DEMAND ANALYSIS

By

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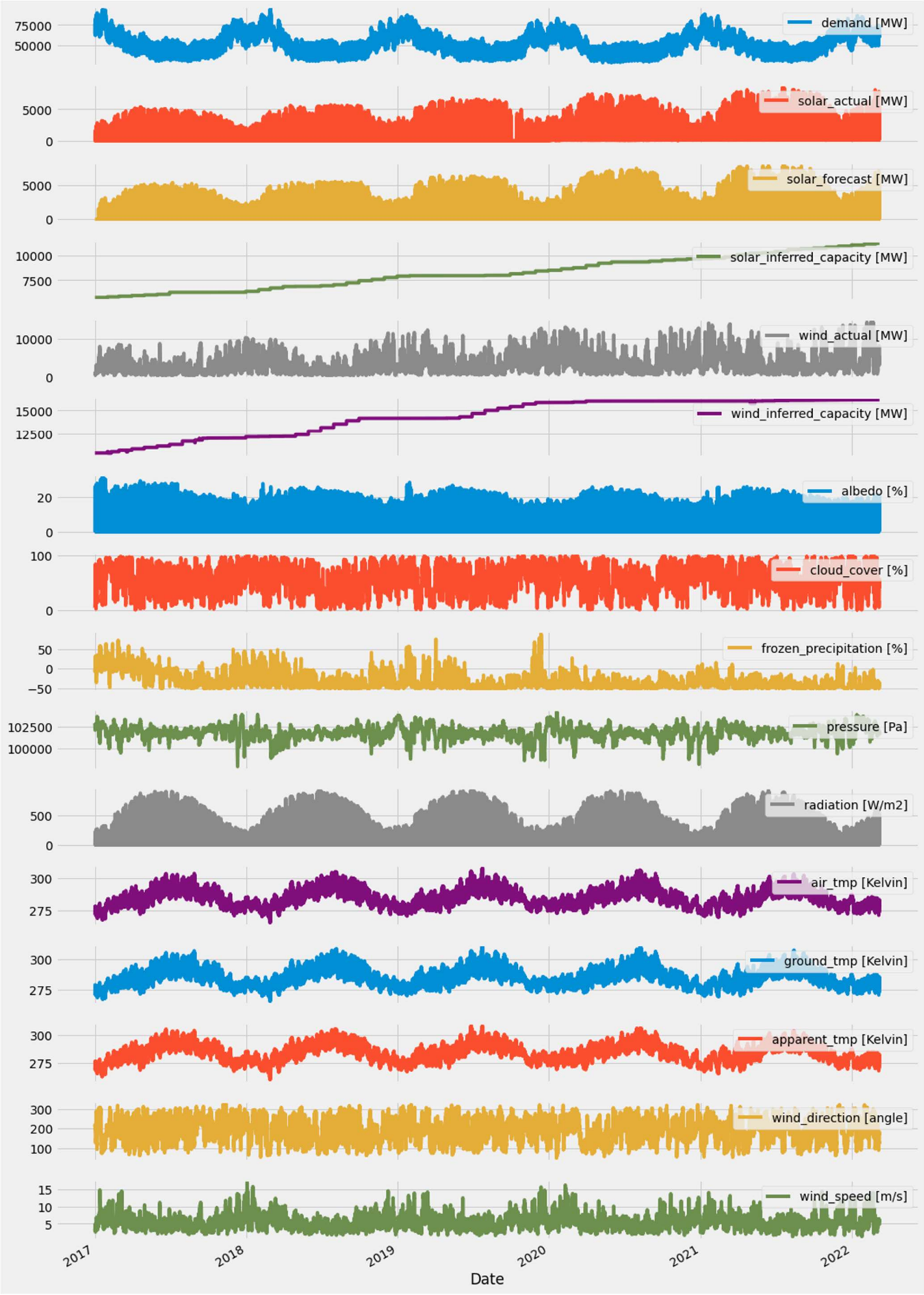
About

