

### NORDIC ELECTRICITY MARKET

11.3.2019 Markus Herranen, Gasum Portfolio Services Oy

#### THE WEATHER FORECASTS ARE WET, WINDY AND MILD

Forecast to week 11:	
ENOFUTBLQ2-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	📉 Bearish (<0%)

#### FORECAST TO WEEK 11

#### ELECTRICITY DERIVATIVES

##### The nearest quarter

The weather is still colder than seasonal normal at the beginning of the week. However, the weather turns warmer during the following days and at the end of the week the weather is warmer than normal. The precipitation increases to above the normal after Monday, and the weather type continues to be wetter than normal. In the weather forecasts there are no clear signs of the weather type change to dry and cold. The hydrobalance increases clearly and we expect the front contracts to decrease.

##### Annual products

The wet and mild weather forecasts and the decreasing front contracts cause downward pressure especially to the closest annual contract. The Europe's weather outlook is also widely mild and for this week very windy. The current weather outlook and weak technical outlook of coal and gas prices maintains the downward pressure in annual contract prices. We expect the strong fluctuation in the emission price to continue, when Britain's Parliament votes on Brexit agreement and also the possible delay of Brexit implementation date during this week.

##### SPOT MARKET

The weather is still colder than seasonal normal at the beginning of the week, but after Wednesday the temperatures rise to above the normal and the electricity demand decreases towards the end of the week. The Nordic wind power production is mainly higher than normal after Monday. In Germany the wind power production continues to be very high. The inflows have decreased to slightly lower than normal. The precipitation is mainly snow and the inflows continue decreasing. We expect the system price to slightly increase at the weekly level and to realize at about 43,0 €/MWh. In Finland the wind power production is mainly higher than normal except for Tuesday. On Tuesday and on Wednesday the Finnish area price realization is increased by the transmission line maintenance between Finland and Northern Sweden. However, we expect the Finnish area price to stay close to system price at the weekly level.

##### EMISSIONS

The mild and windy weather outlook in Europe is decreasing for both the fuels and the electricity market. The weather outlook and weaker electricity market cause also downward pressure to emission price. However, we expect the political uncertainty to be the most significant factor in emission price during this week when the Britain's Parliament will vote on Brexit. We expect the emission price fluctuation to continue to be strong. The fail of the draft agreement on Tuesday is likely, but in this case on Wednesday the Parliament votes on no-deal Brexit. If also the no-deal Brexit is not supported enough, the Parliament will vote on delaying the Brexit implementation date on Thursday. This last option is the most likely and therefore almost neutral for emission price. The success of the agreement would give strong upward signal to emission price, and the no-deal Brexit a strong downward signal.

#### 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	8.3.2019	41.70	3.5%	1.40
ENOFUTBLQ3-19	8.3.2019	41.35	3.8%	1.50
ENOFUTBLQ4-19	8.3.2019	43.95	-0.8%	-0.35
ENOFUTBLQ1-20	8.3.2019	44.80	-2.4%	-1.10
ENOYR-20	8.3.2019	36.70	-3.0%	-1.15
ENOYR-21	8.3.2019	32.50	-4.3%	-1.45
ENOYR-22	8.3.2019	32.00	-5.0%	-1.70
ENOYR-23	8.3.2019	32.25	-2.8%	-0.93
ENOYR-24	8.3.2019	32.25	-2.3%	-0.75
NEDEC9	8.3.2019	23.02	3.3%	0.74
NEDEC20	8.3.2019	23.44	3.4%	0.76

