

NORDIC ELECTRICITY MARKET

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FUNDAMENTALS SUPPORT CONTINUED RISE

Forecast to week 29:	
ENOFUTBLQ4-19	↗ Bullish (>0%)
ENOYR-20	↗ Bullish (>0%)
NP System	↗ Bullish (>0%)
NEDEC9	↗ Bullish (>0%)

Market signals	spot	Q4-19	YR-20
Hydrologic balance	→	→	→
Precipitation forecast	↓	↓	↓
Temperature forecast	→	→	→
Spot	↗	→	↗
Production and transmission exch.	↗	→	→
Emissions allowance	↗	↗	↗
Coal price	↗	↗	↗
German prices	↗	↗	↗
Technical analysis	↗	↗	↗

FORECAST TO WEEK 29

ELECTRICITY DERIVATIVES

Front quarter

The weather during the current week is very dry until Friday and then precipitation amounts will rise above normal and also temperatures will return to normal. The hydro balance has fallen noticeably in recent weeks, but now an upturn is anticipated. Rising spot prices have provided the basis for the pricing of front products. Rising emission allowance and fuel prices are giving broad support to the market. We expect front products to rise moderately because the weather forecast restricts the pressure brought about by fuel prices.

Annual products

Emission allowance prices have risen strongly and this, coupled with firmer fuel prices and the rising cost of German electricity, is exerting pressure on annual products. Also technical price signals are still rising and it seems likely that the resistance level is near to breaking with the closest annual product. Although also more distant annual products have been rising, the rise has been moderate in euro terms. The price rise as regards these products is restricted by the marginal cost of renewable production. We expect annual products to rise along with emission allowances and coal.

SPOT MARKET

Flow rates are clearly below normal and will start to rise at the weekend following rain. Nordic wind power production will be around normal in the early part of the week but will tail off to become very low towards the end of the week. There will be very little wind power production in Finland during this week. Electricity imports from Russia into Finland will be scant during July because of maintenance work on the transmission link between Russia and Finland. We expect to see a further rise in spot prices this week. We expect the system price to settle at a weekly level averaging €36.5/MWh and the Finnish area price to settle at a level averaging €42.0/MWh.

EMISSIONS

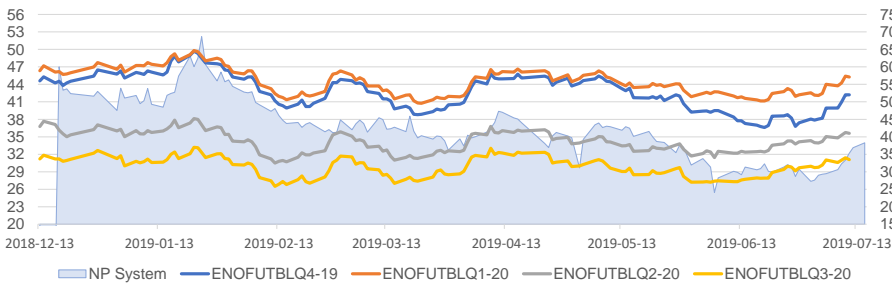
Emission allowance prices are being supported by a strong technical picture, a rise in the gas price and weak wind conditions across much of Europe. It would seem also the weather in Europe is again set to become warmer than normal, which may increase the need for cooling. Fuel and gas prices have been rising strongly and as far as next winter is concerned coal has become a cheaper fuel, which will stoke demand for emission allowances. Support is also being brought by auction volumes in August. These volumes have been halved and this is making some operators to buy enough allowances in advance. The next resistance level is to be found at all-time record figures of €29.69/t and even figures of €30/t. We expect emission allowance prices to rise and to test the next support level.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ4-19	12.7.2019	42.20	10.5%	4.00
ENOFUTBLQ1-20	12.7.2019	45.25	6.6%	2.80
ENOFUTBLQ2-20	12.7.2019	35.60	4.1%	1.40
ENOFUTBLQ3-20	12.7.2019	31.10	3.2%	0.95
ENOYR-20	12.7.2019	37.85	4.7%	1.70
ENOYR-21	12.7.2019	34.68	2.0%	0.68
ENOYR-22	12.7.2019	33.70	1.7%	0.55
ENOYR-23	12.7.2019	33.50	1.6%	0.54
ENOYR-24	12.7.2019	32.95	1.9%	0.62
NEDEC9	12.7.2019	28.82	9.1%	2.41
NEDEC20	12.7.2019	29.22	9.2%	2.46

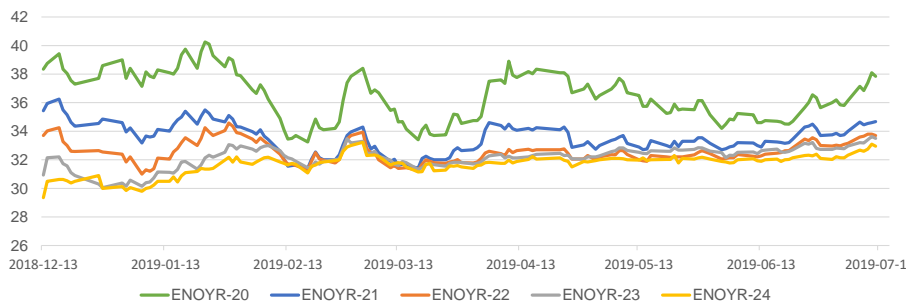
EPAD settlements				
12.7.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	4.45	2.68	2.88	3.03
SE1-NP System	-2.00	-1.50	-2.25	-2.25
SE2 - NP System	-2.00	-1.50	-2.25	-2.25
SE3 - NP System	1.41	1.25	1.35	1.35
SE4 - NP System	2.50	2.60	2.60	2.60

