

#### NORDIC ELECTRICITY MARKET

15.3.2021 Markus Herranen, Gasum Portfolio Services Oy

### PRECIPITATION AMOUNTS AND TEMPERATURES NORMALIZING

Forecast to week 11:	
ENOFUTBLQ2-21	↔ Sideways (± 0,5%)
ENOYR-22	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC21	↗ Bullish (>0%)

#### FORECAST TO WEEK 11

### POWER FUTURES

#### Front quarter

The weather is dry, and temperatures have begun to fall. The weather will remain dry over the next few days and the weather will become colder towards Friday, when it will be much colder than normal. Near products have been robust and technically continue to rise. However, during the weekend temperatures will rise to near normal and next week the weather will turn milder than normal. At the same time, precipitation amounts will increase to slightly above normal. We expect next week's wetter and milder weather picture to ease the upward pressure on near products. We expect near products to move near to last week's closing levels.

#### Annual products

Fuel prices have risen and the price of natural gas in particular is very strong. The emission allowance price has remained very strong and is also raising the marginal cost of fuels. We expect the prices of annual products to continue rising. The technical analysis also supports the rise. General market sentiment is again confident and share indexes have been rising. Meetings of central banks, with the US Federal Reserve meeting on Wednesday receiving the most attention, could unsettle indexes and forex during the current week. Comments about the development of inflation and any response to it remain key.

#### SPOT MARKET

Temperatures have taken a downward turn and after Tuesday the weather will turn colder than normal for the time of year. Within the week, the weather will be at its coldest on Friday. Nordic wind power production will be weak during the first half of the week but will increase to higher than normal at the weekend. Wind power production in Finland will largely be very scant in the first half of the week but will rise towards the end of the week. We expect spot prices to rise at the weekly level. We expect the system price to settle at an average level of €39.5/MWh at the weekly level. We expect the Finnish area price to settle at an average level of €47.0/MWh.

#### EMISSIONS

The emission allowance price opened the current week on an upward note. There are no particular factors in sight that would reduce the price. The weather will grow cooler in Central Europe during the current week, but the overall weather picture is not particularly cold. Demand preceding the surrender of emission allowances will be supportive of any falls in the prices. The RSI has crept above 70 and indicates the product to be overbought, but there are no historical resistance levels to a rise in the price because trading is at historically high figures. We expect the emission allowance to continue rising, taking into account, however, the possibility of a technical correction.

#### 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	12.3.2021	30.16	13.2%	3.51
ENOFUTBLQ3-21	12.3.2021	27.30	11.2%	2.75
ENOFUTBLQ4-21	12.3.2021	31.55	10.7%	3.05
ENOFUTBLQ1-22	12.3.2021	35.20	6.7%	2.22
ENOYR-22	12.3.2021	27.90	6.3%	1.65
ENOYR-23	12.3.2021	27.70	4.3%	1.15
ENOYR-24	12.3.2021	27.85	2.4%	0.65
ENOYR-25	12.3.2021	28.43	2.0%	0.57
ENOYR-26	12.3.2021	28.80	1.9%	0.55
NEDEC21	12.3.2021	41.85	7.5%	2.92
NEDEC22	12.3.2021	43.20	10.0%	3.92

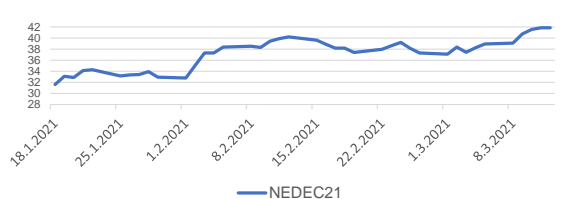
#### EPAD settlements

12.3.2021 (€/MWh)	2021	2022	2023
SYHEL	10.65	5.45	4.70
SE1- NP System	-4.00	-4.00	-4.00
SE2 - NP System	-4.00	-4.00	-4.00
SE3 - NP System	4.10	3.63	3.05
SE4 - NP System	8.35	7.60	8.00

