

**NORDIC ELECTRICITY MARKET**

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**MORE POSITIVE GENERAL MARKET SENTIMENT LENDS SUPPORT TO FUEL AND EMISSION ALLOWANCE PRICES**

Forecast to week 24:	
ENOFUTBLQ3-19	↗ Bullish (>0%)
ENOYR-20	↗ Bullish (>0%)
NP System	↘ Bearish (<0%)
NEDEC9	↗ Bullish (>0%)

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	→	↓	↓

**FORECAST TO WEEK 24**  
**ELECTRICITY DERIVATIVES**

**Front quarter**  
The weather type has been wet and the water situation has improved considerably. However, precipitation rates have now declined and are close to the normal level over the two-week forecast period. Any more permanent turn for a dry weather type appears unlikely, however. Low spot prices and weak technical picture maintain downward pressure on quarterly products. The decline has, however, already been considerable and we expect the downward pressure on quarterly products to calm down by now. With the wet weather type ending and fuel and emission allowance prices stronger, we expect a slight rebound in quarterly product prices.

**Annual products**  
The import tariffs planned by the U.S. for Mexican products have been cancelled for the time being. Concerns about the trade war and nervousness about a slowdown in economic growth have eased and share indices are rising. The general market sentiment is clearly more positive, lending support to fuel as well as emission allowance prices. Oil prices are on the rise again and OPEC is continuing the oil-cuts agreement into the second half of the year as well. We expect a rise in annual product prices.

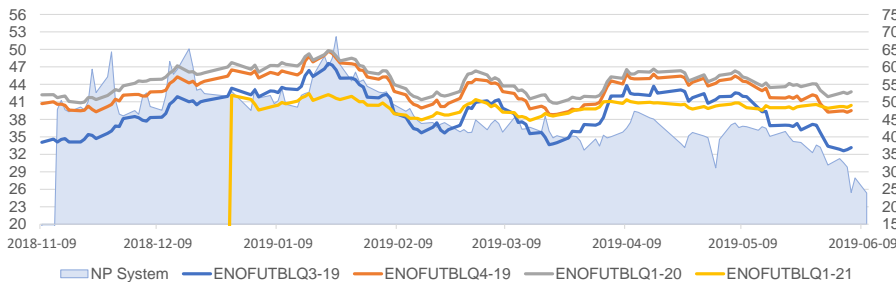
**SPOT MARKET**  
Temperatures have fallen close to the normal level for the time of year and will continue to fall towards Wednesday. Towards the end of the week, however, the weather will get warmer than normal again. On Monday, electricity demand at the Nordic level was decreased by the public holidays in Norway and Denmark, but the demand for electricity will rise on Tuesday and Wednesday. Flow rates are at a high level but will take a downturn and, after the first days of the week, fall to a level close to normal for the time of year. Nordic wind power production will be abundant in the first half of the week but decline to a lower-than-normal level in the second half. We expect spot prices to rise after the start of the week but at the weekly level we expect the system price to still settle low. We expect the system price to settle at an average of €27.0/MWh. The Olkiluoto 1 nuclear power plant unit will be operational again on Tuesday night and the interconnection restriction between Finland and Sweden has ended. Finnish wind power production will be abundant for the first days of the week but will mostly be weaker than normal for the rest of the week. We expect the Finnish area price to settle close to the system price at the weekly level.

**EMISSIONS**  
The more positive general market mood will lend support to fuel prices and the electricity market and we expect this to also lend support to emission allowance prices. There is, however, a great deal of political uncertainty in the background due to issues including the handling of Brexit. We expect political uncertainty and its consideration to ease for a while, however, and we expect emission allowance prices to rise.

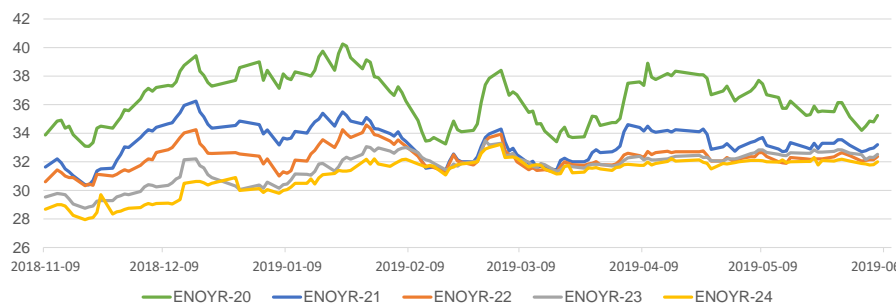
Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-19	7.6.2019	33.15	-7.3%	-2.60
ENOFUTBLQ4-19	7.6.2019	39.50	-2.9%	-1.20
ENOFUTBLQ1-20	7.6.2019	42.73	-0.6%	-0.27
ENOFUTBLQ1-21	7.6.2019	40.40	0.3%	0.12
ENOYR-20	7.6.2019	35.25	0.3%	0.10
ENOYR-21	7.6.2019	33.20	0.2%	0.05
ENOYR-22	7.6.2019	32.37	-0.2%	-0.06
ENOYR-23	7.6.2019	32.53	-0.2%	-0.08
ENOYR-24	7.6.2019	32.00	-0.2%	-0.05
NEDEC9	7.6.2019	24.56	0.3%	0.08
NEDEC20	7.6.2019	24.87	0.6%	0.14

