

NORDIC ELECTRICITY MARKET

19.4.2021 Markus Herranen, Gasum Portfolio Services Oy

WEATHER GROWING COLDER AFTER THE EARLY PART OF THE WEEK

Forecast to week 16:	
ENOFUTBLQ3-21	↗ Bullish (>0%)
ENOFUTBLR-22	↗ Bullish (>0%)
NP System	↘ Bearish (<0%)
NEDEC21	↗ Bullish (>0%)

FORECAST TO WEEK 16

POWER FUTURES

Front quarter

The weather is dry and warm for the time of year. However, amounts of rainfall will arise after the early part of the week and overall amounts of rainfall will approach normal during the two-week forecast period. Temperatures will take a downward turn and in the second half of the week will fall to lower than normal for the time of year. After this, the weather will remain cold for the time being. The cold weather will slow melting and flow rates will be much lower than normal for the rest of the month and early May. The cold weather picture will support the spot price view in the following weeks. Near products are technically strong. Also strong fuel and emission allowance prices will bring upward pressure. We expect near products to continue rising for the time being.

Annual products

The weather picture across Europe is cold for the time of year and will increase demand for fuels and emission allowances. General strong market sentiment and strong stock markets are also supportive of fuel and emission allowance prices. Besides the reporting season and the Purchasing Managers Index, this week the stock markets will also be looking at the ECB's meeting on Thursday. Technically, coal, natural gas and emission allowance prices continue rising. Strong near-term products are also supportive of prices of annual products. We expect the prices of annual products to rise.

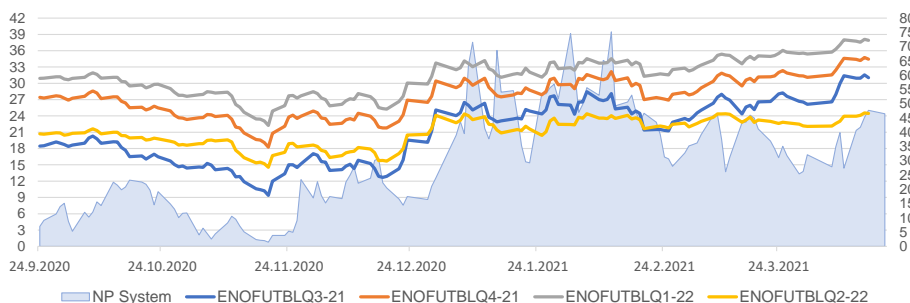
SPOT MARKET

In the early part of the week, the weather will be quite warm for the time of year but temperatures will fall. The weather will turn colder than normal in the second half of the week and at the weekend temperatures will drop to much lower than normal. Demand for electricity will increase. Nordic wind power production will be weak in the early part of the week but will reach high towards the end of the week. Flow rates have risen to near normal but will fall towards the end of the week. Wind power production in Finland will be mostly weaker than normal until Friday but will reach high at the weekend. Olkiluoto nuclear power unit 1 will be taken out of production on Sunday for annual maintenance. We expect the system price to settle at an average level of €40.5/MWh and the Finnish area price to settle close to the system price at the weekly level.

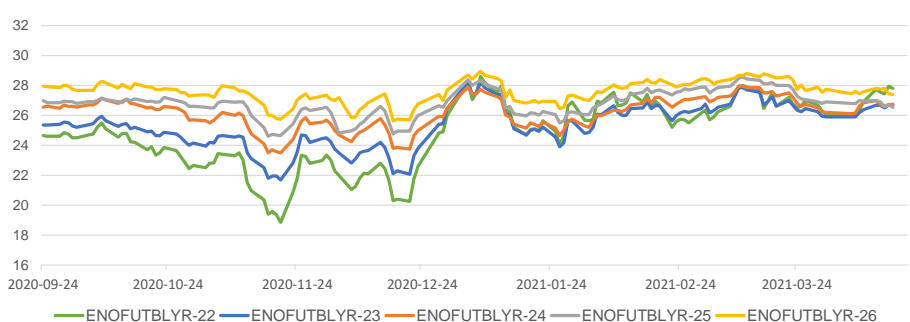
EMISSIONS

During the current week, the weather is likely to remain colder than normal in Europe but in particular in the early part of the week wind power production could even out the impact of temperatures on the emission allowance price. This means the increased demand for fossil fuels seen last week is likely to end. There are less than two weeks until the deadline for the surrender of EUAs and last minute purchases will presumably not greatly affect the price. This week, EU negotiations are expected on the emission reduction percentage concerning the Climate Law and any decision could move the market. We expect the emission allowance price to continue rising slightly.

