

NORDIC ELECTRICITY MARKET

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WE EXPECT THE MARKET TO TURN BEARISH

Forecast to week 39:

ENOFUTBLQ4-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📈 Bullish (>0%)
NEDEC9	📉 Bearish (<0%)

FORECAST TO WEEK 39

ELECTRICITY DERIVATIVES

Front quarter

The weather type will be very dry until Thursday and the hydro balance will continue to fall. However, towards the end of the week the precipitation rates will get back to normal and will rise above the normal level next week. Consequently, as a whole over the two-week forecast period, there are not going to be any major changes in the hydro balance, but the turn for a wetter-than-normal weather type is bringing downward pressure on quarterly products. We expect quarterly product prices to fall slightly.

Annual products

Broadly across Europe, October will get off to a mild and windy start and therefore the short-term fuel demand outlook is sluggish. Stock levels of natural gas in particular are also high, and concerns about scarcer European nuclear power supply over the winter have eased. Concerns about slowing economic growth have emerged again as the latest European economic figures have been weak. Share indices, fuels and emission allowance prices have taken a downturn. We expect a fall in annual product prices.

SPOT MARKET

Nordic wind power production will decline to a low level after Monday and will be very weak especially on Tuesday. The weather will be dry until Thursday and flow rates will continue to fall. Temperatures are rising and will rise momentarily above the normal level for the time of year towards the end of the week. Nuclear output will increase following the restart of the Oskarshamn 3 unit on Monday and the Loviisa 1 unit on Thursday. Maintenance of the interconnections between Finland and Sweden begins on Thursday. Finnish wind power production will mainly be very scarce. We expect the system price to rise slightly at the weekly level and to settle at an average of €33.5/MWh. We expect the Finnish area price to rise at the weekly level and settle at an average of €50.5/MWh.

EMISSIONS

Auction volumes are up from last week, exerting downward pressure on emission allowance prices. The uncertainty concerning French nuclear power plants has also decreased and fuel prices and electricity markets have taken a downturn. We expect a fall in emission allowance prices.

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	↓	↑	↑

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ4-19	20.9.2019	39.00	2.9%	1.10
ENOFUTBLQ1-20	20.9.2019	43.50	2.5%	1.05
ENOFUTBLQ2-20	20.9.2019	34.65	2.7%	0.92
ENOFUTBLQ3-20	20.9.2019	30.70	2.6%	0.77
ENOYR-20	20.9.2019	36.50	2.4%	0.85
ENOYR-21	20.9.2019	34.20	0.6%	0.20
ENOYR-22	20.9.2019	33.15	0.3%	0.10
ENOYR-23	20.9.2019	32.93	0.5%	0.15
ENOYR-24	20.9.2019	33.13	1.0%	0.33
NEDEC9	20.9.2019	26.57	0.5%	0.12
NEDEC20	20.9.2019	26.82	0.9%	0.23

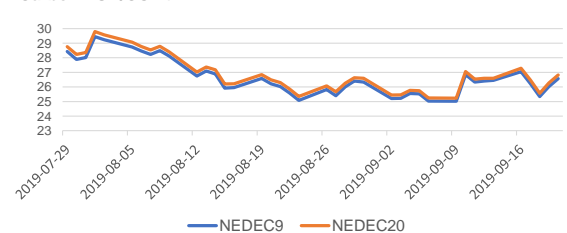
EPAD settlements

20.9.2019 (€/MWh)	2020	2021	2022	2023
SYHEL	7.05	4.85	4.08	4.25
SE1-NP System	-0.50	-1.50	-2.25	-2.25
SE2 - NP System	-0.50	-1.50	-2.25	-2.25
SE3 - NP System	1.88	1.25	1.35	1.35
SE4 - NP System	3.50	2.60	2.60	2.60