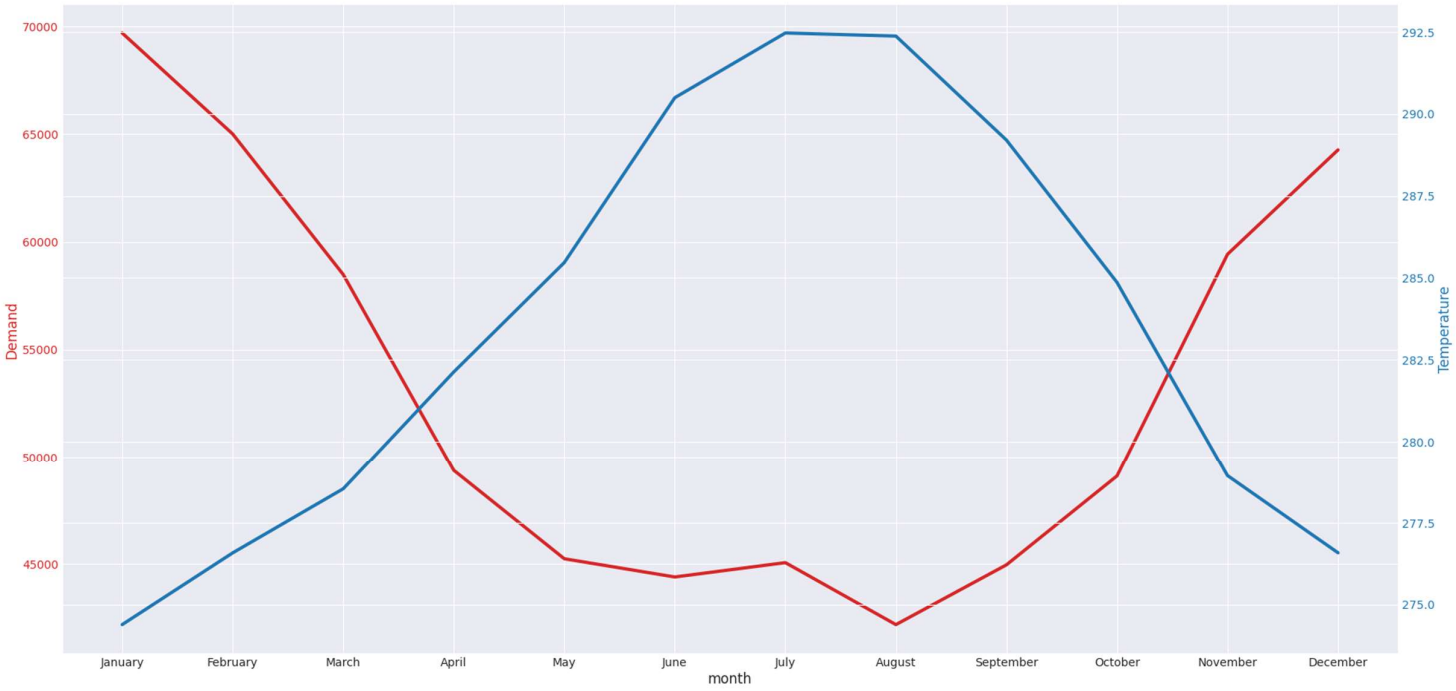
The analysis is focused on the development of a prediction model to properly plan energy producing operations and balance demand with adequate supply. An accurate prediction can assist in managing day-to-day operations, fulfilling customers' energy demands, and preventing surplus energy generation.

