

Summarising all the main findings of Analysis

1. It is discovered that Energy value increase with the increase in dates. The energy consumption is lowest at 13-11-22 and highest at 1-01-23. The increase from early dates to ending dates could be because the expansion of production (Maybe they're expanding their business), addition of new machinery, or increasing demand for textile products.
2. It is observed that the Rainbow Hosiery has a night shift or operates more intensively during nighttime hours. It opens at 8:00am and closes at 6:00am so it might be the case. This could be a strategy to take advantage of lower electricity rates during off-peak hours, reduce daytime noise or heat generation, or accommodate worker schedules. The dataset covers December and January, peak hours are from 6:00 pm to 10:00 pm. It is observed that higher energy consumption are outside these peak hours, especially towards midnight, it confirms that the industry is strategically shifting its operations to minimize energy costs.
3. Highest energy consumption is at 23rd hour (11pm) almost every day including weekends, i.e after peak hours (i.e 6:00pm-10:00pm) and lowest energy consumption is at starting hour of industry i.e 12am.
4. Rainbow Hosiery operates every day (weekdays and weekends alike, pattern is same), meaning the production demand is high and factory needs to run on most days to meet those demands.
5. There are one to two days when work was started at unusual time compared to rest, there could be many reasons like maintenance activities, power outage, delay in raw material supply.