German Zero

Das Treibhausgasbudget und die Bilanzierung

18.11.2021– Benedikt Heyl

Plan

German Zero

1. Pariser Abkommen und IPCC Budget
2. Einteilung auf Nationen
3. Übriges Budget Deutschland
4. Nicht-CO2 Emissionen
5. Klimaneutralitäts und Emissionsziele
6. Sektorziele und das Klimaschutzgesetz
7. Ausblick Bilanzierung

Pariser Ziele und globales Budget

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(a) Holding the increase in the global average temperature to **well below 2 °C** above pre-industrial levels and to **pursue efforts** to limit the temperature increase **to 1.5 °C** above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;

[START TABLE 5.8 HERE]

Table 5.8: The assessed remaining carbon budget and corresponding uncertainties. Assessed estimates are provided for additional human-induced warming expressed as global average surface air temperature since the recent past (2010–2019), which *likely* amounted to 0.8 to 1.3 with a best estimate of 1.07°C relative to 1850–1900 (Table 3.1 in Chapter 3).

Additional warming since 2010–2019 *(1)	Warming since 1850–1900 *(1)	Remaining carbon budget*(2) starting from 1 January 2020 and subject to variations and uncertainties quantified in the columns on the right					Scenario variation	Geophysical uncertainties			
°C	°C	Percentiles of TCRE*(3)*(4) PgC ($GtCO_2$)					Non-CO_2 scenario variation *(5)	Non-CO_2 forcing and response uncertainty *(6)	Historical temperature uncertainty *(1)	ZEC uncertainty *(7)	Recent emissions uncertainty*(8)
		17th	33rd	50th	67th	83rd	PgC ($GtCO_2$)	PgC ($GtCO_2$)	PgC ($GtCO_2$)	PgC ($GtCO_2$)	PgC ($GtCO_2$)
0.23	1.3	100 (400)	60 (250)	40 (150)	30 (100)	10 (50)	Values can vary by at least ±60 PgC (±220 $GtCO_2$) due to choices related to non-CO_2 emissions mitigation	Values can vary by at least ±60 PgC (±220 $GtCO_2$) due to uncertainty in the warming reponse to future non-CO_2 emissions	±150 PgC (±550 $GtCO_2$)	±115 PgC (±420 $GtCO_2$)	±6 PgC (±20 $GtCO_2$)
0.33	1.4	180 (650)	120 (450)	90 (350)	[illegible]	50 (200)					
0.43	1.5	250 (900)	180 (650)	140 (500)	0 (400)	80 (300)					
0.53	1.6	330 (1200)	230 (850)	180 (650)	[illegible]	110 (400)					
0.63	1.7	400 (1450)	290 (1050)	230 (850)	190 (700)	150 (550)					
0.73	1.8	470 (1750)	350 (1250)	280 (1000)	230 (850)	180 (650)					
0.83	1.9	550 (2000)	400 (1450)	320 (1200)	270 (1000)	120 (800)					
0.93	2	620 (2300)	460 (1700)	370 (1350)	310 (1150)	250 (900)					
1.03	2.1	700 (2550)	510 (1900)	420 (1500)	560 (1250)	280 (1050)					
1.13	2.2	770 (2850)	570 (2100)	460 (1700)	390 (1400)	310 (1150)					
1.23	2.3	850 (3100)	630 (2300)	510 (1850)	430 (1550)	350 (1250)					
1.33	2.4	920 (3350)	680 (2500)	550 (2050)	470 (1700)	380 (1400)					

