

NORDIC ELECTRICITY MARKET

3.8.2020 Markus Herranen, Gasum Portfolio Services Oy

WEATHER TURNING DRIER AND WARMER

Forecast to week 32:	
ENOFUTBLQ4-20	↗ Bullish (>0%)
ENOYR-21	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC20	↗ Bullish (>0%)

Market signals	spot	Q4-20	YR-21
	Hydrologic balance	↓	↓
Precipitation forecast	↑	↑	↑
Temperature forecast	→	→	→
Spot	→	→	→
Production and transmission exch.	↓	→	→
Emissions allowance	→	↑	↑
Coal price	→	→	→
German prices	↑	→	→
Technical analysis		↑	↑

FORECAST TO WEEK 32

POWER FUTURES

Front quarter

The week will start off rainy and cooler than normal for the time of year, but the weather type will turn drier and warmer later in the week. An area of high pressure will form over the Nordic countries and the dry, warm weather is likely to also spill over into next week. The latter half of next week could see the high pressure retreat, although this is still very uncertain. We expect near products to continue an upward correction for the time being. However, the hydro balance is still high, and this combined with very low spot prices will continue to limit room to rise for the time being.

Annual products

Dry weather, a falling hydro balance and the near-term products in a correction movement will provide support to the front annual product. The emission allowance price, supported by scant auction availability in August, may also bring support to annual products. Nevertheless, concerns about the coronavirus pandemic continue to maintain a cautious general market sentiment. We expect annual products to rise slightly.

SPOT MARKET

The week is starting on a wet note, but rainfall amounts will tail off considerably at the end of the week. Flow rates will fall towards the end of the week but remain close to the normal level. Nordic wind power production will be near normal in the early part of the week. Wind power production will increase high on Wednesday before growing weak for the rest of the week. We expect the system price to gain faint support after Wednesday and the system price to rise marginally at the weekly level. We expect the system price to settle at an average level of €2.0/MWh. The Loviisa 2 unit in Finland is undergoing annual maintenance and the annual maintenance of the Ringhals 3 unit in Sweden has been stopped for maintenance until August 10. Wind power production in Finland will be mostly slightly weaker than normal. We expect the Finnish area price to rise and to settle at an average level of €32/MWh.

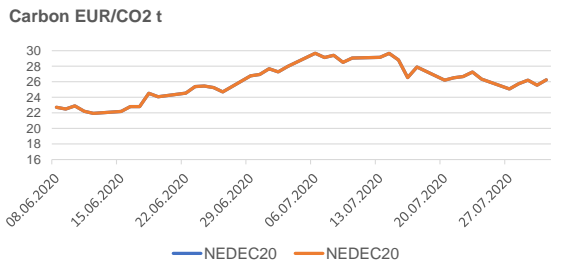
EMISSIONS

Auction availability in August has halved because of the holiday season and will bring support to emission allowance prices. The weather will also bring support, with high temperatures in Europe this week and fairly low renewables production. Besides this, a heatwave also threatens to reduce French nuclear power capacity if temperatures rise too high. The technical picture for emission allowances is neutral. Last week they sought direction and the emission allowance price has room to move between €25-€27.5/t. The continued spread of the coronavirus pandemic around the world may bring uncertainty to the emissions market, which has recently followed movements on the stock markets. We expect the emission allowance price to continue at its present level north of €25/t or to slightly rise this week.

