

### NORDIC ELECTRICITY MARKET

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#### THE WEATHER TYPE CONTINUES TO BE MILD AND LIGHTLY MORE MOIST THAN NORMAL

Forecast to week 9:	
ENOFUTBLQ2-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	📉 Bearish (<0%)

#### FORECAST TO WEEK 9

#### ELECTRICITY DERIVATIVES

##### The nearest quarter

The weather type will continue to be mostly moister and milder than normal, without any obvious signs of a change of the weather type. The moist and mild weather type and the weak technical image will maintain the near-term products at downward pressure. The water situation is improving, but nevertheless, the realized rainfall did not reach the projected level and, as a whole, during the two-week forecast period, rainfall is only slightly more moist than normal. The near term product has already fallen close to the levels of last autumn, and we expect the downward pressure on the near term products to be already calming down.

##### Annual products

The weather type and mild weather and a weak technical picture will bring down pressure on annual products. The price of coal is also still technically weak, and the mild weather prevalent in Europe keeps the estimated demand for coal low. However, the strong oil price limits the downward pressure on coal prices. In addition, the trade negotiations between the United States and China have progressed, and the associated general market sentiment supports the fuel prices. The price of emission allowances is weak, but a strong support level (18.35 €/t) may limit the decrease. We expect annual products to continue moving close to last week's emission levels or falling slightly.

#### SPOT MARKET

The weather is quite mild, and the discharges are higher than normal. The weather will remain very mild in the first half of the week, but after Wednesday the temperatures will drop. The temperatures will momentarily fall close to the normal level at the end of the week, but the weekend weather is mild again. Wind conditions vary within a week. On Tuesday, Friday and Saturday, Nordic wind production is weak, but on Wednesday and Sunday, wind production is higher than normal. We expect the system price on a weekly level to continue to fall and to be realized at an average of 41.0 €/MWh. In Finland, wind production also varies within a week. On Monday, Wednesday and Thursday, Finland's wind production is very high, but on Tuesday, wind production in Finland is weak. We expect the Finnish regional price to remain at the weekly level close to the system price and to reach an average of 42.0 €/MWh.

#### EMISSIONS

The price of emission allowances is technically weak, and technically the market is heading towards the lowest trading levels since December, i.e., 18.35 €/t. In addition to the weak technical picture, the downward pressure is largely due to the very mild weather conditions prevailing in Europe and the significantly falling price of natural gas. In the short term, we consider the downward trend to be more likely than a rise. A strong support level of the price 18.35 €/t may limit the downward pressure, but on the other hand, a failure of keeping the level would open up space for an additional decline of up to 15.5 €/t.

#### 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	→	↓	↓

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ2-19	22.2.2019	36.30	-3.2%	-1.20
ENOFUTBLQ3-19	22.2.2019	35.65	-1.7%	-0.60
ENOFUTBLQ4-19	22.2.2019	40.20	-0.4%	-0.15
ENOFUTBLQ1-20	22.2.2019	42.00	0.6%	0.25
ENOYR-20	22.2.2019	34.10	1.2%	0.40
ENOYR-21	22.2.2019	32.00	1.2%	0.37
ENOYR-22	22.2.2019	31.98	1.2%	0.38
ENOYR-23	22.2.2019	31.88	-0.1%	-0.02
ENOYR-24	22.2.2019	31.85	0.5%	0.17
NEDEC9	22.2.2019	18.94	-7.2%	-1.48
NEDEC20	22.2.2019	19.33	-7.4%	-1.54

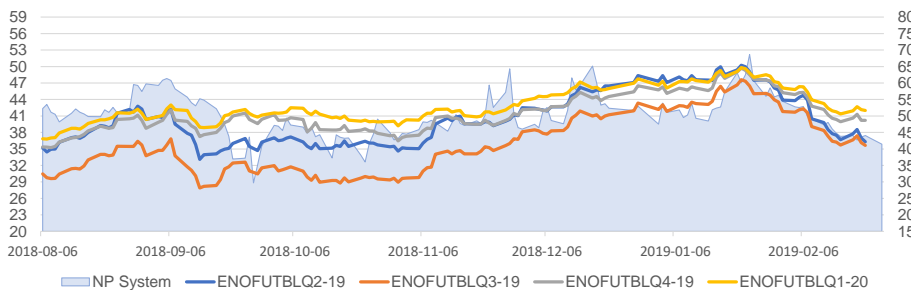
#### EPAD settlements

22.2.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.40	3.63	3.63	3.75
SE1-NP System	-1.10	-1.10	-1.10	-1.10
SE2 - NP System	-1.10	-1.10	-1.10	-1.10
SE3 - NP System	2.13	2.25	2.25	2.25
SE4 - NP System	3.00	3.38	3.38	3.25

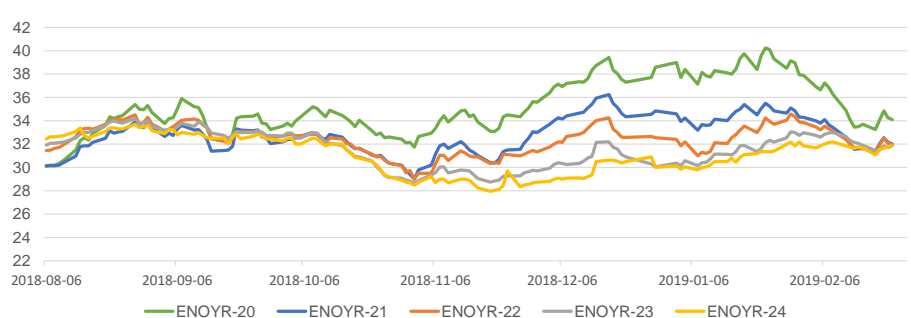
#### Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	24.2.2019	42.55	-5.0%	-2.26
NP Area FI	24.2.2019	43.12	-5.7%	-2.59
NP Area SE1	24.2.2019	41.69	-5.0%	-2.22
NP Area SE2	24.2.2019	41.69	-5.0%	-2.22
NP Area SE3	24.2.2019	42.17	-4.9%	-2.16
NP Area SE4	24.2.2019	42.17	-4.9%	-2.16

