

NORDIC ELECTRICITY MARKET

6.4.2021 Markus Herranen, Gasum Portfolio Services Oy

WETTER THAN NORMAL WEATHER PICTURE MAINTAINING DOWNWARD PRESSURE BUT OTHER FUNDAMENTALS ARE STRONG

| Forecast to week 14: | |
|----------------------|----------------------|
| ENOFUTBLQ3-21 | 📉 Bearish (<0%) |
| ENOFUTBLR-22 | ↔️ Sideways (± 0,5%) |
| NP System | 📈 Bullish (>0%) |
| NEDEC21 | 📈 Bullish (>0%) |

FORECAST TO WEEK 14

POWER FUTURES

Front quarter

The weather has turned colder than normal for the time of year and the weather type will remain cool for the time being. However, precipitation amounts will be largely higher than normal, and the hydro balance will rise slightly. Nevertheless, there have been no major changes in the weather forecasts compared to last week's forecasts. We expect near products to fall slightly as the slightly wetter than weather picture and rising hydro balance maintain downward pressure.

Annual products

The emission allowance price and, with regard to fuels, the price of natural gas in particular have remained strong as the colder than normal weather in Europe maintains price support. General market sentiment is very optimistic and strong development on the stock markets is maintaining upward pressure on fuel and emission allowance prices. Despite this, however, prices of annual products have remained weak as annual products seek direction from near products. At the same time, the price spread against the German electricity market has continued rising. We expect prices of annual products to seek direction close to current levels for the time being. However, we see the risk of an upward correction movement since valuations of annual products have fallen low compared to the marginal cost prices of fuels and the German electricity market.

SPOT MARKET

The weather has turned colder than normal for the time of year and will grow cold towards Thursday, after which temperatures will rise slightly but the weather will remain colder than normal. Demand for electricity will rise compared with last week's level. Nordic wind power production will mostly be very abundant and especially on Monday and Friday will be highly abundant. Flow rates have dropped to near normal and will continue falling over the following days. Wind power production in Finland will also mostly be more plentiful than normal, but weaker on Tuesday evening and Wednesday. We expect spot prices to rise at the weekly level. We expect the system price to settle at an average level of €28.5/MWh and the Finnish area price to settle at an average level of €32.0/MWh.

EMISSIONS

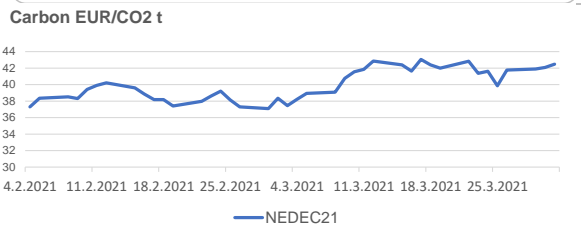
Temperatures in Europe will be cooler than normal during the current week and this has supported the price of natural gas. Auction availability is less than normal during the current week because of the public holiday on Monday. The 2020 EU ETS emissions data published last week were in line with expectations and so the news gave no downward signal to the market. On the other hand, the net positions of investors on the market have decreased slightly at the weekly level. We expect the emission allowance price to remain strong and to potentially test new peaks this week.

| Market signals | spot | Q3-21 | YR-22 |
|-----------------------------------|------|-------|-------|
| Hydrologic balance | ↓ | ↓ | ↓ |
| Precipitation forecast | ↓ | ↓ | ↓ |
| Temperature forecast | ↑ | → | → |
| Spot | ↓ | ↓ | ↓ |
| Production and transmission exch. | → | → | → |
| Emissions allowance | ↑ | ↑ | ↑ |
| Coal price | ↑ | ↑ | ↑ |
| German prices | ↑ | ↑ | ↑ |
| Technical analysis | ↓ | ↑ | ↑ |

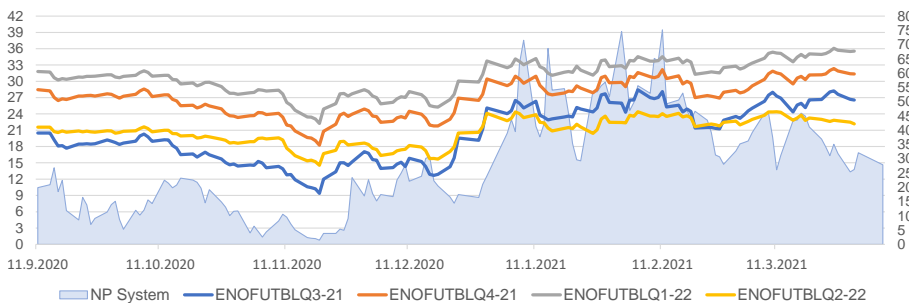
| Product | Date | Value | % chg | Chg (EUR) |
|---------------|-----------|-------|-------|-----------|
| ENOFUTBLQ3-21 | 31.3.2021 | 26.55 | -6.0% | -1.70 |
| ENOFUTBLQ4-21 | 31.3.2021 | 31.35 | -3.1% | -1.00 |
| ENOFUTBLQ1-22 | 31.3.2021 | 35.55 | -1.5% | -0.53 |
| ENOFUTBLQ2-22 | 31.3.2021 | 22.18 | -2.9% | -0.67 |
| ENOFUTBLR-22 | 31.3.2021 | 26.05 | -3.5% | -0.95 |
| ENOFUTBLR-23 | 31.3.2021 | 25.90 | -2.1% | -0.55 |
| ENOFUTBLR-24 | 31.3.2021 | 26.20 | -2.0% | -0.54 |
| ENOFUTBLR-25 | 31.3.2021 | 26.90 | -0.6% | -0.15 |
| ENOFUTBLR-26 | 31.3.2021 | 27.75 | 0.4% | 0.10 |
| NEDEC21 | 31.3.2021 | 42.48 | 1.7% | 0.72 |
| NEDEC22 | 31.3.2021 | 42.82 | 1.7% | 0.70 |

