

NORDIC ELECTRICITY MARKET

1.3.2021 Markus Herranen, Gasum Portfolio Services Oy

PRECIPITATION AMOUNTS AND TEMPERATURES NORMALIZING

Forecast to week 9:	
ENOFUTBLQ2-21	↗ Bullish (>0%)
ENOYR-22	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC21	↻ Sideways (± 0,5%)

FORECAST TO WEEK 9

POWER FUTURES

Front quarter

There were no major changes in the weather forecasts over the weekend. The weather is wet and for the time of year very mild. However, after the early part of the week, temperatures will fall, and also precipitation amounts will decrease. Both the amounts of precipitation and temperatures are approaching normal levels and there are no major changes in the hydro balance over the two-week forecast period. The weather picture therefore provides no clear direction for near products. We expect near products to move close to last week's emission levels or to pick up slightly after an abundant fall last week.

Annual products

The weather picture currently provides no clear signals for the nearest annual product. The week has started more optimistically than last week in terms of general market sentiment and share indexes have returned to a rise. More optimistic sentiment could be slightly supportive of emission allowance and fuel prices. We expect annual products to show a slight rise.

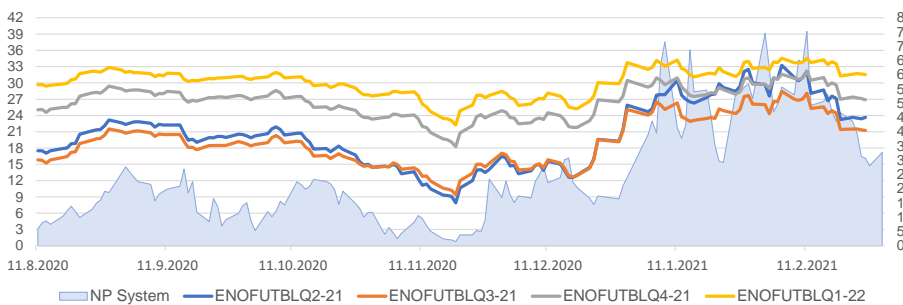
SPOT MARKET

The weather is very mild for the time of year and on Monday the weather is still wet. The wet and mild weather means that flow rates are high for the time year. Temperatures will begin to fall after the early part of the week and in the second half of the week temperatures will drop to near normal. At the same time, precipitation amounts will fall to temporarily lower than normal. Flow rates will begin to fall and fall towards the end of the week. Nordic wind power production will be abundant on Monday, after which it will normalize. On Friday, wind power production will fall to under the normal level. Wind power production in Finland will be very plentiful in the early part of the week but will fall towards the end of the week. We expect spot prices to rise after the early part of the week towards the end of the working week. At the weekly level, we expect spot prices to show a slight rise. We expect the system price to settle at an average €34.5/MWh at the weekly level and the Finnish area price to settle at an average level of €38.0/MWh.

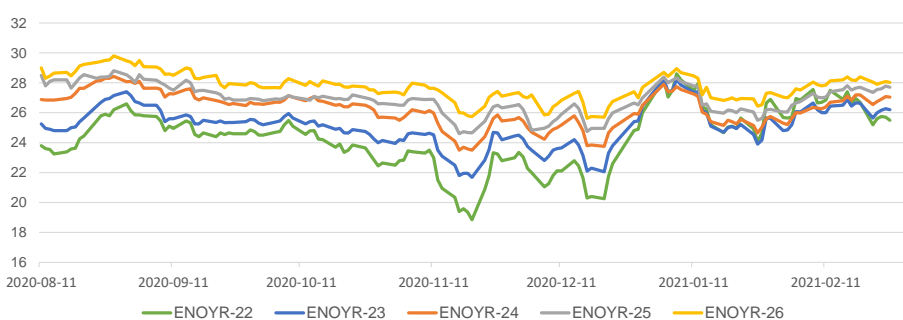
EMISSIONS

During the current week, the emission allowance price may take direction from movements on the stock and energy commodity markets. Temperatures in Central Europe will be milder than normal during the current week, but on the other hand colder weather is expected at the turn of the week. Wind power production will be weaker than normal, in addition to which demand ahead of the surrenders of emission allowances could provide support. We expect the emission allowance price to seek direction at between €36.50 - €40/t.

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



Years EUR/MWh



Market signals

	spot	Q2-21	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)
ENOFUTBLQ2-21	26.2.2021	23.65	-12.9%	-3.50
ENOFUTBLQ3-21	26.2.2021	21.25	-13.1%	-3.20
ENOFUTBLQ4-21	26.2.2021	26.90	-9.2%	-2.73
ENOFUTBLQ1-22	26.2.2021	31.55	-6.0%	-2.00
ENOYR-22	26.2.2021	25.50	-4.5%	-1.20
ENOYR-23	26.2.2021	26.20	-1.7%	-0.44
ENOYR-24	26.2.2021	27.05	-0.6%	-0.15
ENOYR-25	26.2.2021	27.70	0.0%	0.00
ENOYR-26	26.2.2021	28.03	-1.3%	-0.37
NEDEC21	26.2.2021	37.30	-0.3%	-0.10
NEDEC22	26.2.2021	37.62	-0.2%	-0.09

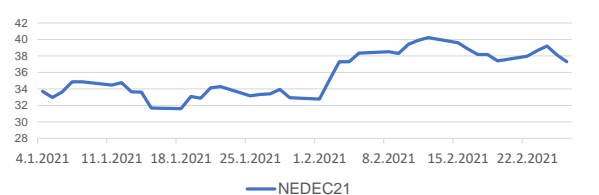
EPAD settlements

26.2.2021 (€/MWh)	2021	2022	2023
SYHEL	10.80	5.05	4.90
SE1- NP System	-4.00	-4.00	-4.00
SE2 - NP System	-4.00	-4.00	-4.00
SE3 - NP System	3.60	3.38	3.00
SE4 - NP System	8.25	8.00	8.00