Mögliche Verteilung

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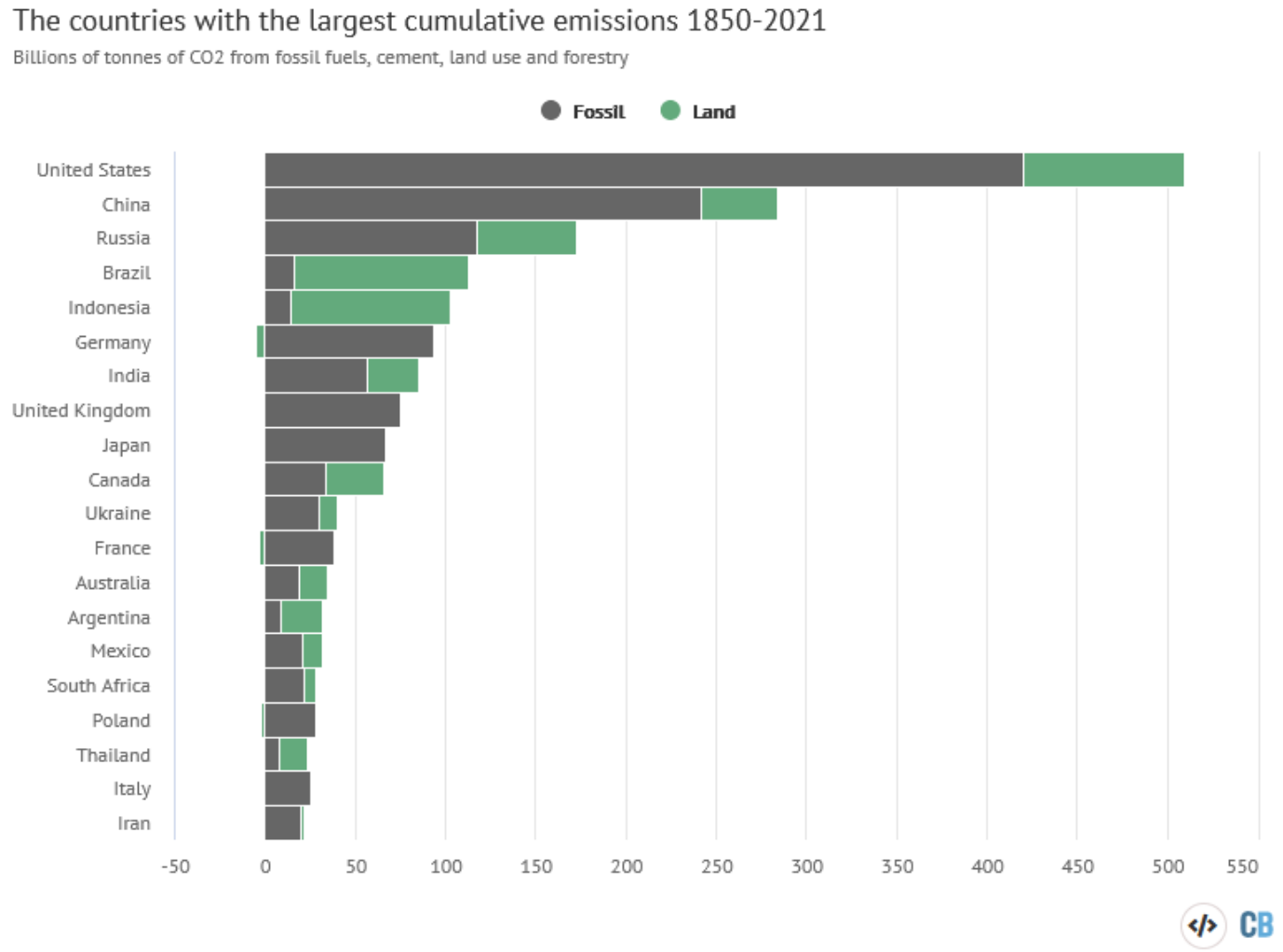
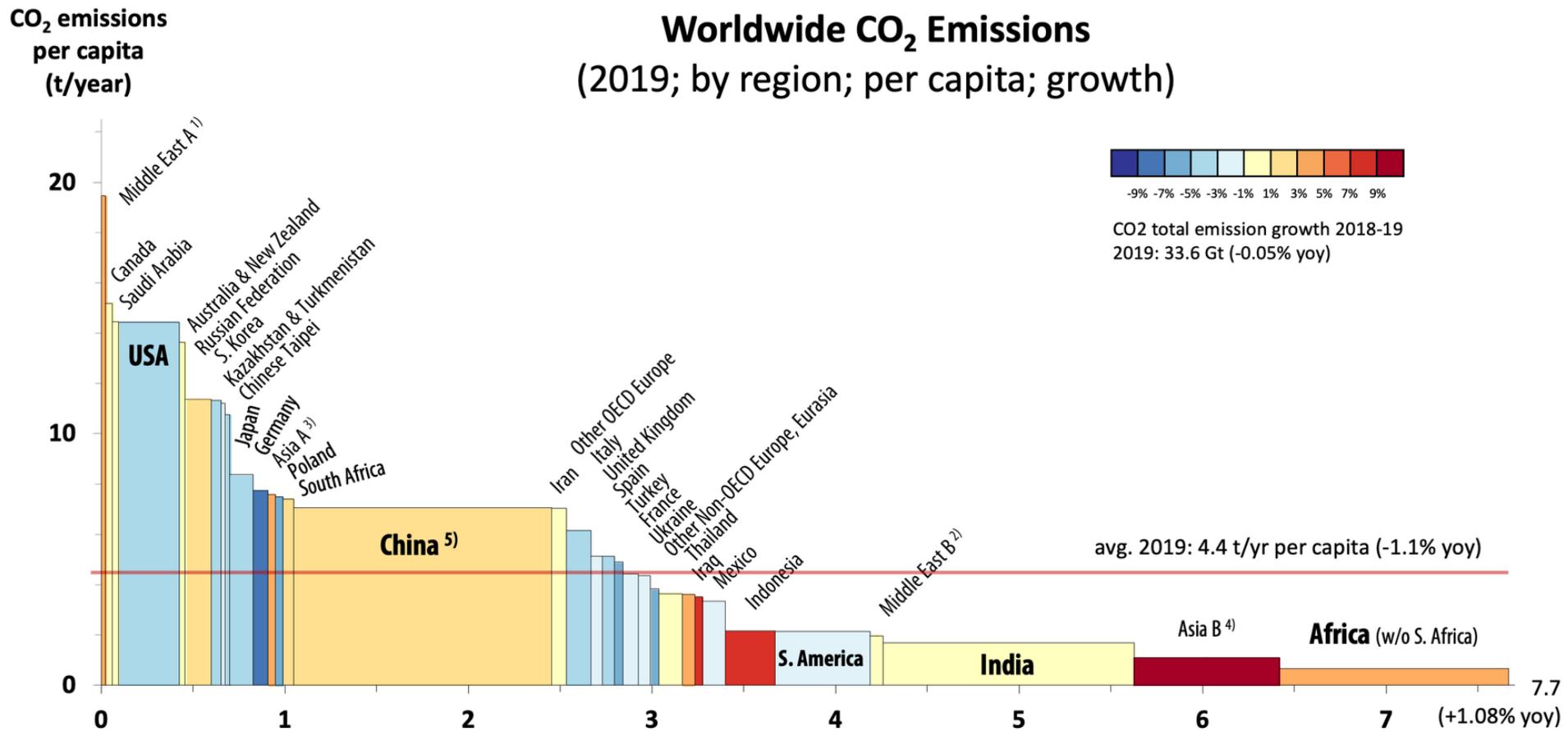


