

NORDIC ELECTRICITY MARKET

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REDUCED TRADE TENSIONS SUPPORT THE FUEL PRICES

Forecast to week 49:	
ENOFUTBLQ1-19	↗ Bullish (>0%)
ENOYR-19	↗ Bullish (>0%)
NP System	↘ Bearish (<0%)
NEDEC8	↗ Bullish (>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 49  
ELECTRICITY DERIVATIVES

**The nearest quarter**  
At the beginning of the week the weather is fairly wet and at the same time also mild compared to seasonal normal. However, the precipitation and the temperatures started to fall and at the end of the week the weather turns to dry and colder than normal. The precipitation increases at the end of next week, but the weather type is likely to continue to be slightly drier than normal. We expect the front contracts to increase. The front contracts are also supported by the increasing coal price and the bullish emission price.

**Annual products**  
The dry weather outlook next week supports the closest annual contract. Upward pressure to fuel prices and to emission price is caused by the reducing of trade tensions between U.S and China, which supports also the annual contracts. Technically the annual contracts are also strong. When both the fundamentals and the technical analysis support the increase, we expect the annual contracts to increase. The strong fluctuation to fuel prices might be caused by the OPEC meeting on Thursday, where the members are expected to agree on next year's production cuts.

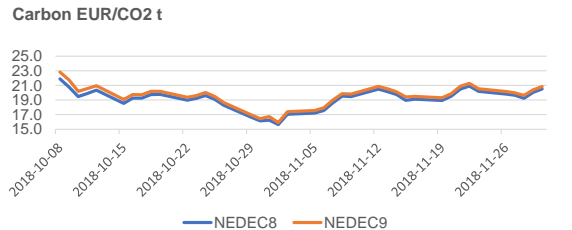
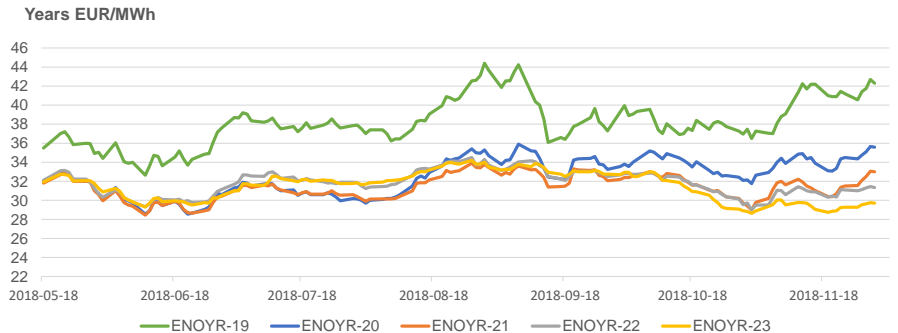
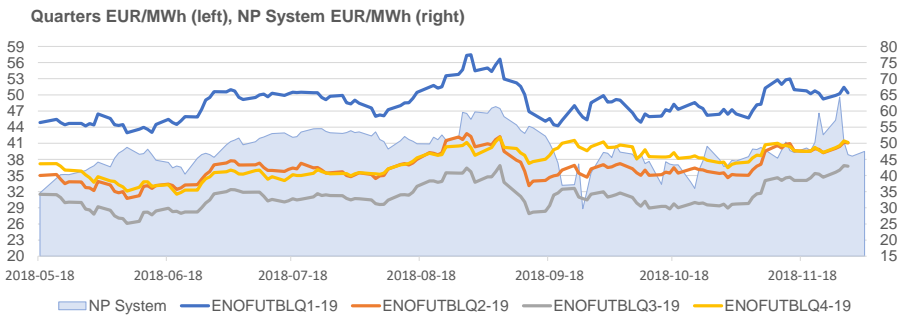
**SPOT MARKET**  
At the beginning of the week the mild weather is reducing the electricity demand, but the temperatures fall during the following days and the electricity demand starts to increase. The inflows are slightly higher than normal, but decrease towards the end of the week. The wind power production is high during the beginning of the week and especially on Tuesday, but from Wednesday to Friday the wind power production decreases to lower than normal. During the week the weather is at the coldest on Thursday, when also the wind power production is at the weakest. We expect the system price to decrease at the weekly level and to realize at about 48,0 €/MWh. In Finland the wind power production is higher than normal except for Friday. We expect also the Finnish area price to decrease and to realize at about 50,0 €/MWh.

**EMISSIONS**  
The emission price is technically in a bullish trend. In addition to the strong technical outlook, the emission price is supported by the increasing German power market and the fuel prices. The emission price is also supported by the weather turning colder widely in Europe next week. We expect the emission price to increase. The uncertainty on emission price is, however, maintained by Brexit negotiations. Britain is expected to vote on Brexit draft agreement on Tuesday next week.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ1-19	30.11.2018	50.38	0.2%	0.08
ENOFUTBLQ2-19	30.11.2018	41.05	3.0%	1.20
ENOFUTBLQ3-19	30.11.2018	36.75	4.3%	1.50
ENOFUTBLQ4-19	30.11.2018	41.15	3.7%	1.45
ENOYR-19	30.11.2018	42.30	2.7%	1.10
ENOYR-20	30.11.2018	35.58	3.1%	1.08
ENOYR-21	30.11.2018	33.00	4.8%	1.50
ENOYR-22	30.11.2018	31.34	0.8%	0.24
ENOYR-23	30.11.2018	29.70	1.4%	0.42
NEDEC8	30.11.2018	20.52	1.7%	0.34
NEDEC9	30.11.2018	20.83	1.4%	0.28

