



## Writing your thesis about an energy related subject

A precondition for completing the Energy Focus Area is writing your MSc thesis about an energy-related topic. Topics to be covered include, but are not limited to:

- Investment decisions in (renewable) energy projects
- Financial risk management of energy companies
- Strategic decisions of energy companies regarding new developments
- Renewable energy policy

### Bloomberg terminal

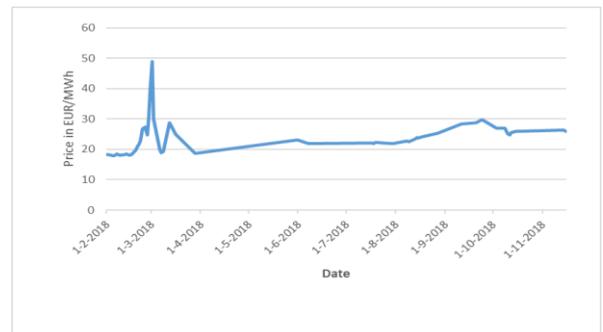
The Bloomberg terminal is available for energy related research at the Faculty of Business and Economics (FEB). This terminal contains data about commodities (oil, gas, electricity markets); the price of emissions (EU ETS); generation capacities per source (wind, solar, gas, oil) of a large variety of countries; weather data (temperature, wind speed); and much more.

### Gas market

As an illustration of what the Terminal has to offer, data on gas prices in the Netherlands was collected. All data is collected using the Bloomberg terminal. In figure 1 the data is plotted for the year 2018. An interesting observation here is that in early March, the price of gas in the Netherlands spiked to almost 50 EUR/MWh. Previous theses have focused on the drivers of natural gas prices at European hubs and the impact of gas storage on the natural gas price.

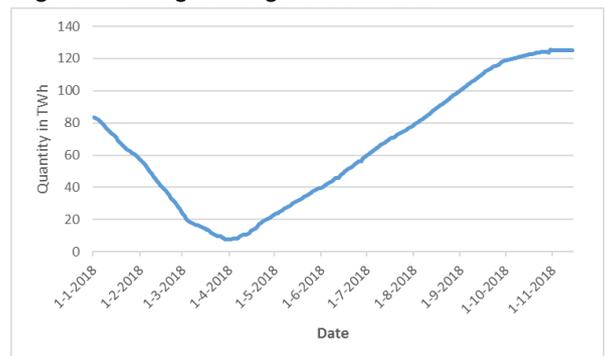
Interestingly, when looking at the data regarding gas storage in the Netherlands, one will see that around early March gas storage was rather low. This limited supply might have increased gas prices. A likely reason for the depletion of gas reserves is 'the Beast from the East', which was a strong cold wave that dramatically lowered temperatures in Europe. Due to these low temperatures, more gas might have been used to heat houses.

Figure 1. Dutch gas prices in 2018



Source: Bloomberg L.P.

Figure 2. Dutch gas storage levels in 2018



Source: Bloomberg L.P.

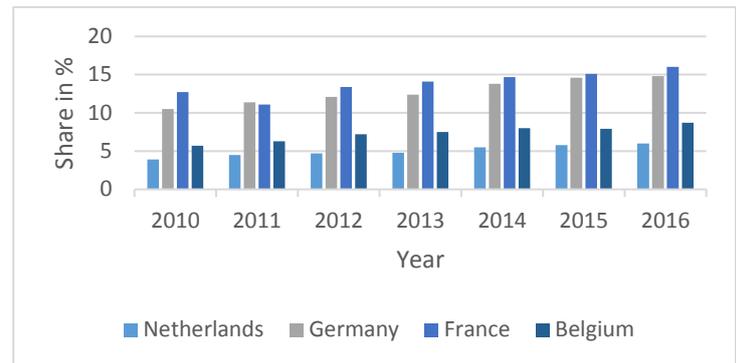
### Renewable energy shares

Figure 3 shows the share of renewable energy in the gross final energy consumption of four European countries. As can be seen, the share in Germany has increased almost 5% from 2010-2016. In 2010 Germany implemented the 'Energiewende', which is German for energy transition. A lot of research has been devoted to this, because it offers an example of what comes along with an energy transition. Figure 3 also shows that the Netherlands is way behind.

### European emissions trading scheme (EU ETS)

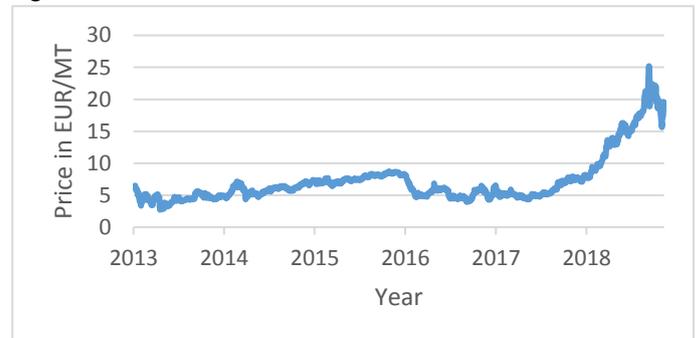
As mentioned, Bloomberg also has data on the prices of carbon allowances. This was introduced with the EU ETS and it is a key tool for reducing greenhouse gas emissions. As can be seen in figure 4, the price of the certificates has been increasing lately. This makes it more expensive for e.g. coal-fired power plants to produce energy.

Figure 3. Share of renewable energy in gross consumption



Source: Bloomberg L.P.

Figure 4. Price of EU ETS certificates



Source: Bloomberg L.P.

### Requesting data

It must be noted that the data service is only available for data which cannot be obtained using regular University of Groningen data sources, such as Eikon and Zephyr. In order to request the data, please email [d.schans@rug.nl](mailto:d.schans@rug.nl) and mention "Bloomberg terminal" in the message subject.

Next, please fill in the following:

- Your name
- S-number
- Topic of your research
- Reason (e.g. data not available on Datastream)
- Type of data (variables – not coal, but e.g. CIF ARA) – please be specific as possible and we will try to get the data for you (if it is available)
- Time period (specify e.g. 2009 – 2017) – we normally take 2010+