

NORDIC ELECTRICITY MARKET

1.6.2020 Toni Sjöblom, Gasum Portfolio Services Oy

WEATHER FORECAST HAS TURNED WETTER

Forecast to week 23:	
ENOFUTBLQ3-20	📉 Bearish (<0%)
ENOYR-21	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC20	↔ Sideways (± 0,5%)

Market signals	spot	Q3-20	YR-21
Hydrologic balance	↓	↓	↑
Precipitation forecast	↓	↓	↑
Temperature forecast	↓	→	→
Spot	↓	↓	↓
Production and transmission exch.	↓	→	→
Emissions allowance	→	→	→
Coal price	→	→	→
German prices	→	→	→
Technical analysis	↓	↓	↑

FORECAST TO WEEK 23

POWER FUTURES

Front quarter

The weather will turn rainier than normal in the middle of the week, and high precipitation rates will be seen particularly at the weekend. The latter part of the forecast period will see a return to normal, but there is no change back to dry conditions in sight yet. Melting will be abundant this week, and this year's highest figures are likely to be reached in the next few days. The hydro balance is rising, but the rapid rate of melting is bound to cause spillway use. We expect quarterly products to fall as the weather forecast has turned rainier. Of course, the new warming shown by the forecast for the end of the period may mean drier weather, but this cannot yet be seen in the forecast.

Annual products

The rainier weather forecast is exerting pressure on the front-year product, too. Annual products have been supported by the strong emission allowances, but a slight softening in emission allowances could result in a drop in power prices, too. The stock market has remained strong, despite the unrest seen in the USA and Hong Kong. The support provided by the easing of the coronavirus lockdowns has in part been reflected in fuels, too, but coal and gas have remained inexpensive. We expect annual products to fall slightly.

SPOT MARKET

The warm weather has resulted in flow rates increasing strongly and remaining high throughout the week. Precipitation will rise above normal in the middle of the week and be abundant at the weekend, which will maintain high flow rates despite the weather getting slightly cooler. Wind power production will be low in the early part of the week and rise above normal from Thursday onwards. We expect the system price to fall further due to the high flow rates and wind power output towards the end of the week and to settle at an average of €2.5/MWh. The annual maintenance of the Olkiluoto 1 nuclear power plant unit will continue until Sunday. Finnish wind power production will be weaker than normal until the weekend. We expect the Finnish area price to climb at the weekly level.

EMISSIONS

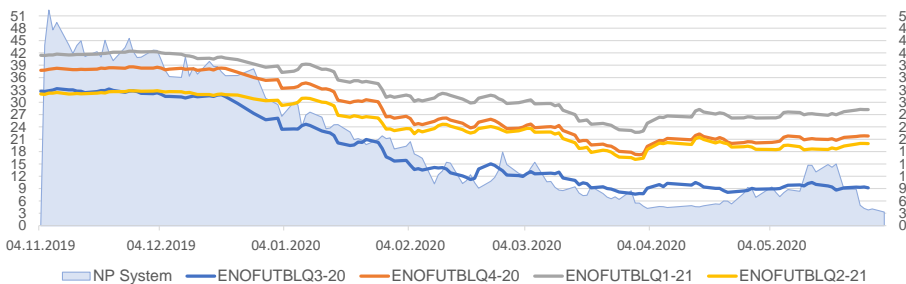
Emission allowance fundamentals still remain conflicting. Support is created by the still bullish oil and stock markets, which have been followed recently by the emission allowance market, but the rise is curbed by lack of demand and by the soft gas market. Resistance is also provided technically by many strong resistance levels above €22/t. We expect emission allowance prices to continue to seek direction but, as the resistance level has held, the next direction could be down.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-20	29.5.2020	9.20	6.4%	0.55
ENOFUTBLQ4-20	29.5.2020	21.80	5.1%	1.05
ENOFUTBLQ1-21	29.5.2020	28.20	4.6%	1.25
ENOFUTBLQ2-21	29.5.2020	19.95	7.0%	1.30
ENOYR-21	29.5.2020	23.05	5.3%	1.15
ENOYR-22	29.5.2020	25.15	1.4%	0.35
ENOYR-23	29.5.2020	26.65	0.8%	0.20
ENOYR-24	29.5.2020	27.75	0.6%	0.17
ENOYR-25	29.5.2020	29.03	0.7%	0.20
NEDEC20	29.5.2020	21.40	0.0%	0.00
NEDEC20	29.5.2020	21.40	0.0%	0.00

