

NORDIC ELECTRICITY MARKET

30.3.2020 Markus Herranen, Gasum Portfolio Services Oy

BOTH FUNDAMENTALS AND TECHNICAL ANALYSIS STILL POINTING TO CONTINUED DOWNWARD TREND

Forecast to week 14:	
ENOFUTBLQ2-20	📉 Bearish (<0%)
ENOYR-21	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC20	📉 Bearish (<0%)

Market signals	spot	Q2-20	YR-21
Hydrologic balance	↓	↓	↓
Precipitation forecast	↓	↓	↓
Temperature forecast	↓	↓	↓
Spot	→	→	→
Production and transmission exch.	↓	↓	→
Emissions allowance	↓	↓	↓
Coal price	↓	↓	↓
German prices	↓	↓	↓
Technical analysis	→	↓	↓

FORECAST TO WEEK 14

POWER FUTURES

Front quarter

The weather forecasts are wetter than normal and the hydro balance is taking another upturn. Downward pressure on quarterly products is maintained by the wetter-than-normal weather forecasts and very weak technical picture. Quarterly products have, however, plummeted and are at a very low level. We regard the scope for decrease to already be limited and see potential for an upward corrective move. For the time being, however, both fundamentals and technical analysis are pointing to a continued downward trend and we therefore regard a downtrend more likely than an upward one.

Annual products

The general market sentiment calmed a little last week and stock indices corrected upwards. Annual products have remained weak, however, and the front-year product has fallen below €20/MWh. The oversupply of oil and the weak economic outlook are maintaining downward pressure on coal and natural gas prices. Uncertainty and fluctuations will remain high, but we expect annual product prices to decline for the time being.

SPOT MARKET

Temperatures are rising, but the weather will still be slightly colder than normal on Monday. After Monday, the temperatures will rise slightly above normal, but the weather will turn cooler again at the weekend. Nordic wind power production will rise to a high level after Monday and will be very abundant especially on Friday. The weather forecasts are wet and the hydro balance is very high. We expect the system price at the weekly level to remain close to the level seen last week. Finnish wind power production will be very high on Tuesday but, due to the maintenance of the Olkiluoto 1 nuclear power plant unit, the Finnish area price settled clearly higher than the system price. After Tuesday, Finnish wind power output will decline but will mostly remain above normal. The Olkiluoto 1 unit is due to restart on Tuesday and will increase capacity during Wednesday. We expect the Finnish area price to rise at the weekly level and to settle at an average of €18.5/MWh.

EMISSIONS

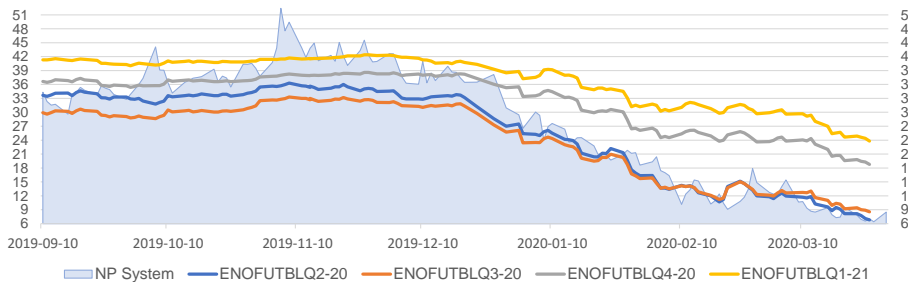
The weak economic outlook, very weak oil price and weak German power market are putting downward pressure on emission allowance prices. The technical picture for emission allowances is also weak despite last week's slight price recovery. We expect a fall in emission allowance prices.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ2-20	27.3.2020	6.80	-25.3%	-2.30
ENOFUTBLQ3-20	27.3.2020	8.55	-16.2%	-1.65
ENOFUTBLQ4-20	27.3.2020	18.77	-9.3%	-1.93
ENOFUTBLQ1-21	27.3.2020	23.80	-7.4%	-1.90
ENOYR-21	27.3.2020	19.95	-8.3%	-1.80
ENOYR-22	27.3.2020	23.20	-3.1%	-0.75
ENOYR-23	27.3.2020	24.35	-4.9%	-1.25
ENOYR-24	27.3.2020	25.48	-4.6%	-1.22
ENOYR-25	27.3.2020	26.95	-5.5%	-1.58
NEDEC20	27.3.2020	16.37	1.4%	0.22
NEDEC20	27.3.2020	16.37	1.4%	0.22

