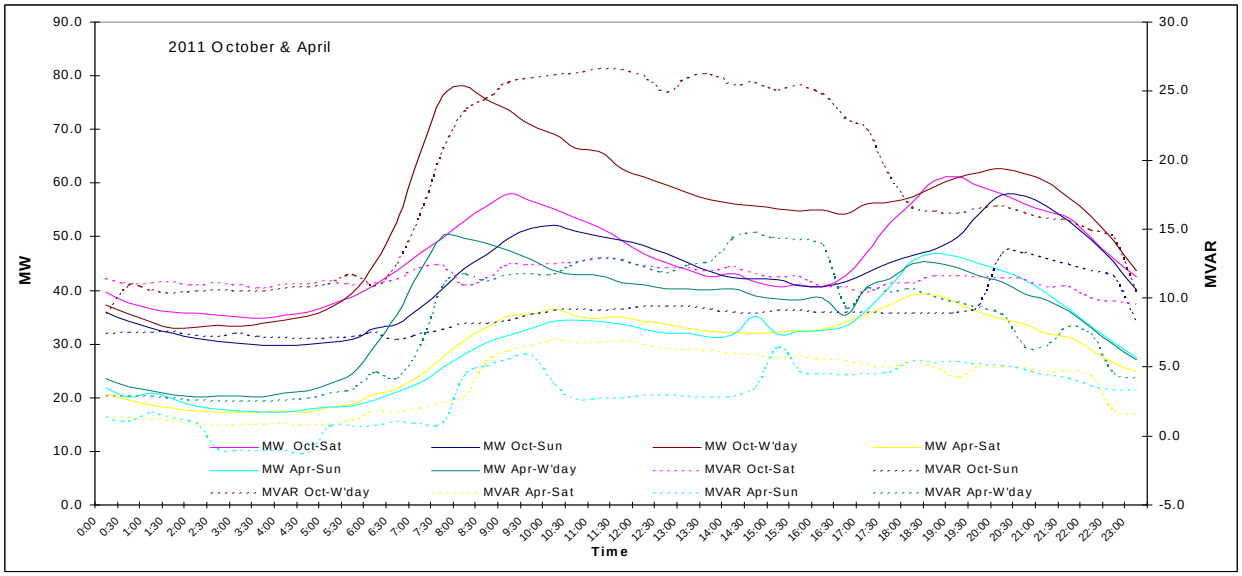
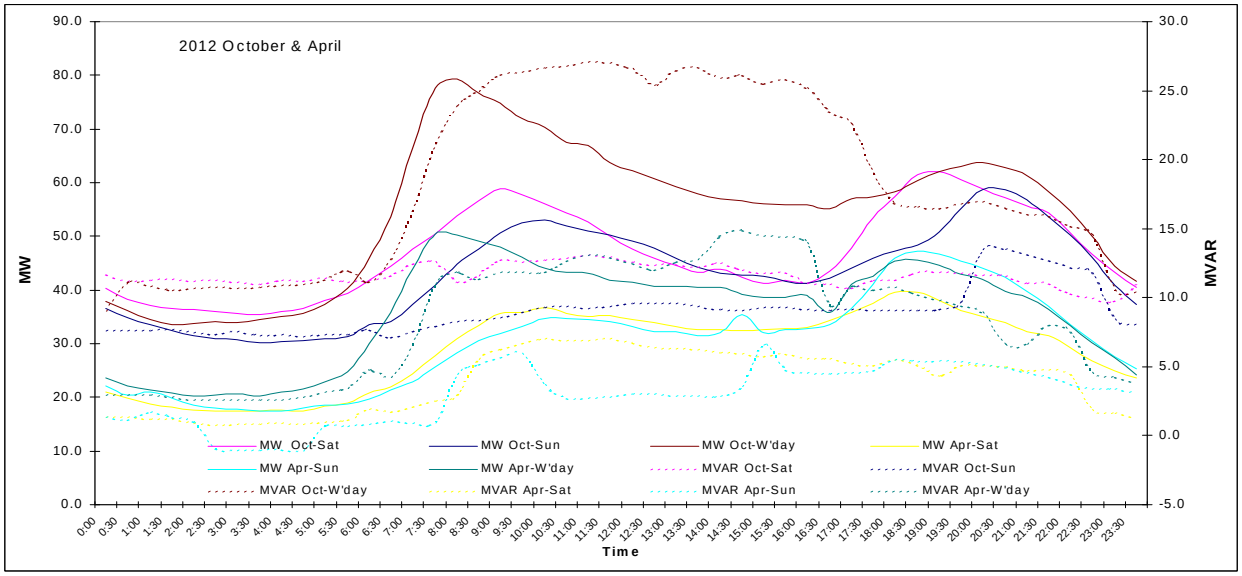
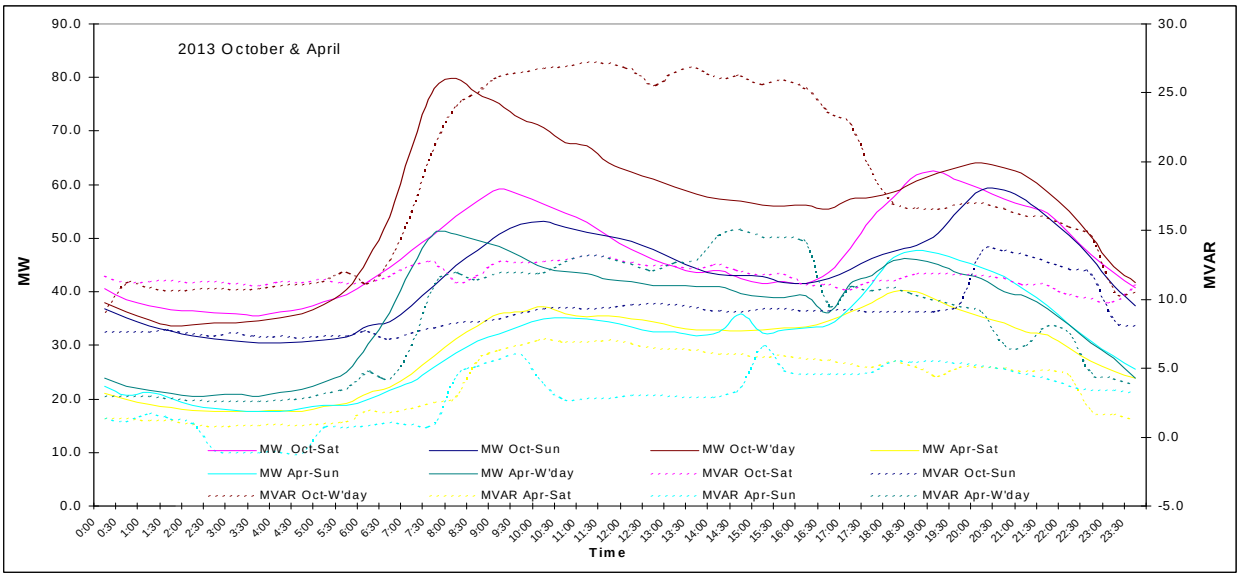

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

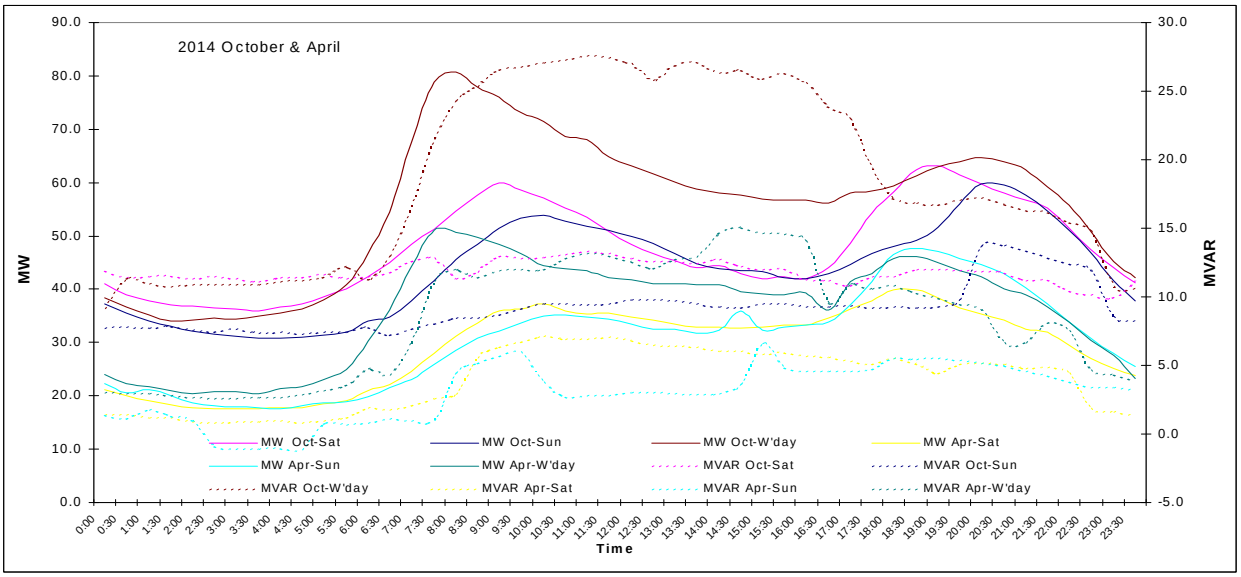
Figure 4-217 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

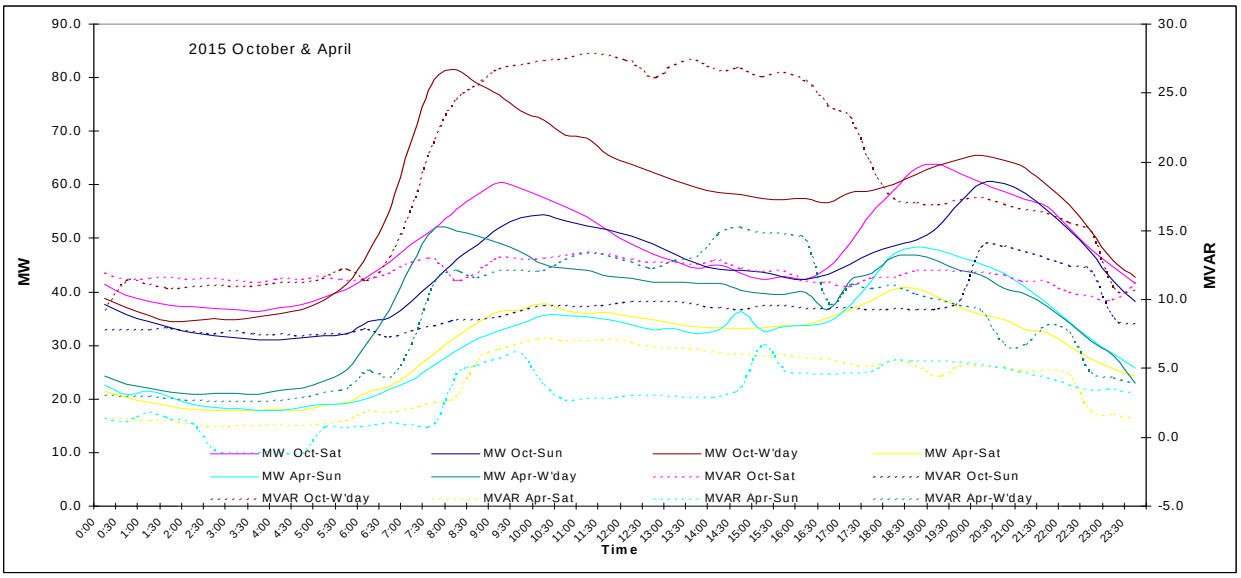
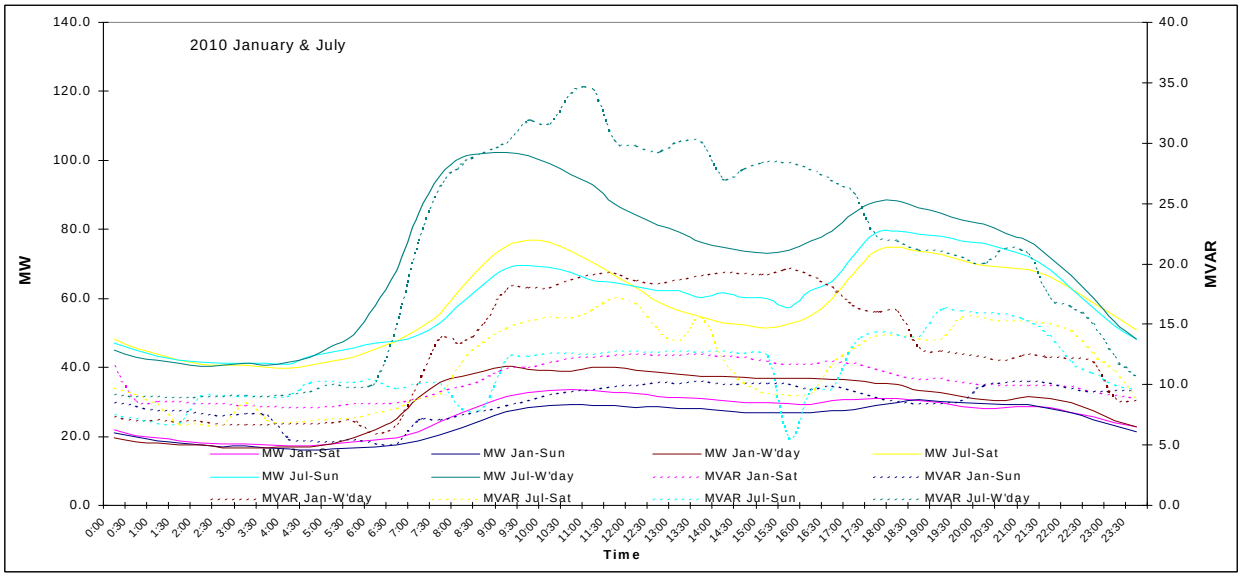
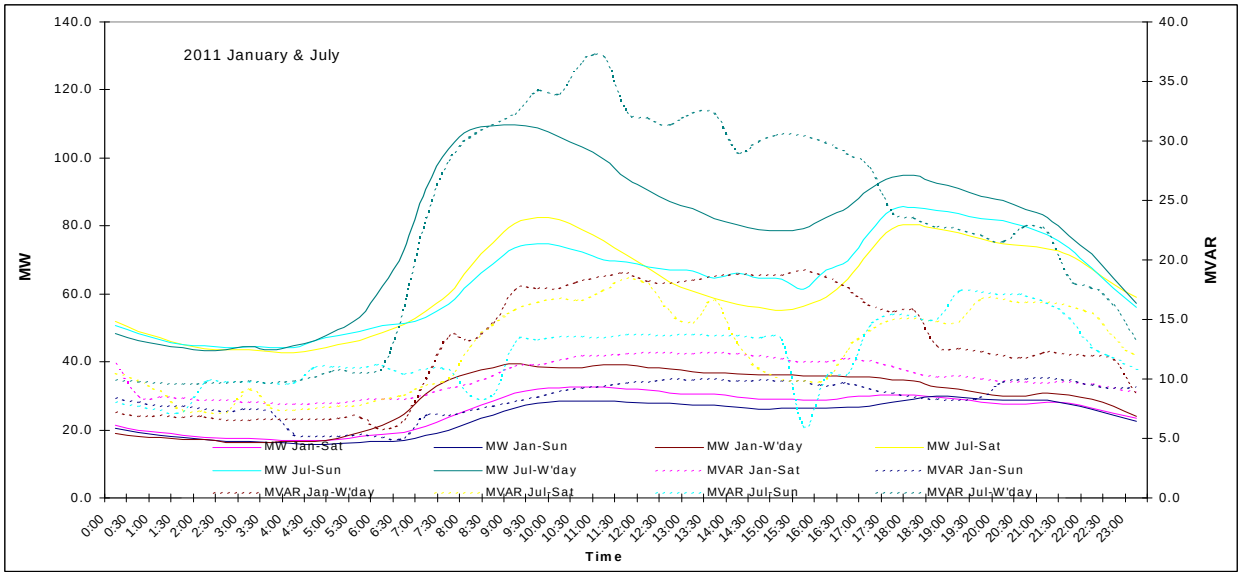
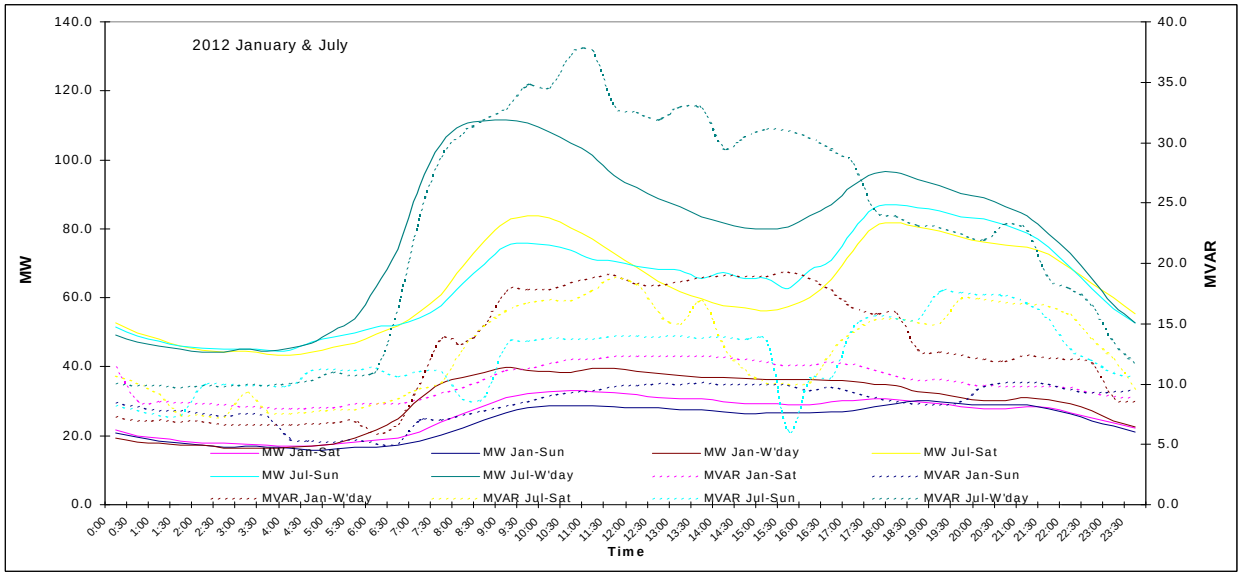
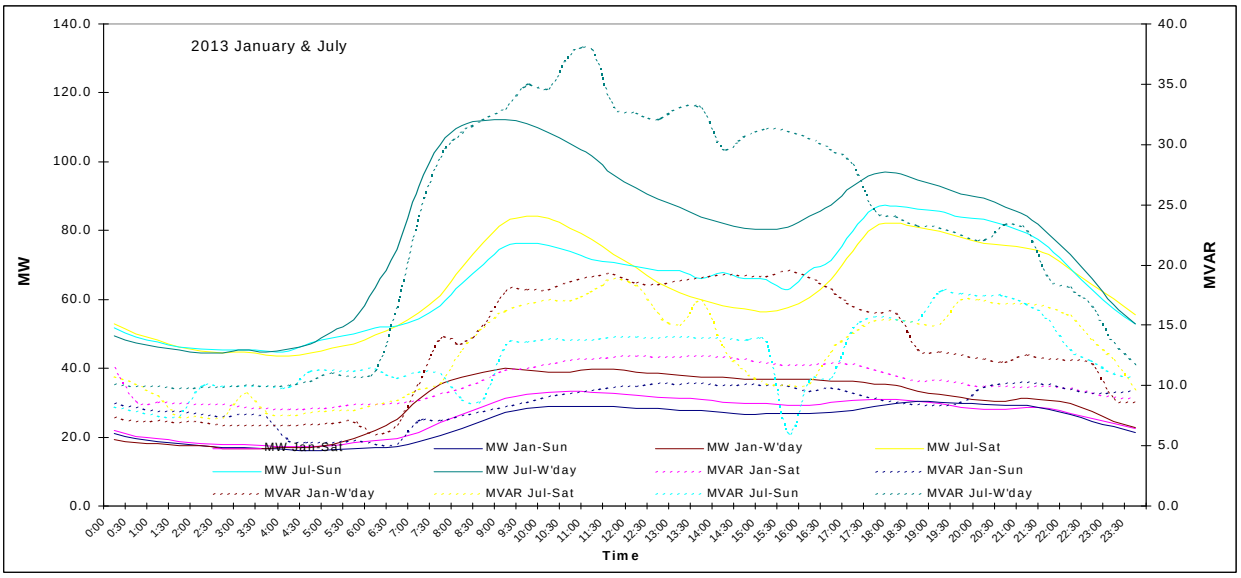

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

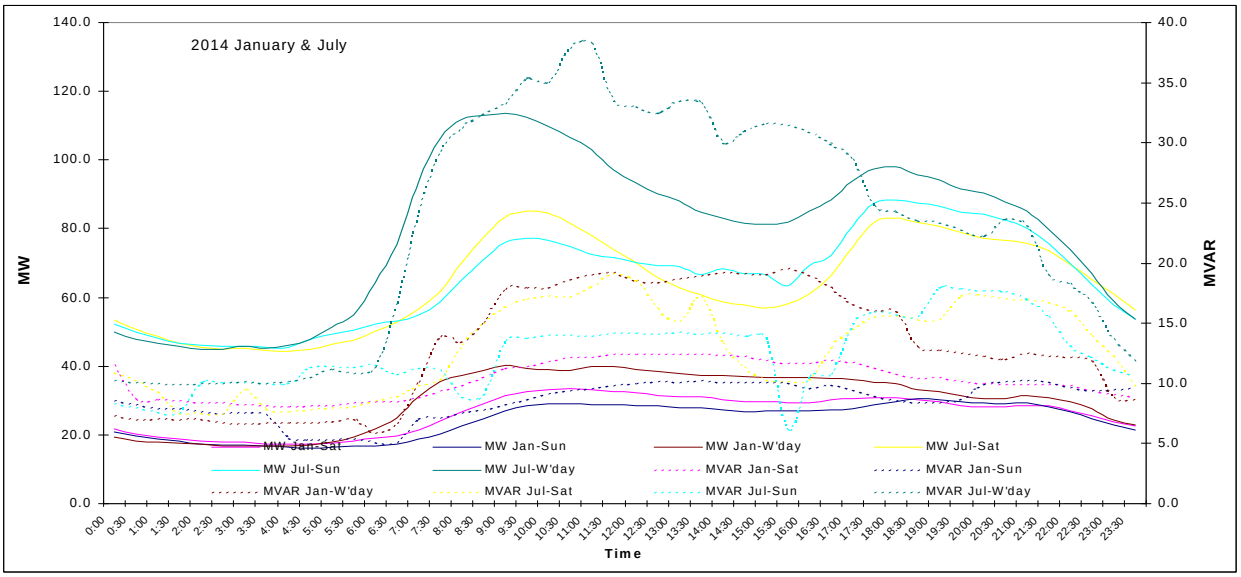
Figure 4-218 Load Profiles: Weekday, Saturday, Sunday for January & July

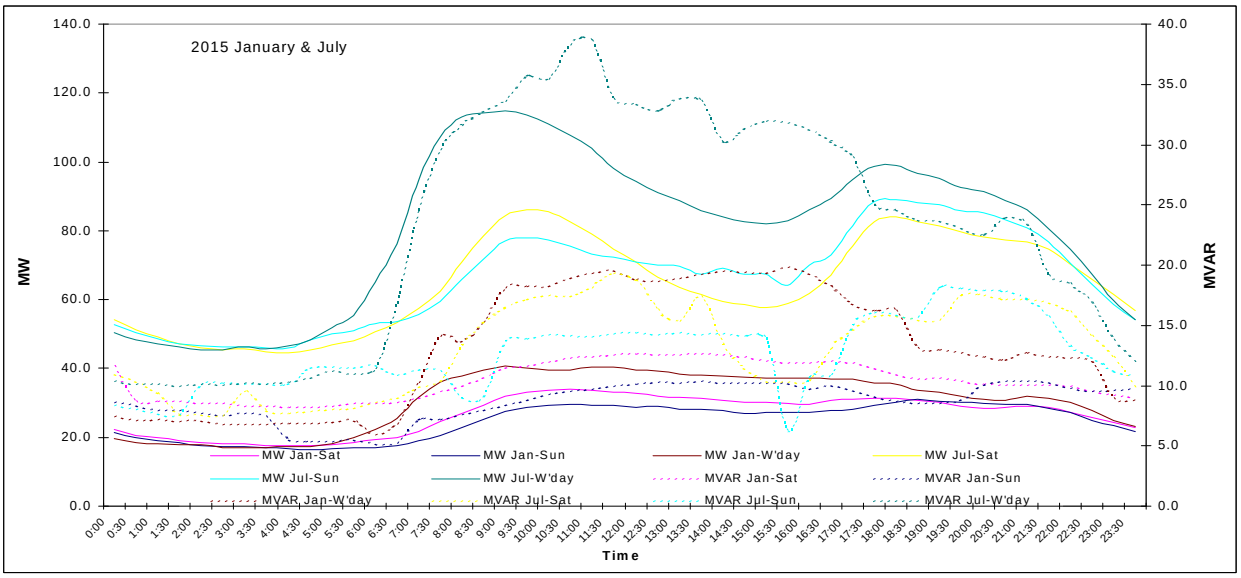







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.39 Triabunna

Description:

The Substation is located at Triabunna and is known as “Triabunna Substation”. The substation is owned by Transend.

Table 4-135 Triabunna Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	3	50	25

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-136 Triabunna Site Winter load forecast

Triabunna	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	7.25	7.51	6.74	6.99	7.25	7.51	6.86	7.11
2006	9.18	9.20	7.91	7.93	9.18	9.20	8.36	8.38
2007	8.81	8.89	7.99	8.07	8.81	8.89	8.07	8.15
2008	7.40	7.43	7.34	7.38	7.40	7.43	7.42	7.45
2009	7.86	7.90	7.16	7.19	7.86	7.90	7.37	7.40
2010	8.94	8.99	6.74	6.77	8.94	8.99	6.82	6.85
2011	9.34	9.38	7.03	7.07	9.39	9.44	7.08	7.11
2012	9.38	9.43	7.06	7.10	9.43	9.48	7.11	7.14
2013	9.40	9.45	7.08	7.11	9.46	9.51	7.13	7.16
2014	9.48	9.53	7.14	7.18	9.54	9.59	7.19	7.22
2015	9.56	9.61	7.20	7.24	9.63	9.68	7.25	7.29
2016	9.67	9.72	7.28	7.32	9.73	9.78	7.33	7.37
2017	9.78	9.82	7.36	7.40	9.84	9.89	7.41	7.45
2018	9.92	9.97	7.47	7.51	9.99	10.03	7.52	7.56
2019	10.09	10.14	7.60	7.64	10.17	10.22	7.66	7.70
2020	10.29	10.34	7.75	7.79	10.37	10.42	7.81	7.85

Table 4-137 Triabunna Site Summer load forecast

Triabunna	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	6.25	6.74	4.45	4.80	6.25	6.74	4.45	4.80
2006	8.08	8.53	4.55	4.81	8.08	8.53	4.57	4.83
2007	11.76	11.77	5.42	5.43	11.76	11.77	5.58	5.59
2008	11.26	15.88	5.40	7.61	11.26	15.88	5.40	7.61
2009	11.45	11.59	5.43	5.50	11.45	11.59	5.44	5.50
2010	5.77	5.80	5.34	5.37	5.77	5.80	5.40	5.42
2011	5.86	5.89	5.43	5.45	6.03	6.05	5.58	5.60
2012	6.13	6.16	5.67	5.70	6.30	6.33	5.83	5.86
2013	6.29	6.32	5.82	5.85	6.47	6.49	5.98	6.01
2014	6.38	6.41	5.91	5.93	6.55	6.58	6.06	6.09
2015	6.57	6.60	6.08	6.11	6.75	6.78	6.24	6.27
2016	6.64	6.67	6.15	6.17	6.82	6.85	6.31	6.34
2017	6.96	6.99	6.44	6.47	7.14	7.17	6.61	6.64
2018	7.18	7.21	6.64	6.67	7.37	7.40	6.82	6.85
2019	7.40	7.44	6.85	6.88	7.59	7.63	7.03	7.06
2020	7.65	7.68	7.08	7.11	7.84	7.87	7.25	7.28

Figure 4-219 Triabunna Site Summer Load Forecast at 50% and 10% POE

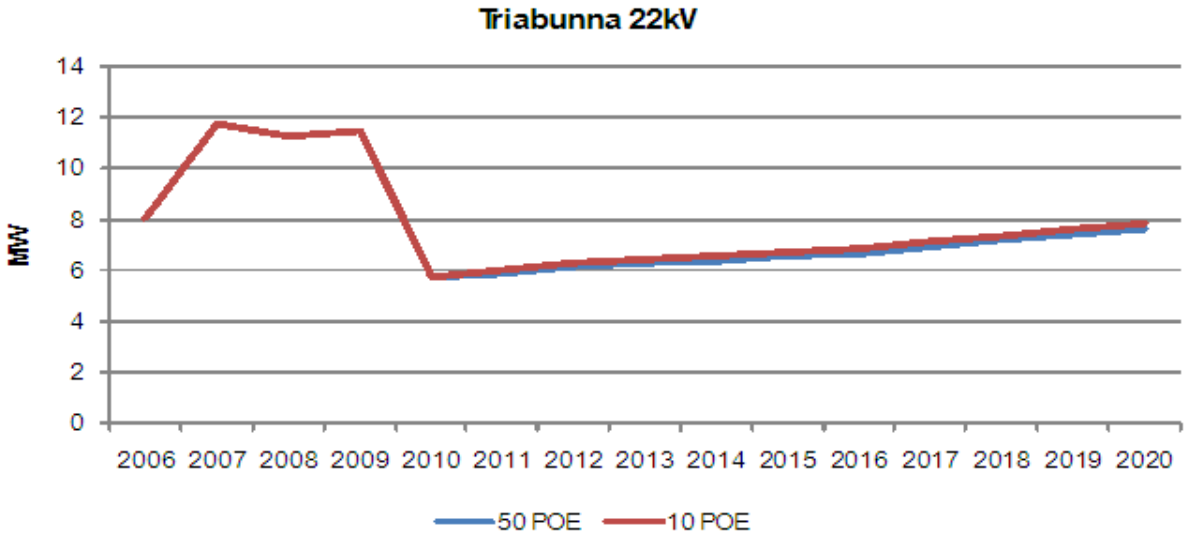
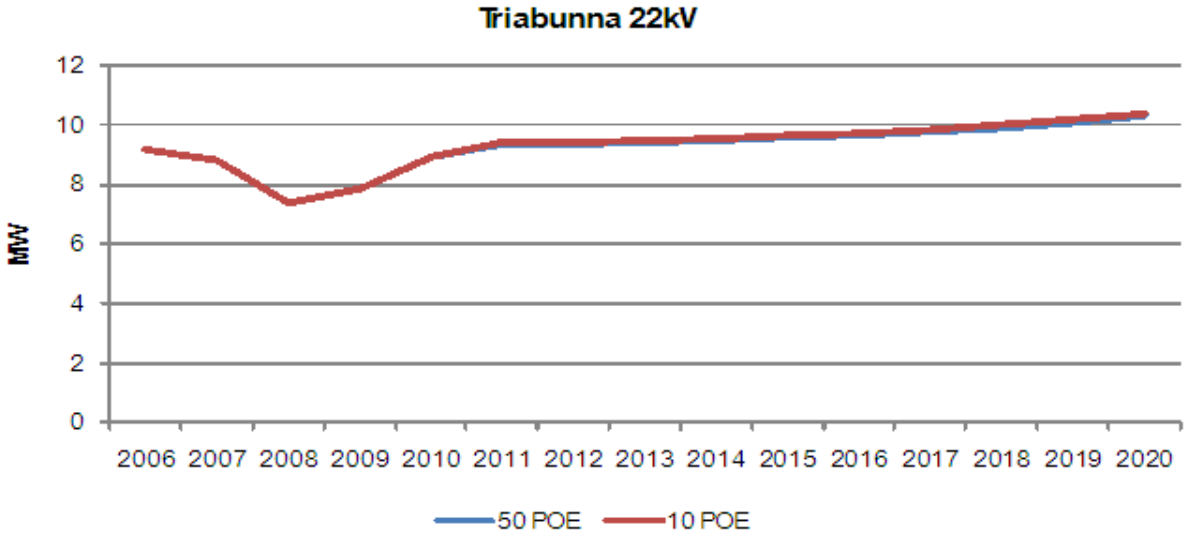
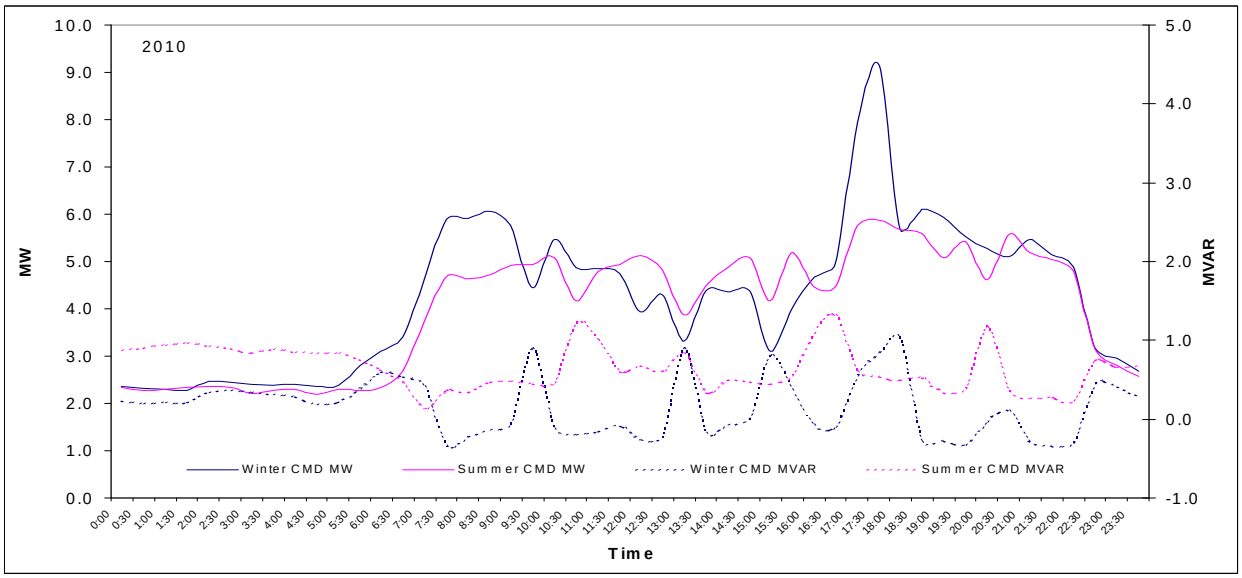


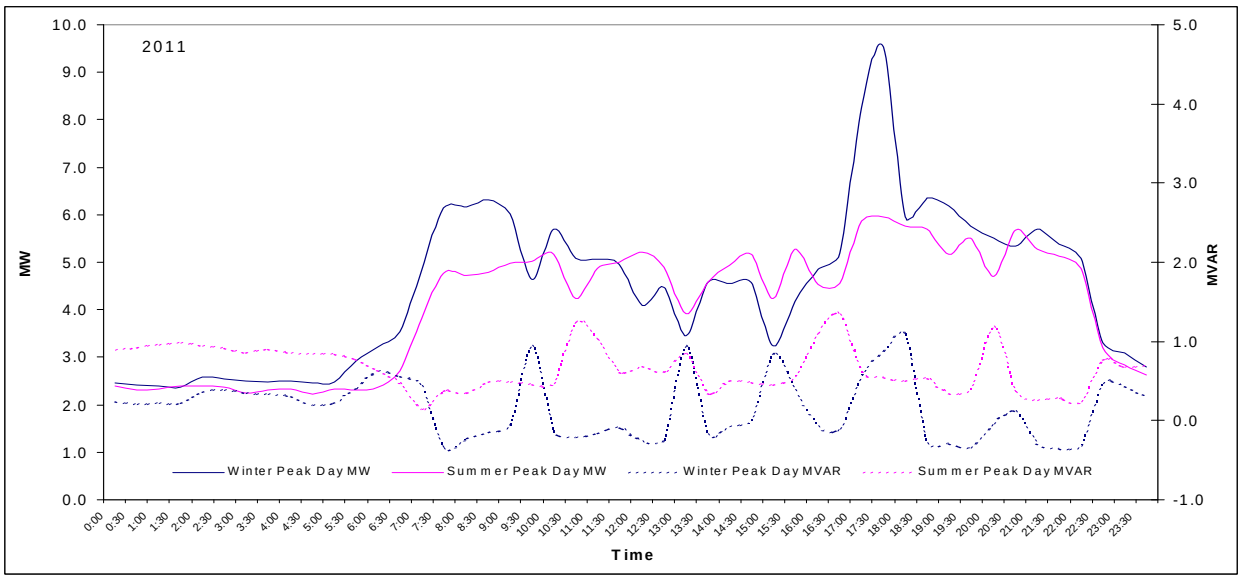
Figure 4-220 Triabunna Site Winter Load Forecast at 50% and 10% POE

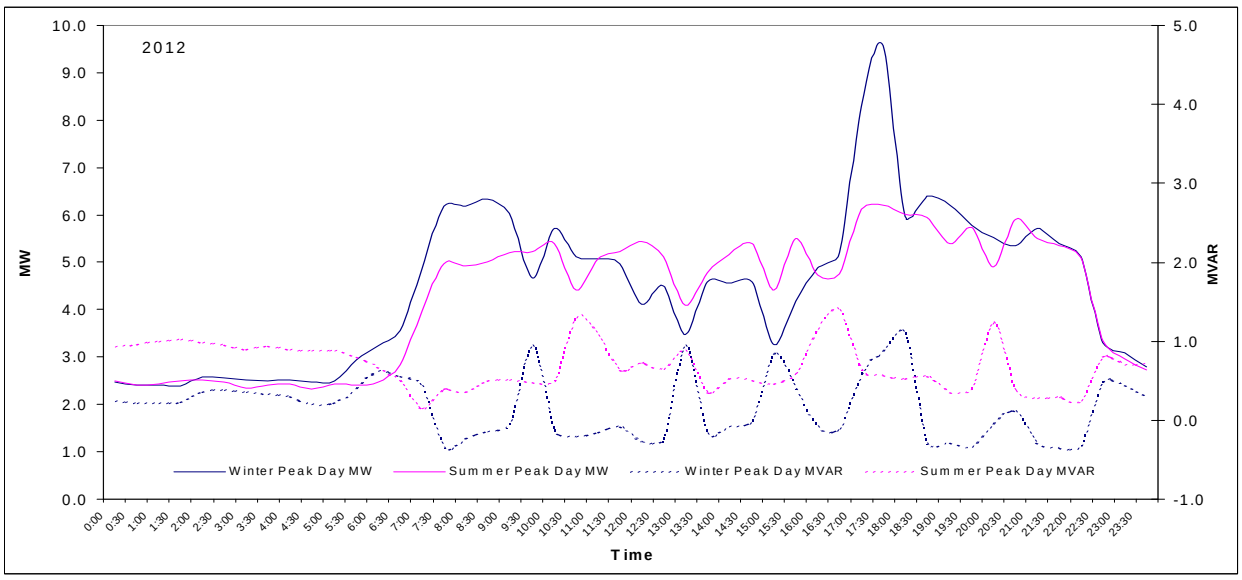


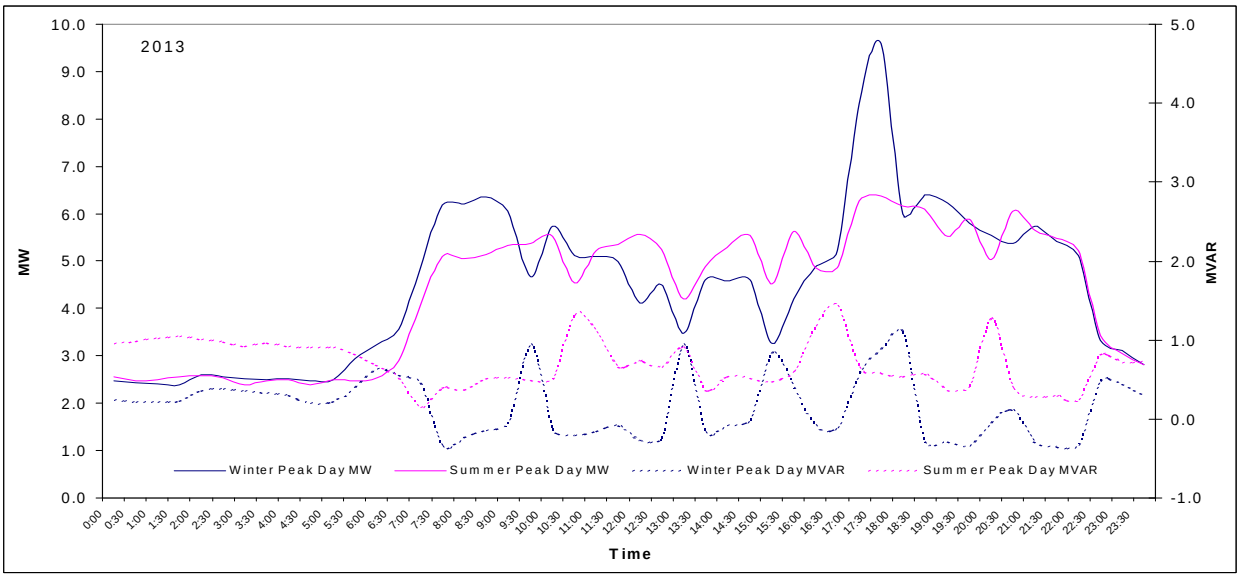
Load Profiles:

