

NORDIC ELECTRICITY MARKET

4.5.2020 Toni Sjöblom, Gasum Portfolio Services Oy

STOCK MARKETS AGAIN FALLING, NO SIGNIFICANT CHANGES IN WEATHER FORECAST

Forecast to week 19:	
ENOFUTBLQ3-20	↔ Sideways (± 0,5%)
ENOYR-21	⬇ Bearish (<0%)
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 19

POWER FUTURES

Front quarter

From Friday onwards, the weather will become slightly wetter and also much colder than normal. There are no significant changes in the weather forecasts compared with the forecasts on Thursday last week. Spot prices have shown a clear rise and are giving support to front quarter prices. The hydro balance will remain roughly unchanged as the cold weather increases consumption. The hydro balance has fallen in recent weeks but is still very high. The end of the weather forecast is for rainfall and temperature approaching normal. We expect front products to remain near present levels.

Annual products

General market sentiment has again turned negative due to the threat of a trade war between the USA and China reiterated by Trump. Stock markets were down in the USA whereas the markets were closed in Finland on Friday. Fuel prices have remained fairly soft despite oil prices rising after a sharp fall. Emission allowance prices were in decline and this put pressure on further annual products. The weather forecast will not now provide any clear direction for further annual products. We expect annual products to fall with declining emission allowance prices and general market sentiment.

SPOT MARKET

The weather will be drier than normal until Friday and colder than normal for the whole period. Especially from the weekend onwards, the weather will be very cold and flow rates will remain at their current level of just half the normal rate. Nordic wind power production will be largely more abundant than normal, with Wednesday being the windiest day. We expect the system price at the weekly level to rise and to settle at a level averaging €8.0/MWh. Wind power production in Finland will average the normal rate, with Wednesday being the windiest day. Maintenance of Olkiluoto will start on Sunday. We expect the Finnish area price to decrease slightly at the weekly level and to settle at a level averaging €18.5/MWh.

EMISSIONS

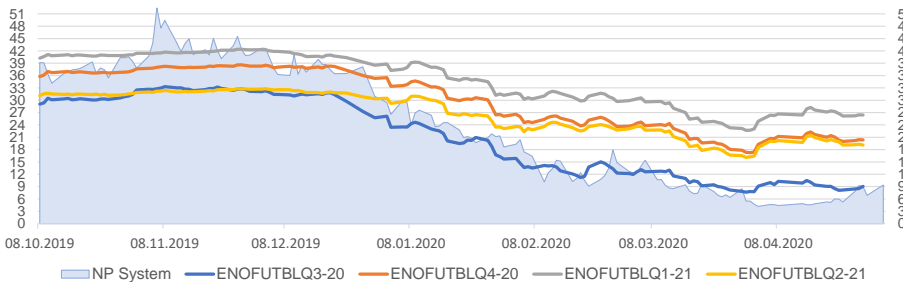
Emission allowance prices have again fallen in line with general market sentiment. Low amounts of emissions are fueling support for this softening even though Europe is gradually removing the restrictions imposed because of Covid-19. Gas, coal and German electricity prices have for the time being been very weak and much softer than emission allowances, which have behaved more in line with the stock markets. On top of this, the support brought by the surrender date of emission allowances at the end of April has ended. Technically, emission allowance prices breached the support level of €18.90 and are falling. We expect emission allowance prices to fall.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-20	30.4.2020	9.05	11.7%	0.95
ENOFUTBLQ4-20	30.4.2020	20.35	0.2%	0.05
ENOFUTBLQ1-21	30.4.2020	26.40	-1.3%	-0.35
ENOFUTBLQ2-21	30.4.2020	19.09	-4.1%	-0.81
ENOYR-21	30.4.2020	21.90	-1.7%	-0.38
ENOYR-22	30.4.2020	25.04	-0.6%	-0.16
ENOYR-23	30.4.2020	27.25	-0.1%	-0.03
ENOYR-24	30.4.2020	27.90	-0.9%	-0.25
ENOYR-25	30.4.2020	29.15	-0.3%	-0.10
NEDEC20	30.4.2020	19.47	-6.0%	-1.24
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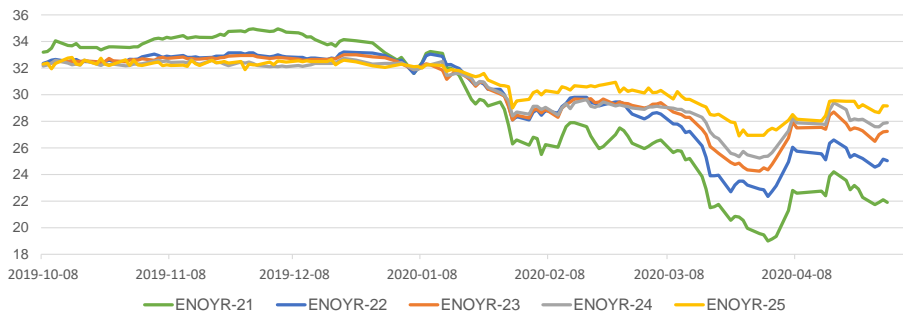
EPAD settlements			
30.4.2020 (€/MWh)	2021	2022	2023
SYHEL	9.40	5.60	4.45
SE1- NP System	-1.50	-2.25	-2.25
SE2 - NP System	-1.50	-2.25	-2.25
SE3 - NP System	1.25	1.35	1.35
SE4 - NP System	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	3.5.2020	7.45	36.8%	2.00
NP Area FI	3.5.2020	19.53	-10.1%	-2.19
NP Area SE1	3.5.2020	8.95	74.1%	3.81
NP Area SE2	3.5.2020	8.95	74.1%	3.81
NP Area SE3	3.5.2020	13.63	47.4%	4.38
NP Area SE4	3.5.2020	13.63	47.4%	4.38

