

NORDIC ELECTRICITY MARKET

3.2.2020 Markus Herranen, Gasum Portfolio Services Oy

WEATHER OUTLOOK RAINY AND MILD AGAIN

Forecast to week 6:

ENOFUTBLQ2-20	📉 Bearish (<0%)
ENOYR-21	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC20	📉 Bearish (<0%)

FORECAST TO WEEK 6

ELECTRICITY DERIVATIVES

Front quarter

Temperatures have dropped close to normal for the time of year and the week gets off to a dry start. The cooler and drier weather type will, however, be short-lived. The weekend will see the weather turn very wet and mild again, and the weather type is likely to continue as clearly rainier and milder than normal next week. Quarterly products have already plummeted to a very low level, but so far both fundamentals and technical analysis are pointing to a continued downtrend.

Annual products

The rising hydro balance and weak quarterly products are maintaining downward pressure on the front-year product. Fuel prices are also still very weak. The broad European weather picture is turning very mild and windy again after the current week. The general market sentiment is nervous and stock indices have been falling clearly due to growing concerns caused by the coronavirus outbreak. The concerns may maintain downward pressure on fuel prices. Emission allowance prices are also weaker. We expect the downtrend of annual product prices to continue.

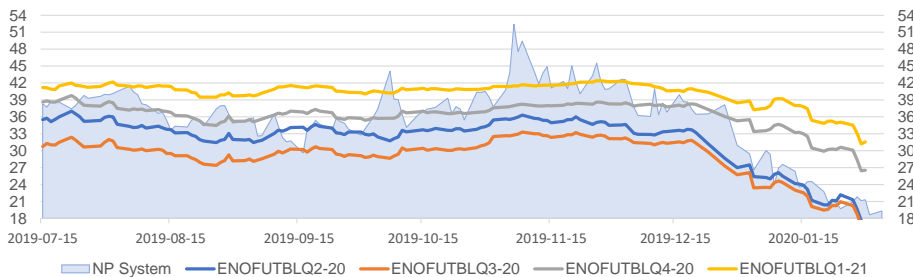
SPOT MARKET

In the early part of the week, the weather will be dry, with slightly lower wind rates than normal. Temperatures will also be close to normal for the time of year. Downward pressure on spot prices is restricted, however, by the very high hydro balance and the weather picture turning wet and mild again. After the first days of the week, temperatures will take an upturn and the weather will be very mild again at the weekend. Nordic wind power production will be abundant on Wednesday and Sunday. We expect the system price to fall slightly at the weekly level and to settle at an average of €18.5/MWh. Finnish wind power production will be weak on Tuesday but slightly more abundant than normal during the other days of the week. We expect the Finnish area price at the weekly level to settle at a level close to last week's closing level.

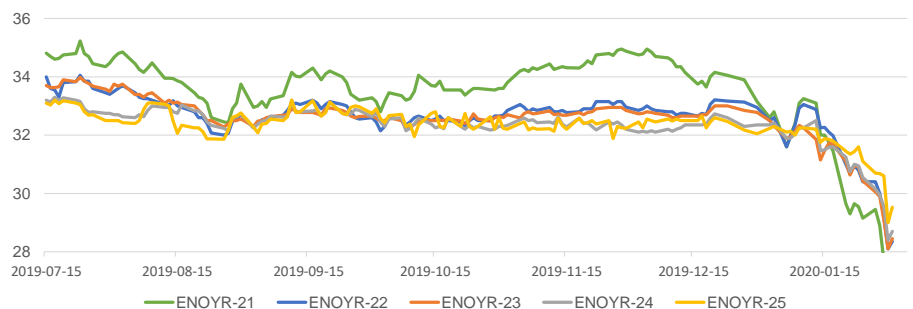
EMISSIONS

The broad European weather picture is turning windy and mild again next week. Development in the electricity markets is weak, and the bearish stock indices are also exerting downward pressure on emission allowance prices. Technically, emission allowance prices are also weaker now that the €23.5 price support level has broken. The next strong support level is at around €22. We expect a fall in emission allowance prices. The emission allowance market is awaiting decisions on the re-start of the UK free allocation and auctions following Brexit, with news on these potentially generating movement in emission allowance prices.