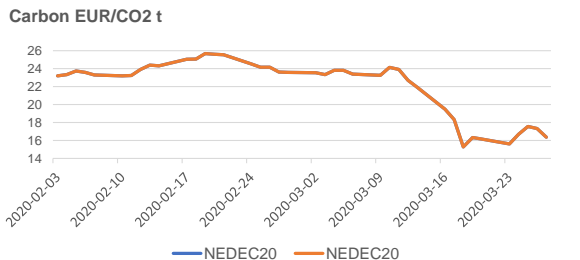
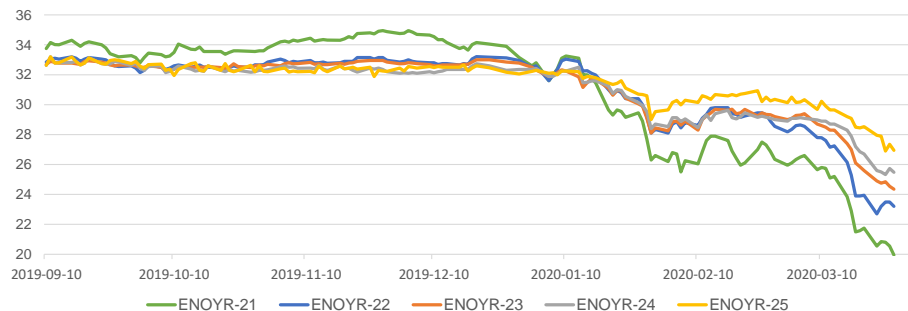
EPAD settlements			
27.3.2020 (€/MWh)	2021	2022	2023
SYHEL	7.85	4.48	3.75
SE1- NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	29.3.2020	6.43	-20.3%	-1.63
NP Area FI	29.3.2020	13.07	-35.1%	-7.07
NP Area SE1	29.3.2020	6.11	-20.4%	-1.56
NP Area SE2	29.3.2020	6.11	-20.4%	-1.56
NP Area SE3	29.3.2020	8.75	-39.0%	-5.59
NP Area SE4	29.3.2020	8.75	-39.0%	-5.59

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



Years EUR/MWh



COMMENTS ON WEEK 13

POWER FUTURES

Front quarter

Last week, quarterly products continued on a clear downward trajectory. The weather forecasts got wetter as the week progressed and indicated a turn in the weather type after a brief dry spell towards wetter-than-normal conditions. In addition, the general uncertainty and concerns about a drop in power demand strengthened the downward pressure on quarterly products.

Annual products

Last week, the general market sentiment calmed slightly and stock indices climbed. After a crash, an upwards corrective move was seen in stock indices thanks to major stimulus measures. The climbing stock indices provided support for emission allowance prices. Coal prices also climbed in the early part of the week. However, the downward pressure on annual products continued due to the weak technical picture, very weak quarterly products and high uncertainty. Annual products showed a clear drop at the weekly level.

SPOT MARKET

Last week, the weather was milder than normal for the time of year but got colder towards the end of the week. Nordic wind power production was very abundant during the first half of the week but slightly weaker than normal on Thursday and Friday. The rainy weather forecasts exerted downward pressure on spot prices. Finnish wind power production was also abundant in the first half of the week. On Thursday, Finnish wind power production dropped to a low level but rose above normal again at the weekend. The Finnish area price dropped clearly more than the system price at the weekly level.

