

NORDIC ELECTRICITY MARKET

14.4.2020 Toni Sjöblom, Gasum Portfolio Services Oy

**WEATHER FORECASTS DRIER, CORONAVIRUS CRISIS CALMING**

Forecast to week 16:	
ENOFUTBLQ3-20	↗ Bullish (>0%)
ENOYR-21	↔ Sideways (± 0,5%)
NP System	↗ Bullish (>0%)
NEDEC20	↘ Bearish (<0%)

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 16**

**POWER FUTURES**

**Front quarter**

The weather forecasts have got drier since last week and are now showing precipitation rates below normal from Thursday onwards for the entire two-week period. The temperature forecasts are also below normal starting from Thursday. The hydro balance is anticipated to drop, but it would take ten dry weeks for the hydro situation to reach the normal level. The climb of fuels has turned out to be rather subdued. We expect quarterly product prices to rise due to the weather forecasts.

**Annual products**

The general market sentiment has been positive as the coronavirus epidemic has been easing in the worst-affected areas. Support for stock markets has also been provided by the continued measures of central banks. The climb of fuels has been modest and the 9.7 Mbl/d cut negotiated by the OPEC+ alliance has only kept oil prices unchanged. The way out of the crisis is not yet clear and market swings are likely to continue. We expect the market to take a breather this week, but the front-year product will be supported by the drier weather forecasts.

**SPOT MARKET**

The temperatures will be below normal except for Wednesday, and the flow rates will remain at their current levels clearly below normal. Nordic wind power production will be very abundant until Friday. This week's demand is also lowered by the Easter holiday, emphasizing the impact of abundant wind power production. We expect the system price to rise towards the end of the week, averaging €4.9/MWh at the weekly level. Finnish wind power production will be variable and close to normal in the first half of the week but will rise high from Thursday onwards. The Finnish spot price will be pushed up this week due to the capacity of the interconnection with northern Sweden being restricted and the Olkiluoto 1 nuclear power plant unit still running on slightly reduced capacity. We expect the Finnish area price to fall towards the end of the week but to rise clearly at the weekly level and to settle at an average of €20/MWh.

**EMISSIONS**

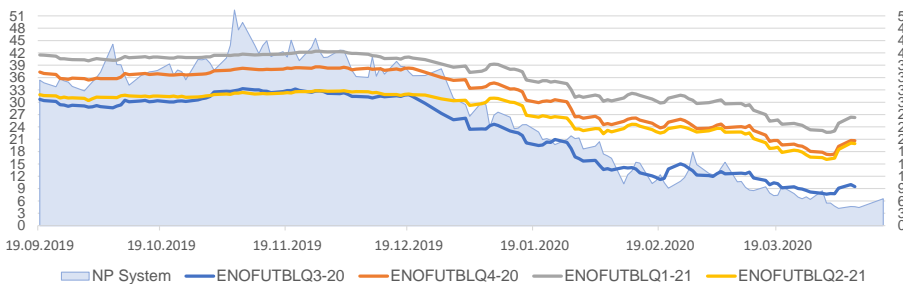
Emission allowances are highly dependent on the general hopefulness of the market. Last week saw a rise that was even a bit too rapid. The flattening of the hopeful mood and the reduction of the surrender purchases for last year's emissions may calm down the emissions market. The big picture is obviously still unchanged, meaning that the market stability reserve is reducing the surplus and, on the other hand, emissions are declining strongly as natural gas is cheaper than coal and emissions are decreasing due to the coronavirus epidemic. The technical picture for emission allowances is still bullish. We expect emission allowance prices to drop as the market levels off from last week's rapid rise.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-20	8.4.2020	9.50	22.4%	1.74
ENOFUTBLQ4-20	8.4.2020	20.65	18.9%	3.28
ENOFUTBLQ1-21	8.4.2020	26.30	14.3%	3.30
ENOFUTBLQ2-21	8.4.2020	19.95	21.6%	3.55
ENOYR-21	8.4.2020	22.60	16.8%	3.25
ENOYR-22	8.4.2020	25.75	11.2%	2.60
ENOYR-23	8.4.2020	27.50	8.9%	2.25
ENOYR-24	8.4.2020	27.88	7.0%	1.83
ENOYR-25	8.4.2020	28.15	2.9%	0.80
NEDEC20	8.4.2020	21.21	18.1%	3.25
NEDEC20	8.4.2020	21.21	18.1%	3.25

