Daily Energy Generation Report on 2019-11-27

Weather Conditions

Sunlight Hours: 14

Average Temperature: 23.85°C

Average Wind Speed: 5.27 m/s

Most Frequent Wind Direction: 0°

Total Rainfall: 30239.25 mm

Air Quality Data:

Average PM1: 2.31 µg/m³

Average PM2.5: 0.08 µg/m³

Average PM4: 0.00 µg/m³

Average PM10: 0.00 µg/m³

Average Particulate Concentration: 0.45 particle/m³

Energy Generation Data

Total Energy Generated AC: 21.60 kWh

Total Energy Generated DC: 22.02 kWh

Conversion Efficiency Rate: 98.10%

Peak hour: 2019-11-27 08:00:00: 3.64 kWh

Hourly Energy Generation:

['00:00: 0.00 kWh', '04:00: 0.00 kWh', '05:00: 0.44 kWh', '06:00: 1.31 kWh', '07:00: 3.07 kWh', '08:00: 3.64 kWh', '09:00: 3.29 kWh', '10:00: 2.61 kWh', '11:00: 2.63 kWh', '12:00: 1.10 kWh', '13:00: 1.20 kWh', '14:00: 1.05 kWh', '15:00: 0.75 kWh', '16:00: 0.39 kWh', '17:00: 0.12 kWh', '18:00: 0.00 kWh', '19:00: 0.00 kWh', '20:00: 0.00 kWh', '21:00: 0.00 kWh', '22:00: 0.00 kWh', '23:00: 0.00 kWh']:

Environmental Impact

Environmental Impact:The energy generated today resulted in a significant reduction of 16.37 kg of CO2 emissions. The clean energy production contributed to improving air quality by reducing reliance on fossil fuels.

CO2 Savings: 16.37 kg

Alerts and Notifications

Performance Alerts: No information

Weather Warnings: No information

Summary and Recommendations

Summary: On 2019-11-27, the system generated a total of 21.60 kWh of AC energy and 22.02 kWh of DC energy, with a peak generation of 3.64 kWh at 2019-11-27 08:00:00. The conversion efficiency rate was 98.10%. The weather conditions on this day were characterized by 14 hours of sunlight, an average temperature of 23.85°C, and an average wind speed of 5.27 m/s. The air quality was excellent, with low levels of particulate matter.

