

CORONA-ENERGY MARKET RADAR GERMANY

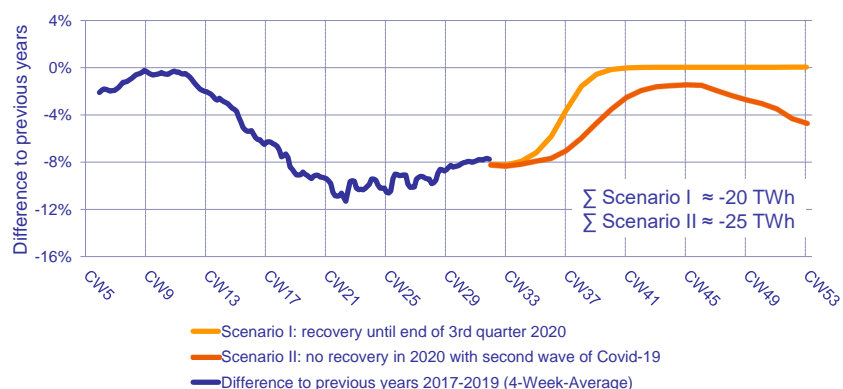
19.08.2020

KEY FACTS

- According to AGEBA data, natural gas shows the lowest decrease in fossil fuel consumption in the first half of 2020 (-5%), the other fossil fuels decrease by -7% (mineral oils) and up to -35% (lignite).
- The ifo business climate index rose for the third time in a row. Companies are more optimistic about the future than in previous months and, according to the Ifo-Institute, the signs are pointing towards recovery.
- Electricity consumption hit a low in calendar week 22, at approximately -12% compared to previous years. Since then, consumption has shown a slight upward trend.

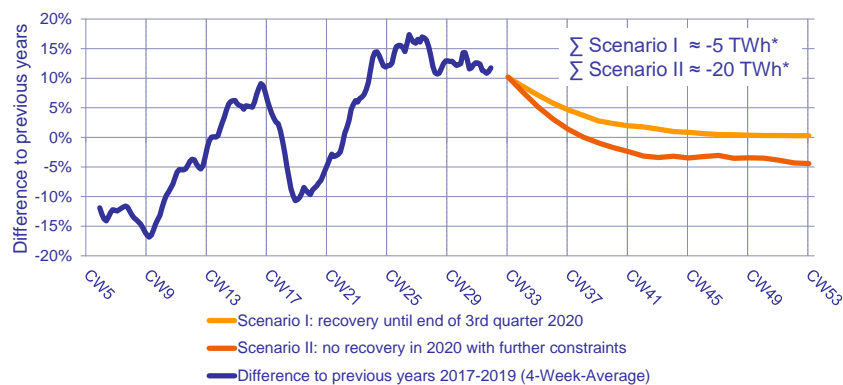
Power consumption

- Most recently (in calendar week 32), underconsumption is about -8%
- In the optimistic scenario, consumption normalizes to the level of previous years by week 41 (corresponds to -20 TWh underconsumption for the entire year)
- In the pessimistic scenario, underconsumption in the entire year reaches 25 TWh ($\approx 5\%$ of annual consumption)



Gas consumption

- Surplus gas consumption by power plants continues (≈ 16 TWh since CW 10 compared to previous years) and overcompensates the Covid-19-related lower industry consumption and temperature-related lower heat demand in Q1
- Industrial consumption has stabilized. The cumulative underconsumption in the current year is -11 TWh



Scenario I: Normalization of energy demand in the 3rd quarter

Scenario II: Partial normalization of energy demand and renewed pandemic-related constraints in the 4th quarter

