

### NORDIC ELECTRICITY MARKET

25.1.2021 Markus Herranen, Gasum Portfolio Services Oy

#### DRY, COLD WEATHER PICTURE PROVIDES SUPPORT

##### Forecast to week 4:

ENOFUTBLQ2-21	↗ Bullish (>0%)
ENOYR-22	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC21	↗ Bullish (>0%)

#### FORECAST TO WEEK 4

#### POWER FUTURES

##### Front quarter

The weather type has again turned dry and over the following days also temperatures will fall to below normal. The current week will be very dry and the end of the week also very cold. Dry, cold weather, a falling hydro balance and higher spot prices are supportive of near products. However, next week's weather picture contains a great deal of uncertainty and some forecasting models indicate the possibility of wetter and milder weather. All the same, we consider it even more likely that the weather picture will continue to be mostly drier and colder than normal. We expect near products to rise.

##### Annual products

The reversal in the weather picture to dry and cold again, and strong near-term products have been supportive of the prices of annual products. We expect this effect to continue for the time being. Also, emission allowance and natural gas prices are supportive of annual products, but the price of coal has mostly continued to show a slight fall. On the emission allowance markets, eyes are on the auctions restarting on Friday and this may bring movement to the emission allowance price. We expect annual products to continue to show a slight rise.

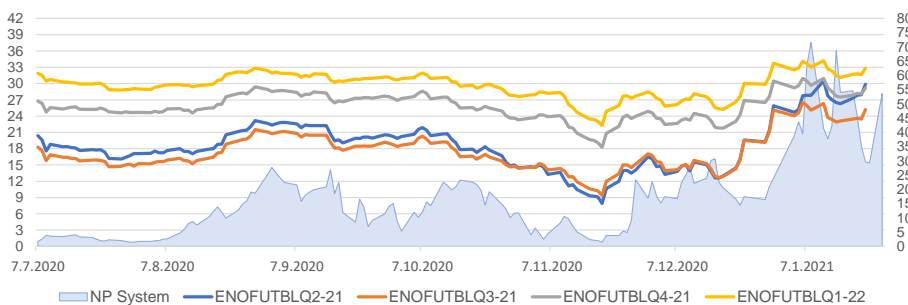
#### SPOT MARKET

Temperatures are falling and after Monday temperatures will drop to lower than normal for the time of year. Temperatures will continue to fall towards the end of the week and demand for electricity will rise towards the end of the working week. Nordic wind power production will be mostly weak and within the week at its lowest early in the week. The weather will also be very dry and after the early part of the week flow rates will fall to lower than normal. In Finland, wind power production will be mostly weaker than normal. The profile of electricity imports from Russia to Finland has continued in the same way as last week. We expect spot prices to rise. We expect the system price to settle at an average level of €52.5/MWh. We expect the Finnish area price to settle at an average level of €59.5/MWh.

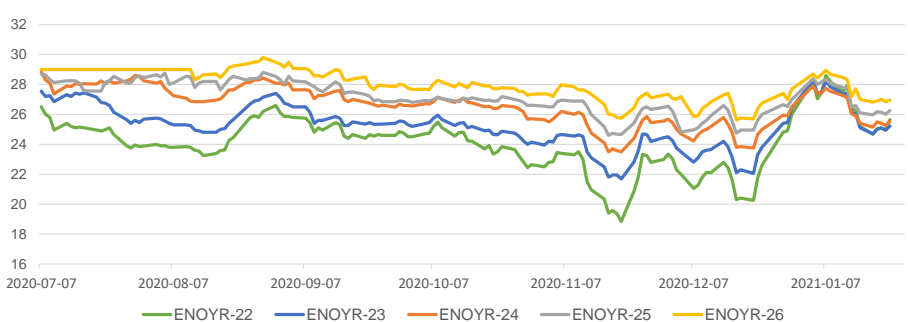
#### EMISSIONS

Auctions begin on Friday of this week and the first auction of the fourth trading period may provide direction to the market. Mostly weather close to normal for the time of year has been forecast for Central Europe for the current week, with temperatures dropping slightly towards the turn of the week. The price of gas has recovered from last Monday's levels and the stock markets have remained robust with expectations of stimulation. We expect the emissions market to continue to remain strong and to follow the movements of the gas market, which is dependent on the weather, but Friday's auction could bring a new direction to the market as availability rises.

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	22.1.2021	29.85	12.6%	3.35
ENOFUTBLQ3-21	22.1.2021	25.20	10.0%	2.30
ENOFUTBLQ4-21	22.1.2021	29.15	5.2%	1.45
ENOFUTBLQ1-22	22.1.2021	32.80	4.1%	1.30
ENOYR-22	22.1.2021	25.65	1.8%	0.45
ENOYR-23	22.1.2021	25.22	0.5%	0.12
ENOYR-24	22.1.2021	25.55	0.6%	0.15
ENOYR-25	22.1.2021	26.26	0.6%	0.16
ENOYR-26	22.1.2021	26.95	-0.2%	-0.05
NEDEC21	22.1.2021	34.28	8.2%	2.60
NEDEC22	22.1.2021	34.48	8.1%	2.59

