

NORDIC ELECTRICITY MARKET

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DOWNWARD PRESSURE CREATED BY WET WEATHER PICTURE AND WEAK EMISSION ALLOWANCE PRICES

Forecast to week 41:

ENOFUTBLQ1-20	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📈 Bullish (>0%)
NEDEC9	📉 Bearish (<0%)

FORECAST TO WEEK 41

ELECTRICITY DERIVATIVES

Front quarter

The weather forecasts turned wetter over the weekend. Precipitation rates will rise above the normal level towards the end of the week and wet weather will continue next week. At the same time, temperatures will rise slightly above the level that is normal for the time of year. The hydro balance will take an upturn again. Downward pressure is also created by the weak emission allowance prices. We expect quarterly products to fall.

Annual products

Downward pressure is created on the front-year product by the wet weather picture, rising hydro balance and falling quarterly products. Downward pressure on annual products is also created by the very weak emission allowance prices. On the other hand, the price of coal has been seeking direction within the fluctuation range. The stock markets are in an expectant mood ahead of the U.S.-China trade talks set to begin on Thursday. Any comments and turns of events may shake fuel and emission allowance prices through stock indices. As the technical picture of emission allowances is weak and the weather forecasts are wet, we regard a bearish trend more likely for annual products than a bullish one.

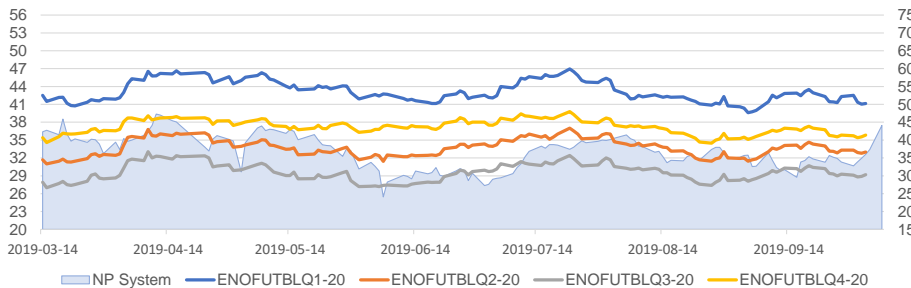
SPOT MARKET

Nordic wind power production will mainly be weaker than normal during the business days of the week, with the output being low on Monday in particular. Flow rates will be below normal during the business days of the week. At the weekend, wind power production will rise close to the normal level. The weather is considerably cooler than normal for the time of year, but temperatures will rise towards the normal as we get closer to the weekend. We expect the system price to fall towards the end of the week but at the weekly level we expect it to rise and to settle at an average of €37.5/MWh. Finnish wind power production will be substantially weaker than normal for the time of year throughout the week. The interconnection between Finland and Northern Sweden will be closed for maintenance on Tuesday. We expect the Finnish area price to rise and to settle at an average of €51.0/MWh.

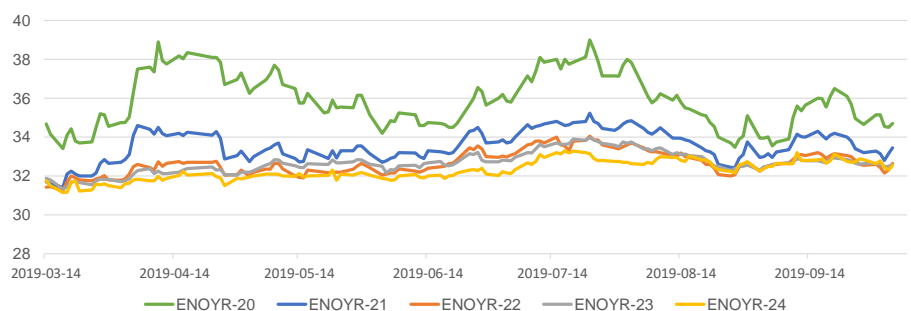
EMISSIONS

Emission allowance prices have taken a turn for a strong bearish trend as a very strong price support level has been broken. Technically, there is room for downward movement in emission allowance prices even all the way down to the €20.5/t level. Auction supply will increase from last week and auction demand has been weak. Brexit is still undefined, and any developments may shake emission allowance prices. Swings may also be caused by the U.S.-China trade talks. We expect emission allowance prices to continue their decline as the technical picture is very weak.

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



Years EUR/MWh



Market signals

	spot	Q1-20	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)
ENOFUTBLQ1-20	4.10.2019	41.15	-0.4%	-0.15
ENOFUTBLQ2-20	4.10.2019	33.00	0.5%	0.15
ENOFUTBLQ3-20	4.10.2019	29.20	0.7%	0.20
ENOFUTBLQ4-20	4.10.2019	35.85	0.8%	0.30
ENOYR-20	4.10.2019	34.70	0.1%	0.05
ENOYR-21	4.10.2019	33.45	0.8%	0.25
ENOYR-22	4.10.2019	32.65	0.3%	0.10
ENOYR-23	4.10.2019	32.60	-0.1%	-0.04
ENOYR-24	4.10.2019	32.55	-0.9%	-0.30
NEDEC9	4.10.2019	23.01	-9.2%	-2.32
NEDEC20	4.10.2019	23.22	-9.2%	-2.34

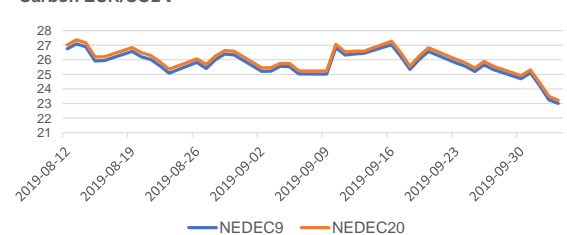
EPAD settlements

4.10.2019 (€/MWh)	2020	2021	2022	2023
SYHEL	7.90	4.85	4.05	4.30
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	2.15	1.25	1.35	1.35
SE4 - NP System	3.38	2.60	2.60	2.60

