

### NORDIC ELECTRICITY MARKET

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#### THE WEATHER FORECASTS ARE WET, WINDY AND MILD, BUT NORMALIZING NEXT WEEK

Forecast to week 12:	
ENOFUTBLQ2-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	📉 Bearish (<0%)

Market signals	spot	Q2-19	YR-20
Hydrologic balance	↓	↓	↓
Precipitation forecast	↓	↓	↓
Temperature forecast	↓	→	→
Spot	↓	↓	→
Production and transmission exch.	↓	→	→
Emissions allowance	↓	↓	↓
Coal price	↓	↓	↓
German prices	↓	→	↑
Technical analysis	↓	↓	↓

#### FORECAST TO WEEK 12

#### ELECTRICITY DERIVATIVES

##### The nearest quarter

This week the weather is very wet, mild and also windy. Next week the weather seems to normalize when the high pressure covers at least the southern parts of the Nordic countries. The forecasts are very uncertain for the time after that, and still there is no certainty on more permanent weather type change. This week's high precipitation increase the hydrobalance clearly and cause downward pressure to front contracts. The fuels have also been heading down. We expect the front contracts to decrease.

##### Annual products

The wet and mild weather forecasts and increasing front contracts cause downward pressure also to closest annual contract. The decreasing trend in coal and gas prices maintains the softness in annual contract prices. We expect the fluctuation in emission price to continue and currently the market seems to be heading towards the lower trend line of the variation range. We expect the annual contracts to decrease with the coal, emission and wet weather.

#### SPOT MARKET

The temperature starts to rise clearly after Tuesday and the consumption decreases further. The precipitation for this week is promised to be almost double the normal and also the inflows will start to increase at the end of the week. Pressure to spot price is also caused by the wind power production, that is higher than normal except for Tuesday. In Germany the wind power production decreases due to high pressure already during this week. We expect the system price to decrease at the weekly level and to realize at about 41,5 €/MWh. In Finland the wind power production is mainly higher than normal except for the beginning of the week. We expect the Finnish area price to stay close to system price at the weekly level.

#### EMISSIONS

The Brexit voting last week didn't offer any surprises, and the uncertainty continues. This week the Britain's Parliament votes on Tuesday for the third time on the agreement negotiated by May, and they are expected to look for more time, short or long, to implement the Brexit and the EU summit to grant it. Again the surprises would cause significant price fluctuation. The decreasing gas price causes downward pressure to CO2 market. Also the decreasing electricity market causes downward pressure to emission price. The weather in Europe continues to be warm, but the wind power production weakens due to high pressure and the effect from the weather decreases from last weeks. The basic support to the market is offered by lower auction amounts due to MSR. We expect the emission price fluctuation to continue and the next direction would be the lower trend line of the variation range.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ2-19	15.3.2019	37.95	-9.0%	-3.75
ENOFUTBLQ3-19	15.3.2019	37.15	-10.2%	-4.20
ENOFUTBLQ4-19	15.3.2019	41.15	-6.4%	-2.80
ENOFUTBLQ1-20	15.3.2019	42.50	-5.1%	-2.30
ENOYR-20	15.3.2019	34.15	-6.9%	-2.55
ENOYR-21	15.3.2019	31.60	-2.8%	-0.90
ENOYR-22	15.3.2019	31.45	-1.7%	-0.55
ENOYR-23	15.3.2019	31.80	-1.4%	-0.45
ENOYR-24	15.3.2019	31.50	-2.3%	-0.75
NEDEC9	15.3.2019	22.48	-2.3%	-0.54
NEDEC20	15.3.2019	22.86	-2.5%	-0.58

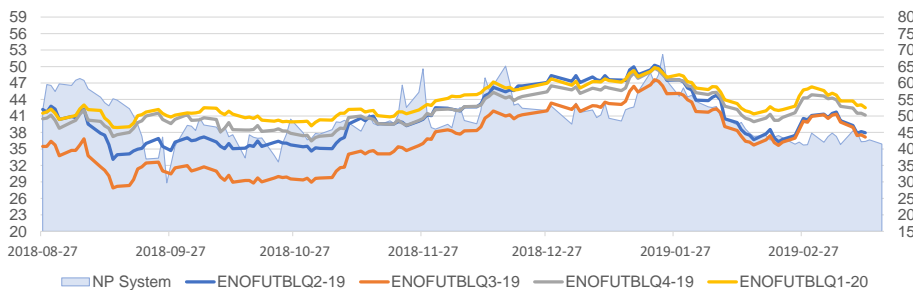
#### EPAD settlements

15.3.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.50	3.43	3.25	3.25
SE1-NP System	-1.00	-1.25	-1.25	-1.25
SE2 - NP System	-1.00	-1.25	-1.25	-1.25
SE3 - NP System	1.88	1.95	1.95	2.15
SE4 - NP System	3.45	3.25	3.50	3.25