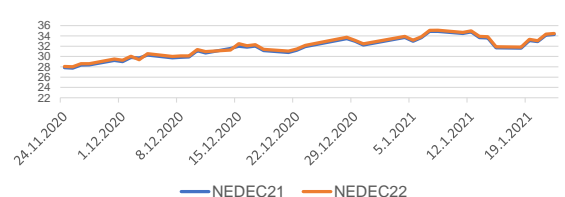
#### EPAD settlements

22.1.2021 (€/MWh)	2021	2022	2023
SYHEL	11.80	4.63	4.60
SE1-NP System	-2.50	-3.00	-3.00
SE2 - NP System	-2.50	-3.00	-3.00
SE3 - NP System	3.63	2.28	2.73
SE4 - NP System	8.85	8.00	8.00

#### Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	24.1.2021	39.45	-19.5%	-9.58
NP Area FI	24.1.2021	47.23	-19.1%	-11.16
NP Area SE1	24.1.2021	37.48	-16.4%	-7.37
NP Area SE2	24.1.2021	37.48	-16.4%	-7.37
NP Area SE3	24.1.2021	40.28	-25.9%	-14.10
NP Area SE4	24.1.2021	40.28	-25.9%	-14.10

#### Carbon EUR/CO2 t



## COMMENTS ON WEEK 3

### POWER FUTURES

#### Front quarter

Last week, the weather turned wet and mild, and the hydro balance took a clear upward turn. However, the downward pressure on near products ended when the weather forecasts indicated that the following week would see a change in the weather type to dry and cold again. Near products rose abundantly on Friday with more certainty received on the turn of the weather type. This being the case, near products were clearly up at the weekly level.

#### Annual products

Last week, prices of annual products sought direction. The falling price of coal put downward pressure on the prices of annual products but on the other hand the emission allowance price once again took an upward turn during the week. At the end of the week, the cold dry weather picture, and with it the strong rise in near products, provided support for the prices of annual products. With Friday's rise, annual products were up at the weekly level.

### SPOT MARKET

Last week, the weather turned milder than normal after the early part of the week and demand for electricity fell. The weather was very wet and windy, especially on Thursday and Friday, and this put clear downward pressure on spot prices. This being the case, spot prices were down at the weekly level. Also, in Finland, the weather was windy and spot prices were down. At the weekly level, the Finnish area price fell slightly more than the system price.

### EMISSIONS

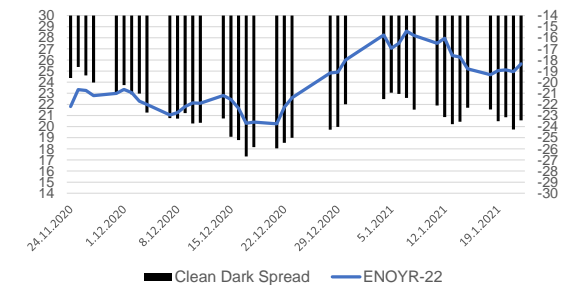
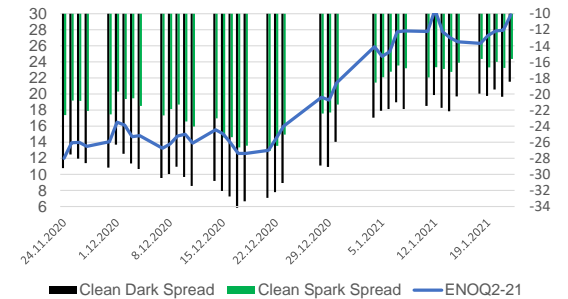
Last week, the emission allowance price recovered have started to fall from the historic high prices of the previous week. A significant rise on the emissions market was seen on Tuesday and Thursday. On Tuesday, the rise in the gas market accelerated the rise, whereas on Thursday the correlation with the gas market discontinued, but the breakthrough of technical levels and the weather picture were supportive of the rise in the emission allowance price. On other weekdays, the market sought direction or fell but the emission allowance price was up €2.50 at the weekly level.

Indicator	ENOFUTBLQ2-21	ENOYR-22
Coal-fired production	5 %	2 %
Coal price	15 %	8 %
Gas price (NBP)	18 %	28 %
German price level	37 %	23 %
Spot	0 %	0 %
Crude oil Brent	16 %	18 %
Water reservoirs	58 %	53 %
EUR/USD FX rate	12 %	13 %
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	3	Chg	2	Chg
ENOFUTBLQ2-21	↗	12.6%	↗	-4.8%
ENOYR-22	↻	1.8%	↗	-10.6%
NP System	↘	-19.5%	↘	-24.5%
NEDEC21	↘	8.2%	↗	-9.1%



## DETERMINANTS AFFECTING THE MARKET ON WEEK 4

### RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Forsmark 1 (988 MW), 23.12.-25.1.2021, failure, in use 494 MW

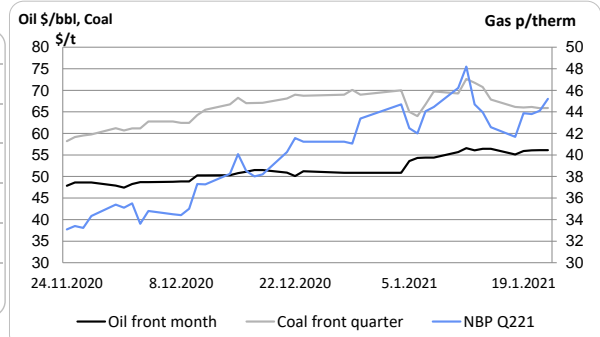
SE3-FI (1200 MW), 23.-25.1.2021, failure, in use 800 MW

- 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 76 % 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	44.60
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	6.11
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-1.17
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-1.17
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	3.04
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	4.43

\*Average for period between 1.1.2021-25.1.2021.



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Source for data: intStream, Tilastokeskus

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