Week's spot price change

Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	6.10.2019	35.23	4.7%	1.57
NP Area FI	6.10.2019	44.37	-21.1%	-11.83
NP Area SE1	6.10.2019	35.02	1.5%	0.52
NP Area SE2	6.10.2019	35.02	1.5%	0.52
NP Area SE3	6.10.2019	35.06	-1.2%	-0.43
NP Area SE4	6.10.2019	35.06	-1.2%	-0.43

Carbon EUR/CO2 t



COMMENTS ON WEEK 40

ELECTRICITY DERIVATIVES

Front quarter

Quarterly products climbed in the first days of last week as weather forecasts got drier after the weekend. The weather type turned dry and the hydro balance took a downturn. However, the high pressure appeared to be short-lived in the weather forecasts. The end to the dry spell was confirmed further by the forecasts towards the end of the week, and quarterly products took a downturn. Further downward pressure was created by the plummeting emission allowance prices. At the weekly level, the front-quarter product ended up on a slight downward trajectory.

Annual products

In the first days of last week, the front-year product was supported by the weather turning drier and the hydro balance taking a downturn. Annual product prices did, however, take a downturn as a strong emission allowance price support level was broken. Towards the end of the week, however, the annual products rose despite the weak emission allowance prices. Annual products were slightly up at the weekly level.

SPOT MARKET

The system price rose last week. Nordic wind power production was abundant in the first half of the week but declined to a lower-than-normal level after Thursday. At the same time, temperatures fell, and the weather was considerably cooler than normal for the time of year during the last days of the week. Flow rates also fell, and spot prices climbed towards the end of the week. Nuclear output was, however, higher than the level seen a week earlier as the Oskarshamn 3 and Loviisa 1 units were operational again. The Finnish area price declined at the weekly level as the interconnection between Finland and Southern Sweden was back in use. Finnish wind power production was also abundant between Tuesday and Friday.

EMISSIONS

Last week, emission allowance prices plummeted. Weak auction demand continued. On Thursday the prices broke through the strong support level of €27.4/t – the lowest trading figure of the summer. Due to the very weak technical picture, the price decline continued on Friday, too.

Indicator	ENOFUTBLQ1-20	ENOYR-20
Coal-fired production	74 %	78 %
Coal price	60 %	44 %
Gas price (NBP)	70 %	54 %
German price level	11 %	45 %
Spot	31 %	25 %
Crude oil Brent	48 %	32 %
Water reservoirs	5 %	1 %
EUR/USD FX rate	13 %	14 %
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	40	Chg	39	Chg
ENOFUTBLQ1-20	↗	-0.4%	↘	-5.1%
ENOYR-20	↗	0.1%	↘	-5.1%
NP System	↻	4.7%	↗	-2.6%
NEDEC9	↻	-9.2%	↘	-4.7%

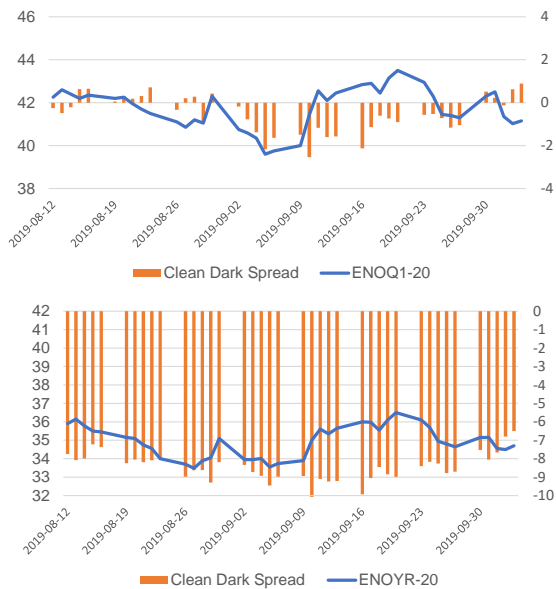
DETERMINANTS AFFECTING THE MARKET ON WEEK 41

RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY

Forsmark 3 (1172 MW), failure 12.-16.10.2019 in use 0 MW
 Ringhals 2 (852 MW), maintenance 7.9.-30.12.2019, in use 300 MW
 Ringhals 4 (1103 MW), maintenance 28.8.-15.10.2019, 0 MW in use

SE1-FI (1500 MW), maintenance 8.-11.10.2019, in use 400 MW
 NO1-SE3 (2145 MW), maintenance 30.7. – 18.10.2019, 1845 MW in use

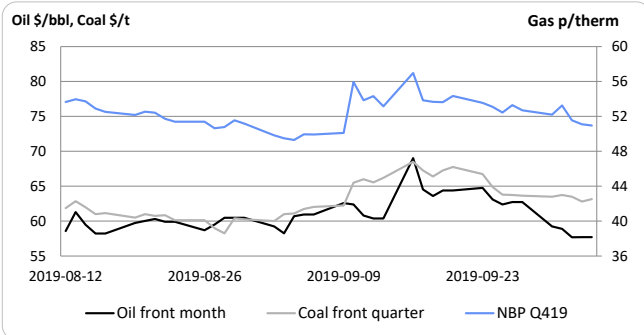
- Nordic nuclear power plants are currently operating at a capacity utilization rate of 86%
- RU-FI transmission profile varies due to capacity payments, average imports from Russia last week were 57% of the maximum



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	38.99
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	5.28
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.96
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.96
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.70
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	0.73

*Average for period between 1.1.2019-7.10.2019.



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