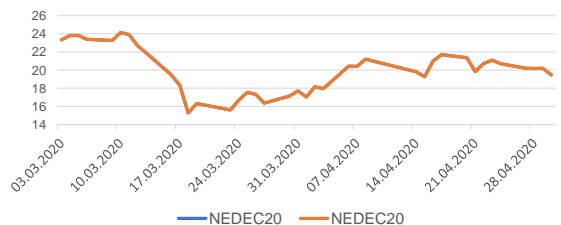
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 18

POWER FUTURES

Front quarter

Last week, the weather type had changed over the previous weekend to become drier and colder. This brought support for spot prices and front products, even will falling emission allowance prices.

Annual products

Last week, emission allowance prices began to fall and this put pressure on annual products especially earlier in the week. The price of coal was also in retreat. The nearest annual product touched its lowest point on Tuesday at €21.25/MWh but recovered during the day and approached €22/MWh at the weekend as the drier weather type supported also the nearest annual product. However, annual products showed a clear decrease at the weekly level.

SPOT MARKET

Last week was clearly colder than normal and this suspended the melting of snow. At the same time, flow rates have been clearly much lower than normal. Apart from odd days, also Nordic wind power production was at a low level. At the weekly level, the system price rose from the April lows and despite May Day settled at the highest weekly level since the end of March. The Finnish area price on the other hand fell because of May Day and at the same time the difference between the Finnish area price and system price was slightly more modest than has been the case in previous weeks.

EMISSIONS

Last week, emission allowance prices headed south along with weak fuel prices and the German electricity market. Soft stock market prices also exerted downward pressure on emission allowance prices. Demand brought by the surrender date for emissions allowances at the end of April also ended last week.

Indicator	ENOFUTBLQ3-20	ENOYR-21
Coal-fired production	85 %	93 %
Coal price	87 %	77 %
Gas price (NBP)	93 %	85 %
German price level	6 %	85 %
Spot	97 %	88 %
Crude oil Brent	66 %	80 %
Water reservoirs	92 %	81 %
EUR/USD FX rate	24 %	29 %
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)

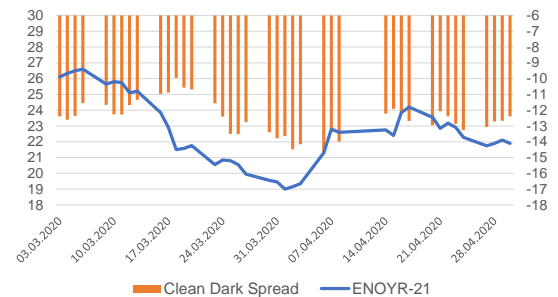
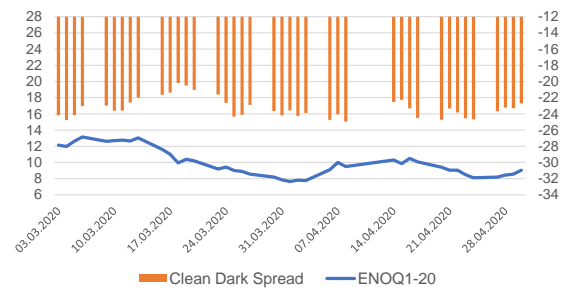
Forecast history	18	Chg	17	Chg
ENOFUTBLQ3-20	↗	11.7%	↗	-19.6%
ENOYR-21	↗	-1.7%	↘	-7.9%
NP System	↗	36.8%	↗	9.3%
NEDEC20	↔	-6.0%	↘	-4.6%

DETERMINANTS AFFECTING THE MARKET ON WEEK 19

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

- Olkiluoto 2 (890 MW), maintenance 10.-18.5.2020, in use 0 MW
- Forsmark 2 (1120 MW), 3.5.-26.6.2020, maintenance, in use 0 MW
- Olkiluoto 1 (890 MW) 8.4.-24.5.2020 failure, in use 836 MW
- Ringhals 3 (1063 MW) 5.4.-4.6.2020 maintenance, in use 0 MW
- Ringhals 1 (881 MW), 13.3.-30.9.2020 maintenance, in use 0 MW

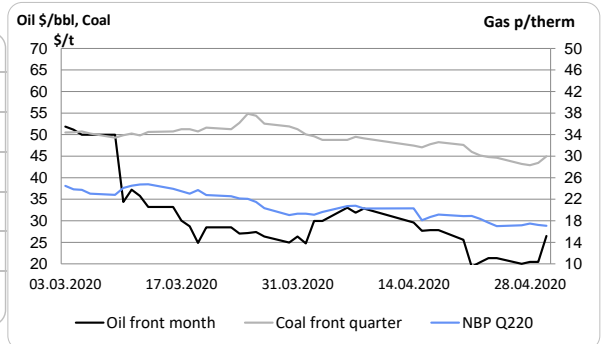
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 72%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 6 % of the maximum



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	12.74
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	9.87
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	0.08
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	0.08
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	3.41
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	5.81

*Average for period between 1.1.2020-4.5.2020.



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Source for data: intStream, Tilastokeskus

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