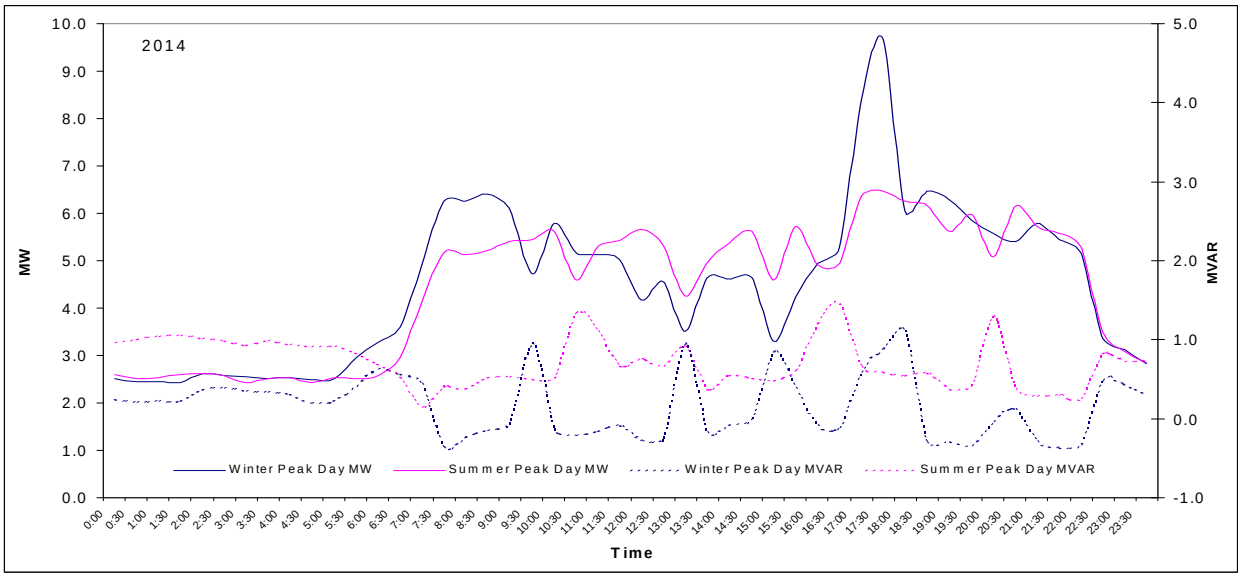
Figure 4-221 Load Profiles: Triabunna Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

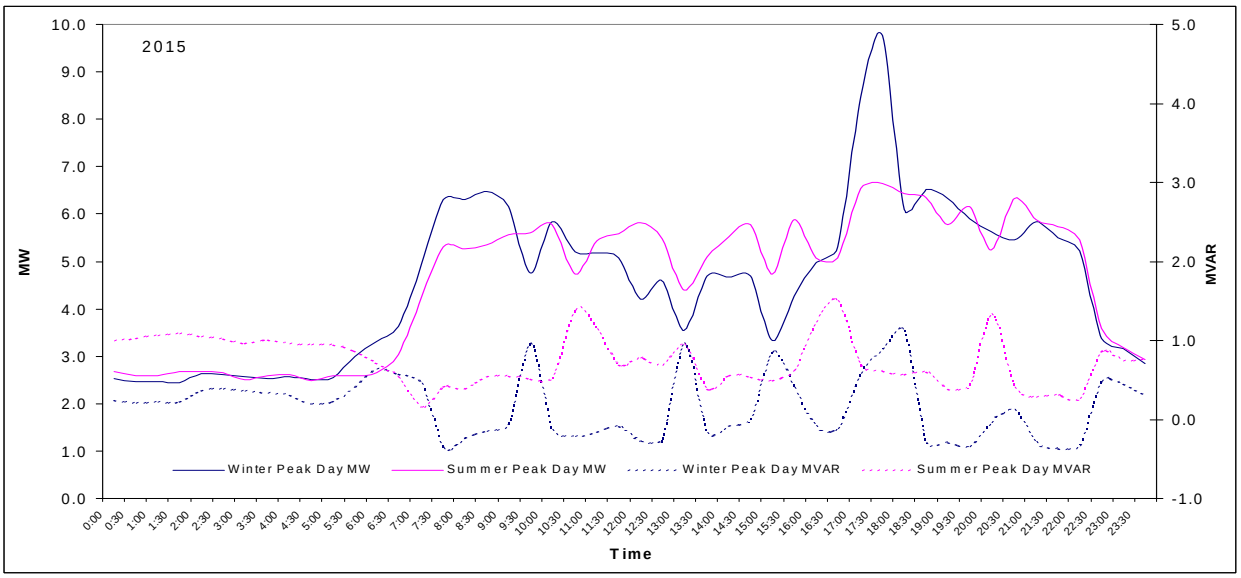
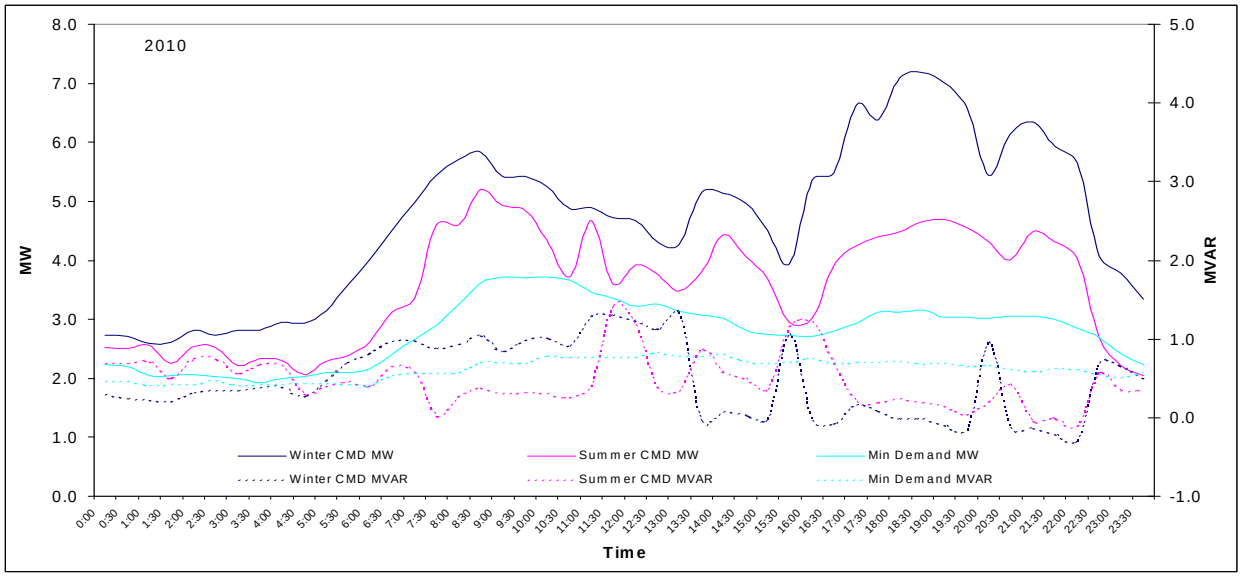
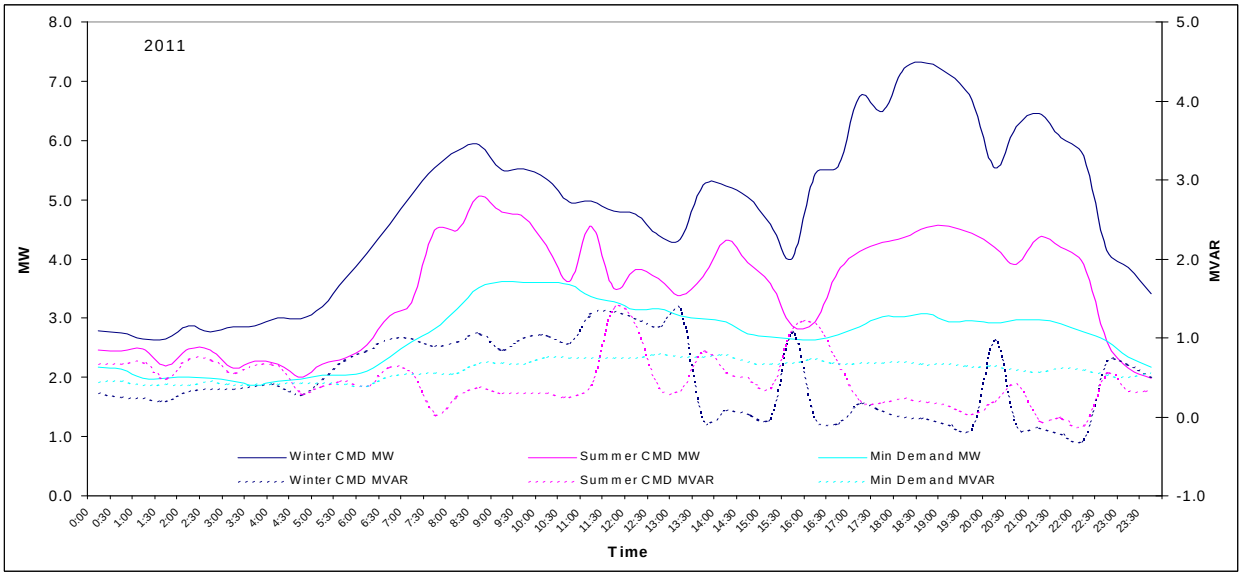
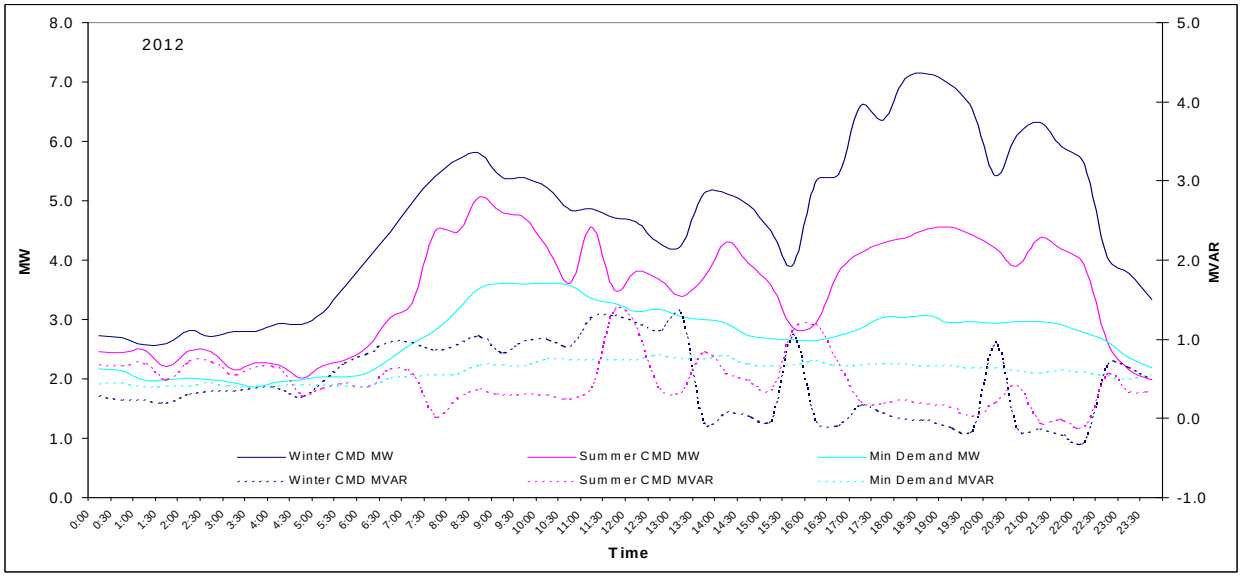
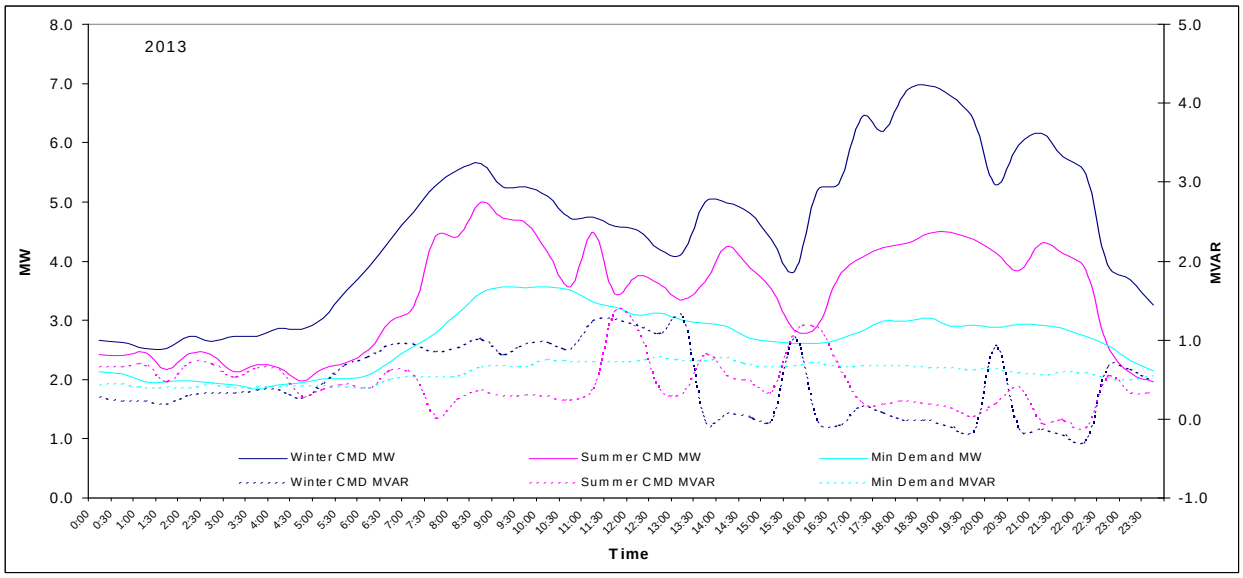

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

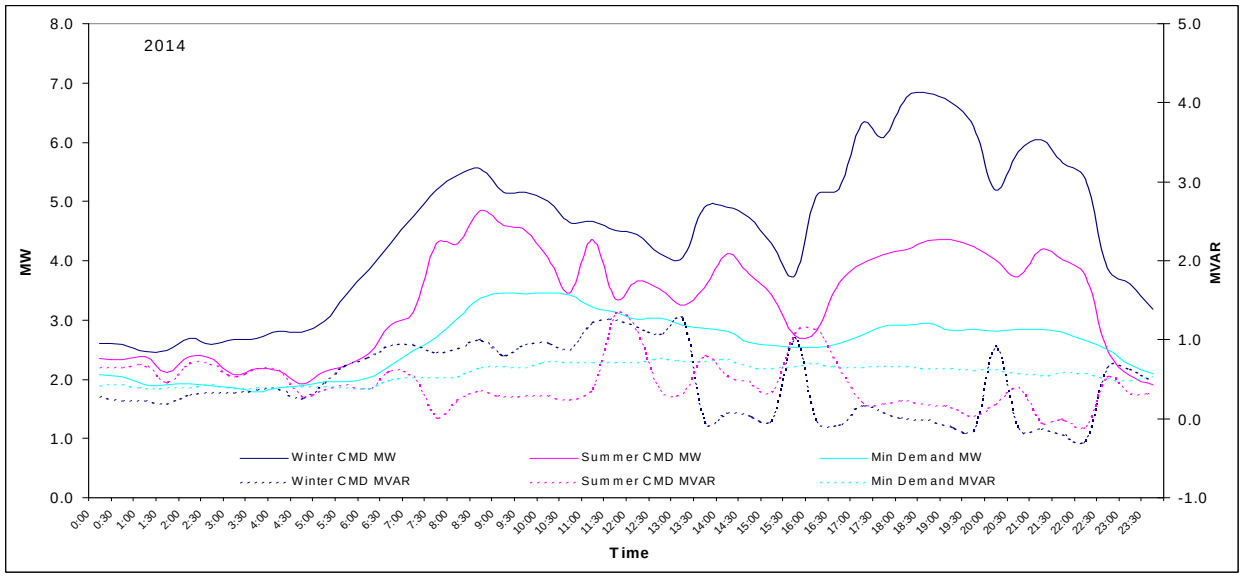
Figure 4-222 Load Profiles: Triabunna Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

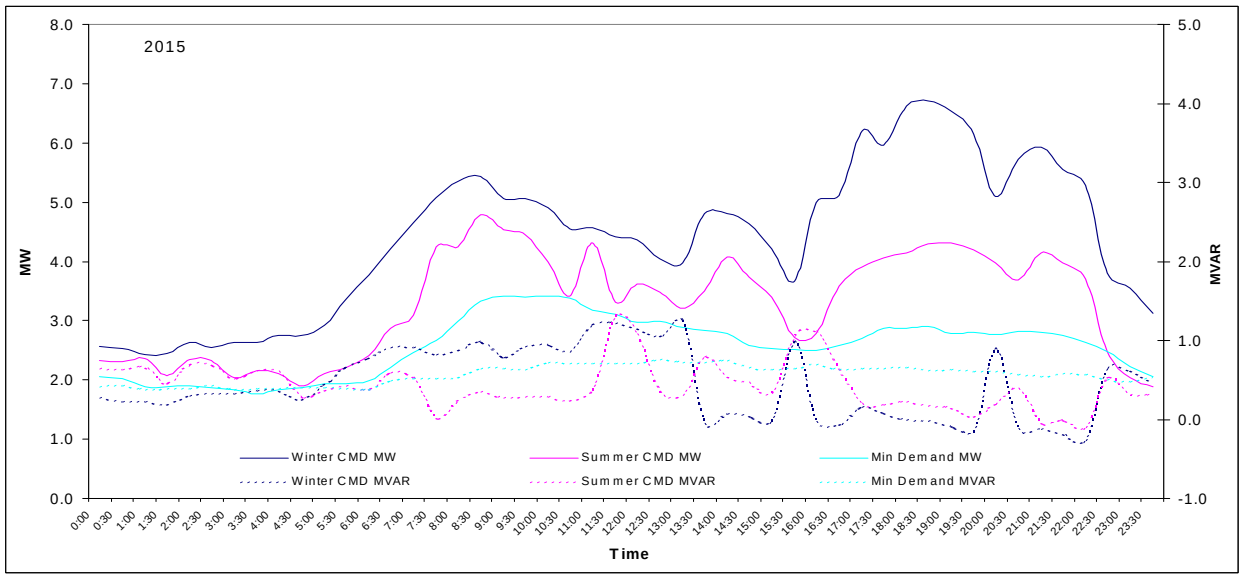
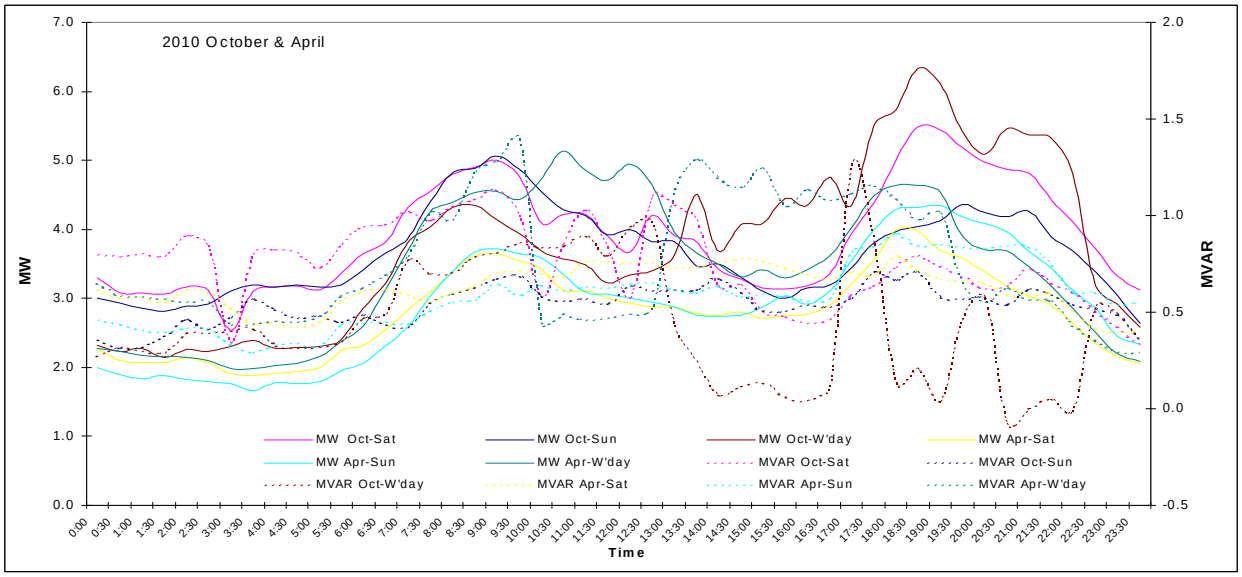
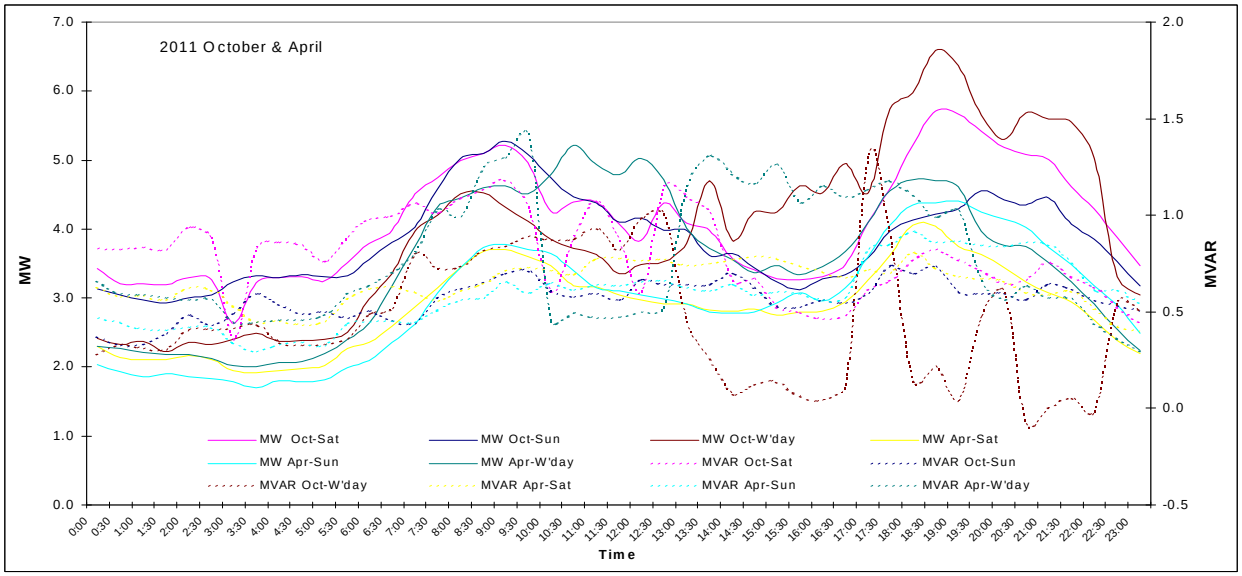
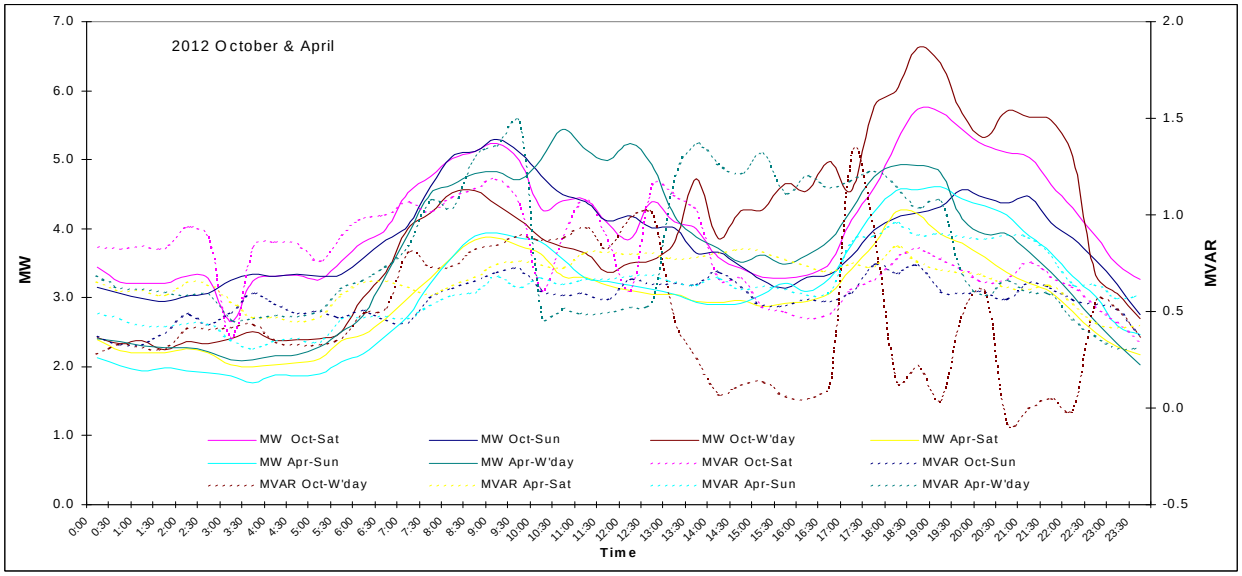
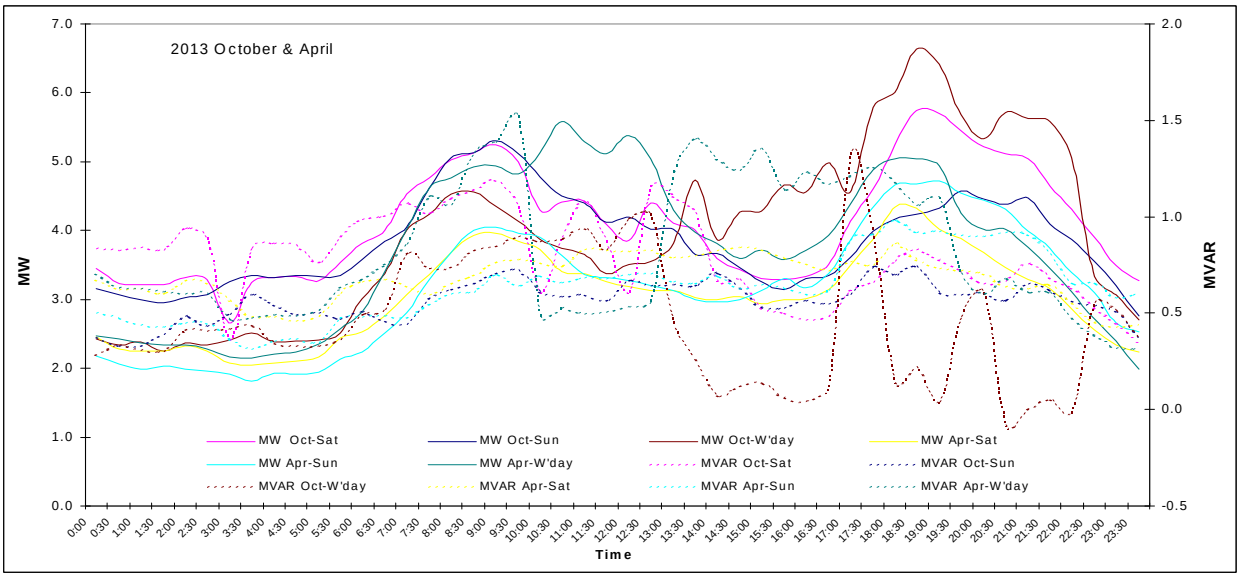

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

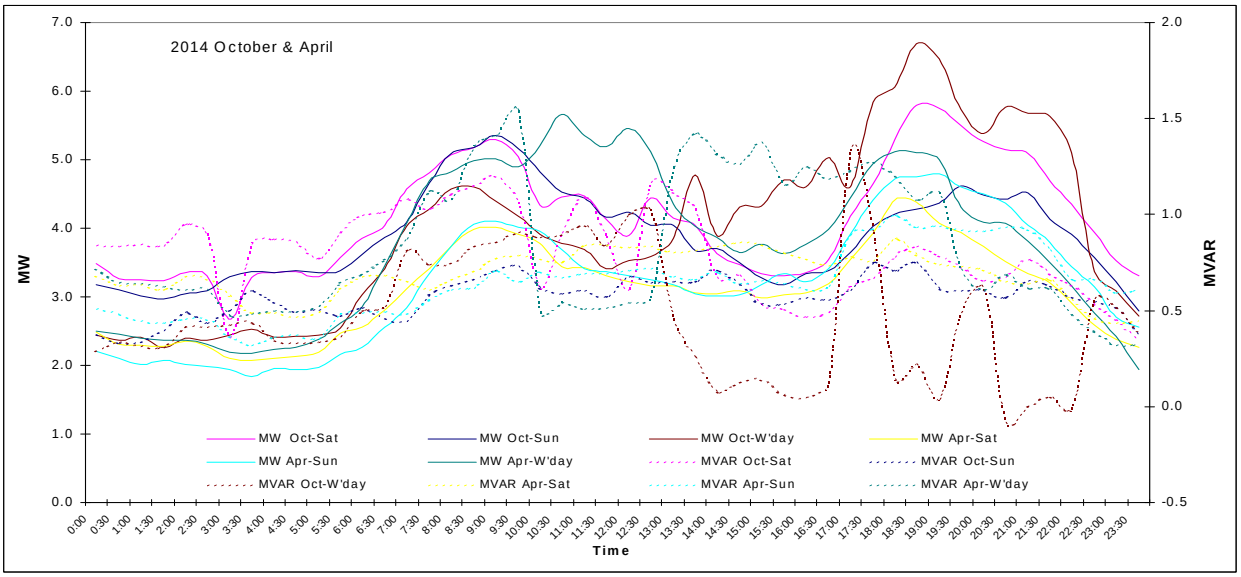
Figure 4-223 Load Profiles:- Weekday, Saturday, Sunday for October & April











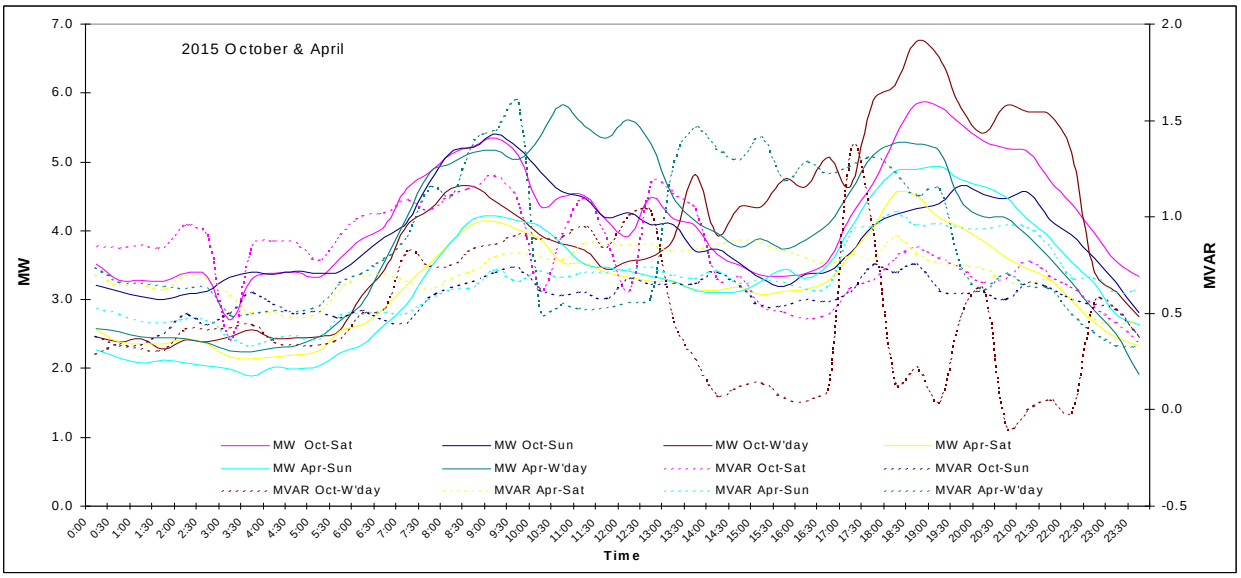
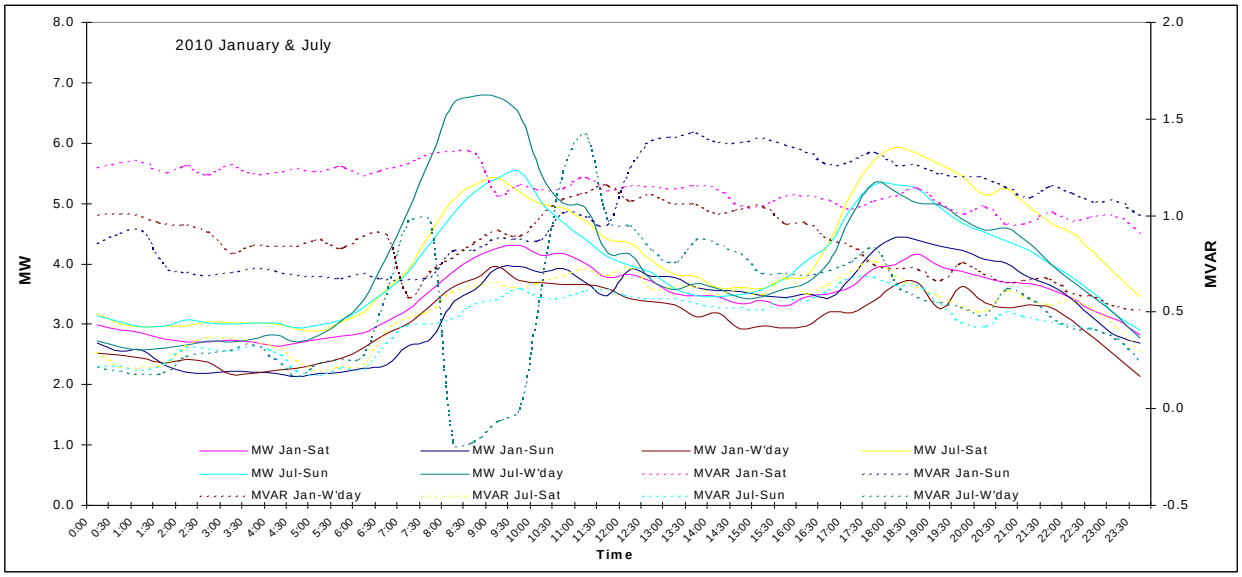
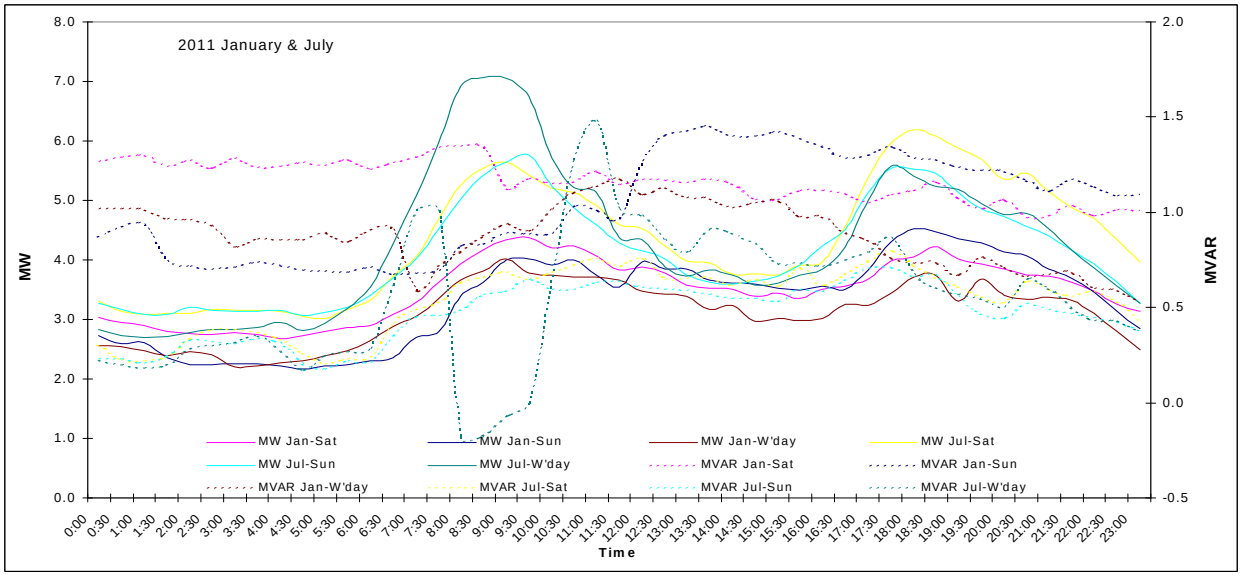
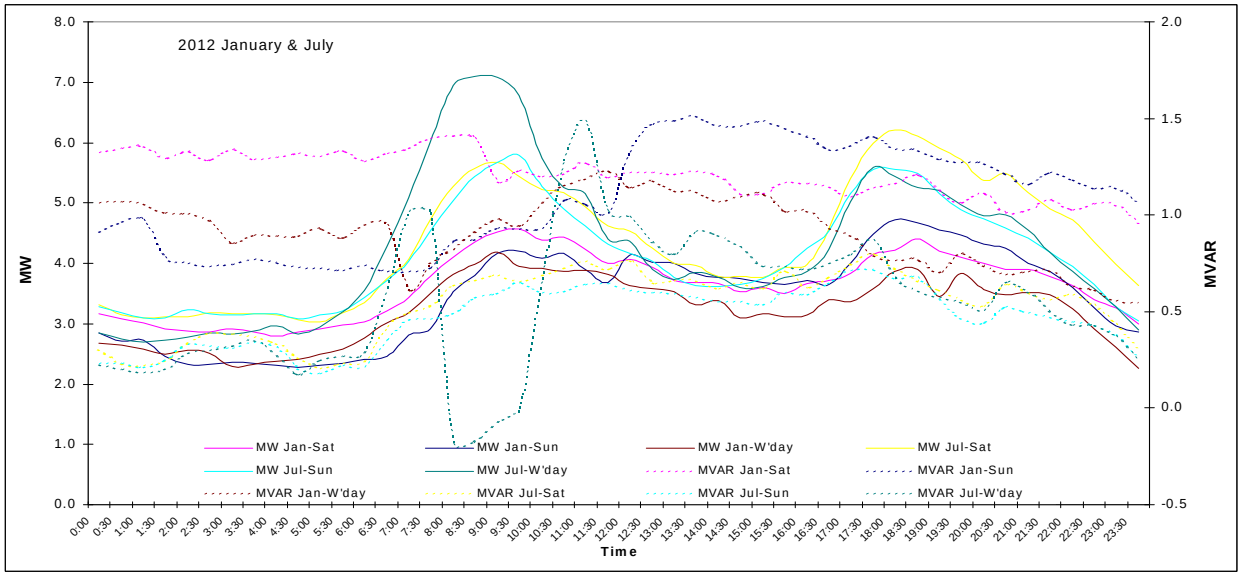
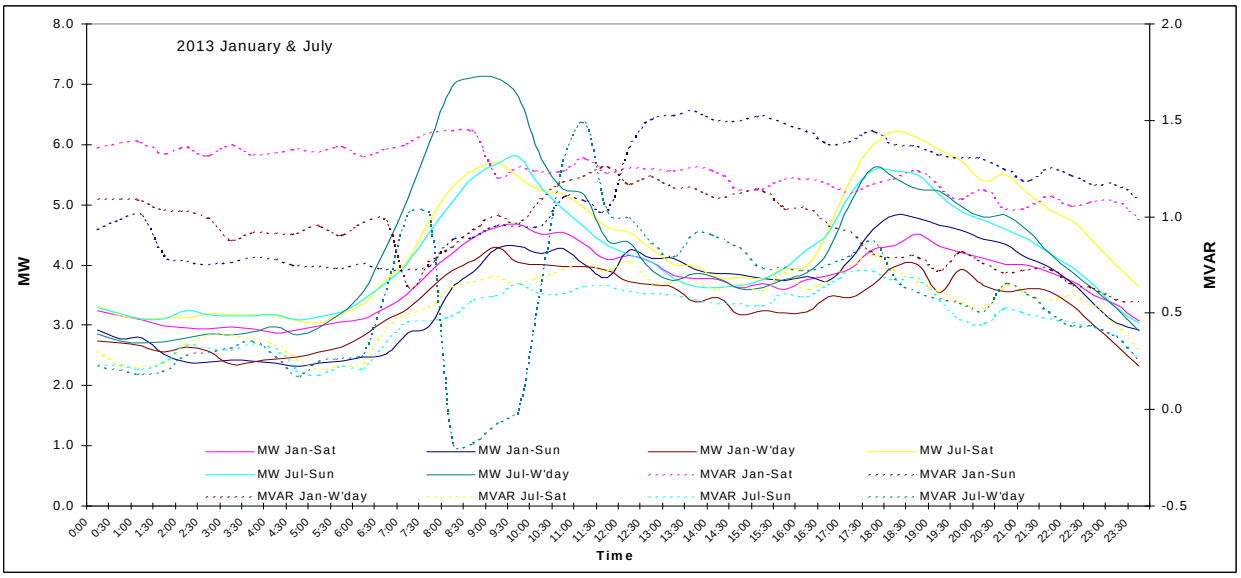


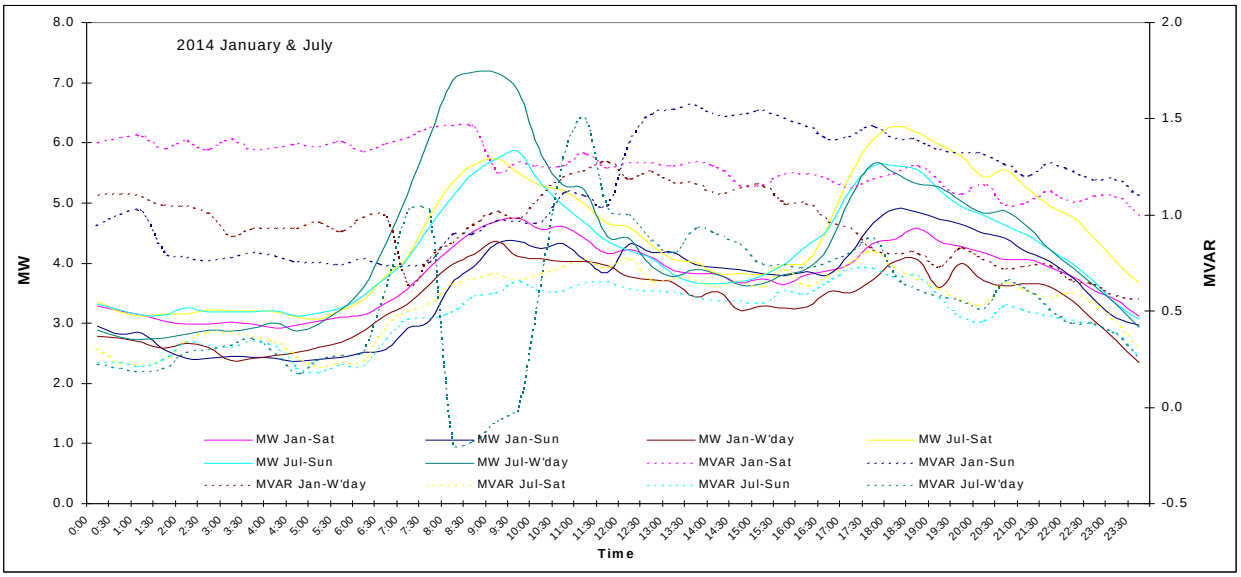
Figure 4-224 Load Profiles: Weekday, Saturday, Sunday for January & July

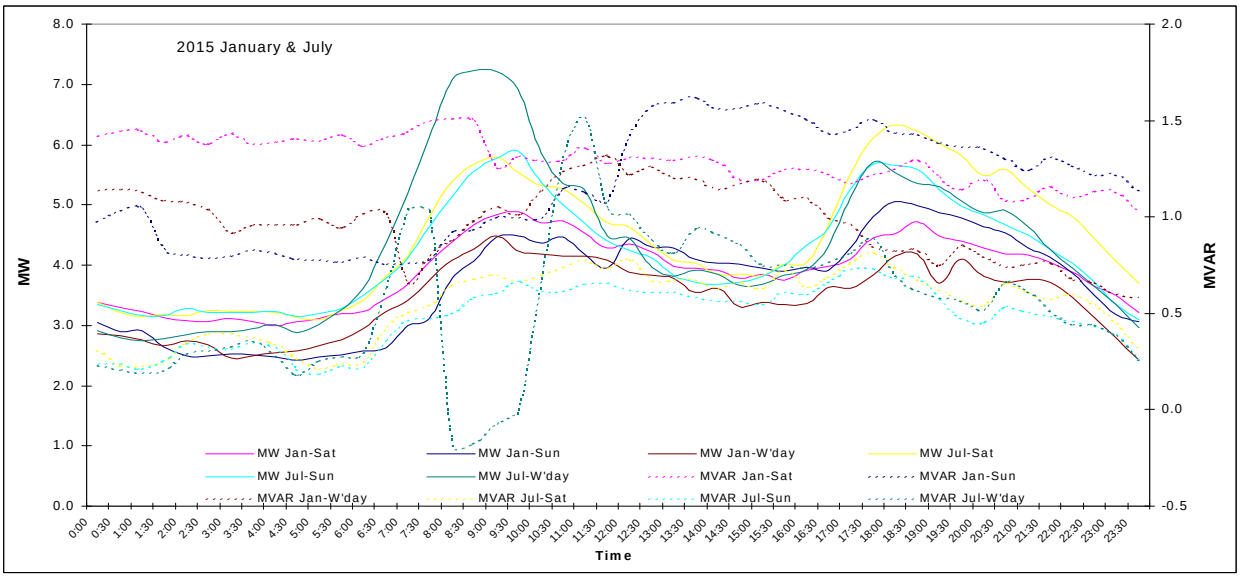












4.5.40 Tungatinah

Description:

The Substation is located at Tungatinah and is known as “Tungatinah Substation”. The substation is owned by Transend.