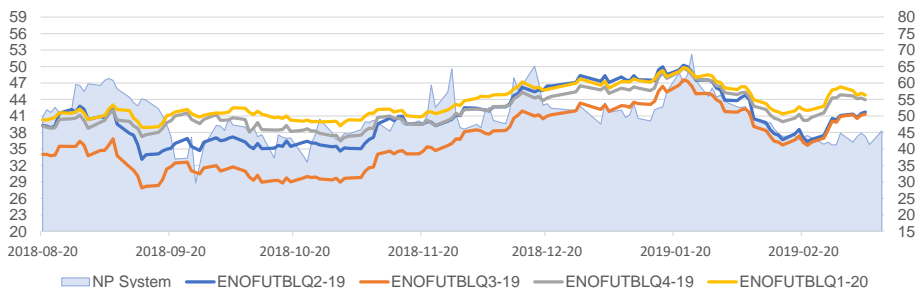
#### EPAD settlements

8.3.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.28	3.35	3.38	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	1.85	2.05	2.05	2.25
SE4 - NP System	3.25	3.25	3.50	3.25

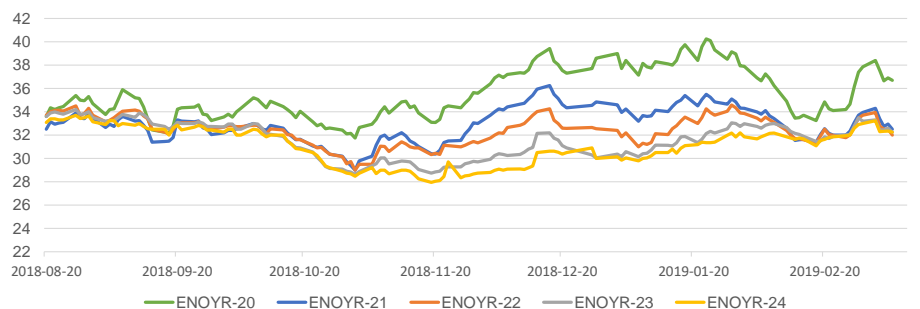
#### Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	10.3.2019	42.54	1.6%	0.68
NP Area FI	10.3.2019	42.61	0.0%	0.01
NP Area SE1	10.3.2019	41.35	1.0%	0.40
NP Area SE2	10.3.2019	41.35	1.0%	0.40
NP Area SE3	10.3.2019	41.35	-0.2%	-0.09
NP Area SE4	10.3.2019	41.35	-0.2%	-0.09

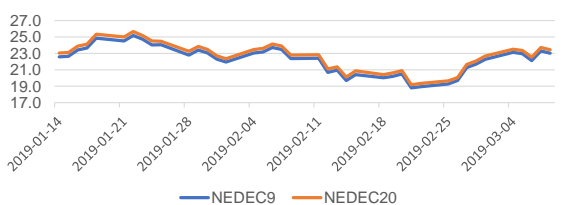
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 10

**ELECTRICITY DERIVATIVES**

**The nearest quarter**

Last week the front contracts continued bullish. The technical outlook, where the upward correction movement continued, supported the front contracts. The front contracts were also supported by the next week's weather outlook, where the weather seemed to turn clearly colder than seasonal normal. The forecasts showed also drier than normal. However, the dry period seemed only short-term, which limited the upward pressure.

**Annual products**

At the beginning of last week the annual contracts continued bullish supported by the strong emission price. However, after Monday the emission price increase stopped and the coal price started to decrease sharply. The decreasing margin cost for coal condensate and the German power market turned the annual contracts bearish at the weekly level. The general market atmosphere was pessimistic, when ECB decreased sharply its forecasts for economic growth in euro area. The dove-like message from ECB caused euro weakening clearly against the dollar.

**SPOT MARKET**

Last week the temperatures varied during the week. The weather turned colder than seasonal normal after Monday, but on Thursday and Friday the temperatures rose above the normal. During the weekend the temperatures fell again to below the normal. The Nordic wind power production was close to normal level at the first half of the week, but on Thursday and especially on Friday the wind power production was very high. The inflows were higher than normal, but towards the end of the week the inflows decreased. In Germany the wind power production was very high, and therefore the German prices realized low causing downward pressure also to spot prices. The electricity import from Russia to Finland was higher, when on Friday the electricity import was high due to Russian holiday. In Finland the wind power production was mainly higher than normal last week. At the weekly level the system price increased slightly, but the Finnish area price realized at the same level as previous week. The Finnish area price realized very close to system price at the weekly level.

