

NORDIC ELECTRICITY MARKET

5.7.2021 Jussi Polvi, Gasum Portfolio Services Oy

STRONG FUEL MARKET AND EMISSION ALLOWANCE LIFT THE MARKET

Forecast to week 27:

ENOFUTBLQ4-21	↗ Bullish (>0%)
ENOFUTBLR-22	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC21	↗ Bullish (>0%)

FORECAST TO WEEK 27

POWER FUTURES

Front quarter

The weather forecasts dried during the weekend. The forecast for the current week is warm and rainy earlier in the week, but by mid-week the rain will have fallen to normal. Temperatures will remain high until the end of the current week and there is no sign of a turn to cooler weather. Winds will rise to higher than normal tomorrow but drop on Wednesday to well below normal and remain weak until the end of the week. Flow rates will remain lower than normal. The hydro balance will dampen with the rain in the early part of the week but turn downwards at the end of the week. With no change in the weather picture, we expect near-term products to rise at the weekly level.

Annual products

Last week saw a sharp rise in the price of fuels and the emission allowance. We expect the rise to continue and to support the rise in the price of annual products. The price spread compared to Central Europe is still very wide with the existing SYS annual product. We expect annual products to rise supported by strengthening fuels and the emission allowance. A turn in the weather forecasts to damper weather could trigger a fall in the market.

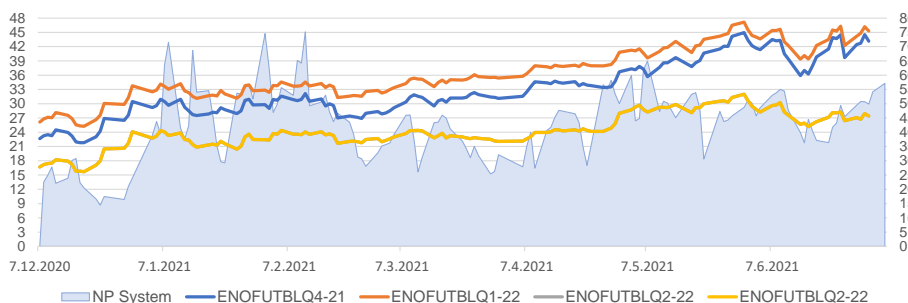
SPOT MARKET

The weather type for the current week has changed to slightly wetter than normal with the highest rainfalls on Tuesday and Wednesday. Following this, the rain forecasts are again around normal. The temperature will fall slightly during the early part of the week but still remain well above normal. Flow rates will rise momentarily in the early part of the week before returning to their current level of around 600 GWh/day at the end of the week, whereas the normal level would be about 1 TWh/day. Wind power production will increase to near normal on Tuesday and Wednesday before dropping to low. Regarding nuclear power plants, work started at the weekend on annual maintenance of the Forsmark 1 unit. Because of high fuel and emission allowance prices, the spot price settled very high in Central Europe. Hydropower producers have very good control, and the SYS price is expected to rise during the week, with an intraday average price north of €60/MWh perhaps being reached at the end of the week. We expect the SYS price to continue rising and to settle at a weekly level of €56/MWh. The Finnish area price is expected to settle at slightly lower than last week as wind power production rises in the next few days, with Thursday being the windiest day in Finland. At the same time, the price spread is expected to narrow compared to last week but will still be high at the weekly level.

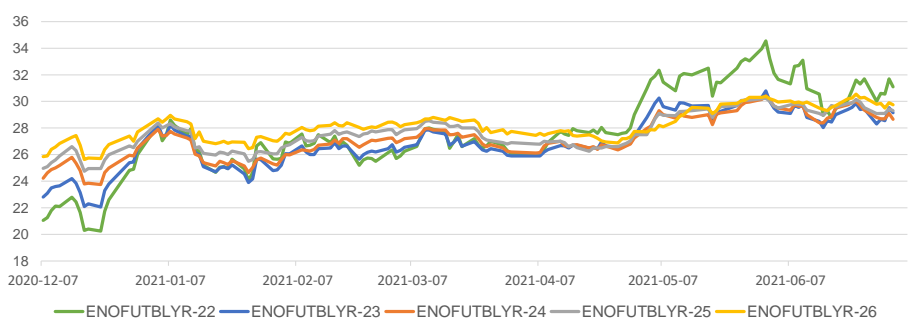
EMISSIONS

Low renewables production and the technical strength of the emissions market will provide support for the market during the current week. The rise on the gas market remains strong and for the time being there are no signs of the market flagging. The high price of gas is maintaining the high price of switching fuels and supports the emission allowance price. On top of this, the announcement next week of the Climate Law package could further support market sentiment. We expect the market to rise.