| EPAD settlements | | | |
|-------------------|-------|-------|-------|
| 31.3.2021 (€/MWh) | 2021 | 2022 | 2023 |
| SYHEL | 8.75 | 5.18 | 4.68 |
| SE1- NP System | -4.50 | -4.50 | -4.50 |
| SE2 - NP System | -4.50 | -4.50 | -4.50 |
| SE3 - NP System | 4.40 | 4.50 | 4.10 |
| SE4 - NP System | 12.63 | 8.75 | 8.75 |

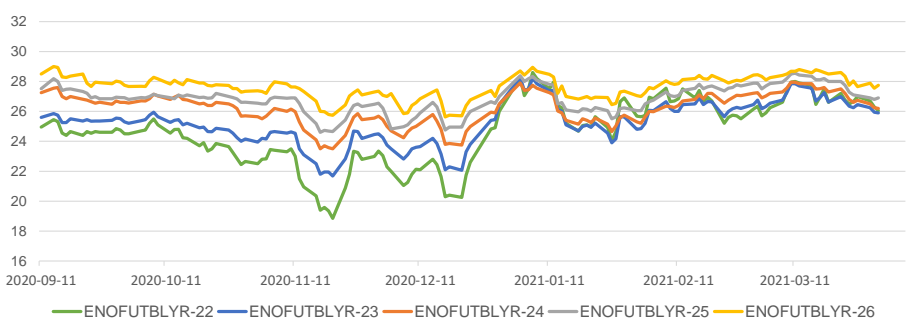
| Week's spot price change | | | | |
|--------------------------|----------|-------|--------|-----------|
| Price area (€/MWh) | Date | Value | % chg | Chg (EUR) |
| NP System | 5.4.2021 | 22.05 | -24.4% | -7.11 |
| NP Area FI | 5.4.2021 | 23.58 | -21.4% | -6.41 |
| NP Area SE1 | 5.4.2021 | 15.56 | -25.6% | -5.35 |
| NP Area SE2 | 5.4.2021 | 15.56 | -25.6% | -5.35 |
| NP Area SE3 | 5.4.2021 | 21.24 | -23.5% | -6.54 |
| NP Area SE4 | 5.4.2021 | 21.24 | -23.5% | -6.54 |



Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



COMMENTS ON WEEK 13

POWER FUTURES

Front quarter

Last week saw a fall in near products. The weather was quite mild for the time of year in the early part of the week and at the same time wet. The weather forecasts showed signs of colder and momentarily drier weather after the first part of the week. However, the weather forecasts indicated the weather turning largely slightly wetter than normal after a brief dry spell. Near products fell on the back of the wetter than normal weather picture and rising hydro balance forecast.

Annual products

Last week, prices of annual products fell along with near products. The situation on the oil market calmed once the container ship in the Suez Canal had been freed. However, the price of the emission allowance strengthened and also the price of natural gas continued rising. There were no significant changes in the price of coal during the week. Fuels and marginal cost prices rose and so the profit margins on coal-fired power and natural gas production continued to fall. At the same time, the price spread against the German electricity market increased.

SPOT MARKET

Last week got off to a very mild start for the time of year. At the same time, the weather was windy and wet. Flow rates rose with the mild and wet weather. Temperatures turned downwards after the early part of the week, but Easter meant that demand for electricity decreased after Wednesday. Wind power production rose high at the weekend and spot prices fell to a low level. Spot prices were well down at the weekly level and the Finnish area price settled close to the system price at the weekly level.