**EMISSIONS**

On Monday last week the emission price continued strong development with the strengthened technical outlook and reduced political uncertainty. However, after Monday the emission price increase stopped. Downward pressure to emission price was caused by weak fuels, that caused selling pressure to electricity market. At the weekly level the emission price was, however, higher.

Indicator	ENOFUTBLQ2-19	ENOYR-20
Coal-fired production	0 %	1 %
Coal price	22 %	18 %
Gas price (NBP)	13 %	13 %
German price level	13 %	12 %
Spot	38 %	27 %
Crude oil Brent	68 %	51 %
Water reservoirs	3 %	3 %
EUR/USD FX rate	13 %	7 %
Temperature	8 %	5 %
Precipitation	16 %	13 %

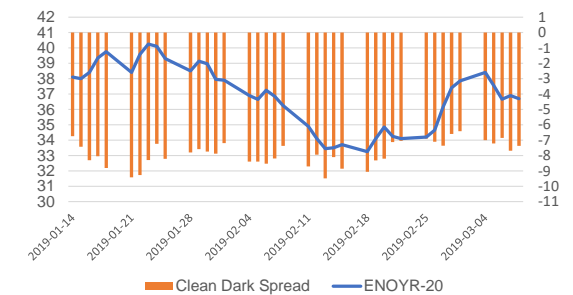
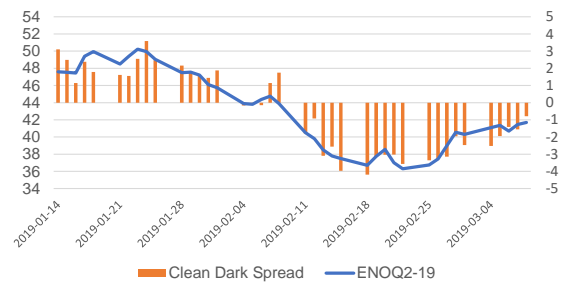
**Definition**  
The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination\*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow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

Forecast history	10	Chg	9	Chg
ENOFUTBLQ2-19	↻	3.5%	↘	11.0%
ENOYR-20	↗	-3.0%	↘	11.0%
NP System	↻	1.6%	↘	3.3%
NEDEC9	↗	3.3%	↘	17.6%

DETERMINANTS AFFECTING THE MARKET ON WEEK 11

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

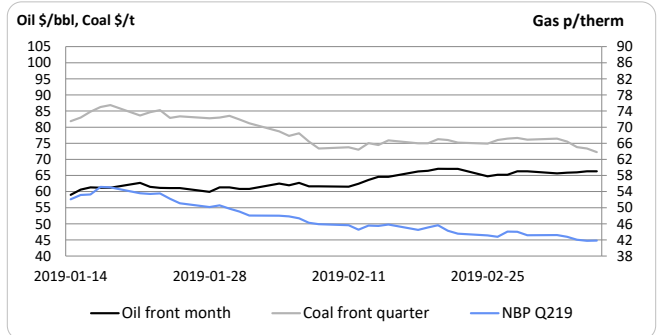
- Forsmark 2 (1118 MW), maintenance 16.-17.3.2019 available 605 MW, 17.-22.3.2019 available 0 MW
- Ringhals 2 (904 MW), failure 27.12.-30.4.2019, available 452 MW
- Ringhals 3 (1063 MW), maintenance 5.3.-30.4.2019 available 770 MW
- SE1 - FI (1500 MW), maintenance 12.-13.3.2019, available 1000 MW
- Nordic nuclear power plants are currently operating at 94%
- RU-FI transfer profile varies due to capacity charges, on average imports from Russia last week were 74 % 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	48.88
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.30
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.55
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.55
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	0.00
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.47

\*Average for period between 1.1.2019-11.3.2019.



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Source for data: intStream, Tilastokeskus

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