

NORDIC ELECTRICITY MARKET

24.5.2021 Markus Herranen, Gasum Portfolio Services Oy

WEATHER FORECASTS CLEARLY DRIER

Forecast to week 21:	
ENOFUTBLQ3-21	↗ Bullish (>0%)
ENOFUTBLQ4-21	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC21	↗ Bullish (>0%)

FORECAST TO WEEK 21

POWER FUTURES

Front quarter

The weather forecasts have dried up over the weekend. The weather will turn dry in the second half of the week. Rainfall amounts will increase after this week, but it is likely that they will only increase to near normal, and the weather is not turning to wet. The weather forecasts are also warmer, and the weather will turn warmer than normal later in the week. With the clearly drier weather picture, we expect near products to rise.

Annual products

The drier weather and falling hydro balance will put upward pressure also on the prices of annual products. Last week, a downward correction was seen in natural gas and emission allowance prices, but the longer-term price trend is strongly upward. We expect the prices of annual products to again take an upward turn.

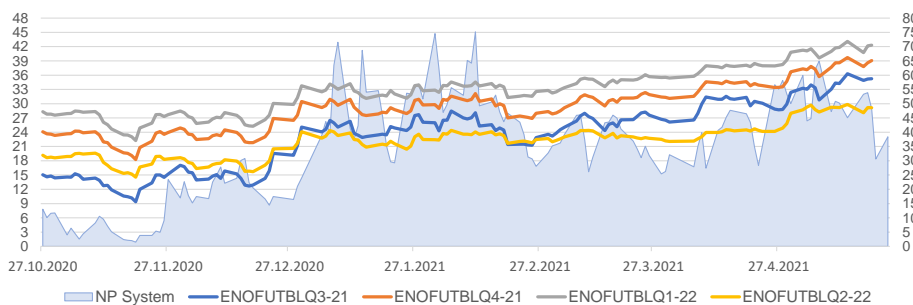
SPOT MARKET

The weather is chilly for the time of year, but temperatures will start to rise later in the week. On Monday, demand for electricity fell due to a public holiday in Norway and Denmark. At the weekend, temperatures will rise to higher than normal. Flow rates have fallen to near normal but at the weekend flow rates will again begin to clearly rise. Nordic wind power production will be plentiful mid-week but will fall to a low level at the weekend. The Ringhals 3 and Oskarshamn 3 units are undergoing annual maintenance. Wind power production in Finland will be at a very low level on Tuesday. On Wednesday, wind power production in Finland will rise but will be mostly weaker than normal for the rest of the week. We expect the system price to rise at the weekly level and to settle at an average level of around €45.5/MWh. We expect the Finnish area price to rise and to settle at an average level of around €53.0/MWh.

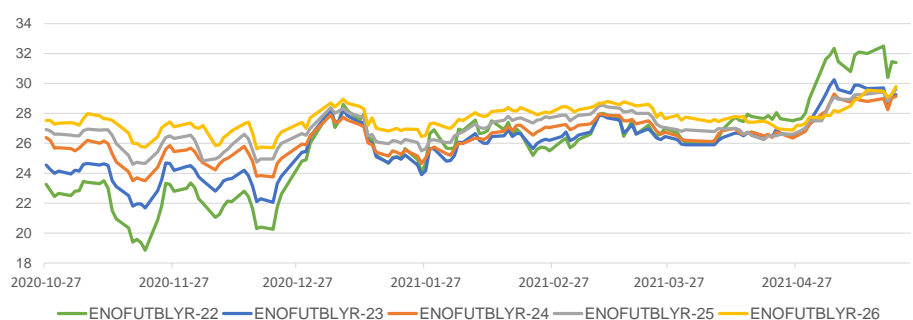
EMISSIONS

During the current week, renewables production will be high in Central Europe and temperatures will rise towards normal. Auction volume is less than normal because of the auction not held on Monday, a public holiday. The market is technically still strong having jumped from the support level of €48.60/t and sentiment remains strong in the longer term. The fall in price may also increase regulated actors' inclination to buy and this could curb the fall. We expect the market to seek direction north of the level of €50/t.

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	21.5.2021	35.25	2.9%	1.00
ENOFUTBLQ4-21	21.5.2021	39.08	1.2%	0.48
ENOFUTBLQ1-22	21.5.2021	42.30	1.1%	0.47
ENOFUTBLQ2-22	21.5.2021	29.15	-0.1%	-0.03
ENOFUTBLYR-22	21.5.2021	31.40	-1.9%	-0.60
ENOFUTBLYR-23	21.5.2021	29.25	-1.3%	-0.40
ENOFUTBLYR-24	21.5.2021	29.13	1.1%	0.33
ENOFUTBLYR-25	21.5.2021	29.60	1.0%	0.30
ENOFUTBLYR-26	21.5.2021	29.80	0.8%	0.25
NEDEC21	21.5.2021	51.40	-8.8%	-4.95
NEDEC22	21.5.2021	52.10	-8.6%	-4.93