Wiki

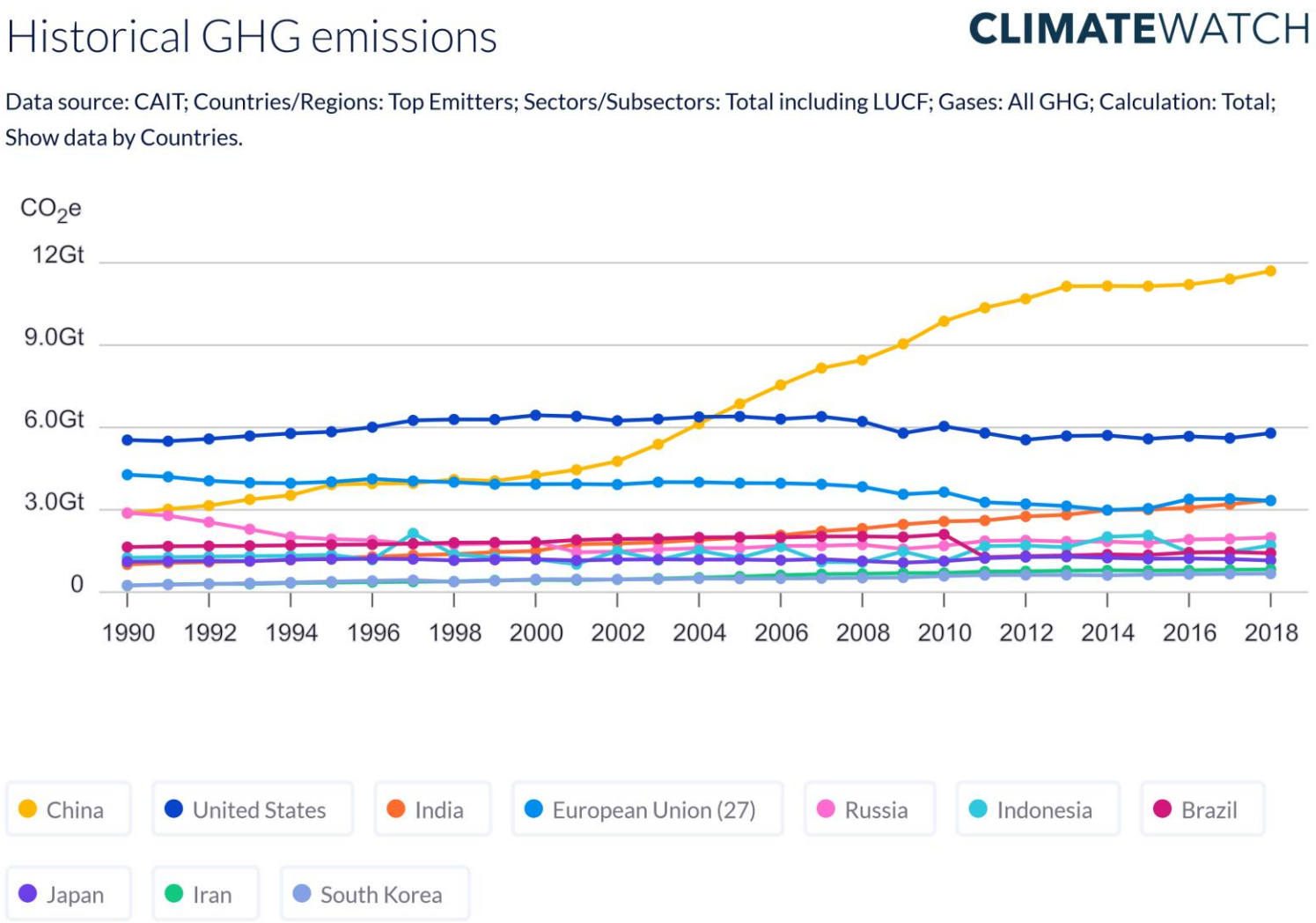
Mögliche Verteilung

German Zero



Mögliche Verteilung

German Zero



Übriges Budget Deutschland

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