Recommendations: Considering the high rainfall and lack of information regarding system downtime, maintenance, and energy consumption, a comprehensive review of the system's performance and operational efficiency is recommended. This analysis should include assessing the impact of rainfall on energy generation, evaluating the need for preventative maintenance, and optimizing energy usage on-site to maximize energy savings and minimize environmental impact.
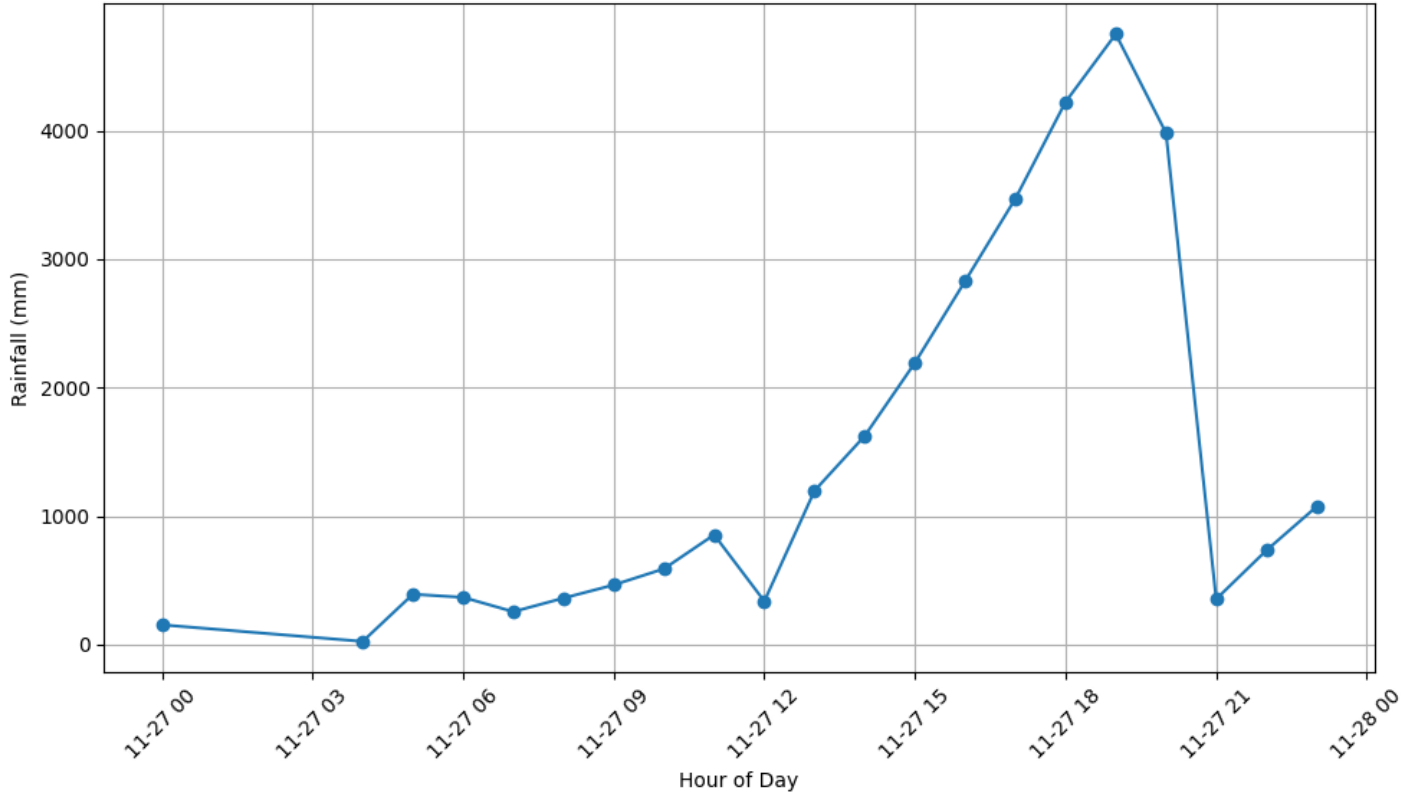
Hourly Energy Generation (kWh)