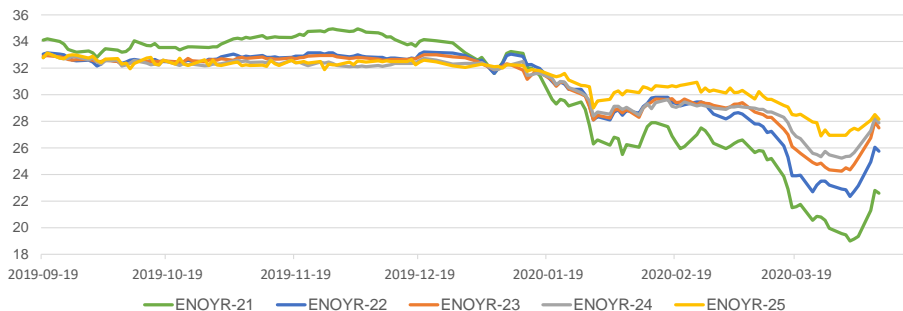
EPAD settlements			
8.4.2020 (€/MWh)	2021	2022	2023
SYHEL	7.90	4.90	3.75
SE1- NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	13.4.2020	4.22	-12.5%	-0.60
NP Area FI	13.4.2020	11.23	-40.6%	-7.68
NP Area SE1	13.4.2020	3.79	-17.8%	-0.82
NP Area SE2	13.4.2020	3.79	-17.8%	-0.82
NP Area SE3	13.4.2020	7.63	13.2%	0.89
NP Area SE4	13.4.2020	7.63	13.2%	0.89

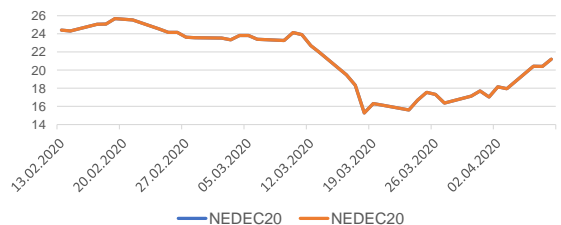
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 15

**POWER FUTURES**

**Front quarter**

Quarterly products took a strong upturn on Monday last week. Weather forecasts have dried from the previous week's rainy outlook, and the surge of emission allowances also accelerated the climb of quarterly products. Wednesday was the week's last trading day and saw a slight downward correction from the previous increase as the weather forecasts were slightly rainier than earlier in the week and the surge of the emission allowances seen in the early part of the week also calmed down.

**Annual products**

Last week, annual products in particular received considerable support from emission allowances climbing from the previous week's lows. The front-year product was also supported by the drier weather forecasts. Fuel prices climbed, too, but only rather moderately. In Germany, annual products rose a little more moderately than the Nordic market, but the rise was significant in the German market, too.

**SPOT MARKET**

Last week's wind power production was strong throughout the business week and again during the weekend. The temperatures in the Nordics were also very warm during the first days of the week, reducing demand. Due to the low price level, the Ringhals 3 was closed and awaits annual maintenance scheduled for next week. Spot prices ended up taking a downward trajectory at the weekly level, and the day averages settled below €5/MWh except for Saturday. The Finnish area price plummeted. The start of the week was very windy in Finland and so was the weekend starting from Sunday. The Easter holiday naturally reduced demand in Finland, too. The Finnish area price dropped below €13/MWh at the weekly level and at the same time the settled area price difference shrunk.

**EMISSIONS**

Last week, emission allowances climbed clearly in the wake of the stabilization of the stock markets. Last year's verified emissions data was published on Wednesday, and the reduction was around 8%. The emission reduction was slightly greater than expected and, consequently, Wednesday was the only day when prices declined in the emission allowance market. The reduction mainly took place in the energy sector as renewables increased and natural gas was cheaper than coal in power production.

