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APPENDIX A: Analysis of Average Annual Temperature

Western province electricity demand (GWh) and total electricity demand (GWh) for 2014 and 2015 is shown in Table 1.

Table 1 – Western Province and Total Electricity Demand in GWh 2014 & 2015

Year	2014	2015
Western Province (GWh)	5,916	6,224
Total (GWh)	11,063	11,786

Accordingly, Western Province contribution for total energy demand is 50% - 55% and total peak demand is 40% - 45% (approximately). Since the province is the most densely populated province in the country with rapid development of the largest infrastructure development projects, it has contributed for half of the electricity demand of the country.

Figure 1, 2 and 3 shows the Colombo daily electricity demand variation and daily maximum temperature variation of year 2014, 2015 and 2016.

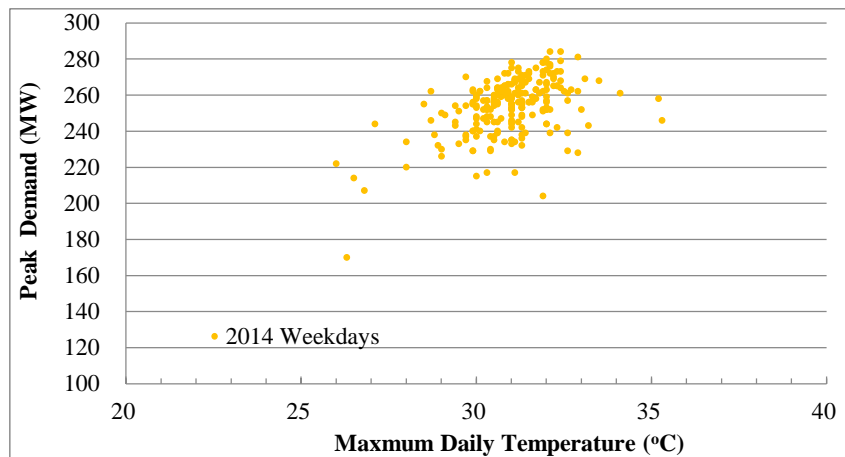


Figure 1 – Peak Demand Vs Maximum Daily Temperature 2014

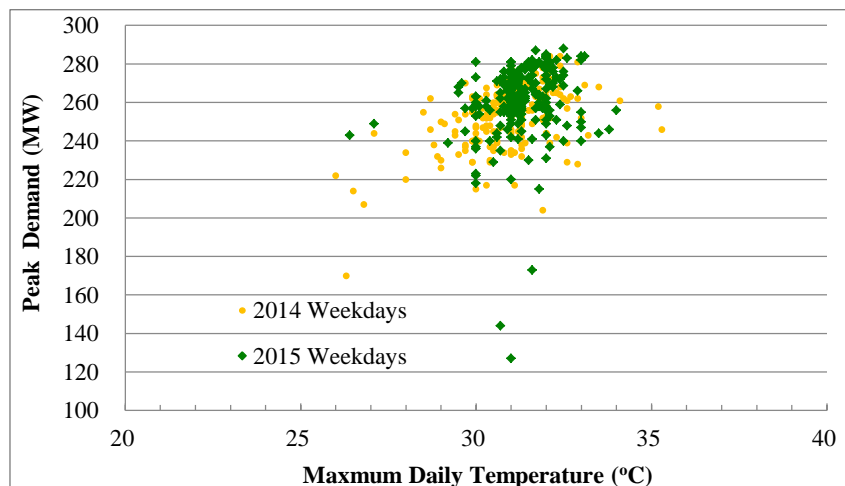


Figure 2 – Peak Demand Vs Maximum Daily Temperature 2014 & 2015

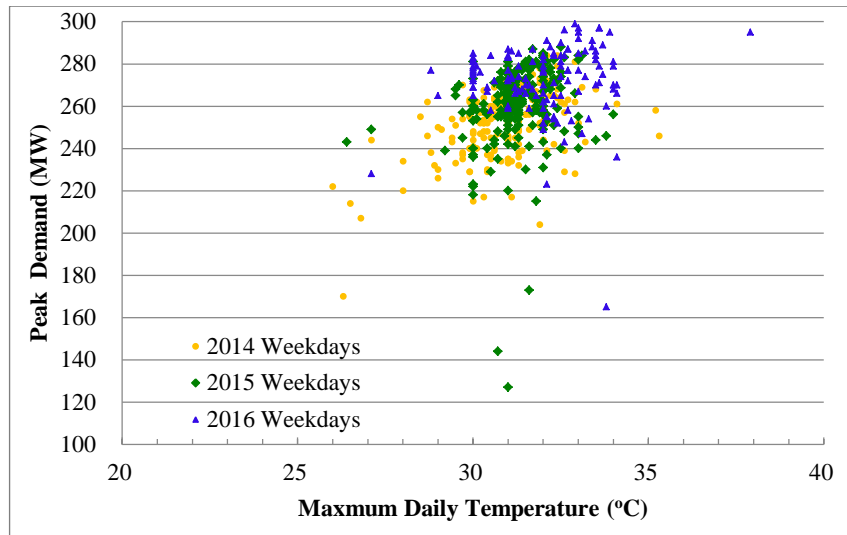


Figure 3 – Peak Demand Vs Maximum Daily Temperature 2014, 2015 & 2016

According to the above, it can be seen that the yearly peak demand is increasing while maximum daily temperature also increasing. Figure 4 shows the average maximum demand and average daily temperature variation of Colombo over last 3 years.

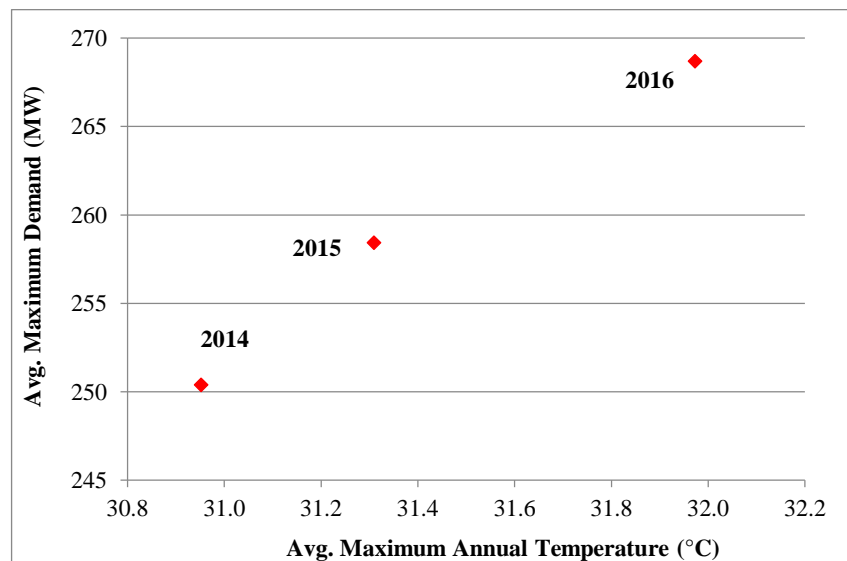


Figure 4 – Avg. Peak Demand Vs Avg. Maximum Daily Temperature

Accordingly both figures show increasing trend and indication of impact from temperature over the electricity demand variation is significant. Therefore, average annual temperature of Colombo meteorological station is considered for the analysis in this study.