Table 4-138 Tungatinah Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	4	10	5

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-139 Tungatinah Site Winter load forecast

Tungatinah	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.88	0.90	0.70	0.72	0.88	0.90	0.70	0.72
2006	1.01	1.03	0.77	0.78	1.01	1.03	0.78	0.80
2007	1.17	1.18	0.84	0.84	1.17	1.18	0.85	0.86
2008	1.15	1.16	0.92	0.93	1.15	1.16	0.96	0.97
2009	1.09	10.18	0.72	6.68	1.09	10.18	0.72	6.68
2010	1.06	1.09	0.67	0.69	1.06	1.09	0.68	0.70
2011	1.12	1.16	0.71	0.74	1.13	1.17	0.72	0.74
2012	1.15	1.19	0.73	0.75	1.16	1.19	0.73	0.76
2013	1.17	1.21	0.75	0.77	1.18	1.22	0.75	0.77
2014	1.20	1.24	0.76	0.79	1.21	1.25	0.77	0.79
2015	1.23	1.27	0.78	0.81	1.24	1.28	0.79	0.81
2016	1.27	1.31	0.81	0.83	1.28	1.31	0.81	0.83
2017	1.30	1.34	0.83	0.85	1.31	1.35	0.83	0.86
2018	1.34	1.38	0.85	0.88	1.35	1.39	0.86	0.88
2019	1.38	1.43	0.88	0.91	1.39	1.44	0.88	0.91
2020	1.43	1.47	0.91	0.94	1.44	1.48	0.91	0.94

Table 4-140 Tungatinah Site Summer load forecast

Tungatinah	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.72	0.72	0.57	0.58	0.72	0.72	0.59	0.60
2006	0.66	0.67	0.39	0.40	0.66	0.67	0.40	0.40
2007	0.98	20.52	0.59	12.22	0.98	20.52	0.59	12.35
2008	0.74	0.77	0.50	0.52	0.74	0.77	0.50	0.52
2009	0.84	0.86	0.63	0.65	0.84	0.86	0.65	0.67
2010	0.64	0.64	0.64	0.64	0.64	0.64	0.66	0.66
2011	0.63	0.63	0.63	0.63	0.66	0.66	0.66	0.66
2012	0.63	0.63	0.63	0.63	0.66	0.66	0.66	0.66
2013	0.62	0.62	0.62	0.62	0.65	0.65	0.65	0.65
2014	0.61	0.61	0.61	0.61	0.64	0.64	0.64	0.64
2015	0.61	0.61	0.61	0.61	0.64	0.64	0.64	0.64
2016	0.59	0.59	0.59	0.59	0.62	0.62	0.62	0.62
2017	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.63
2018	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.63
2019	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.63
2020	0.60	0.60	0.60	0.60	0.63	0.63	0.63	0.63

Figure 4-225 Tungatinah Site Summer Load Forecast at 50% and 10% POE

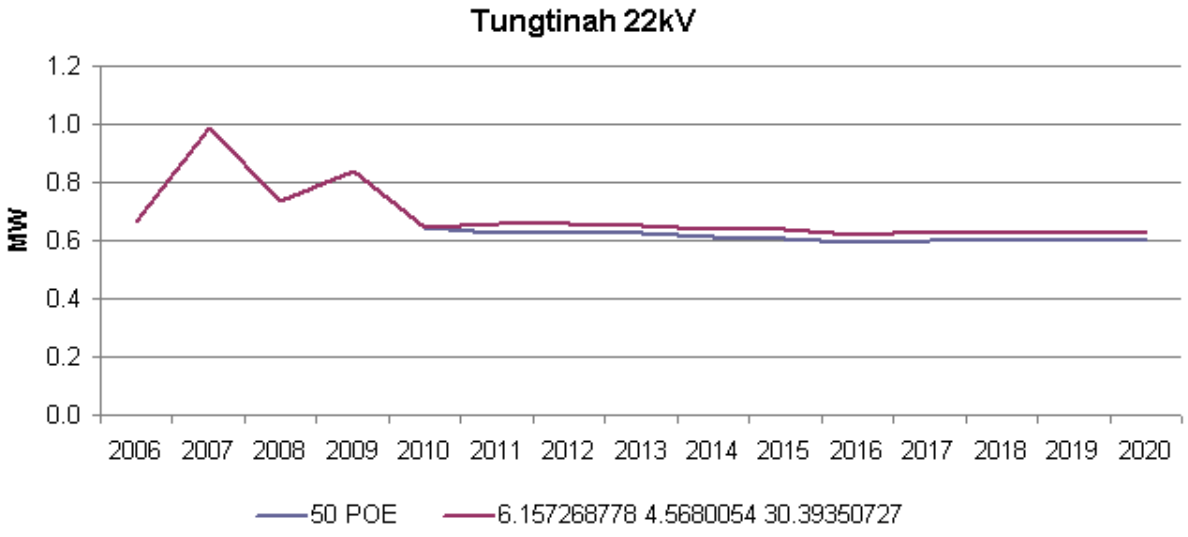
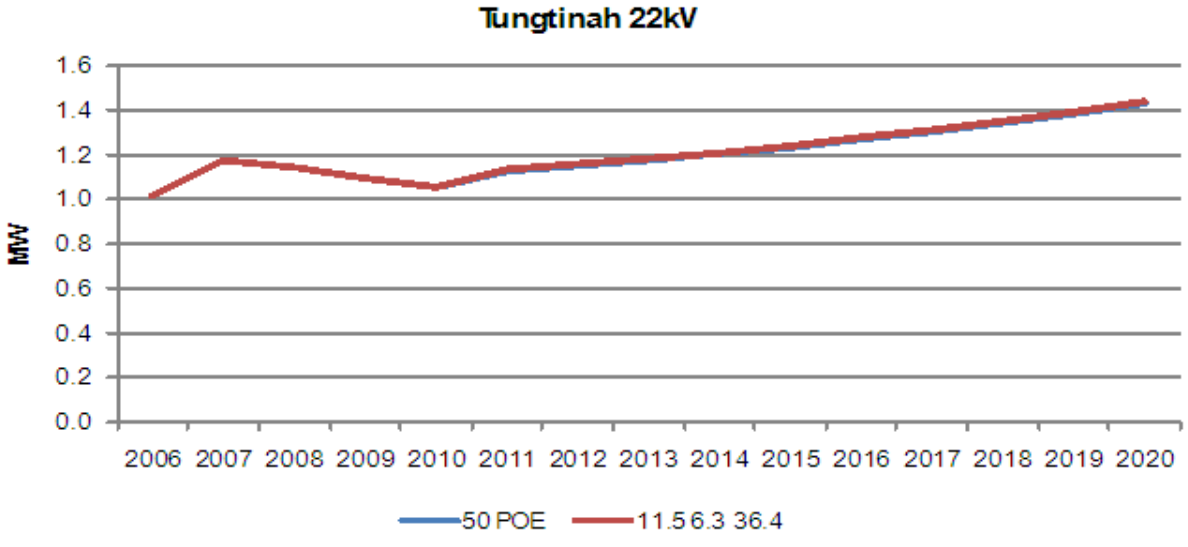
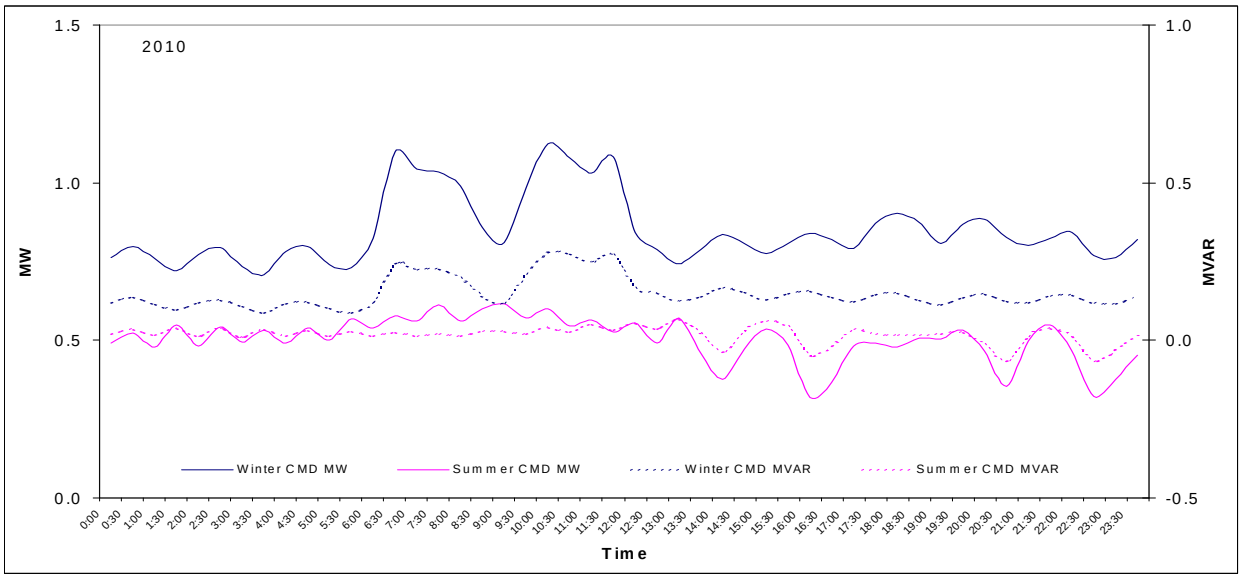


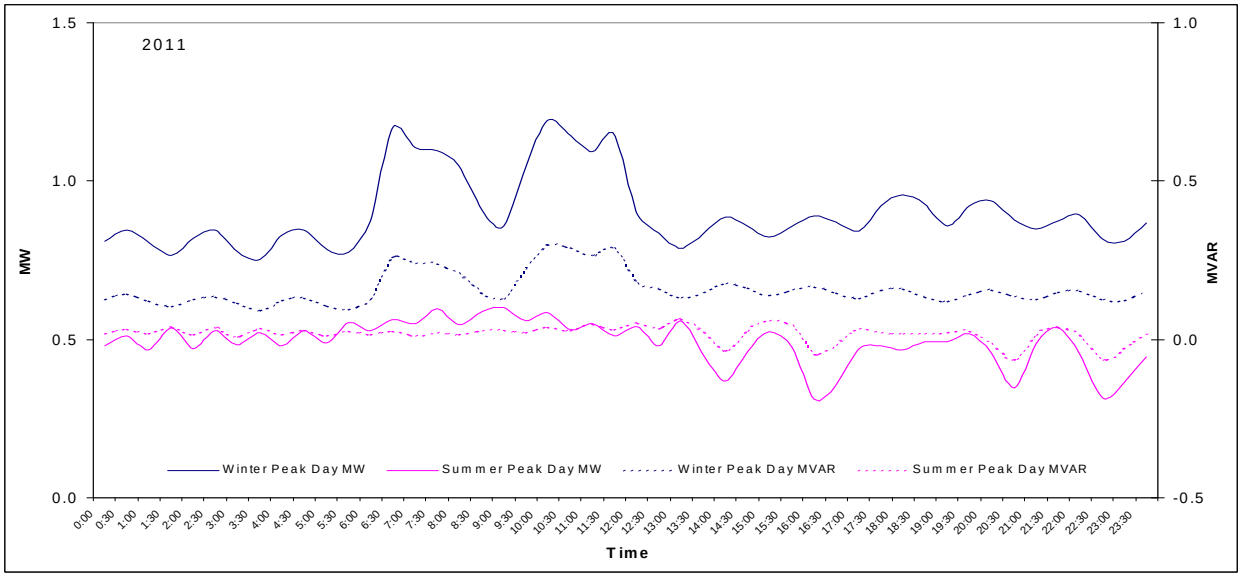
Figure 4-226 Tungatinah Site Winter Load Forecast at 50% and 10% POE

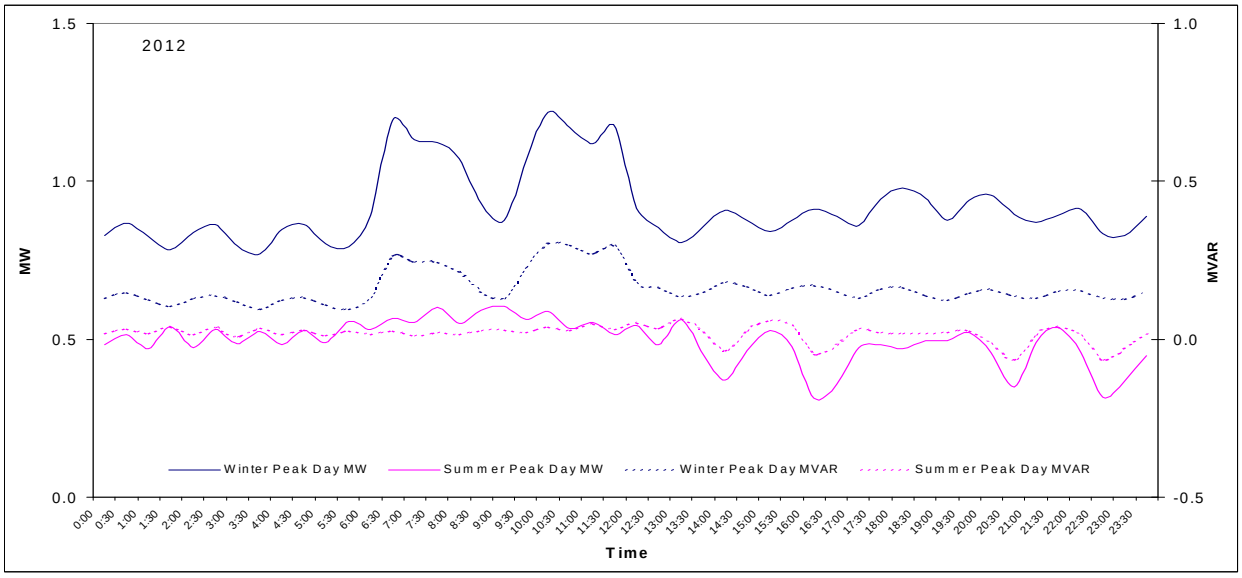


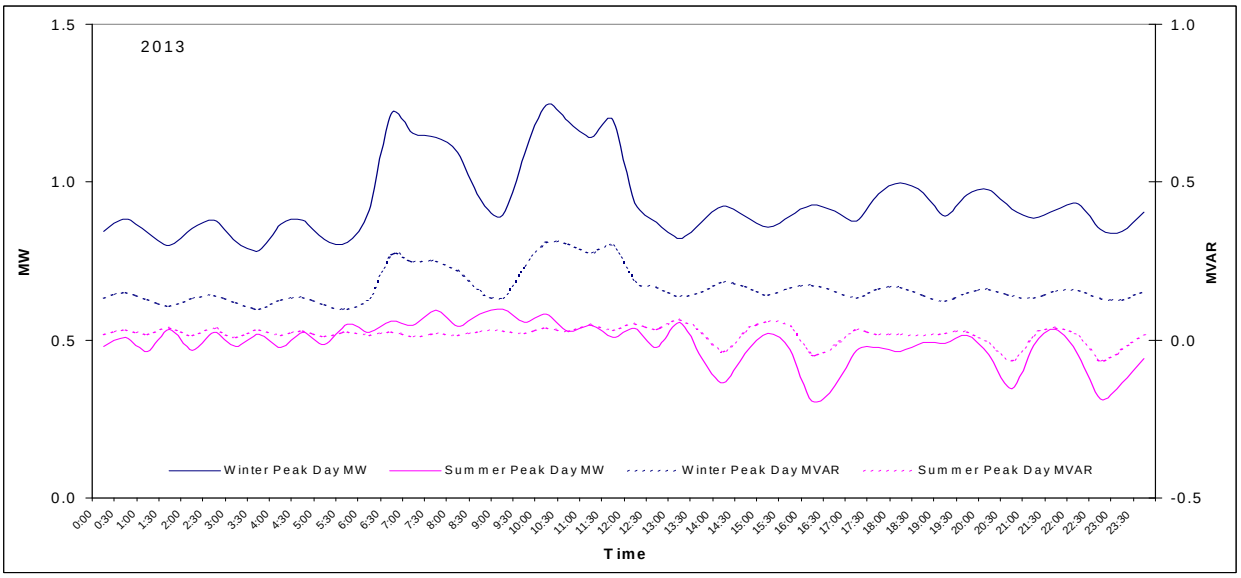
Load Profiles:

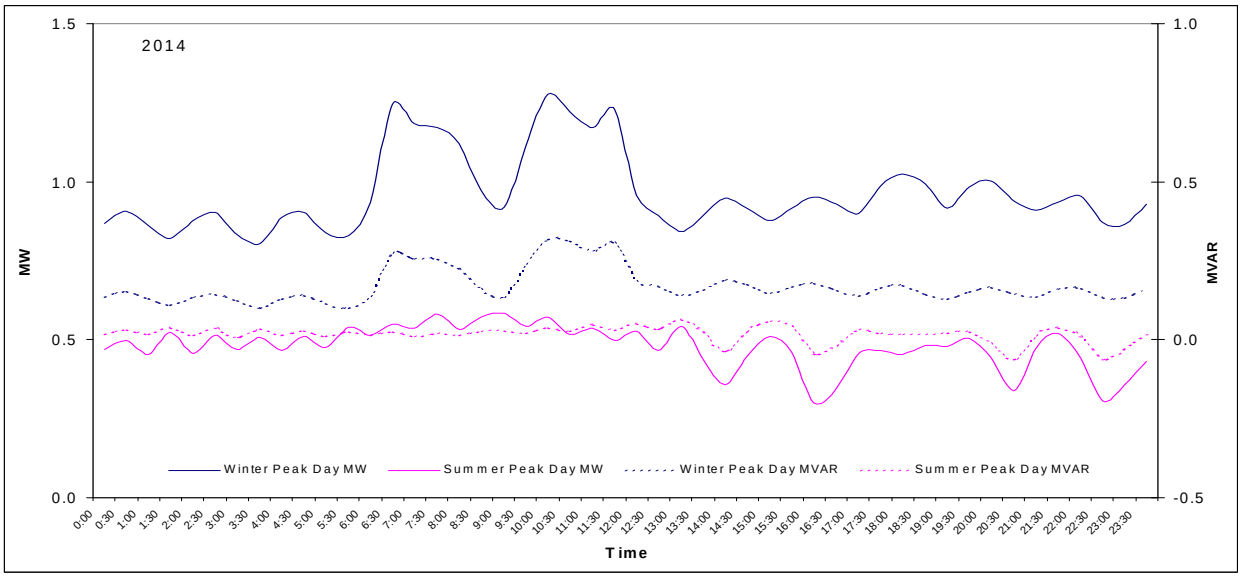
Figure 4-227 Load Profiles: Tungatinah Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

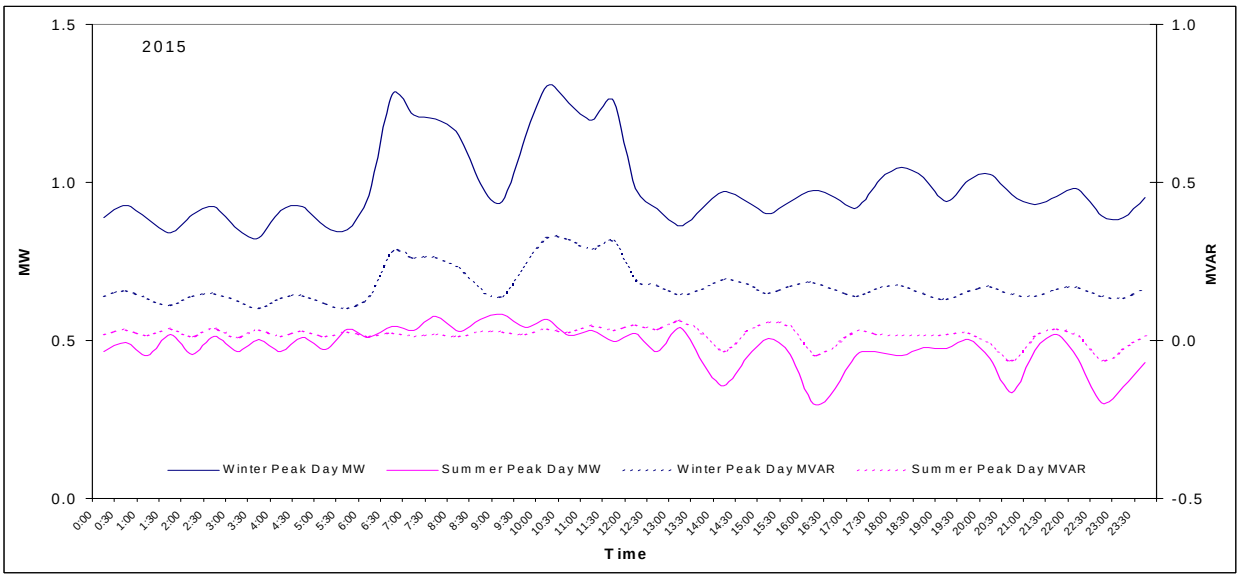
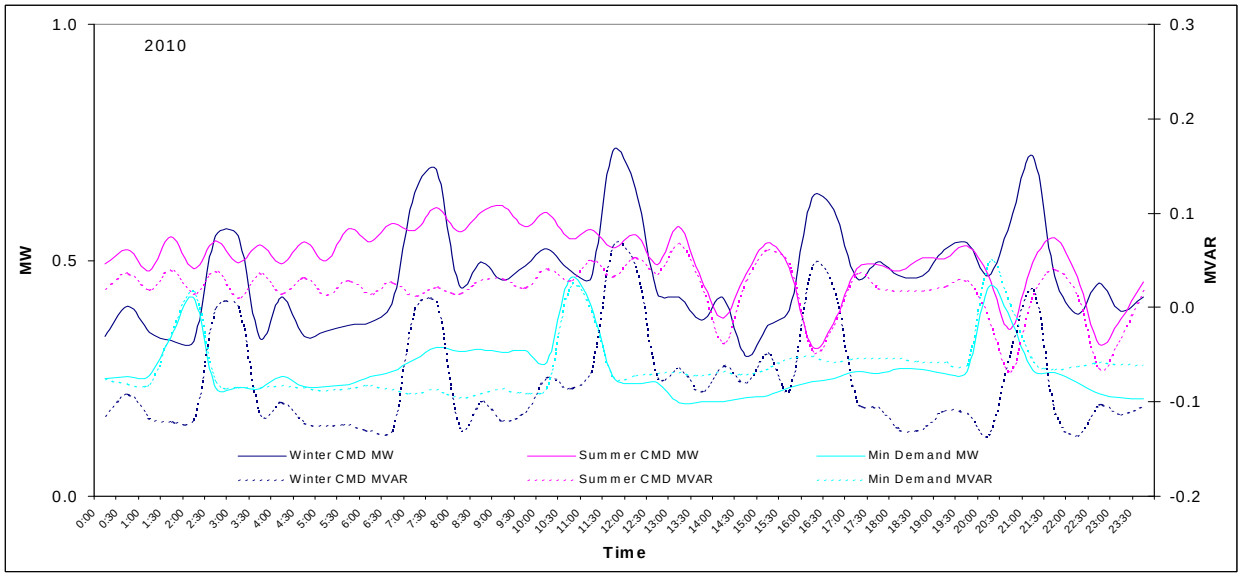
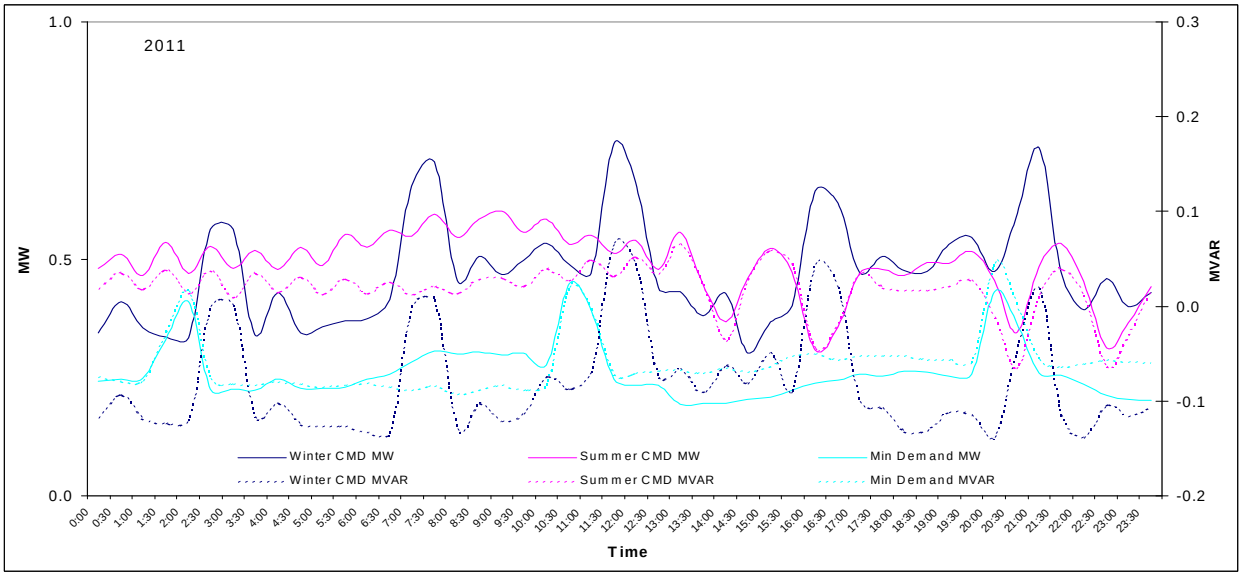
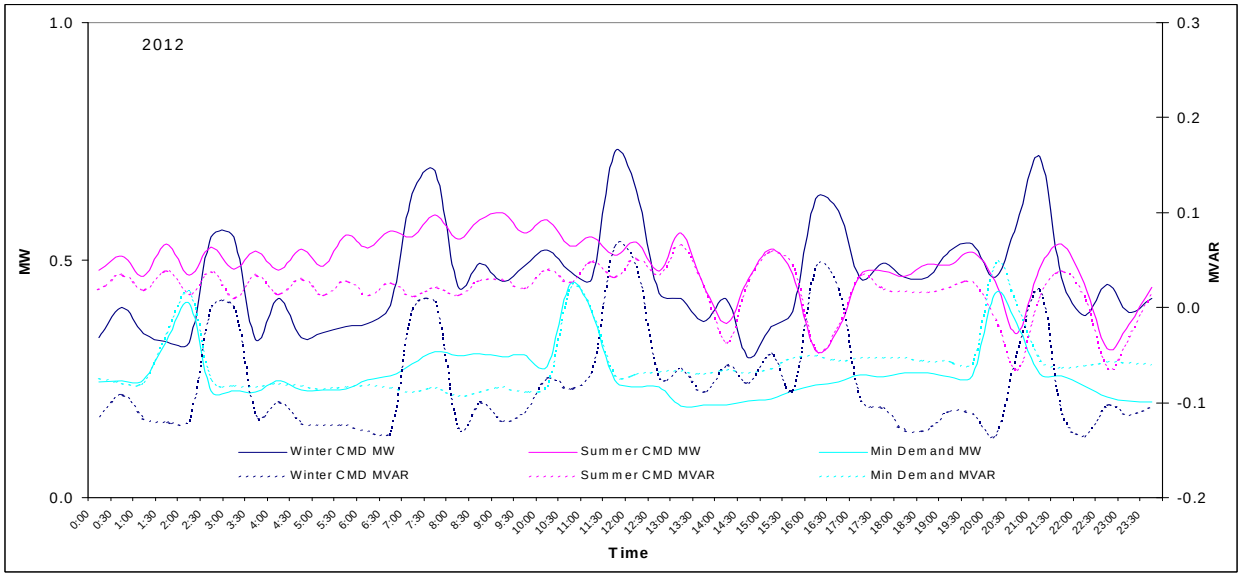
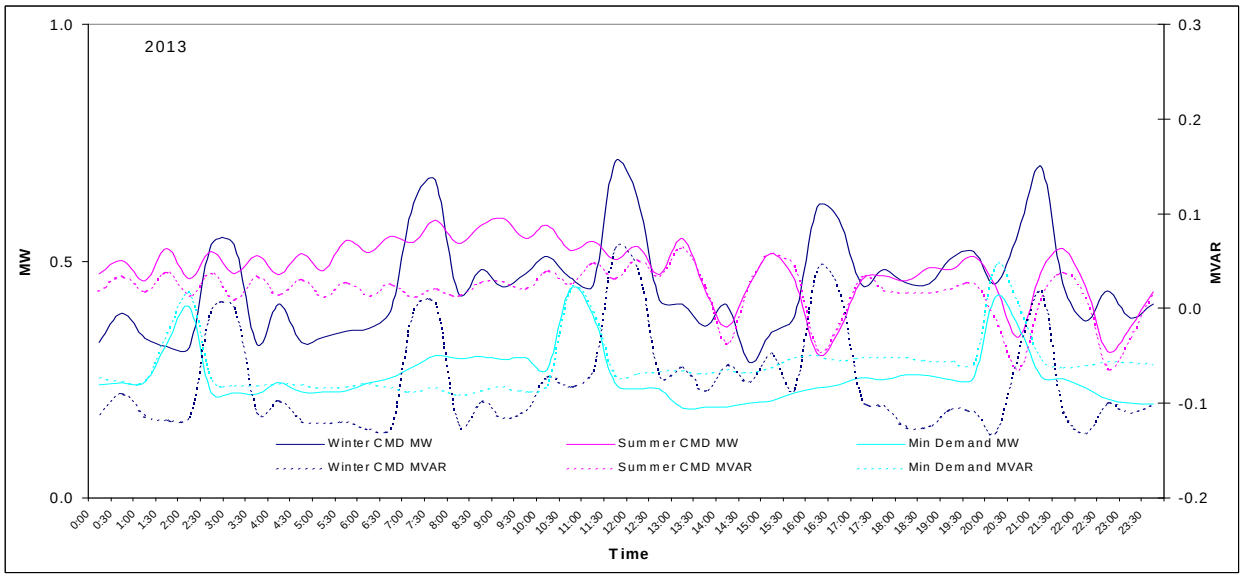

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

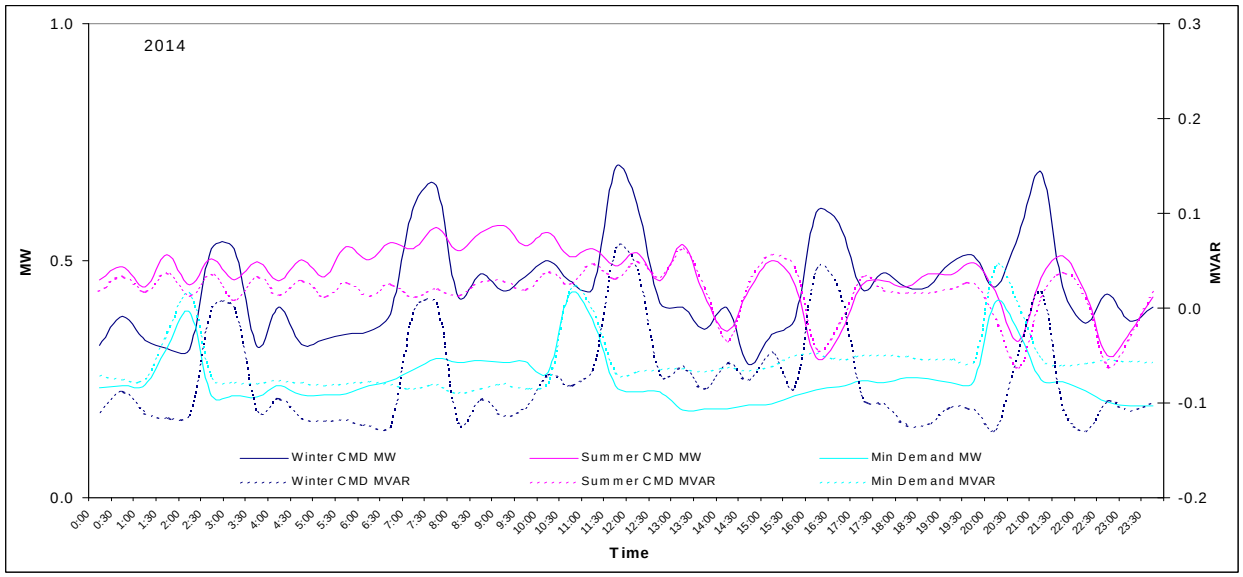
Figure 4-228 Load Profiles: Tungatinah Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

