

Daily Energy Generation Report on 2020-02-14

Weather Conditions

Sunlight Hours: 14

Average Temperature: 27.23°C

Average Wind Speed: 7.74 m/s

Most Frequent Wind Direction: 135°

Total Rainfall: 0.00 mm

Air Quality Data:

Average PM1: 2.19 µg/m³

Average PM2.5: 0.30 µg/m³

Average PM4: 0.23 µg/m³

Average PM10: 0.03 µg/m³

Average Particulate Concentration: 0.47 particle/m³

Energy Generation Data

Total Energy Generated AC: 49.44 kWh

Total Energy Generated DC: 50.15 kWh

Conversion Efficiency Rate: 98.58%

Peak hour: 2020-02-14 12:00:00: 7.02 kWh

Hourly Energy Generation:

['00:00: 0.00 kWh', '01:00: 0.00 kWh', '02:00: 0.00 kWh', '03:00: 0.00 kWh', '04:00: 0.00 kWh', '05:00: 0.06 kWh', '06:00: 0.99 kWh', '07:00: 1.89 kWh', '08:00: 4.17 kWh', '09:00: 5.55 kWh', '10:00: 4.00 kWh', '11:00: 6.73 kWh', '12:00: 7.02 kWh', '13:00: 5.02 kWh', '14:00: 6.18 kWh', '15:00: 4.10 kWh', '16:00: 3.03 kWh', '17:00: 0.67 kWh', '18:00: 0.03 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 system's high conversion efficiency rate of 98.58% contributes to reducing greenhouse gas emissions and promoting clean energy production.