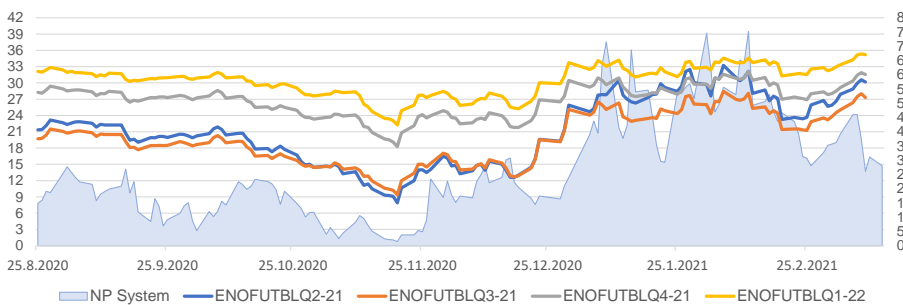
#### Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	14.3.2021	35.76	5.6%	1.90
NP Area FI	14.3.2021	43.81	16.3%	6.13
NP Area SE1	14.3.2021	26.98	7.2%	1.82
NP Area SE2	14.3.2021	26.98	7.2%	1.82
NP Area SE3	14.3.2021	40.53	11.1%	4.06
NP Area SE4	14.3.2021	40.53	11.1%	4.06

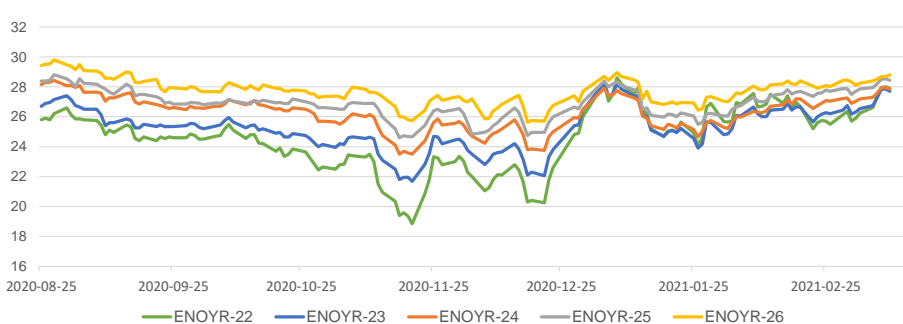
#### Carbon EUR/CO2 t



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



Years EUR/MWh



## COMMENTS ON WEEK 10

### POWER FUTURES

#### Front quarter

Last week saw a decent rise in near products. Last week started off dry and cold and spot prices rose. Temperatures rose in the second half of last week and the weather momentarily turned wet and very windy. Spot prices fell abundantly but near products nevertheless remained strong since drier and colder weather was again in sight the following week. The sharply risen price of natural gas and the continued very strong emission allowance price also brought upward pressure.

#### Annual products

Prices of annual products rose last week. The price of emission allowances had again risen to new highs and put upward pressure on the prices of annual products. In addition to the strong emission allowance price, the price of natural gas rose profusely and also an upward turn was seen in the price of coal. Strong near-term products also contributed to the prices of annual products. General market sentiment was again confident and share indexes were well up as the massive US relief package was approved and concerns about accelerating inflation eased.

### SPOT MARKET

Last week got off to a cold, dry start with little wind. However, wind power production turned to a sharp upswing after Tuesday and was very abundant, especially on Thursday. At the same time, temperatures rose during the second half of the same week. Spot prices were well down at the end of the week but following higher spot prices in the early part of the week were up at the weekly level. In Finland, cold weather with little wind greatly increased spot prices during the first half of the week and the Finnish area price rose by much more than the system price at the weekly level.

