

NORDIC ELECTRICITY MARKET

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SUPPORT BROUGHT BY DRIER AND COLDER WEATHER FORECASTS

Forecast to week 43:

ENOFUTBLQ1-20	↗ Bullish (>0%)
ENOYR-20	↗ Bullish (>0%)
NP System	↔ Sideways (± 0,5%)
NEDEC9	↗ Bullish (>0%)

FORECAST TO WEEK 43

ELECTRICITY DERIVATIVES

Front quarter

The weather forecasts got drier and colder over the weekend. In the current week, the weather will be wetter and warmer than normal, but next week will see a turn for dry and cool weather. We expect quarterly product prices to rise. However, as a whole, the precipitation rates over the two-week forecast period will be close to normal, with no significant changes to be expected in the hydro balance. Therefore we expect any upward scope to be limited for the time being.

Annual products

The colder and drier weather forecasts and bullish quarterly products are also providing support for the front-year product. Fluctuation in emission allowance prices may continue to be considerable while the Brexit process is still underway. The Central European weather picture will turn cool towards the end of October. The cool weather picture may support fuel and emission allowance demand and prices. We expect a slight rise in annual product prices.

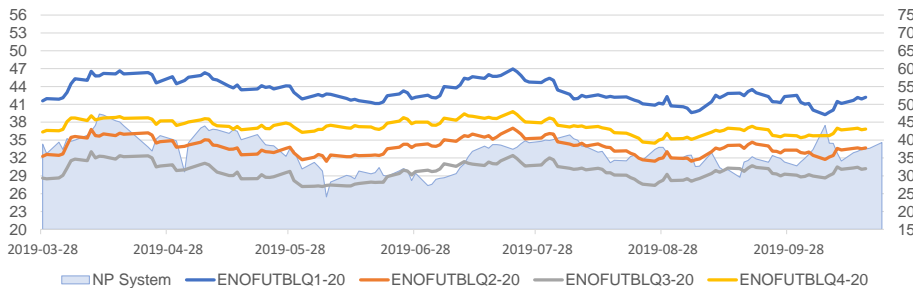
SPOT MARKET

Nordic wind power production will be variable over the week. On Monday, output will be weak, on Tuesday very abundant, on Wednesday and Thursday slightly below normal and for the rest of the week abundant. Nuclear power output has risen close to the normal level. Electricity demand will fall as, after Monday, the weather will be warmer than normal for the rest of the week. Flow rates will increase towards the end of the week. We expect the system price to settle at a level close to that seen last week. The maintenance of the interconnection between Finland and Northern Sweden has been completed. Finnish wind power production will be scant on Monday but very abundant on Tuesday. After Tuesday, Finnish wind power output will decline but will average slightly above normal for the rest of the week. We expect the Finnish area price to fall and to settle at an average of €43.0/MWh.

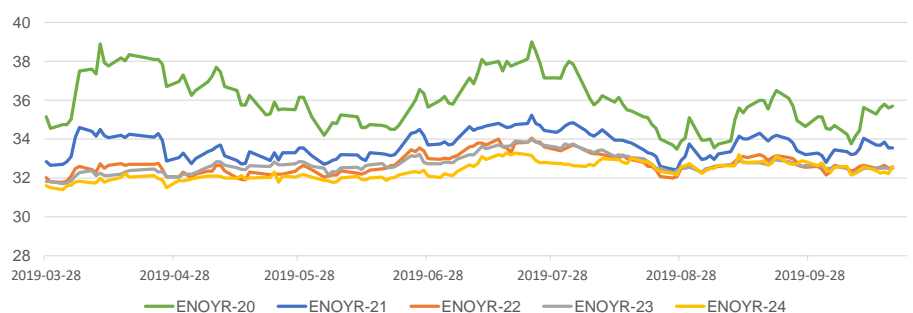
EMISSIONS

Brexit still hangs in uncertainty and fluctuations in emission allowance prices may continue to be heavy. The British parliament is due to vote on the withdrawal agreement again early this week. If there is not enough support for the deal, the Brexit date is likely to be postponed. The Central European weather picture will turn colder than normal in late October and November will start cold. The cold weather picture may increase demand for emission allowances. There is a great deal of political uncertainty, but we regard a bullish trend more likely than a bearish one.

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	18.10.2019	42.20	1.7%	0.70
ENOFUTBLQ2-20	18.10.2019	33.70	0.3%	0.10
ENOFUTBLQ3-20	18.10.2019	30.20	-1.0%	-0.30
ENOFUTBLQ4-20	18.10.2019	36.85	-0.4%	-0.15
ENOYR-20	18.10.2019	35.70	0.2%	0.07
ENOYR-21	18.10.2019	33.55	-1.5%	-0.50
ENOYR-22	18.10.2019	32.50	-0.5%	-0.15
ENOYR-23	18.10.2019	32.55	0.2%	0.05
ENOYR-24	18.10.2019	32.60	0.1%	0.02
NEDEC9	18.10.2019	25.86	5.5%	1.35
NEDEC20	18.10.2019	26.04	5.4%	1.34

