

NORDIC ELECTRICITY MARKET

30.12.2019 Markus Herranen, Gasum Portfolio Services Oy

DOWNWARD PRESSURE MAINTAINED BY WET AND MILD WEATHER TYPE

Forecast to week 1:	
ENOFUTBLQ1-20	📉 Bearish (<0%)
ENOYR-21	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC20	📉 Bearish (<0%)

Market signals	spot	Q1-20	YR-21
Hydrologic balance	↓	↓	↓
Precipitation forecast	↓	↓	↓
Temperature forecast	↓	↓	↓
Spot	→	↓	→
Production and transmission exch.	↓	↓	→
Emissions allowance	↓	↓	↓
Coal price	↓	↓	↓
German prices	↓	↓	↓
Technical analysis	→	↓	→

FORECAST TO WEEK 1

ELECTRICITY DERIVATIVES

Front quarter

The weather type is quite mild and at the same time rainy for the time of year. There are no signs of a turn in the weather type, and the hydro balance is rising considerably above the normal level. Quarterly products have already plummeted, but so far both fundamentals and technical analysis are pointing to a continued downtrend.

Annual products

Quarterly products are very weak and the hydro balance is rising considerably above the normal level, which is creating downward pressure on the front-year product, too. For the time being, however, the impact of changes in the hydro situation on the 2021 annual product are very moderate. The prices of coal and natural gas have been persistently weak. We expect a moderate fall in annual product prices.

SPOT MARKET

Nordic wind power products will be very abundant during the current week and the weather will be clearly milder than normal for the time of year. Precipitation rates will also be high, with the exception of Tuesday. Flow rates will rise above the normal level. The rising hydro balance is creating downward pressure on spot prices. Demand for electricity is falling not only due to mild weather but also the New Year public holiday. Finnish wind power production will be abundant during the current week. Russia's New Year holiday season is starting and electricity imports from Russia to Finland will increase from Wednesday onwards. We expect a fall in spot prices. We expect the system price to settle at an average of €31.0/MWh and the Finnish area price to settle at an average of €28.0/MWh.

EMISSIONS

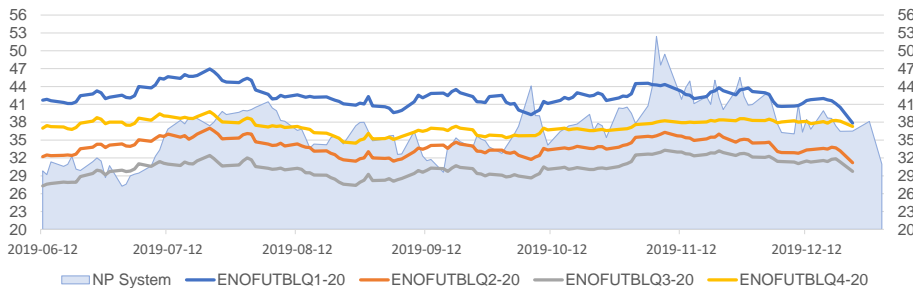
The German electricity market has remained weak and the broad European weather picture is mild and windy, creating downward pressure on emission allowance prices. The downward pressure is, however, restricted by the auction pause that still continues for the current week. On the other hand, participants may already be getting ready for the auctions starting next week. Trading activity is likely to remain low due to the New Year impact. We expect a slight fall in emission allowance prices.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ1-20	27.12.2019	37.85	-8.0%	-3.28
ENOFUTBLQ2-20	27.12.2019	31.20	-7.4%	-2.50
ENOFUTBLQ3-20	27.12.2019	29.75	-6.6%	-2.10
ENOFUTBLQ4-20	27.12.2019	37.30	-2.6%	-1.00
ENOYR-21	27.12.2019	33.90	-0.7%	-0.25
ENOYR-22	27.12.2019	33.13	-0.2%	-0.08
ENOYR-23	27.12.2019	32.85	-0.5%	-0.15
ENOYR-24	27.12.2019	32.30	-1.3%	-0.43
ENOYR-25	27.12.2019	32.17	-1.3%	-0.43
NEDEC20	27.12.2019	26.71	-0.1%	-0.03
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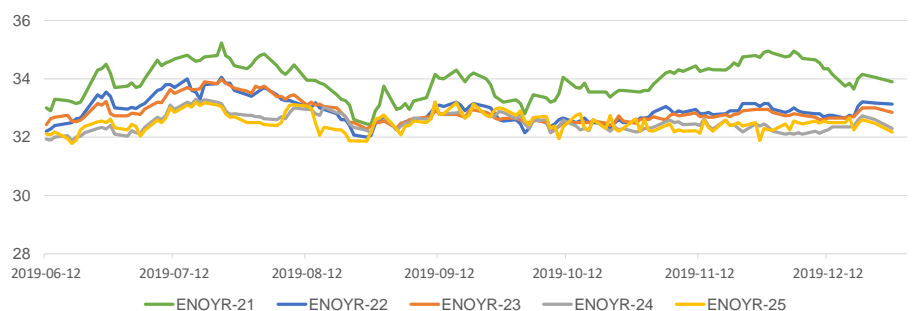
EPAD settlements				
27.12.2019 (€/MWh)	2021	2022	2023	
SYHEL	5.70	3.75	3.75	
SE1-NP System	-1.50	-2.25	-2.25	
SE2 - NP System	-1.50	-2.25	-2.25	
SE3 - NP System	1.25	1.35	1.35	
SE4 - NP System	2.60	2.60	2.60	