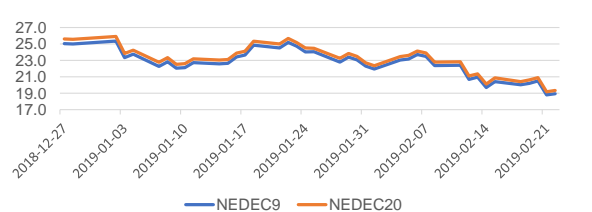
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 8

**ELECTRICITY DERIVATIVES**

**The nearest quarter**

Last week, near term products continued to decline. In near term products, downward pressure was maintained by humid and mild weather forecasts and improved water status. The additional downward pressure was caused by weak emission allowances price, but on the other hand, the increase in coal prices limited the downward pressure.

**Annual products**

Last week the prices of annual products fluctuated back and forth. The week started falling due to the near term products and low emission allowances price. However, the fall in coal prices came to a halt due to strong oil prices. Reinforced fuel prices also supported the German electricity market, which also supported the price of emission allowances and annual products on the Nordic market. On Friday, the price of emission allowances, and also the price of coal turned again to a sharp decline, but at the weekly level, the annual products stayed slightly up.

**SPOT MARKET**

Last week, with the exception of Thursday, the weather was mild, and the discharges were higher than normal. Nordic wind production is higher than normal in the first half of the week, but in the second half, it is weaker than normal. Mild and rainy weather forecasts keep downward pressure on spot prices. In Finland, wind production varied within a week, but mainly wind production in Finland was high. The Finnish area price was realized near the system price.

**EMISSIONS**

The price of emission allowances continued to fluctuate last week. The price of emission allowances recovered in the first half of the week after a strong decline in the previous week. The price of emission allowances was supported by a strong price of oil, which stopped the fall in the price of coal. Stronger fuel prices supported the German electricity market, which also strengthened the price of emission allowances. However, at the end of the week, the price of emission allowances returned to a decline with a weak technical image and a generally mild weather image in Europe. At the weekly level, the price of emission allowances finally closed on a decline.

Indicator	ENOFUTBLQ2-19	ENOYR-20
Coal-fired production	0 %	1 %
Coal price	29 %	18 %
Gas price (NBP)	20 %	13 %
German price level	17 %	11 %
Spot	34 %	23 %
Crude oil Brent	62 %	51 %
Water reservoirs	3 %	3 %
EUR/USD FX rate	11 %	7 %
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)

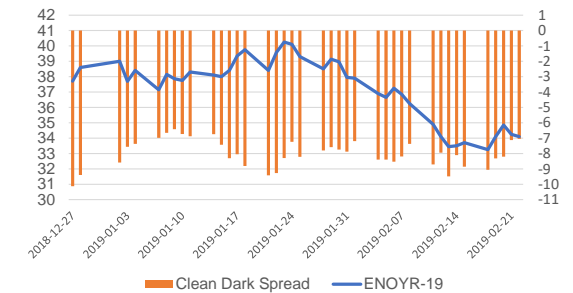
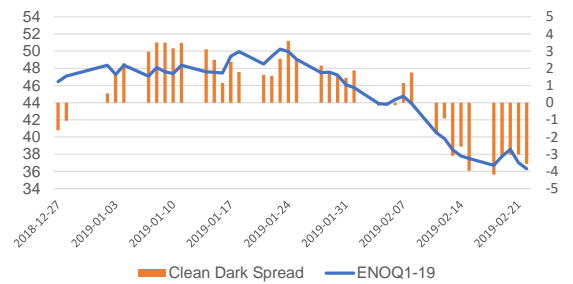
Forecast history	8	Chg	7	Chg
ENOFUTBLQ2-19	↘	-3.2%	↘	-14.6%
ENOYR-20	↘	1.2%	↘	-7.0%
NP System	↘	-5.0%	↘	-10.8%
NEDEC9	↘	-7.2%	↘	-8.7%

DETERMINANTS AFFECTING THE MARKET ON WEEK 9

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

- Ringhals 2 (904 MW), failure 27.12.-30.4.2019, available 452 MW

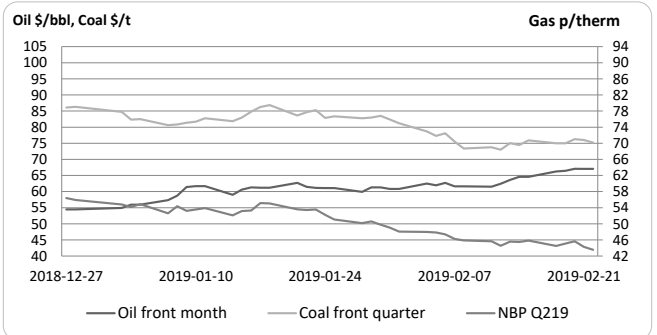
- Nordic nuclear power plants are currently operating at 96%  
-RU-FI transfer profile varies due to capacity charges, on average imports from Russia last week were 73 % of the maximum.



**AVERAGE SPOT PRICE AND EPAD**

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	50.48
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.40
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.44
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.44
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	0.20
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.70

\*Average for period between 1.1.2019-25.2.2019.



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