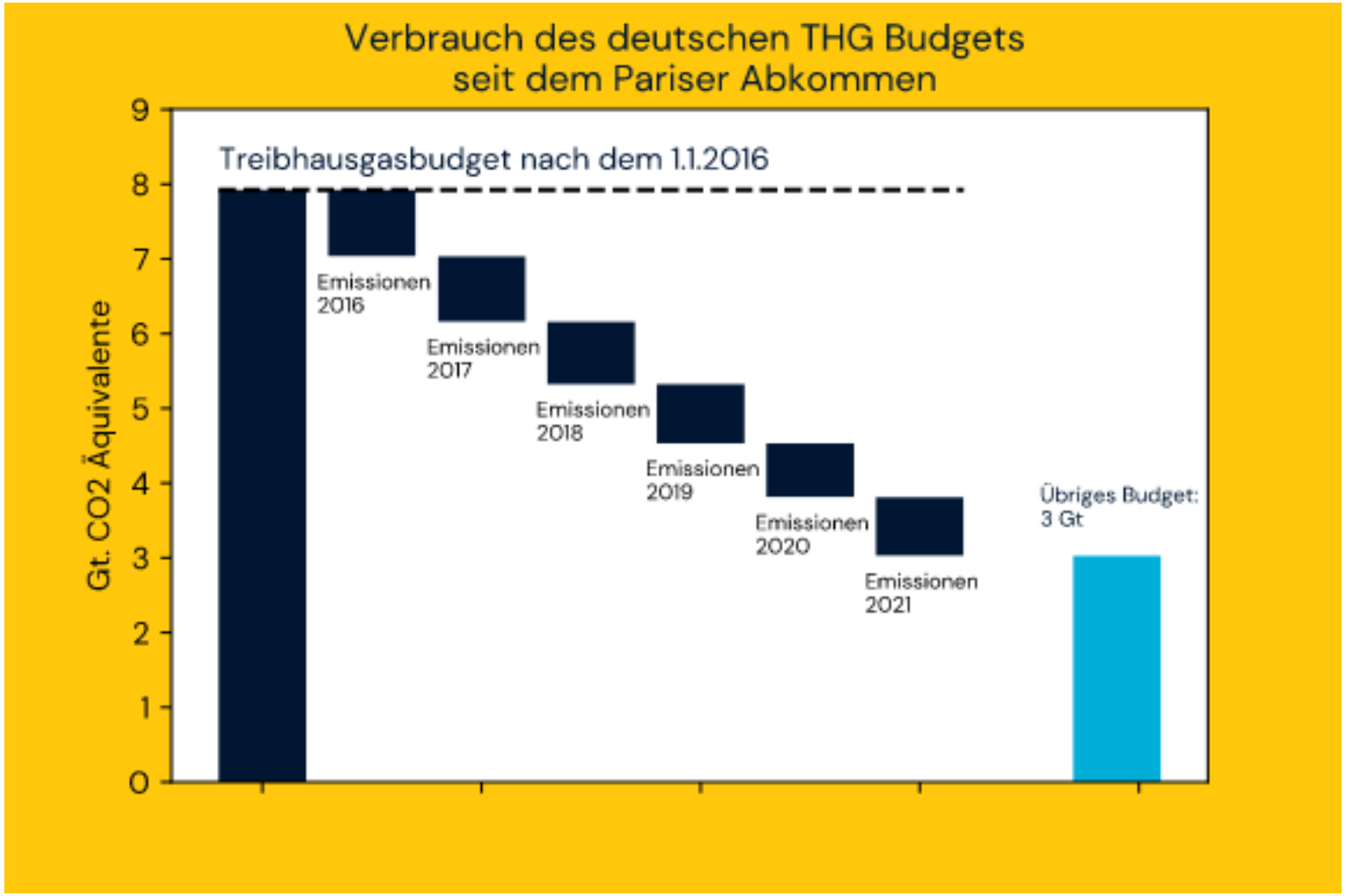
- **3 Gt CO2e ab 2022**
- Verteilt nach Anteil an der Weltbevölkerung 1.1.2016 ~ 1,12%
- Regionales Zuordnungsprinzip
- Grandfathering der nicht-CO2 Emissionen