### EMISSIONS

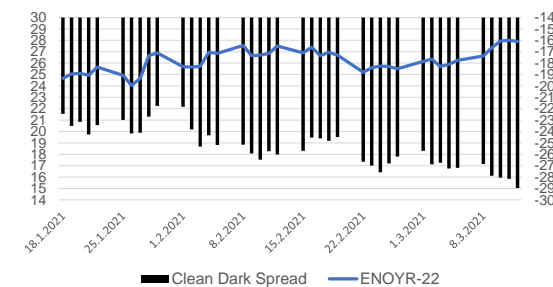
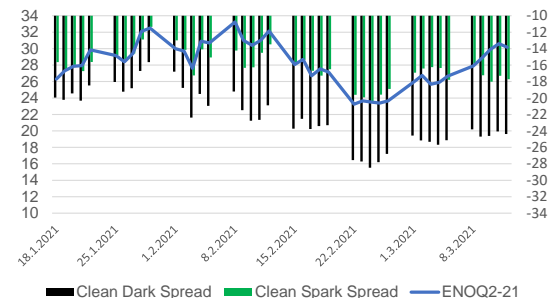
The emission allowance price rose last week. Uncertainty was seen in the price on Monday, after which new peaks were reached daily during the week. On Tuesday, the emission allowance price settled at 9 eurocents higher than on the secondary market. The rise in the price of oil, as well as positive market sentiment on the stock markets brought additional support during the week. Also, the European Parliament voted for the carbon border adjustment mechanism proposal, which could have added its own support to the market. On Wednesday, the approval of Biden's relief package generally supported the markets. The emission allowance price closed on Friday at €42.85/t, up €3.83 at the weekly level.

Indicator	ENOFUTBLQ2-21	ENOYR-22
Coal-fired production	50 %	36 %
Coal price	58 %	44 %
Gas price (NBP)	6 %	85 %
German price level	69 %	48 %
Spot	37 %	25 %
Crude oil Brent	62 %	45 %
Water reservoirs	67 %	58 %
EUR/USD FX rate	13 %	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	10	Chg	9	Chg
ENOFUTBLQ2-21	↗	13.2%	↗	12.7%
ENOYR-22	↗	6.3%	↗	2.9%
NP System	↗	5.6%	↗	39.9%
NEDEC21	↔	7.5%	↗	4.4%



## DETERMINANTS AFFECTING THE MARKET ON WEEK 11

### RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Forsmark 1 (990 MW), maintenance 20.-21.3.2021, in use 300 MW

- EE-FI (1016 MW), maintenance 15.-21.3.2021, in use 858 MW

- FI-SE3 (1200 MW), maintenance 15.-29.3.2021, in use 0 MW

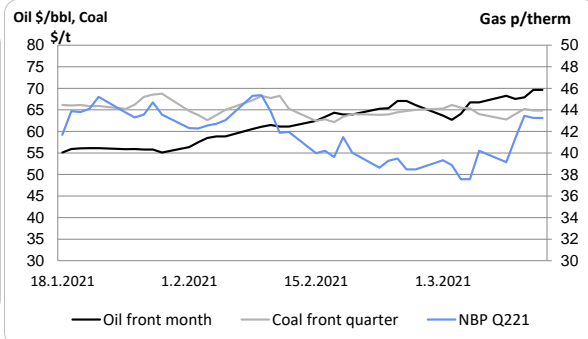
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 100%

- 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	44.09
NP Area FI - NP System	3.10	6.40	8.70	5.54	3.78	2.81	5.10	17.28	7.41
NP Area SE1 - NP System	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.60	-3.64
NP Area SE2 - NP System	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.60	-3.64
NP Area SE3 - NP System	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.53	4.28
NP Area SE4 - NP System	1.80	2.30	1.90	2.62	2.77	2.37	0.86	15.06	6.19

\*Average for period between 1.1.2021-15.3.2021.



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Source for data: intStream, Tilastokeskus

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