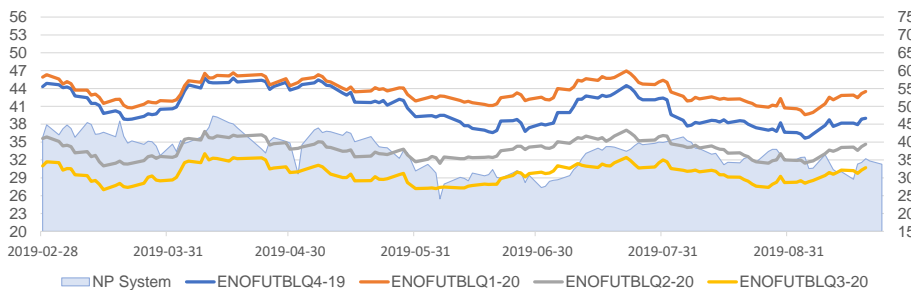
Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	22.9.2019	32.94	5.6%	1.75
NP Area FI	22.9.2019	44.86	-1.1%	-0.51
NP Area SE1	22.9.2019	34.28	6.7%	2.16
NP Area SE2	22.9.2019	34.28	6.7%	2.16
NP Area SE3	22.9.2019	35.02	8.1%	2.62
NP Area SE4	22.9.2019	35.02	8.1%	2.62

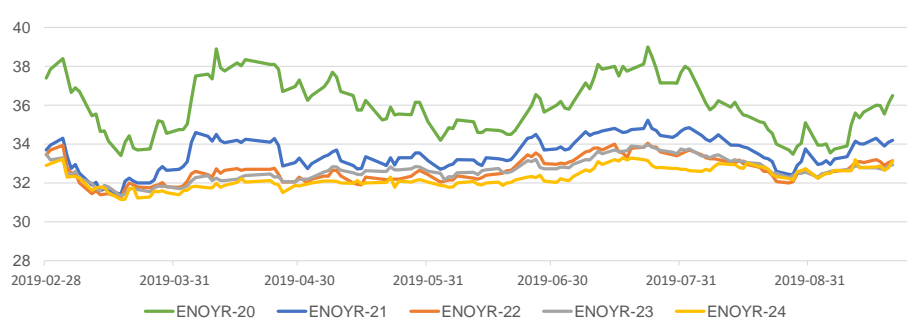
Carbon EUR/CO2 t



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



Years EUR/MWh



COMMENTS ON WEEK 38

ELECTRICITY DERIVATIVES

Front quarter

The weather was dry last week, the hydro balance weakened and quarterly prices continued to rise. The brief dry spell seen in weather forecasts was prolonged, boosting the upward pressure. The bullish fuels and emission allowance prices also provided price support. An end to the dry period was, however, still visible in the weather forecasts, which curbed the upward pressure.

Annual products

The attacks on Saudi Arabian oil facilities made oil prices skyrocket on Monday last week. The steep hike in oil prices also created upward pressure on other fuel prices as well as the electricity markets. On Tuesday, however, oil prices corrected downwards as Saudi Arabia announced that the full recovery of its oil output will be relatively quick. Consequently, after Monday annual products also pulled back. Downward pressure on fuels, emission allowances and annual products was also created by the EDF announcement stating that the welding problems detected at French nuclear power plants will not require any immediate action. Due to the escalating tensions in the Middle East, however, oil prices continued to climb towards the end of the week. Coal, emission allowance and annual product prices also increased in the last days of the week. The upward pressure on the front-year product was strengthened by the dry weather. Annual products ended up on an upward trajectory at the weekly level.

SPOT MARKET

In the first half of last week, Nordic wind power production was abundant and flow rates were high. Spot prices settled low in the first days of the week. The weather type turned dry, however, and flow rates fell towards the end of the week. Wind power production also weakened after the start of the week to a level below normal. Spot prices rose after the first days of the week and the system price increased at the weekly level. The Finnish area price dropped slightly at the weekly level as the Loviisa 2 unit and the interconnection between Southern Sweden and Lithuania were operational again. However, the Finnish area price still settled clearly above the system price as the Loviisa 1 unit was under maintenance and Finnish wind power production also weakened after the first days of the week.