EMISSIONS

Last week, the slightly calmer market sentiment and higher stock indices provided support for emission allowance prices. However, the persistent major uncertainty, lower demand for emission allowances and weak economic outlook restricted the support. At the weekly level, emission allowance prices ended on a slight upward trajectory.

Indicator	ENOFUTBLQ2-20	ENOYR-21
Coal-fired production	76 %	70 %
Coal price	77 %	69 %
Gas price (NBP)	80 %	70 %
German price level	6 %	85 %
Spot	93 %	87 %
Crude oil Brent	42 %	51 %
Water reservoirs	94 %	92 %
EUR/USD FX rate	1 %	1 %
Temperature	8 %	5 %
Precipitation	16 %	13 %

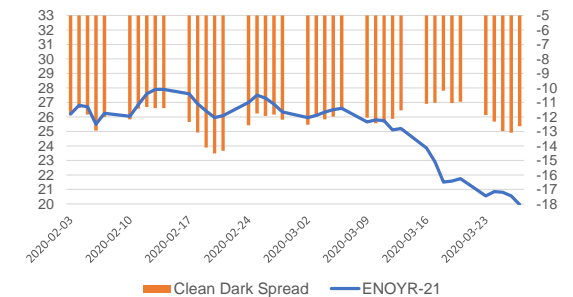
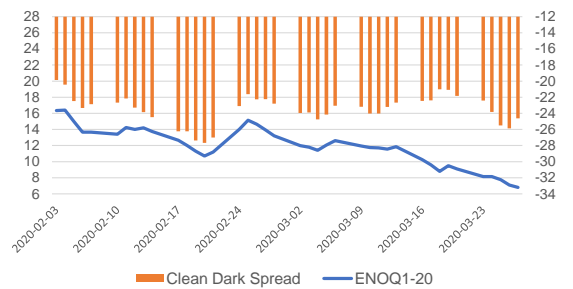
Definition
The above figures measure the ability of market determinants to describe the price changes occurred in last 6 months. The affect is measured as Coefficient of Determination*. Each variable is evaluated independently. We use a color scale to demonstrate efficacy, green (strong), yellow (moderate), red (weak)

Forecast history	13	Chg	12	Chg
ENOFUTBLQ2-20	⬇️	-25.3%	⬇️	-23.2%
ENOYR-21	⬇️	-8.3%	⬇️	-13.7%
NP System	↔️	-20.3%	⬆️	12.1%
NEDEC20	⬇️	1.4%	⬇️	-26.4%

DETERMINANTS AFFECTING THE MARKET ON WEEK 14

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

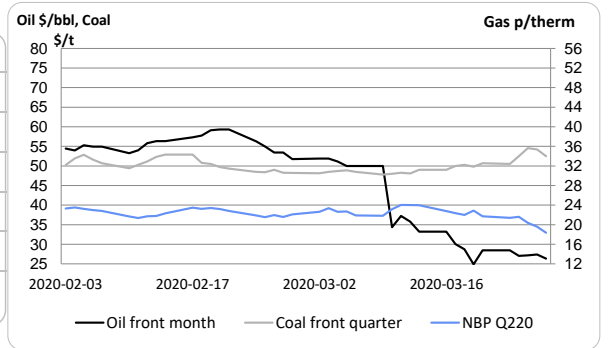
- Olkiluoto 1 (890 MW) 30.-1.4.2020 failure, in use 0 MW
- Ringhals 3 (1063 MW) 5.-22.4.2020 maintenance, in use 930 MW
- Ringhals 1 (881 MW), 13.3.-10.4.2020, in use 13.-14.3.2020 440 MW, 14.3.-10.4.2020 0 MW
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 89%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 3 % 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	15.45
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	8.53
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	0.13
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	0.13
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	3.22
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	4.90

*Average for period between 1.1.2020-30.3.2020.



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Source for data: intStream, Tilastokeskus

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