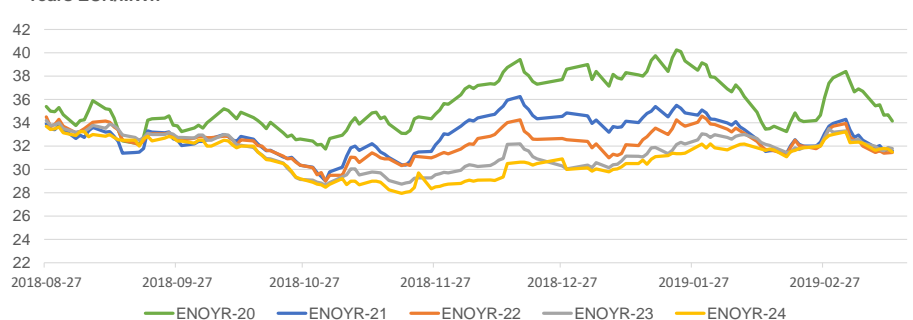
#### Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	17.3.2019	42.09	-1.1%	-0.45
NP Area FI	17.3.2019	42.01	-1.4%	-0.60
NP Area SE1	17.3.2019	41.59	0.6%	0.23
NP Area SE2	17.3.2019	41.59	0.6%	0.23
NP Area SE3	17.3.2019	41.59	0.6%	0.23
NP Area SE4	17.3.2019	41.59	0.6%	0.23

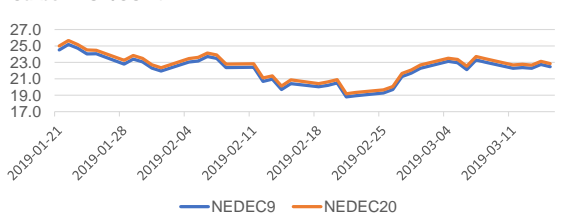
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 11

**ELECTRICITY DERIVATIVES**

**The nearest quarter**

Last week the front contracts turned sharply bearish. The weather type change to wetter and milder was secured during last week, so the front contracts started to decrease sharply during the beginning of the week. At the end of the week the decrease stopped, but was finally on Friday at the lowest level of the week. The downward pressure was also caused by the coal price decrease, which has pressed down the electricity price in the Central Europe. The closest quarter in the Nordics is still priced almost to the same level as in Germany despite of the significant strengthening of the hydrobalance.

**Annual products**

Last week especially the closest annual contract decreased sharply when the market closed on Friday to the lowest level of the week close to 34 €/MWh. The decrease for the longer annual contracts was more moderate. The closest annual contract was pressed down by, in addition to coal and emission price decreases, the weather type strengthening to wetter. The coal price in front contracts has decreased to below 70 USD/t level. The biggest downward pressure in the coal price is already expected to be realized and sharper decrease would need also the economic slowdown. Also in Germany the closest annual contract decreased last week, but the annual contract price difference between the Nordic market and Germany has remained very big.

**SPOT MARKET**

At the beginning of last week the temperature was colder than normal, but rose to above the normal at the end of the week. Also the wind power production increased after Monday. Although the weather was momentarily colder, the forward price decrease pressed down the water valuation and finally at the weekly level the system price was 42 €/MWh, 50 cents lower at the weekly level. The high wind power production kept the German spot price clearly lower than the Nordic price, which reflected also to Danish prices. Also the Finnish area price realized lower than system price during the night hours for the several days due to high wind power production. At the weekly level the Finnish area price realized marginally lower than system price, although at the beginning of the week there was limited transfer between Finland and Sweden due to maintenance.

**EMISSIONS**

Last week the emission price was above the momentary upward opening 23 €/t and started to decrease, the price was almost close to 22 €/t. Also during the other days the price varied between 22-23 €/t the Brexit votes being the main price driver. Also the fuel and electricity price decrease had a decreasing effect on emission price. Finally at the weekly level the price closed 50 cents lower, but there wasn't any bigger technical direction during the week.

DETERMINANTS AFFECTING THE MARKET ON WEEK 12

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

- Forsmark 2 (1118 MW), 17.-22.3.2019 available 0 MW
- Ringhals 2 (904 MW), failure 27.12.-30.4.2019, available 452 MW
- Ringhals 3 (1063 MW), maintenance 5.3.-30.4.2019 available 770 MW

- Nordic nuclear power plants are currently operating at 84%
- RU-FI transfer profile varies due to capacity charges, on average imports from Russia last week were 67 % of the 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	48.21
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.18
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.56
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.56
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.06
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.37

\*Average for period between 1.1.2019-18.3.2019.

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Source for data: intStream, Tilastokeskus

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Indicator	ENOFUTBLQ2-19	ENOYR-20
Coal-fired production	1 %	2 %
Coal price	14 %	11 %
Gas price (NBP)	6 %	6 %
German price level	8 %	7 %
Spot	46 %	32 %
Crude oil Brent	65 %	48 %
Water reservoirs	3 %	3 %
EUR/USD FX rate	6 %	2 %
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	11	Chg	10	Chg
ENOFUTBLQ2-19	📉	-9.0%	📈	3.5%
ENOYR-20	📉	-6.9%	📈	-3.0%
NP System	📉	-1.1%	📈	-7.7%
NEDEC9	📉	-2.3%	📈	3.3%