EMISSIONS

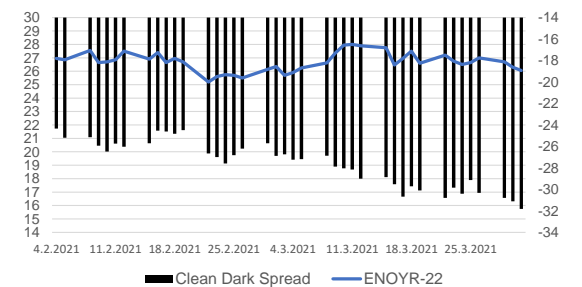
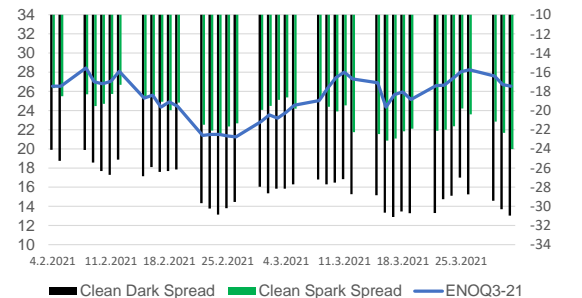
Last week saw the emission allowance price rise slightly. Volumes traded on the market were lower than normal the whole week ahead of the public holidays. Prices were supported among other things by cold weather forecasts and good auction results. A small rise in prices was seen daily, but on Thursday the price was unable to rise above €43/t and remained slightly down. The emission allowance price rose €0.74 at the weekly level.

| Indicator | ENOFUTBLQ3-21 | ENOFUTBLYR-22 |
|-----------------------|---------------|---------------|
| Coal-fired production | 62 % | 48 % |
| Coal price | 69 % | 53 % |
| Gas price (NBP) | 6 % | 85 % |
| German price level | 65 % | 52 % |
| Spot | 53 % | 39 % |
| Crude oil Brent | 61 % | 65 % |
| Water reservoirs | 64 % | 59 % |
| EUR/USD FX rate | 6 % | 4 % |
| Temperature | 8 % | 5 % |
| Precipitation | 16 % | 13 % |

Definition

The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow (moderate), red (weak)

| Forecast history | 13 | Chg | 12 | Chg |
|------------------|----|--------|----|--------|
| ENOFUTBLQ3-21 | 📉 | -6.0% | 📈 | 6.2% |
| ENOFUTBLYR-22 | 📉 | -3.5% | 📈 | -0.7% |
| NP System | 📉 | -24.4% | 📉 | -13.7% |
| NEDEC21 | 🔄 | 1.7% | 📈 | -2.5% |



DETERMINANTS AFFECTING THE MARKET ON WEEK 14

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

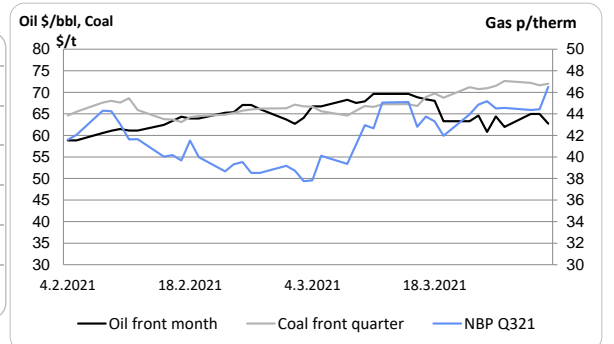
- FI-SE1 (1100 MW), maintenance, 24.3.-11.4.2021, in use 750 MW
- SE1-FI (1500 MW), maintenance 12.-20.4.2021, in use 1100 MW
- FI-SE3 (1200 MW), maintenance 29.3.-30.4.2021, in use 250 MW, 6.-9.4.2021 and 12.4.-20.5.2021 0 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 100%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 30 % of the maximum

AVERAGE SPOT PRICE AND EPAD

| Price area (€/MWh) | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021* |
|-------------------------|------|------|------|-------|-------|-------|-------|-------|-------|
| NP System | 38.1 | 29.6 | 21 | 26.91 | 29.41 | 43.99 | 38.94 | 10.93 | 40.79 |
| NP Area FI - NP System | 3.10 | 6.40 | 8.70 | 5.54 | 3.78 | 2.81 | 5.10 | 17.28 | 6.20 |
| NP Area SE1 - NP System | 1.10 | 1.80 | 0.20 | 2.04 | 1.43 | 0.24 | -1.00 | 3.60 | -4.75 |
| NP Area SE2 - NP System | 1.10 | 1.80 | 1.00 | 2.04 | 1.43 | 0.24 | -1.00 | 3.60 | -4.75 |
| NP Area SE3 - NP System | 1.40 | 2.00 | 1.00 | 2.33 | 1.83 | 0.55 | -0.58 | 10.53 | 3.30 |
| NP Area SE4 - NP System | 1.80 | 2.30 | 1.90 | 2.62 | 2.77 | 2.37 | 0.86 | 15.06 | 7.16 |

*Average for period between 1.1.2021-6.4.2021.



Copyright 2021 Gasum Oy – All rights reserved

Source for data: Gasum, Tilastokeskus

Disclaimer: This document is issued by Gasum Oy in jointly by its subsidiary Gasum Portfolio Services Oy. The information in this document, which is for private circulation only, was obtained from sources believed to