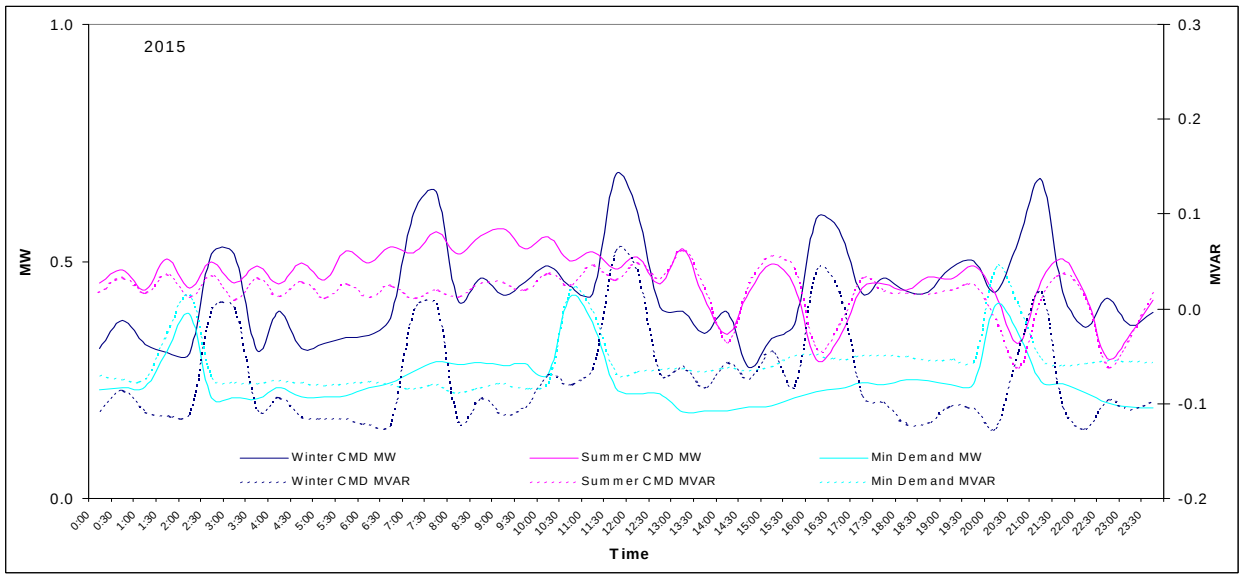
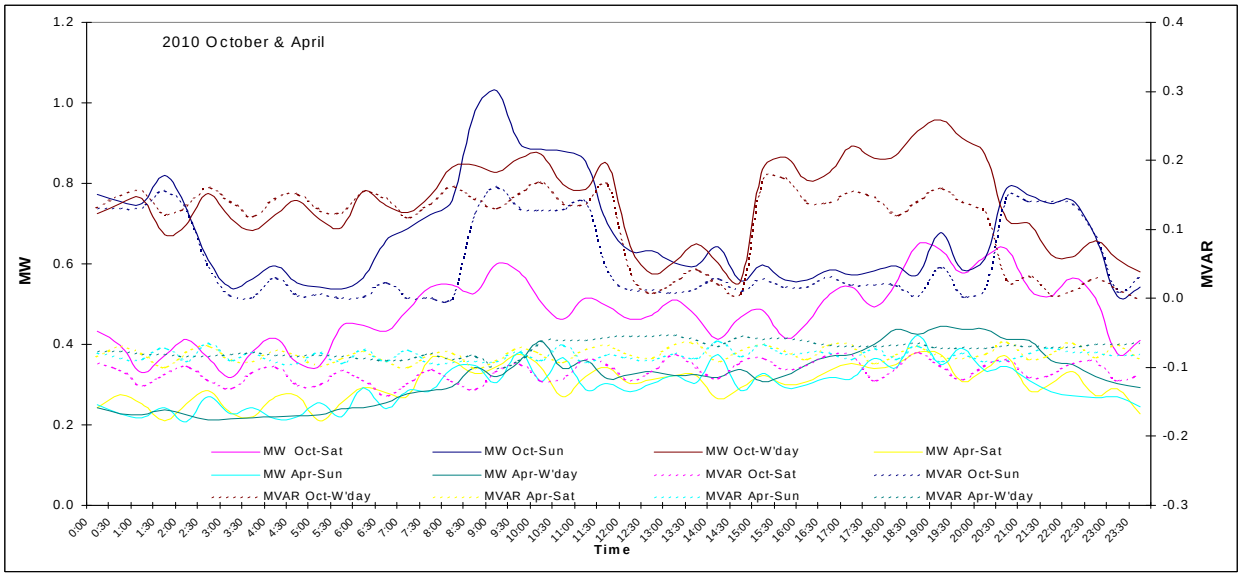
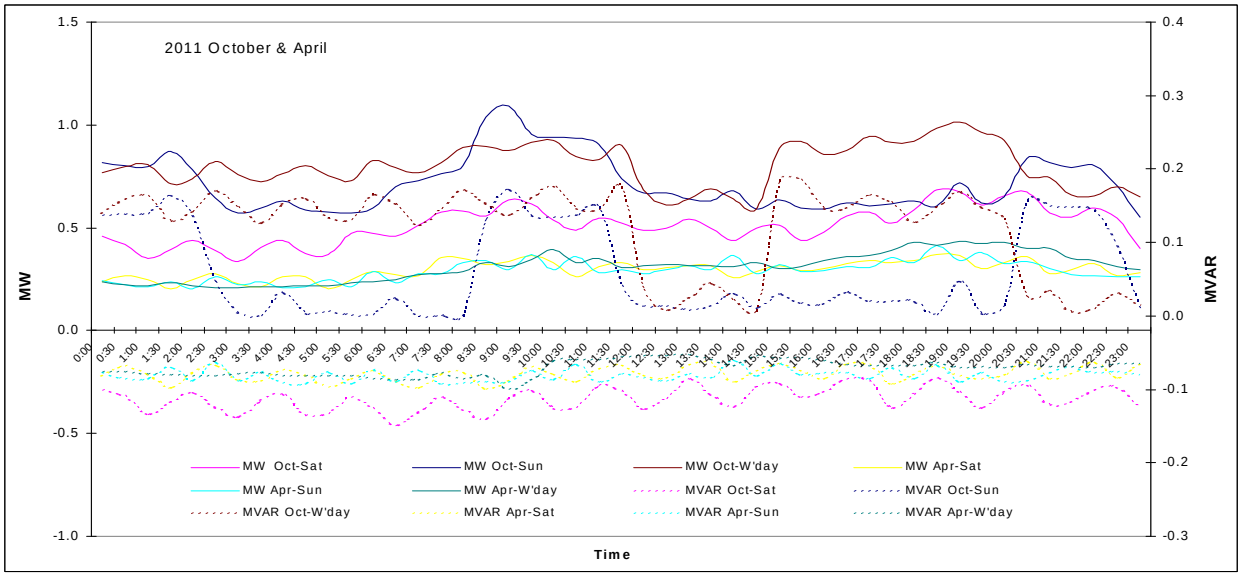
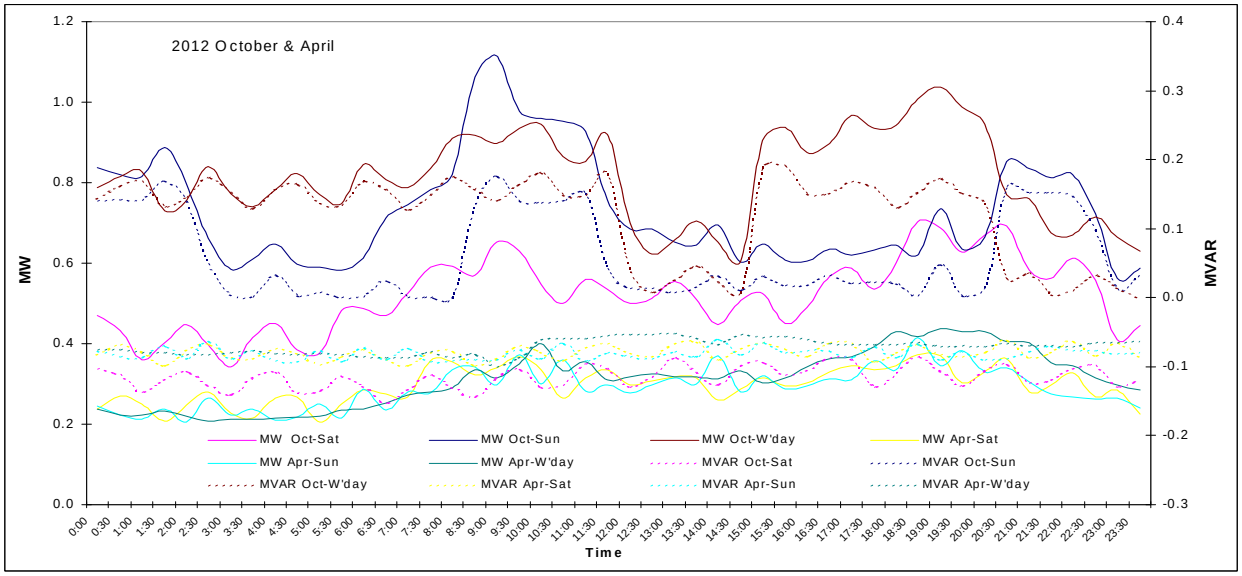
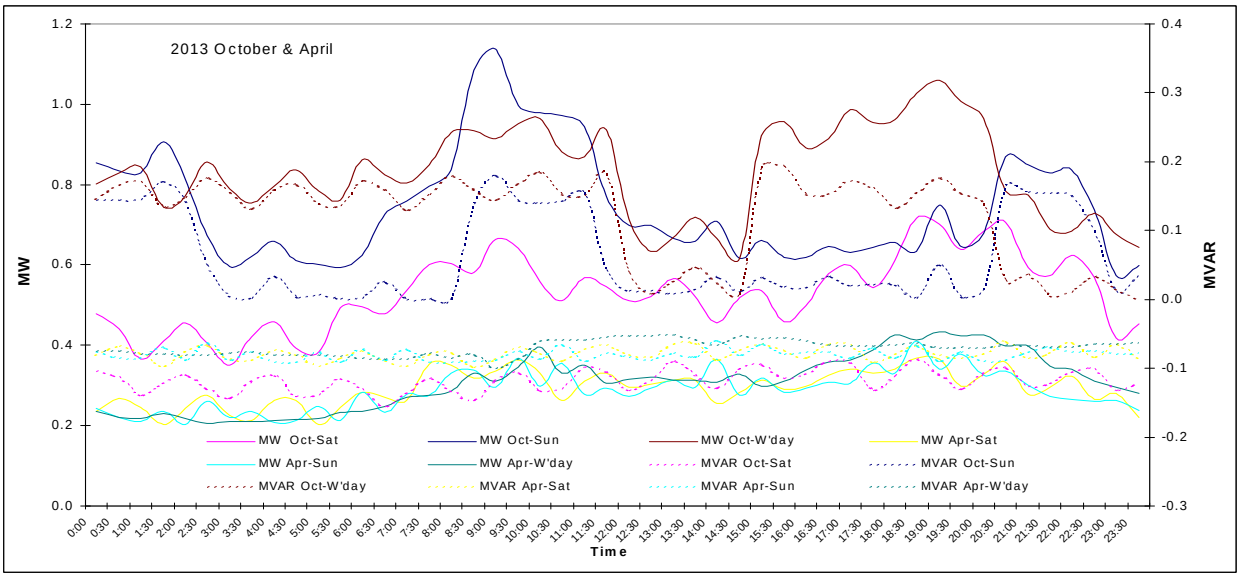

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

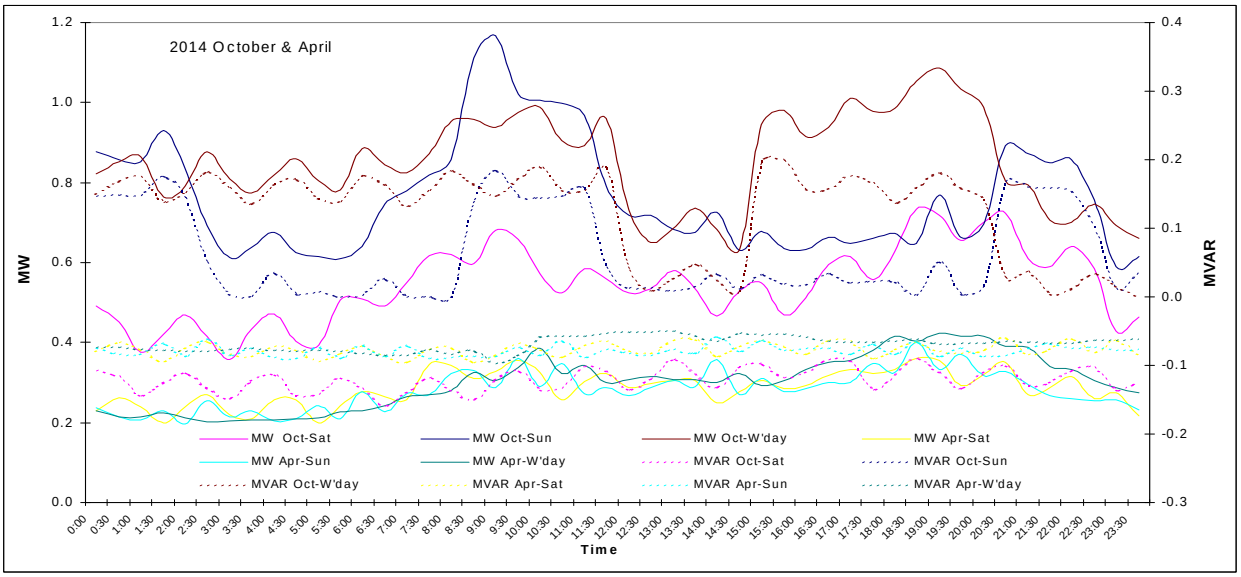
Figure 4-229 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

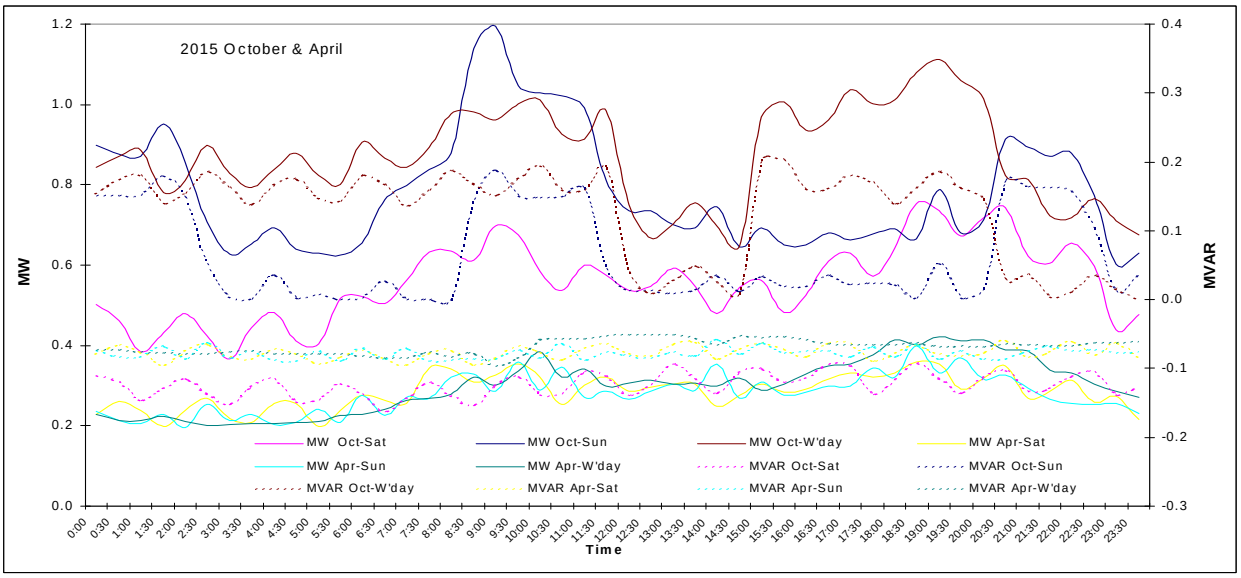
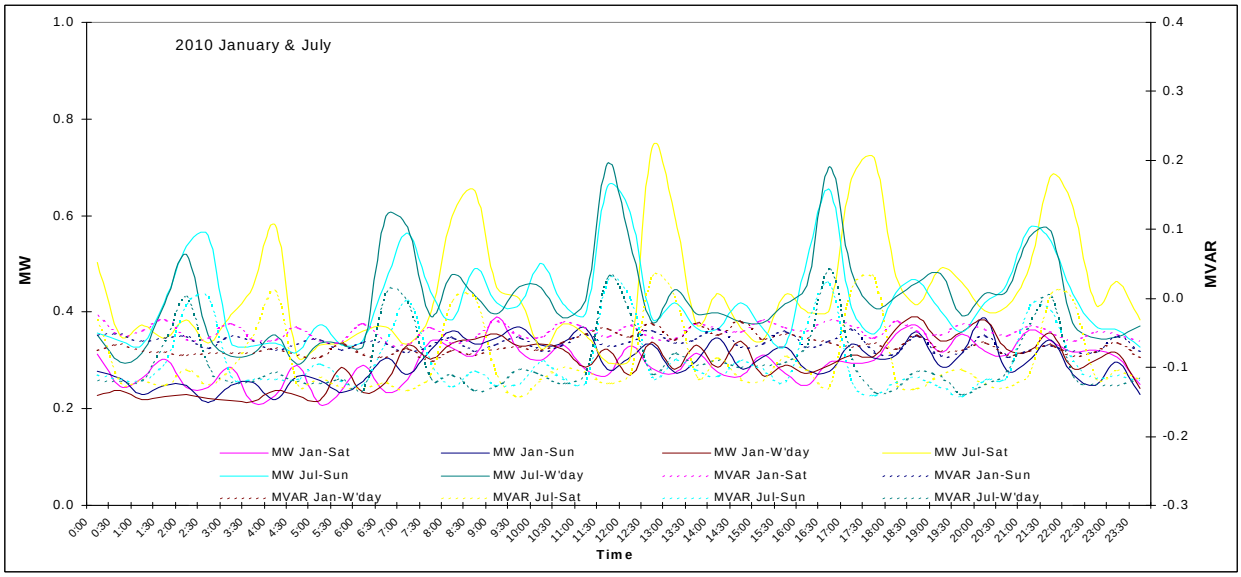
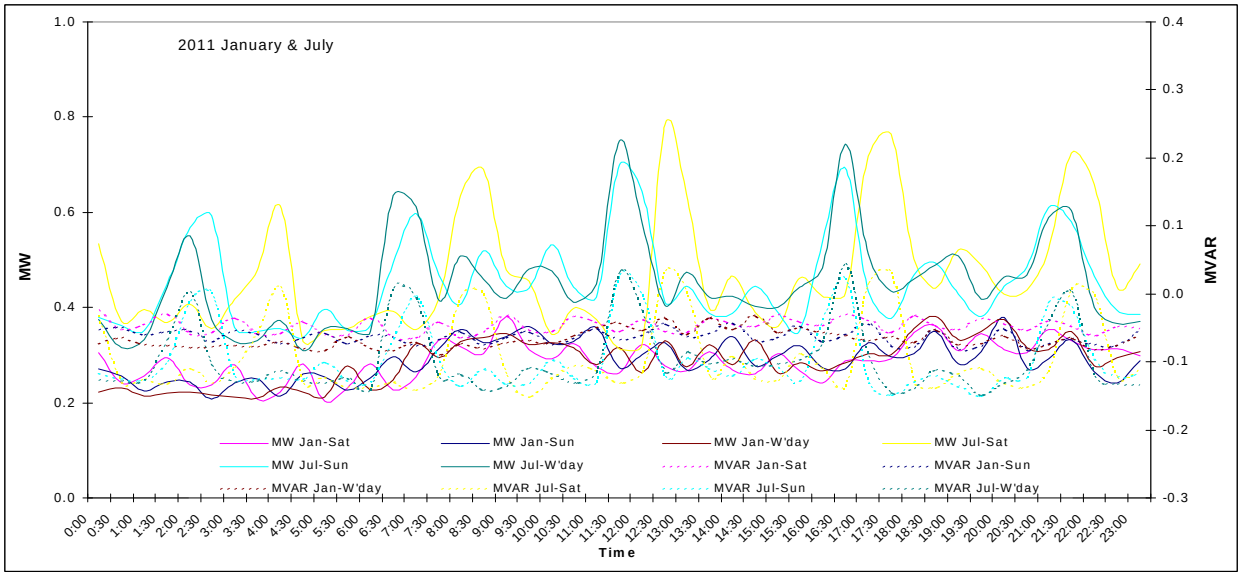
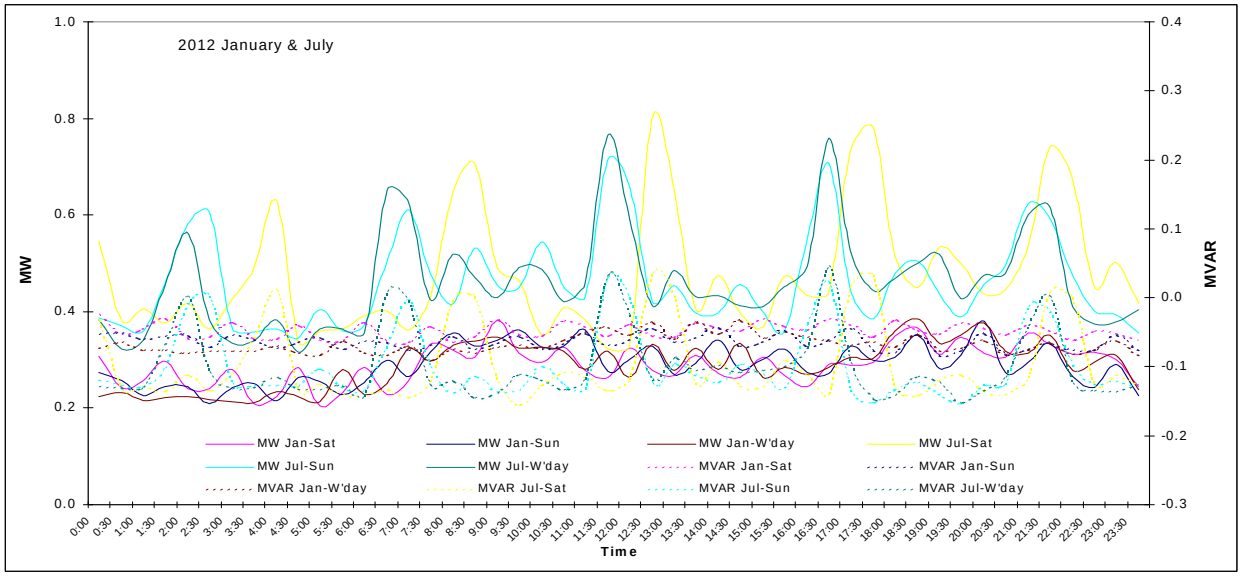
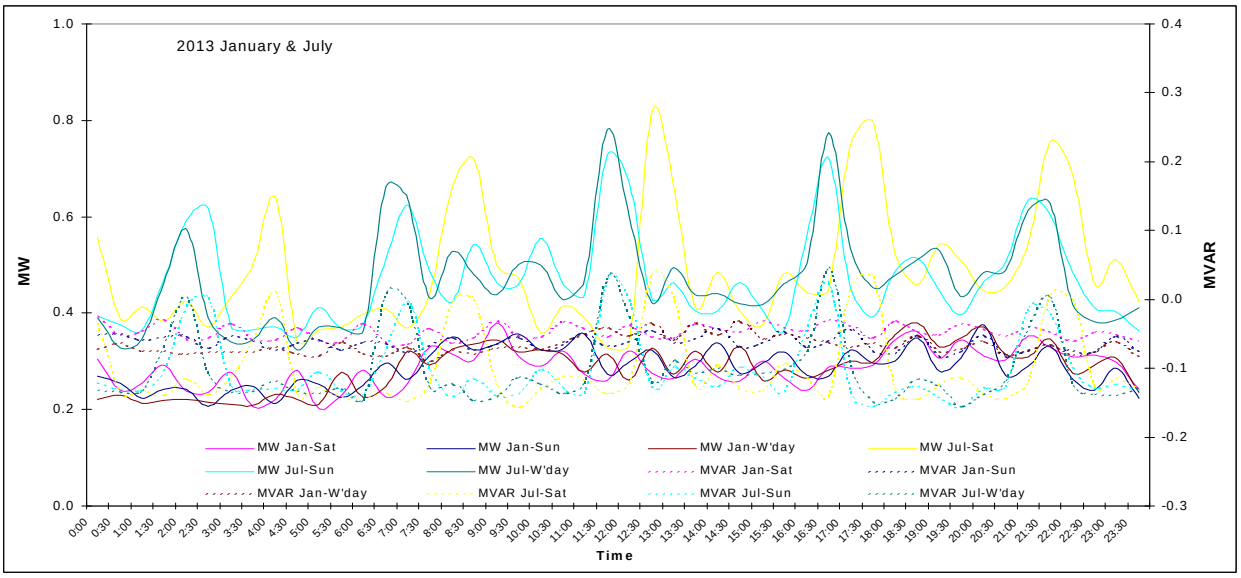

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

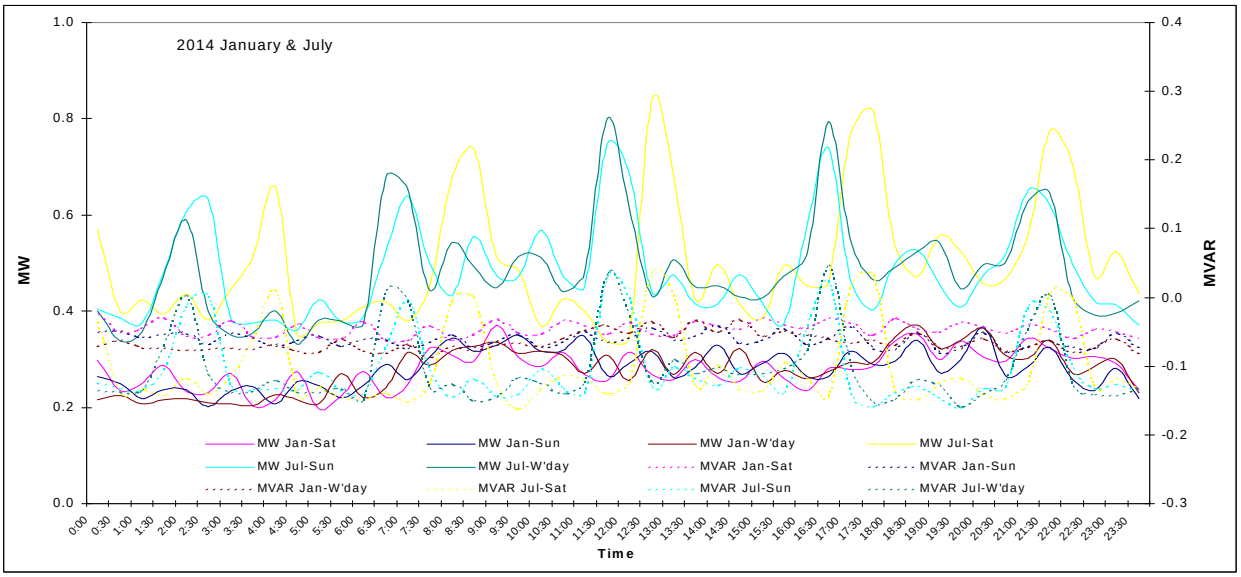
Figure 4-230 Load Profiles: Weekday, Saturday, Sunday for January & July

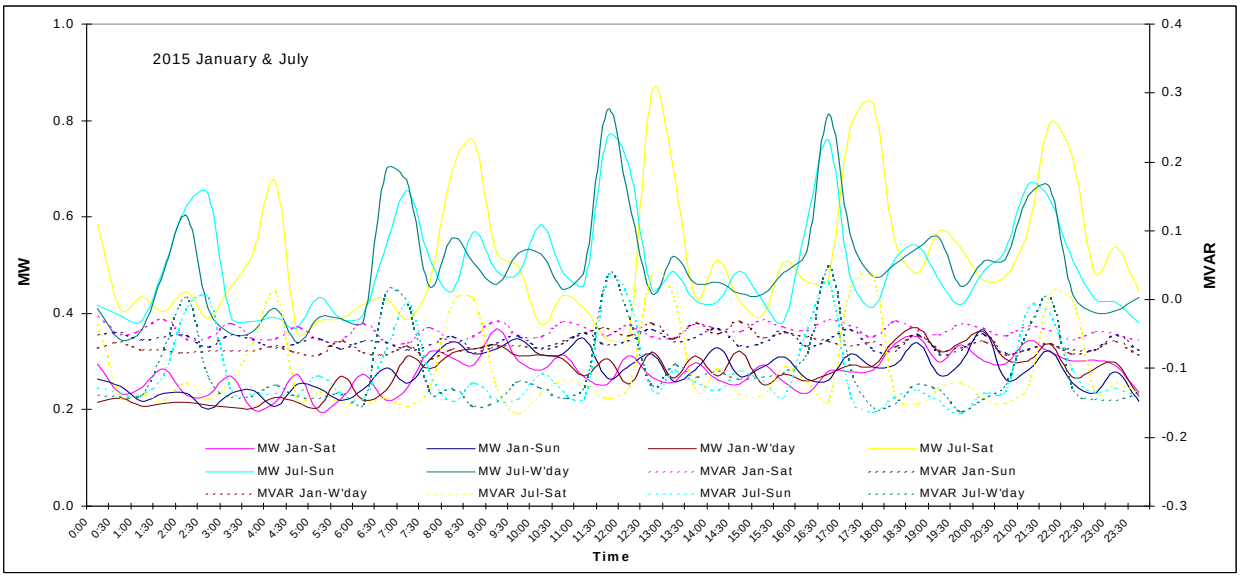







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.41 Ulverstone

Description:

The Substation is located at Ulverstone and is known as “Ulverstone Substation”. The substation is owned by Transend.

Table 4-141 Ulverstone Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	22	8	90	45

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-142 Ulverstone Site Winter load demand forecast

Ulverstone	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	37.24	38.41	34.90	35.99	37.24	38.41	35.29	36.39
2006	36.62	37.70	36.25	37.33	36.62	37.70	36.71	37.80
2007	38.79	39.84	38.78	39.83	38.79	39.84	39.25	40.32
2008	39.57	40.40	39.57	40.40	39.57	40.40	40.07	40.90
2009	36.39	36.92	34.28	34.78	36.39	36.92	34.80	35.30
2010	37.55	37.82	34.15	34.40	37.55	37.82	34.51	34.76
2011	38.87	39.16	35.36	35.61	39.02	39.30	35.49	35.75
2012	38.71	38.99	35.21	35.47	38.86	39.14	35.34	35.60
2013	38.46	38.74	34.98	35.24	38.64	38.92	35.15	35.41
2014	38.48	38.76	35.00	35.26	38.65	38.93	35.15	35.41
2015	38.48	38.77	35.00	35.26	38.68	38.97	35.18	35.44
2016	38.59	38.88	35.10	35.36	38.78	39.07	35.28	35.53
2017	38.70	38.98	35.20	35.46	38.91	39.20	35.39	35.65
2018	38.96	39.25	35.44	35.70	39.16	39.45	35.62	35.88
2019	39.32	39.61	35.77	36.03	39.57	39.86	35.99	36.25
2020	39.78	40.07	36.18	36.45	40.02	40.31	36.40	36.66

Table 4-143 Ulverstone Site Summer load forecast

Ulverstone	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	25.90	28.43	23.60	25.91	25.90	28.43	23.60	25.91
2006	25.59	27.40	24.97	26.74	25.59	27.40	25.14	26.92
2007	28.45	29.92	27.46	28.88	28.45	29.92	27.77	29.21
2008	26.87	28.14	26.87	28.14	26.87	28.14	27.12	28.40
2009	26.18	26.99	25.41	26.20	26.18	26.99	25.41	26.20
2010	25.58	26.48	21.96	22.73	25.58	26.48	22.14	22.92
2011	25.09	25.96	21.53	22.28	25.74	26.64	22.09	22.86
2012	25.35	26.23	21.75	22.52	26.02	26.93	22.33	23.11
2013	25.17	26.05	21.60	22.36	25.85	26.75	22.18	22.96
2014	24.73	25.60	21.23	21.97	25.37	26.25	21.77	22.53
2015	24.70	25.57	21.20	21.94	25.34	26.23	21.75	22.51
2016	24.22	25.07	20.79	21.51	24.88	25.75	21.35	22.10
2017	24.65	25.52	21.16	21.90	25.30	26.18	21.71	22.47
2018	24.72	25.58	21.21	21.96	25.38	26.27	21.78	22.54
2019	24.80	25.67	21.29	22.03	25.45	26.35	21.85	22.61
2020	24.93	25.80	21.40	22.15	25.58	26.48	21.96	22.73

Figure 4-231 Ulverstone Site Summer Load Forecast at 50% and 10% POE

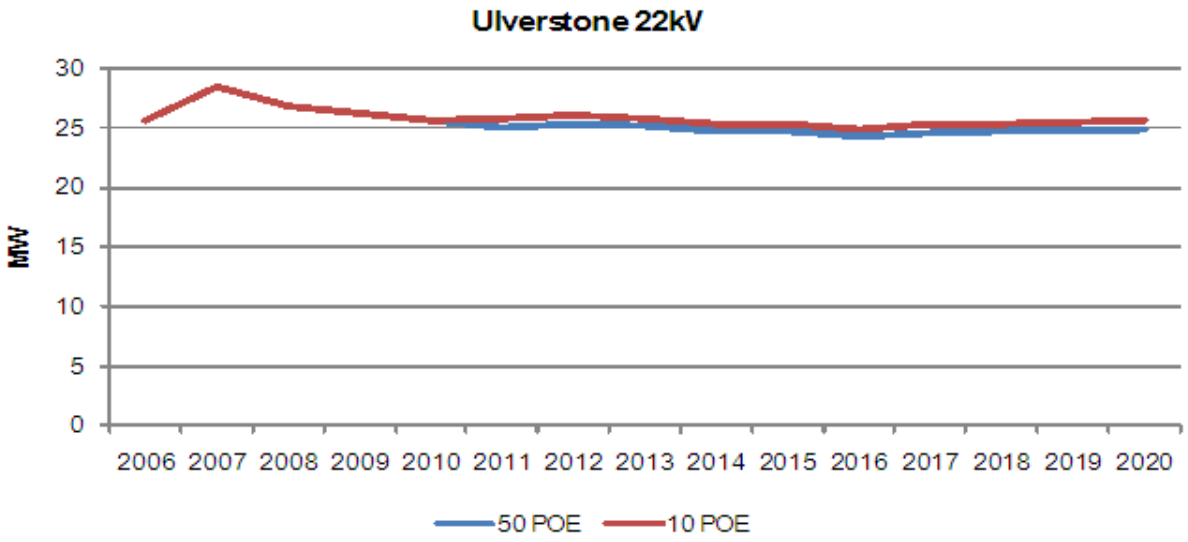
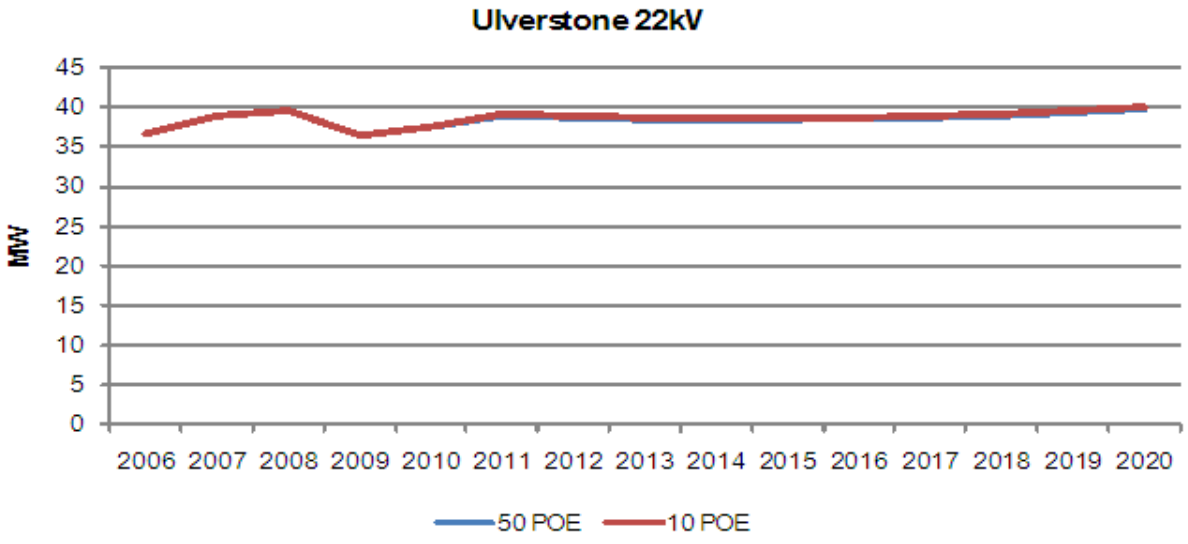
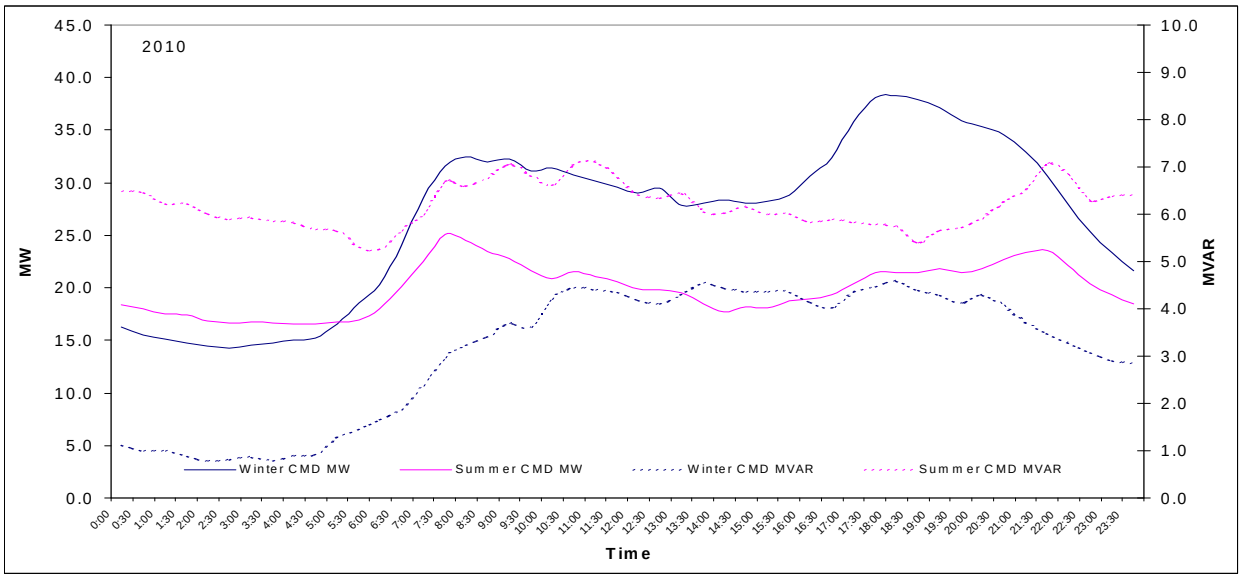


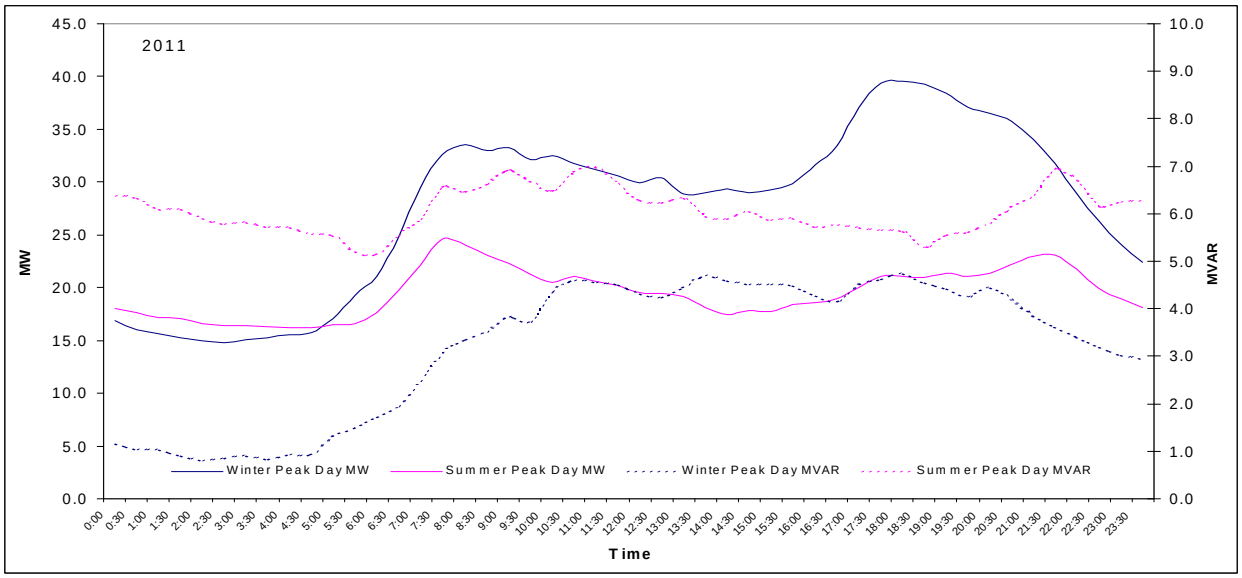
Figure 4-232 Ulverstone Site Winter Load Forecast at 50% and 10% POE



Load Profiles:

Figure 4-233 Load Profiles: Ulverstone Substation Day of Summer/Winter Peak Demand






2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Summer Peak Day MVAR
Winter Peak Day MVAR

