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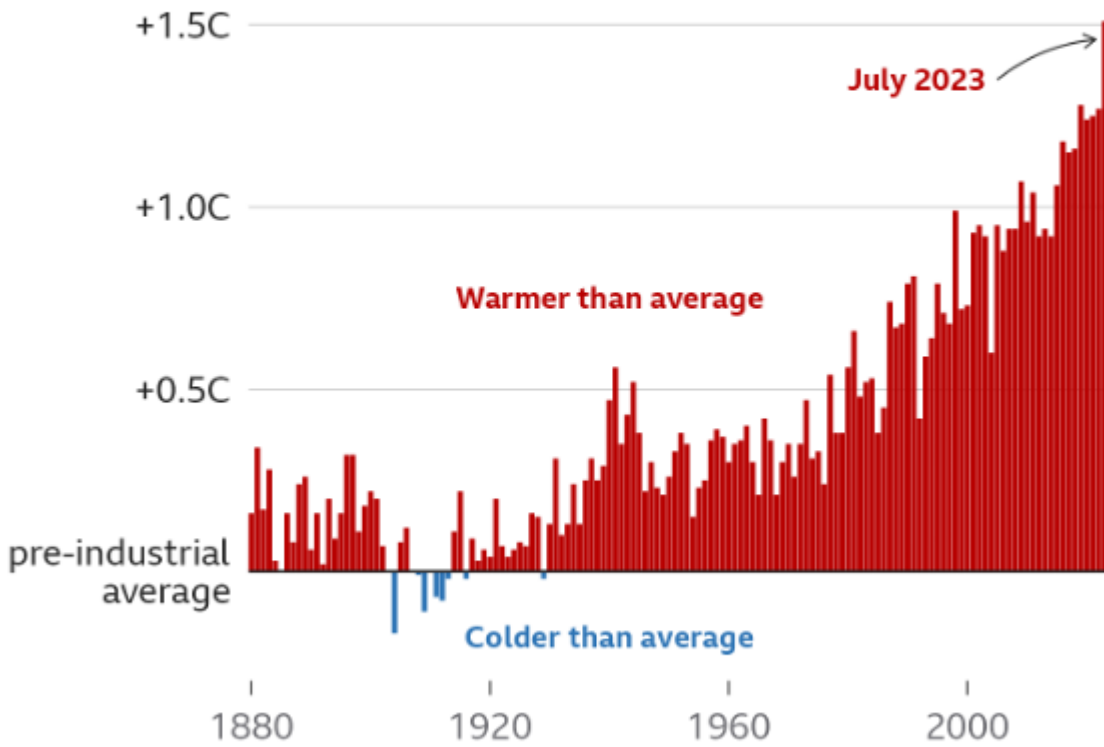
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World set for hottest July on record

Global average July temperature by year, compared with pre-industrial average for July (1850-1900)



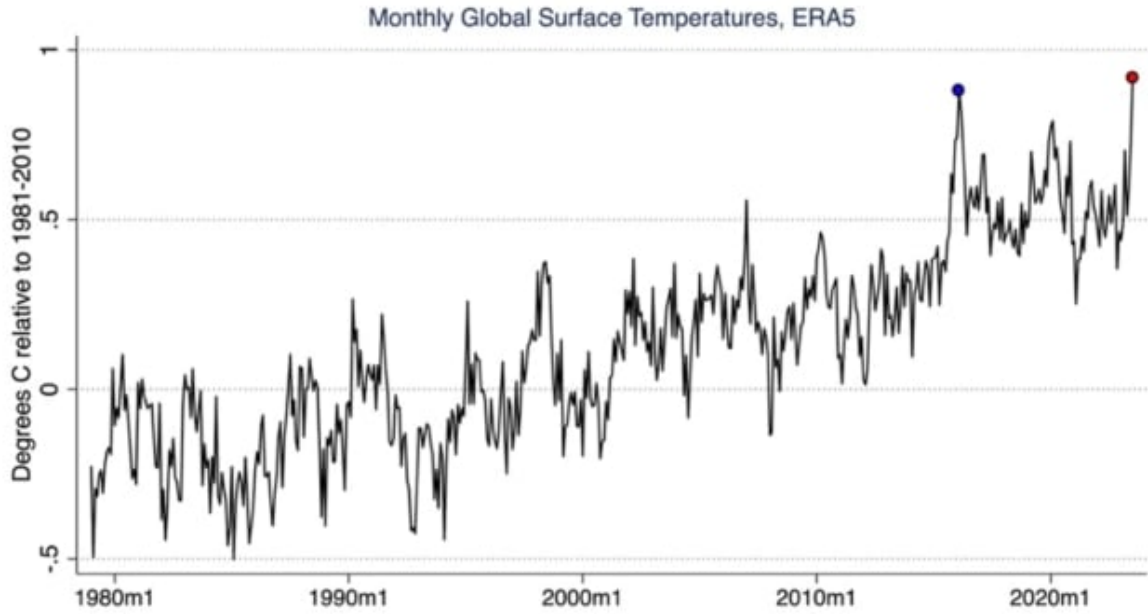
Data for July 2023 is provisional based on NCEP/GFS analysis

