

NORDIC ELECTRICITY MARKET

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DRY AND WARM WEATHER TYPE ENDING

Forecast to week 21:

ENOFUTBLQ3-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	↔ Sideways (± 0,5%)

FORECAST TO WEEK 21

ELECTRICITY DERIVATIVES

Front quarter

For the first days of the week, the weather will still remain dry and clearly warmer than normal for the time of year. The dry and warm weather type is, however, ending and precipitation rates will rise above normal after Tuesday. At the same time temperatures will take a downturn and fall below normal towards the end of the week. The hydro balance will improve considerably and, so far, the weather forecasts show no clear signs of the weather type turning dry again. We expect quarterly product prices to fall.

Annual products

Downward pressure on annual products is created by the weather picture turning for rain and by weak quarterly products. Fuel prices excluding oil also still remain weak. In addition, nervous mood in the market is maintained by concerns relating to trade tensions between the US and China. We expect a fall in annual product prices.

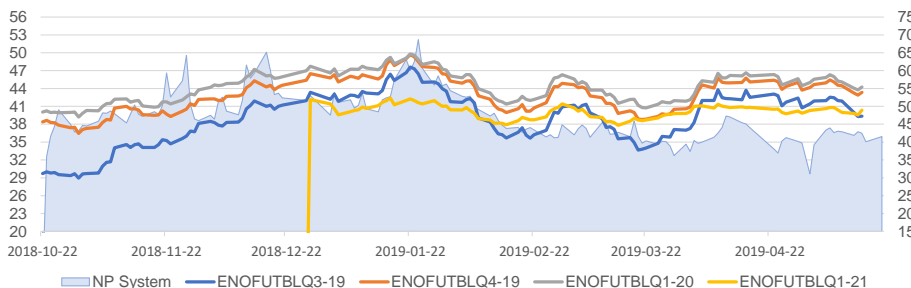
SPOT MARKET

The weather will still be very warm and dry in the first days of the week, but there will be a turn in the weather type. Temperatures will drop close to the normal level after Wednesday and precipitation levels will rise above normal after Tuesday. Nordic wind power production will be weak in the first days of the week but rise close to the normal level after Wednesday. Flow rates are high and will still continue to rise as we head towards Wednesday. After Wednesday, there will be a big drop in temperatures and melting will slow down. After that, flow rates will take a downturn and will fall to a level close to normal during the weekend. We expect the system price to fall at the weekly level and to settle at an average of €37.0/MWh. Finnish wind power production will be weak in the first days of the week but rise close to the normal level after Wednesday. We expect the Finnish area price to settle at a level higher than the system price due to weaker-than-normal nuclear power production.

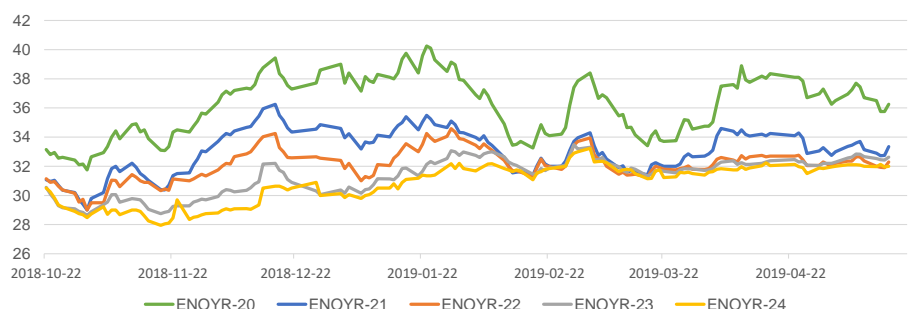
EMISSIONS

Fluctuations are created in the electricity market and fuel prices by uncertainties in the US-Chinese trade talks and the uncertainty is also reflected in emission allowance prices. Because of the high degree of uncertainty, we expect a great deal of swinging to continue in emission allowance prices. Emission allowance prices have fallen slightly since the first half of April but technically the short-term and particularly the long-term price trend is still rising. The closest price support level is €24.35/t and the possible breaking of this level would take the short-term trend to a downward path. The closest resistance levels for the price are €27.21 and €27.85. For the time being, we expect emission allowance prices to move within the €24.35–€27.21/MWh range.