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



Years EUR/MWh



Market signals

	spot	Q3-21	YR-22
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)
ENOFUTBLQ3-21	16.4.2021	31.05	3.7%	1.10
ENOFUTBLQ4-21	16.4.2021	34.45	2.7%	0.90
ENOFUTBLQ1-22	16.4.2021	37.90	2.2%	0.82
ENOFUTBLQ2-22	16.4.2021	24.45	6.2%	1.42
ENOFUTBLYR-22	16.4.2021	27.80	3.2%	0.87
ENOFUTBLYR-23	16.4.2021	26.70	1.2%	0.32
ENOFUTBLYR-24	16.4.2021	26.75	-0.4%	-0.10
ENOFUTBLYR-25	16.4.2021	26.52	-1.6%	-0.43
ENOFUTBLYR-26	16.4.2021	27.40	-0.7%	-0.18
NEDEC21	16.4.2021	44.40	1.8%	0.80
NEDEC22	16.4.2021	44.79	1.7%	0.76

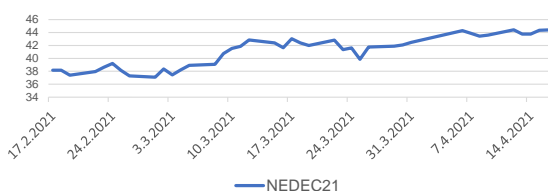
EPAD settlements

16.4.2021 (€/MWh)	2021	2022	2023
SYHEL	7.88	4.98	4.70
SE1- NP System	-5.50	-5.50	-5.00
SE2 - NP System	-5.50	-5.50	-5.00
SE3 - NP System	4.60	4.60	3.68
SE4 - NP System	13.38	8.50	8.50

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	18.4.2021	44.33	49.4%	14.67
NP Area FI	18.4.2021	42.93	49.3%	14.17
NP Area SE1	18.4.2021	25.62	32.0%	6.22
NP Area SE2	18.4.2021	25.62	32.0%	6.22
NP Area SE3	18.4.2021	40.62	49.1%	13.38
NP Area SE4	18.4.2021	40.62	49.1%	13.38

Carbon EUR/CO2 t



COMMENTS ON WEEK 15

POWER FUTURES

Front quarter

The start of last week saw near products rise prolifically with the dry weather picture. However, after Monday the upward pressure on near products eased and the products sought direction for the rest of the week. The upward pressure eased when the forecasts the following week showed an end to the dry weather type. However, the following week showed signs only of the rainfall amounts normalizing not a turn in the weather type to rainy. Even so, near products did not take a downward turn, however.

Annual products

The prices of annual products rose slightly last week. In the early part of the week, annual products were supported by the dry weather picture and high near-term products. The emission allowance price had risen to new peak prices and this again put upward pressure on annual products. Fuel prices also rose and the price of natural gas remained very robust. The weather picture across Europe was cold, which put upward pressure especially on natural gas and emission allowance prices.

SPOT MARKET

The weather was cold for the time of year in the first half of last week but Nordic wind power production was more abundant than normal. After Wednesday, temperatures started to rise and at the weekend were higher than normal. On the other hand, Nordic wind power production started to fall after the early part of the week and weakened to a low level at the end of the week. Flow rates were much lower than normal. Wind power production in Finland also decreased mostly to a lower level than normal after the early part of the week. Spot prices rose prolifically at the weekly level. During the working week, the Finnish area price settled at higher than the system price but clearly lower spot prices at the weekend meant that the Finnish area price was still lower than the system price at the weekly level.