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



Years EUR/MWh



Market signals

	spot	Q4-21	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)
ENOFUTBLQ4-21	2.7.2021	43.15	-3.0%	-1.35
ENOFUTBLQ1-22	2.7.2021	45.27	-2.2%	-1.03
ENOFUTBLQ2-22	2.7.2021	27.40	-3.1%	-0.88
ENOFUTBLQ2-22	2.7.2021	27.40	-3.1%	-0.88
ENOFUTBLYR-22	2.7.2021	31.10	-1.9%	-0.60
ENOFUTBLYR-23	2.7.2021	29.15	-1.0%	-0.28
ENOFUTBLYR-24	2.7.2021	28.65	-2.4%	-0.70
ENOFUTBLYR-25	2.7.2021	29.30	-0.8%	-0.23
ENOFUTBLYR-26	2.7.2021	29.75	-1.8%	-0.55
NEDEC21	2.7.2021	57.51	4.1%	2.28
NEDEC22	2.7.2021	57.90	3.9%	2.20

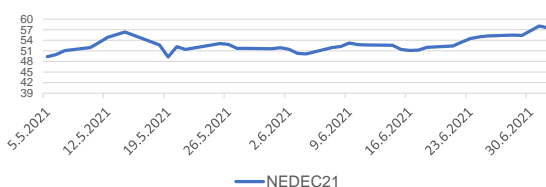
EPAD settlements

2.7.2021 (€/MWh)	2021	2022	2023
SYHEL	9.00	4.75	4.53
SE1- NP System	-7.00	-7.00	-6.50
SE2 - NP System	-7.00	-7.00	-6.50
SE3 - NP System	3.05	3.20	3.20
SE4 - NP System	24.25	16.00	14.50

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	4.7.2021	51.99	22.6%	9.59
NP Area FI	4.7.2021	74.93	48.4%	24.43
NP Area SE1	4.7.2021	40.11	35.0%	10.39
NP Area SE2	4.7.2021	40.11	35.0%	10.39
NP Area SE3	4.7.2021	47.21	33.0%	11.73
NP Area SE4	4.7.2021	47.21	33.0%	11.73

Carbon EUR/CO2 t



COMMENTS ON WEEK 26

POWER FUTURES

Front quarter

Last week near products fell sharply at the start of the week following wetter weather forecasts during the weekend. The forecasts dried on Tuesday and there were no longer signs of the weather type turning damper. The weather was warm and flow rates were falling and much lower than normal. Also, low wind power production provided support for the spot price and strengthened the rise in near products at the end of the week. The front quarter was down by about €1.7 at the weekly level and the following quarters by about €1.5.

Annual products

A sharp fall was also seen in annual products on Monday, but they returned to normal towards the end of the week. Support for the rise was provided by strongly risen fuel prices and the emission allowance as well as a rise in German prices. The price spread with Germany is record wide. A fall was seen in electricity prices of further years earlier in the week, but these too returned to almost the closing levels of the previous week. At the weekly level, the nearest annual product was slightly down, as were further years.

SPOT MARKET

Last week was mostly with very little wind. At the same time, rainfall was very little, and evaporation was greater than rainfall. Flow rates were very low throughout the week since there is very little snow in the mountains. A planned valve replacement in nuclear power production in Olkiluoto meant that the plant was out of action on Tuesday and partly on Wednesday. In transmission links, maintenance work on the transmission link between Russia and Finland started at the turn of the month. The SYS price rose during the course of the week and at the weekend settled well above €50/MWh, higher than earlier in the week. At the weekly level, the SYS price rose sharply, settling when it was €52.0/MWh. The Finnish area price rose much more than expected and on Friday the intraday average price rose to above €90/MWh, which was the second highest figure of the year. At the weekly level, the Finnish area price settled at almost €75/MWh and the area price spread was very high.

