This is the very first time I am playing with time-series data and I took it as a very good opportunity to explore something I haven't done before.

After looking at the given yearly demand data, I thought that I could use the multivariate LSTM model to solve the problem. The idea was to consider every half-hour data as a different variable and indexing using 'date'. However, I was not sure about this idea as usual multivariate problems use different attributes, but in this problem, each column is a different measure of the same attribute.
I did some feature engineering adding lag features. I did not have time to explore that this methodology is correct, therefore I did not complete this task. The partially completed code is included.

The forecasting model was implemented using daily total demand data set.

Observations about the data

- Data shows a stationary nature and shows seasonally trend.

The questions needs to be explored more

Which prediction model can give optimal performance in terms of accuracy, efficiency and scalability?
How feature engineering can be done to improve the performance of the problem?
Which evaluation metrics can be used?

If there is more time, I would spend more time to explore more about the most suitable algorithms that could be used with different types of time series data to understand the most suitable methods to address this problem. Also, I will spend more time to do feature engineering and data visualisation,and evaluation.

Future Work: Apply deep learning methods like LSTM