Nicht CO2 Emissionen

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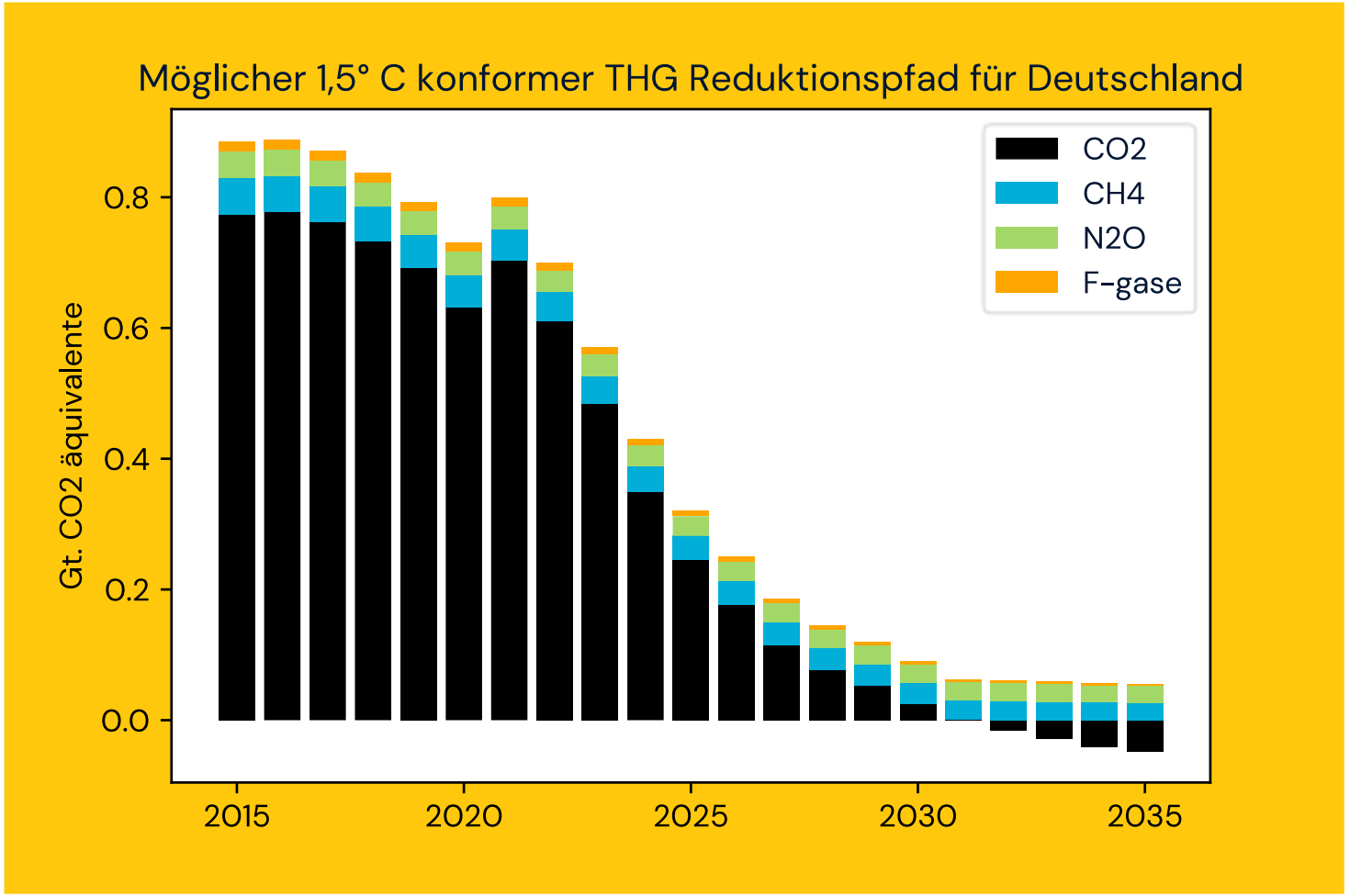
- Methan, Lachgas und andere Stickoxide, F-Gase
- Weniger Masseanteil, stärkerer Klimaeffekt
- Meist kein Teil der Budgets, bei uns schon
- Zukünftige Emissionen entsprechen dem Anteil der Deutschen Emission an den globalen Emissionen 2016