EMISSIONS

Last week, the emission allowance price continued rising and on Thursday reached a new peak of €58.64/t. The rise of the emissions market was driven by the rise of the gas market and expectations of a tightening of the emissions market. A leaked European Commission law draft regarding a tightening of the ETS helped the market rise towards new peaks. On Friday, the price softened, and the market closed at a level of €57.35/t, up €2.30 at the weekly level.

Indicator	ENOFUTBLQ4-21	ENOFUTBLYR-22
Coal-fired production	57 %	53 %
Coal price	81 %	79 %
Gas price (NBP)	6 %	85 %
German price level	20 %	19 %
Spot	70 %	65 %
Crude oil Brent	81 %	80 %
Water reservoirs	59 %	59 %
EUR/USD FX rate	0 %	1 %
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	26	Chg	25	Chg
ENOFUTBLQ4-21	↻	-3.0%	↗	17.3%
ENOFUTBLYR-22	↻	-1.9%	↗	7.6%
NP System	↻	22.6%	↗	22.3%
NEDEC21	↘	4.1%	↗	6.3%

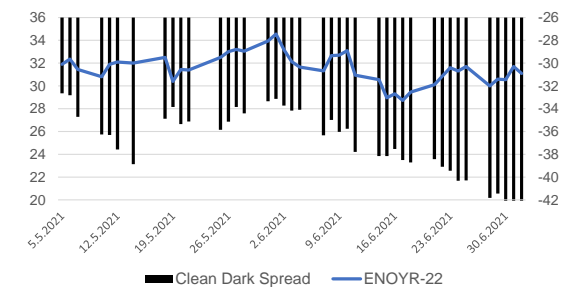
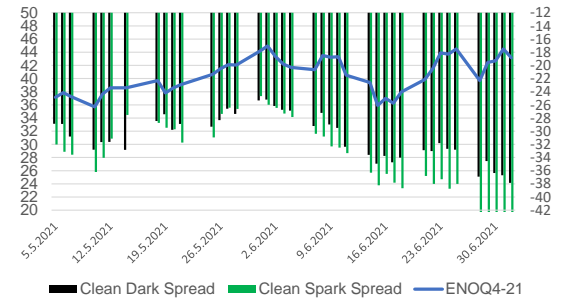
DETERMINANTS AFFECTING THE MARKET ON WEEK 27

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Forsmark 1 (984 MW), maintenance 4.-24.7.2021 in use 0 MW
- Ringhals 3 (1074 MW), maintenance 24.5.-27.8.2021, in use 0 MW

- FI-RU (320 MW), maintenance 30.6.-31.7.2021, in use 0 MW
- RU-FI (1300 MW), maintenance 30.6.-31.7.2021, in use 405 MW
- EE-FI (1016 MW), maintenance 6-8.7, in use 808 MW
- FI-SE3 (1200 MW), limitation till 15.11.2021, in use 250 MW, 4.-10.7.2021 in use 0 MW

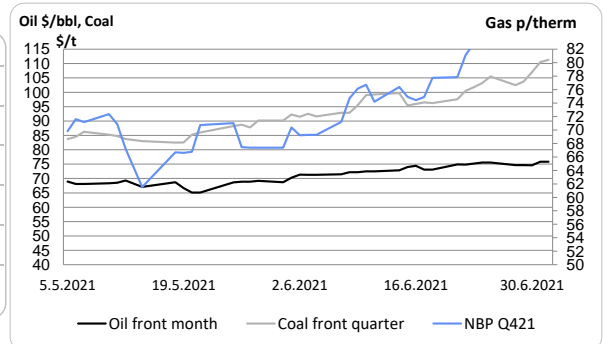
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 80 %
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 38 % of the maximum



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	42.35
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	5.90
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-6.85
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-6.85
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	0.04
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	10.53

*Average for period between 1.1.2021-5.7.2021.



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Source for data: Gasum, Tilastokeskus

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