

data

November 18, 2017

```
In [56]: import pandas as pd
import numpy as np
import datetime as dt

import matplotlib.pyplot as plt
import matplotlib.dates as mdates
%matplotlib inline

import seaborn as sns
sns.set_style("darkgrid")

In [57]: power_countries_1986_2015 = pd.read_csv("EMHIRESPV_TSh_CF_Country_19862015.csv")
meteorological_france_2006_2015 = pd.read_csv("france_2006_2015_ver2_0_9258_487749847")

In [58]: power_countries_1986_2015.head(10)

Out[58]: <div>
<style>
    .dataframe thead tr:only-child th {
        text-align: right;
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    .dataframe thead th {
        text-align: left;
    }

    .dataframe tbody tr th {
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```

10 rows × 29 columns

In [59]: meteorological_france_2006_2015.head(10)

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Out[59]: <div>
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  }

  .dataframe thead th {
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In [60]: power_countries_1986_2015.shape

Out[60]: (262968, 29)

In [61]: meteorological_france_2006_2015.shape

Out[61]: (3662956, 16)

In [62]: t_h = pd.date_range('1/1/1986', periods=262968, freq='H')

In [63]: power_countries_1986_2015["**HOURL**"] = t_h
power_countries_1986_2015.set_index("**HOURL**", inplace = **True**)

In [64]: power_countries_1986_2015.head(10)

Out[64]:

```

<div>
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    .dataframe thead tr:only-child th {
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    }

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        text-align: left;
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<p>10 rows & 29 columns</p>
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In [65]: power_countries_1986_2015['DAY']=power_countries_1986_2015.index.map(lambda x: x.strftime('%Y-%m-%d'))
power_countries_1986_2015_day = power_countries_1986_2015.groupby('DAY').mean()
```

```
In [66]: power_countries_1986_2015_day.shape
```

```
Out[66]: (10957, 29)
```

```
In [67]: power_countries_1986_2015_day.head(10)
```

```

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	SK
	SE
	UK
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<p>10 rows × 29 columns</p>
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```
In [68]: power_countries_2006_2015_day = power_countries_1986_2015_day.loc["2006-01-01":"2015-"]
```

```
In [69]: power_countries_2006_2015_day.shape
```

```
Out[69]: (3652, 29)
```

```
In [87]: t_d = pd.date_range('1/1/2006', periods=3652, freq='D')
         t_d.shape
```

```
Out[87]: (3652L,)
```

```
In [71]: power_france_2006_2015_day = power_countries_2006_2015_day["FR"]
```

```
In [80]: power_france_2006_2015_day.shape
```

```
Out[80]: (3652L,)
```

```
In [81]: power_france_2006_2015_day.head(10)
```

```
Out[81]: DAY
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2006-01-02    0.050066
2006-01-03    0.046397
2006-01-04    0.061315
2006-01-05    0.042258
2006-01-06    0.062992
2006-01-07    0.039511
2006-01-08    0.047271
2006-01-09    0.064127
2006-01-10    0.076414
Name: FR, dtype: float64
```

```
In [82]: meteorological_france_2006_2015_day = meteorological_france_2006_2015.groupby('DAY').r
```

```
In [83]: meteorological_france_2006_2015_day.shape
```

```
Out[83]: (3652, 15)
```

```
In [84]: meteorological_france_2006_2015_day["DAY"] = t_d
         meteorological_france_2006_2015_day.set_index("DAY", inplace=True)
```

```
In [85]: meteorological_france_2006_2015_day.shape
```

```
Out[85]: (3652, 15)
```

```
In [86]: meteorological_france_2006_2015_day.head(10)
```

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In [78]: france_2006_2015_day.shape
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In [79]: france_2006_2015_day.head(10)
```

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