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	28.2.2021	33.09	-25.9%	-11.54
NP Area FI	28.2.2021	36.32	-39.9%	-24.12
NP Area SE1	28.2.2021	31.17	-24.1%	-9.91
NP Area SE2	28.2.2021	31.17	-24.1%	-9.91
NP Area SE3	28.2.2021	34.44	-29.0%	-14.05
NP Area SE4	28.2.2021	34.44	-29.0%	-14.05

Carbon EUR/CO2 t



COMMENTS ON WEEK 8

POWER FUTURES

Front quarter

On Monday last week, near products fell particularly sharply with the damp and mild weather picture. Also, the technical picture weakened clearly. After Monday, the downward pressure on near products eased and products switched to seeking direction. The damp and mild weather maintained downward pressure, but the weather forecasts showed signs of temperatures and precipitation amounts approaching near normal levels the following week. In addition, some forecasting models sought the possibility of a turn to dry weather. However, signs of a turn were very uncertain and so support for the products was limited. Near products were clearly down at the weekly level.

Annual products

On Monday last week, annual products fell sharply with near products. Also, the emission allowance price continued a downward correction movement on Monday. However, the downward pressure on the emission allowance price eased already on Monday evening. The emission allowance price rose on Tuesday and Wednesday, and the price of coal rose at the same time. The higher marginal cost price of coal condensate power turned annual products upwards on the German electricity market, which also brought upward pressure for annual products on the Nordic market. However, at the end of the week, share indexes took a downward turn, which brought downward pressure on the emission allowance price and annual products. The prices of annual products were down at the weekly level.

SPOT MARKET

Last week, the weather was very mild for the time of year and so demand for electricity was much lower than usual. Nordic wind power production rose to a high level after the early part of the week. With the mild, wet weather flow rates rose to much higher than normal. Higher availability of and lower demand for electricity meant spot prices fell a lot at the weekly level. Imports of electricity to Finland from Russia were abundant in the early part of the because of public holidays in Russia. In Finland, wind power production was mostly more plentiful than normal. The area price in Finland fell clearly much more than the system price at the weekly level and the difference between the Finnish area price and system price was modest.

EMISSIONS

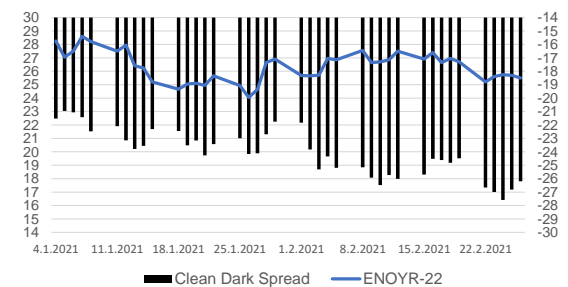
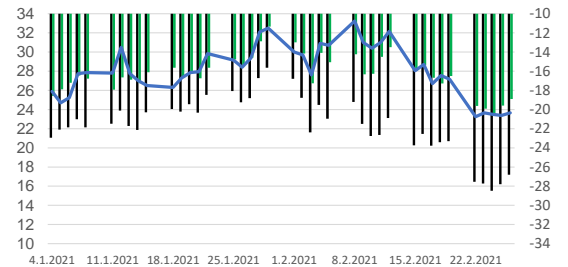
Last week, the emission allowance price sought direction. The emission allowance price was rising at the start of the week, supported among other things by rising fuel markets. On Thursday, the rise reversed to a fall, again taking direction from the stock and energy commodity markets. The fall continued on Friday. The emission allowance price closed €0.12 down at the weekly level. Demand at auctions has risen but prices have mostly continued to be softer than on the secondary market.

Indicator	ENOFUTBLQ2-21	ENOYR-22
Coal-fired production	37 %	21 %
Coal price	49 %	32 %
Gas price (NBP)	6 %	85 %
German price level	67 %	45 %
Spot	30 %	18 %
Crude oil Brent	51 %	32 %
Water reservoirs	66 %	77 %
EUR/USD FX rate	14 %	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	8	Chg	7	Chg
ENOFUTBLQ2-21	📉	-12.9%	📉	-15.6%
ENOYR-22	📉	-4.5%	📉	-2.9%
NP System	📉	-25.9%	📉	-5.3%
NEDEC21	📉	-0.3%	📈	-7.0%



DETERMINANTS AFFECTING THE MARKET ON WEEK 9

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

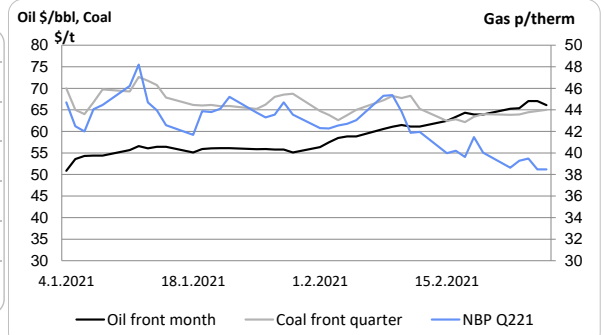
- Oskarshamn 3 (1400 MW), failure 27.2.-1.3.2021, in use 1200 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 98%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 82 % 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	46.08
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	7.62
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-2.42
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-2.42
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	4.40
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	5.48

*Average for period between 1.1.2021-1.3.2021.



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