Klimaneutralitäts- und Emissionsziele

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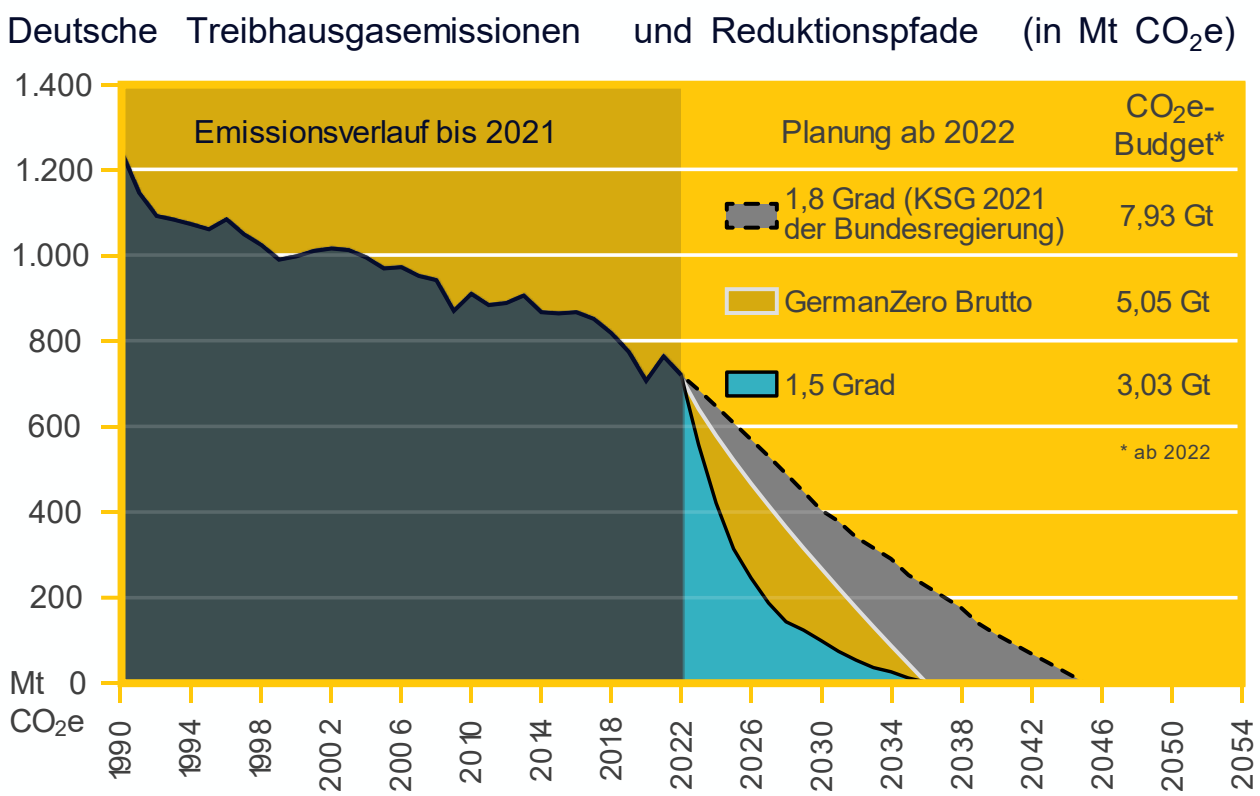
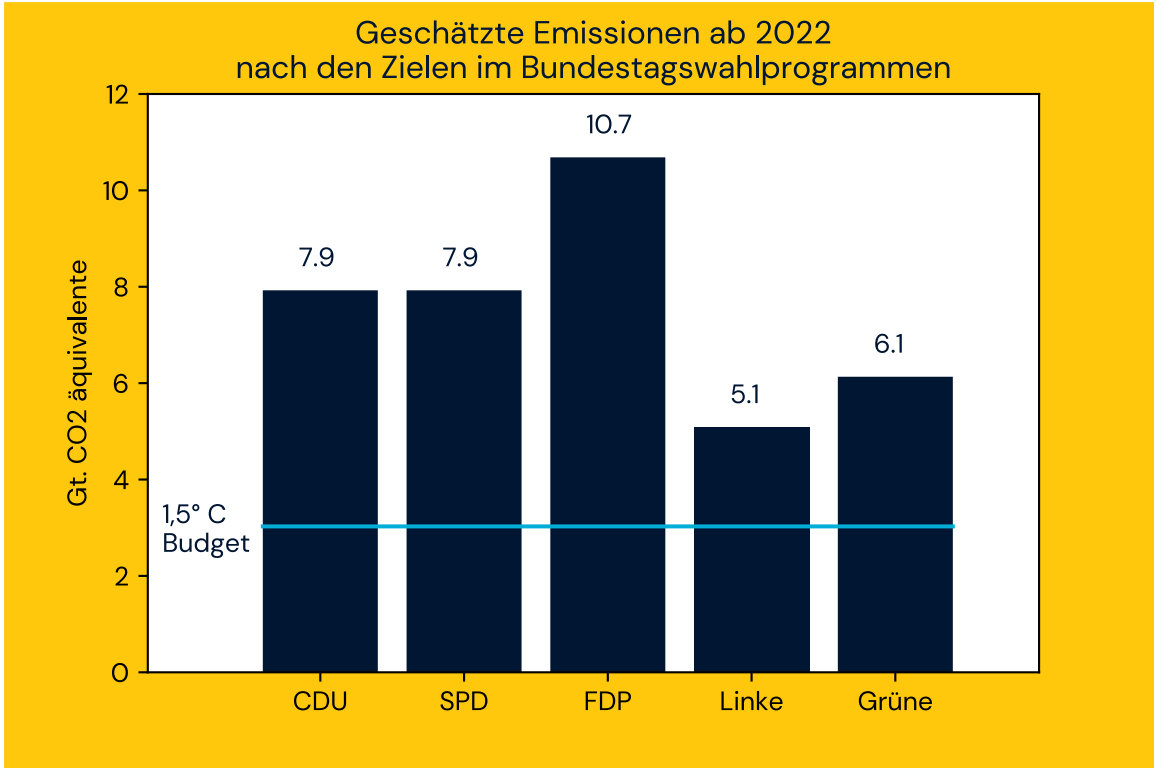
Emissionsziele oder klimaneutralitäts Ziele sind nur bedingt wichtig.