CO2 Savings: 37.47 kg

Alerts and Notifications

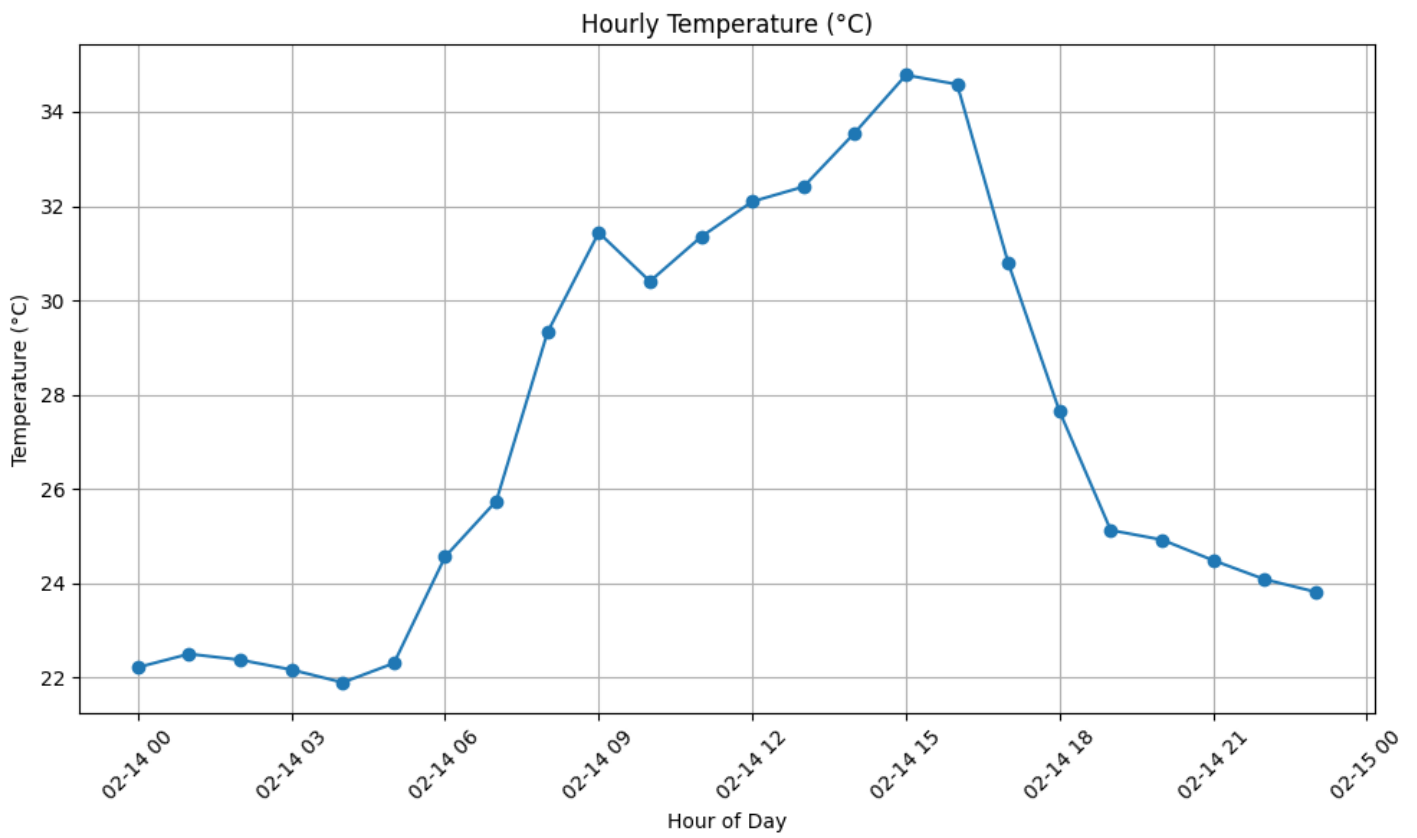
