

NORDIC ELECTRICITY MARKET

30.11.2020 Antti Kouvo, Gasum Portfolio Services Oy

TURN IN WATER RESERVES BRINGS MARKET SUPPORT

Forecast to week 49:

ENOFUTBLQ1-21	↗ Bullish (>0%)
ENOYR-21	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC20	↗ Bullish (>0%)

Market signals

	spot	Q1-21	YR-21
Hydrologic balance	↓	↓	↓
Precipitation forecast	→	→	→
Temperature forecast	→	→	→
Spot	↔	→	→
Production and transmission exch.	↑	↑	↑
Emissions allowance	↑	↑	↑
Coal price	↑	↑	↑
German prices	↑	↑	↑
Technical analysis	↔	↑	↑

FORECAST TO WEEK 49

POWER FUTURES

Front quarter

The weather will be dry earlier in the week on Tuesday and Wednesday, but precipitation will rise to above normal from the end of the week. Drier than normal weather is forecast for next week and overall precipitation amounts are predicted to remain slightly lower than normal during the forecast period. The temperature during the current week will be slightly above normal and the weekend will be the warmest time during the forecast period. The change in the weather type last week saw flow rates fall to near normal, where they remain. This has enabled water reserves to turn to a fall and, at the same time, hydropower producers have increased prices compared to the low level seen in recent weeks. The overall water situation, however, is still high at a level of over 20 TWh, even though a small downward turn has been seen. Should there be no significant change for a wetter weather type during the week, we expect near products to continue to rise.

Annual products

The rise in the emission allowance price to near €29/t and the increase in the price of coal to above the summer peaks to the level at the early part of the year is supportive of annual products and a rise in near products. We expect annual products to continue to rise during the current week. The biggest change seen in the nearest annual product, the change in longer years is expected to remain modest.

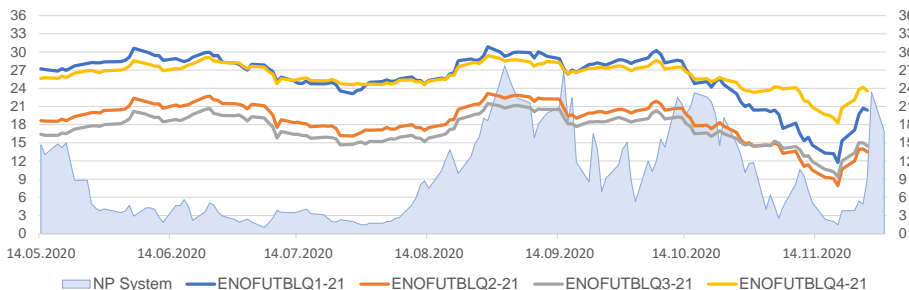
SPOT MARKET

Now that flow rates have fallen to approach normal levels, water reserves continue falling and day by day hydropower producers' control is improving. Wind power production in the Nordic countries will remain at a low level during the early part of the week, with Tuesday being the least windy day. Nuclear power production will be low during the current week because of faults and maintenance work. Also, hydropower production will be limited in areas where there are river power plants, and the frost to form ice covers. Restoration of the transmission link between Norway and Sweden to full capacity during the next few days will give hydropower producers room to produce more. We expect the system price to continue to rise clearly at the weekly level now that hydropower producers have gained control. The Finnish area price is linked to the Swedish SE3 price during the current week, but especially during the early part of the week the Finnish area price will settle high through high Swedish prices. The rise in wind power production later in the week will narrow the Finnish area price difference through Swedish prices. However, the Finnish area price is expected to rise at the weekly level.

