

NORDIC ELECTRICITY MARKET

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BEARISH MARKET INDICATED BY BOTH FUNDAMENTALS AND TECHNICAL ANALYSIS

Forecast to week 50:

ENOFUTBLQ1-20	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	📉 Bearish (<0%)

FORECAST TO WEEK 50

ELECTRICITY DERIVATIVES

Front quarter

The weather type has been wet and mild for the time of year and, for the time being, there is no sign of any permanent turn of the weather type towards drier and colder conditions. The hydro balance is continuing to rise and is already approaching the long-term normal level. With the weather picture being rainy and mild, we expect quarterly products to remain bearish. The products are also technically bearish and the price of coal is weak.

Annual products

The rising hydro balance and bearish quarterly products are putting downward pressure on the front-year product, too. The price of coal and the German electricity market are also technically very weak. The broad European weather picture is quite mild and mainly windier than normal. The weather picture is keeping the demand outlook for emission allowances and fuels subdued. We expect a fall in annual product prices.

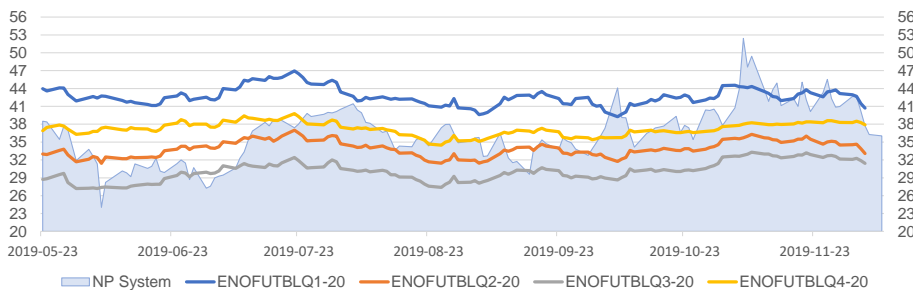
SPOT MARKET

Nordic wind power production has been mainly abundant in the current week. Wind power output will be at its most abundant on Monday and Wednesday before dropping close to normal at the weekend. The weather is clearly milder than normal for the time of year, but there will be a momentary dip in temperatures on Tuesday. The reduced output of the Forsmark 2 nuclear power unit is due to end on Friday. Flow rates are decreasing but still remain higher than normal. The mild and wetter-than-normal weather is exerting downward pressure on spot prices. We expect the system price to fall slightly at the weekly level and to settle at an average of €38.0/MWh. We expect the Finnish area price to fall, too, and to settle at an average of €40.0/MWh.

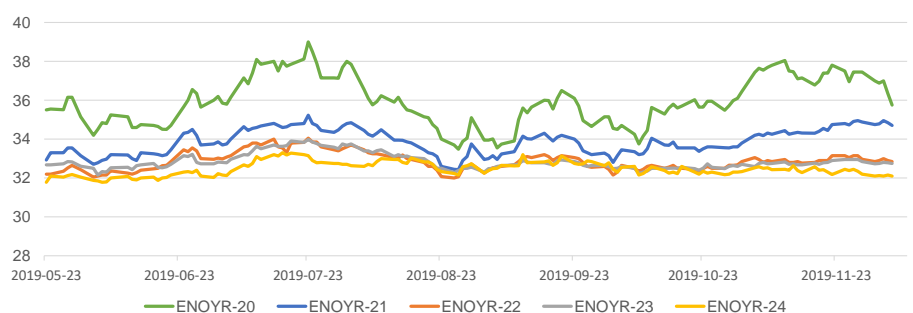
EMISSIONS

The broad European weather picture is quite mild and also mainly windier than normal, which is why the demand outlook for emission allowances is subdued. Downward pressure on emission allowance prices is created by the very weak German electricity market. We expect a fall in emission allowance prices. This Thursday's UK general election may, however, result in movement in emission allowance prices, depending on the outcome.

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



Years EUR/MWh



Market signals

	spot	Q1-20	YR-20
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)
ENOFUTBLQ1-20	6.12.2019	40.70	-7.0%	-3.05
ENOFUTBLQ2-20	6.12.2019	33.08	-5.6%	-1.97
ENOFUTBLQ3-20	6.12.2019	31.43	-3.6%	-1.17
ENOFUTBLQ4-20	6.12.2019	37.90	-1.4%	-0.55
ENOYR-20	6.12.2019	35.75	-4.5%	-1.70
ENOYR-21	6.12.2019	34.70	-0.5%	-0.18
ENOYR-22	6.12.2019	32.85	-0.3%	-0.11
ENOYR-23	6.12.2019	32.75	-0.3%	-0.10
ENOYR-24	6.12.2019	32.10	-0.3%	-0.10
NEDEC9	6.12.2019	24.85	-1.6%	-0.40
NEDEC20	6.12.2019	25.06	-1.2%	-0.31

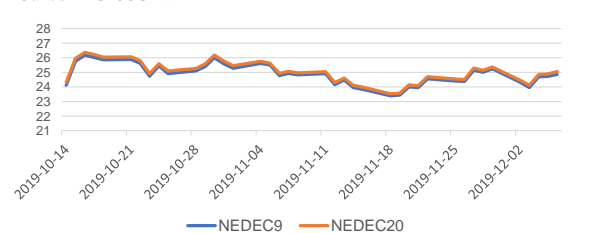
EPAD settlements

6.12.2019 (€/MWh)	2020	2021	2022	2023
SYHEL	7.15	3.82	3.30	3.30
SE1-NP System	-1.00	-1.50	-2.25	-2.25
SE2 - NP System	-1.00	-1.50	-2.25	-2.25
SE3 - NP System	1.35	1.25	1.35	1.35
SE4 - NP System	3.25	2.60	2.60	2.60

