

NORDIC ELECTRICITY MARKET

23.4.2019 Markus Herranen, Gasum Portfolio Services Oy

A TURN OF THE WEATHER BRINGS DOWNWARD PRESSURE

Forecast to week 17:

ENOFUTBLQ3-19	📉 Bearish (<0%)
ENOYR-20	📉 Bearish (<0%)
NP System	📉 Bearish (<0%)
NEDEC9	📈 Bullish (>0%)

Market signals

	spot	Q3-19	YR-20
Hydrologic balance	↑	↑	↑
Precipitation forecast	↓	↓	↓
Temperature forecast	↓	↓	→
Spot	↓	↓	→
Production and transmission exch.	↑	→	→
Emissions allowance	↑	↑	↑
Coal price	↑	↑	↑
German prices	↑	↑	↑
Technical analysis	↓	↑	↑

FORECAST TO WEEK 17

ELECTRICITY DERIVATIVES

The nearest quarter

The weather is still dry this week and quite warm considering the time. However, weather forecasts show the weather turning at the end of the week. The weather is getting damper than normal, and temperatures will fall next week close to the normal levels. The weather likely to continue to be damper than normal and the hydrobalance will improve. We expect the near term products to fall.

Annual products

The upward pressure on the annual products is brought by the very strong price of oil, which in turn supports the price of coal. The strong emission allowances price will also continue to support annual products. However, downward pressure to the nearest annual product will be brought by the turn of the weather to more humid than normal. We expect a slight decrease in the nearest annual products, but we expect the annual products following the nearest annual products to move close to last week's closing levels.

SPOT MARKET

The weather is clearly warmer than usual and will stay warm this week. Due to the warm weather, melting is fast, and the discharges have risen above normal. Towards the end of the week, discharges continue to rise. Nordic wind production is abundant until wind production returns to normal on Thursday, and wind production falls to a lower level than normal at the end of the week. Wind production in Finland is already falling close to normal levels after Tuesday. We expect spot prices to continue falling on a weekly basis. We expect the Finnish regional price to be lower than the system price at the weekly level.

EMISSIONS

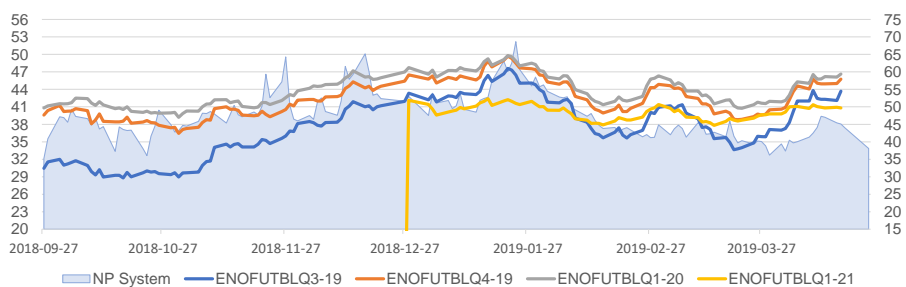
The price of emission rights is still very strong in a technical uptrend. In addition to a very strong technical picture, the emission allowances price is supported for the remaining week by the return date of emission allowances at the end of April. However, the price of emission allowances has risen sharply and the risk of a downward correction has risen. The downward pressure on the price of emission allowances can be brought back by the declining price of natural gas.

Product	Date	Value	% chg	Chg (EUR)
ENOFUTBLQ3-19	17.4.2019	43.70	3.3%	1.40
ENOFUTBLQ4-19	17.4.2019	45.75	1.8%	0.80
ENOFUTBLQ1-20	17.4.2019	46.63	1.9%	0.85
ENOFUTBLQ1-21	17.4.2019	40.80	-0.3%	-0.13
ENOYR-20	17.4.2019	38.35	1.6%	0.59
ENOYR-21	17.4.2019	34.25	0.5%	0.18
ENOYR-22	17.4.2019	32.70	0.2%	0.05
ENOYR-23	17.4.2019	32.38	0.8%	0.25
ENOYR-24	17.4.2019	32.05	0.5%	0.17
NEDEC9	17.4.2019	27.43	3.2%	0.85
NEDEC20	17.4.2019	27.74	3.1%	0.83