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	29.12.2019	35.52	-5.4%	-2.01
NP Area FI	29.12.2019	36.16	-14.8%	-6.27
NP Area SE1	29.12.2019	34.77	-5.6%	-2.07
NP Area SE2	29.12.2019	34.77	-5.6%	-2.07
NP Area SE3	29.12.2019	34.77	-5.9%	-2.17
NP Area SE4	29.12.2019	34.77	-5.9%	-2.17

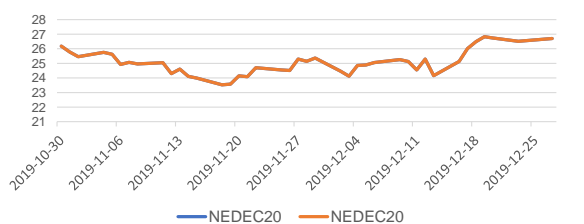
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 52

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products plummeted as the weather forecasts had taken a turn for clearly wetter and milder weather. There were no signs for the weather type changing, and the hydro balance rose significantly in the forecasts. The front-quarter product dropped below the strong support levels, which steepened the downtrend.

Annual products

Movements in annual products have been moderate despite the very weak quarterly products, but the persistently very weak coal and emission allowance prices have created some downward pressure on annual products. On the other hand, emission allowance prices have been stronger and curbed the fall of annual products.

SPOT MARKET

Spot prices fell last week as electricity demand declined due to the impact of Christmas. The weather was also mainly mild while, on the other hand, the weaker-than-normal wind production curbed the decline in spot prices. The Finnish area price settled close to the system price at the weekly level.

EMISSIONS

In the second half of December, emission allowance prices have been supported by the auction pause but at the same time weak development in the German electricity market has restricted the support. Last week, emission allowance prices were seeking direction as trading activity was subdued due to the Christmas impact.

Indicator	ENOFUTBLQ1-20	ENOYR-21
Coal-fired production	34 %	9 %
Coal price	13 %	2 %
Gas price (NBP)	10 %	0 %
German price level	21 %	38 %
Spot	10 %	21 %
Crude oil Brent	18 %	23 %
Water reservoirs	0 %	3 %
EUR/USD FX rate	10 %	9 %
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	52	Chg	51	Chg
ENOFUTBLQ1-20	⬇️	-8.0%	⬇️	-1.2%
ENOYR-21	⬇️	-0.7%	⬇️	0.0%
NP System	⬇️	-5.4%	⬇️	-1.0%
NEDEC20	⬇️	-0.1%	⬆️	10.7%

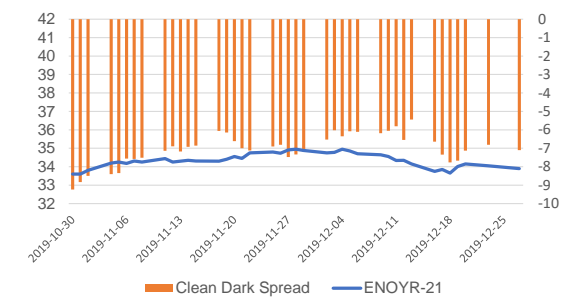
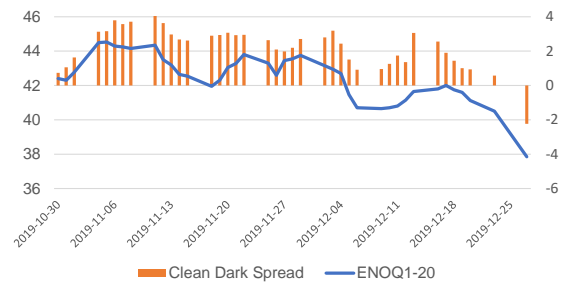
DETERMINANTS AFFECTING THE MARKET ON WEEK 1

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Ringhals 2 (852 MW), maintenance 7.9.-30.12.2019, in use 300 MW

FI-EE (1016 MW), failure 27.12.2019.-1.1.2020, in use 358 MW

- Nordic nuclear power plants are currently operating at a capacity utilization rate of 95%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 45% 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	38.96
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.12
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.99
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.99
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.57
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.88

*Average for period between 1.1.2019-30.12.2019.

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Source for data: intStream, Tilastokeskus

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