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	14.7.2019	34.46	21.3%	6.06
NP Area FI	14.7.2019	39.81	7.8%	2.87
NP Area SE1	14.7.2019	34.00	20.9%	5.89
NP Area SE2	14.7.2019	34.00	20.9%	5.89
NP Area SE3	14.7.2019	34.52	22.8%	6.41
NP Area SE4	14.7.2019	34.52	22.8%	6.41

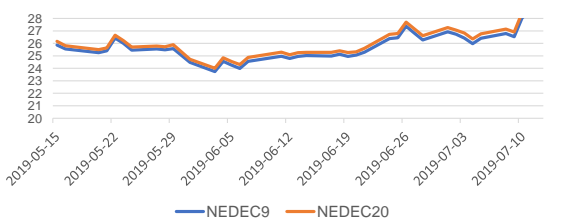
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 28

ELECTRICITY DERIVATIVES

Front quarter

Last week front products started the week on an upward note with the forecast for dry weather and also supported by the rise in fuel prices. The end of the forecast indicated a normalization, but the start has been considerably put off. The hydro balance prediction showed a clear downturn as a result of the dry spell that has been confirmed. Support for a rise was also given by a strengthening of the spot price and rise in fuel prices, which continued throughout the week. On Friday, the weather forecasts began to confirm a change in the weather type to wetter than normal and on Friday the price movement was small, but at the weekly level the price was up by more than €4.00/MWh.

Annual products

The closest annual product started the week on an upward note driven by fuels and the weather. Another strong upward day was seen on Thursday when after the close of the Nordic electricity market on Wednesday emission allowances and coal had shown an ample rise. On Wednesday, the emission allowance price reached an 11-year peak. Coal is at a fairly advantageous level, but last week this was corrected upwards to close at two-month peaks. German electricity prices were naturally also rising and broke through their previous resistance levels. Friday closed on a small downturn after the sharp rise on Thursday and at a weekly level the closest annual product closed up €1.70/MWh.

SPOT MARKET

Last week spot prices showed a sharp rise. Nordic wind power production was weaker than normal apart from Monday. Additionally, dry weather reduced flow rates and improved the control of hydro power producers to a better level. In addition, a sharp rise in the price of futures also increased the valuation of water, which was well reflected as a rise in system prices. At a weekly level, the system price rose by more than €6/MWh. While the Finnish area price failed to rise as strongly, the area price difference was still high because of maintenance work on the transmission link between Russia and Finland and low daily production otherwise.

EMISSIONS

Last week emission allowance prices rose strongly to close at 11-year peaks. Volumes coming up for auction in August have been halved and last week's spell of weak wind conditions have increased demand. Emission allowances were also supported by the prices of other commodities. In addition, the markets again discussed the recommendation that Germany should cancel an amount of emission allowances corresponding to the phasing out of coal power plants. Under the European Commission's announcement, 397 million surplus allowances are to be withdrawn from auctions and placed in the Market Stability Reserve over a period of two years starting in September. The emission allowance price rose €2.41 last week.

DETERMINANTS AFFECTING THE MARKET ON WEEK 29

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Ringhals 4 (1103 MW), maintenance 6 July – 27 August 2019, 680 MW in use
 Forsmark 2 (1118 MW), maintenance 8 – 28 July 2019, 998 MW in use
 Forsmark 3 (1167 MW), annual maintenance 30 June – 16 July 2019, 0 MW in use
 Ringhals 1 (881 MW), maintenance 18 June – 20 July 2019, 750 MW in use

RU-FI (1300 MW), annual maintenance 30 June – 31 July 2019, 400 MW in use

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 85%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 23% of the maximum

AVERAGE SPOT PRICE AND EPAD

Price area (€/MWh)	2012	2013	2014	2015	2016	2017	2018	2019*
NP System	31.20	38.10	29.60	21.00	26.91	29.41	43.99	40.51
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	1.68
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.63
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.63
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-1.41
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	-0.43

*Average for period between 1.1.2019-15.7.2019.

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 Source for data: intStream, Tilastokeskus

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Indicator	ENOFUTBLQ4-19	ENOYR-20
Coal-fired production	87 %	61 %
Coal price	49 %	12 %
Gas price (NBP)	70 %	31 %
German price level	45 %	65 %
Spot	61 %	26 %
Crude oil Brent	3 %	1 %
Water reservoirs	24 %	4 %
EUR/USD FX rate	3 %	3 %
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	28	Chg	27	Chg
ENOFUTBLQ4-19	↗	10.5%	↗	3.8%
ENOYR-20	↗	4.7%	↗	1.4%
NP System	↗	21.3%	↗	-4.0%
NEDEC9	↗	9.1%	↗	0.5%