EMISSIONS

Last week, the emission allowance price remained on a slight upward trend. The market received support from the cold weather forecast for May and increased use of fossil fuels. The cold weather was also supportive of the fuel markets. The emission allowance market reached new peaks on Monday and Tuesday. New peak levels in the price of coal were seen on Friday and also the emission allowance price reached new peaks having touched €44.90/t. The emission allowance price was up €0.78 at the weekly level.

Indicator	ENOFUTBLQ3-21	ENOFUTBLR-22
Coal-fired production	62 %	48 %
Coal price	69 %	53 %
Gas price (NBP)	6 %	85 %
German price level	65 %	52 %
Spot	53 %	39 %
Crude oil Brent	61 %	65 %
Water reservoirs	64 %	59 %
EUR/USD FX rate	6 %	4 %
Temperature	8 %	5 %
Precipitation	16 %	13 %

Definition

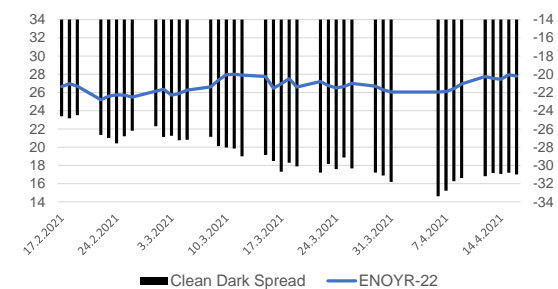
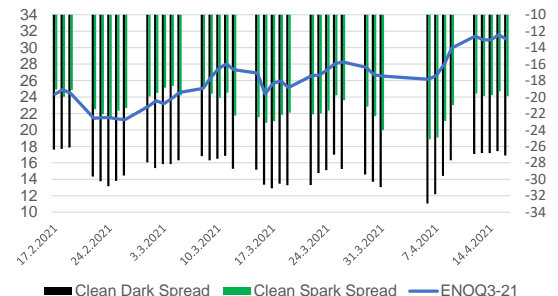
The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow (moderate), red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

Forecast history	15	Chg	14	Chg
ENOFUTBLQ3-21	↗	3.7%	↘	12.8%
ENOFUTBLR-22	↗	3.2%	↻	3.4%
NP System	↗	49.4%	↗	-14.7%
NEDEC21	↗	1.8%	↗	2.6%

DETERMINANTS AFFECTING THE MARKET ON WEEK 16

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

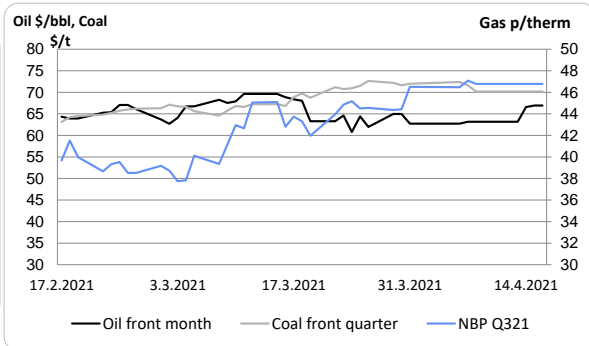
- Olkiluoto 1 (890 MW), maintenance 25.4.-10.5.2021, in use 0 MW
- Forsmark 2 (1118 MW), maintenance 12.4.-2.5.2021, in use 1018 MW
- SE1-FI (1500 MW), maintenance 12.-20.4.2021, in use 1100 MW, 21.-22.4 in use 1300 MW
- FI-SE3 (1200 MW), maintenance 29.3.-30.4.2021, in use 250 MW, 12.4.-20.5.2021 0 MW
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 99 %
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 57 % of the maximum



AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2013	2014	2015	2016	2017	2018	2019	2020	2021*
NP System	38.1	29.6	21	26.91	29.41	43.99	38.94	10.93	40.79
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	5.28
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-6.08
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-6.08
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	2.42
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	6.87

*Average for period between 1.1.2021-19.4.2021.



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Source for data: Gasum, Tilastokeskus

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