

NORDIC ELECTRICITY MARKET

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THE WEATHER, THAT TURNS WET AT THE WEEKEND, CAUSES DOWNWARD PRESSURE

Forecast to week 45:	
ENOFUTBLQ1-19	📉 Bearish (<0%)
ENOYR-19	📉 Bearish (<0%)
NP System	📈 Bullish (>0%)
NEDEC8	📉 Bearish (<0%)

Market signals	spot	Q1-19	YR-19
Hydrologic balance	→	↓	↓
Precipitation forecast	↓	↓	↓
Temperature forecast	↓	↓	→
Spot	↓	↑	→
Production and transmission exch.	↑	→	→
Emissions allowance	↓	↓	↓
Coal price	→	→	→
German prices	↑	→	→
Technical analysis	↓	↓	↓

FORECAST TO WEEK 45
ELECTRICITY DERIVATIVES

The nearest quarter
The weather is dry during the weekdays, but at the weekend the precipitation increases to high level and also next week the weather forecasts are wetter than normal without any clear signs of drier weather. The weather stays warmer than normal. We expect the front contracts to decrease due to mild and wet weather outlook.

Annual products
The wetter weather forecasts and decreasing front contracts cause downward pressure to annual contracts. Downward pressure is also caused by weak technical outlook and still bearish emission price. Also the fuels are weak. However, the oil price has already decreased close to strong support levels and there is a risk for upward correction. The oil price might get support from the economic sanctions from US that started on Monday, which causes the Iran's oil export decrease. We expect the closest annual contract to decrease, but we see a possibility for longer annual contracts to turn the direction during the week. The general market sentiment is more settled, which might support the fuel prices. However, the fluctuation might continue to be strong. During this week the stock index fluctuations and the currency fluctuations might be caused by the mid-term elections in US on Tuesday and the US Federal Reserve meeting on Thursday.

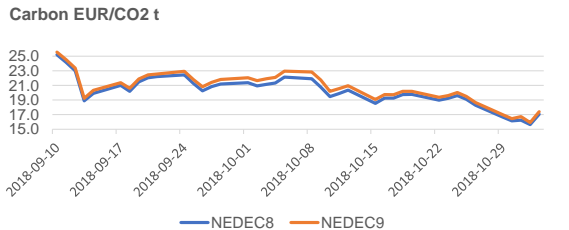
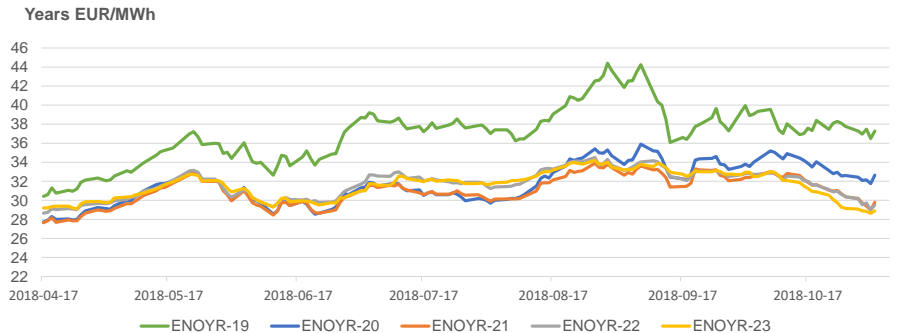
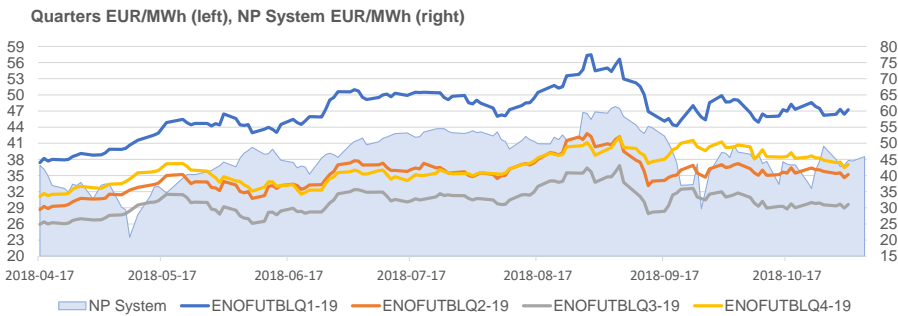
SPOT MARKET
The weather is dry and warm compared to seasonal normal. The weather stays warm and the electricity demand is lower compared to seasonal normal. The inflows are at low level and continue decreasing towards the weekend. The Nordic wind power production is weak and it weakens more towards the end of the working week. We expect the system price to continue increasing at the weekly level and to realize at about 46.5 €/MWh. The electricity import from Russia to Finland is at high level on Monday due to holiday in Russia. After Monday the electricity import from Russia decreases, but compared to October, the electricity import is clearly higher on November. In Finland the wind power production decreases after Monday and on Wednesday and on Thursday the Finnish wind power production is very weak. We expect the Finnish area price to increase and to realize at about 50,0 €/MWh.