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



Years EUR/MWh



Market signals

	spot	Q2-20	YR-21
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)
ENOFUTBLQ2-20	31.1.2020	16.90	-19.9%	-4.20
ENOFUTBLQ3-20	31.1.2020	16.29	-19.6%	-3.96
ENOFUTBLQ4-20	31.1.2020	26.55	-12.1%	-3.65
ENOFUTBLQ1-21	31.1.2020	31.55	-9.6%	-3.35
ENOYR-21	31.1.2020	26.60	-8.7%	-2.55
ENOYR-22	31.1.2020	28.35	-6.7%	-2.05
ENOYR-23	31.1.2020	28.45	-6.5%	-1.98
ENOYR-24	31.1.2020	28.70	-6.1%	-1.85
ENOYR-25	31.1.2020	29.53	-5.0%	-1.57
NEDEC20	31.1.2020	23.91	-2.2%	-0.54
NEDEC20	31.1.2020	23.91	-2.2%	-0.54

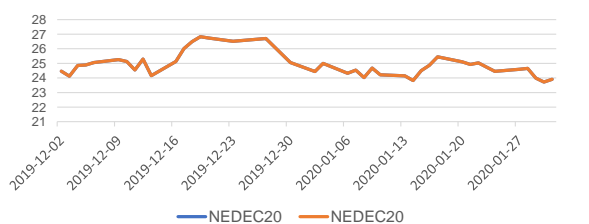
EPAD settlements

31.1.2020 (€/MWh)	2021	2022	2023
SYHEL	8.00	4.70	4.05
SE1-NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	2.2.2020	19.24	-7.6%	-1.58
NP Area FI	2.2.2020	26.19	2.4%	0.62
NP Area SE1	2.2.2020	19.03	-7.1%	-1.46
NP Area SE2	2.2.2020	19.03	-7.1%	-1.46
NP Area SE3	2.2.2020	19.17	-7.5%	-1.56
NP Area SE4	2.2.2020	19.17	-7.5%	-1.56

Carbon EUR/CO2 t



COMMENTS ON WEEK 5

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products took an upturn on Monday as temperatures had taken a downturn and precipitation rates also dropped. Weather forecasts were also showing signs of a turn in the weather type for dry and colder-than-normal conditions in the week ahead. However, the turn in the weather type appeared less likely after Monday. The weather forecasts indicated that the cooler and dry conditions would be short-lived. With the mild and wet weather type returning, quarterly products plummeted again after Monday. At the weekly level, quarterly products closed on a strong downward trajectory. On the other hand, the upward pressure on Finnish area price differential products remained very strong.

Annual products

Last week, annual products continued their decline in the wake of quarterly products and wet weather forecasts. Fuel prices also remained weak. Added downward pressure on fuel prices was created by the clearly bearish stock indices, which in turn were pushed down by broader concerns about the spread of the virus outbreak. The demand outlook of commodities was also regarded as potentially declining due to the possible slowing of China's economic growth. Emission allowance prices also fell in the wake of weak fuel prices and electricity markets.

SPOT MARKET

Nordic wind power production was close to the normal level last week and fell considerably from the week before. Temperatures also took a downturn last week, but the weather was still considerably milder than normal for the time of year. Flow rates were decreasing but still higher than normal. The system price fell, however, at the weekly level due to the wet weather forecasts and the continuous rise of the hydro balance. In contrast, the Finnish area price rose at the weekly level due to colder weather and lower wind power output.

EMISSIONS

Emission allowance prices fell last week in the wake of the bearish electricity markets and share indices. The broad European weather picture was also still mild and windy and the emission allowance demand outlook was subdued. Downward pressure was curbed by the closest support levels, however, and therefore the decline of emission allowance prices remained moderate at the weekly level.

DETERMINANTS AFFECTING THE MARKET ON WEEK 6

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- 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 29% of the maximum

AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019	2020*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	38.94	23.45
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	3.41
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	-0.81
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	-0.81
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	-0.19
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	2.23

*Average for period between 1.1.2020-3.2.2020.

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Source for data: intStream, Tilastokeskus

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Indicator	ENOFUTBLQ2-20	ENOYR-21
Coal-fired production	54 %	36 %
Coal price	59 %	39 %
Gas price (NBP)	59 %	35 %
German price level	49 %	54 %
Spot	72 %	56 %
Crude oil Brent	2 %	1 %
Water reservoirs	72 %	76 %
EUR/USD FX rate	1 %	0 %
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	5	Chg	4	Chg
ENOFUTBLQ2-20	↗	-19.9%	↘	-8.9%
ENOYR-21	↗	-8.7%	↘	-7.3%
NP System	↗	-7.6%	↘	-19.8%
NEDEC20	↘	-2.2%	↘	-3.9%