EPAD settlements				
7.6.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.15	3.18	3.23	3.45
SE1-NP System	-1.50	-2.25	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35	1.35
SE4 - NP System	2.60	2.60	2.60	2.60

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

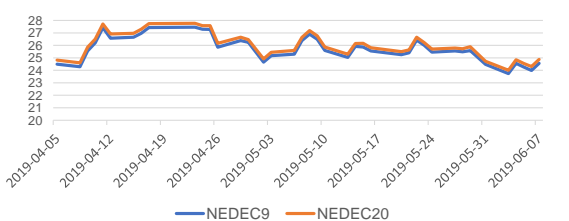


Years EUR/MWh



Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	9.6.2019	24.98	-23.0%	-7.44
NP Area FI	9.6.2019	37.53	26.5%	7.87
NP Area SE1	9.6.2019	19.99	-22.4%	-5.76
NP Area SE2	9.6.2019	19.99	-22.4%	-5.76
NP Area SE3	9.6.2019	19.99	-22.4%	-5.76
NP Area SE4	9.6.2019	19.99	-22.4%	-5.76

Carbon EUR/CO2 t



COMMENTS ON WEEK 23

ELECTRICITY DERIVATIVES

Front quarter

Last week, the wet weather type continued and the hydro balance continued to rise. Owing to the improved hydro balance and spot prices settling low, quarterly products continued to plummet. In addition, the technical picture worsened even further as the front quarterly product fell below the lowest trading figures of March.

Annual products

At the beginning of last week, fuel and emission allowance prices fell and annual product prices also dropped in their wake. After Monday, however, the decline of emission allowance and fuel prices halted and the prices recovered towards the end of the week. The prices of annual products also recovered towards the end of the week and in the end there were no major changes in annual product prices at the weekly level.

SPOT MARKET

The weather was warm last week, which accelerated melting again and flow rates rose to a high level towards the end of the week. The weather was also rainier than normal. Nordic wind power production was mainly close to the normal level. The improved water situation, high flow rates and continued rise of the hydro balance resulted in a collapse in night-time prices and the system price plummeted at the weekly level. On the other hand, the Finnish area price rose at the weekly level and therefore the gap between the area price and the system price grew a lot. The Finnish area price difference was caused by the annual maintenance of the Olkiluoto 1 nuclear power unit and the maintenance of the interconnection between Finland and Southern Sweden. Finnish wind power production was at times also weak.

EMISSIONS

During the first days of last week, emission allowance prices fell in the wake of continued weakness in fuel prices and the electricity market. Auction supply was also more abundant than the level seen the week before. After Monday, the decline of fuel prices, the electricity market and emission allowance prices halted. In the stock market, indices were supported by the Federal Reserve chairman's comments sending the signal that interest rates might be cut. Trade war concerns also subsided slightly. The market was supported by the more positive market sentiment. At the weekly level, emission allowance prices ended up rising slightly.

DETERMINANTS AFFECTING THE MARKET ON WEEK 24

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Olkiluoto 1 (890 MW), annual maintenance June 2–11, 2019, 0 MW available (June 11–14 590-780 MW)  
 FI – EE (1016 MW), maintenance June 10–14, 2019, available 358 MW  
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- Current Nordic nuclear power plant utilization rate 93%
- RU-FI transfer profile varies due to capacity charges, with average import from Russia having been 38% 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	42.74
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.68
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.63
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.63
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-1.39
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	-0.71

\*Average for period between 1.1.2019-10.6.2019.

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 Source for data: intStream, Tilastokeskus

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Indicator	ENOFUTBLQ3-19	ENOYR-20
Coal-fired production	59 %	62 %
Coal price	26 %	23 %
Gas price (NBP)	23 %	25 %
German price level	29 %	49 %
Spot	41 %	36 %
Crude oil Brent	3 %	7 %
Water reservoirs	1 %	7 %
EUR/USD FX rate	13 %	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	23	Chg	22	Chg
ENOFUTBLQ3-19	↘	-7.3%	↘	-4.2%
ENOYR-20	↘	0.3%	↘	-1.1%
NP System	↘	-23.0%	↘	-16.9%
NEDEC9	↘	0.3%	↻	-3.8%