Budgetrechnung

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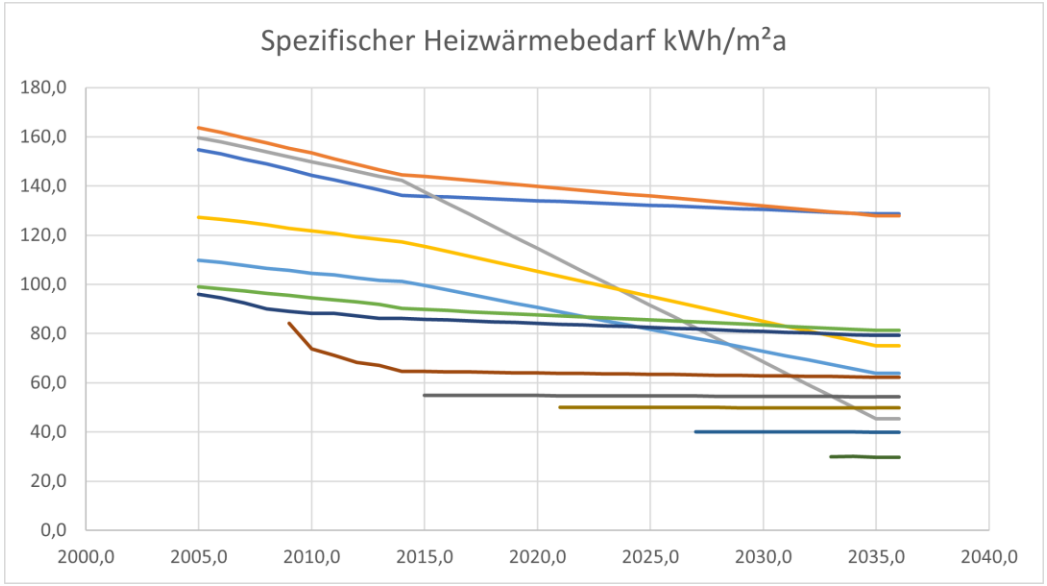