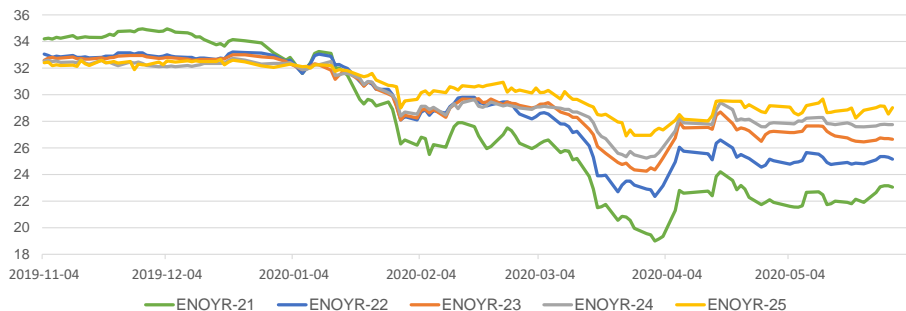
EPAD settlements			
29.5.2020 (€/MWh)	2021	2022	2023
SYHEL	8.70	5.03	3.88
SE1- NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	31.5.2020	4.42	-55.9%	-5.60
NP Area FI	31.5.2020	21.46	-0.9%	-0.20
NP Area SE1	31.5.2020	7.71	-37.9%	-4.70
NP Area SE2	31.5.2020	7.71	-37.9%	-4.70
NP Area SE3	31.5.2020	11.99	-11.0%	-1.48
NP Area SE4	31.5.2020	11.99	-11.0%	-1.48

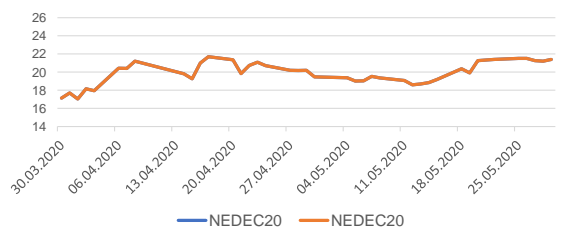
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 22

POWER FUTURES

Front quarter

Last week saw clearly drier weather forecasts in the early part of the week compared with the week before, and this turned quarterly products bullish despite the spot price settling low. After Monday, the movements of the quarterly products remained moderate, however, and for the rest of the week trading in the front-quarter product settled as a rule slightly above €9/MWh. Towards the end of the week, the weather type appeared to turn from dry to rainier, and this pushed quarterly products down on Friday. At the weekly level, the quarterly products ended up on an upward trajectory, however.

Annual products

Emission allowance prices were rising in the early part of the week, breaking above €22/t on Tuesday. Consequently, the front-year product surged in the early part of the week to above €23/MWh, which is where trading remained for the rest of the week, too. At the same time, the price level exceeded the highest prices of early May but did not rise to the April highs of slightly above €24/MWh, the breaking of which would turn the annual product trend bullish.

SPOT MARKET

Last week, snow melting was already rapid and flow rates remained above normal throughout the week, rising further at the weekend close to 2 TWh per day. The first days of the week also saw transmission restrictions from Southern Norway to other areas, and this left hydropower producers with less production space, which brought down not only Southern Norwegian price areas but also the system price. At the weekly level, the system price dropped clearly and settled below €5/MWh. In Finland, the annual maintenance outage of the Olkiluoto 1 unit had started the weekend before, so the unit was unavailable. The Finnish area price also dropped clearly at the weekly level as the weekend settled low, but the area price difference rose more clearly and was €17/MWh at the weekly level.