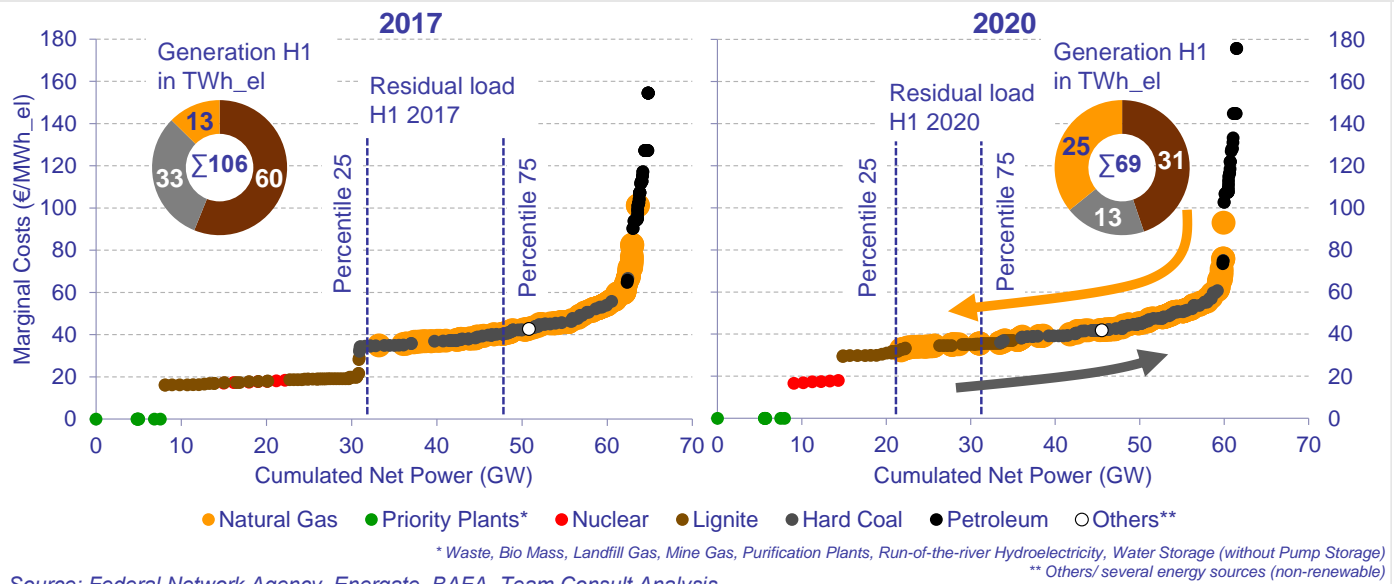
Reservation: Graphs and numbers are constantly updated

GDP forecasts	Before 01.20	Last forecast	Current forecast	Energy prices	17.08.20 ¹	Ø 2019 ²	Difference
Ifo-Institute	+1.1%	-6.6%	-6.7%	Power [EUR/MWh]	34.57	48.26	-13.69
IfW Kiel	+1.1%	-7.1%	-6.8%	Gas [EUR/MWh]	8.25	18.94	-10.69
DIW Berlin	+1.8%	<-6.0%	-9.4%	Oil [USD/bbl]	45.37	61.14	-15.77
HWWI	+1.4%	-2.5%	-5.0%	Coal [USD/t]	48.80	69.86	-21.06

1 Month Ahead Price, Source: EEX, ICE, Spectron

2 Arithmetic average of the year ahead futures of all trading days in 2019, Source: EEX, ICE, Spectron

Impact of fuel costs from 2017 and 2020 on Germany's Merit-Order



Source: Federal Network Agency, Enertage, BAFA, Team Consult Analysis

- The currently low gas prices and the increased EUA certificate prices lead to marginal costs advantages for gas-fired power plants, whereby they move forward in the merit order and partially displace hard coal and lignite-fired power plants.
- The trend is confirmed by the increase in electricity generation from gas-fired power plants and the reduction in power production from lignite and hard coal.

Development in key branches of the manufacturing industry

Branch of industry	Ifo-Index (2020)			Power		Gas	
	May	June (new)	July (new)	Ø Annual Consumption (share of manuf. industry)	Current Covid-19 effect ¹	Ø Annual Consumption (share of manuf. industry)	Current Covid-19 effect ¹
Chemical industry (WZ08-20)	●	●	○	52 TWh (21%)	-0.4%	119 TWh (32%)	0%
Metal industry (WZ08-24)	●	●	●	42 TWh (17%)	-7%	37 TWh (10%)	-7%
Glass and ceramic industry (WZ08-23)	●	○	○	13 TWh (5%)	-3%	30 TWh (8%)	-3%
Paper industry (WZ08-17)	●	●	●	18 TWh (7%)	-0.3%	28 TWh (8%)	-4%
Automotive industry (WZ08-29)	●	●	●	16 TWh (7%)	-3%	13 TWh (4%)	-3%

Ifo-Index: > 45: ● 15 to 45: ● -15 to 15: ○ -15 to -45: ● < -45: ●

- Estimated change of consumption per branch is based on the historic relation of the Ifo-index and production index as well as the relation of production level and power and gas consumption

¹ Estimation of Covid-19-related effect on consumption in the last month; analysis by Team Consult based on the latest Ifo-index data

Imprint

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