

## **ABSTRACT**

Electricity is one of the most important sources of energy and its consumption is increasing day-by-day. Today, Pakistan is facing the worst energy crisis; with a short-fall of 2,000 Mega Watts (MW) to 5,000 M.W. On one hand, the extremism and terrorism is severely affecting the common man and on the other hand, the shortage of electricity is creating havoc in our country. Duration of extensive load shedding all over country ranges from 8 to 16 hours a day. Government has tried to save daylight by moving the time an hour ahead but this practice is not helping much. In order to cope with this situation there must be a policy for the near future.

In this study, firstly, we have developed time series forecast models for electricity consumption in IESCO region of Pakistan, using Seasonal Auto Regressive Integrated Moving Average (SARIMA) modeling technique. Secondly, to gauge the short-term and long-term dynamics of the relationship between electricity consumption, temperature and number of electricity consumers using Johansen Co-integration technique.