```
#communicating results
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```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import matplotlib.dates as mdates
```

```
#visualising the results

# Load predictions
df_future = pd.read_csv("../datasets/future_predictions.csv")

# Ensure time column is datetime
df_future["time"] = pd.to_datetime(df_future["time"])

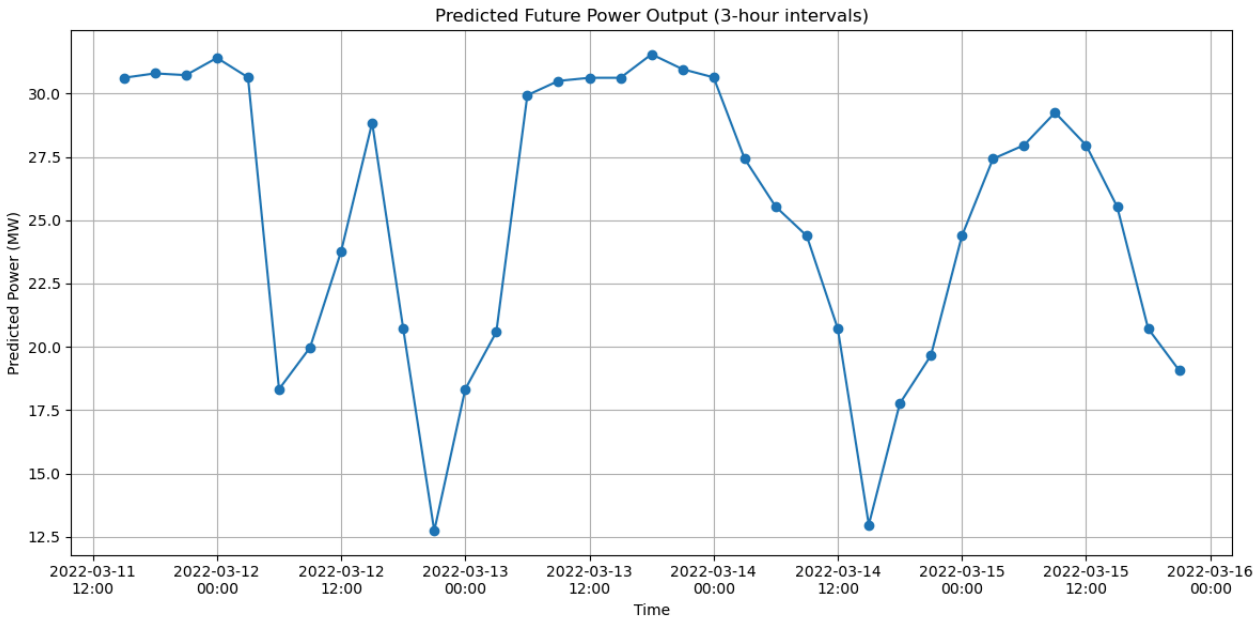
# Sort by time (just to be safe)
df_future = df_future.sort_values("time")

# Plot
plt.figure(figsize=(12,6))
plt.plot(df_future["time"], df_future["Predicted_Power"], marker="o", linestyle="-")

plt.title("Predicted Future Power Output (3-hour intervals)")
plt.xlabel("Time")
plt.ylabel("Predicted Power (MW)")

# Format date labels
plt.gca().xaxis.set_major_formatter(mdates.DateFormatter('%Y-%m-%d\n%H:%M'))
plt.gca().xaxis.set_major_locator(mdates.AutoDateLocator())

plt.grid(True)
plt.tight_layout()
plt.show()
```




```
# Sum of all the predicted power
total_power = df_future["Predicted_Power"].sum()

# mean for each 3hours
mean_power = df_future["Predicted_Power"].mean()

print("Total predicted power:", total_power)
print("Mean predicted power:", mean_power)
```

```
Total predicted power: 883.0353486927349
Mean predicted power: 25.229581391221
```

```
#comparing mean to power for existing data points based on df_merged

df_merged = pd.read_csv("/work/bda2/datasets/df_merged.csv")

# calculating mean for the existing data points
mean_total = df_merged["Total"].mean()

print("Mean Total:", mean_total)
```

```
Mean Total: 21.449641219857046
```