EMISSIONS

Last week, emission allowance prices were seeking direction within a small range. The technical picture had been bullish, but emission allowances were not able to break through the previous resistance level. Despite the easing of the restrictions in place due to the coronavirus epidemic, demand is still very weak and has kept prices largely unchanged.

Indicator	ENOFUTBLQ3-20	ENOYR-21
Coal-fired production	80 %	91 %
Coal price	81 %	76 %
Gas price (NBP)	82 %	80 %
German price level	6 %	85 %
Spot	95 %	86 %
Crude oil Brent	71 %	84 %
Water reservoirs	32 %	23 %
EUR/USD FX rate	31 %	34 %
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)

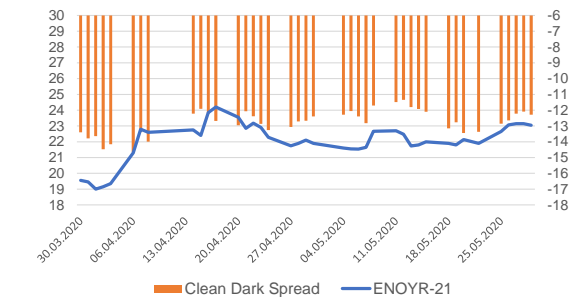
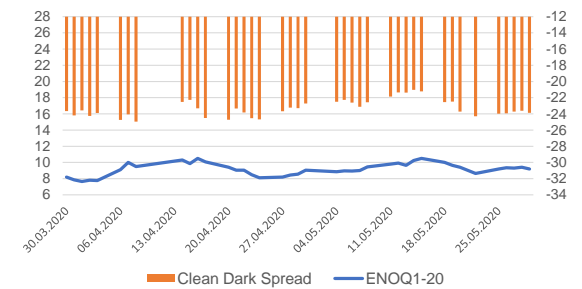
Forecast history	22	Chg	21	Chg
ENOFUTBLQ3-20	↗	6.4%	↗	-17.6%
ENOYR-21	↗	5.3%	↗	-0.5%
NP System	↘	-55.9%	↘	-32.7%
NEDEC20	↗	0.0%	↗	11.5%

DETERMINANTS AFFECTING THE MARKET ON WEEK 23

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Forsmark 1 (988 MW), 3.-10.6.2020, maintenance, in use 0 MW
- Forsmark 2 (1120 MW), 3.5.-26.6.2020, maintenance, in use 0 MW
- Olkiluoto 1 (890 MW) 24.5-7.6.2020, maintenance, in use 0 MW
- Ringhals 3 (1063 MW) 22.4-22.6.2020 maintenance, in use 0 MW
- Ringhals 1 (881 MW), 13.3.-30.9.2020 maintenance, in use 0 MW

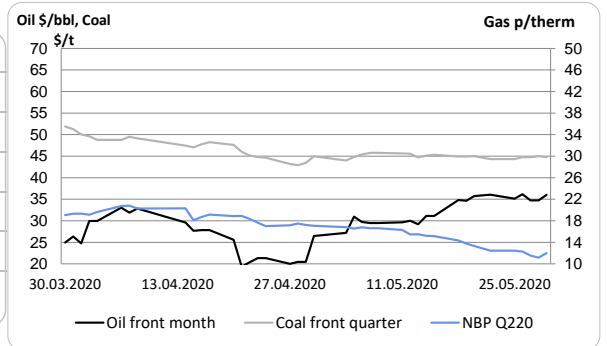
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 64%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 5 % of the maximum



AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019	2020*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	38.94	11.93
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	10.35
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	0.31
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	0.31
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	3.57
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	5.77

*Average for period between 1.1.2020-1.6.2020.



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Source for data: intStream, Tilastokeskus

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