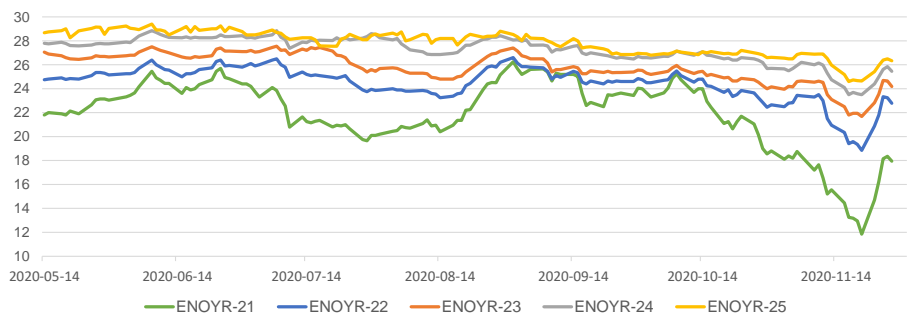
EMISSIONS

The weather in European will be chilly during the current week and renewable energy production will be weaker than normal. There are two weeks before the break in auction trading and the break may extend even until early February. In addition, the delay in 2021 free allocations is also bringing uncertainty to the availability side. It seems that positive sentiment brought about by the coronavirus vaccine is supportive of broader market sentiment and prices have strengthened on the fuel markets. Development and any outcome of the Brexit negotiations may still bring uncertainty. The technical picture is also supportive of the emission allowance price. We expect the emission allowance price to continue to rise.

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



Years EUR/MWh



Product Date Value % chg Chg (EUR)

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ1-21	27.11.2020	20.40	73.6%	8.65
ENOFUTBLQ2-21	27.11.2020	13.50	70.9%	5.60
ENOFUTBLQ3-21	27.11.2020	14.50	54.6%	5.12
ENOFUTBLQ4-21	27.11.2020	23.55	29.0%	5.30
ENOYR-21	27.11.2020	17.95	51.5%	6.10
ENOYR-22	27.11.2020	22.79	20.9%	3.94
ENOYR-23	27.11.2020	24.19	11.6%	2.51
ENOYR-24	27.11.2020	25.45	8.3%	1.95
ENOYR-25	27.11.2020	26.33	6.8%	1.68
NEDEC20	27.11.2020	28.16	5.2%	1.40
NEDEC20	27.11.2020	28.16	5.2%	1.40

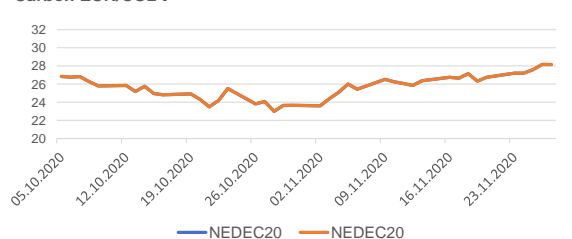
EPAD settlements

27.11.2020 (€/MWh)	2021	2022	2023
SYHEL	19.75	10.60	5.73
SE1- NP System	-0.50	-2.25	-2.50
SE2 - NP System	-0.50	-2.25	-2.50
SE3 - NP System	8.50	4.00	2.78
SE4 - NP System	15.03	7.65	6.63

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	29.11.2020	10.52	401.7%	8.42
NP Area FI	29.11.2020	36.81	73.1%	15.55
NP Area SE1	29.11.2020	11.38	314.2%	8.63
NP Area SE2	29.11.2020	11.38	314.2%	8.63
NP Area SE3	29.11.2020	28.68	105.0%	14.69
NP Area SE4	29.11.2020	28.68	105.0%	14.69

Carbon EUR/CO2 t



COMMENTS ON WEEK 48

POWER FUTURES

Front quarter

In last week's forecasts, the weather type changed to drier and colder after a very wet previous week. Electricity derivatives also saw a sharp upward correction during the first part of the week from the previous week's very low prices. Following the very sharp rise earlier in the week, the rise calmed later in the week, but the week showed a large change.

Annual products

Also, annual products saw a sharp upward correction with the change in weather type. In addition, the rise in the emission allowance and fuel prices provided more support for a rise. As in the earlier fall, also the rise was greatest in the change for the nearest annual product.

SPOT MARKET

Last week, the weather began to turn towards normal. Wind power production fell from hard levels to below normal as the week progressed. Also, temperatures dropped towards normal and slightly increased consumption. Swedish nuclear power production is clearly lower than normal. There have been problems in re-starting the Oskarshamn 3 unit which should take place tomorrow. Likewise, the re-start of the Ringhals 4 unit was pushed back from last week to Thursday this week. Flow rates were very high at the beginning of last week but fell towards normal as the week progressed. The system price rose slightly faster than expected to settle at a weekly level of €10.5/MWh in Finland, wind power production was slightly weaker than normal expect on Tuesday and Wednesday. The delay in the re-start of Swedish nuclear power had the biggest impact on the Finnish spot price. The highest prices were again reached on Friday as the wind dropped and Swedish nuclear power dropped. At the weekly level, the Finnish spot price rose to a level of €36.8/MWh.

