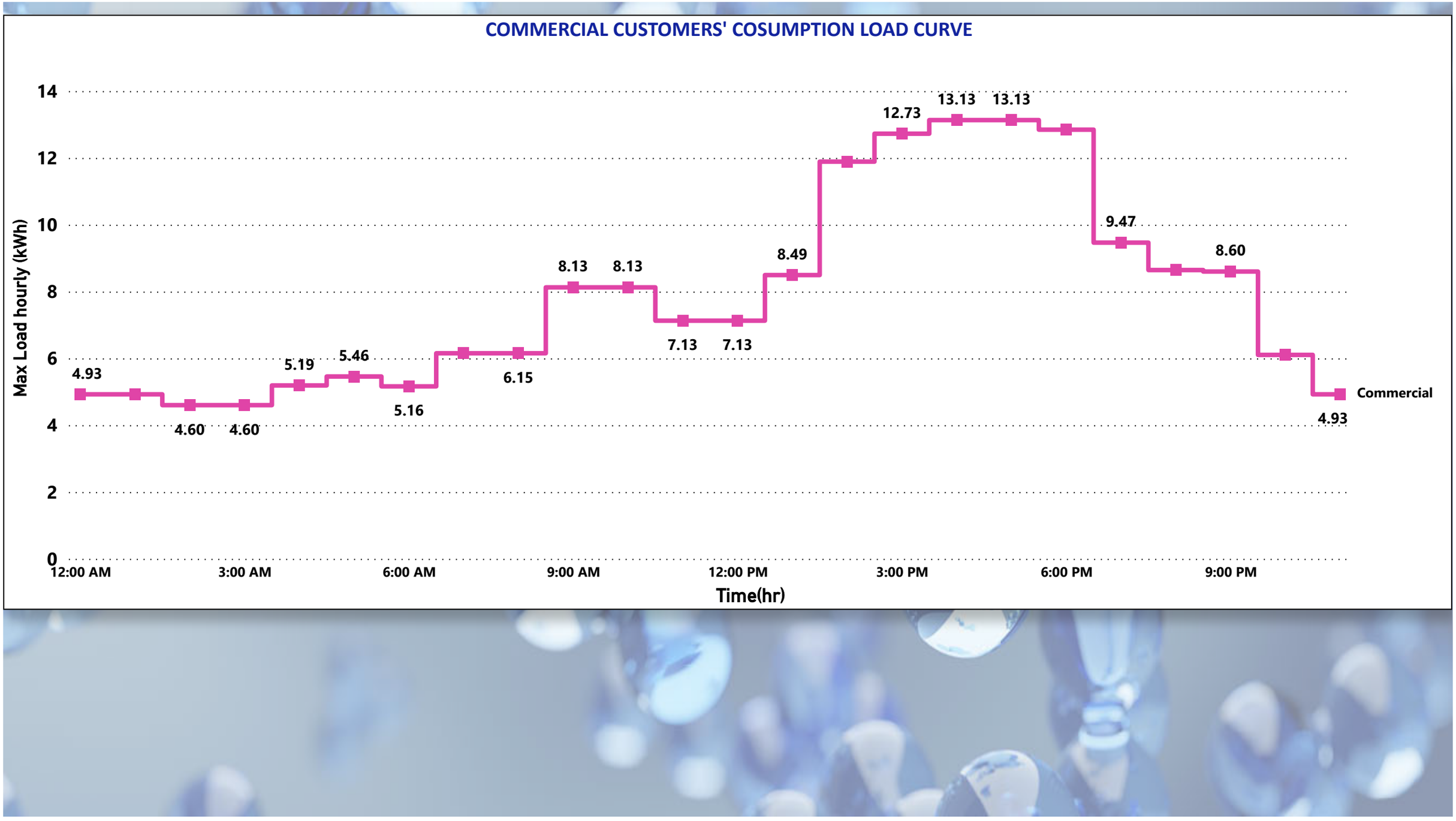
