

NORDIC ELECTRICITY MARKET

7.6.2021 Toni Sjöblom, Gasum Portfolio Services Oy

WEATHER FORECASTS HAVE TURNED RAINIER

Forecast to week 23:	
ENOFUTBLQ3-21	↔ Sideways (± 0,5%)
ENOFUTBLR-22	↔ Sideways (± 0,5%)
NP System	↔ Sideways (± 0,5%)
NEDEC21	⬇ Bearish (<0%)

FORECAST TO WEEK 23

POWER FUTURES

Front quarter

The weather forecasts have turned slightly rainier, but the weather will remain very dry until Friday this week. After this, rainfall amounts will rise to normal or just above normal. Temperature forecasts are clearly warmer than normal until Friday, after which they will drop but end up slightly higher than normal at the end of the period. Wind power production will also be very low earlier in the week and at the weekend rise to above normal. The spot price will remain very robust. The change to normal in the weather type will exert slight downward pressure but spread between the high spot price and Germany will continue to be lifting factors. We expect the prices of near products to remain at their current levels as any fall would require clearly much rainier weather than normal.

Annual products

The turn to normal in the weather at the end of this week is putting minor downward pressure on the nearest annual product. Last week, the emission allowance and German electricity market retreated slightly. Natural gas and coal prices largely moved sideways last week. There is currently psychologically downward pressure through the emission allowance and Germany, but the price spread with Germany is still very wide and with the longer term normal weather forecast there is upward pressure, particularly on the nearest annual product. We expect the prices of annual products to remain at their current levels this week.

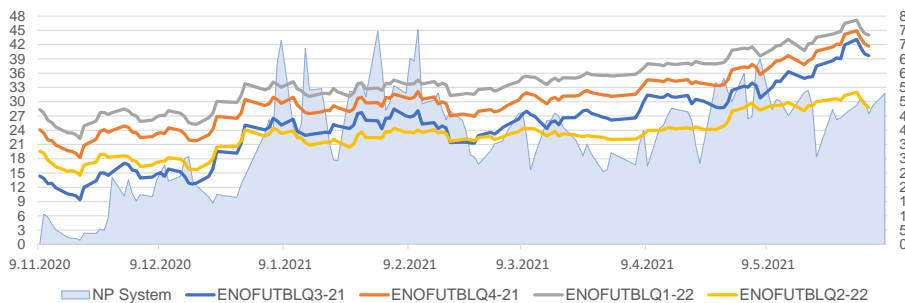
SPOT MARKET

The weather will be very dry until Friday and mostly through evaporation. Brisk melting with the warm weather will keep flow rates above normal. Wind power production will be weak until Thursday. From Friday onwards, wind power production will be higher than normal and much higher than normal over the weekend. This week, there is still plenty of nuclear power undergoing annual maintenance. We expect the system price to remain high on workdays but to fall at the weekend as wind power production increases and to settle at around €48/MWh at the weekly level. Because of nuclear power maintenance, the Finnish area price will remain higher than the system price in the early part of the week and settle at around €55/MWh at the weekly level as wind power production won't increase until Friday.

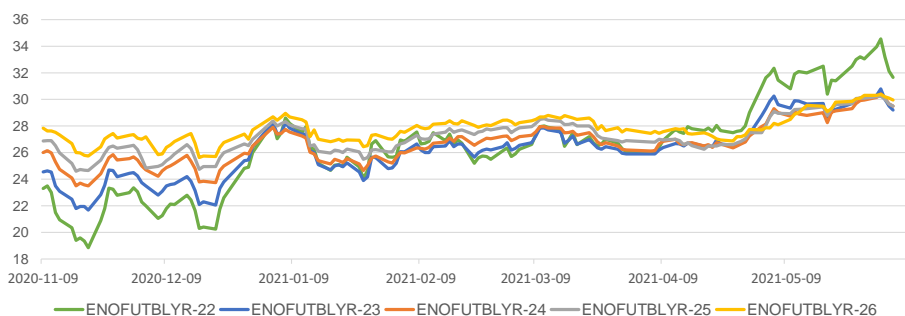
EMISSIONS

The weather in Europe will be warmer than normal during the current week; weak wind power production will be offset by better than normal photovoltaic energy production. The gas market has remained strong even though a fear of inflation has darkened the outlook for the global economy. In addition, expectations of free allocations could keep the market calm. The market is technically weaker having dropped through important support levels. We expect the emission allowance price to fall slightly and to trade at between €46 - €52/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	4.6.2021	39.70	1.7%	0.65
ENOFUTBLQ4-21	4.6.2021	41.70	-0.8%	-0.35
ENOFUTBLQ1-22	4.6.2021	44.00	-1.7%	-0.75
ENOFUTBLQ2-22	4.6.2021	28.80	-5.0%	-1.50
ENOFUTBLR-22	4.6.2021	31.65	-4.2%	-1.40
ENOFUTBLR-23	4.6.2021	29.20	-2.7%	-0.80
ENOFUTBLR-24	4.6.2021	29.50	-1.5%	-0.45
ENOFUTBLR-25	4.6.2021	29.50	-2.0%	-0.60
ENOFUTBLR-26	4.6.2021	29.95	-1.2%	-0.35
NEDEC21	4.6.2021	50.14	-3.0%	-1.56
NEDEC22	4.6.2021	50.64	-3.3%	-1.74