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	8.12.2019	38.39	-8.5%	-3.55
NP Area FI	8.12.2019	40.41	-12.9%	-5.99
NP Area SE1	8.12.2019	36.11	-11.7%	-4.80
NP Area SE2	8.12.2019	36.11	-11.7%	-4.80
NP Area SE3	8.12.2019	38.39	-7.3%	-3.01
NP Area SE4	8.12.2019	38.39	-7.3%	-3.01

Carbon EUR/CO2 t



COMMENTS ON WEEK 49

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products plummeted due to the wet and mild weather. In the first days of the week, downward pressure was restricted by the weather picture for the following week, with forecasts showing drier and colder weather. After the first days of the week, however, the forecasts for the following week got considerably wetter and warmer. Towards the end of the week, the weather type already appeared to continue as wetter and milder than normal, and quarterly products plummeted. Downward pressure was strengthened by the weak coal price and by the technical picture having taken a downturn.

Annual products

Last week, the front-year product declined in line with quarterly products and wet weather forecasts. Downward pressure was strengthened by the lower emission allowance prices and the very weak coal price as the strong support level of USD 62 broke for the front-year coal product. At the same time in the German electricity market, too, the front-year product dropped below the lowest trading levels of the current year. The front-year product plummeted at the weekly level but the downward pressure on the further-ahead annual products was very moderate.

SPOT MARKET

Nordic wind power production was slightly above normal in the first days of last week but very abundant in the second half of the week. After the early part of the week, the weather also turned milder than normal for the time of year. The weather was also rainy and flow rates increased. Spot prices fell towards the end of the week and declined clearly at the weekly level. Finnish wind power production was mainly abundant, and the Independence Day public holiday also reduced the demand for electricity. The Finnish area price dropped more than the system price at the weekly level.

EMISSIONS

Last week, emission allowance prices fell. Downward pressure on emission allowance prices was created by the very weak German electricity market. In addition, the weather picture for the week ahead was very windy and mild for the time of year in Central Europe. Auction supply was also more abundant than seen the week before.

Indicator	ENOFUTBLQ1-20	ENOYR-20
Coal-fired production	32 %	11 %
Coal price	10 %	2 %
Gas price (NBP)	6 %	0 %
German price level	21 %	38 %
Spot	10 %	23 %
Crude oil Brent	23 %	25 %
Water reservoirs	0 %	3 %
EUR/USD FX rate	9 %	5 %
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)

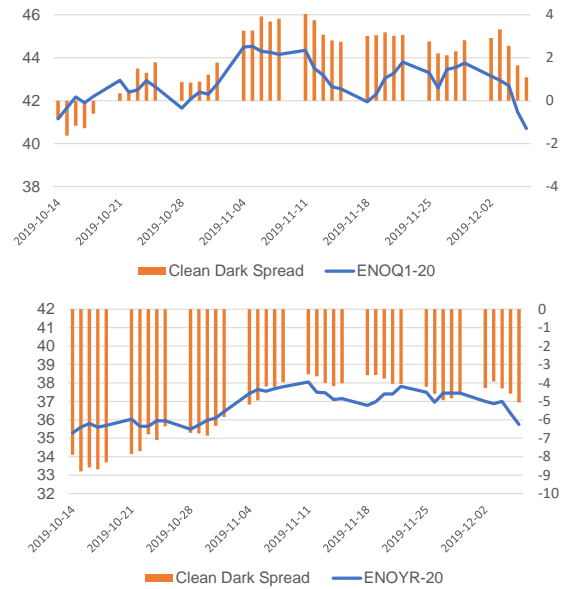
Forecast history	49	Chg	48	Chg
ENOFUTBLQ1-20	↘	-7.0%	↘	-0.1%
ENOYR-20	↘	-4.5%	↘	-1.0%
NP System	↘	-8.5%	↻	2.1%
NEDEC9	↘	-1.6%	↘	2.8%

DETERMINANTS AFFECTING THE MARKET ON WEEK 50

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Ringhals 2 (852 MW), maintenance 7.9.-30.12.2019, in use 300 MW
Forsmark 2 (1118 MW), failure 2.-13.12.2019, in use 504 MW

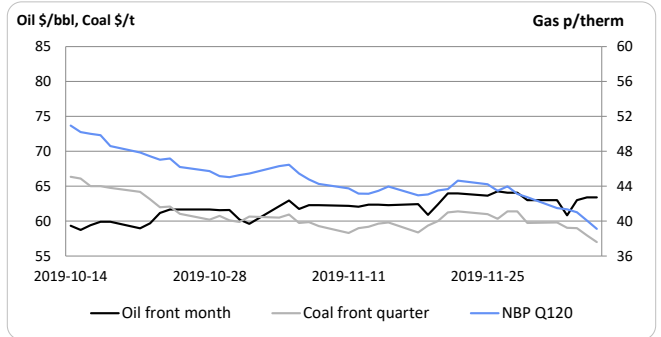
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 90%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 43% of the maximum



AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	39.12
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.45
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.98
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.98
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.56
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.94

*Average for period between 1.1.2019-9.12.2019.



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