

NORDIC ELECTRICITY MARKET

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UPWARD PRESSURE ON ELECTRICITY MARKET CREATED BY FUEL AND EMISSION ALLOWANCE PRICE HIKES AND DRIER WEEK

Forecast to week 26:

ENOFUTBLQ3-19	↗ Bullish (>0%)
ENOYR-20	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC9	↗ Bullish (>0%)

FORECAST TO WEEK 26

ELECTRICITY DERIVATIVES

Front quarter

Weather forecasts are as a whole slightly wetter than normal but, with the exception of a rainier day on Tuesday, the current week will be dry as the weather type will be dominated by high pressure until Saturday. Next week will get off to a rainier start, and after that the forecasts land at a level close to normal. The hydro balance is settling down in the +2-3 TWh range. Quarterly products have not yet technically turned to an upward trend, but we expect quarterly products to rise at the weekly level owing to the transitory drier weather type and improving hydro control.

Annual products

The rise of fuels and emission allowances lends support to annual products. Annual products are also supported by the rise of quarterly products. We expect annual products to end up on an upward trajectory at the weekly level, but towards the end of the week intraday movements are expected to be more moderate than on Monday.

SPOT MARKET

Except for Friday, temperatures will be above normal at the Nordic level even though the European heatwave will not reach the Nordic countries. Wind power production will be weak for the first days of the week but rise towards the end of the week, with Thursday being the windiest day of the week. Because of the dry weather, flow rates will be lower than normal for the time of year and, after a momentary rise on Wednesday, will decline considerably towards the end of the week. Nuclear power production will still remain high during the current week but as from the weekend Forsmark 3 will be down for annual maintenance. We expect hydropower producers' control to improve this week, too, and the rising valuation of hydro is expected to push the system price up. At the weekly level, the system price is expected to settle at around €31/MWh. The Finnish area price is expected to rise more strongly and settle higher than the system price as the lowest night-time prices subside.

EMISSIONS

Emission allowance prices are expected to rise along with other fuels. Today, the emission allowance market has risen above the €26/t level during the day, the highest quote seen in more than a month. The next resistance level is at around €26.5/t, which may be tested during the week and the exceeding of which would take the emissions allowance market onto a new upward trend.

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	21.6.2019	32.45	2.4%	0.75
ENOFUTBLQ4-19	21.6.2019	36.95	-2.1%	-0.80
ENOFUTBLQ1-20	21.6.2019	41.40	-1.1%	-0.45
ENOFUTBLQ1-21	21.6.2019	40.58	0.6%	0.23
ENOYR-20	21.6.2019	34.70	-0.1%	-0.05
ENOYR-21	21.6.2019	33.45	0.5%	0.15
ENOYR-22	21.6.2019	32.85	1.4%	0.45
ENOYR-23	21.6.2019	32.70	0.1%	0.02
ENOYR-24	21.6.2019	32.15	0.5%	0.15
NEDEC9	21.6.2019	25.29	1.1%	0.27
NEDEC20	21.6.2019	25.61	1.3%	0.33

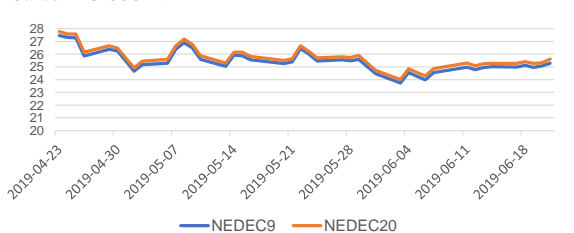
EPAD settlements

21.6.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.50	3.25	3.00	3.30
SE1-NP System	-3.25	-1.25	-2.00	-2.00
SE2 - NP System	-3.25	-1.25	-2.00	-2.00
SE3 - NP System	1.00	1.25	1.28	1.30
SE4 - NP System	2.93	2.75	2.75	2.75

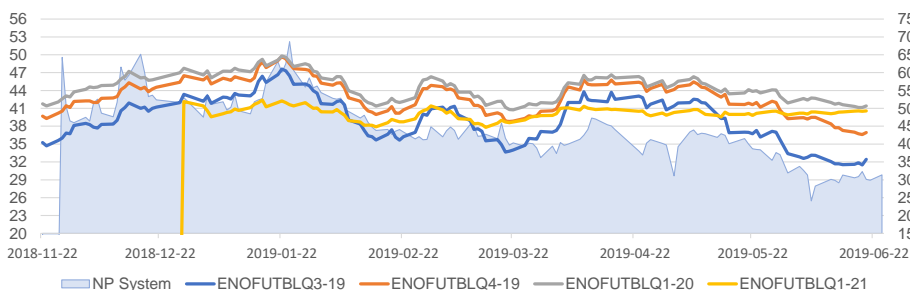
Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	23.6.2019	29.39	4.5%	1.25
NP Area FI	23.6.2019	27.07	-1.1%	-0.31
NP Area SE1	23.6.2019	25.96	3.2%	0.81
NP Area SE2	23.6.2019	25.96	3.2%	0.81
NP Area SE3	23.6.2019	25.96	3.2%	0.81
NP Area SE4	23.6.2019	25.96	3.2%	0.81