Source: NASA GISTEMP



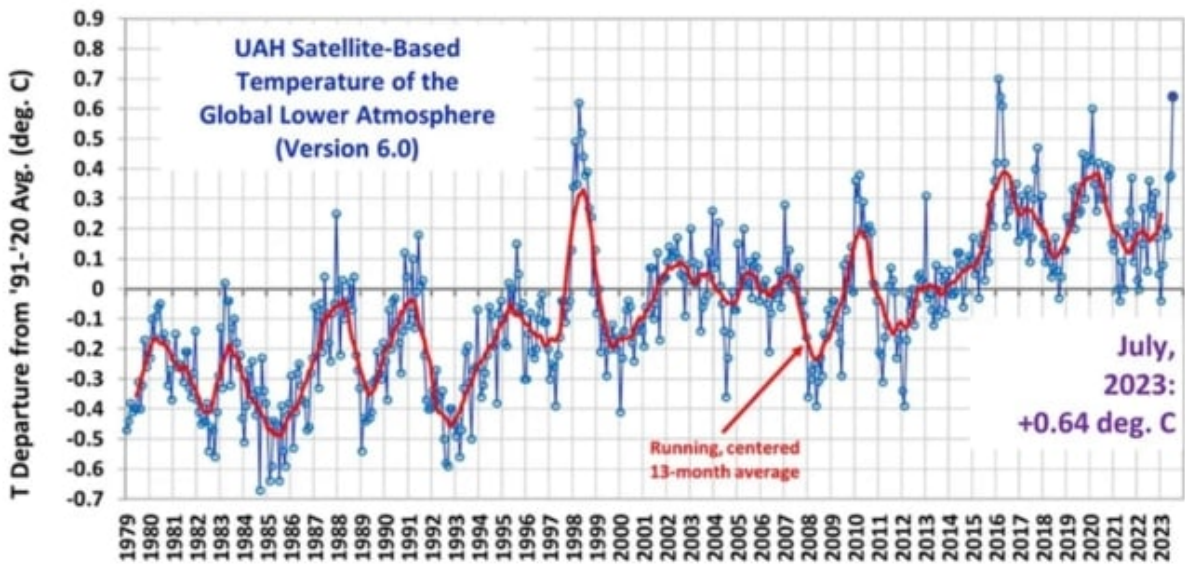
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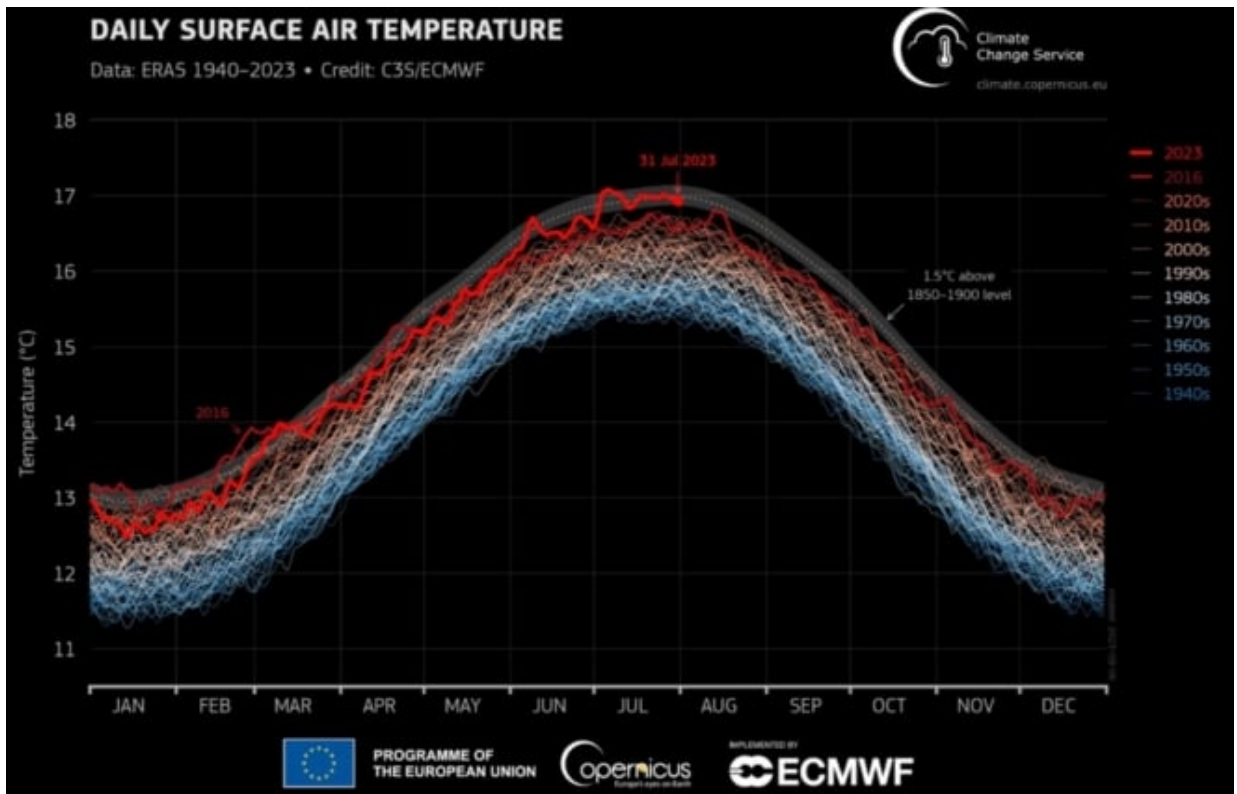
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S. Matsuda?“ Validity of Bio-Ethanol as a Countermeasure against Global Warming”, J. Environ. Inf. Sci. , Vol.37, No.5, pp.1-6 (2009.3)?

CO2

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vol.37

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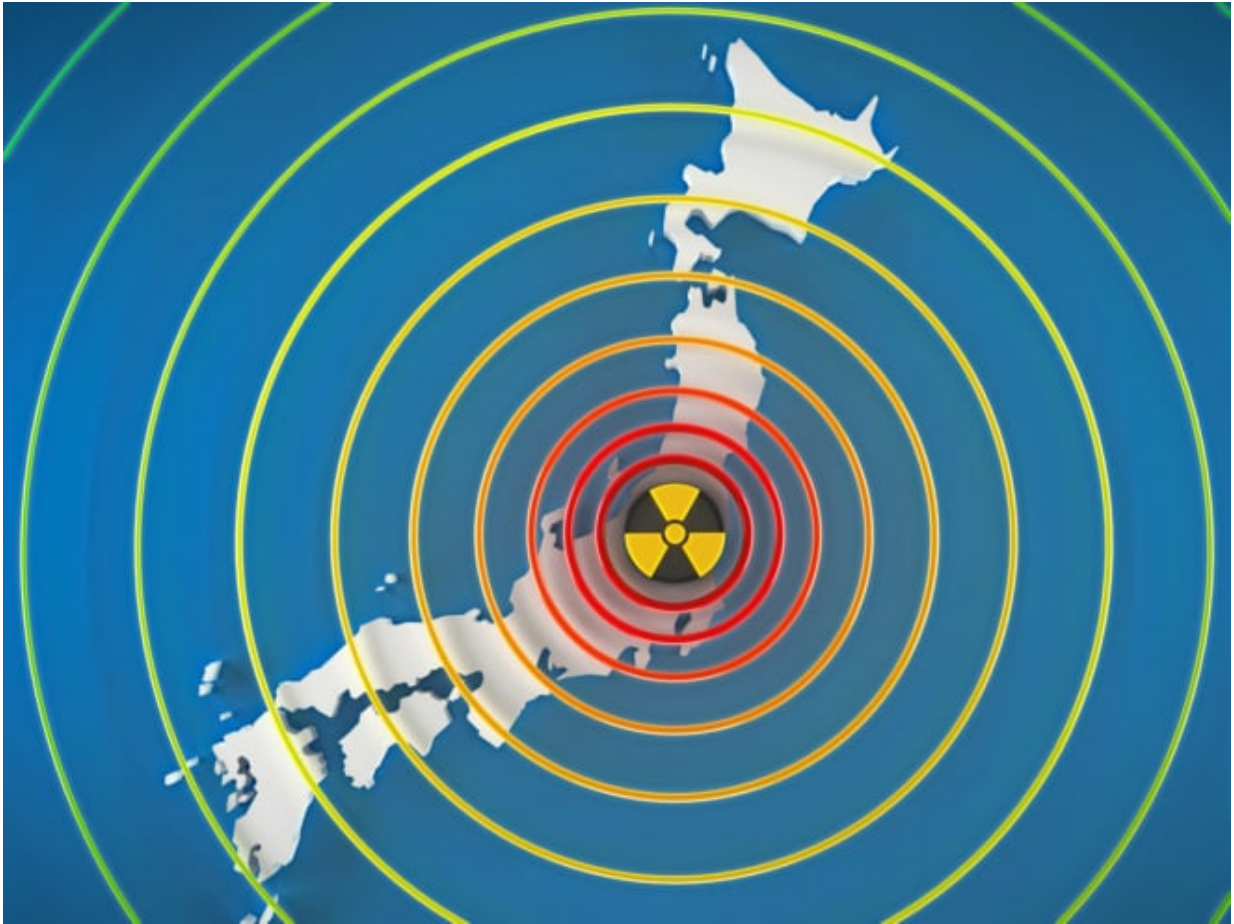
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?? ?? · Thursday, August 3rd, 2023