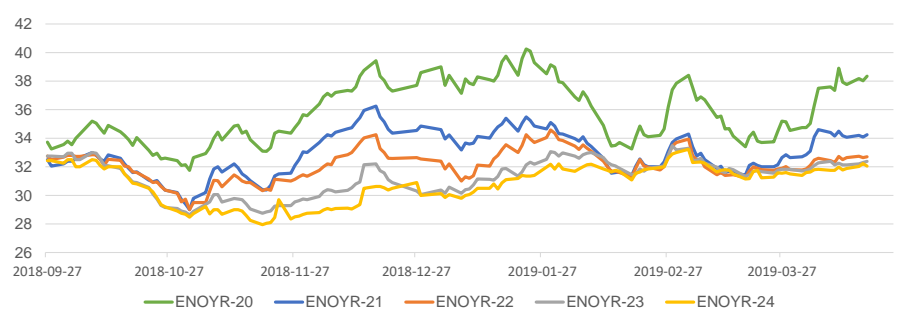
EPAD settlements				
17.4.2019 (€/MWh)	2019	2020	2021	2022
SYHEL	3.85	3.08	3.08	3.25
SE1-NP System	-1.00	-1.40	-1.40	-1.40
SE2 - NP System	-1.00	-1.40	-1.40	-1.40
SE3 - NP System	1.45	1.65	1.50	1.75
SE4 - NP System	3.35	3.38	3.38	3.40

Week's spot price change				
Price area (€/MWh)	Date	Value	% chg	Chg (EUR)
NP System	22.4.2019	42.17	-5.7%	-2.54
NP Area FI	22.4.2019	43.17	-5.9%	-2.69
NP Area SE1	22.4.2019	41.37	-6.9%	-3.05
NP Area SE2	22.4.2019	41.37	-6.9%	-3.05
NP Area SE3	22.4.2019	41.37	-6.9%	-3.05
NP Area SE4	22.4.2019	41.37	-6.9%	-3.05

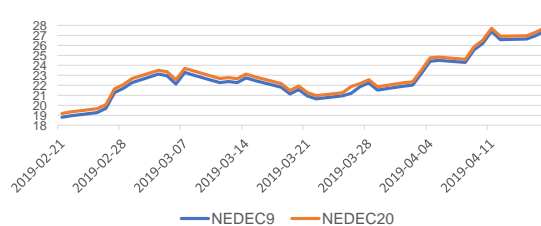
Quarters EUR/MWh (left), NP System EUR/MWh (right)



Years EUR/MWh



Carbon EUR/CO2 t



COMMENTS ON WEEK 16

**ELECTRICITY DERIVATIVES**

**The nearest quarter**

Last week, near term products were slightly on the decline at the beginning of the week when weather forecasts showed the stepping aside of high-pressure next week and, as a result, the turn of the weather type damper than normal. However, after Tuesday, in the weather forecasts, the stepping aside of high pressure seemed to be delayed and, as a result, the weather dried up. With a strong rise of Wednesday, near term products remained on the rise on the weekly level.

**Annual products**

Last week, downward pressure on the near term annual products at the beginning of the week was brought by a damper weather type of the next week. However, the price of emission allowances continued to develop strongly, and the weather also dried up after the beginning of the week. As a result, the nearest annual product rose on a weekly basis. There were no significant changes in fuel prices during the week.

**SPOT MARKET**

Last week, spot prices fell on a weekly level. Temperatures started to rise clearly, and Easter also dropped significantly in electricity demand. However, wind production was weaker than normal, and discharges were also low. However, at the end of the week, melting accelerated due to the warm weather and the discharges increased close to normal. The Finnish regional price was higher than the system price in the early part of the week due to weak wind production in Finland, but at the weekly level, the Finnish area price was only slightly higher than the system price.

**EMISSIONS**

The price of emission allowances continued to rise last week. Support for the price of emission allowances has been maintained by a very strong technical picture, the approaching return date of the emission allowances of the end of April and a scant auction offer due to Easter.