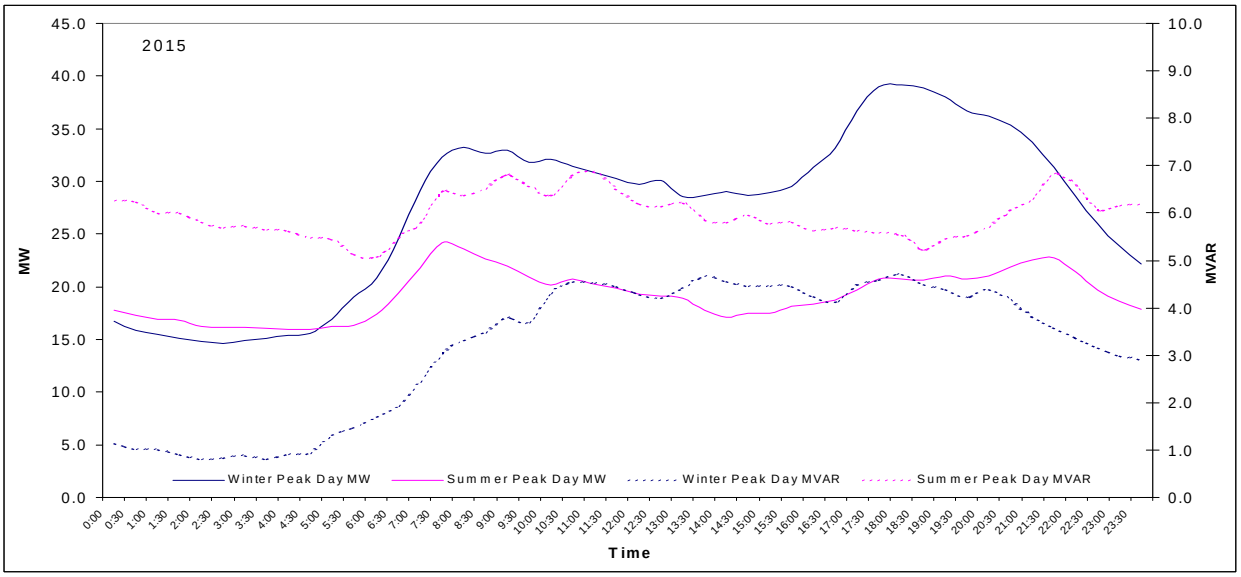
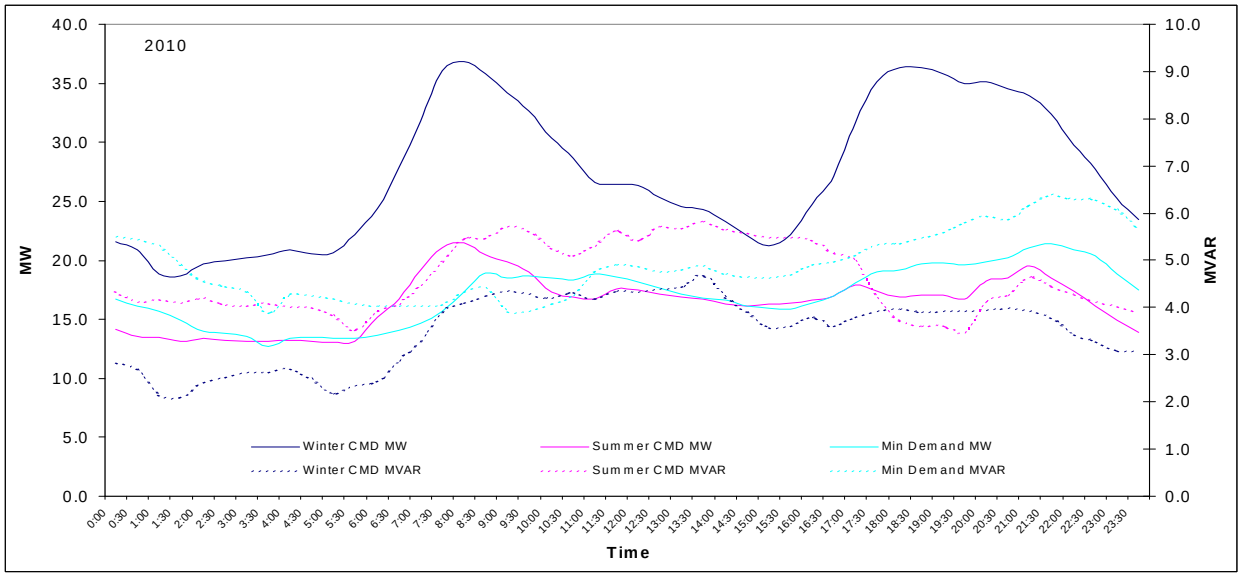
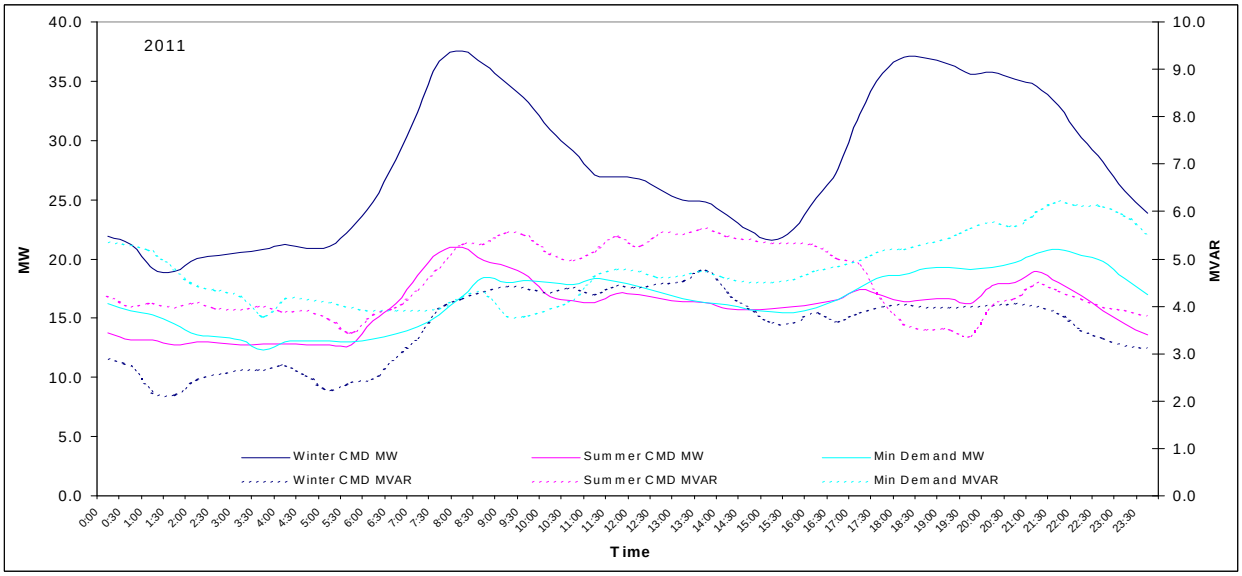
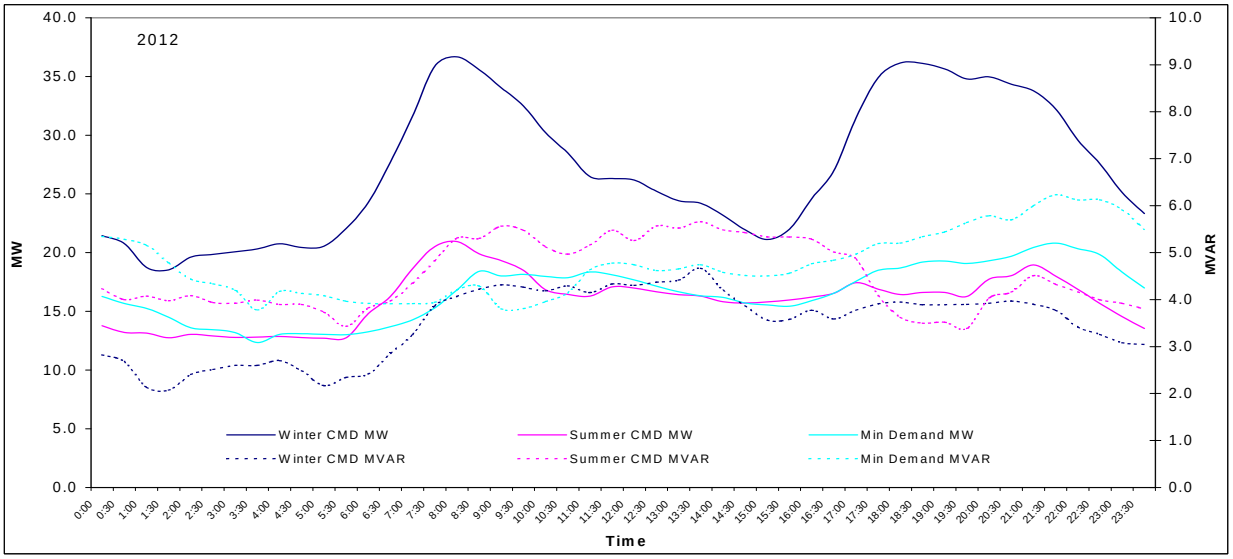
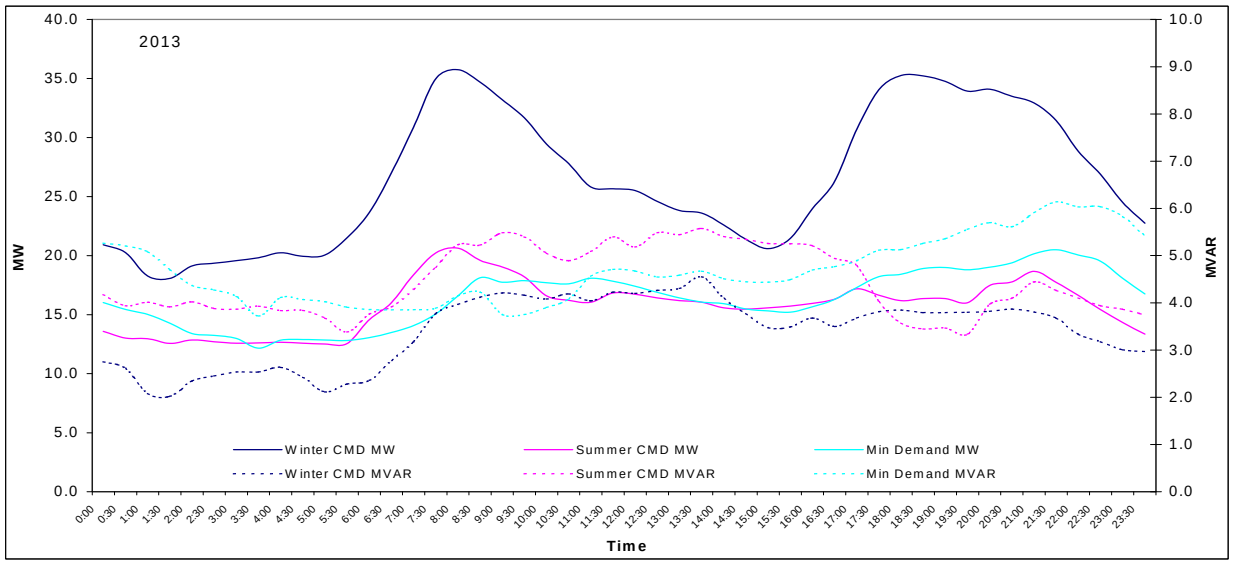

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

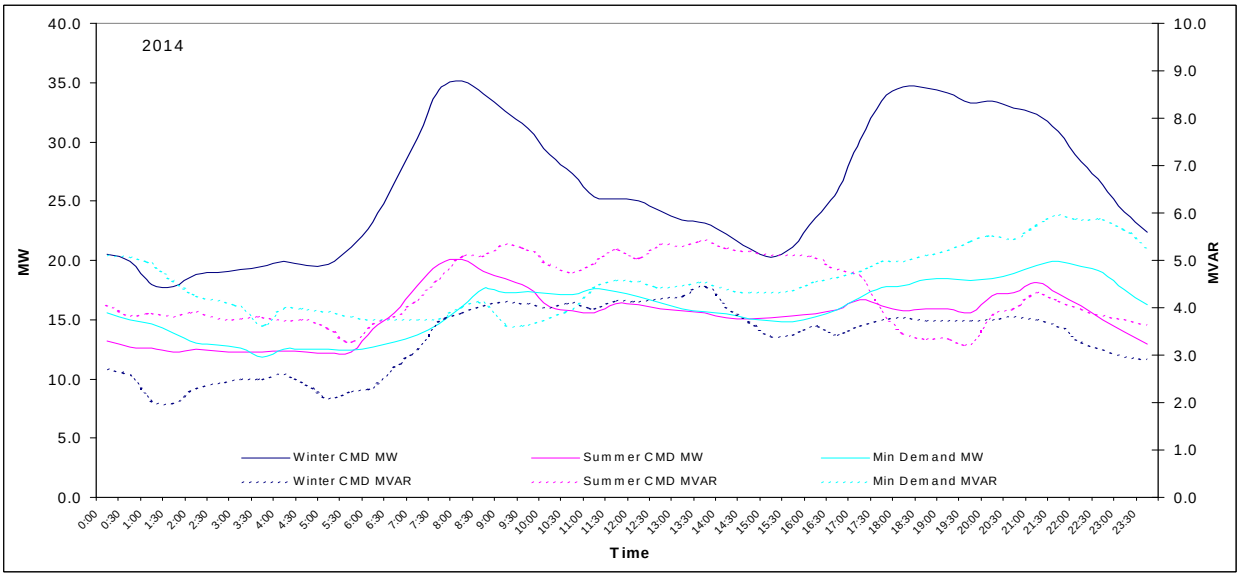
Figure 4-234 Load Profiles: Ulverstone Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

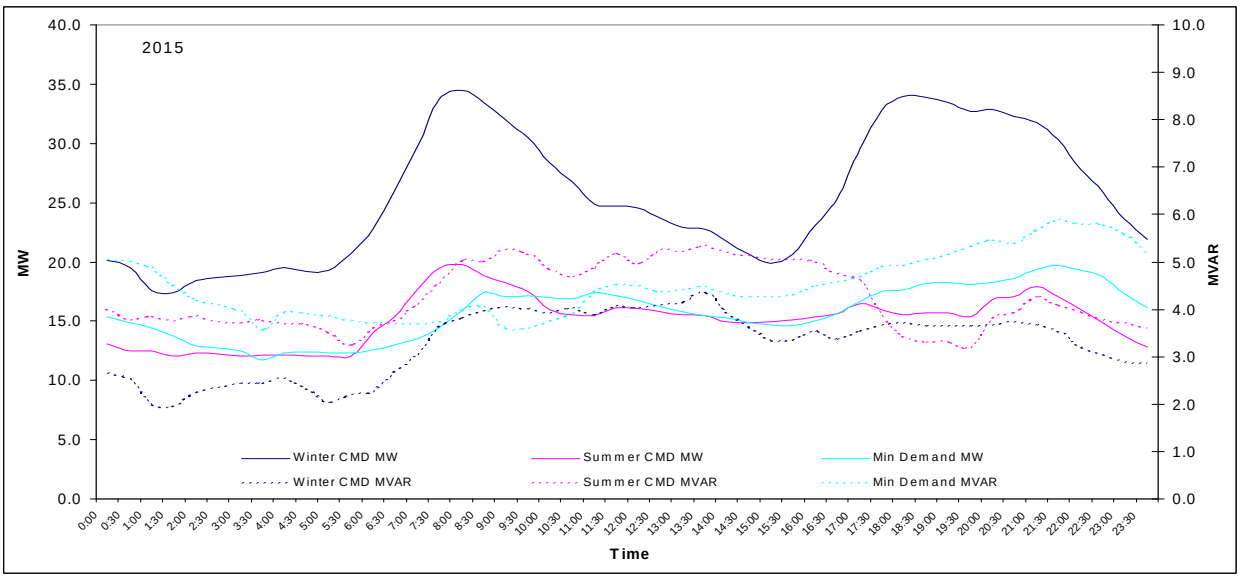
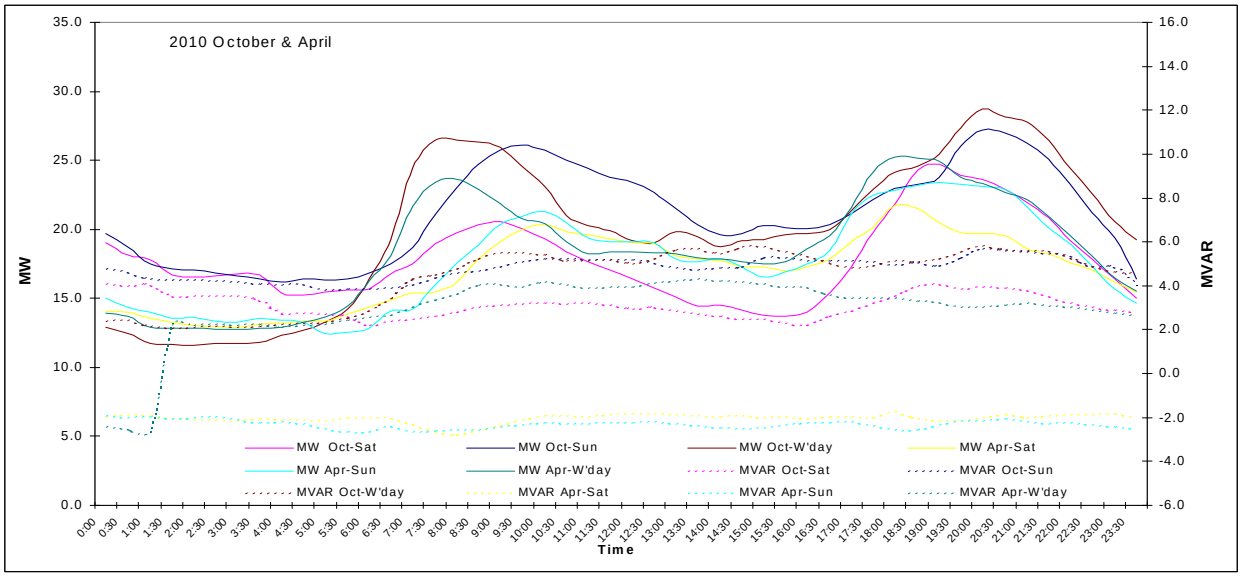
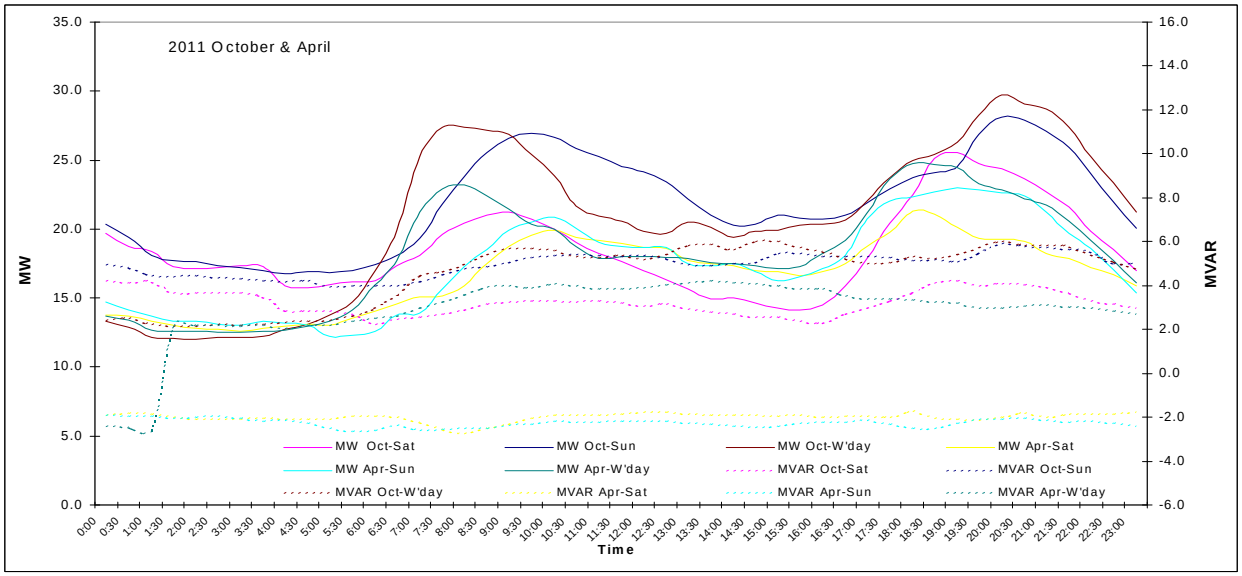
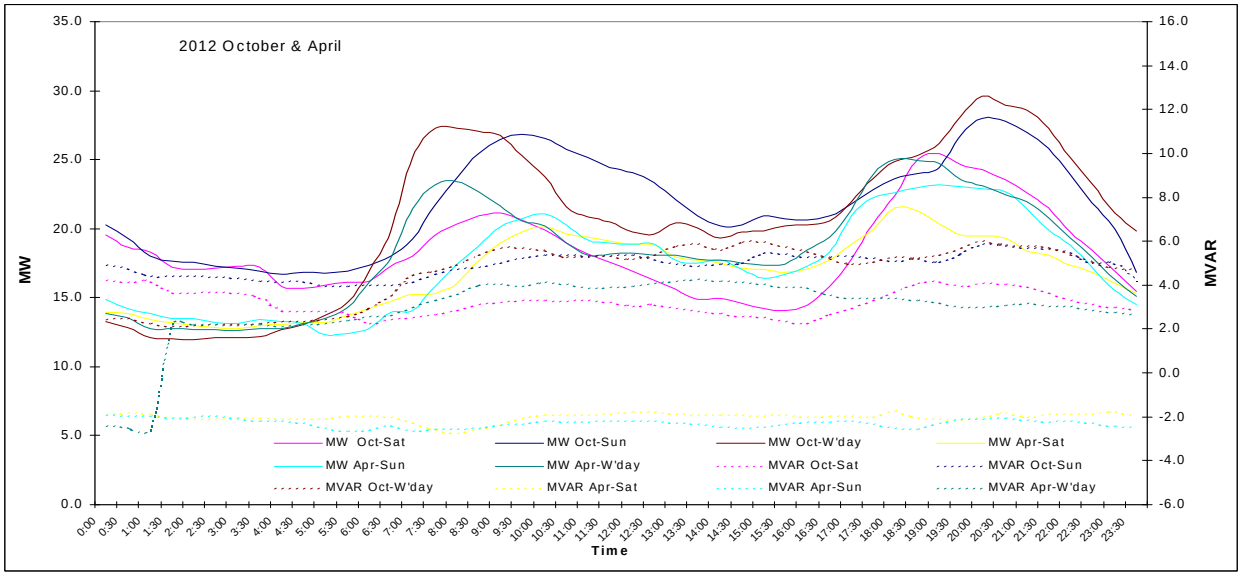
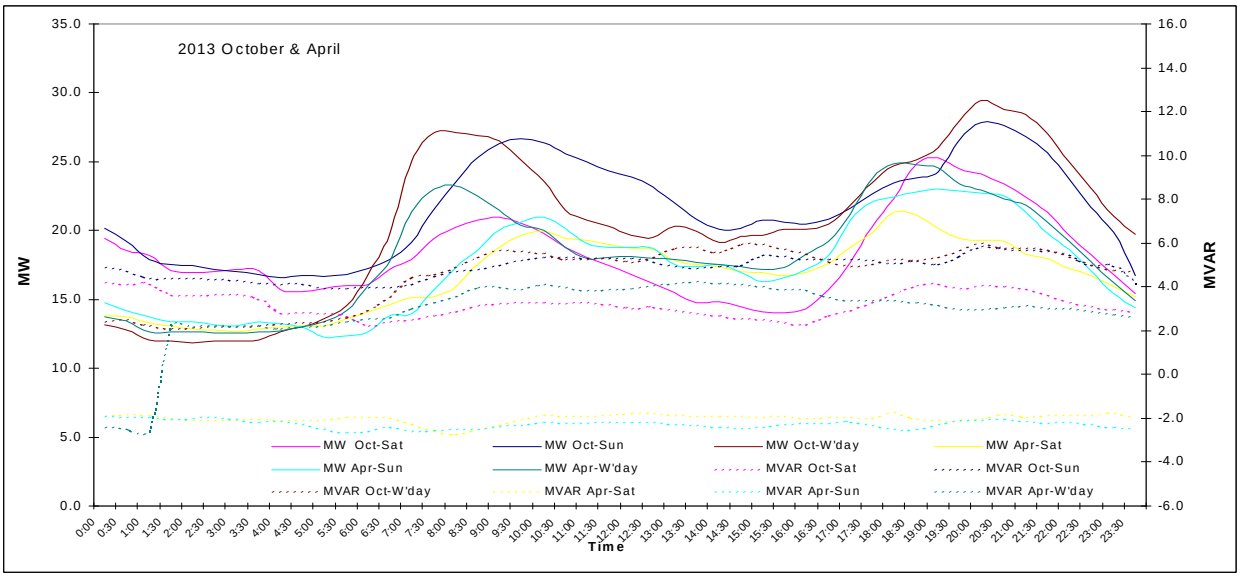

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

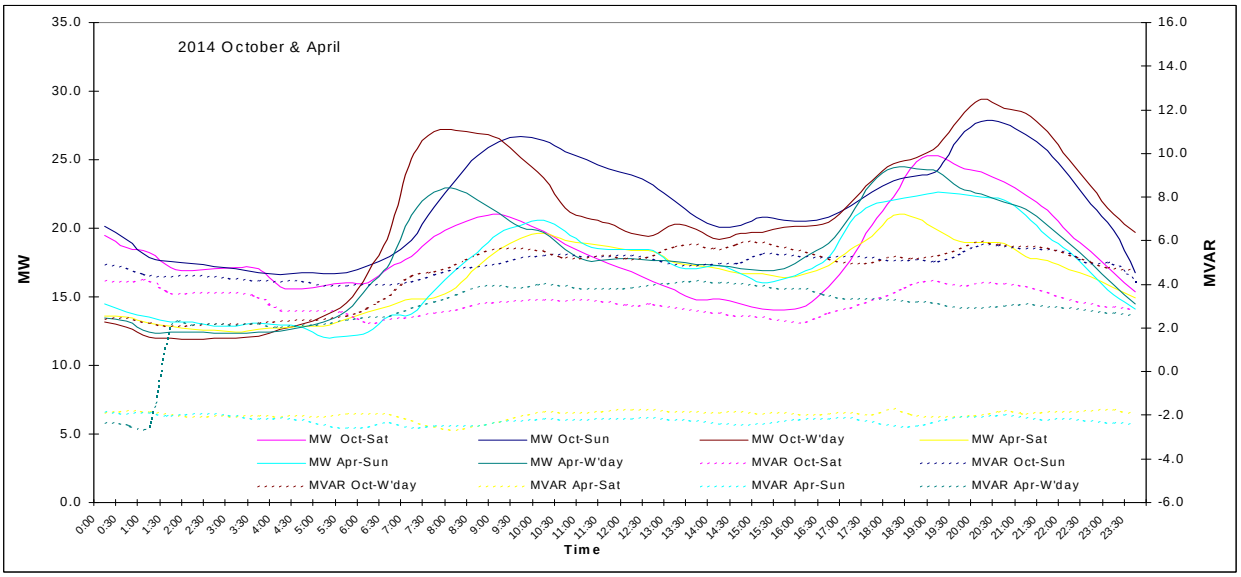
Figure 4-235 Load Profiles: Weekday, Saturday, Sunday for October & April








2013 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day


2014 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

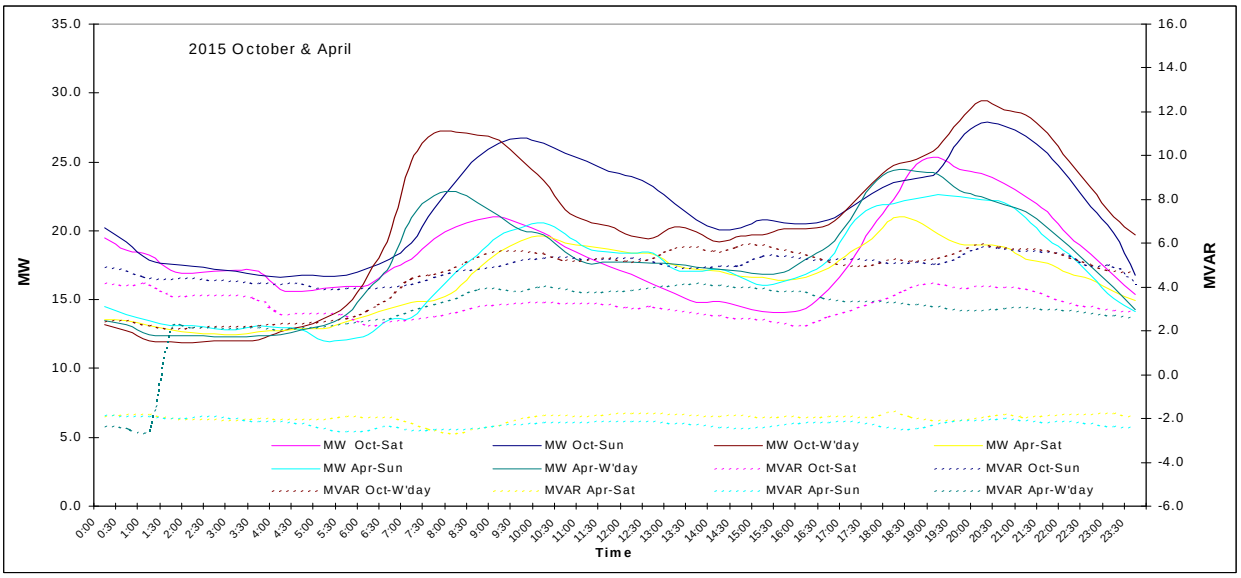
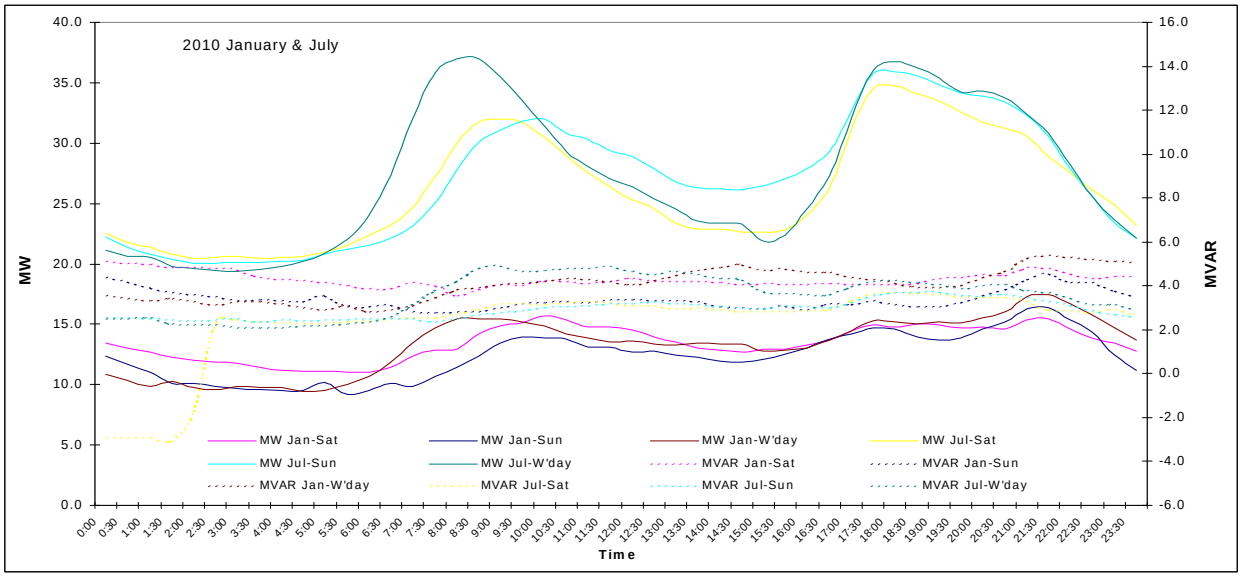
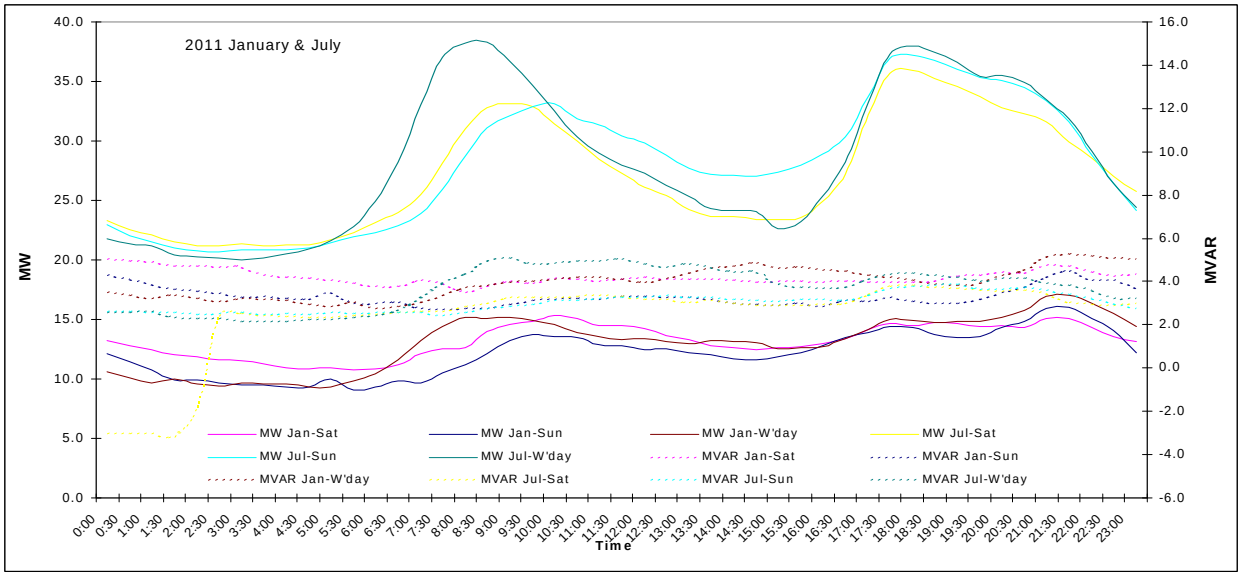
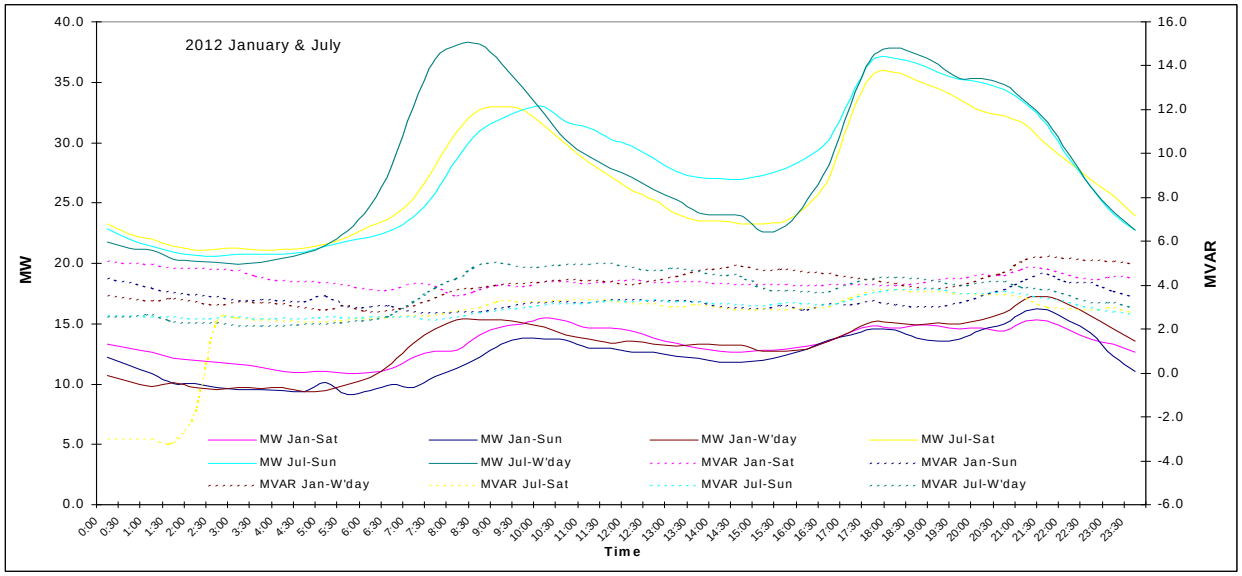
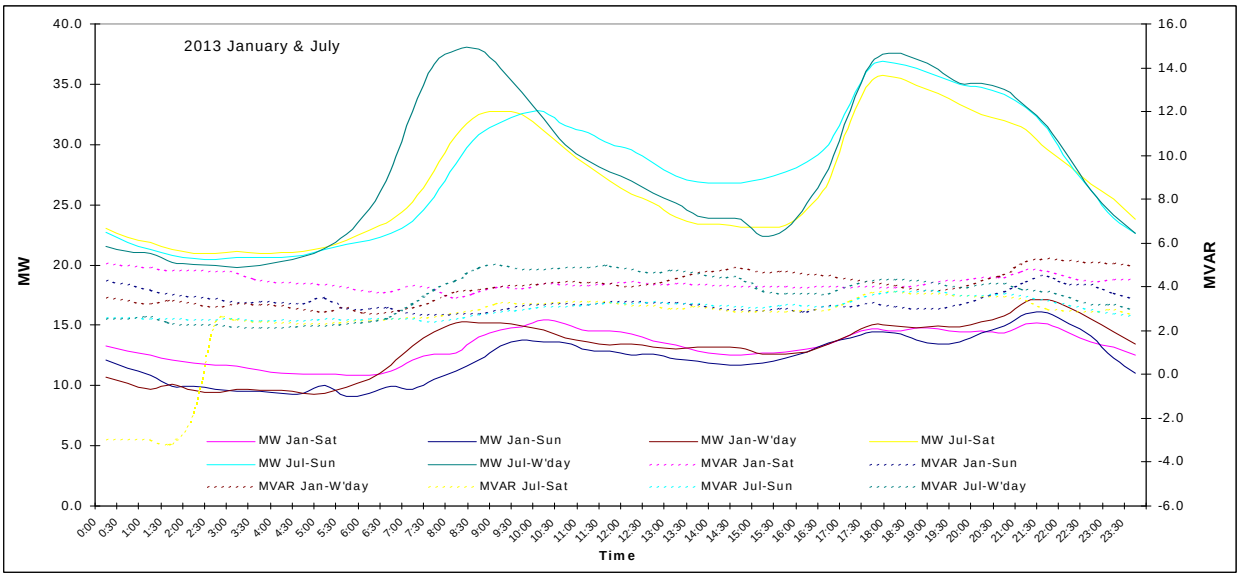

2015 October & April
MW
MVAR
Time
MW Oct-Sat
MW Oct-Sun
MW Oct-W'day
MW Apr-Sat
MW Apr-Sun
MW Apr-W'day
MVAR Oct-Sat
MVAR Oct-Sun
MVAR Oct-W'day
MVAR Apr-Sat
MVAR Apr-Sun
MVAR Apr-W'day

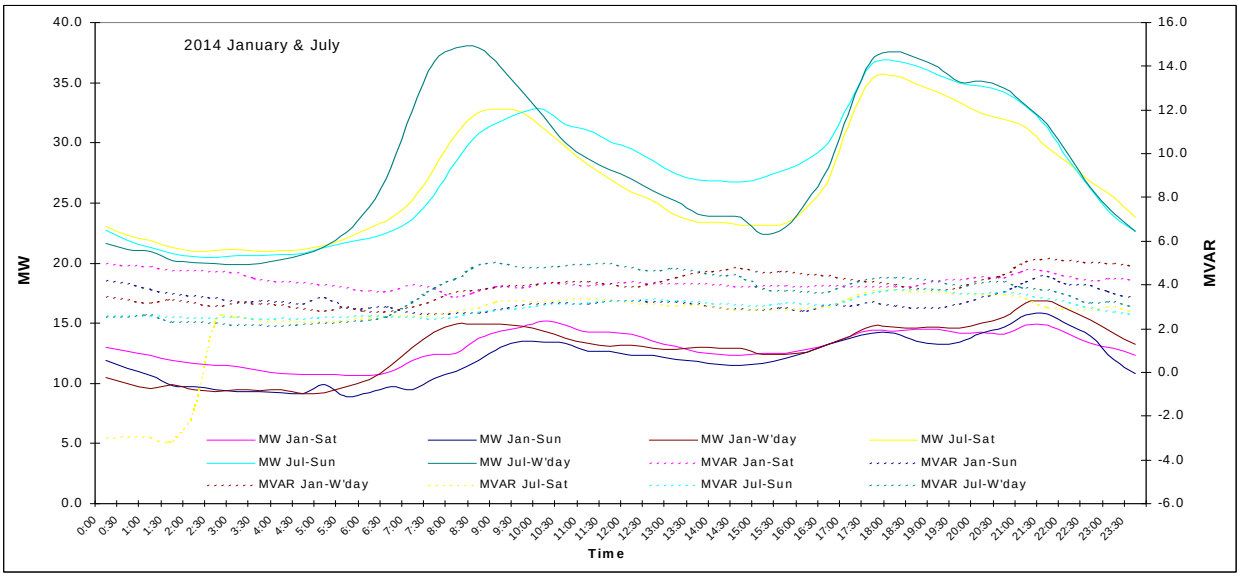
Figure 4-236 Load Profiles: Weekday, Saturday, Sunday for January & July

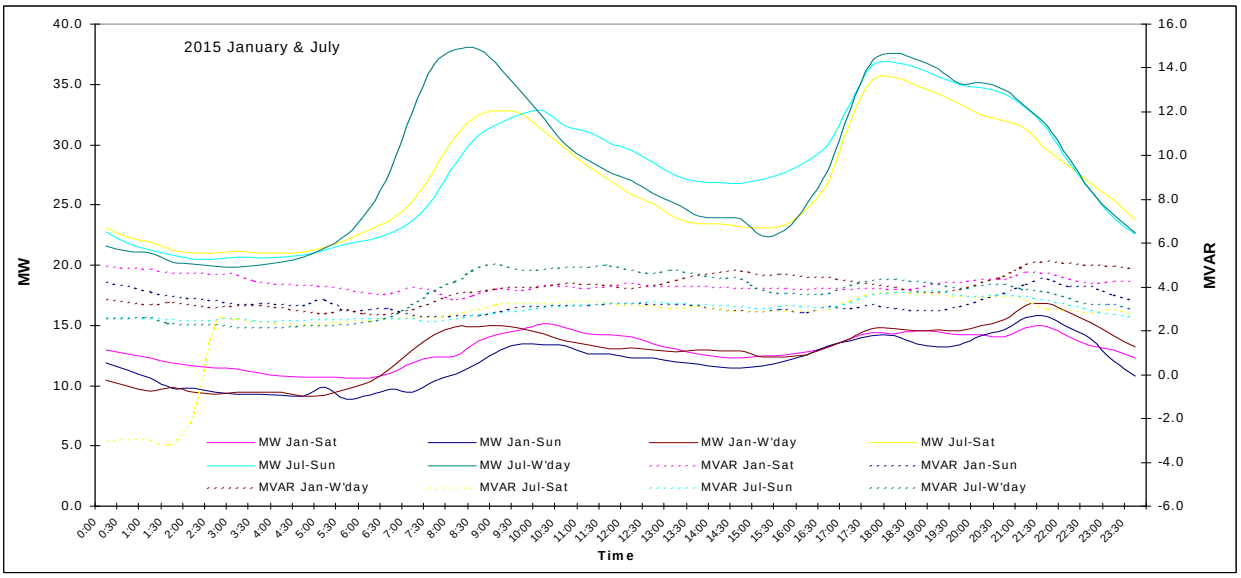







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

4.5.42 Waddamana

Description:

The Substation is located at Waddamana and is known as “Waddamana Substation”. The substation is owned by Transend.