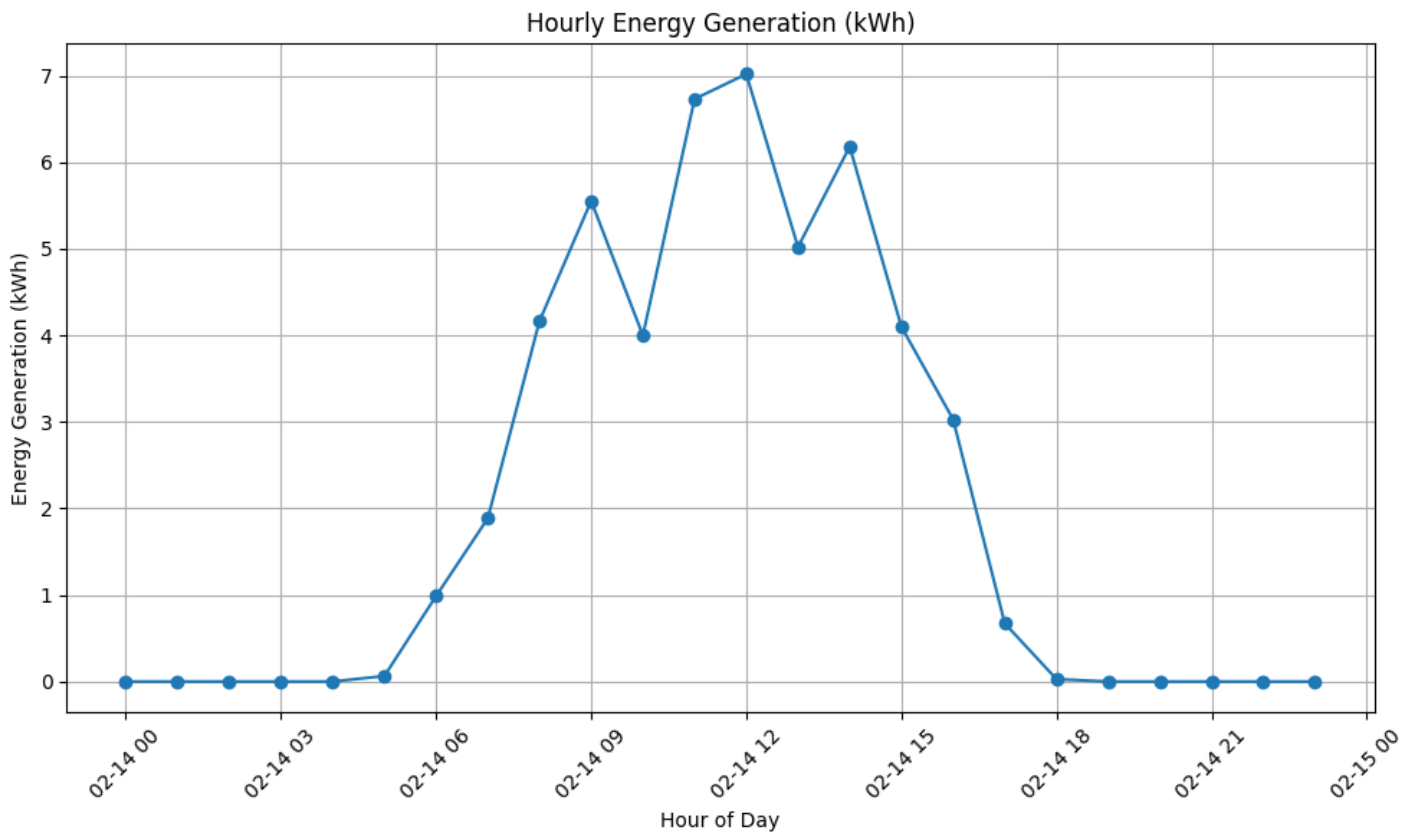
Performance Alerts: No information