EMISSIONS

In the first half of last week, emission allowance prices were supported by the electricity markets rising in the wake of fuel prices. There was, however, a downturn in the prices as the EDF announced that the detected welding problems will not require immediate action. Towards the end of the week, the emission allowance prices climbed again, pulled by the electricity markets. Towards the end of the week, the prices were also supported by Germany's plans to make its climate targets stricter.

Indicator	ENOFUTBLQ4-19	ENOYR-20
Coal-fired production	65 %	72 %
Coal price	59 %	28 %
Gas price (NBP)	68 %	38 %
German price level	11 %	45 %
Spot	37 %	20 %
Crude oil Brent	60 %	25 %
Water reservoirs	8 %	0 %
EUR/USD FX rate	5 %	6 %
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	38	Chg	37	Chg
ENOFUTBLQ4-19	↗	2.9%	↗	5.7%
ENOYR-20	↗	2.4%	↗	5.7%
NP System	↗	5.6%	↘	-2.8%
NEDEC9	↗	0.5%	↗	5.7%

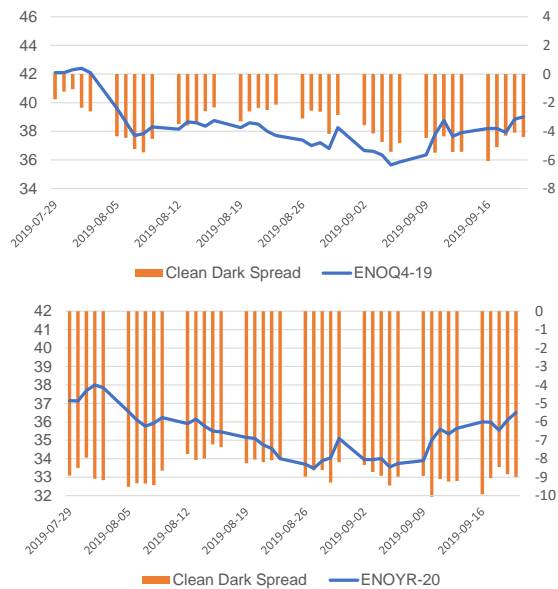
DETERMINANTS AFFECTING THE MARKET ON WEEK 39

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Ringhals 2 (852 MW), maintenance 7.9.-30.12.2019, in use 300 MW
Loviisa 1 (507 MW), maintenance 7. - 26.9.2019, 0 MW in use
Ringhals 4 (1103 MW), maintenance 28.8.-1.10.2019, 0 MW in use
Oskarshamn 3 (1400 MW), maintenance 30.8.-23.9.2019, 0 MW in use

SE3-FI (1200 MW), maintenance 26.9.-3.10.2019, in use 0-800 MW
NO1-SE3 (2145 MW), maintenance 30.7. - 18.10.2019, 1845 MW in use
RU-FI (1300 MW), maintenance 8.-29.9.2019, in use 1100 MW

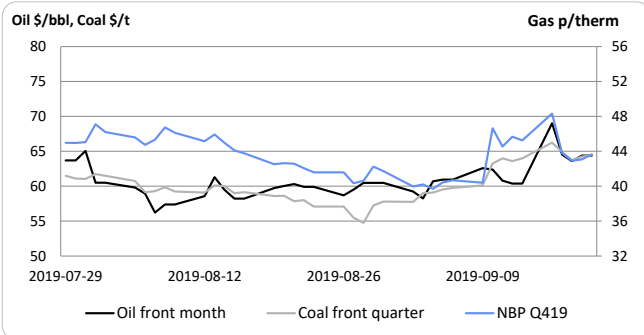
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 70%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 46% of the maximum



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	39.19
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	4.68
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-1.01
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-1.01
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.77
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.50

*Average for period between 1.1.2019-23.9.2019.



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Source for data: intStream, Tilastokeskus

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