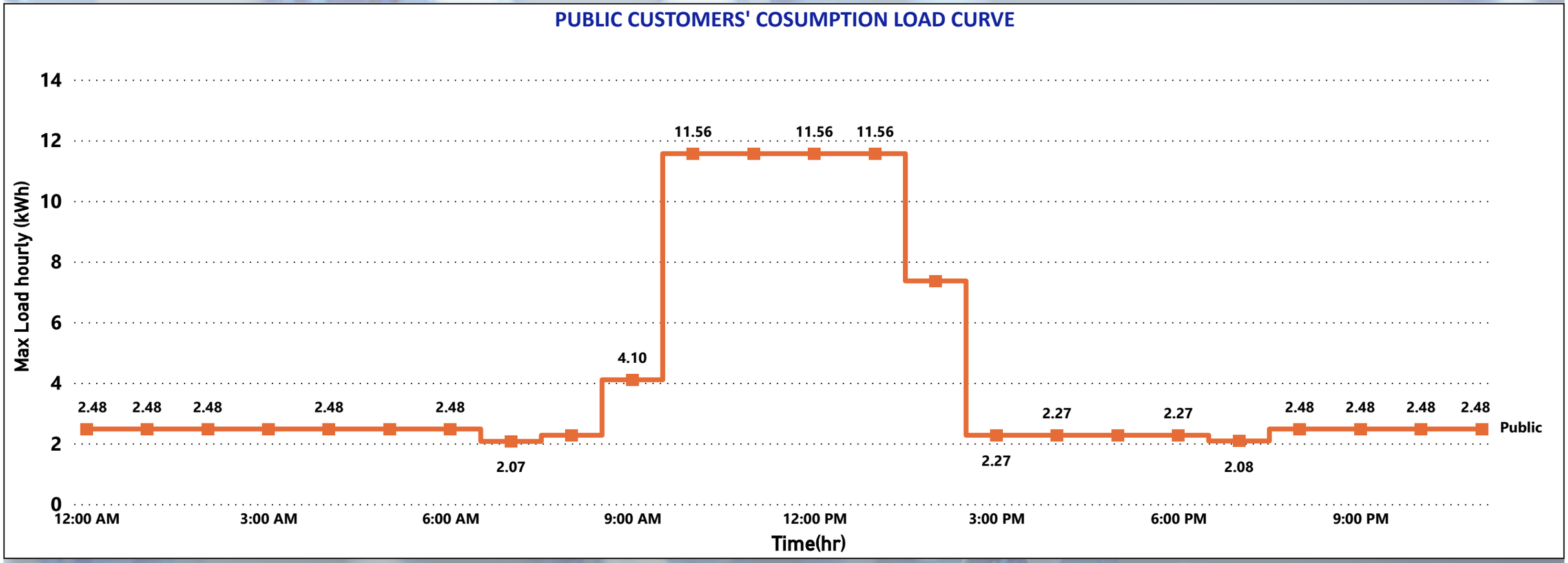
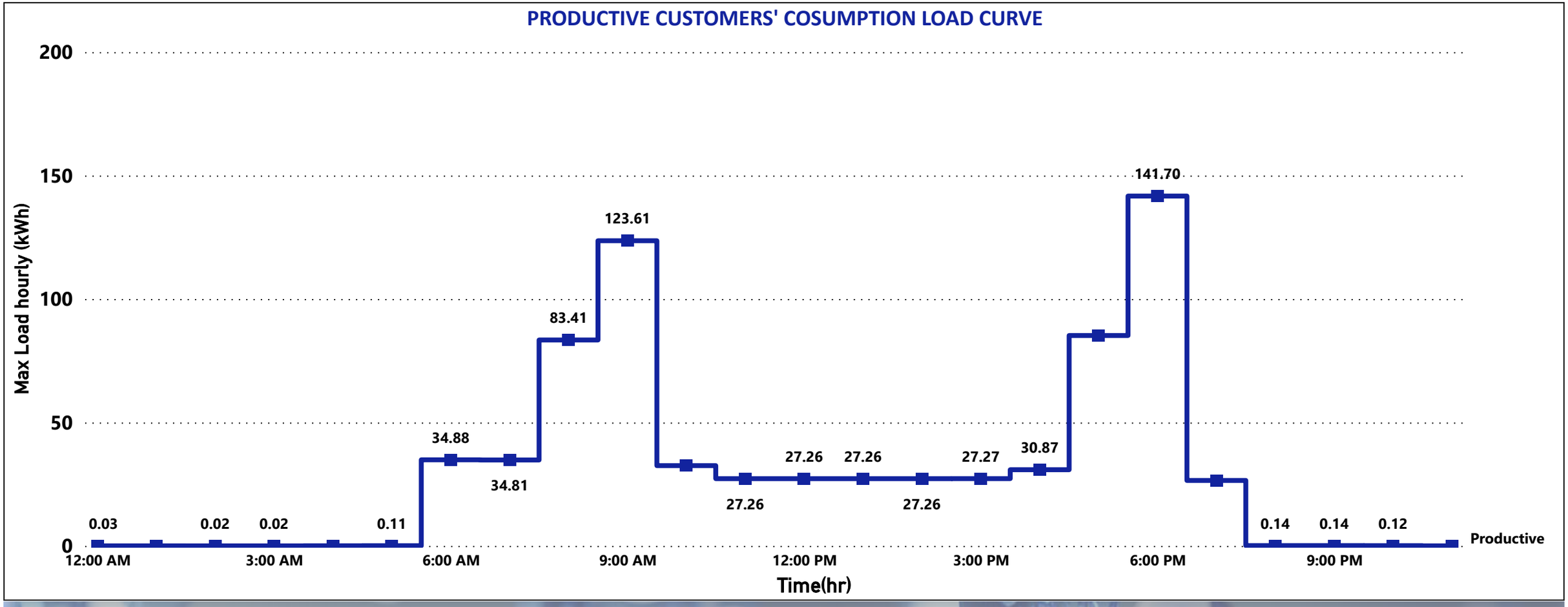