Table 4-144 Waddamana Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	22	1	5	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-145 Waddamana Site Winter load forecast

Waddamana	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.50	0.50	0.27	0.27	0.50	0.50	0.27	0.27
2006	0.69	0.69	0.36	0.36	0.69	0.69	0.36	0.36
2007	0.66	0.66	0.40	0.40	0.66	0.66	0.41	0.41
2008	0.57	0.57	0.40	0.40	0.57	0.57	0.41	0.41
2009	0.69	0.69	0.44	0.44	0.69	0.69	0.44	0.44
2010	0.72	0.72	0.36	0.36	0.72	0.72	0.36	0.36
2011	0.77	0.77	0.39	0.39	0.77	0.77	0.39	0.39
2012	0.79	0.79	0.40	0.40	0.80	0.80	0.40	0.40
2013	0.82	0.82	0.41	0.41	0.82	0.82	0.41	0.41
2014	0.84	0.85	0.43	0.43	0.85	0.85	0.43	0.43
2015	0.87	0.87	0.44	0.44	0.88	0.88	0.44	0.44
2016	0.90	0.90	0.45	0.45	0.91	0.91	0.46	0.46
2017	0.93	0.93	0.47	0.47	0.94	0.94	0.47	0.47
2018	0.97	0.97	0.49	0.49	0.97	0.97	0.49	0.49
2019	1.00	1.01	0.51	0.51	1.01	1.01	0.51	0.51
2020	1.04	1.05	0.53	0.53	1.05	1.05	0.53	0.53

Table 4-146 Waddamana Site Summer load forecast

Waddamana	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.37	0.37	0.26	0.26	0.37	0.37	0.27	0.27
2006	0.50	0.50	0.25	0.25	0.50	0.50	0.26	0.26
2007	0.44	0.44	0.27	0.27	0.44	0.44	0.27	0.27
2008	0.40	0.40	0.34	0.34	0.40	0.40	0.34	0.34
2009	0.78	0.78	0.32	0.32	0.78	0.78	0.32	0.32
2010	0.79	0.79	0.37	0.37	0.79	0.79	0.37	0.37
2011	0.86	0.86	0.40	0.40	0.87	0.87	0.40	0.40
2012	0.95	0.95	0.44	0.44	0.97	0.97	0.45	0.45
2013	1.02	1.02	0.47	0.47	1.04	1.04	0.48	0.48
2014	1.09	1.09	0.50	0.50	1.11	1.11	0.51	0.51
2015	1.16	1.16	0.54	0.54	1.19	1.19	0.55	0.55
2016	1.22	1.22	0.56	0.56	1.24	1.24	0.57	0.57
2017	1.32	1.32	0.61	0.61	1.35	1.35	0.62	0.62
2018	1.40	1.40	0.65	0.65	1.43	1.43	0.66	0.66
2019	1.49	1.49	0.69	0.69	1.52	1.52	0.70	0.70
2020	1.58	1.58	0.73	0.73	1.61	1.61	0.74	0.74

Figure 4-237 Waddamana Site Summer Load Forecast at 50% and 10% POE

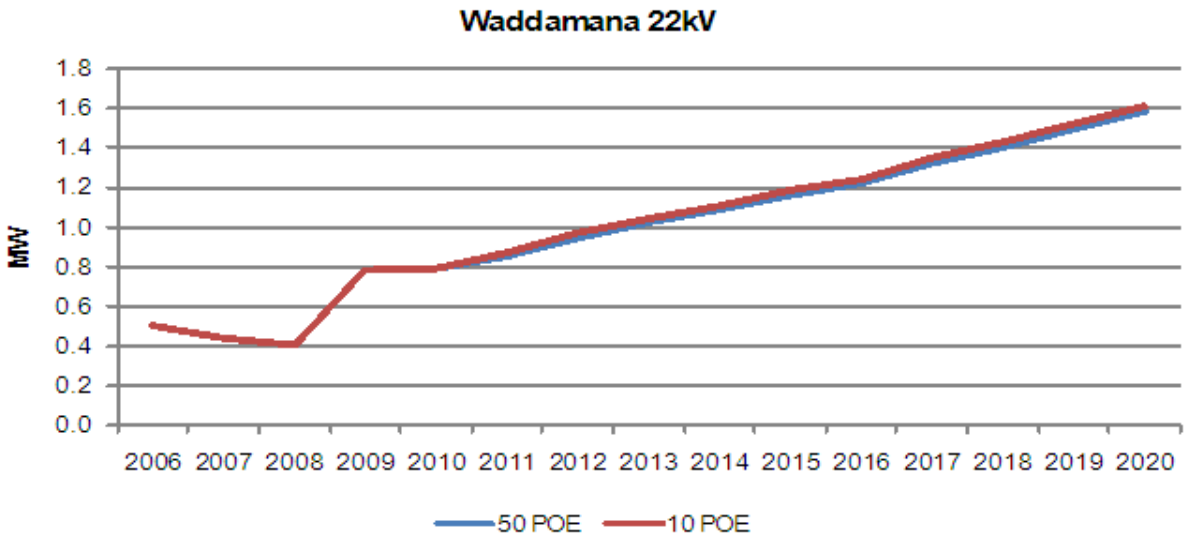
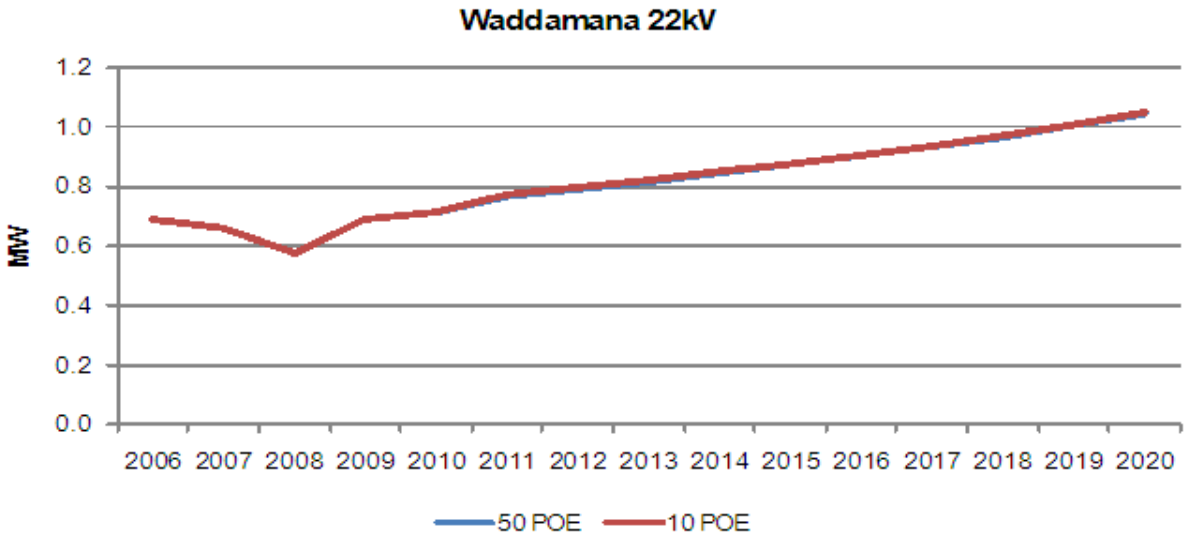
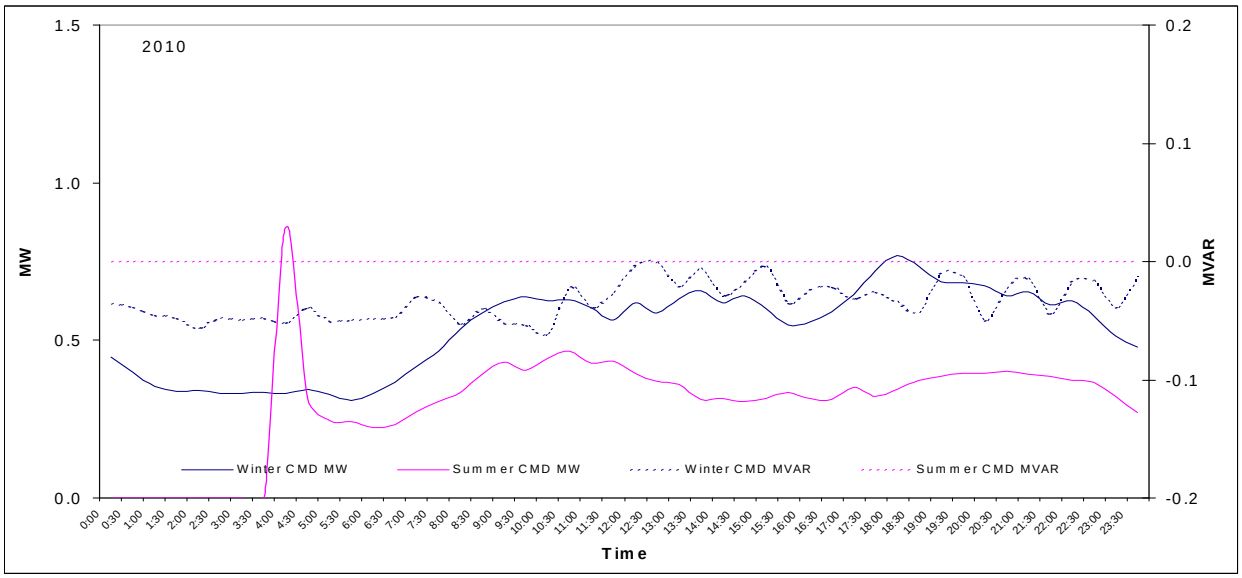


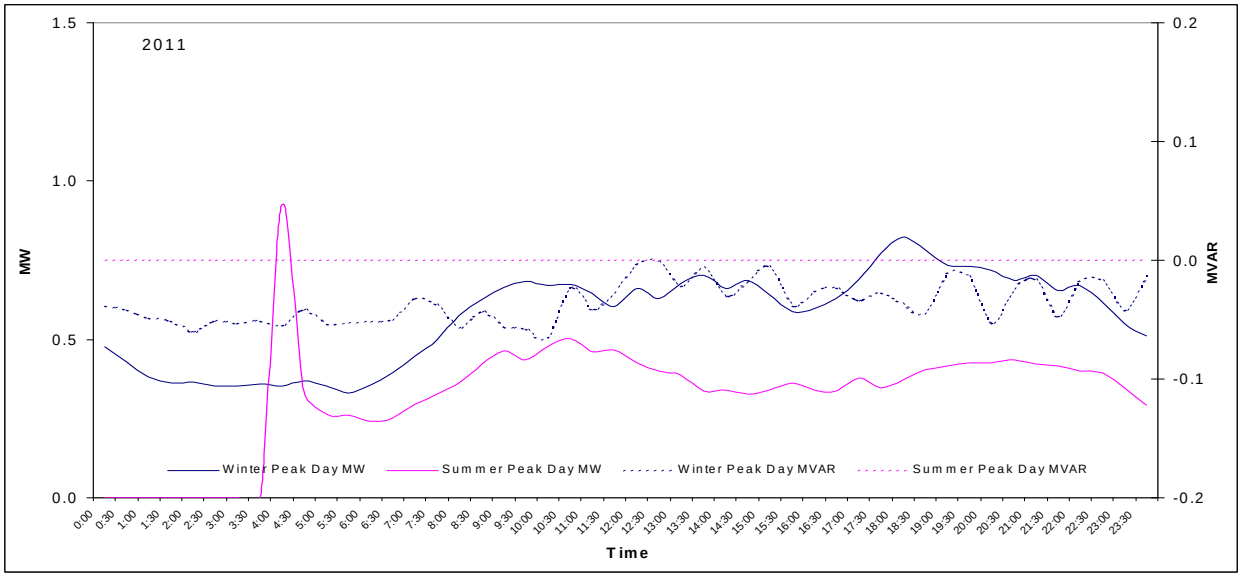
Figure 4-238 Waddamana Site Winter Load Forecast at 50% and 10% POE

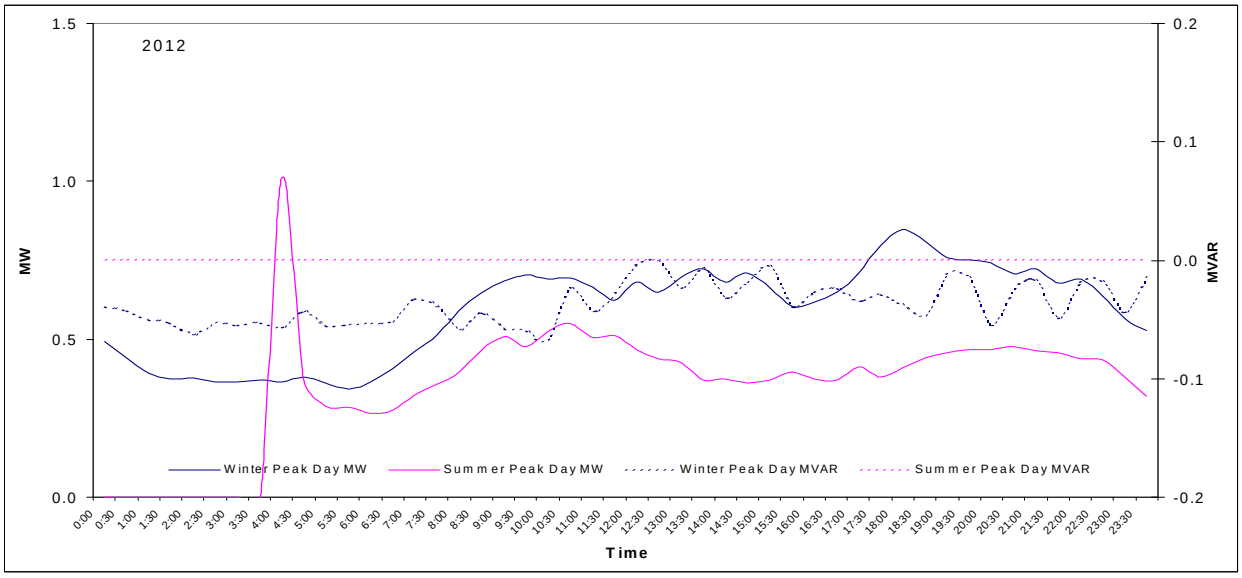


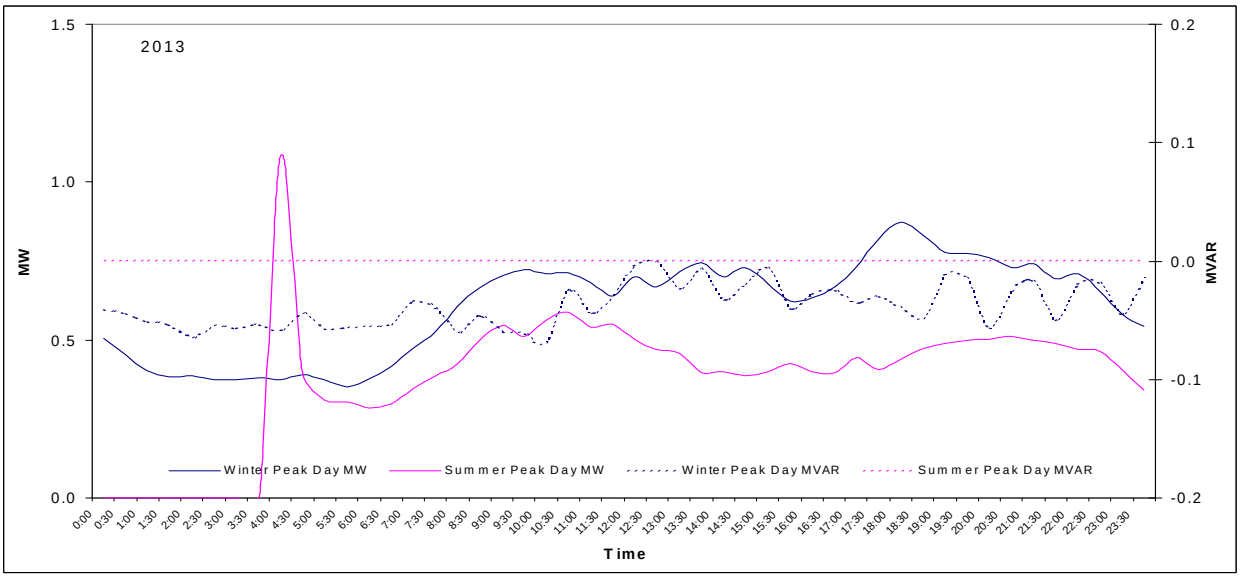
Load Profiles:

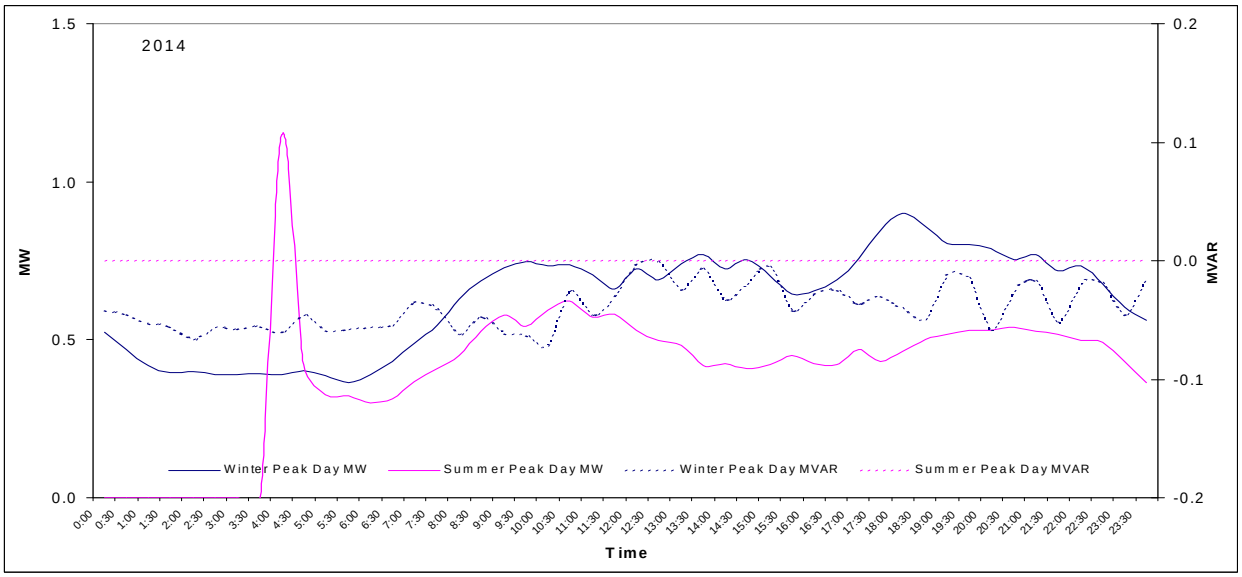
Figure 4-239 Load Profiles: Waddamana Substation Day of Summer/Winter Peak Demand








2013
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR


2014
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

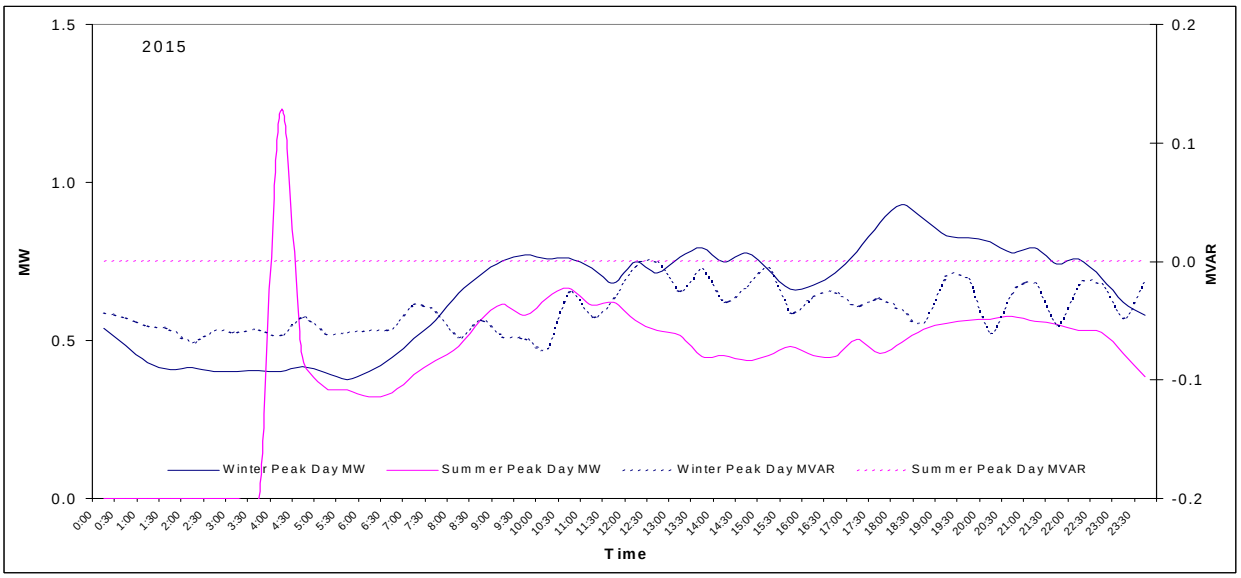
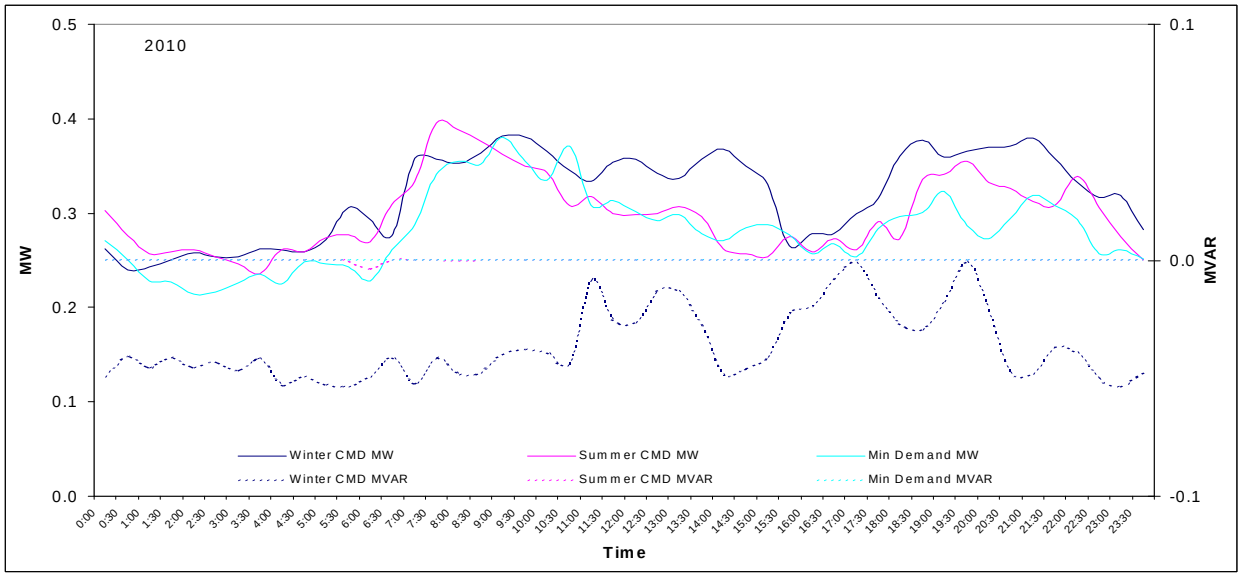
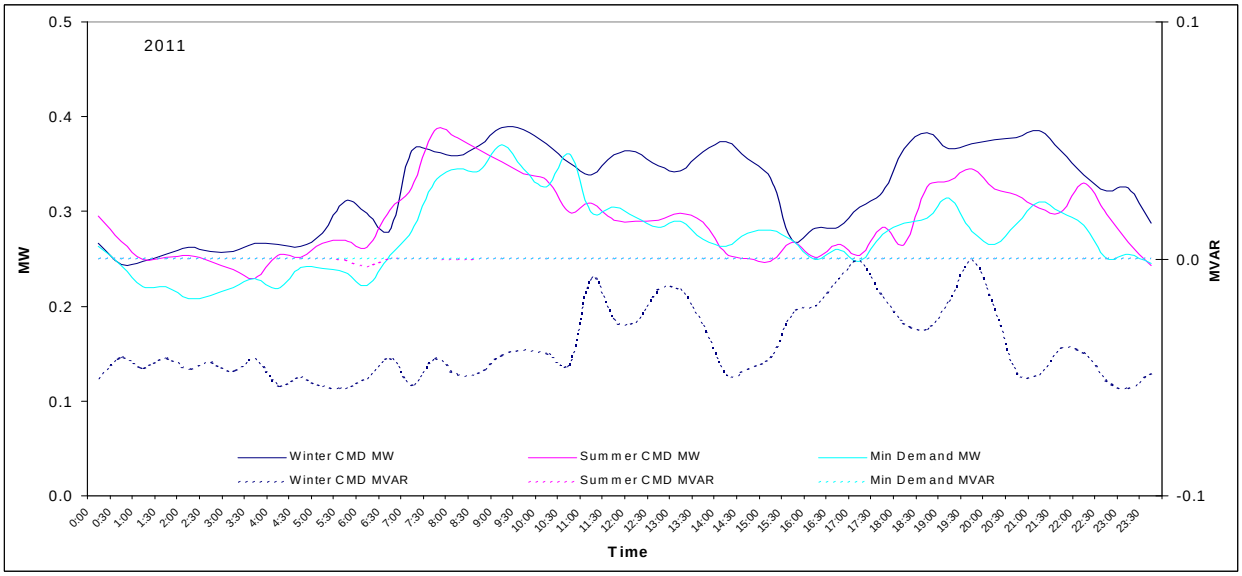
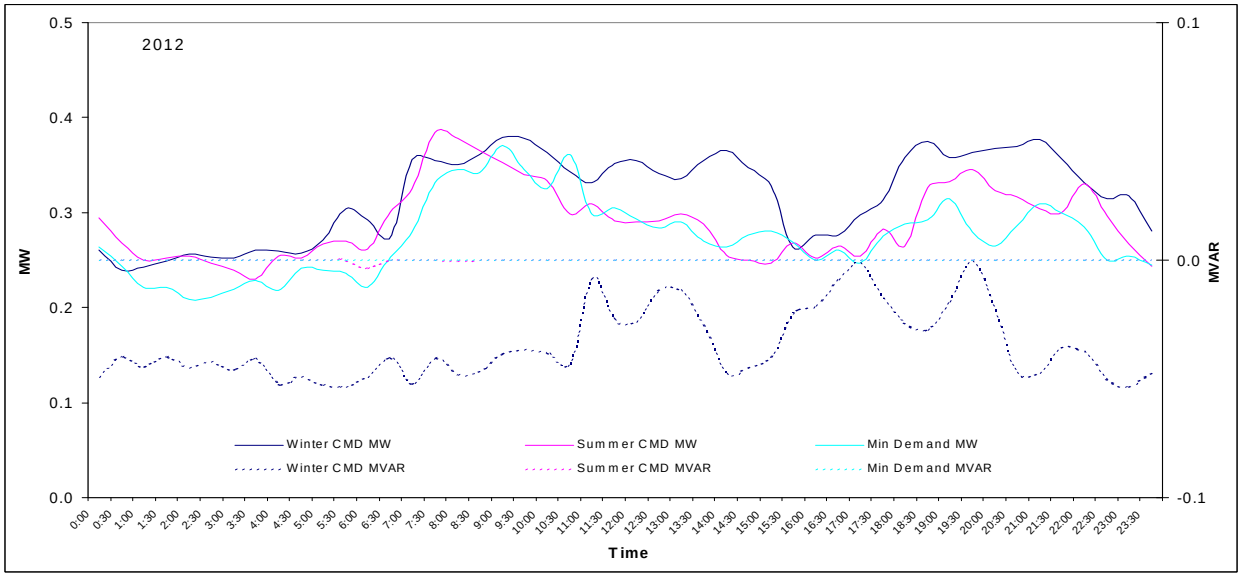
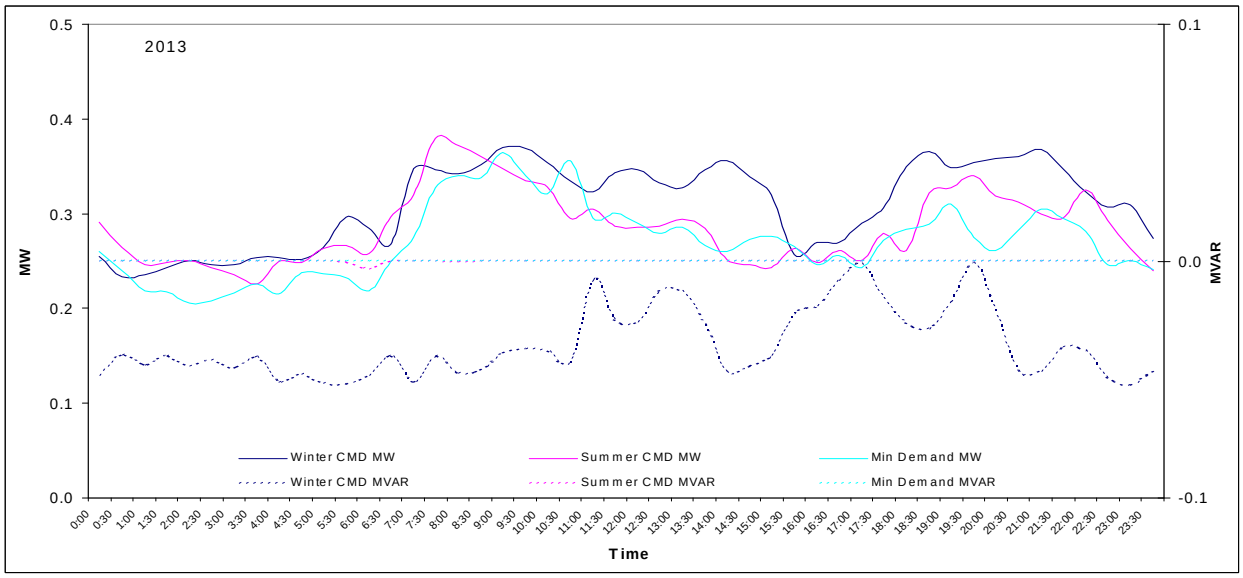

2015
MW
MVAR
Time
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR

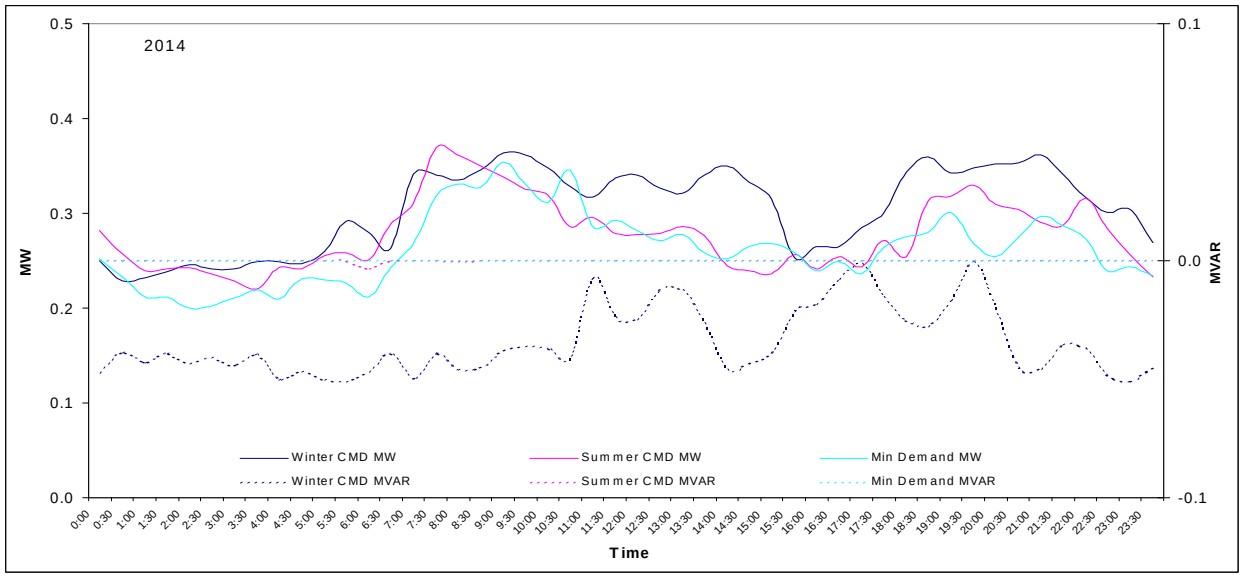
Figure 4-240 Load Profiles: Waddamana Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

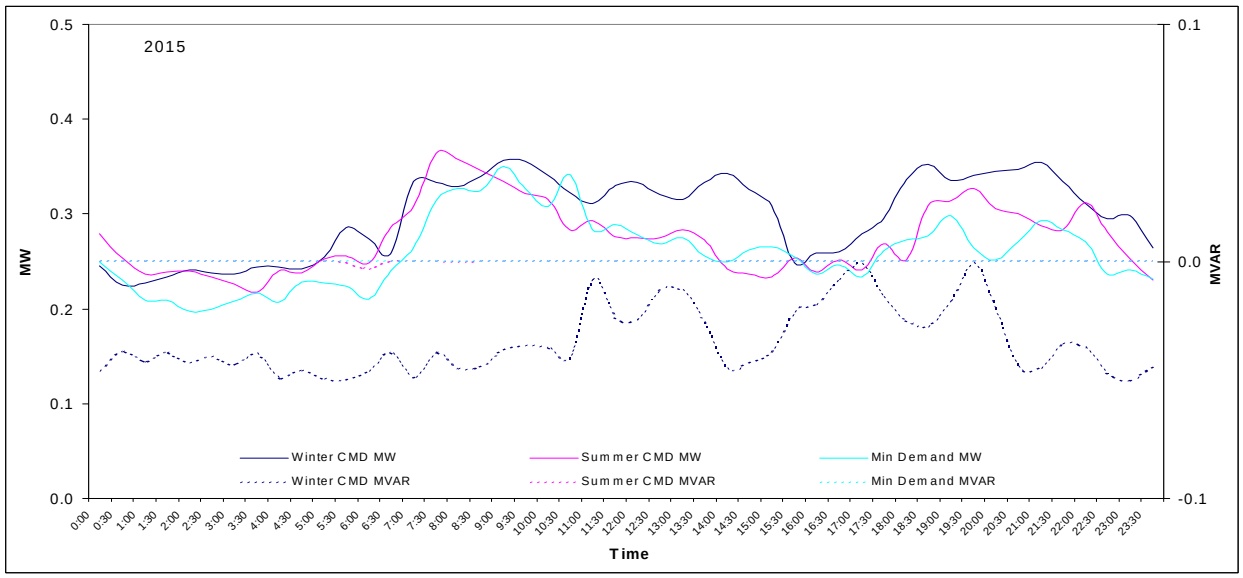
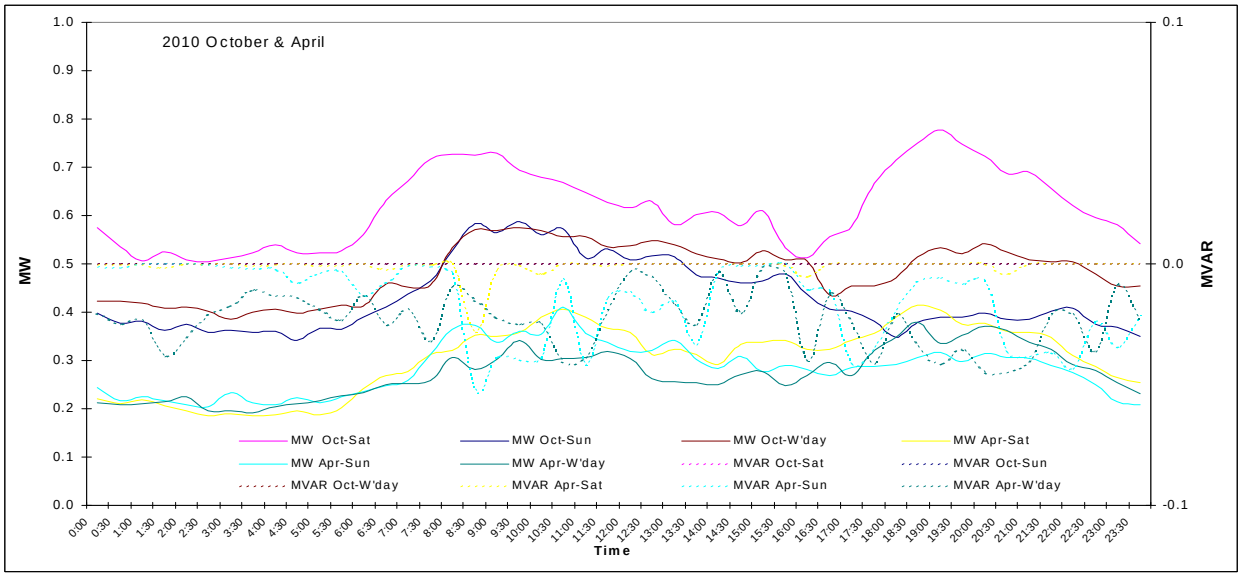
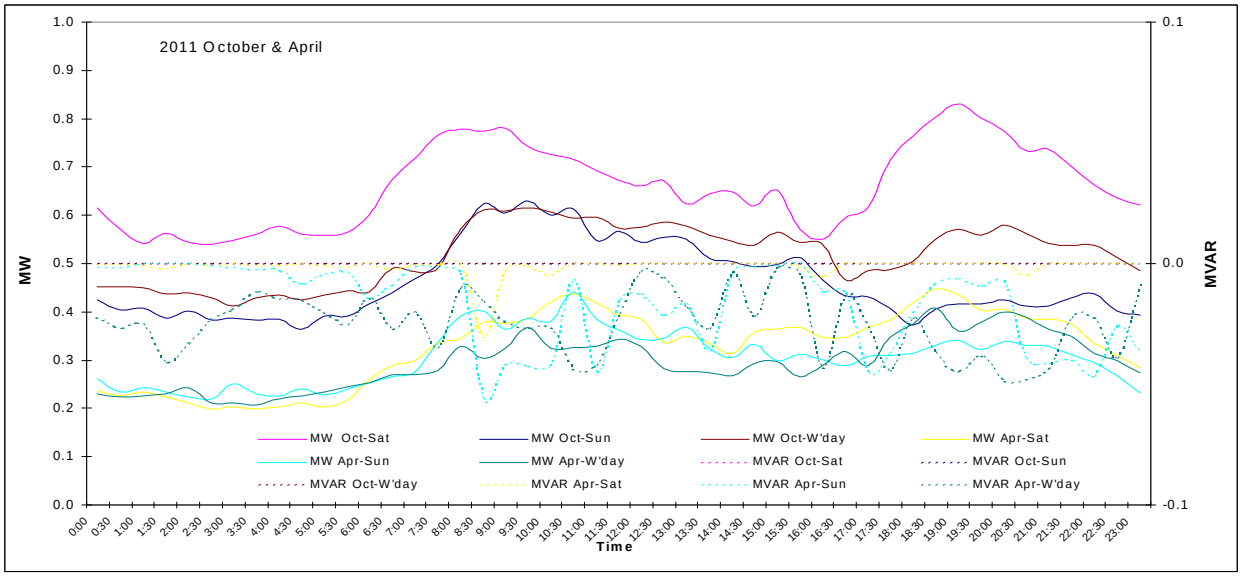
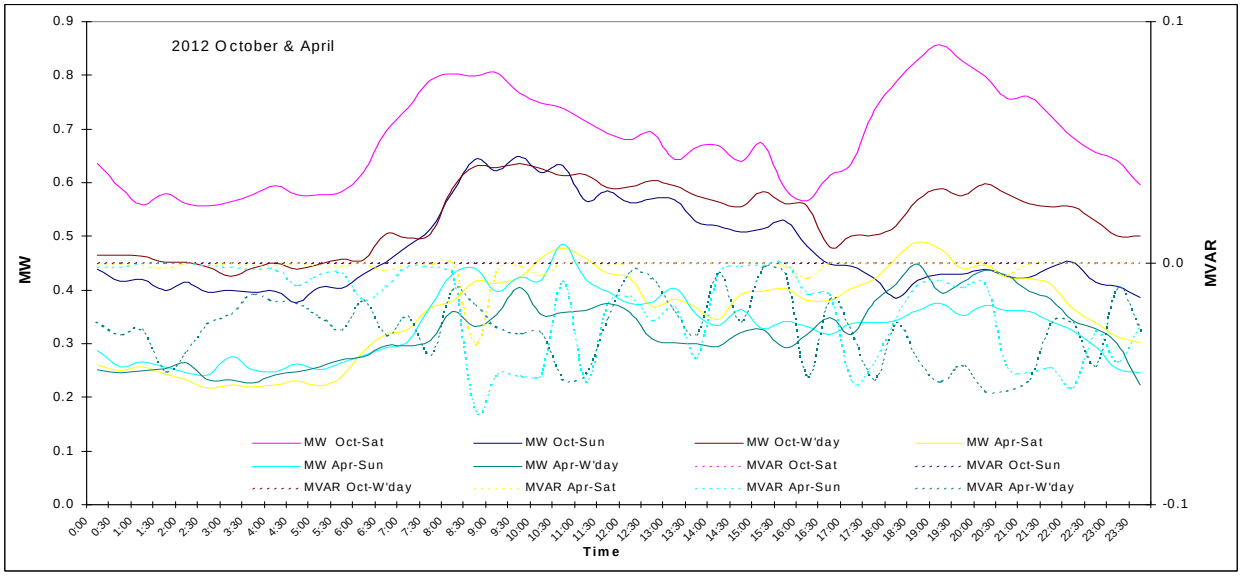
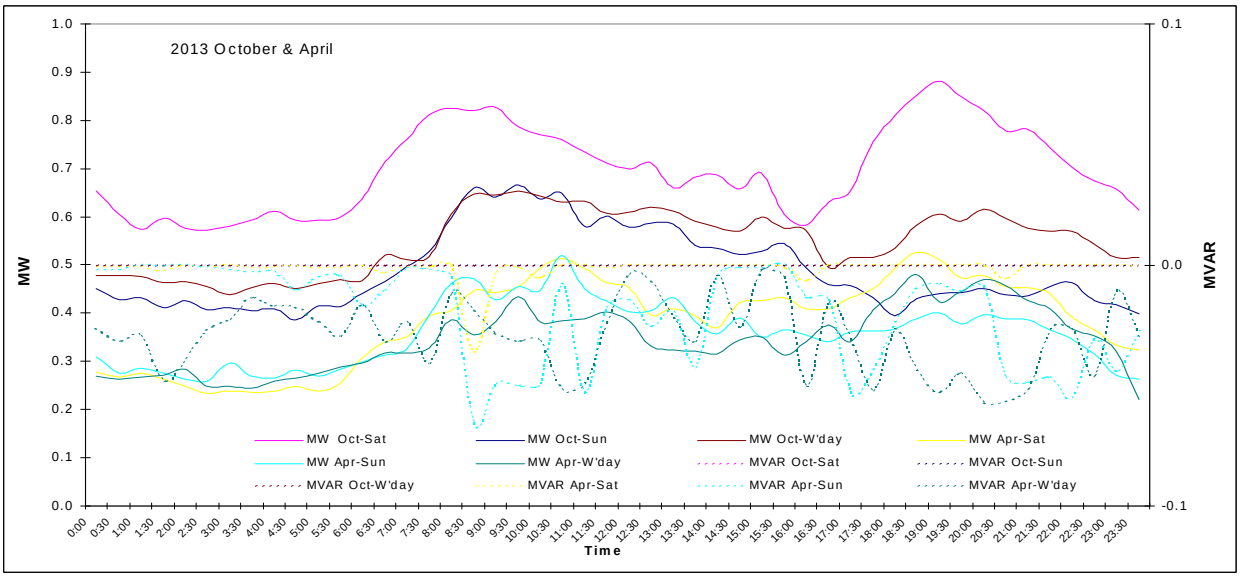