Indicator	ENOFUTBLQ3-19	ENOYR-20
Coal-fired production	15 %	31 %
Coal price	4 %	0 %
Gas price (NBP)	2 %	0 %
German price level	5 %	0 %
Spot	25 %	29 %
Crude oil Brent	41 %	38 %
Water reservoirs	2 %	15 %
EUR/USD FX rate	1 %	4 %
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	16	Chg	15	Chg
ENOFUTBLQ3-19	↘	3.3%	↗	5.2%
ENOYR-20	↗	1.6%	↗	0.7%
NP System	↘	-5.7%	↗	17.5%
NEDEC9	↗	3.2%	↗	8.5%

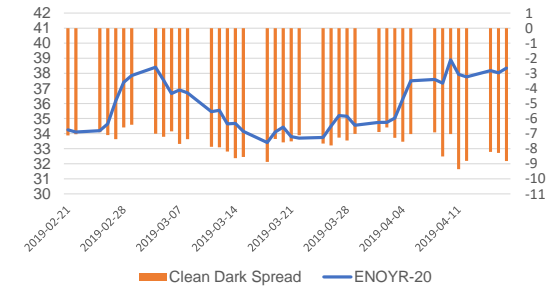
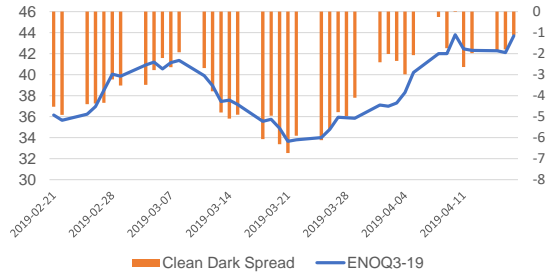
DETERMINANTS AFFECTING THE MARKET ON WEEK 17

**RESTRICTIONS IN PRODUCTION AND TRANSMISSION CAPACITY**

Ringhals 2 (852 MW), malfunctioning 23. - 30.04.2019 in use 452 MW, 05. - 24.04.2019 in use 0 MW  
 Ringhals 3 (1063 MW), service 05.03 - 30.04.2019, in use 770 MW  
 Forsmark 1 (984 MW), service 22.04 - 07.06.2019, in use 0 MW

EE-> FI (1016 MW), service 24-25.04.2019, in use 908 MW

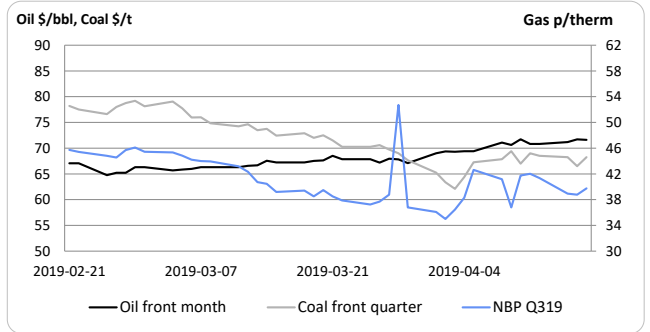
- The utilization rate of Nordic nuclear power plants is currently 82%
- RU-FI transfer profile varies due to capacity charges, average import from Russia last week was 62% of maximum



**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	45.85
NP Area FI - NP System	5.50	3.10	6.40	8.70	5.54	3.78	2.81	0.63
NP Area SE1 - NP System	0.50	1.10	1.80	0.20	2.04	1.43	0.24	-0.81
NP Area SE2 - NP System	0.60	1.10	1.80	1.00	2.04	1.43	0.24	-0.81
NP Area SE3 - NP System	1.10	1.40	2.00	1.00	2.33	1.83	0.55	-0.47
NP Area SE4 - NP System	3.00	1.80	2.30	1.90	2.62	2.77	2.37	-0.13

\*Average for period between 1.1.2019-23.4.2019.



Copyright 2018 Gasum Oy – All rights reserved  
 Source for data: intStream, Tilastokeskus

Disclaimer: This document is issued by Gasum Oy in jointly by its subsidiaries Gasum Portfolio Services Oy and intStream Oy. The information in this document, which is for private circulation only, was obtained from sources believed to be reliable but its accuracy or completeness cannot be guaranteed. No liability whatsoever is accepted for any direct or consequential loss arising from the use of this document. This document is not intended for the use of private customers. Do not distribute. If you received this from a third party that is not affiliated to Gasum Oy, please let us know. For all inquiries and notifications, contact us at support@intstream.fi.