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



Years EUR/MWh



Market signals

	spot	Q3-19	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)
ENOFUTBLQ3-19	16.5.2019	39.35	-6.2%	-2.60
ENOFUTBLQ4-19	16.5.2019	43.35	-2.7%	-1.20
ENOFUTBLQ1-20	16.5.2019	44.25	-2.2%	-1.00
ENOFUTBLQ1-21	16.5.2019	40.35	-0.1%	-0.05
ENOYR-20	16.5.2019	36.25	-1.2%	-0.45
ENOYR-21	16.5.2019	33.35	0.6%	0.21
ENOYR-22	16.5.2019	32.30	-0.2%	-0.07
ENOYR-23	16.5.2019	32.63	-0.1%	-0.03
ENOYR-24	16.5.2019	32.00	0.0%	0.00
NEDEC9	16.5.2019	25.56	-0.1%	-0.03
NEDEC20	16.5.2019	25.81	-0.2%	-0.06

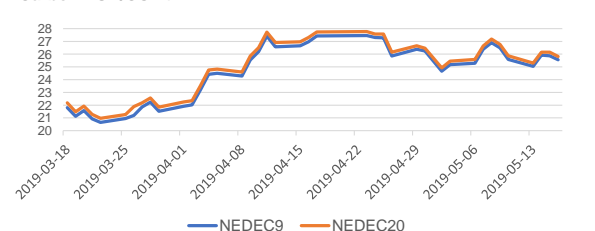
EPAD settlements

16.5.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.10	3.30	3.25	3.33
SE1-NP System	-1.00	-1.60	-1.60	-1.60
SE2 - NP System	-1.10	-1.60	-1.60	-1.60
SE3 - NP System	1.28	1.38	1.38	1.50
SE4 - NP System	2.75	3.08	3.13	3.13

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	19.5.2019	40.00	-3.4%	-1.39
NP Area FI	19.5.2019	45.83	20.1%	7.67
NP Area SE1	19.5.2019	38.36	6.0%	2.16
NP Area SE2	19.5.2019	38.36	6.0%	2.16
NP Area SE3	19.5.2019	38.36	6.0%	2.16
NP Area SE4	19.5.2019	38.36	6.0%	2.16

Carbon EUR/CO2 t



COMMENTS ON WEEK 20

ELECTRICITY DERIVATIVES

Front quarter

Last week was very dry but the forecasts for the following week showed an end to the dry weather type. Owing to the rainy weather picture of the following week, there was a sharp drop in quarterly product prices. Downward pressure on quarterly products was also strengthened by persistently weak fuel prices.

Annual products

Coal and especially natural gas prices remained weak last week. Annual product prices fell in the first days of the week. The general market sentiment was still nervous but, after the first half of the week, fears of trade war expansion eased a little. At the same time the downward pressure on annual products lessened and annual products recovered slightly towards the end of the week. At the weekly level, annual products remained mainly on a slight downward trajectory.

SPOT MARKET

In the first days of last week, the weather was still clearly colder than normal for the time of year but temperatures took an upturn and rose to levels clearly warmer than normal towards the end of the week. The rising temperatures re-accelerated melting and flow rates rose high towards the end of the week. Nordic wind power production dropped to a low level after Monday but rose to a high level on Thursday and Friday. Over the weekend, wind power production weakened again to a low level. The system price dropped at the weekly level. The Finnish area price shot up due to an interconnection restriction between Finland and Southern Sweden. In addition, nuclear power production was weaker than normal due to the annual maintenance of the Olkiluoto 2 nuclear power plant unit.