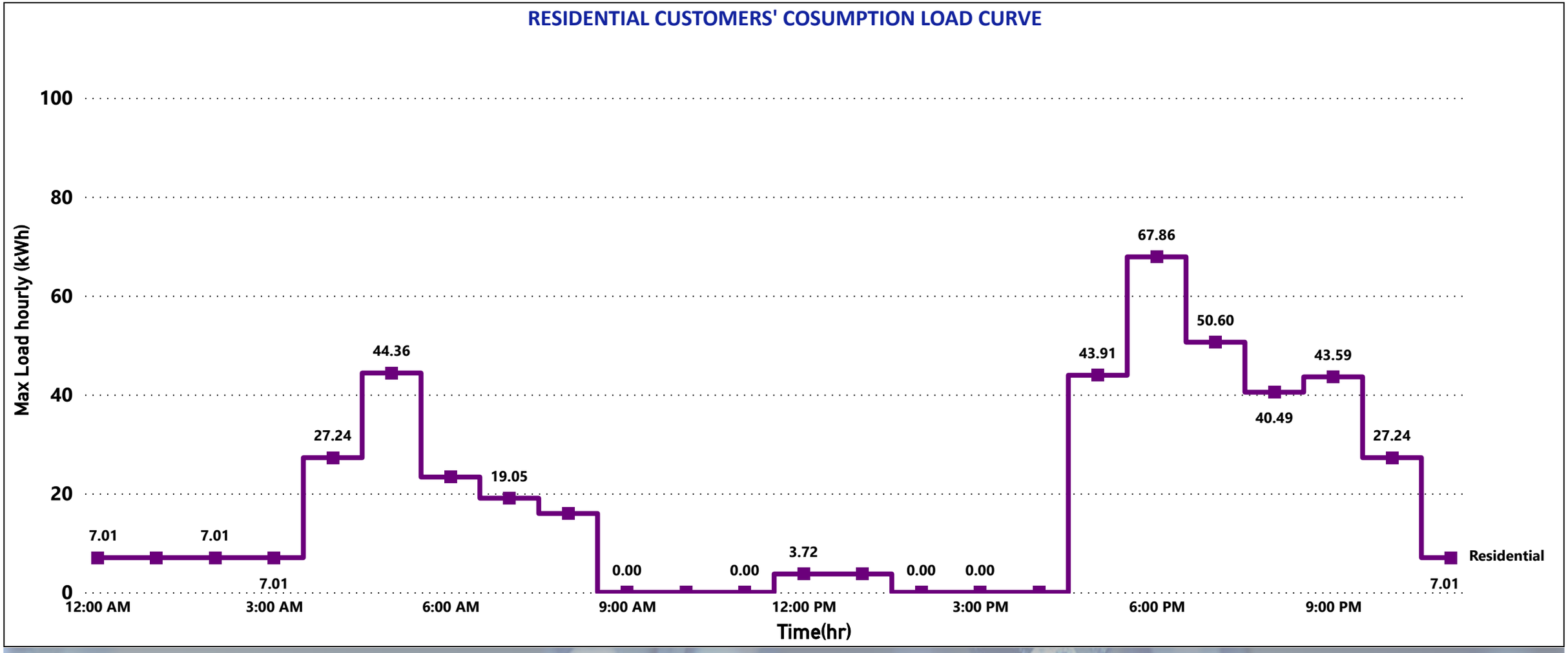