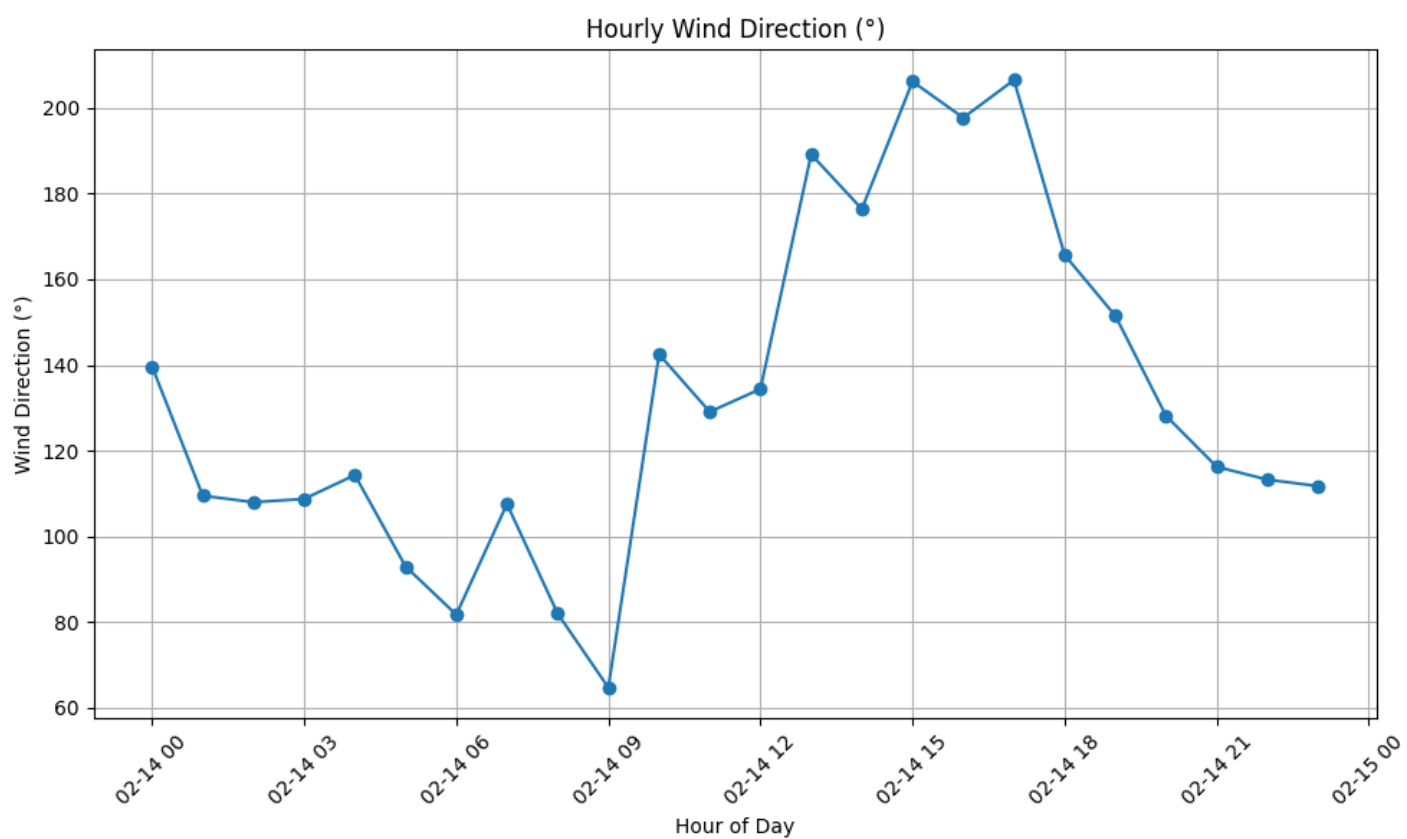
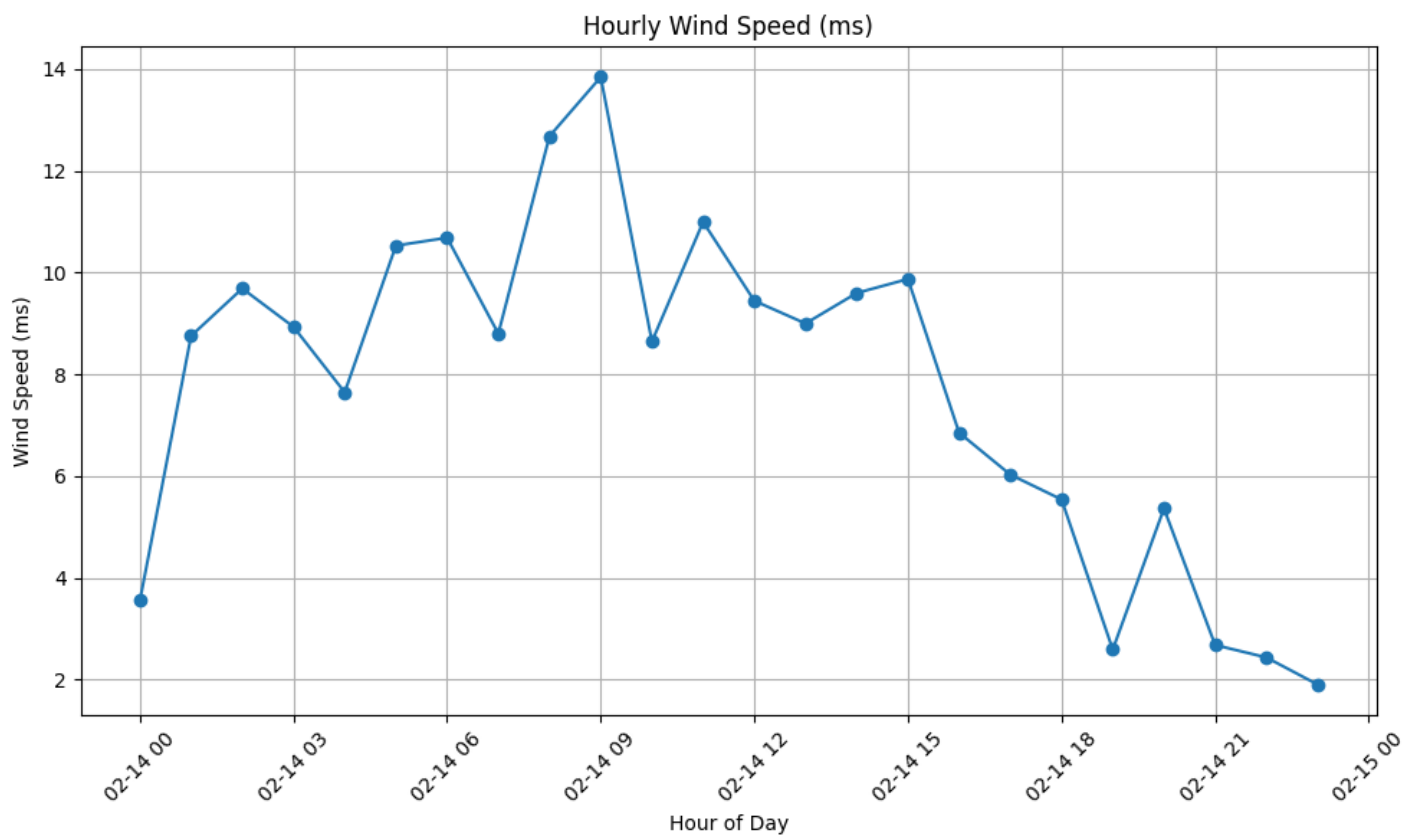
Weather Warnings: No information