EPAD settlements				
30.11.2018 (€/MWh)	2019	2020	2021	2022
SYHEL	5.50	5.25	4.85	5.00
SE1-NP System	0.50	-1.15	-1.15	-1.15
SE2 - NP System	0.50	-1.15	-1.15	-1.15
SE3 - NP System	1.98	2.15	1.90	1.90
SE4 - NP System	3.80	3.55	3.55	3.55

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	2.12.2018	50.75	-0.5%	-0.24
NP Area FI	2.12.2018	53.40	1.3%	0.70
NP Area SE1	2.12.2018	48.25	-5.7%	-2.89
NP Area SE2	2.12.2018	48.25	-5.7%	-2.89
NP Area SE3	2.12.2018	53.31	2.4%	1.23
NP Area SE4	2.12.2018	53.31	2.4%	1.23



COMMENTS ON WEEK 48

ELECTRICITY DERIVATIVES

The nearest quarter

At the beginning of last week the front contracts decreased with the wetter and milder weather forecasts. Also the emission price was decreasing. However, at the second half of the week the front contracts turned bullish. The front contracts were again supported by the signs of the drier and colder weather. Additionally, the emission price and the coal price started to increase. At the weekly level the closest quarter contract closed finally slightly bullish.

Annual products

On Monday last week the annual contracts were decreasing with the front contracts, but after Monday the annual contracts started to increase. The annual contracts were supported by the coal price that turned bullish. Also the emission price turned bullish at the second half of the week. Upward pressure to annual contracts was also caused by the announcement where the completion of Olkiluoto 3 was clarified. According to the latest announcement the first connecting to the net and the test period starts in October next year and the commercial use starts by the end of January 2020.

SPOT MARKET

At the beginning of last week the inflows were at very low level, but at the end of the week the inflows started to increase due to ending of dry weather type. The wind power production was also weak at the beginning of the week and the weather was cold compared to seasonal normal. At the beginning of the week the hourly spot prices increased to 100 €/MWh level at the highest. However, the weather type turned, and therefore the precipitation and the temperatures rose and the wind power production increased to very high level especially on Thursday. The spot prices decreased after the beginning of the week and at the weekly level the system price decreased slightly. The Finnish area price realized at the weekly level very close to Swedish (SE3) price level, but at the weekly level the Finnish area price increased slightly. Therefore the Finnish area price difference against the system price became wider.

EMISSIONS

At the beginning of last week the emission price decreased, when the weather forecasts showed the weather type change to milder and windier. Also still weak fuel prices maintained the downward pressure. However, at the end of the week the emission price turned to a bullish trend. At the weekly level the emission price closed finally slightly higher.

Indicator	ENOFUTBLQ1-19	ENOYR-19
Coal-fired production	4 %	19 %
Coal price	1 %	0 %
Gas price (NBP)	5 %	20 %
German price level	11 %	40 %
Spot	40 %	18 %
Crude oil Brent	5 %	7 %
Water reservoirs	38 %	24 %
EUR/USD FX rate	1 %	10 %
Temperature	8 %	5 %
Precipitation	16 %	13 %

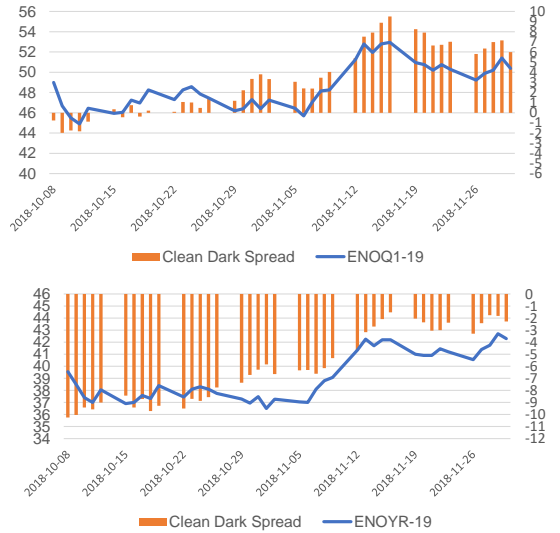
**Definition**  
The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination\*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow (moderate), red (weak)

Forecast history	48	Chg	47	Chg
ENOFUTBLQ1-19	↘	0.2%	↘	-5.0%
ENOYR-19	↘	2.7%	↘	-2.4%
NP System	↗	-0.5%	↗	11.6%
NEDEC8	↘	1.7%	↘	5.5%

DETERMINANTS AFFECTING THE MARKET ON WEEK 49

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

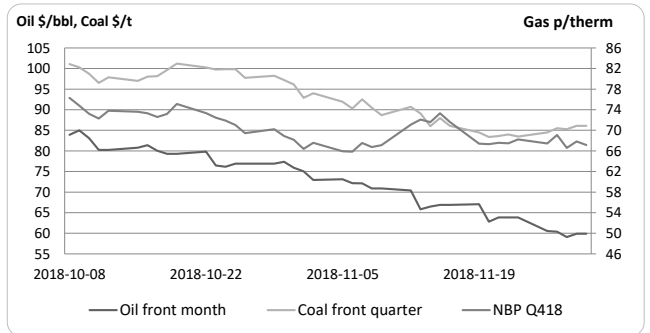
Nordic nuclear power plants are currently operating at 100%  
-RU-FI transfer profile varies due to capacity charges, on average imports from Russia last week were 71 % of the maximum.



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	43.31
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.94
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.35
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.35
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.66
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.58

\*Average for period between 1.1.2018-3.12.2018.



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Source for data: intStream, Tilastokeskus

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