adventr/iStock

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← ツイート



村本大輔(ウーマンラッシュアワー)
@WRHMURAMOTO



事故があった時、地元の人だけじゃなく日本中が被爆しますように

NHKニュース @nhk_news · 7月28日

福井県にある関西電力の高浜原子力発電所1号機が、28日午後、原子炉を起動し、12年ぶりに再稼働します

www3.nhk.or.jp/news/html/2023...

#nhk_video

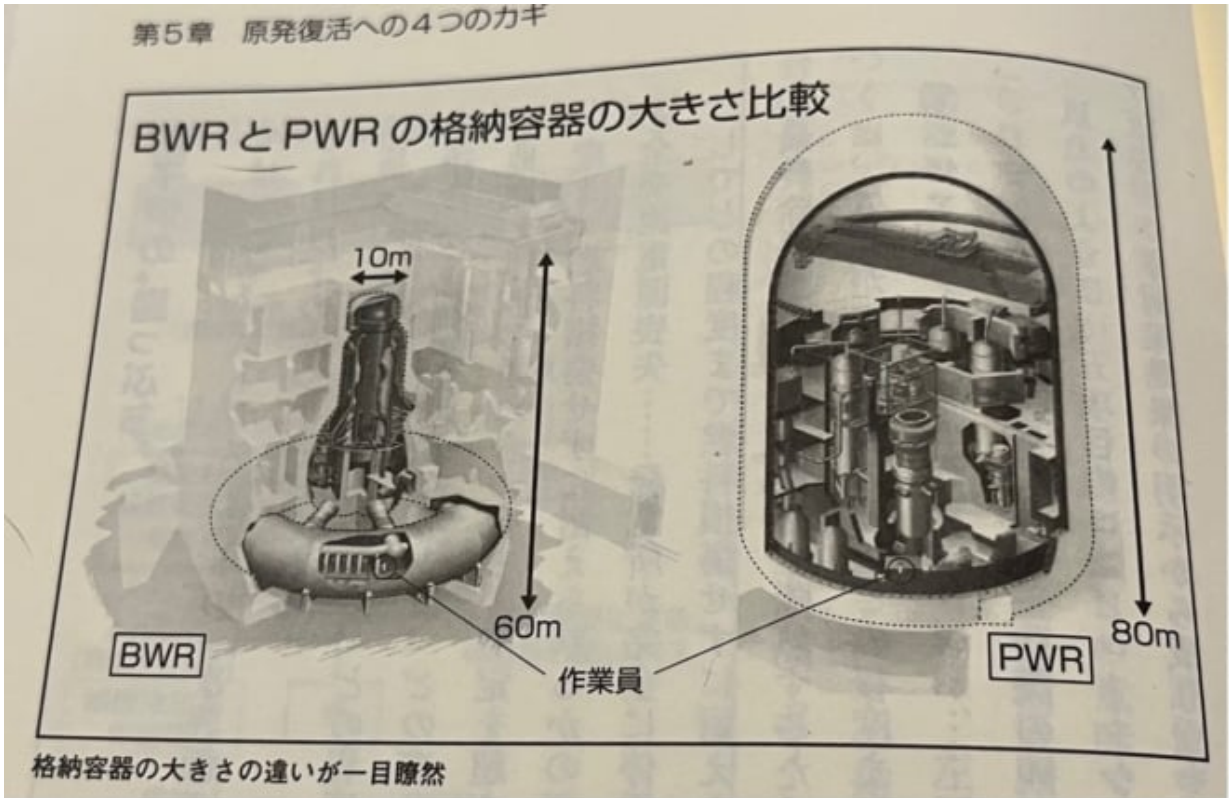
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©? japan.cnet.com

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bluejayphoto/iStock

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?? ? · Monday, July 31st, 2023

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Posted in ???, ??, ??? | No Comments »

AR6 COP26 1.5 IPCC 2014 5
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AR6-SPM?C.2.4

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AR6-SPM?C.2.4
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?3?AR6.SPM?C.2.4?“Even without accounting for all the benefits of avoiding potential damages the global economic and social benefit of limiting global warming to 2°C exceeds the cost of mitigation in most of the assessed literature” (medium confidence)

?4?AR6-SMP P26 ??50?“The evidence is too limited to make a similar robust conclusion for limiting warming to 1.5°C. Limiting global warming to 1.5°C instead of 2°C would increase the costs of mitigation, but also increase the benefits in terms of reduced impacts and related risks, and reduced adaptation needs.”

?5?AR6.SPM C.2.5: “Ambitious mitigation pathways imply large and sometimes disruptive changes in existing economic structures, with significant distributional consequences within and between countries.”

?6?AR6-SPM E.1.3: “Strengthened and coordinated near-term actions in cost-effective modelled global pathways that limit warming to 2°C (>67%) or lower, reduce the overall risks to the feasibility of the system transitions, compared to modelled pathways with relatively delayed or uncoordinated action.”

Posted in ???, ????? | No Comments »

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?? ? · Saturday, July 29th, 2023

Posted in ???, ????? | No Comments »

?????CO2????????????????????

?? ?? · Thursday, July 27th, 2023



JaCZhou/iStock

?????CO2????????????????????2023??74??Enrico Mariutti????????????????????????????????The Dirty Secret of the Solar Industry???