EMISSIONS
The emission price is technically very weak when the strong support level of 17,90 €/t was broken. Also the fuel prices are weak, which causes downward pressure to German power market and the emission price. So far we expect the emission price to decrease. However, we see a possibility for a price to turn the direction due to settled general market sentiment. Also the fuel prices might start to increase during the week.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ1-19	2.11.2018	47.25	-0.4%	-0.20
ENOFUTBLQ2-19	2.11.2018	35.20	-2.4%	-0.85
ENOFUTBLQ3-19	2.11.2018	29.65	-0.8%	-0.25
ENOFUTBLQ4-19	2.11.2018	37.10	-3.0%	-1.15
ENOYR-19	2.11.2018	37.27	-1.3%	-0.48
ENOYR-20	2.11.2018	32.65	0.1%	0.04
ENOYR-21	2.11.2018	29.80	-1.8%	-0.56
ENOYR-22	2.11.2018	29.50	-2.9%	-0.88
ENOYR-23	2.11.2018	28.88	-0.9%	-0.27
NEDEC8	2.11.2018	17.05	-6.7%	-1.23
NEDEC9	2.11.2018	17.40	-6.7%	-1.25

EPAD settlements				
2.11.2018 (€/MWh)	2019	2020	2021	2022
SYHEL	7.10	5.15	4.93	4.85
SE1-NP System	0.25	-1.25	-1.25	-1.25
SE2 - NP System	0.25	-1.25	-1.25	-1.25
SE3 - NP System	2.25	2.25	2.25	2.25
SE4 - NP System	3.35	3.35	3.55	3.35

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	4.11.2018	43.92	3.4%	1.43
NP Area FI	4.11.2018	45.25	-2.3%	-1.04
NP Area SE1	4.11.2018	43.89	3.2%	1.37
NP Area SE2	4.11.2018	43.89	3.2%	1.37
NP Area SE3	4.11.2018	43.89	3.2%	1.37
NP Area SE4	4.11.2018	43.89	3.2%	1.37



COMMENTS ON WEEK 44

ELECTRICITY DERIVATIVES

The nearest quarter

Last week the front contracts turned sharply bearish on Monday, when the weather forecasts had turned wetter during the weekend and the precipitation was clearly higher than normal. Downward pressure was also strengthened by sharply bearish emission price and sharply decreased coal price. However, after the beginning of the week, the weather forecasts dried for the next week, which limited the downward pressure. At the end of the week the weather type change to dry seemed already very likely, which turned the front contracts bullish. Additionally, also the coal and emission prices corrected up on Friday. Despite of the Friday's increase, the front contracts were slightly lower at the weekly level.

Annual products

Last week the strongly bearish emission price maintained the annual contracts under downward pressure. On Thursday the emission price decreased already close to 15 €/t level and at the same time the coal price decreased sharply. The weak development at the German power market and decreased margin cost for coal condensate caused strong downward pressure to annual contracts. However, on Friday the annual contracts recovered, when the emission price and the coal price corrected up. Except for annual contract 2020, the annual contracts were, however, bearish at the weekly level.

SPOT MARKET

At the beginning of the week the weather was still cold compared to seasonal normal, but after Tuesday the temperatures rose to above the normal. The effect of decreasing electricity demand was limited by the wind power production, that turned weak after the beginning of the week, and the system price increased at the weekly level. Upward pressure to system price was also caused by the annual maintenance in Ringhals 2. There were problems in transmission lines between Finland and Northern Sweden, but the transmission line was in use again on Tuesday. After Monday the wind power production in Finland was mainly higher than normal. Additionally, the electricity import from Russia to Finland increased on November and therefore the Finnish area price decreased at the weekly level.

EMISSIONS

Last week the emission price turned sharply bearish, when the extremely strong support level of 17,90 € failed. The breaking of the support level weakened even more the technical outlook. Downward pressure to emission price was also created by weak development at the German power market and mainly weak auctions.

DETERMINANTS AFFECTING THE MARKET ON WEEK 45

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Forsmark 1 (986 MW), maintenance 4.-8.11.2018, available 506 MW
 Ringhals 2 (904 MW), 30.10.-29.11.2018 annual maintenance, available 0 MW

FI-EE (1016 MW) failure 4.-5.11.2018, available 658 MW

Nordic nuclear power plants are currently operating at 88%
 -RU-FI transfer profile varies due to capacity charges, on average imports from Russia last week were 73% of the maximum.

AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	42.81
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	3.09
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.44
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.44
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.59
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.32

*Average for period between 1.1.2018-5.11.2018.

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 Source for data: intStream, Tilastokeskus

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Indicator	ENOFUTBLQ1-19	ENOYR-19
Coal-fired production	18 %	43 %
Coal price	6 %	22 %
Gas price (NBP)	13 %	39 %
German price level	28 %	48 %
Spot	62 %	35 %
Crude oil Brent	2 %	1 %
Water reservoirs	58 %	49 %
EUR/USD FX rate	7 %	8 %
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	44	Chg	43	Chg
ENOFUTBLQ1-19	↘	-0.4%	↘	-1.7%
ENOYR-19	↘	-1.3%	↘	-1.7%
NP System	↗	3.4%	↗	13.2%
NEDEC8	↘	-6.7%	↻	-7.5%

