

NORDIC ELECTRICITY MARKET

7.1.2020 Markus Herranen, Gasum Portfolio Services Oy

WET AND MILD WEATHER TYPE CONTINUES

Forecast to week 2:

ENOFUTBLQ2-20	📉 Bearish (<0%)
ENOYR-21	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC20	📉 Bearish (<0%)

FORECAST TO WEEK 2

ELECTRICITY DERIVATIVES

Front quarter

The mild and rainy weather type is still continuing. There are no signs of a turn in the weather type, and the hydro balance is still continuing on a clear upward trend. Quarterly products have plummeted, but so far both fundamentals and technical analysis are pointing to a continued downtrend. Quarterly products are, however, already technically strongly oversold and the risk of an upward corrective move has increased.

Annual products

Quarterly products are very weak, the weather is rainy and coal and natural gas prices are still in downtrends. On Monday, the closest support levels were broken by annual products, with products getting very close to last year's lowest winter trading levels and, consequently, close to strong support levels. The support levels may slow the decline down but, on the other hand, the support levels possibly being broken would provide significant further scope for decrease.

SPOT MARKET

Nordic wind power production will continue to be very abundant during the current week and the weather will be clearly milder than normal for the time of year. Electricity demand is at a low level considering the time of year. Precipitation rates are also high and flow rates higher than normal. The wet weather forecasts and rising hydro balance are exerting downward pressure on spot prices. Due to the Russian New Year holiday period, electricity imports from Russia to Finland will remain abundant until Wednesday. Finnish wind power production will be abundant. We expect the system price to settle at an average of €28.0/MWh. We expect the Finnish area price to settle close to the system price at the weekly level.

EMISSIONS

Auctions will restart and the increasing supply may put downward pressure on emission allowance prices. The broad European weather picture is still mild and the weakness of the German electricity market has continued. We expect a fall in emission allowance prices.

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	↔	↓	→

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ2-20	3.1.2020	27.50	-4.0%	-1.15
ENOFUTBLQ3-20	3.1.2020	26.10	-4.4%	-1.20
ENOFUTBLQ4-20	3.1.2020	35.50	-1.5%	-0.55
ENOFUTBLQ1-21	3.1.2020	38.80	-1.3%	-0.50
ENOYR-21	3.1.2020	32.80	-1.1%	-0.35
ENOYR-22	3.1.2020	32.60	-1.1%	-0.35
ENOYR-23	3.1.2020	32.32	-1.4%	-0.46
ENOYR-24	3.1.2020	32.42	0.2%	0.07
ENOYR-25	3.1.2020	32.30	0.8%	0.25
NEDEC20	3.1.2020	25.00	-0.2%	-0.06
NEDEC20	3.1.2020	25.00	-0.2%	-0.06

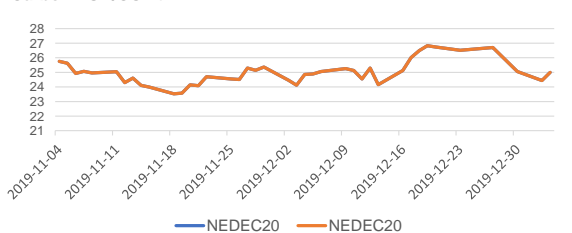
EPAD settlements

3.1.2020 (€/MWh)	2021	2022	2023
SYHEL	5.50	3.50	3.50
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

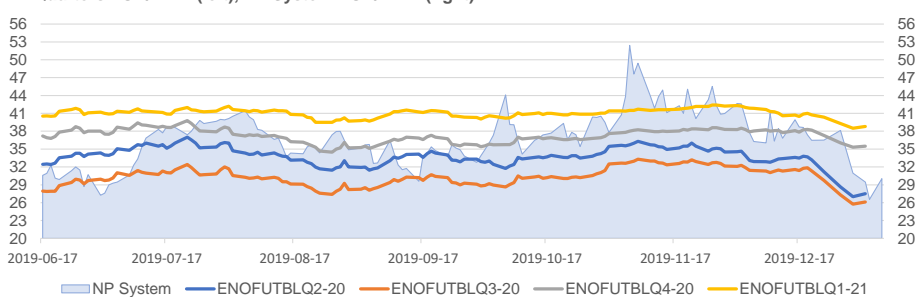
Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	6.1.2020	29.04	-16.4%	-5.68
NP Area FI	6.1.2020	26.47	-22.1%	-7.53
NP Area SE1	6.1.2020	26.46	-20.5%	-6.80
NP Area SE2	6.1.2020	26.46	-20.5%	-6.80
NP Area SE3	6.1.2020	26.47	-20.4%	-6.80
NP Area SE4	6.1.2020	26.47	-20.4%	-6.80