Summary and Recommendations

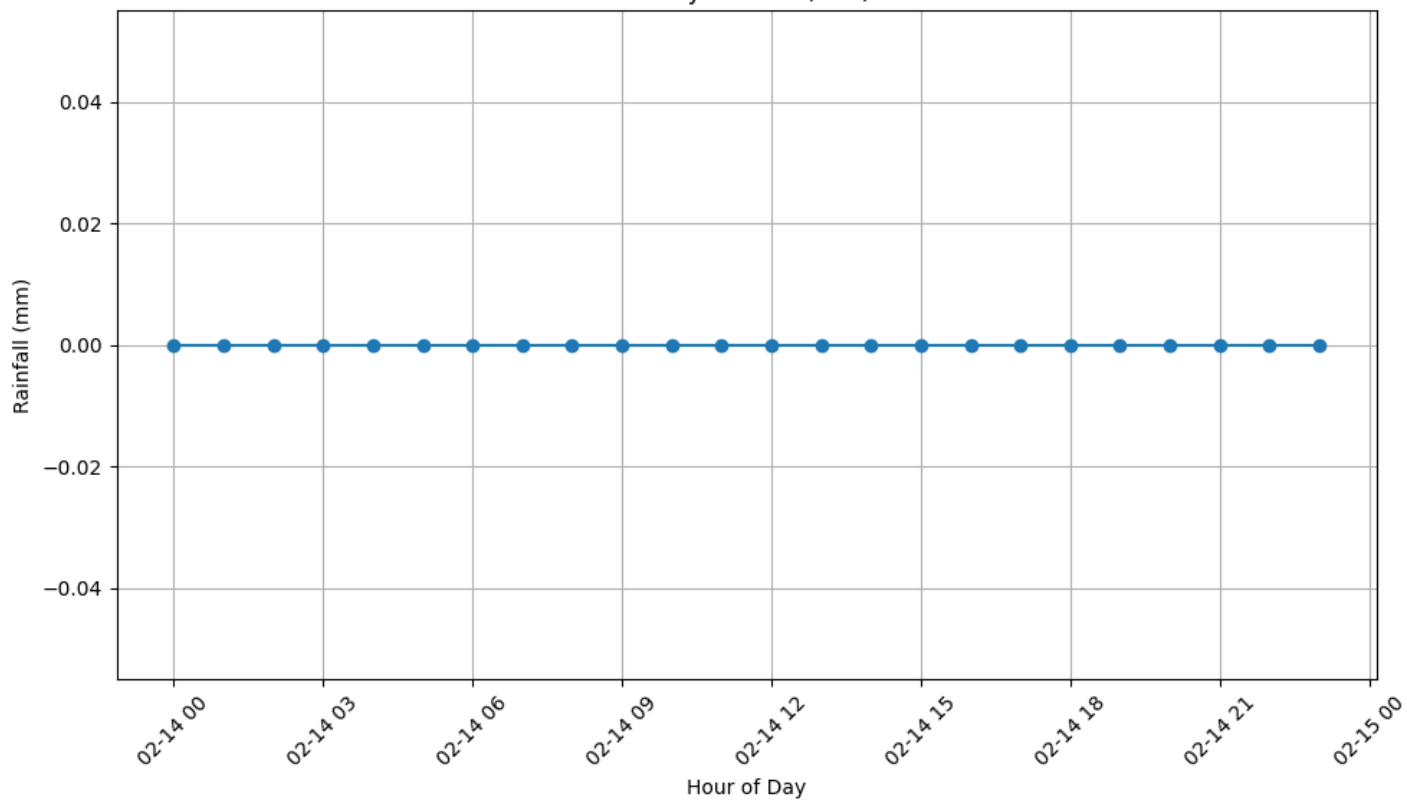
Summary: On February 14th, 2020, the energy generation system produced a total of 49.44 kWh of AC energy and 50.15 kWh of DC energy, with a peak generation of 7.02 kWh at 12:00. The system exhibited a high conversion efficiency of 98.58%. Air quality was excellent with low levels of particulate matter. The weather conditions were favorable for solar energy generation, with 24 hours of sunlight and an average temperature of 27.23°C.

Recommendations: The energy generation system performed well on February 14th. To further optimize performance, consider analyzing hourly energy generation data to identify potential improvements. For instance, the system could potentially benefit from increased energy storage capacity to better manage peak demand and optimize overall efficiency. Additionally, monitoring system health and performing regular maintenance is crucial for maximizing system lifespan and ensuring consistent energy generation.





Hourly Rainfall (mm)



Hourly Particulate Size (μm)