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

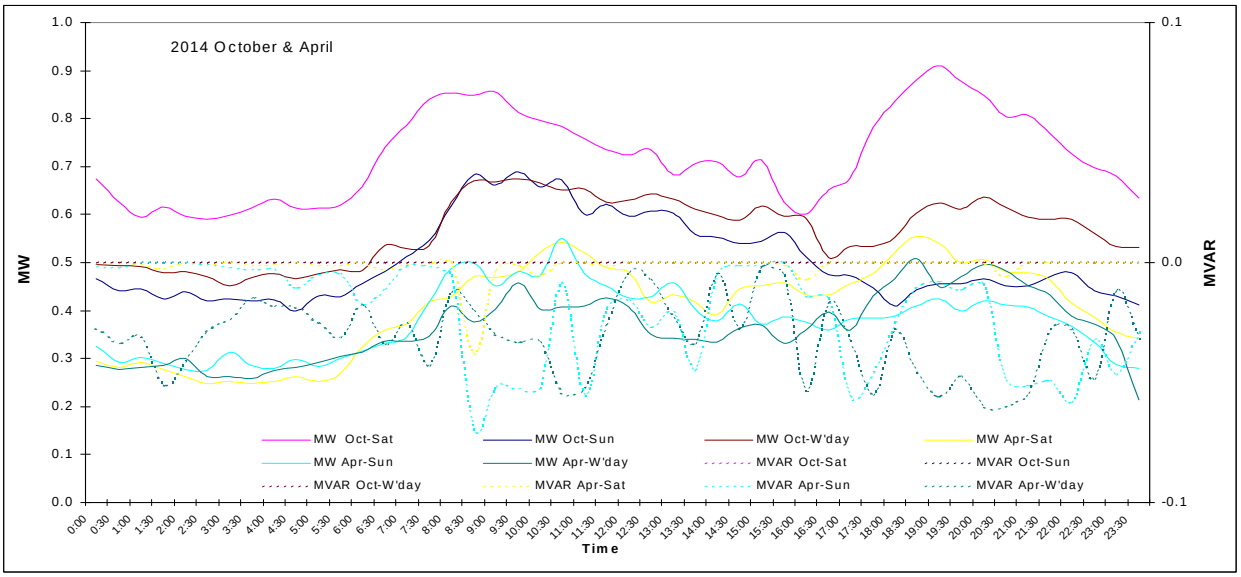
Figure 4-241 Load Profiles: Weekday, Saturday, Sunday for October & April











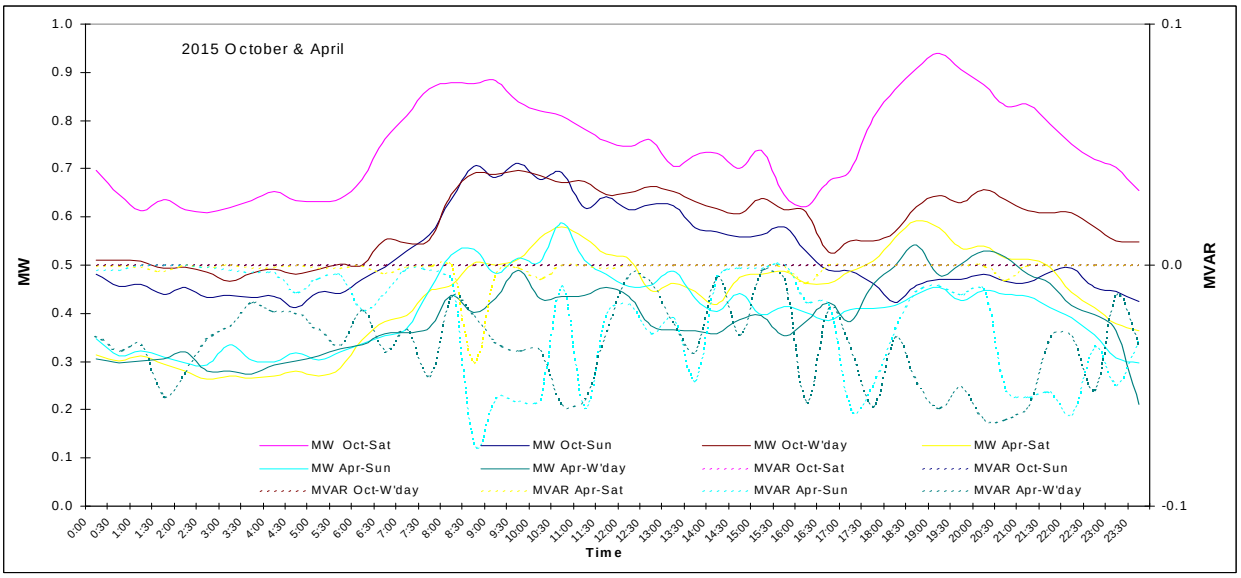
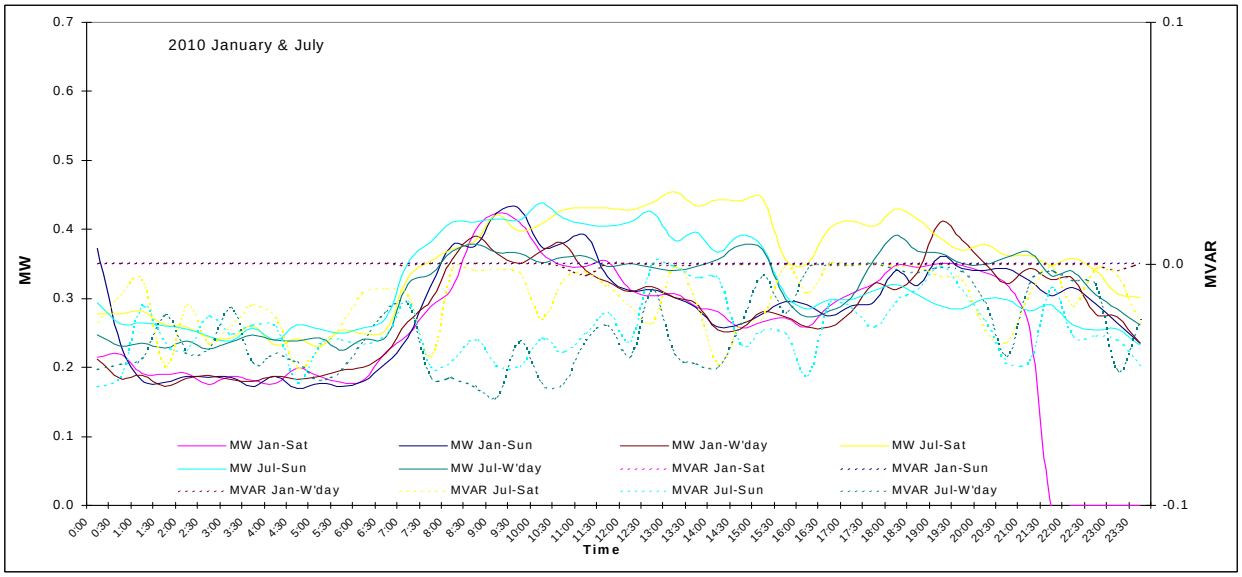
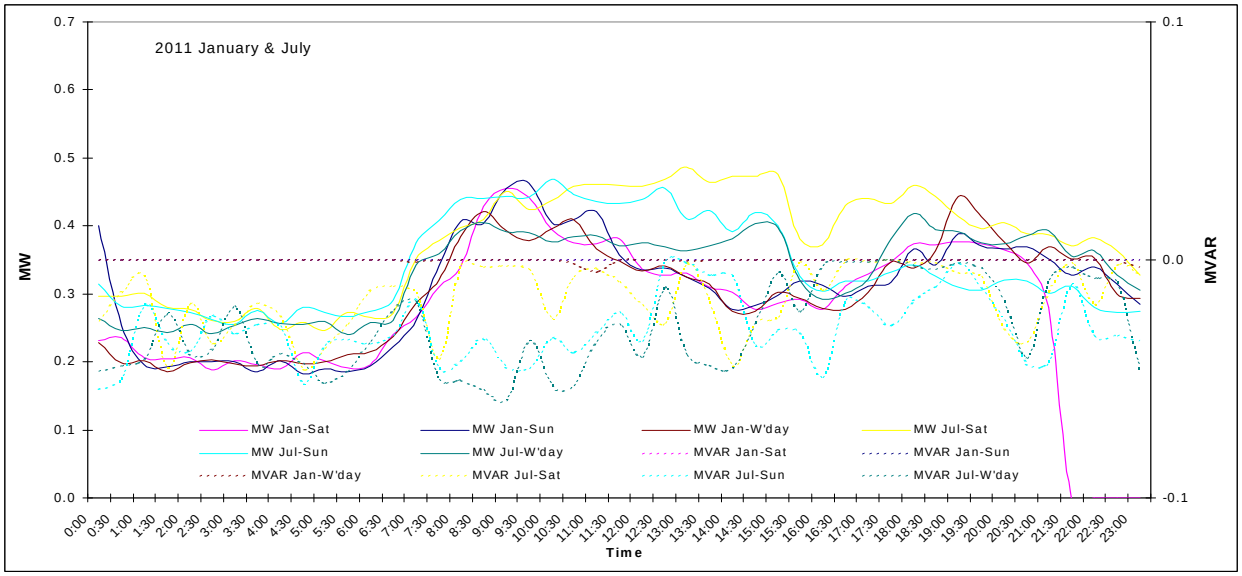
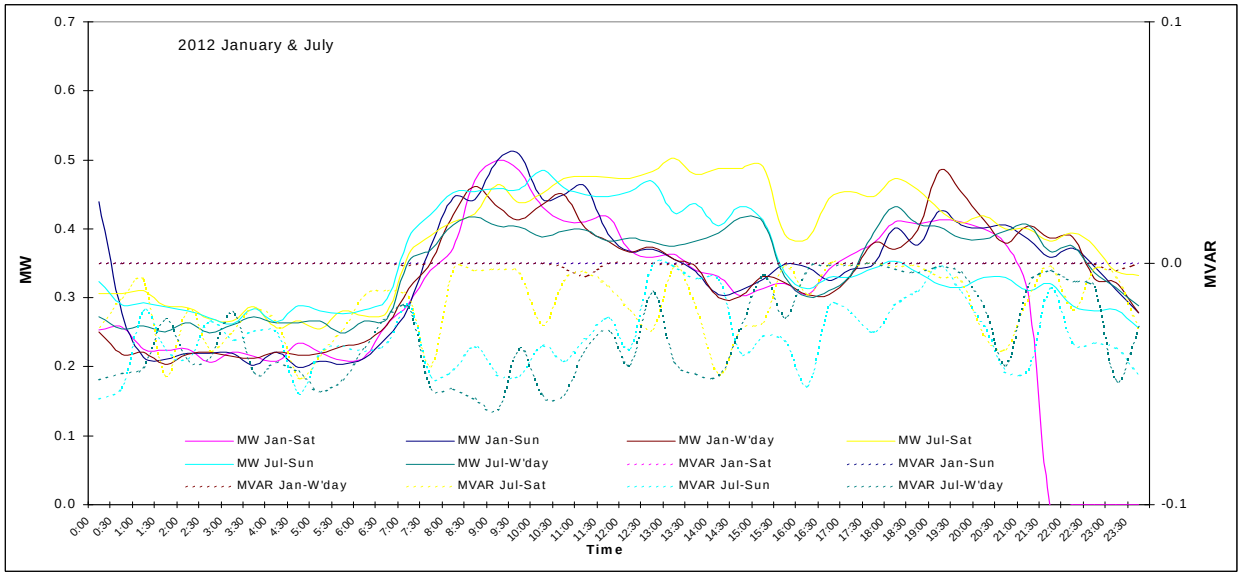
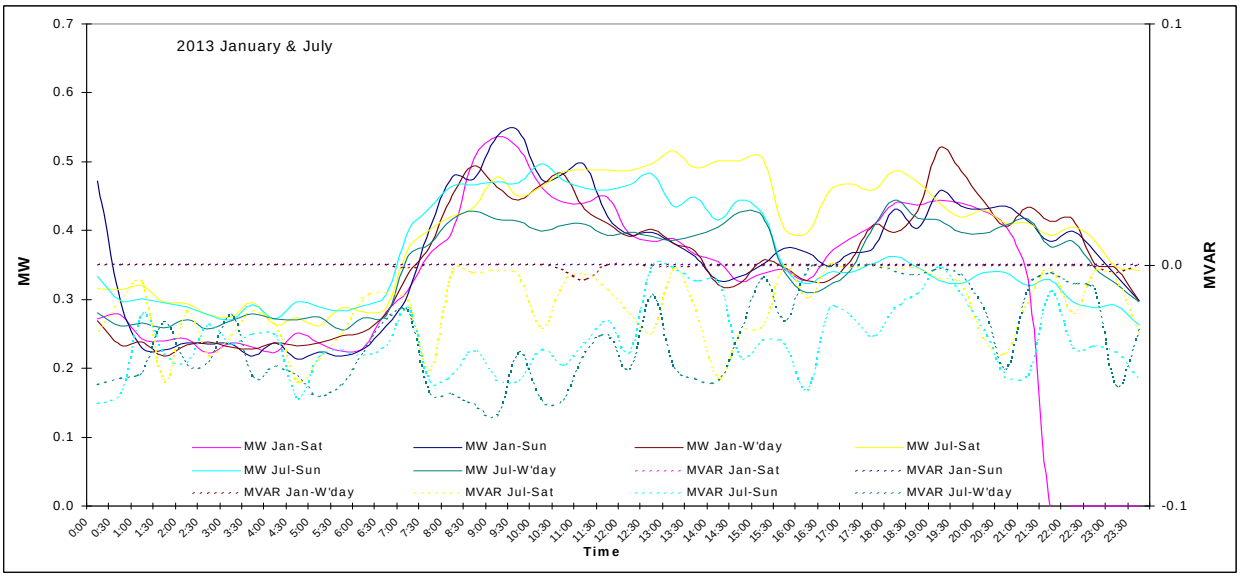


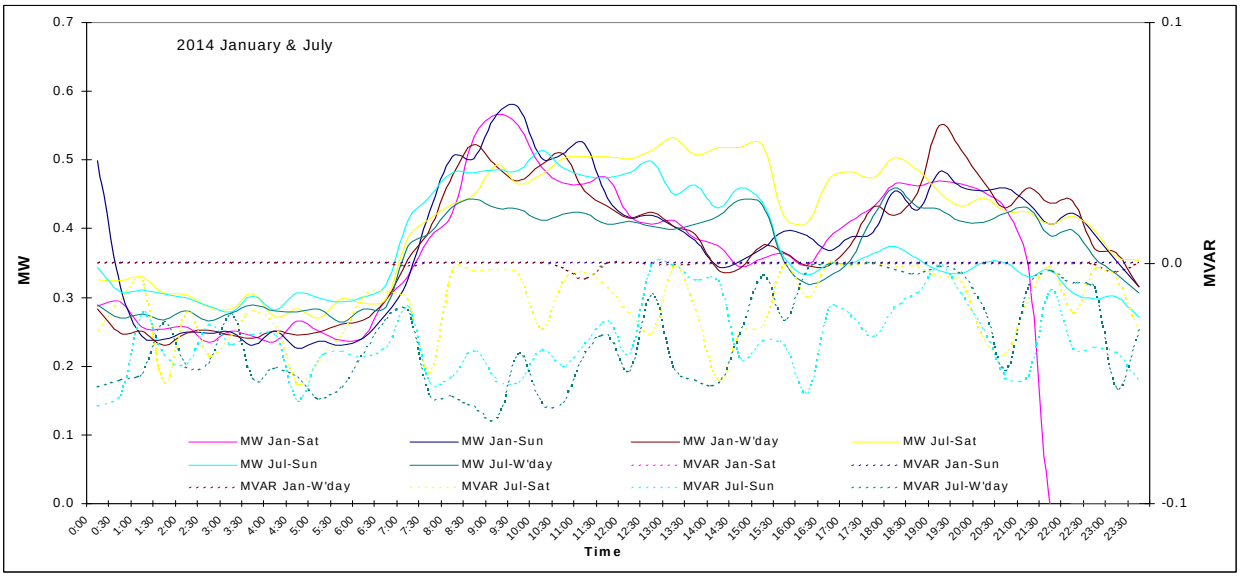
Figure 4-242 Load Profiles: Weekday, Saturday, Sunday for January & July

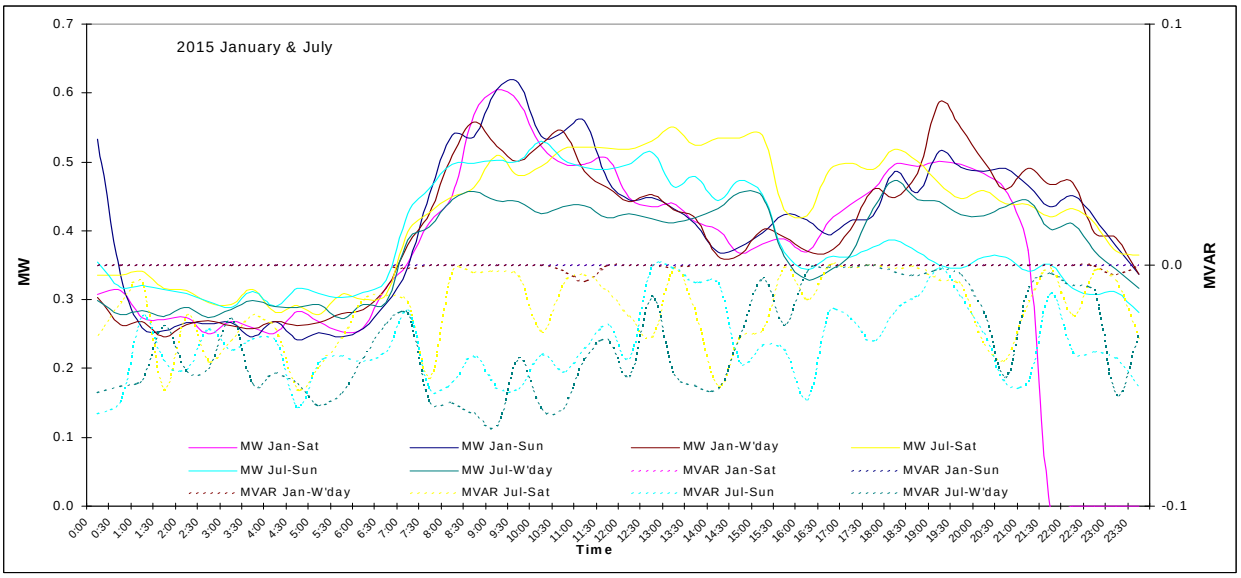












4.5.43 Wayatinah

Description:

The Substation is located at Wayatinah and is known as “Wayatinah Substation”. The Substation is owned by Hydro Tasmania.

Table 4-147 Wayatinah Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
1	11	2	1	0

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-148 Wayatinah Site Winter load forecast

Wayatinah	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	1.58	1.58	0.74	0.74	1.58	1.58	0.75	0.75
2006	1.03	1.45	0.02	0.03	1.03	1.45	0.02	0.03
2007	0.89	0.89	0.01	0.01	0.89	0.89	0.01	0.01
2008	0.63	0.63	0.01	0.01	0.63	0.63	0.01	0.01
2009	0.39	0.39	0.08	0.08	0.39	0.39	0.08	0.08
2010	0.45	0.50	0.00	0.00	0.45	0.50	0.00	0.00
2011	0.47	0.51	0.00	0.00	0.48	0.53	0.00	0.00
2012	0.46	0.51	0.00	0.00	0.48	0.53	0.00	0.00
2013	0.46	0.51	0.00	0.00	0.47	0.52	0.00	0.00
2014	0.46	0.51	0.00	0.00	0.47	0.52	0.00	0.00
2015	0.46	0.51	0.00	0.00	0.47	0.52	0.00	0.00
2016	0.46	0.51	0.00	0.00	0.47	0.52	0.00	0.00
2017	0.46	0.51	0.00	0.00	0.47	0.52	0.00	0.00
2018	0.46	0.51	0.00	0.00	0.48	0.53	0.00	0.00
2019	0.47	0.52	0.00	0.00	0.48	0.53	0.00	0.00
2020	0.47	0.52	0.00	0.00	0.49	0.54	0.00	0.00

Table 4-149 Wayatinah Site Summer load forecast

Wayatinah	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005	0.70	0.78	0.64	0.72	0.70	0.78	0.66	0.73
2006	1.49	1.52	0.61	0.63	1.49	1.52	0.61	0.63
2007	0.76	0.76	0.61	0.61	0.76	0.76	0.61	0.61
2008	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
2009	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
2010	0.40	0.43	0.02	0.02	0.40	0.43	0.02	0.02
2011	0.39	0.42	0.02	0.02	0.40	0.42	0.02	0.02
2012	0.39	0.42	0.02	0.02	0.40	0.43	0.02	0.02
2013	0.39	0.42	0.02	0.02	0.40	0.43	0.02	0.02
2014	0.38	0.41	0.02	0.02	0.39	0.42	0.02	0.02
2015	0.38	0.41	0.02	0.02	0.39	0.42	0.02	0.02
2016	0.38	0.40	0.02	0.02	0.38	0.41	0.02	0.02
2017	0.38	0.41	0.02	0.02	0.39	0.42	0.02	0.02
2018	0.38	0.41	0.02	0.02	0.39	0.42	0.02	0.02
2019	0.38	0.41	0.02	0.02	0.39	0.42	0.02	0.02
2020	0.39	0.42	0.02	0.02	0.39	0.42	0.02	0.02

Figure 4-243 Wayatinah Site Summer Load Forecast at 50% and 10% POE

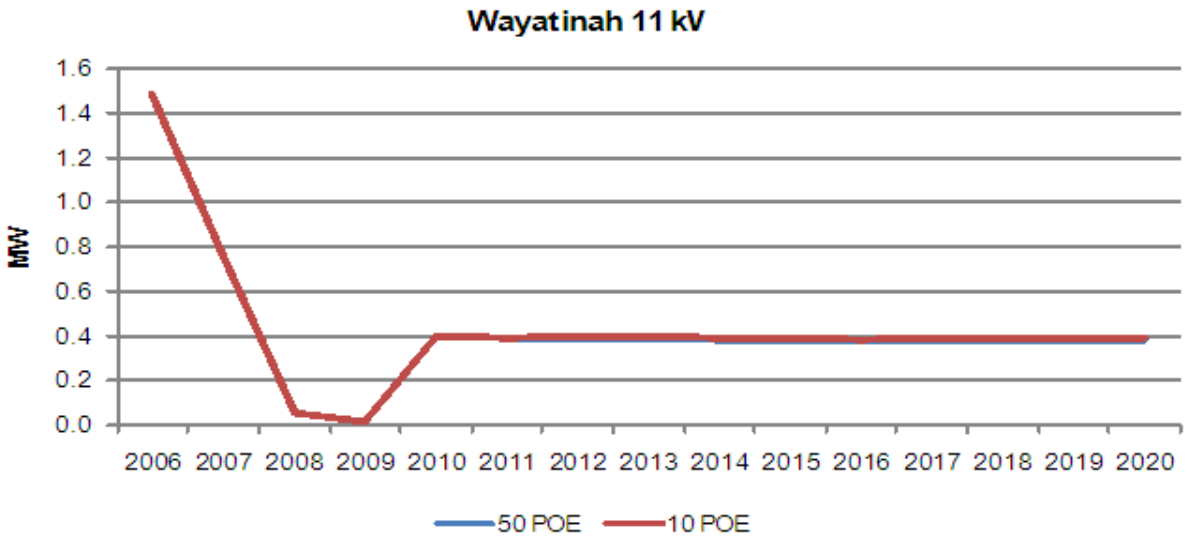
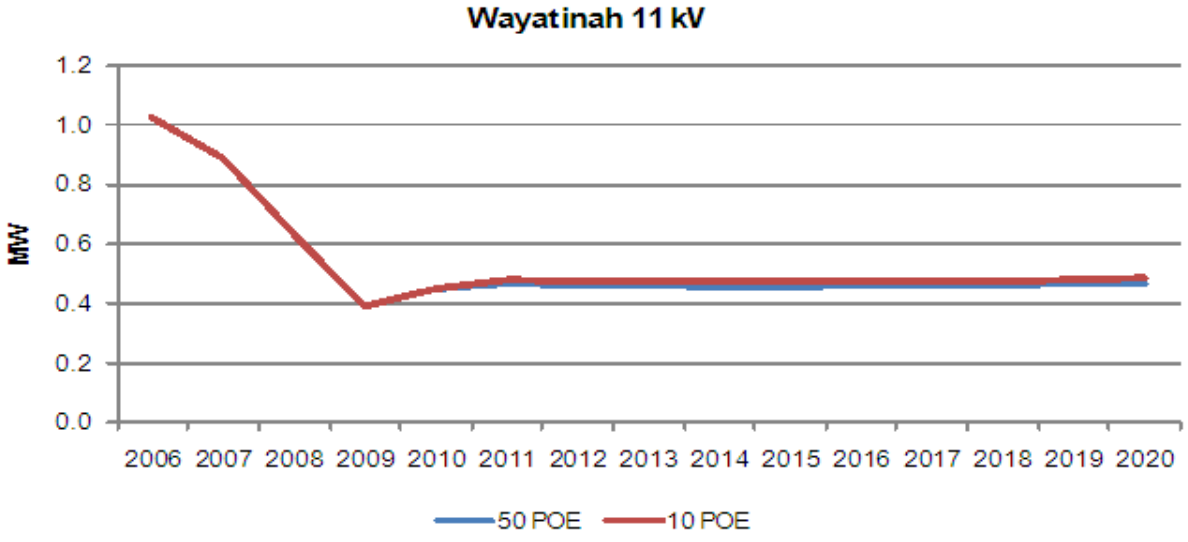


Figure 4-244 Wayatinah Site Winter Load Forecast at 50% and 10% POE



Load Profiles:

No load profile data available for Wayatinah connection site.

4.5.44 Wesley Vale

Description:

The Substation is located at Wesley Vale and is known as “Wesley Vale Substation”. The substation is owned by Transend.

Table 4-150 Wesley Vale Connection Site Data

Number of Transformers	Voltage kV	Number of Distribution Feeders (connection points)	Site Rating MVA	Firm Rating MVA
2	11	1	50	30

Embedded Generation:

There is no significant embedded generation connected to this substation for load forecasting purposes.

Point Load:

No historical or future point loads have been included in the forecast for this connection site.

Permanent Load Transfers:

No permanent load transfers included in the forecast for this connection site.

Demand Management:

No demand reduction due to implementing demand management programs included in the forecast for this connection site.

Forecast Results:

Table 4-151 Wesley Vale Site Winter load forecast

Wesley Vale	Winter							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007								
2008	2.87	2.92	1.64	1.67	2.87	2.92	1.68	1.71
2009	1.76	1.85	1.31	1.38	1.76	1.85	1.31	1.38
2010	1.83	1.98	0.80	0.86	1.83	1.98	0.80	0.86
2011	1.97	2.12	0.86	0.93	1.95	2.11	0.85	0.92
2012	2.03	2.19	0.88	0.95	2.01	2.18	0.88	0.95
2013	2.08	2.25	0.91	0.98	2.07	2.24	0.90	0.97
2014	2.15	2.33	0.94	1.01	2.14	2.31	0.93	1.01
2015	2.22	2.40	0.97	1.05	2.21	2.39	0.96	1.04
2016	2.30	2.48	1.00	1.08	2.28	2.47	0.99	1.07
2017	2.37	2.56	1.03	1.12	2.36	2.55	1.03	1.11
2018	2.46	2.65	1.07	1.16	2.44	2.64	1.06	1.15
2019	2.55	2.75	1.11	1.20	2.54	2.74	1.11	1.19
2020	2.65	2.86	1.15	1.25	2.64	2.85	1.15	1.24

Table 4-152 Wesley Vale Site Summer load forecast

Wesley Vale	Summer							
	50 POE Peak Demand		50 POE Coincident Demand		10 POE Peak Demand		10 POE Coincident Demand	
	MW	MVA	MW	MVA	MW	MVA	MW	MVA
2005								
2006								
2007								
2008	2.02	2.18	1.72	1.86	2.02	2.18	1.74	1.87
2009	1.94	2.23	1.57	1.80	1.94	2.23	1.57	1.80
2010	1.74	1.85	1.61	1.72	1.74	1.85	1.61	1.72
2011	1.71	1.81	1.58	1.68	1.73	1.84	1.61	1.71
2012	1.72	1.83	1.60	1.70	1.75	1.87	1.63	1.73
2013	1.71	1.82	1.59	1.69	1.74	1.85	1.62	1.72
2014	1.68	1.79	1.56	1.66	1.71	1.82	1.59	1.69
2015	1.68	1.79	1.56	1.66	1.71	1.82	1.58	1.68
2016	1.65	1.75	1.53	1.62	1.68	1.78	1.55	1.65
2017	1.68	1.78	1.55	1.65	1.71	1.81	1.58	1.68
2018	1.68	1.79	1.56	1.66	1.71	1.82	1.59	1.69
2019	1.69	1.79	1.56	1.66	1.72	1.82	1.59	1.69
2020	1.69	1.80	1.57	1.67	1.72	1.83	1.60	1.70

Figure 4-245 Wesley Vale Site Summer Load Forecast at 50% and 10% POE

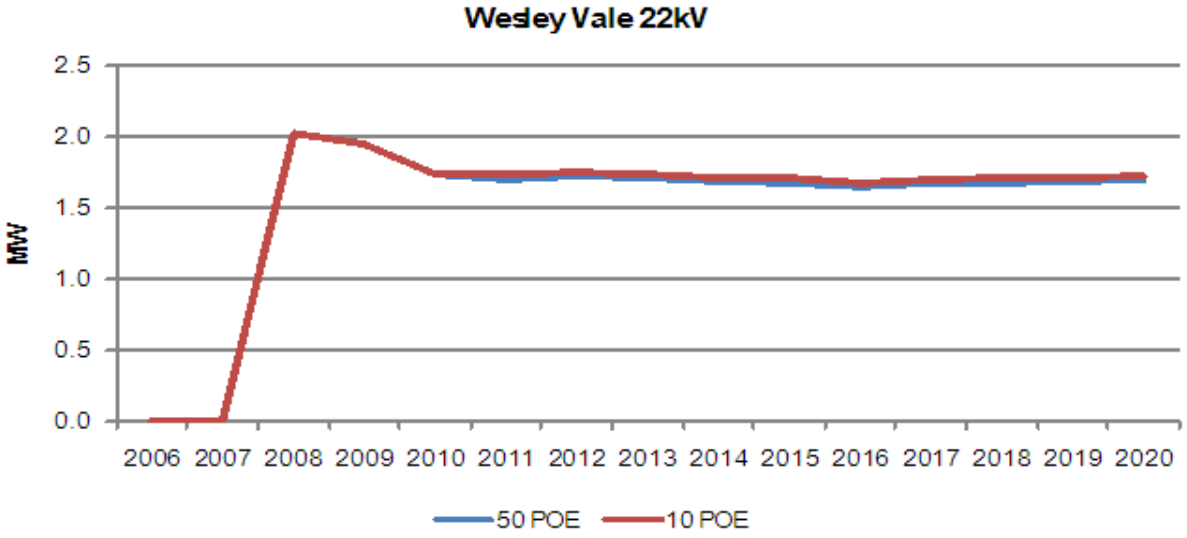
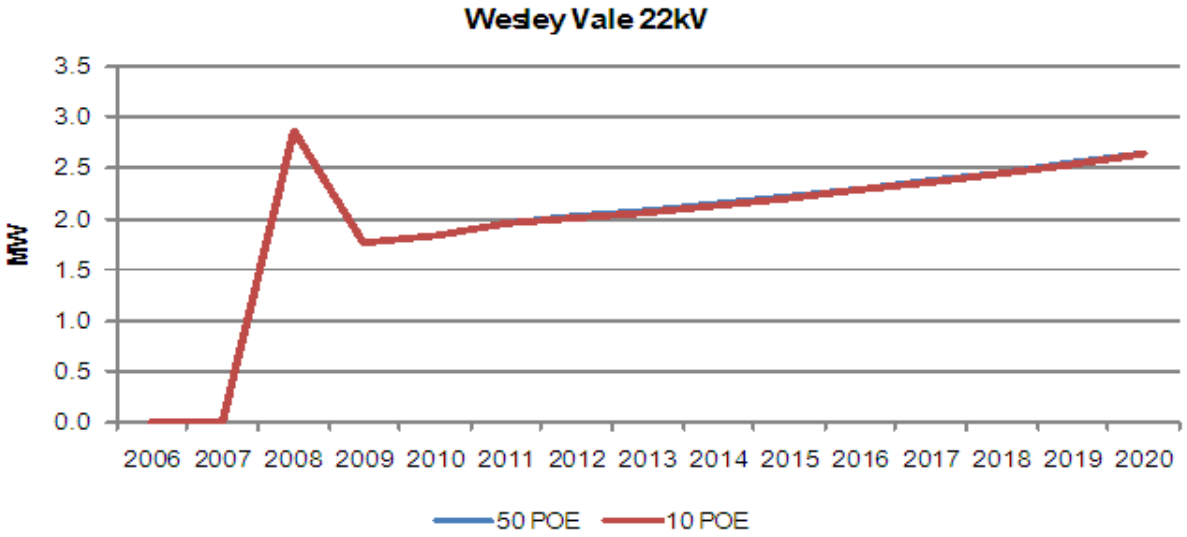
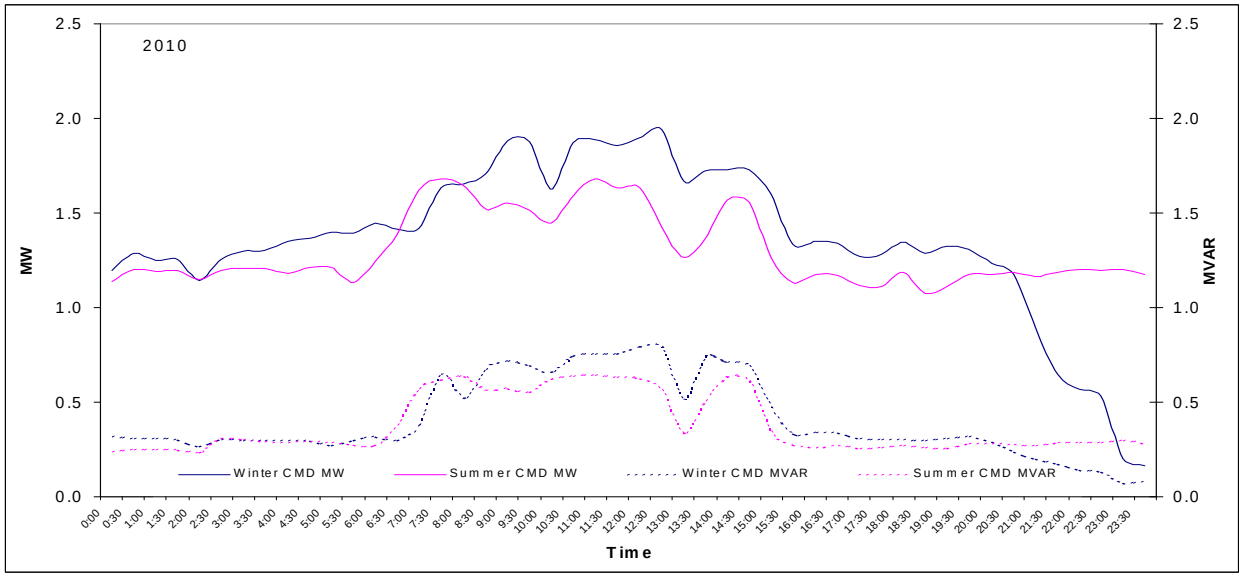


Figure 4-246 Wesley Vale Site Winter Load Forecast at 50% and 10% POE



Load Profiles:

Figure 4-247 Load Profiles: Wesley Vale Substation Day of Summer/Winter Peak Demand