Hourly Temperature (°C)
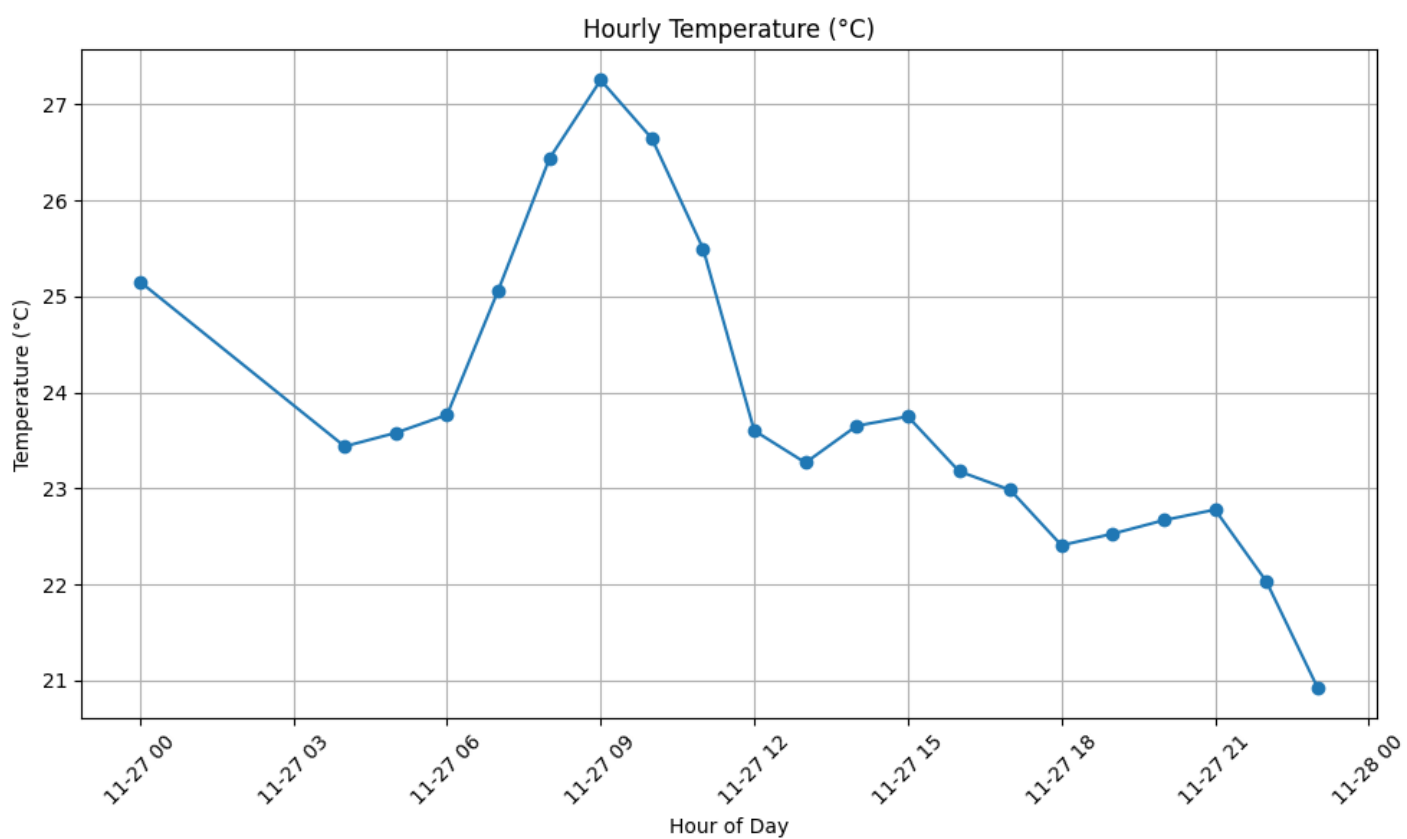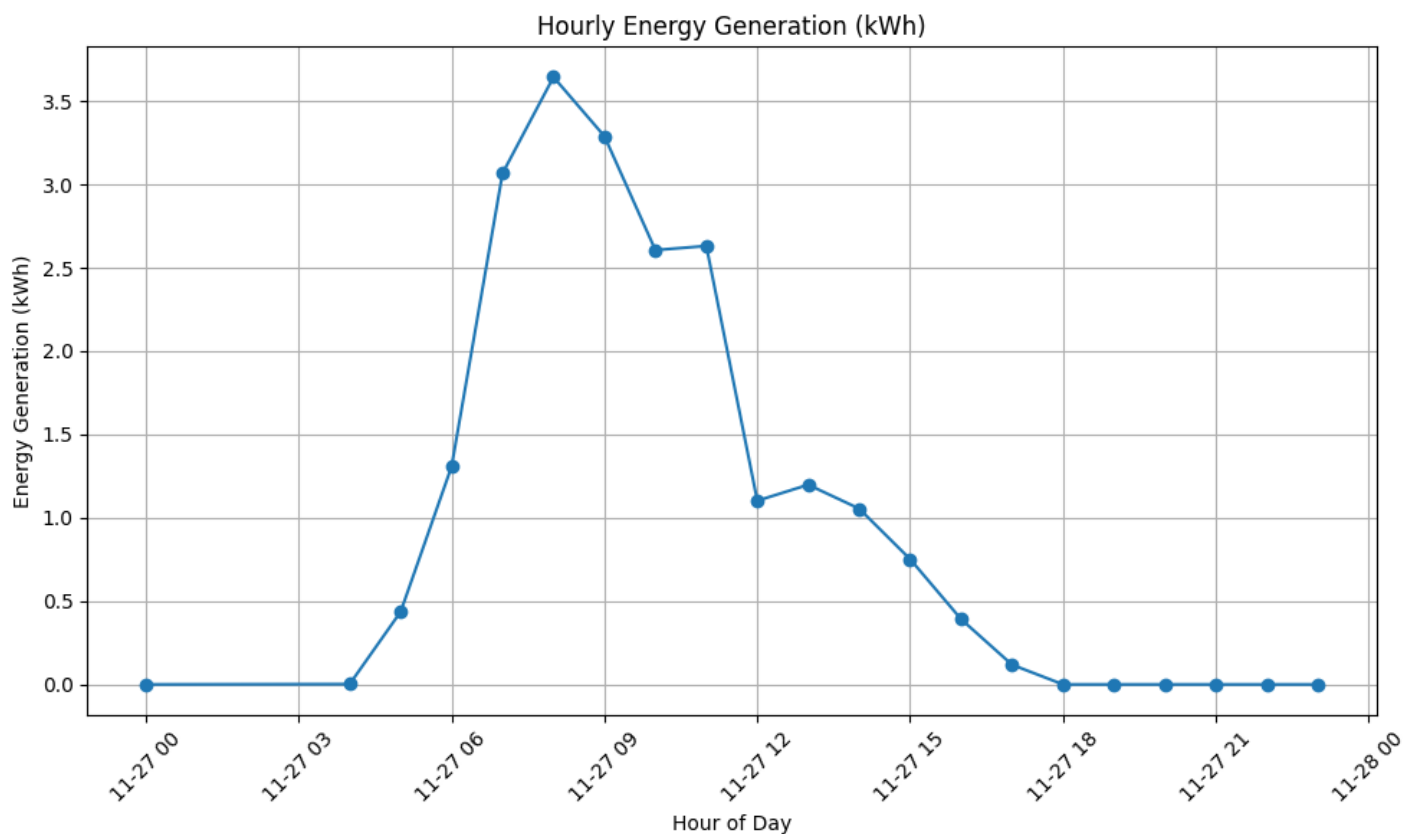