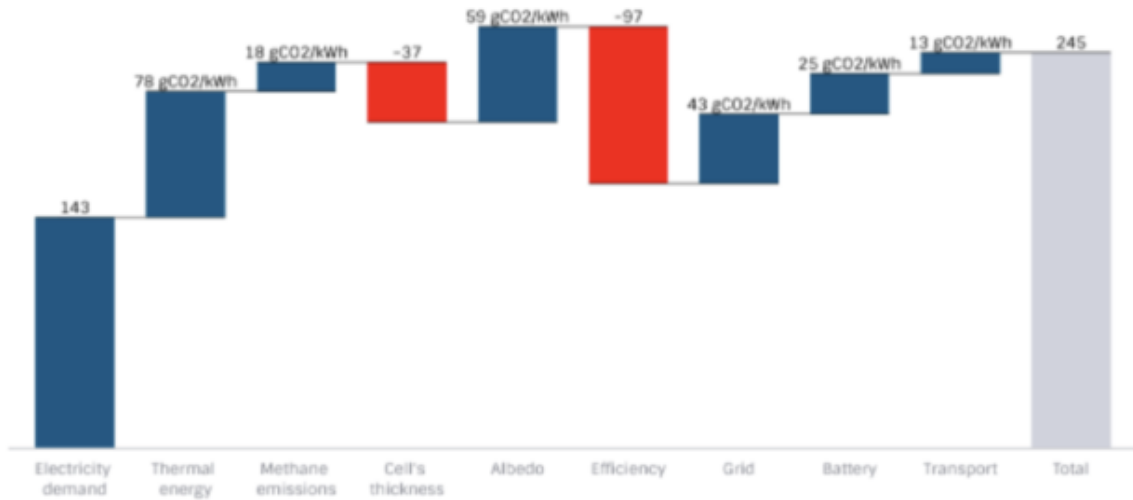
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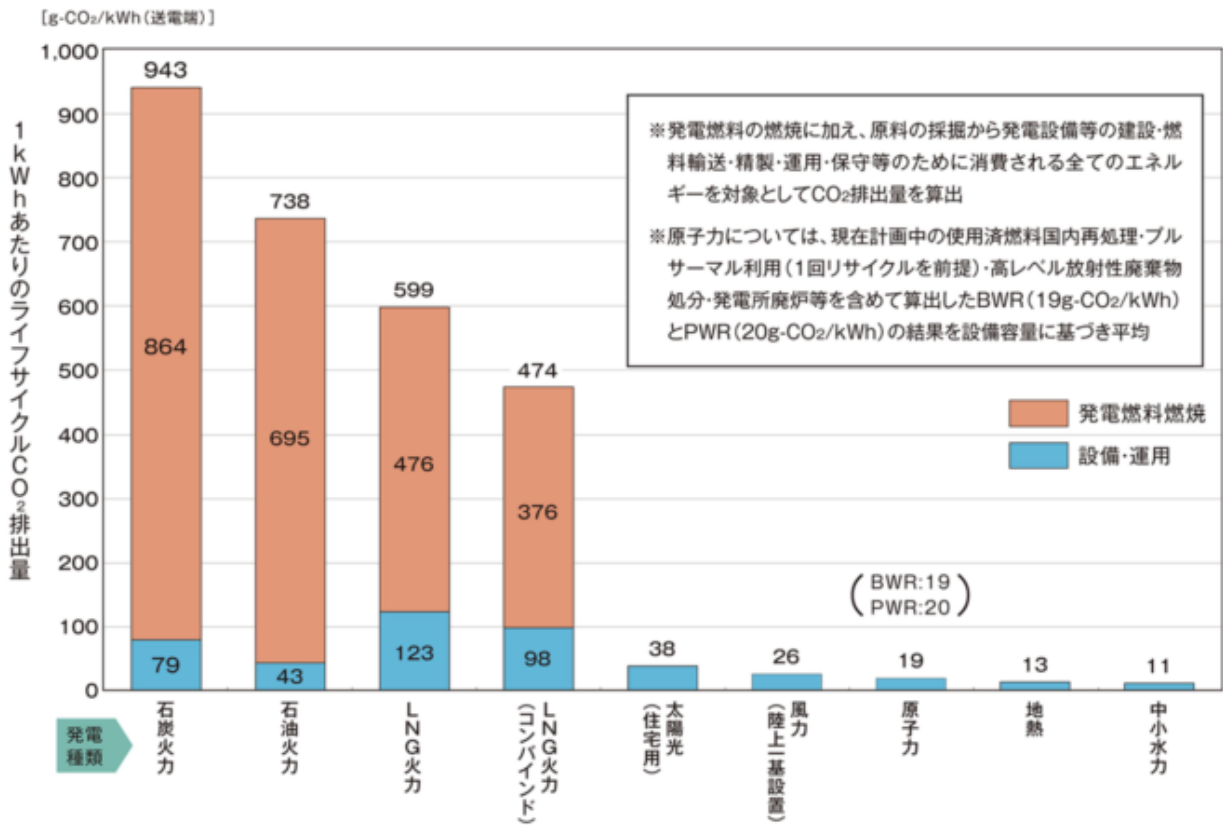
2022
Carbon intensity, Worst Scenario