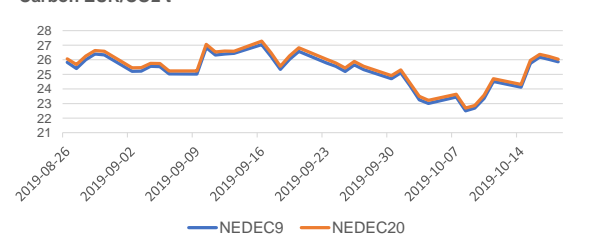
EPAD settlements

18.10.2019 (€/MWh)	2020	2021	2022	2023
SYHEL	8.45	5.18	4.08	4.05
SE1-NP System	-0.56	-1.50	-2.25	-2.25
SE2 - NP System	-0.56	-1.50	-2.25	-2.25
SE3 - NP System	2.28	1.25	1.35	1.35
SE4 - NP System	3.30	2.60	2.60	2.60

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	20.10.2019	36.83	-1.4%	-0.51
NP Area FI	20.10.2019	48.08	-3.2%	-1.60
NP Area SE1	20.10.2019	37.47	4.8%	1.73
NP Area SE2	20.10.2019	37.47	4.8%	1.73
NP Area SE3	20.10.2019	41.73	12.8%	4.72
NP Area SE4	20.10.2019	41.73	12.8%	4.72

Carbon EUR/CO2 t



COMMENTS ON WEEK 42

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products fell on Monday as the weather forecasts got wetter after the weekend. After Monday, however, quarterly products took an upturn as the weather forecasts got drier and cooler. Clear signs of a turn for a dry and cooler-than-normal weather type appeared in the forecasts for the last week of October. Upward pressure on quarterly products was intensified by the rise of emission allowance prices. Quarterly products were down at the weekly level.

Annual products

Last week the front-year product rose slightly, driven by quarterly products, but the further-ahead annual products were bearish. Emission allowance prices rose, but the weaker coal price created downward pressure on annual products. The euro also strengthened against the U.S. dollar, so there were no major changes in the marginal cost price of coal-fired production.

SPOT MARKET

The system price fell last week. Nuclear output increased as the Forsmark 3 and Ringhals 4 units were operational again. Temperatures climbed above normal for the time of year after the first days of the week and the weather was warmer than in the week before. Finnish wind power production was mainly scant, and the interconnection between Finland and Northern Sweden was closed for maintenance on Thursday. The Finnish area price settled at a level considerably higher than the system price, but at the weekly level the Finnish area price fell more than the system price.

EMISSIONS

Last week, emission allowance prices took a strong upturn. Support for emission allowance prices was created by optimism concerning progress made in Brexit negotiations. Towards the end of the week, the UK and the EU agreed on a Brexit deal, but emission allowances took a slight downturn after the announcement, as the positive news had been expected and the market's eyes were already fixed on the increasing auction volumes following the positive outcome as British auctions start again. The deal was not, however, passed by the British parliament on Saturday.

Indicator	ENOFUTBLQ1-20	ENOYR-20
Coal-fired production	72 %	76 %
Coal price	47 %	35 %
Gas price (NBP)	69 %	51 %
German price level	15 %	30 %
Spot	20 %	17 %
Crude oil Brent	48 %	30 %
Water reservoirs	6 %	1 %
EUR/USD FX rate	15 %	14 %
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	42	Chg	41	Chg
ENOFUTBLQ1-20	↓	1.7%	↓	0.9%
ENOYR-20	↓	0.2%	↓	2.7%
NP System	↓	-1.4%	↓	-8.5%
NEDEC9	↻	5.5%	↓	6.5%

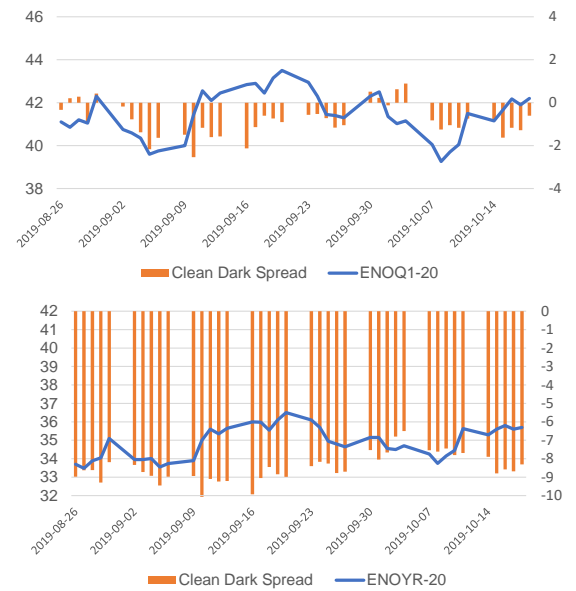
DETERMINANTS AFFECTING THE MARKET ON WEEK 43

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Ringhals 2 (852 MW), maintenance 7.9.-30.12.2019, in use 300 MW

NO1-SE3 (2145 MW), maintenance 21.-22.10.2019, 750-2145 MW in use

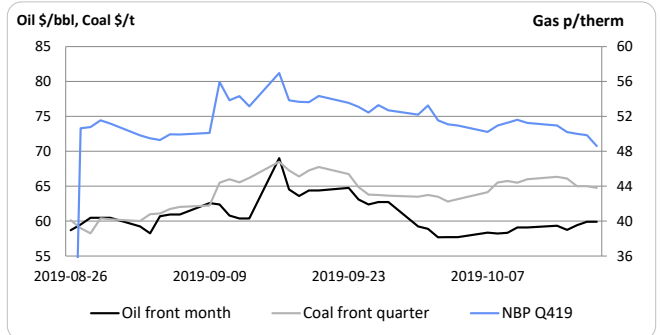
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 95%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 64% of the maximum



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	38.87
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.59
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.92
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.92
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.67
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.85

*Average for period between 1.1.2019-21.10.2019.



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Source for data: intStream, Tilastokeskus

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