Hourly Wind Speed (ms)
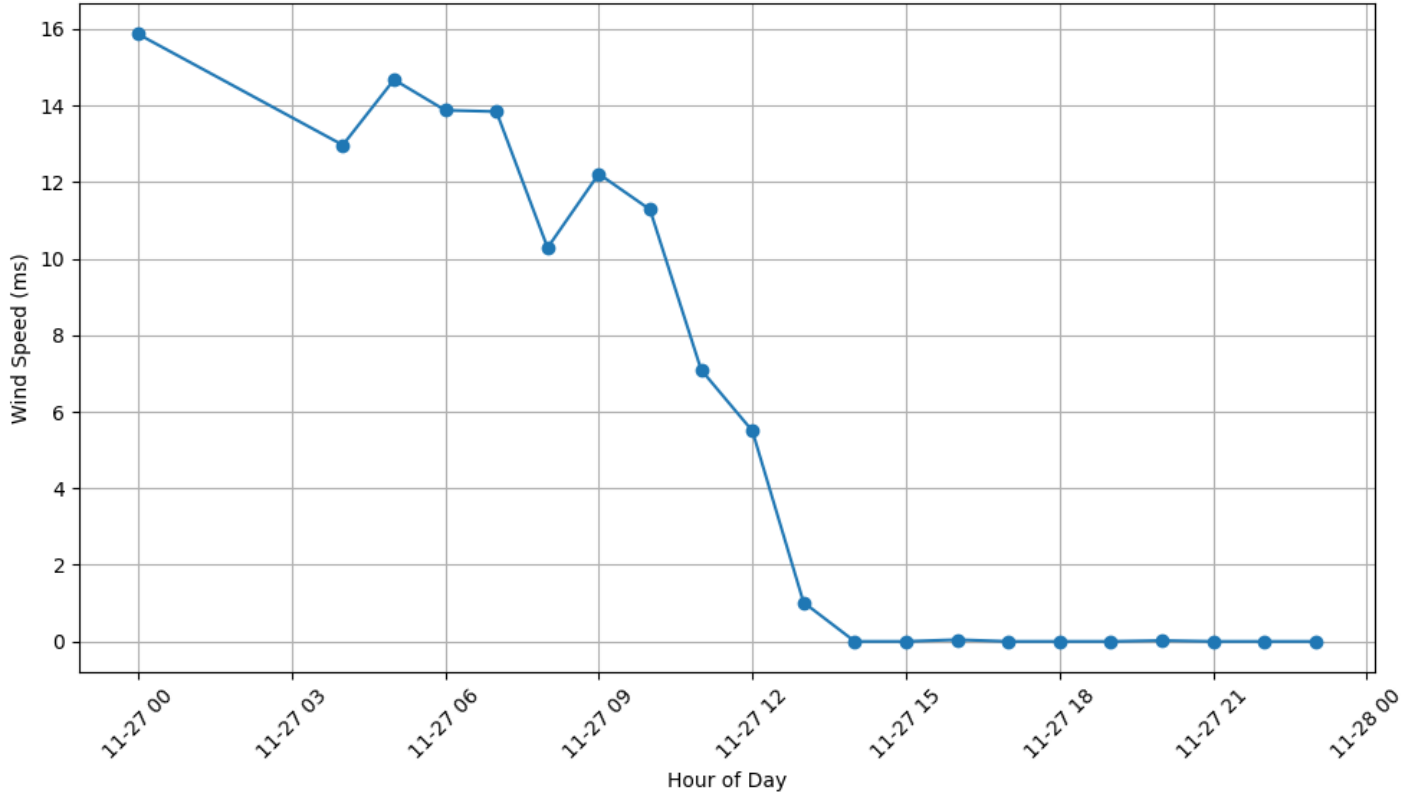
Hourly Wind Direction (°)