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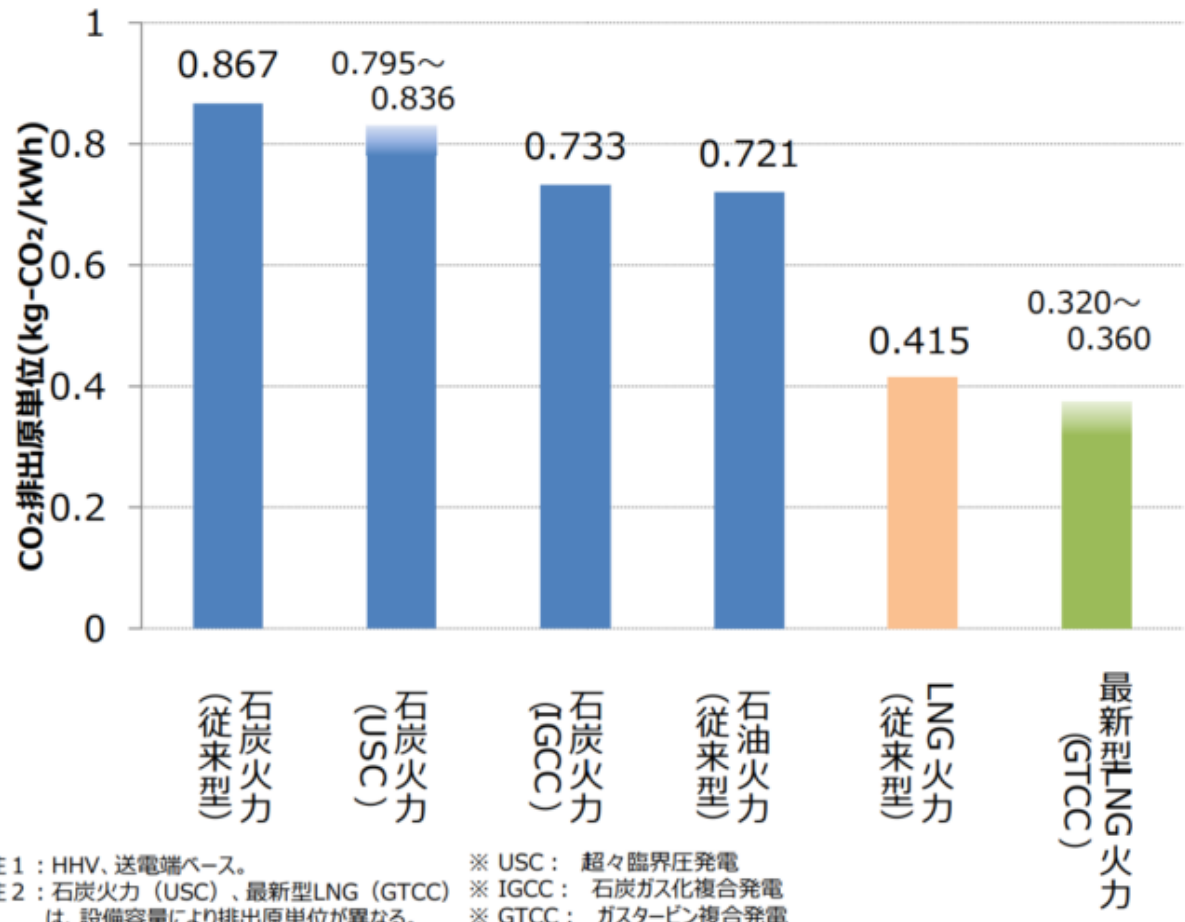
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?? ?? · Friday, July 21st, 2023

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jetcityimage/iStock

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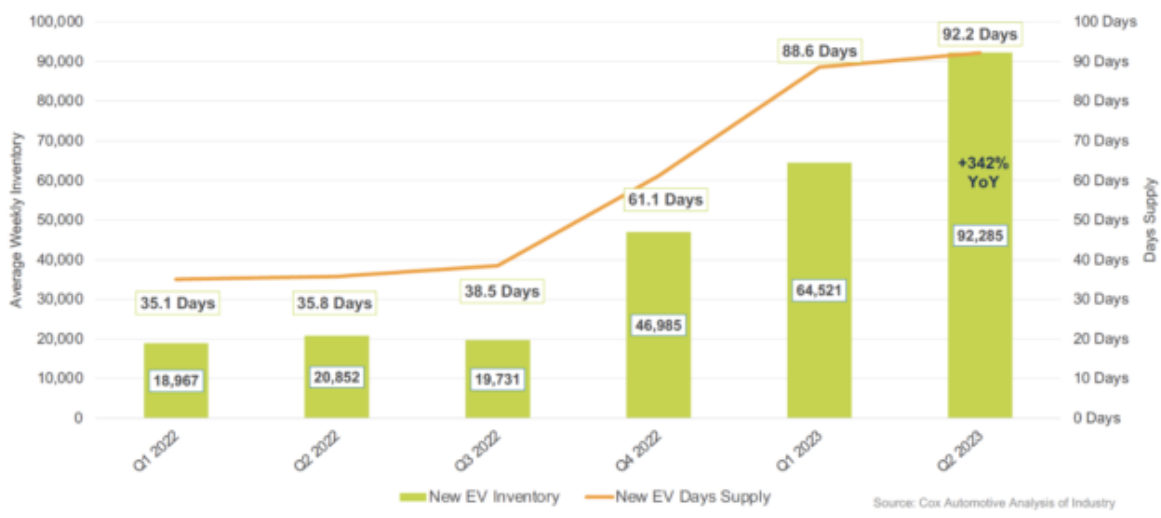
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NEW EV INVENTORY & DAYS' SUPPLY ESTIMATES

EV inventory is having a "Field of Dreams" moment – and days' supply follows



Source: Cox Automotive Analysis of Industry



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?? ? · Thursday, July 20th, 2023

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NickS/iStock

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Nobel Physics Laureate 2022 Slams ‘Climate Emergency’ Narrative as “Dangerous Corruption of Science”

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?? ?? · Wednesday, July 19th, 2023



Max Lirnyk/iStock

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Electric Vehicles for Everyone? The Impossible Dream??

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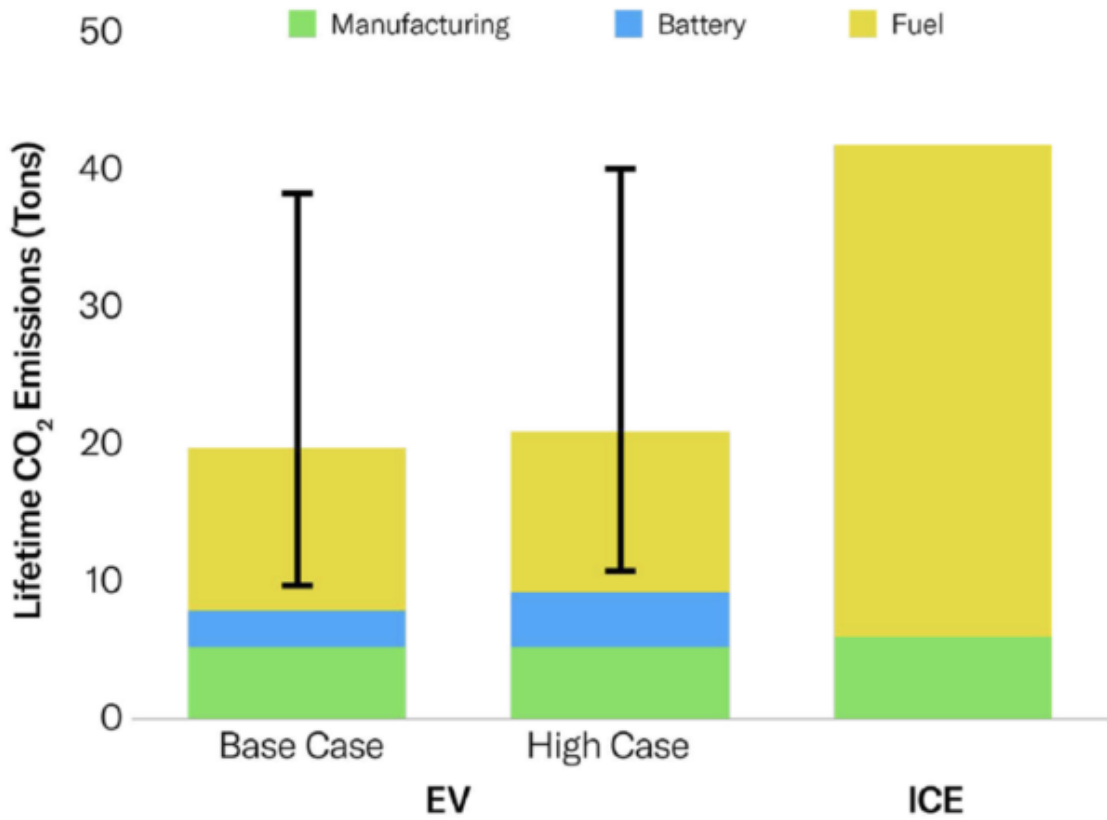
?????2??????CO2????????EV????CO2????????????????????