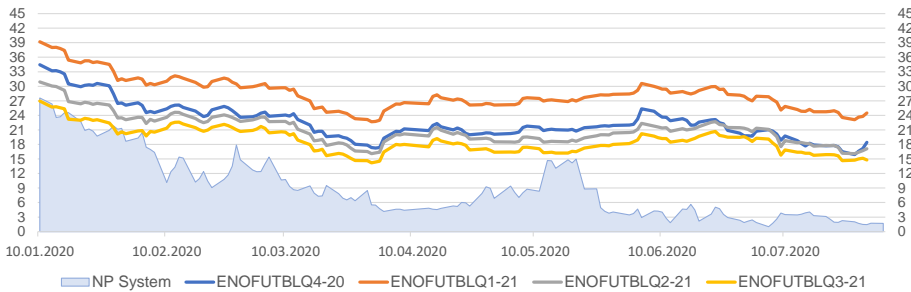
Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ4-20	31.7.2020	18.43	5.3%	0.93
ENOFUTBLQ1-21	31.7.2020	24.50	-0.4%	-0.10
ENOFUTBLQ2-21	31.7.2020	17.10	-1.6%	-0.28
ENOFUTBLQ3-21	31.7.2020	14.80	-5.4%	-0.85
ENOYR-21	31.7.2020	20.20	-2.2%	-0.45
ENOYR-22	31.7.2020	23.88	-3.1%	-0.77
ENOYR-23	31.7.2020	25.68	-1.8%	-0.47
ENOYR-24	31.7.2020	28.25	0.6%	0.17
ENOYR-25	31.7.2020	28.45	-0.4%	-0.10
NEDEC20	31.7.2020	26.26	-0.3%	-0.08
NEDEC20	31.7.2020	26.26	-0.3%	-0.08

EPAD settlements			
31.7.2020 (€/MWh)	2021	2022	2023
SYHEL	11.95	7.00	4.40
SE1- NP System	-1.50	-2.70	-2.50
SE2 - NP System	-1.50	-2.70	-2.50
SE3 - NP System	2.48	2.25	2.05
SE4 - NP System	4.75	3.75	3.75

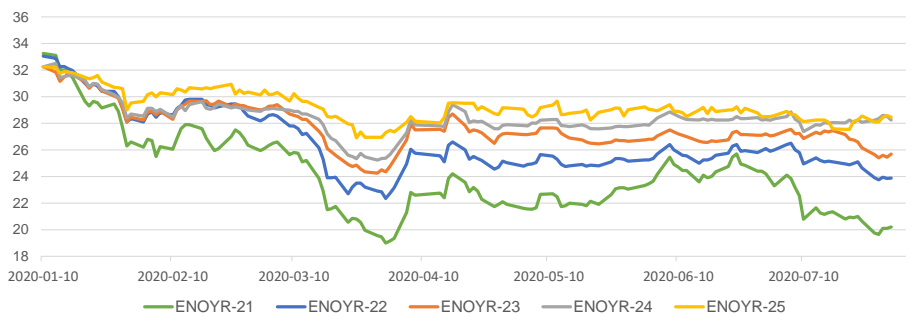
Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	2.8.2020	1.66	-26.2%	-0.59
NP Area FI	2.8.2020	27.07	57.8%	9.92
NP Area SE1	2.8.2020	3.07	-45.5%	-2.56
NP Area SE2	2.8.2020	3.07	-45.5%	-2.56
NP Area SE3	2.8.2020	6.60	17.3%	0.97
NP Area SE4	2.8.2020	6.60	17.3%	0.97



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



Years EUR/MWh



COMMENTS ON WEEK 31

POWER FUTURES

Front quarter

Near products fell last week. The forecasts were for wetter weather and indicated that the weather type would remain wet. The high hydro balance, forecasts for wet weather and very low spot prices exerted downward pressure on near products. However, following the early part of the week, the weather forecasts showed signs of a possible change to dry, warm weather later the following week. These signs strengthened towards the end of the week and near products saw a sharp upward correction movement. The front quarter product closed the week up.

Annual products

Last week the price of annual products fell with those of near products in the early part of the week. Also more jittery general market sentiment brought downward pressure on annual products. Concerns about a new wave of the coronavirus pandemic in Europe also weakened general sentiment. These concerns caused a fall in share indexes, emission allowance and fuel prices. The concerns dispelled somewhat towards the end of the week and the front annual product was supported by forecasts for drier weather. However, annual products closed down at the weekly level.

SPOT MARKET

Last week, the weather was rainy and flow rates were high. Also wind power was very abundant during the working week and the system price settled at a very low weekly level. In Finland, wind power production was weak during the first half of the week but despite wind power production in Finland increasing at the end of the week, the difference between the Finnish area price and the system price grew. The Finnish area price was well up at the weekly level. Annual maintenance of the Loviisa unit 2 began on Sunday.