COMMERCIAL CUSTOMERS' COSUMPTION LOAD CURVE
Max Load hourly (kWh)
14
12
10
8
6
4
2
0
4.93
4.60
4.60
5.19
5.46
5.16
6.15
8.13
8.13
7.13
7.13
8.49
12.73
13.13
13.13
9.47
8.60
4.93
Commercial
12:00 AM
3:00 AM
6:00 AM
9:00 AM
12:00 PM
3:00 PM
6:00 PM
9:00 PM
Time(hr)


PUBLIC CUSTOMERS' COSUMPTION LOAD CURVE
Max Load hourly (kWh)
14
12
10
8
6
4
2
0
2.48
2.48
2.48
2.48
2.48
2.07
4.10
11.56
11.56
11.56
2.27
2.27
2.27
2.08
2.48
2.48
2.48
2.48
Public
12:00 AM
3:00 AM
6:00 AM
9:00 AM
12:00 PM
3:00 PM
6:00 PM
9:00 PM
Time(hr)


PRODUCTIVE CUSTOMERS' COSUMPTION LOAD CURVE
200
150
100
50
0
Max Load hourly (kWh)
0.03
0.02
0.02
0.11
34.88
34.81
83.41
123.61
27.26
27.26
27.26
27.27
30.87
141.70
0.14
0.14
0.12
12:00 AM
3:00 AM
6:00 AM
9:00 AM
12:00 PM
3:00 PM
6:00 PM
9:00 PM
Time(hr)
Productive

RESIDENTIAL CUSTOMERS' COSUMPTION LOAD CURVE



For Commercial Customers, the Peak period was between 2pm to 6pm when load demand was high. The lowest load demand by commercial was between 12am and 11pm at night

For Public, the peak period was between 10am to 2pm which is the peak period for commercial activities. There was a sharp drop in energy demand after 2pm which shows activities were getting to slow down.

For Productive, the peak period was 9am and 6pm. This load demand curve appears a bit problematic because, considering the customers in this category which are farmers, Furniture makers and welders, I expect peak period between 9am to 4pm, which is the peak period for activities. Load evaluation and site visitation are required here to ascertain if the load consumption is accurate.

For Residential, the peak period was between 6pm to 5am. it shows a true load demand curve, because the occupants of the buildings only demand for high energy at nigh or in the midnight after returned from work

Questions

I analyzed rough data to do that from excel to power bi.
Check the load curve above, which is problematic

Plot the chart of maximum hourly load on the y-axis to time on the x-axis for each category. The result should be four charts for each category. These charts are called load curves. A load curve is a graph of the variation in the electrical load versus time. They are very important to minigrid design and commercial operations.
• From a commercial standpoint and considering the technologies we deploy to generate power in our minigrids, answer the following questions:
o In your opinion which categories have potentially problematic load curves and why?