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Figure 3

Estimated Life-Cycle Emissions for EVs vs. ICE Cars, per IEA



Source: IEA, "The Role of Critical Minerals in Clean Energy Transitions"

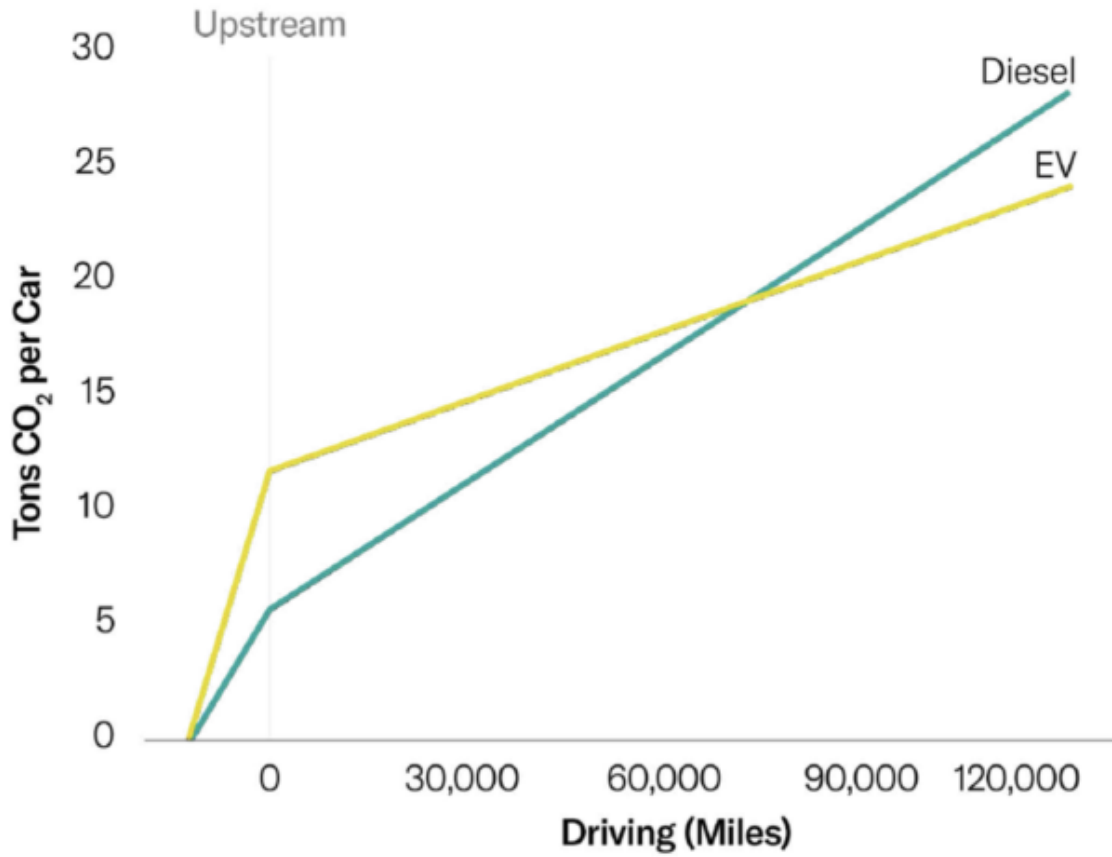
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Figure 4

Life-Cycle Emissions: Volkswagen EV vs. Diesel



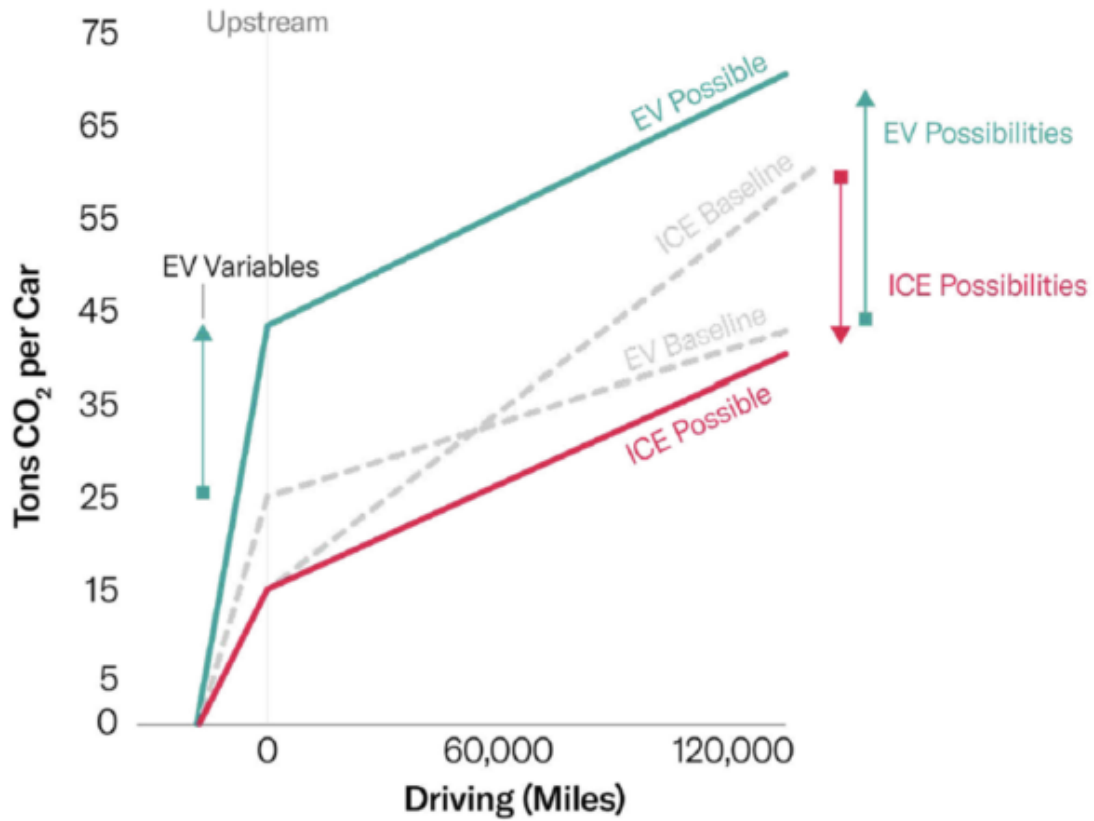
Source: Maciej Neugebauer, Adam Żebrowski, and Ogulcan Esmer, "Cumulative Emissions of CO₂ for Electric and Combustion Cars: A Case Study on Specific Models," *Energies*, Apr. 6, 2022