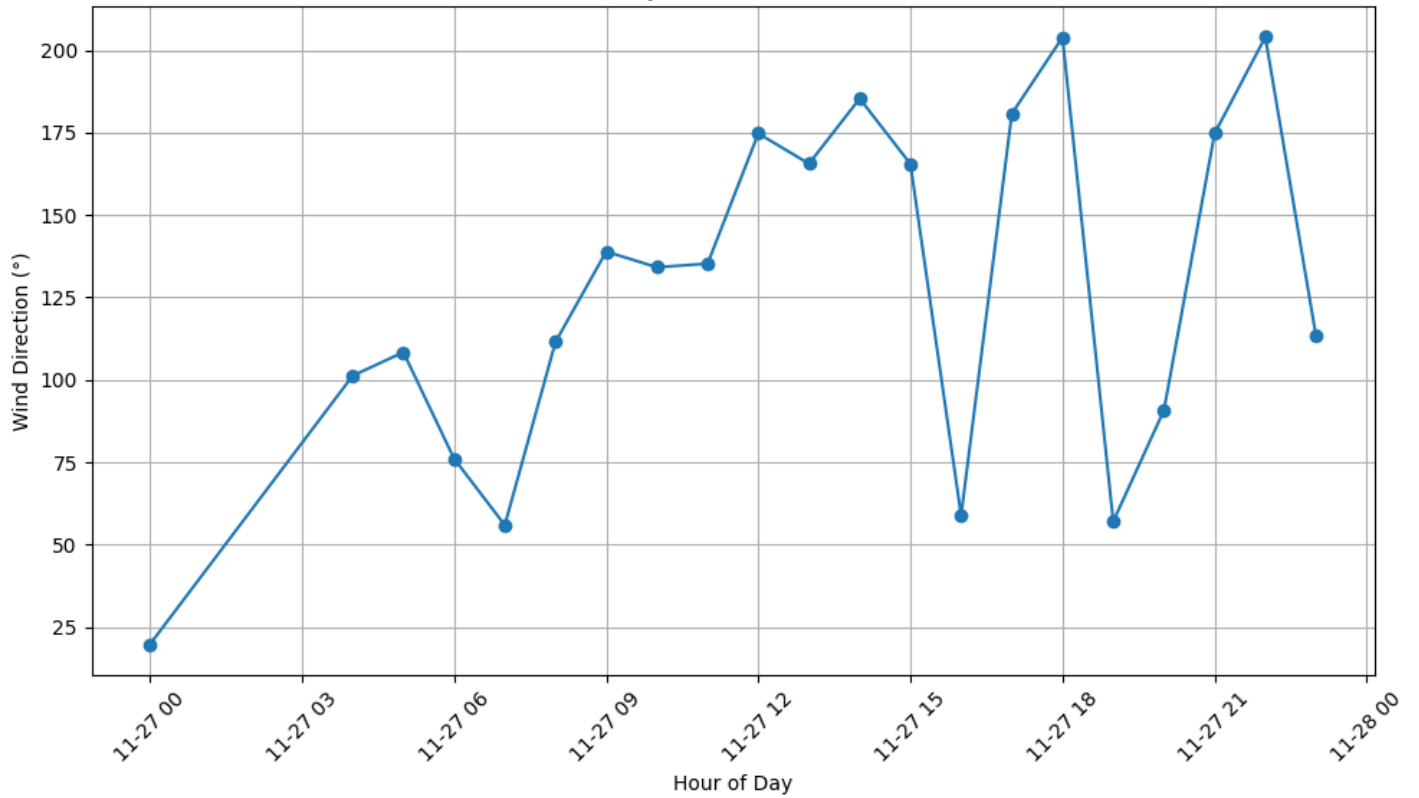
Hourly Rainfall (mm)

Hourly Particulate Size (μm)