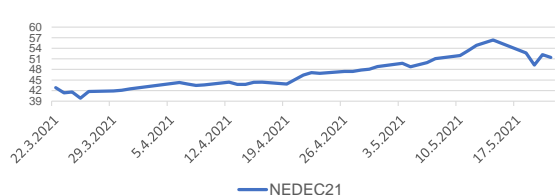
EPAD settlements

21.5.2021 (€/MWh)	2021	2022	2023
SYHEL	6.68	4.08	3.80
SE1- NP System	-6.00	-6.88	-6.88
SE2 - NP System	-6.00	-6.88	-6.88
SE3 - NP System	2.53	2.88	2.88
SE4 - NP System	10.30	9.50	10.25

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	23.5.2021	39.18	-10.4%	-4.56
NP Area FI	23.5.2021	45.39	24.0%	8.80
NP Area SE1	23.5.2021	32.69	-0.3%	-0.09
NP Area SE2	23.5.2021	32.69	-0.3%	-0.09
NP Area SE3	23.5.2021	38.31	6.9%	2.47
NP Area SE4	23.5.2021	38.31	6.9%	2.47

Carbon EUR/CO2 t



COMMENTS ON WEEK 20

POWER FUTURES

Front quarter

Last week, near products were rising strongly in the early part of the week but the rise leveled off later in the week. Signs of a drier weather picture brought upward pressure on near products. However, the upward pressure eased after the early part of the week and near products recovered somewhat. The rise in near products was broken by the great uncertainty surrounding the drier weather picture. At the same time, a downward correction was seen in the emission allowance and fuels. However, near products were up at the weekly level.

Annual products

Last week, the prices of annual products rose in the early part of the week supported by near products and the possibility of high pressure. However, also the upward pressure on annual prices eased after the early part of the week after emission allowance and fuel prices had taken a corrective downward movement. The German electricity market dropped very sharply. The nearest annual product ultimately closed the week slightly down at the weekly level.

SPOT MARKET

Temperatures were cooler than normal last week but demand for electricity fell on Monday, a public holiday in Norway. Nordic wind power production was weak in the first half of the week but rose to higher than normal in the second half and particularly at the weekend was abundant. Flow rates were higher than normal in the early part of the week after which they decreased. At the end of the week, flow rates had fell to near normal levels. Wind power production in Finland also rose in the second half of the week. The Olkiluoto 2 unit was taken out of production for annual maintenance and the Finnish area price rose at the weekly level. After the early part of the week, the system price fell as wind power production rose. At the weekend, the system price settled at a low level and was down at the weekly level.

EMISSIONS

Last week saw a downward correction movement in the emission allowance price. On Monday, the market rise reversed to a fall, which continued until Wednesday. On Thursday, the correction was upward and the fall on Friday from these levels saw the emission allowance price close the week €4.90 down at the weekly level. The fall in the emission allowance price was driven by investors repatriating their profits as the wider market fell, which was possibly affected by expectations of the start of the UK ETS market on Wednesday. On Thursday, the proposal by the Greens' MEPs of a €50 price floor for the emission allowance lifted the market. Last week market volatility and volumes traded rose considerably and auction results settled weak compared to the secondary market.

DETERMINANTS AFFECTING THE MARKET ON WEEK 21

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Ringhals 3 (1074 MW), maintenance 24.5.-20.6.2021, in use 0 MW
- Oskarshamn 3 (1400 MW), maintenance 22.5.-10.6.2021, in use 0 MW
- Olkiluoto 2 (890 MW), maintenance 16.5.-15.6.2021, in use 0 MW
- Forsmark 2 (1120 MW), maintenance 2.5.-30.5.2021, in use 0 MW

- FI-SE3 (1200 MW), limitation till 30.9.2021, in use 250 MW
- RU-FI (1300 MW), maintenance 23.-25.5.2021, in use 1043 MW
- FI-RU (320 MW), maintenance 4.-31.5.2021, in use 0 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 56 %
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 55 % 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	41.65
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	3.96
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-6.29
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-6.30
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	0.74
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	5.45

*Average for period between 1.1.2021-24.5.2021.

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Source for data: Gasum, Tilastokeskus

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Indicator	ENOFUTBLQ3-21	ENOFUTBLYR-22
Coal-fired production	64 %	58 %
Coal price	76 %	75 %
Gas price (NBP)	6 %	85 %
German price level	38 %	34 %
Spot	59 %	62 %
Crude oil Brent	77 %	78 %
Water reservoirs	59 %	59 %
EUR/USD FX rate	3 %	0 %
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	20	Chg	19	Chg
ENOFUTBLQ3-21	↗	2.9%	↘	2.7%
ENOFUTBLYR-22	↗	-1.9%	↘	1.7%
NP System	↗	-10.4%	↘	-30.6%
NEDEC21	↗	-8.8%	↗	10.3%