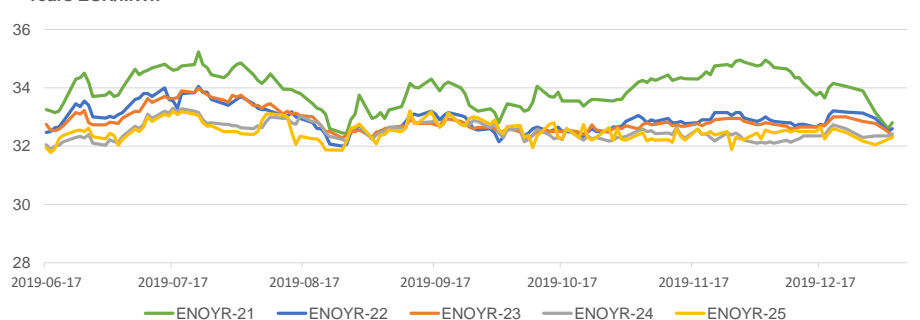
Carbon EUR/CO2 t



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



Years EUR/MWh



COMMENTS ON WEEK 1

ELECTRICITY DERIVATIVES

Front quarter

Last week, quarterly products continued on a steep downward trajectory. The weather forecasts indicate a continuation of the wet and mild weather type without any actual signs of a turn towards a drier or colder weather type. In addition to the rising hydro balance, the downward pressure was strengthened by the very weak technical picture.

Annual products

Annual products fell last week in the wake of quarterly products. The downtrends of coal and natural gas prices also continued. Towards the end of the week, the price of oil surged due to the growing tensions in the Middle East and also provided some support to coal and natural gas prices. The decline of annual product prices also calmed towards the end of the week.

SPOT MARKET

Nordic wind power production was very abundant last week and the weather was clearly milder than normal for the time of year. The week was also considerably rainier than normal, and flow rates rose above normal. The rising hydro balance and wet weather forecasts exerted downward pressure on spot prices. Demand for electricity fell not only due to mild weather but also the New Year public holiday. Finnish wind power production was abundant. Imports of electricity from Russia to Finland were abundant due to Russia's New Year holiday period. Spot prices fell at the weekly level and the Finnish area price settled lower than the system price.

EMISSIONS

Support to emission allowance prices was provided last week by the auction pause that was still on. However, the support provided by the auction pause was restricted by the auctions already scheduled to resume in the following week. The German electricity market also remained weak and the broad European weather picture was still mild and windy. Emission allowance prices dropped slightly at the weekly level.

Indicator	ENOFUTBLQ2-20	ENOYR-21
Coal-fired production	28 %	13 %
Coal price	25 %	5 %
Gas price (NBP)	20 %	2 %
German price level	21 %	38 %
Spot	33 %	19 %
Crude oil Brent	0 %	7 %
Water reservoirs	1 %	8 %
EUR/USD FX rate	0 %	5 %
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)

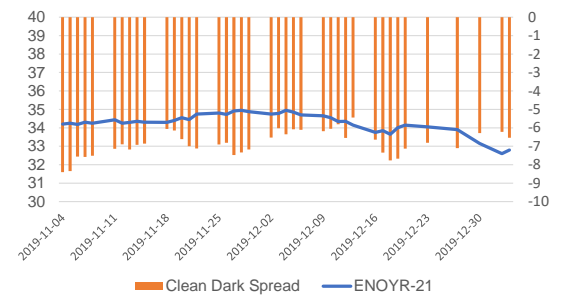
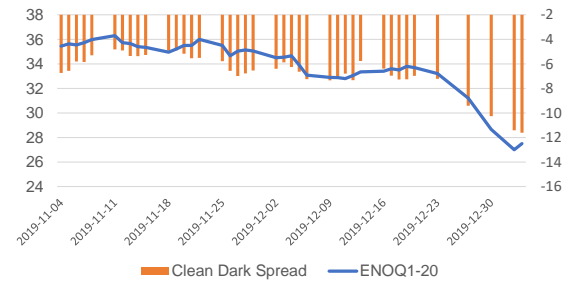
Forecast history	1	Chg	52	Chg
ENOFUTBLQ2-20	⬇️	-4.0%	⬇️	-13.7%
ENOYR-21	⬇️	-1.1%	⬇️	-2.6%
NP System	⬇️	-16.4%	⬇️	-15.2%
NEDEC20	⬇️	-0.2%	⬇️	-5.5%

DETERMINANTS AFFECTING THE MARKET ON WEEK 2

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

FI-EE (1016 MW), failure 27.12.2019-13.1.2020, in use 358 MW

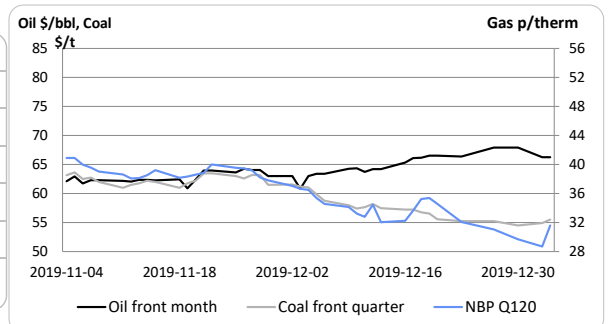
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 100%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 56% of the maximum



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	28.18
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.10	-2.03
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.00	-2.11
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.00	-2.11
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.58	-2.04
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.86	-1.32

*Average for period between 1.1.2020-7.1.2020.



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Source for data: intStream, Tilastokeskus

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