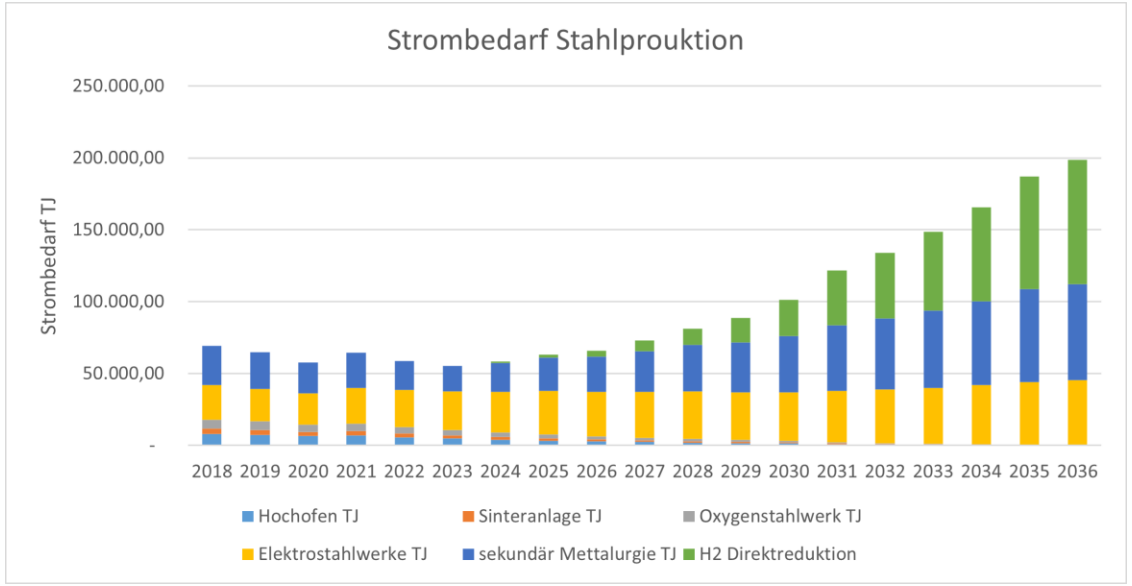

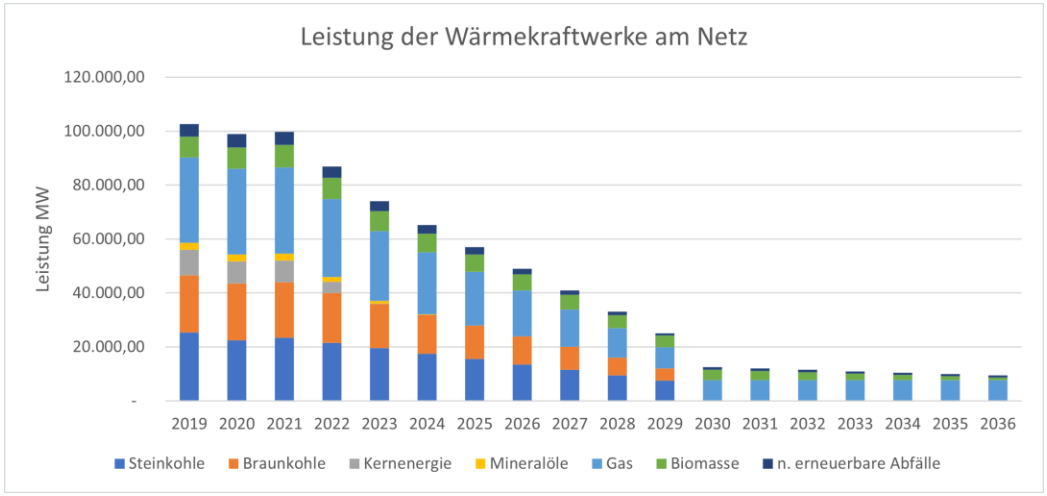

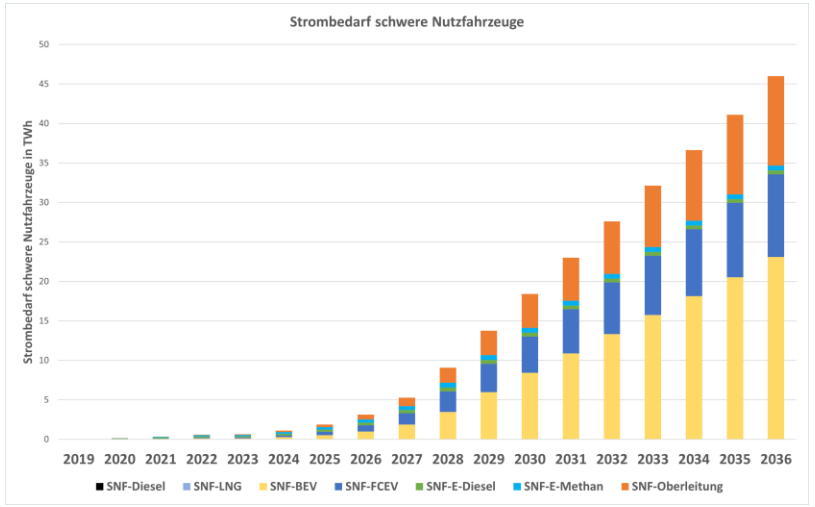

Noch Fragen?