2013
MW
MVAR
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR
Time


2014
MW
MVAR
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR
Time

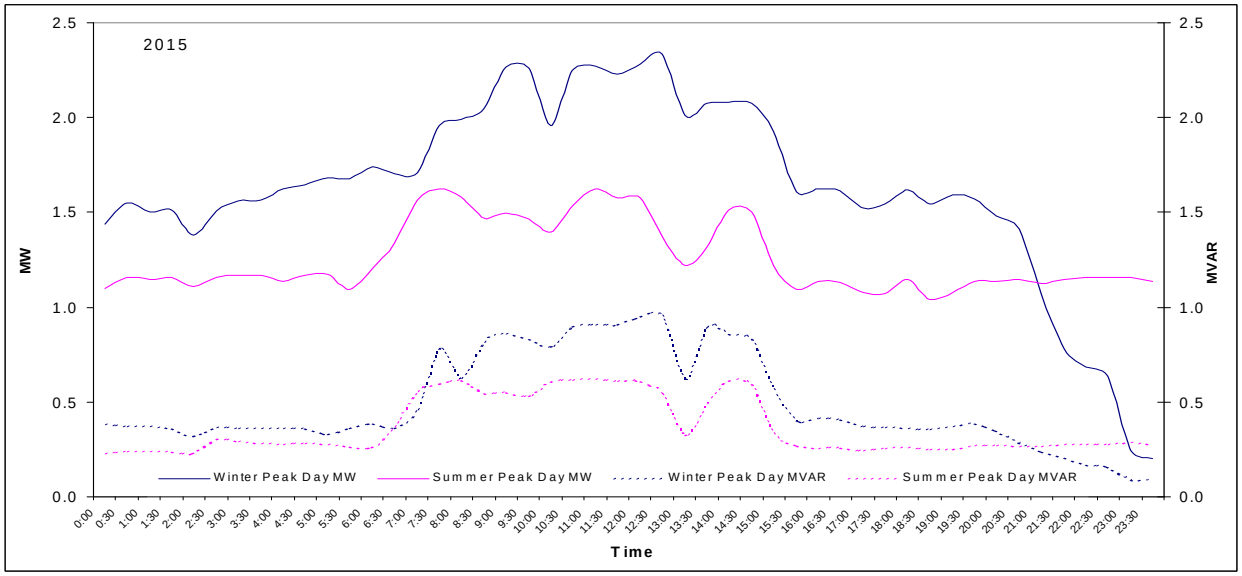
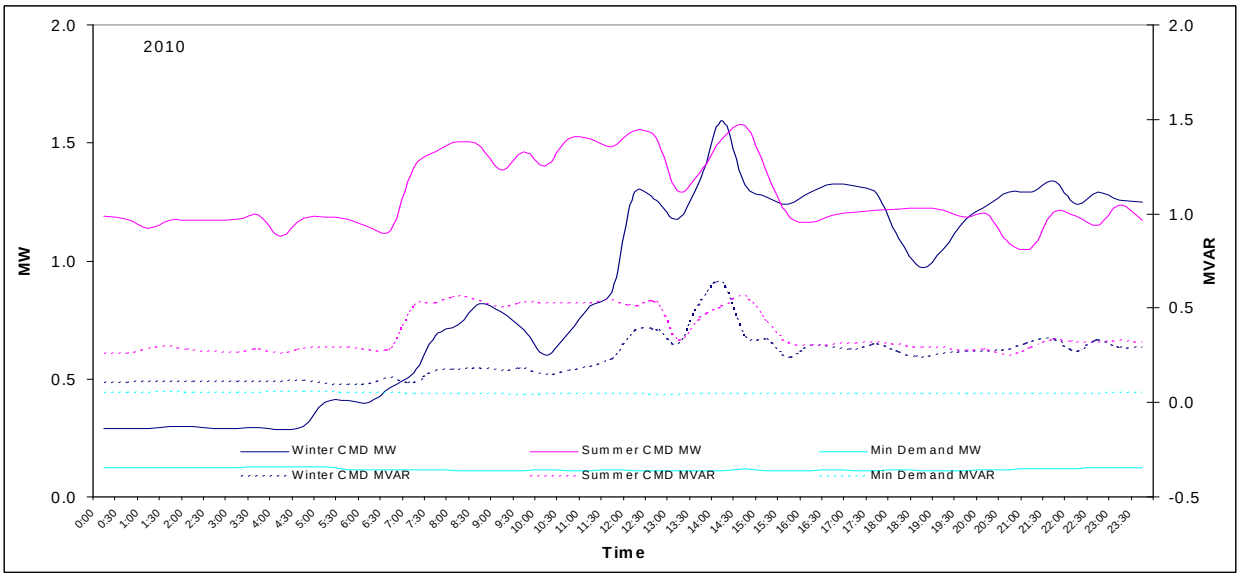
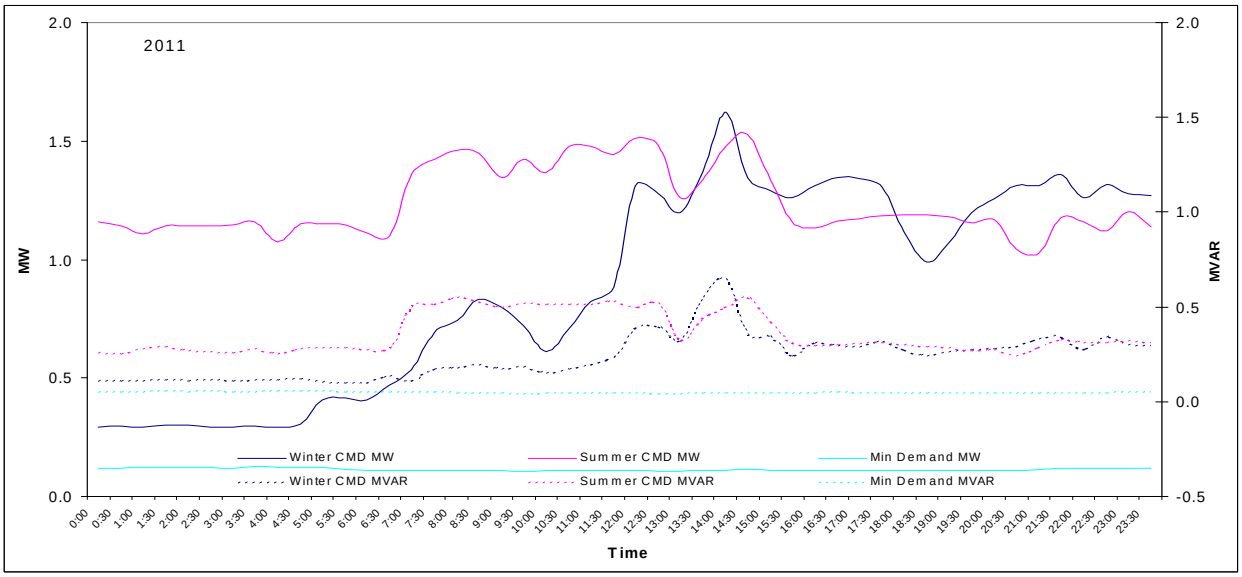
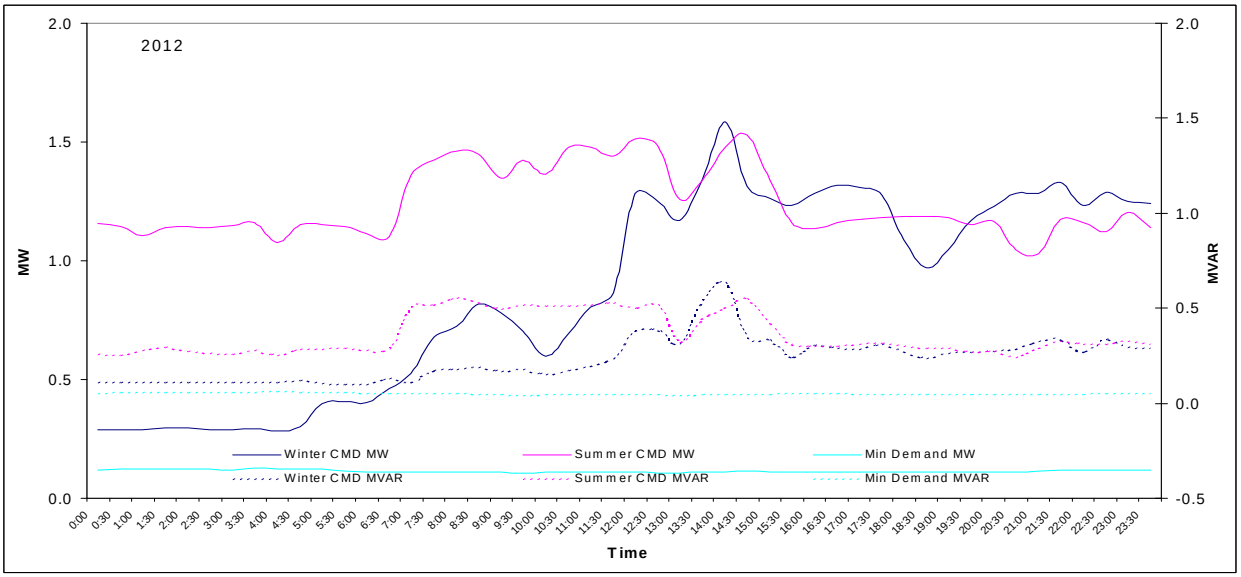
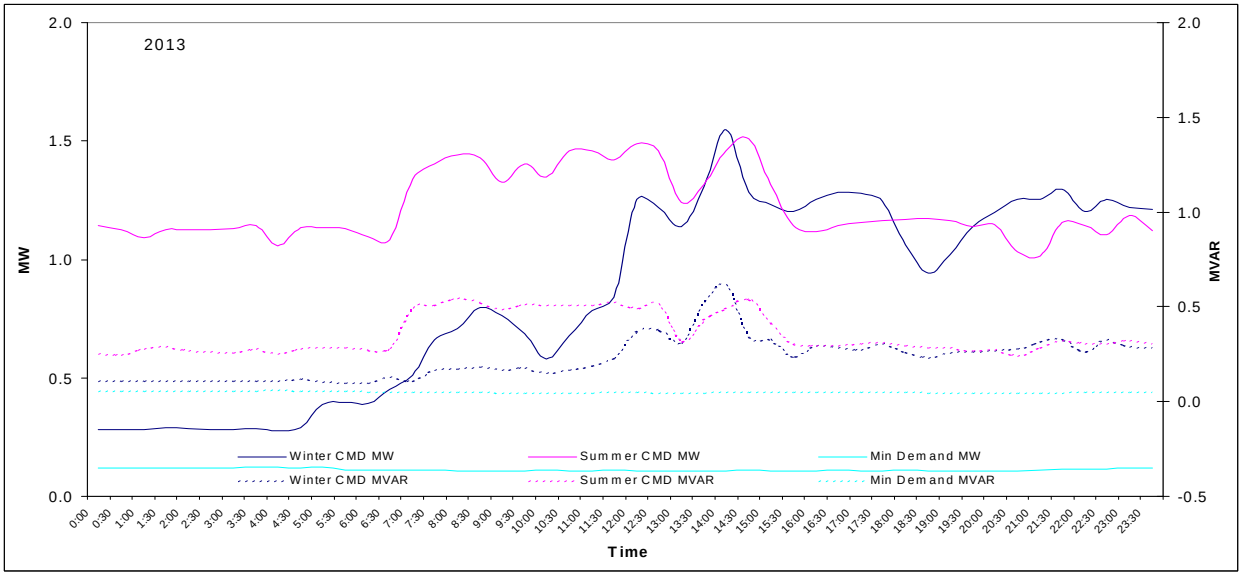

2015
MW
MVAR
Winter Peak Day MW
Summer Peak Day MW
Winter Peak Day MVAR
Summer Peak Day MVAR
Time

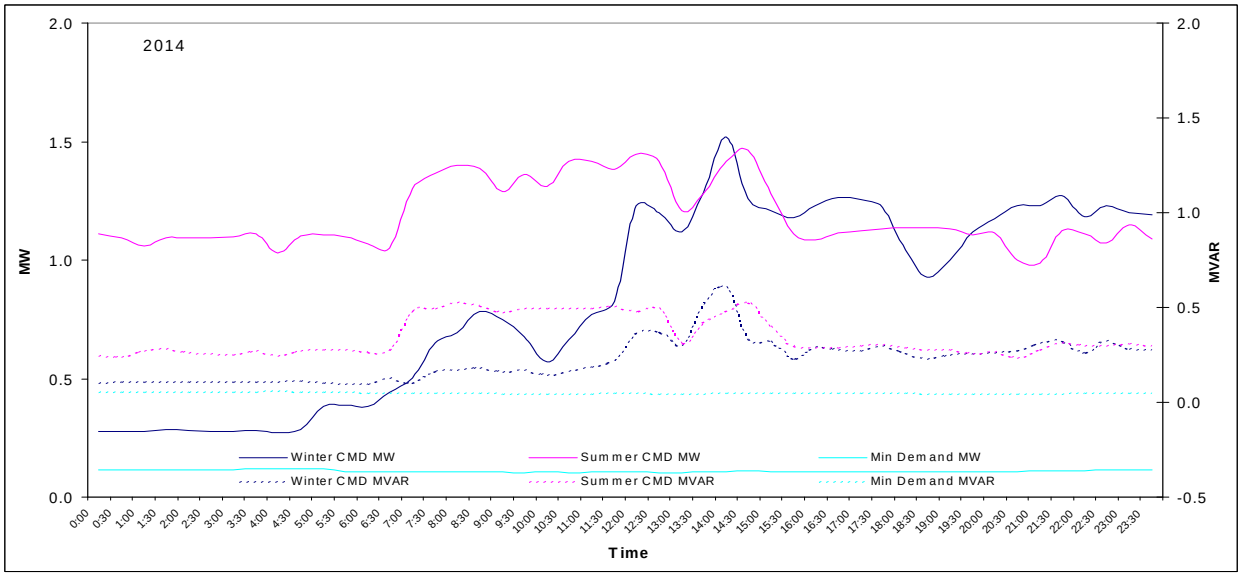
Figure 4-248 Load Profiles: Wesley Vale Substation Day of Summer/Winter CMD, Peak & Min Demand








2013
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR


2014
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

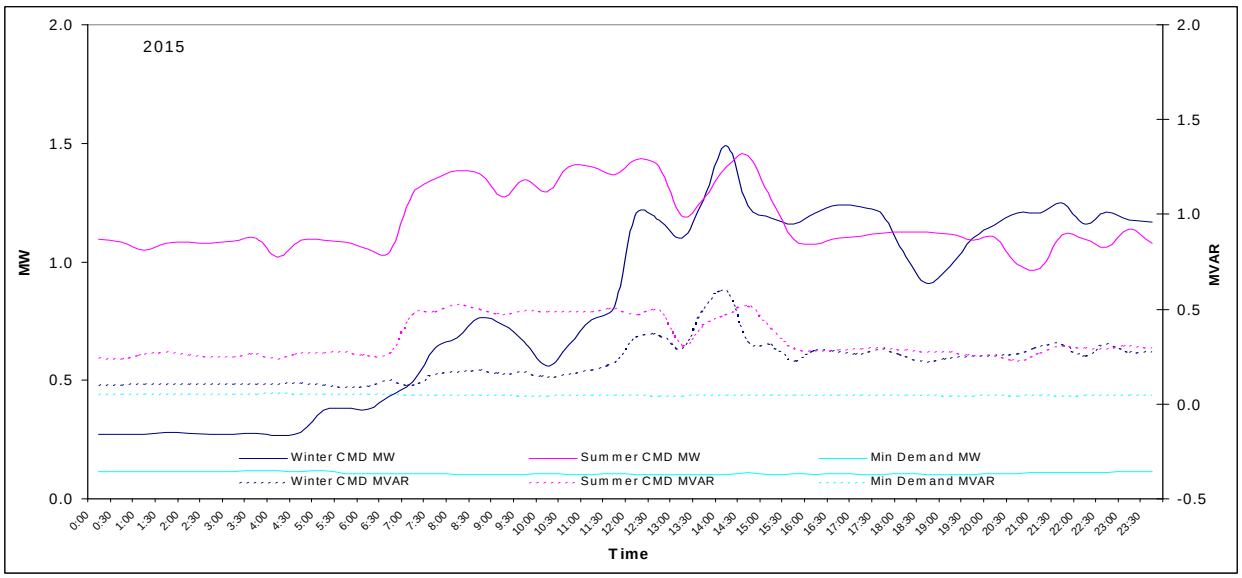
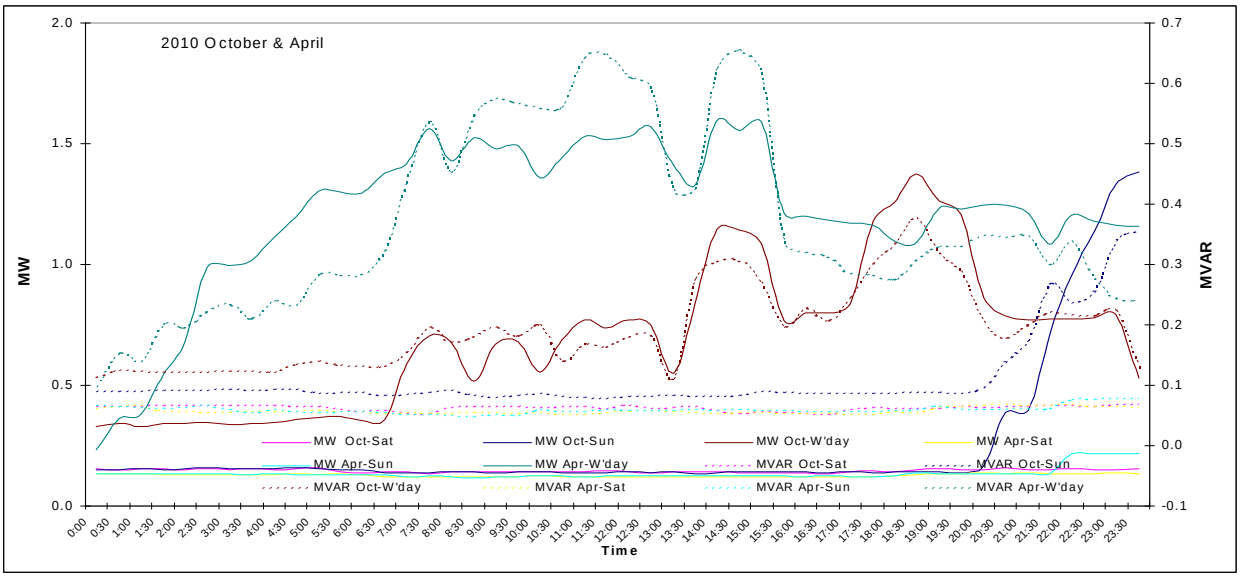
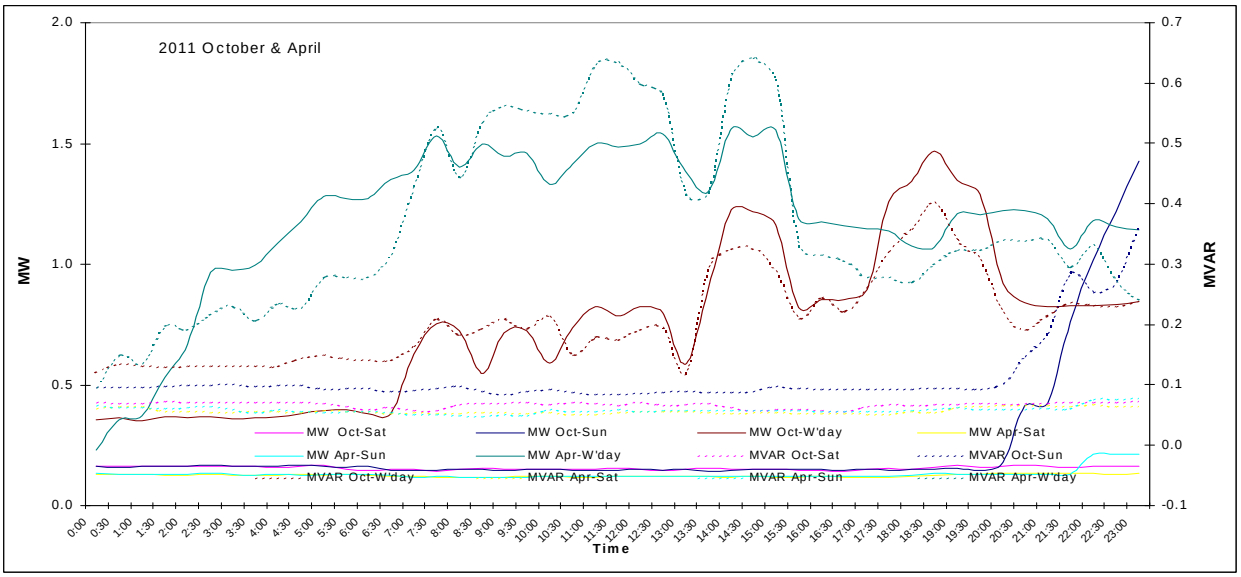
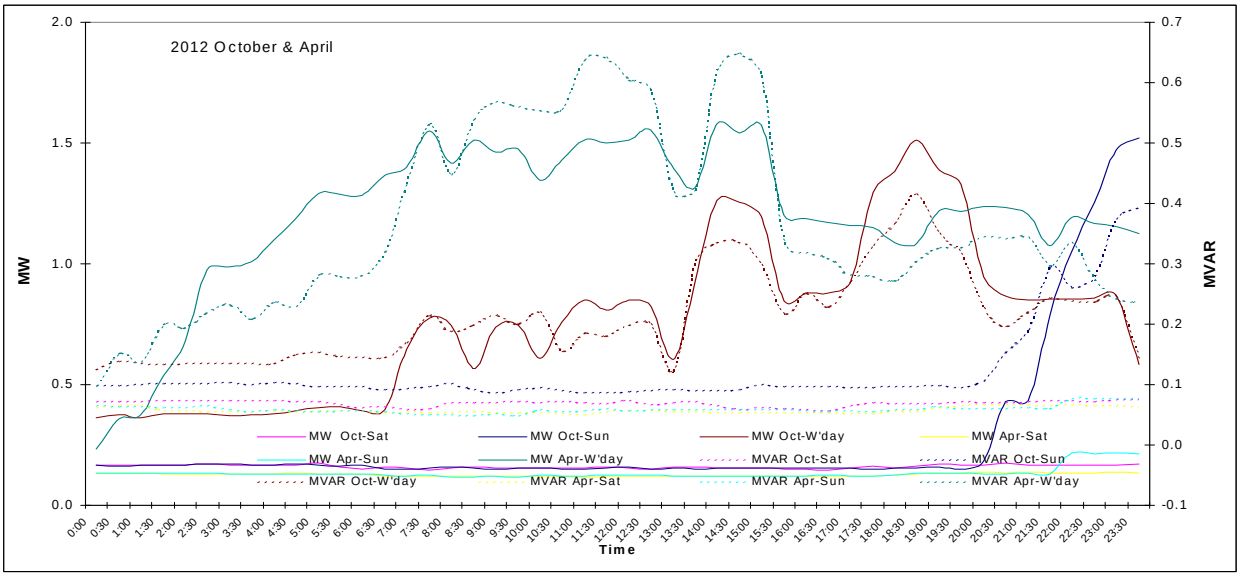
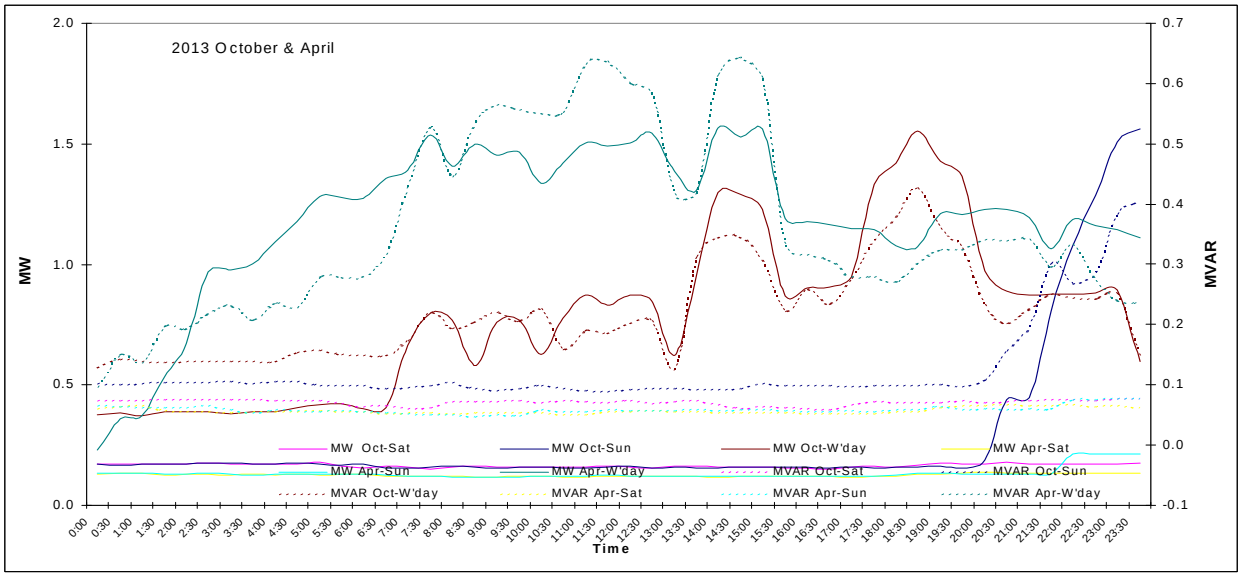

2015
MW
MVAR
Time
Winter CMD MW
Summer CMD MW
Min Demand MW
Winter CMD MVAR
Summer CMD MVAR
Min Demand MVAR

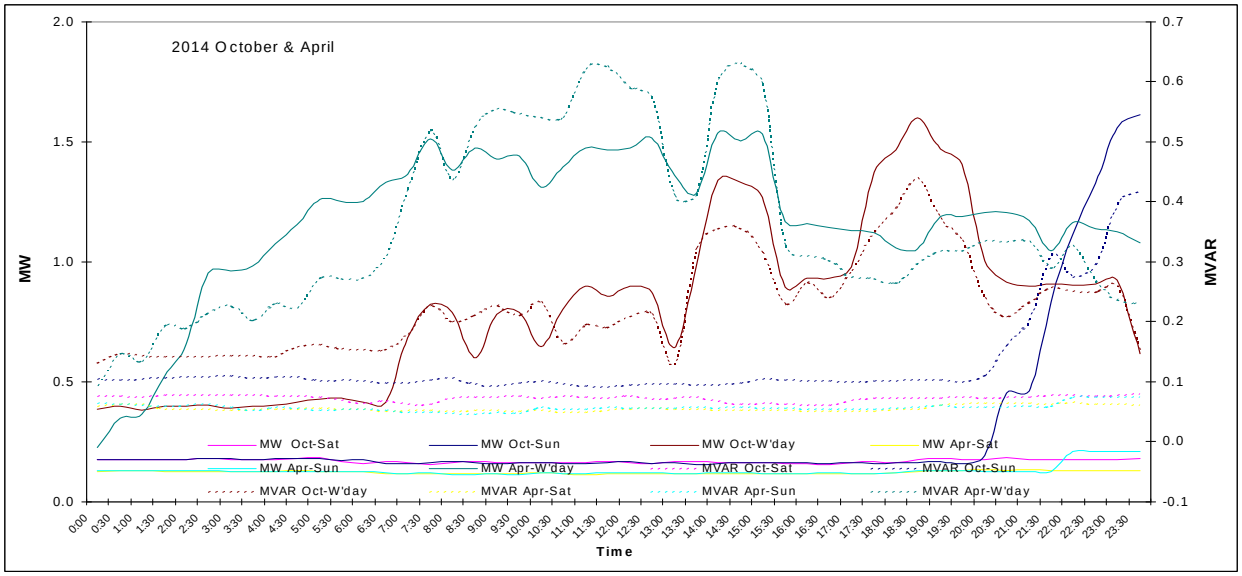
Figure 4-249 Load Profiles: Weekday, Saturday, Sunday for October & April











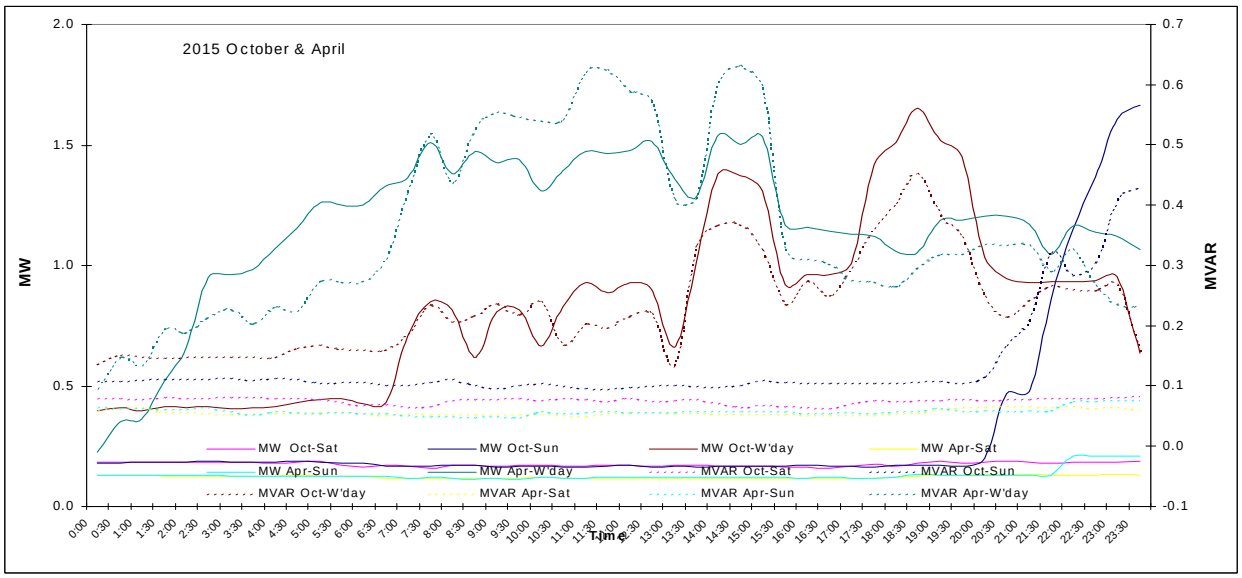
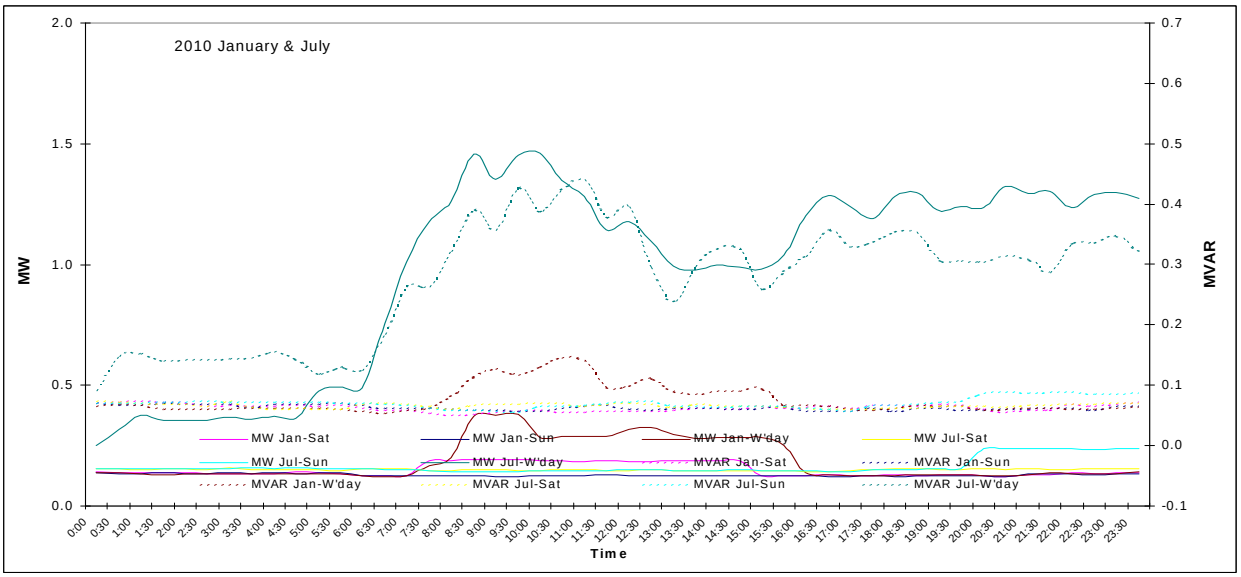
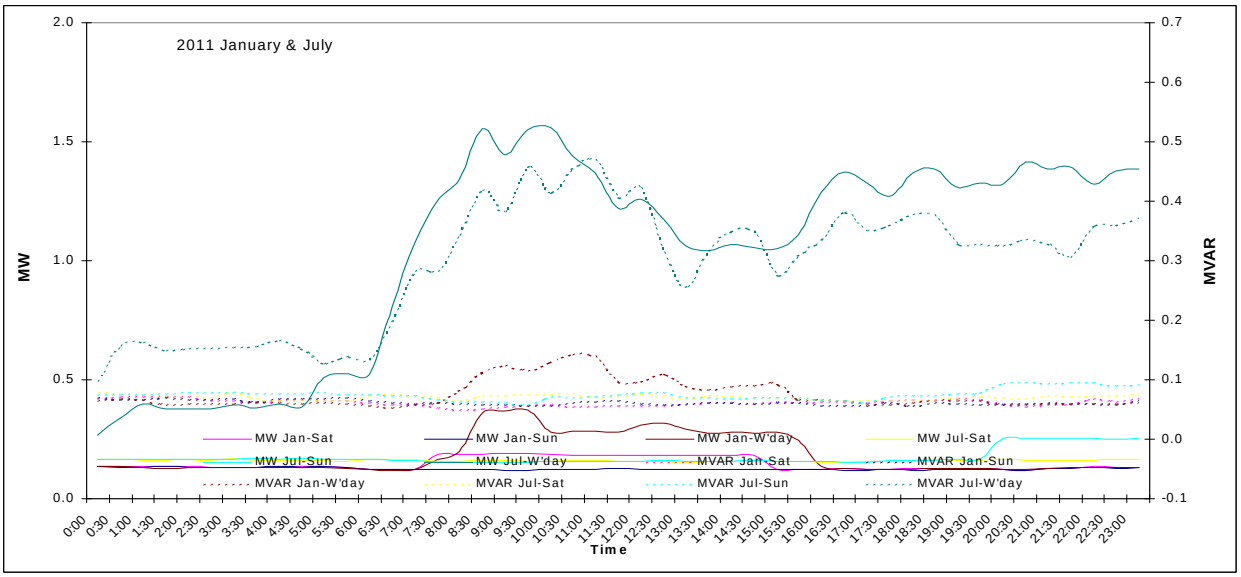
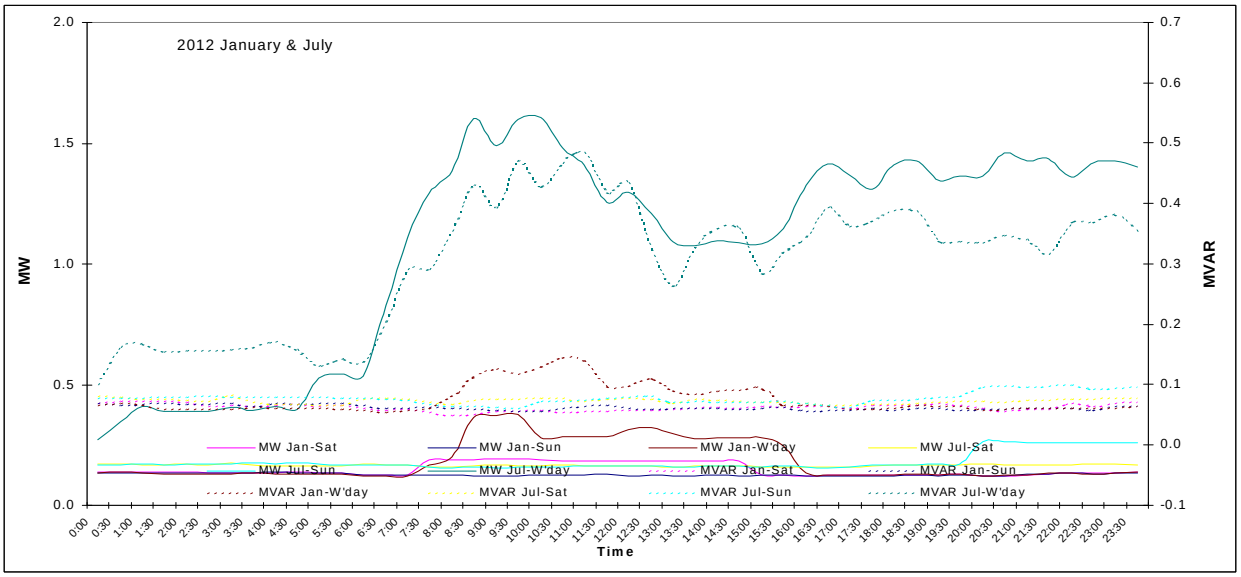
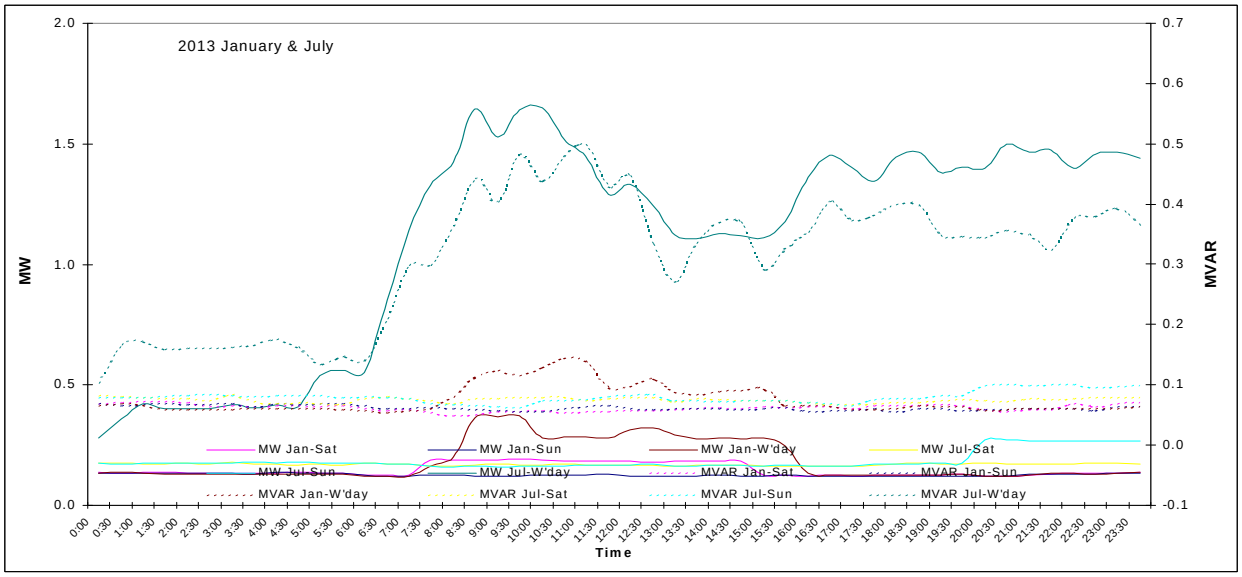


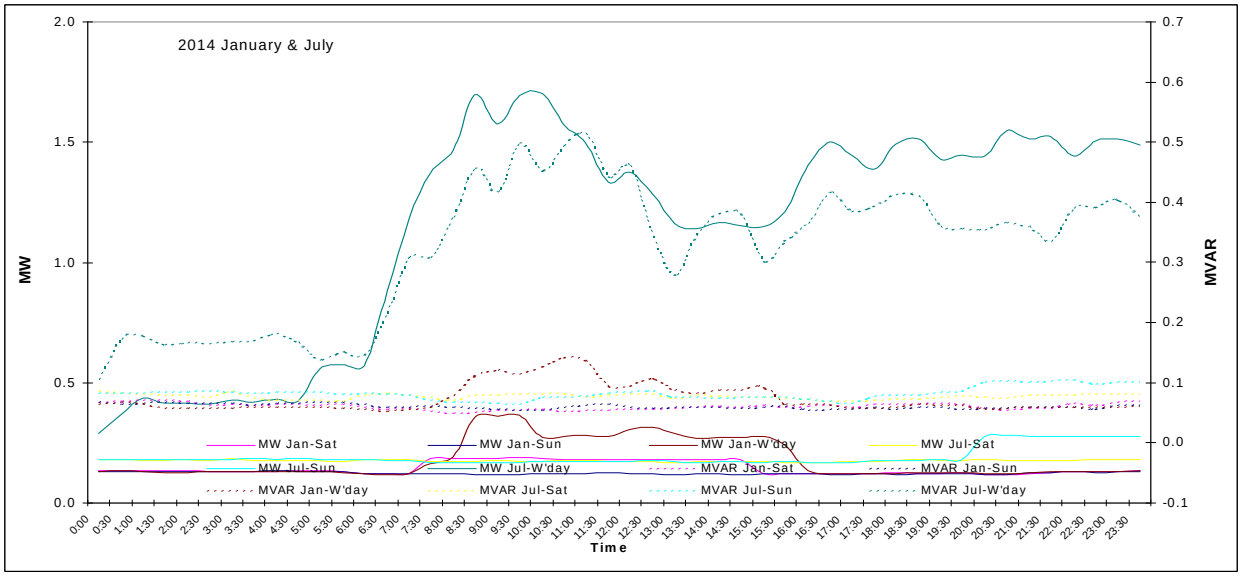
Figure 4-250 Load Profiles: Weekday, Saturday, Sunday for January & July

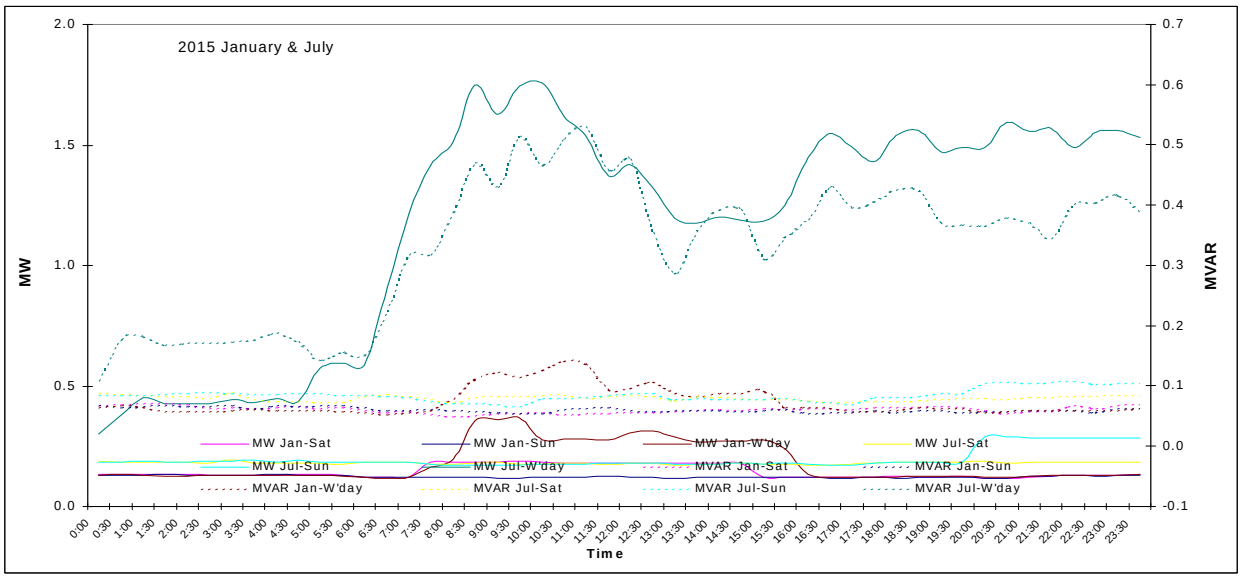







2013 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2014 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day


2015 January & July
MW
MVAR
Time
MW Jan-Sat
MW Jan-Sun
MW Jan-W'day
MW Jul-Sat
MW Jul-Sun
MW Jul-W'day
MVAR Jan-Sat
MVAR Jan-Sun
MVAR Jan-W'day
MVAR Jul-Sat
MVAR Jul-Sun
MVAR Jul-W'day

5 REFERENCES

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6 APPENDIX 1

Schedule 5.7 – Annual Forecast Information for Planning Purposes

This schedule sets out the information in respect of each *connection point* that must be provided to the relevant *Network Service Provider* by each *Registered Participant* that has a *connection point* to a *transmission network* of that *Network Service Provider.*

Data Description	Units	Time Scale	Data Category
At each *connection point* to a *transmission network*, a forecast of:			
Annual Maximum A*ctive power* - Winter	MW	Years 1-10	Annual
Coincident *Reactive Power* - Winter	MVAr	Years 1-10	Annual
Annual Maximum A*ctive power* - Summer	MW	Years 1-10	Annual
Coincident *Reactive Power* - Summer	MVAr	Years 1-10	Annual
Forecast *load* diversity between each *connection point* to the *network* (winter and summer)	%	Years 1-5	Annual
Load Profiles:			
The following forecast daily *profiles* of *connection point* half-hourly average active and reactive *loads* are required, net of all *generating plant*:			
Day of the peak summer and winter MW *peak load* at *connection point*	MW and MVAr	Years 1-5	Annual
Day of *network* peak summer and winter MW *load* (as specified)	MW and MVAr	Years 1-5	Annual

Data Description	Units	Time Scale	Data Category
Each July, October, January, April under average conditions representing:			
(a) Weekdays	MW and MVAr	Years 1-5	Annual
(b) Saturdays	MW and MVAr	Years 1-5	Annual

(c) Sundays/holidays	MW and MVAr	Years 1-5	Annual
Day of the *network* minimum demand (as specified)	MW and MVAr	Years 1-5	Annual

Undispatched *generation*:

For each *connection point* to the *network* the following information is required:

No. of *generating units*	No.	Years 1-5	Annual
Capacity of each *generating unit*	MW (sent out)	Years 1-5	Annual
Daily/Seasonal Operating characteristics	Text	Years 1-5	Annual
Expected output at time of peak *network* Winter *load* (as specified)	MW	Years 1-5	Annual
Expected output at time of peak *network* Summer *load* (as specified)	MW	Years 1-5	Annual