Indicator	ENOFUTBLQ3-20	ENOYR-21
Coal-fired production	83 %	89 %
Coal price	82 %	70 %
Gas price (NBP)	88 %	79 %
German price level	6 %	85 %
Spot	96 %	87 %
Crude oil Brent	59 %	79 %
Water reservoirs	94 %	92 %
EUR/USD FX rate	17 %	21 %
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	15	Chg	14	Chg
ENOFUTBLQ3-20	↗	22.4%	↘	-9.2%
ENOYR-21	↗	16.8%	↘	-3.0%
NP System	↘	-12.5%	↘	-34.7%
NEDEC20	↗	18.1%	↘	9.7%

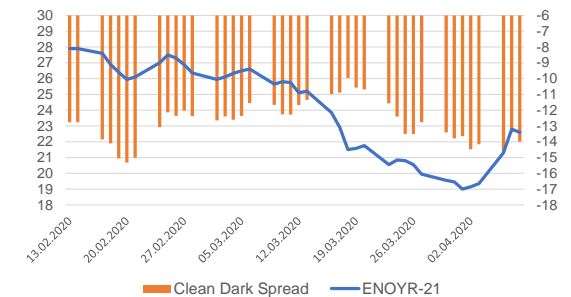
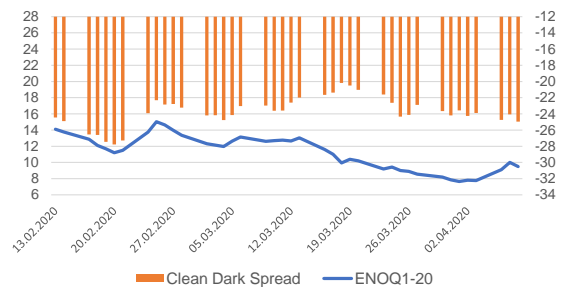
DETERMINANTS AFFECTING THE MARKET ON WEEK 16

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

Olkiluoto 1 (890 MW) 8.4.-24.5.2020 failure, in use 836 MW  
 Ringhals 3 (1063 MW) 5.-22.4.2020 maintenance, in use 0 MW  
 Ringhals 1 (881 MW), 13.3.-30.9.2020 maintenance, in use 0 MW  
 Forsmark 1 (988 MW) 18.4.2020 test, in use 440 MW

SE1-FI (1500 MW), 14.-18.4.2020, maintenance, in use 650 MW

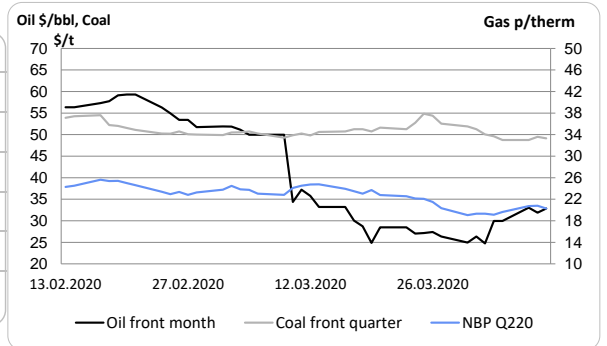
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 82%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 5 % of the maximum



**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	13.90
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	9.03
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	0.06
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	0.06
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	3.10
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	4.88

\*Average for period between 1.1.2020-14.4.2020.



Copyright 2020 Gasum Oy – All rights reserved  
 Source for data: intStream, Tilastokeskus

Disclaimer: This document is issued by Gasum Oy in jointly by its subsidiaries Gasum Portfolio Services Oy and intStream Oy. The information in this document, which is for private circulation only, was obtained from sources believed to be reliable but its accuracy or completeness cannot be guaranteed. No liability whatsoever is accepted for any direct or consequential loss arising from the use of this document. This document is not intended for the use of private customers. Do not distribute. If you received this from a third party that is not affiliated to Gasum Oy, please let us know. For all inquiries and notifications, contact us at