EMISSIONS

Last week, the emission allowance price continued to rise. Sentiment brought by coronavirus vaccines and rising energy markets were supportive of the market. The view of emission allowance availability depleting at least for eight weeks from mid-December also brought support. Volumes for the DEC-20 product on ICE were higher than normal last week. On Friday, the emission allowance price rose above the important support level and closed at a level of €28.1/t.

Indicator	ENOFUTBLQ1-21	ENOYR-21
Coal-fired production	1 %	2 %
Coal price	1 %	1 %
Gas price (NBP)	2 %	1 %
German price level	8 %	11 %
Spot	0 %	0 %
Crude oil Brent	1 %	0 %
Water reservoirs	12 %	12 %
EUR/USD FX rate	10 %	10 %
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	48	Chg	47	Chg
ENOFUTBLQ1-21	↗	73.6%	↘	-26.1%
ENOYR-21	↗	51.5%	↘	-23.8%
NP System	↗	401.7%	↘	-25.3%
NEDEC20	↗	5.2%	↗	1.4%

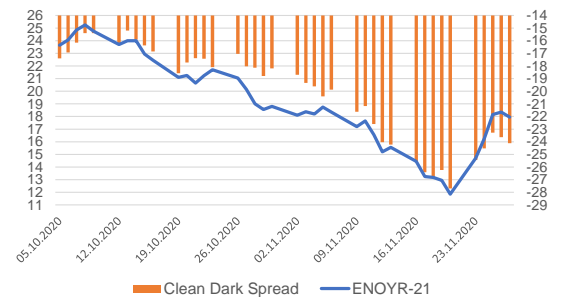
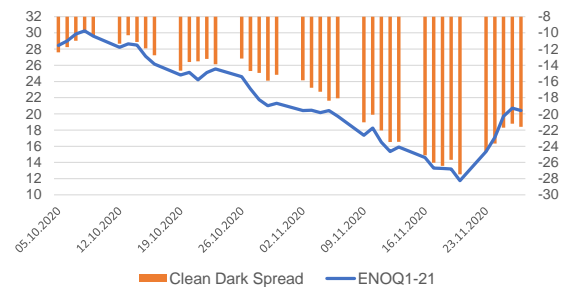
DETERMINANTS AFFECTING THE MARKET ON WEEK 49

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Forsmark 2 (1118 MW), 1.-15.12.2020, failure, in use 0 MW
 Ringhals 4 (1130 MW), 4.11.-3.12.2020, failure, in use 578 MW, 20.11-2.12.2020 in use 0 MW
 Ringhals 1 (881 MW), 25.10.-31.12.2020, maintenance before end of production, in use 600 MW
 Forsmark 1 (988 MW), 27.10.-6.1.2021, maintenance, in use 494 MW

EE-FI (1016 MW), 30.11.-4.12.2020, maintenance, in use 550-908 MW
 NO1-SE3 (2095 MW), transmission restriction ending, connection returning to full capacity starting 2.12.2020

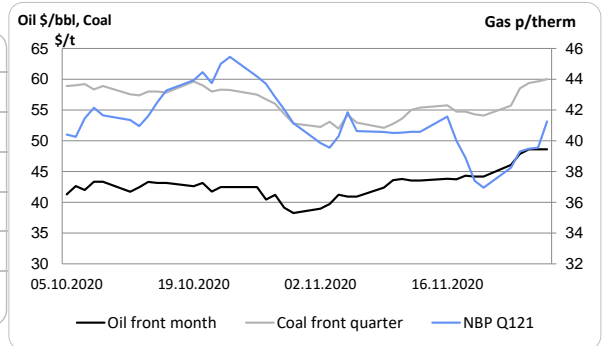
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 83%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 33 % of the maximum



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	10.12
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	16.98
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	3.93
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	3.93
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	10.30
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	14.82

*Average for period between 1.1.2020-30.11.2020.



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 Source for data: intStream, Tilastokeskus

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