????????????????EV????????????????EV????CO2????????????????????????????????ICE????????????
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Figure 6

EV vs. ICE CO₂ Emissions: Scenarios with Known Unknowns



Source: Author's calculations from multiple data sources in this report; see Appendix

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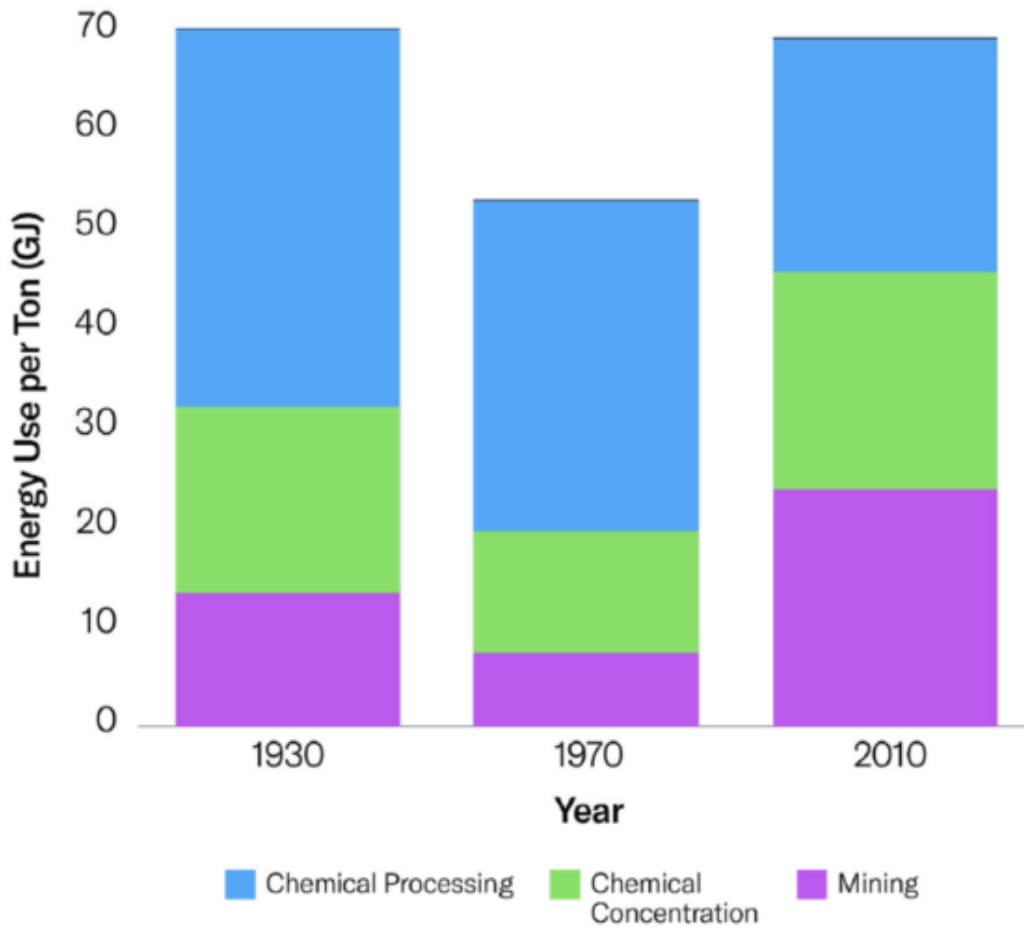
CO₂?????????1????????????????? EV??ICE????????????????????????????????????

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Figure 10

Copper Production: Technology Trends in Energy Use per Ton



Source: Nadine Rötzer and Mario Schmidt, "Historical, Current, and Future Energy Demand from Global Copper Production and Its Impact on Climate Change," *Resources* 9, no. 4 (April 2020)