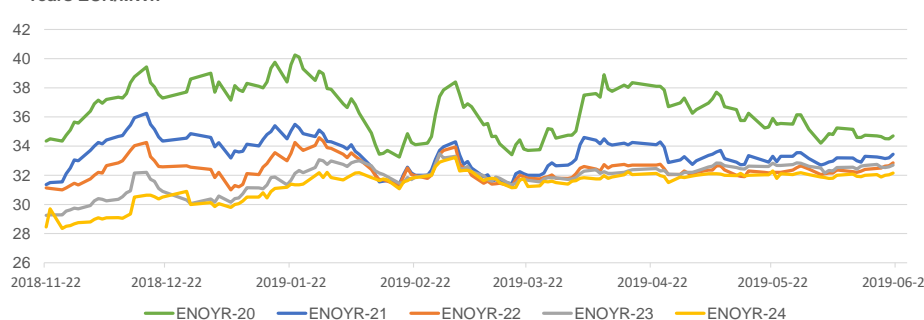
Carbon EUR/CO2 t



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



Years EUR/MWh



COMMENTS ON WEEK 25

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products took an upturn although the first days of the week saw intraday dips into new lows. The lowest the Q3-19 sank to was around €31.3/MWh and the Q4-19 went down to €36.55/MWh. Towards the end of the week, prices took an upturn as weather forecasts dried up after the very high precipitation rates forecast for the first days of the week. In addition, fuel prices took an upturn. The Q3-19 ended on an upward trajectory at the weekly level, while the Q4-19 ended falling following a decline that continued until Thursday.

Annual products

Last week, annual products remained almost unchanged at the weekly level. The intraday range was also modest, with price movements in the €34.5–€35/MWh range for the front-year product. The longer annual products rose marginally. Coal price fell until Wednesday but took an upturn towards the end of the week as the Central European heatwave is causing a temporary increase in the need for cooling capacity. Annual products were also supported towards the end of the week by the rise of emission allowance prices. The oil market posted the clearest hike during the last days of the week due to the U.S.-Iran situation, but its impact on other fuels turned out to be minor.

SPOT MARKET

Last week, temperatures were mainly above normal in the Nordic countries. Flow rates had, however, already taken a downturn because of the previous weekend's dry weather while at the same time most of the snow has already melted. Flow rates remained slightly below normal throughout the week. Wind production was also as a general rule below normal at the Nordic level. The system price continued on an upward trajectory at the weekly level despite the Midsummer celebrations, with business days settling above €30/MWh. The Finnish area price fell and settled at a level more than €2/MWh below the system price. Business days already settled mainly below the system price but during the weekend in particular due to low Midsummer consumption the Finnish area price settled low. Night-time prices sunk momentarily to levels only slightly above zero.

EMISSIONS

Emission allowance prices remained stagnant during the first days of the week and showed intraday movement above and below €25/t. With fuel and electricity prices taking an upturn towards the end of the week, emission allowance prices also rose slightly and Friday's closing price ended up being the week's highest price at the weekly level.

Indicator	ENOFUTBLQ3-19	ENOYR-20
Coal-fired production	73 %	64 %
Coal price	45 %	25 %
Gas price (NBP)	40 %	26 %
German price level	58 %	60 %
Spot	57 %	36 %
Crude oil Brent	0 %	2 %
Water reservoirs	14 %	16 %
EUR/USD FX rate	13 %	13 %
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	25	Chg	24	Chg
ENOFUTBLQ3-19	↘	2.4%	↗	-4.4%
ENOYR-20	↘	-0.1%	↗	-1.4%
NP System	↘	4.5%	↗	11.0%
NEDEC9	↘	1.1%	↗	1.9%

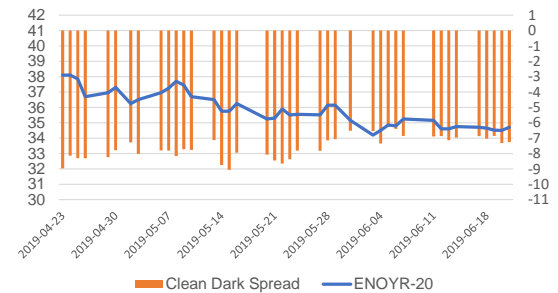
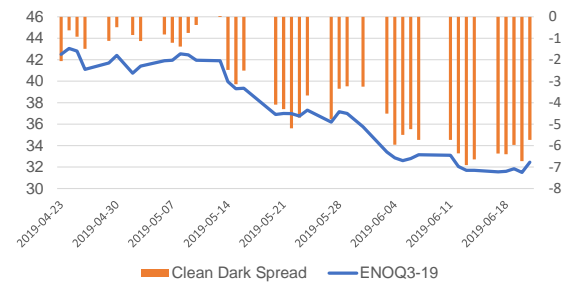
DETERMINANTS AFFECTING THE MARKET ON WEEK 26

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Forsmark 3 (1167 MW), annual maintenance 30.6. - 16.7.2019, available 0 MW
 Ringhals 1 (881 MW), maintenance 18.6. - 20.7.2019, available 750 MW

RU-FI (1300 MW), annual maintenance 30.6. - 31.7.2019, available 400 MW

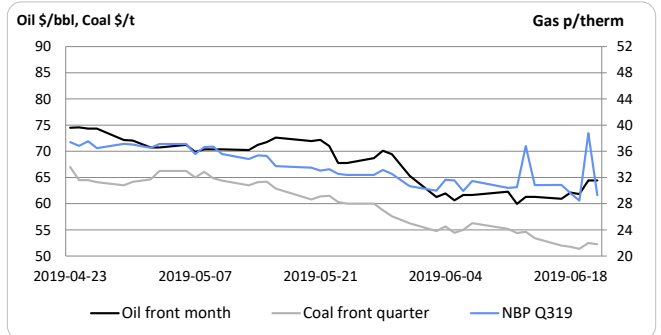
- Current Nordic nuclear power plant utilization rate 99%
- RU-FI transfer profile varies due to capacity charges, with average import from Russia having been 32% of maximum last week



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	41.66
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.07
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.75
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.75
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-1.53
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	-0.64

*Average for period between 1.1.2019-24.6.2019.



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