EMISSIONS

The emissions trading market remained volatile last week but without any clear direction. On Monday and Thursday, the finance markets fell on the back of coronavirus concerns and poor economic data pushed the emission allowance price down. The price was firmer on Tuesday and Wednesday. On Friday, the heatwave in Europe increased the emission allowance price, besides which Friday was the last trading day before the August reduction in availability and demand at Friday's auction was stronger than at auctions during the previous week. The emission allowance price was down €0.08 at the weekly level.

Indicator	ENOFUTBLQ4-20	ENOYR-21
Coal-fired production	1 %	14 %
Coal price	0 %	5 %
Gas price (NBP)	33 %	39 %
German price level	6 %	85 %
Spot	34 %	23 %
Crude oil Brent	24 %	43 %
Water reservoirs	0 %	1 %
EUR/USD FX rate	8 %	2 %
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	31	Chg	30	Chg
ENOFUTBLQ4-20	↓	5.3%	↓	-4.1%
ENOYR-21	↓	-2.2%	↓	-3.3%
NP System	↓	-26.2%	↓	-31.3%
NEDEC20	↓	-0.3%	↓	-5.6%

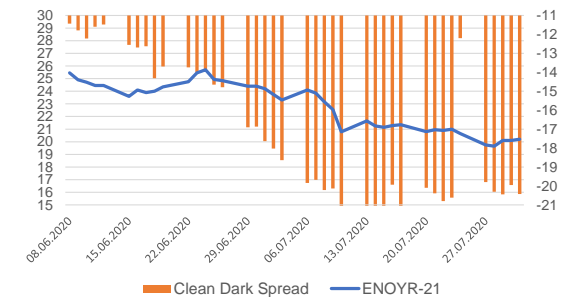
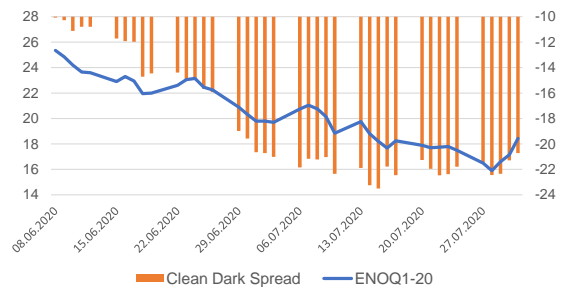
DETERMINANTS AFFECTING THE MARKET ON WEEK 32

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Loviisa 2 (507 MW) 2.-26.8.2020 maintenance, in use 0 MW, 26.-28.8.2020 in use 253 MW
 Oskarshamn 3 (1400 MW) 1.8.-26.10.2020 maintenance, in use 0 MW
 Ringhals 3 (1063 MW) 22.4-10.8.2020 maintenance, in use 0 MW
 Ringhals 4 (1130MW) 5.7.-31.8.2020 maintenance, in use 0 MW

FI-RU (320 MW), 2.-30.8.2020 maintenance, in use 0 WM

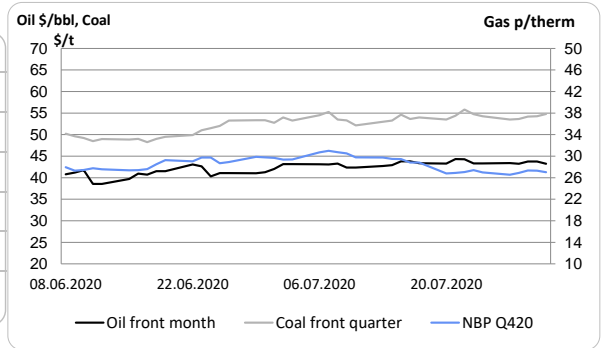
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 63%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 4 % of the maximum



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	9.23
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	13.71
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	2.04
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	2.04
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	6.51
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	10.32

*Average for period between 1.1.2020-3.8.2020.



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 Source for data: intStream, Tilastokeskus

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