Key Notes from EDA

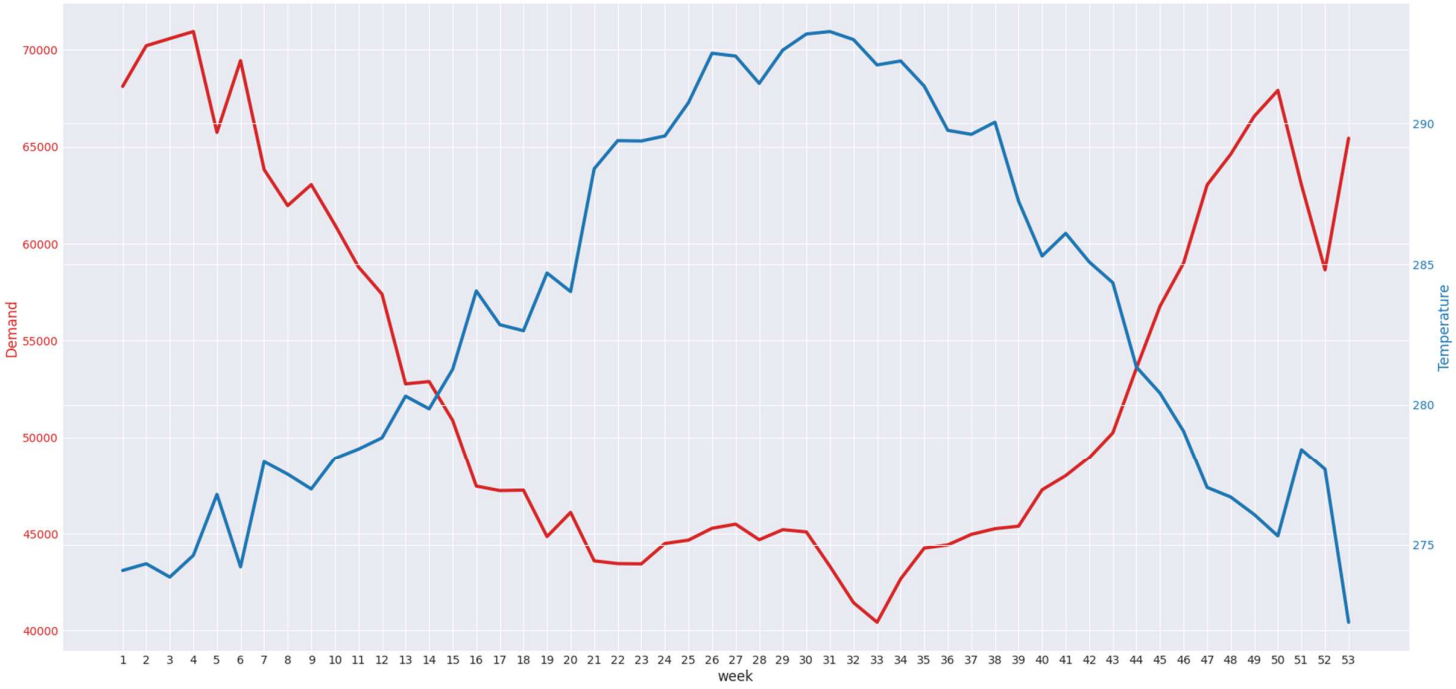
- Air temperature, ground temperature, apparent temperature, radiation, solar actual and solar forecast shows inverse proportionality with energy demand price.
- Solar infrared capacity, wind infrared capacity, cloud covers, frozen precipitation, pressure and wind direction does not show any visible correlation with energy demand.
- Conversely, wind speed, albedo and wind actual show little but noticeable correlation with energy demand price.



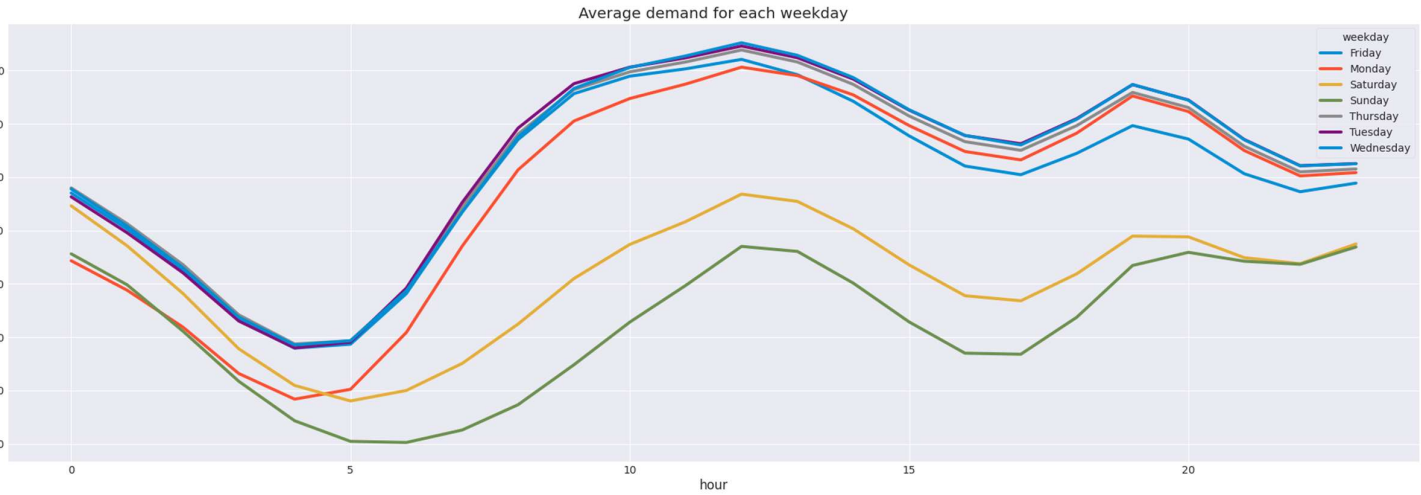
- From April through October when France's temperature is relatively low, demand peaked at those periods.