EMISSIONS

Last week, concern in the market was caused by tensions between the US and China. The uncertainty also put downward pressure on emission allowance prices. The weak price of natural gas and the downward trajectory continuing in the German electricity market also created downward pressure. After the first days of the week, the general market sentiment calmed down a little and emission allowance prices recovered slightly. On Wednesday, the European Commission published the number of emission allowances in circulation. The figure determines the amount of allowances intended to be auctioned over the period from September 2019 and August 2020. The number of allowances in circulation slightly exceeded that anticipated and therefore the auction supply is slightly lower than anticipated. This resulted in a slight rise in emission allowance prices but was followed by another drop towards the end of the week. At the weekly level, emission allowance prices ended up on a slight downward trajectory.

Indicator	ENOFUTBLQ3-19	ENOYR-20
Coal-fired production	30 %	47 %
Coal price	0 %	4 %
Gas price (NBP)	0 %	3 %
German price level	0 %	4 %
Spot	13 %	17 %
Crude oil Brent	1 %	5 %
Water reservoirs	0 %	6 %
EUR/USD FX rate	2 %	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	20	Chg	19	Chg
ENOFUTBLQ3-19	↗	-6.2%	↗	1.3%
ENOYR-20	↗	-1.2%	↗	0.5%
NP System	↻	-3.4%	↗	9.3%
NEDEC9	↗	-0.1%	↗	1.6%

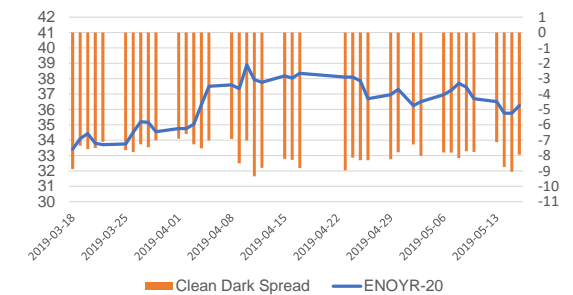
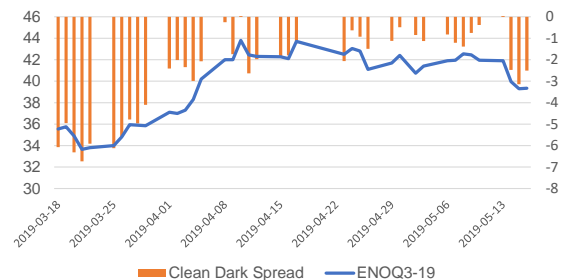
DETERMINANTS AFFECTING THE MARKET ON WEEK 21

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Olkiluoto 2 (890 MW), yearly maintenance 1.-26.5.2019, available 0 MW
 Ringhals 3 (1063 MW), yearly maintenance 30.4.-25.5.2019, available 0 MW
 Forsmark 1 (984 MW), yearly maintenance 22.4-7.6.2019, available 0 MW
 Forsmark 2 (1118 MW), maintenance 22.-23.5.2019, available 750-1118 MW

SE3-FI (1200 MW), maintenance 26.5.-9.6.2019, available 600 MW

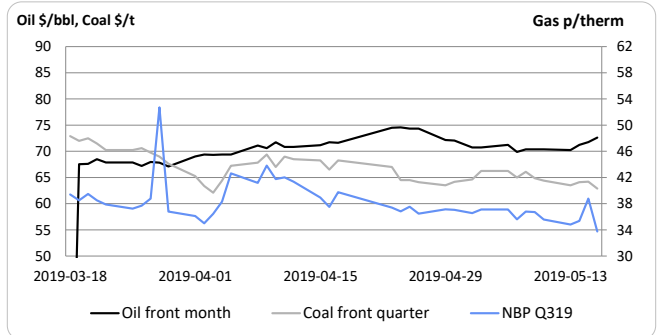
-The utilization rate of Nordic nuclear power plants is currently 75%
 -RU-FI transfer profile varies due to capacity charges, average import from Russia last week was 62% of maximum



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	44.53
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	0.73
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.27
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.27
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-1.00
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	-0.56

*Average for period between 1.1.2019-20.5.2019.



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 Source for data: intStream, Tilastokeskus

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