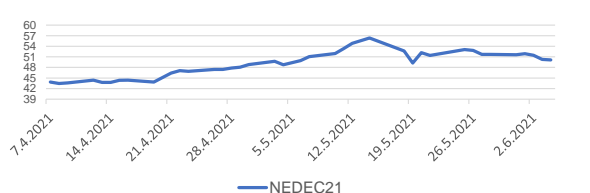
EPAD settlements

4.6.2021 (€/MWh)	2021	2022	2023
SYHEL	7.38	3.91	3.88
SE1 - NP System	-6.13	-7.00	-7.25
SE2 - NP System	-6.13	-7.00	-7.25
SE3 - NP System	2.93	3.00	2.90
SE4 - NP System	10.25	9.25	9.00

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	6.6.2021	48.00	15.2%	6.34
NP Area FI	6.6.2021	53.31	10.0%	4.86
NP Area SE1	6.6.2021	42.09	14.0%	5.18
NP Area SE2	6.6.2021	42.09	14.0%	5.18
NP Area SE3	6.6.2021	46.10	-1.0%	-0.46
NP Area SE4	6.6.2021	46.10	-1.0%	-0.46

Carbon EUR/CO2 t



COMMENTS ON WEEK 22

POWER FUTURES

Front quarter

Last week saw a sharp rise in near products earlier in the week as the weather forecasts had dried up a lot during the weekend. Prices took a downward turn in the second half of the week as the forecasts promised the weather would normalize in the second half of the following week. Spot prices remained very robust despite the melting season. At the weekly level, there were no significant changes in front quarter products.

Annual products

The prices of annual products also rose sharply at the start of last week when the weather forecasts dried up. As the week progressed, also annual products took a downward turn as the weather forecasts promised that the weather would normalize in well over a week. The emission allowance and a small fall in German electricity prices also brought a softness to annual products. The price spread with Germany remains exceptionally high. The nearest annual product was well down at the weekly level, further annual products fell more moderately.

SPOT MARKET

Last week flow rates rose high as the warm weather kept up a brisk snow melting rate. However, the week was very dry and instead of rain there was strong evaporation, which meant that flow rates were from snow melt only. Because of the high pressure, wind power production was very low and this in part supported the spot price. In addition, nuclear power plant annual maintenance season was at its brisket. At the weekend, the spot price settled at considerably higher than the previous week, which meant that at the weekly level the spot price showed a clear rise, the average value being €48/MWh. Because of the annual maintenance at Olkiluoto and low wind power production, on workdays the Finnish area price settled at much higher than the system price. Even though the Finnish area price settled in the negative territory at the weekend, at the weekly level it settled at more than €5/MWh higher than the system price.

EMISSIONS

Last week, the emission allowance price was slightly down. After a weakness on Monday, the highest price of the week, €53.30, was reached on Tuesday after which the emission allowance price retreated for the rest of the week. The emission allowance price closed the week at €49.97/t, down €1.06 at the weekly level. The need for heating fell as the weather got warmer, in addition to which investors' positions on the market have decreased and the UK ETS auction on Wednesday also contributed to weakening the market.

DETERMINANTS AFFECTING THE MARKET ON WEEK 23

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Ringhals 3 (1074 MW), maintenance 24.5.-4.7.2021, 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

- EE-FI (1016 MW), maintenance 7.-11.6.2021, in use 658 MW
- FI-EE (1016 MW), maintenance 7.-11.6.2021, in use 658 MW
- FI-SE3 (1200 MW), limitation till 30.9.2021, in use 250 MW
- FI-RU (320 MW), maintenance 6.-7.6.2021, in use 0 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 67 %
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 80 % 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	42.03
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	4.12
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-6.19
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-6.20
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	0.79
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	6.45

*Average for period between 1.1.2021-7.6.2021.

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Source for data: Gasum, Tilastokeskus

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Indicator	ENOFUTBLQ3-21	ENOFUTBLYR-22
Coal-fired production	59 %	55 %
Coal price	79 %	79 %
Gas price (NBP)	6 %	85 %
German price level	22 %	21 %
Spot	68 %	68 %
Crude oil Brent	80 %	81 %
Water reservoirs	59 %	59 %
EUR/USD FX rate	1 %	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	22	Chg	21	Chg
ENOFUTBLQ3-21	↗	1.7%	↗	10.8%
ENOFUTBLYR-22	↗	-4.2%	↗	5.3%
NP System	↗	15.2%	↗	49.4%
NEDEC21	↗	-3.0%	↗	0.6%