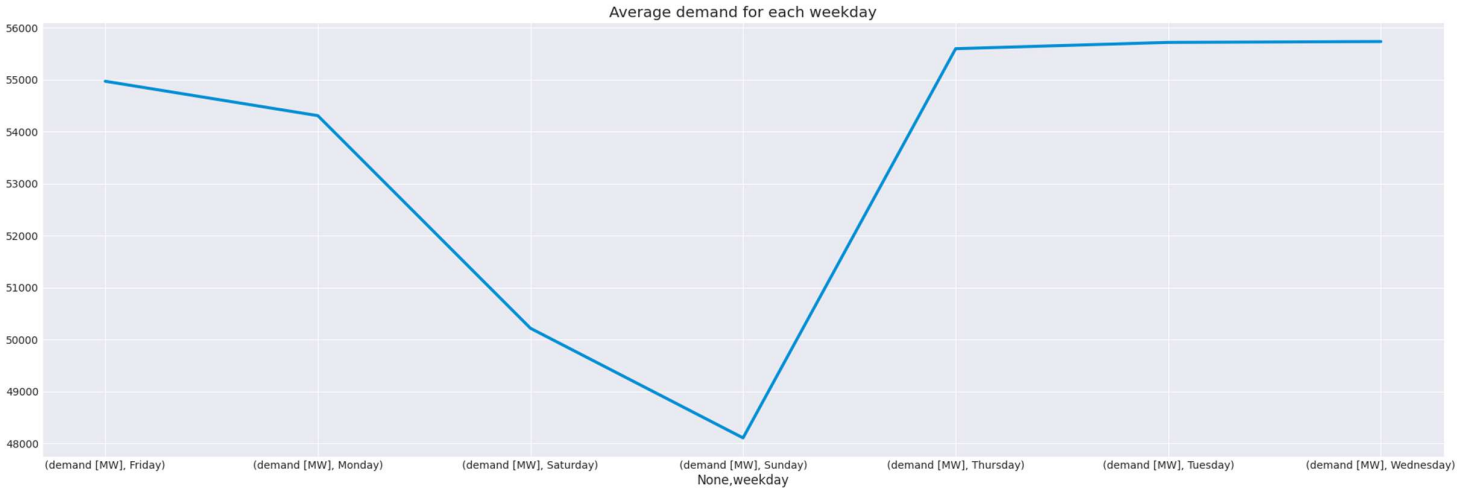


- The average demand and temperature plot shows a similar trend highlighted above.



- In the week, energy are least demanded on weekdays, this could be as a result of the days not being regular working days where businesses require power to function properly


Average demand for each weekday
weekday
Friday
Monday
Saturday
Sunday
Thursday
Tuesday
Wednesday
60000
57500
55000
52500
50000
47500
45000
42500
0
5
10
15
20
hour


Average demand for each weekday
56000
55000
54000
53000
52000
51000
50000
49000
48000
(demand [MW], Friday)
(demand [MW], Monday)
(demand [MW], Saturday)
(demand [MW], Sunday)
(demand [MW], Thursday)
(demand [MW], Tuesday)
(demand [MW], Wednesday)
None,weekday