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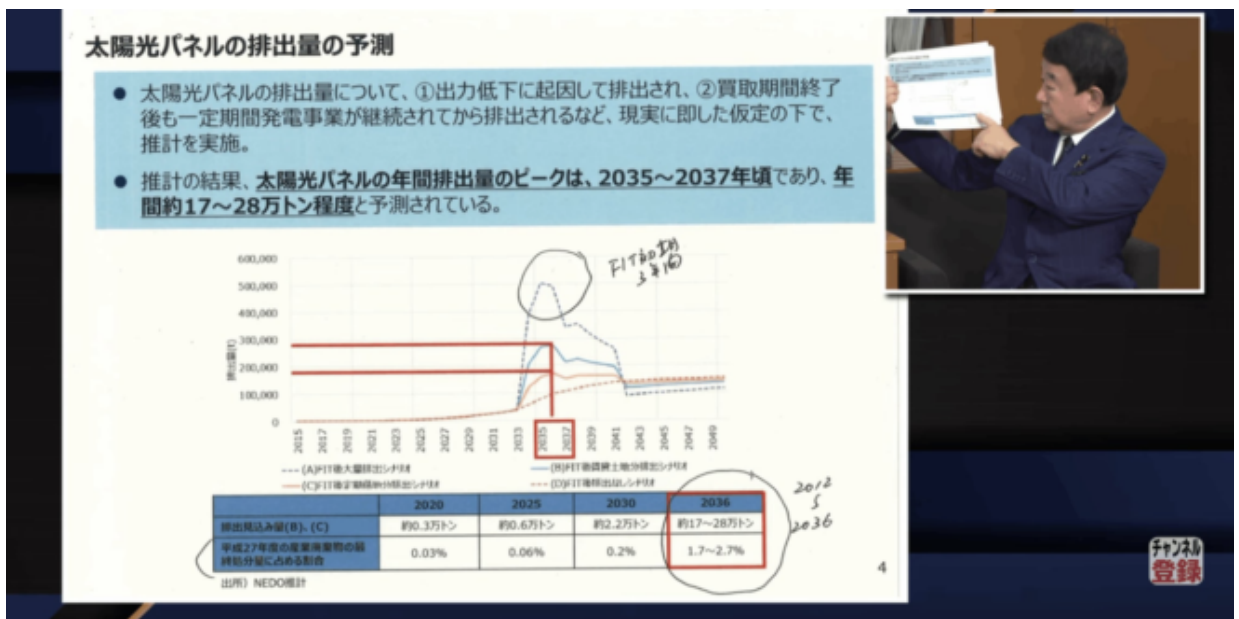
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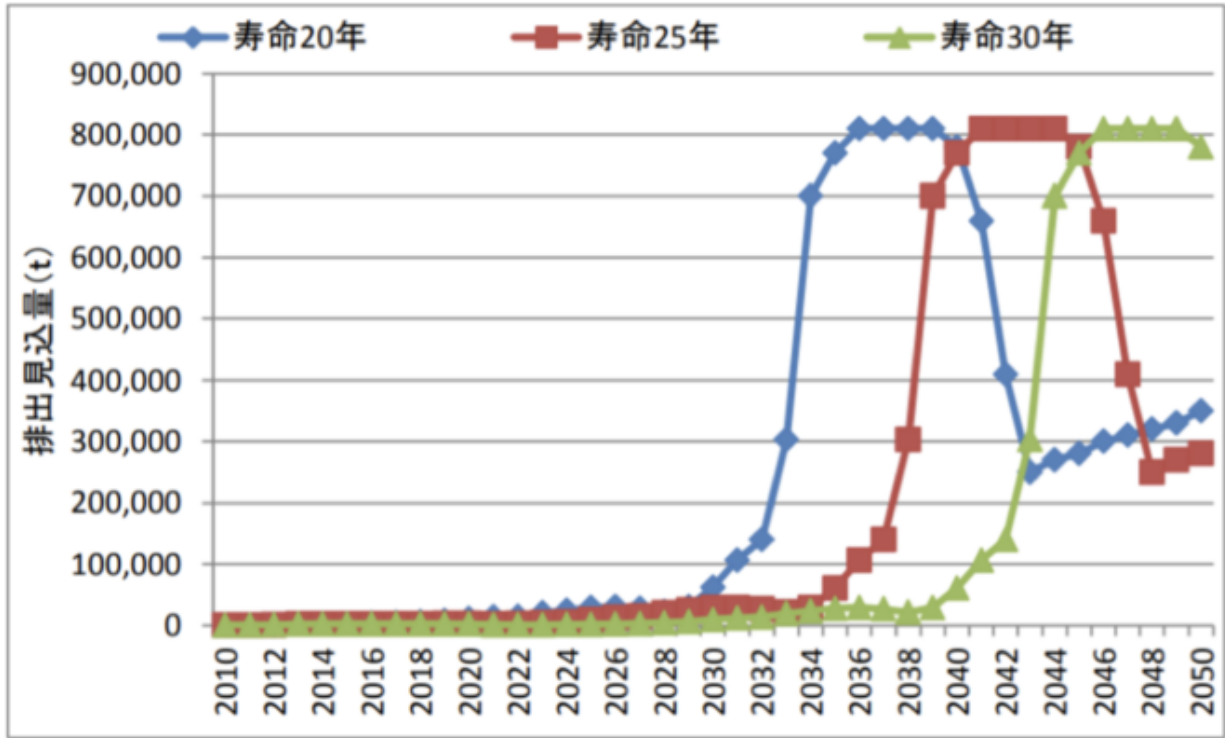


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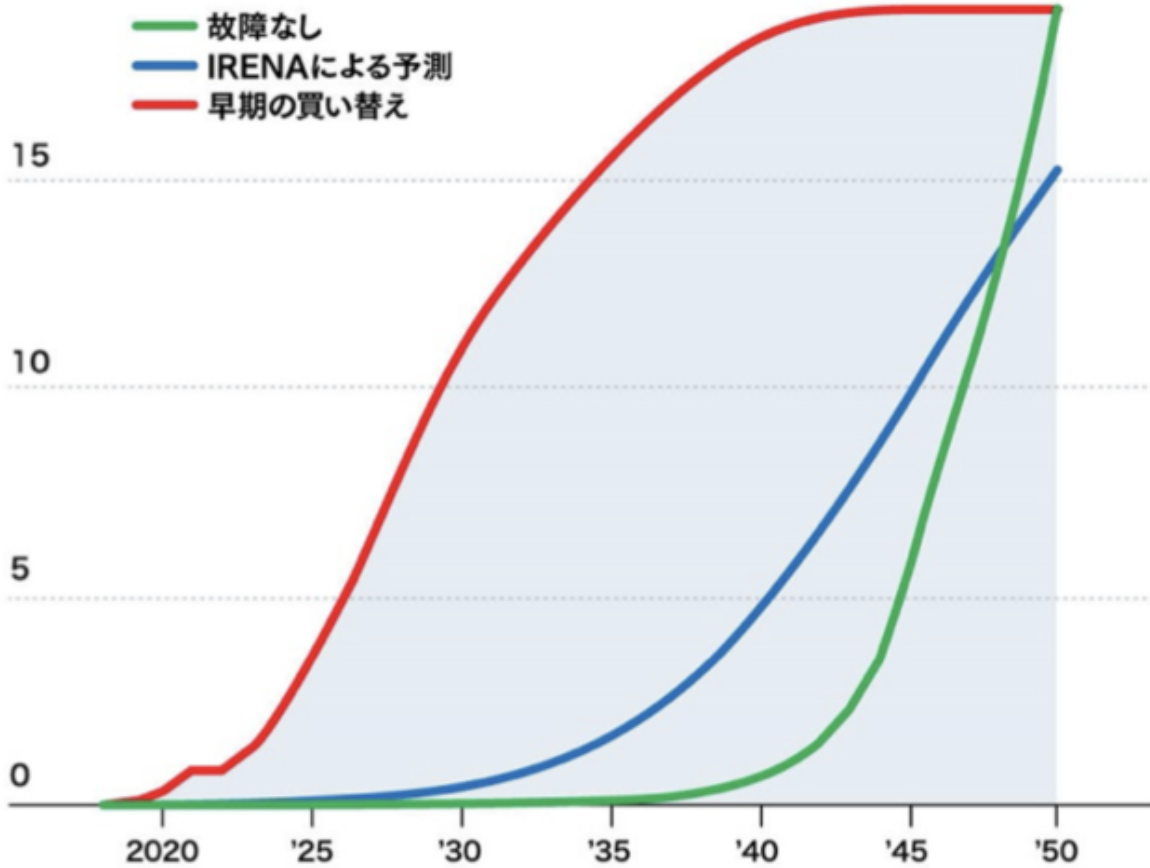
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廃棄物の累計
 (発電容量ベース)

20ギガワット



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?? ??? ?? · Sunday, July 9th, 2023



Grafissimo/iStock

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Pixelci/iStock

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?? ?? · Tuesday, July 4th, 2023



xijian/iStock

??IEA????????????Net Zero Scenario, NZE????????????

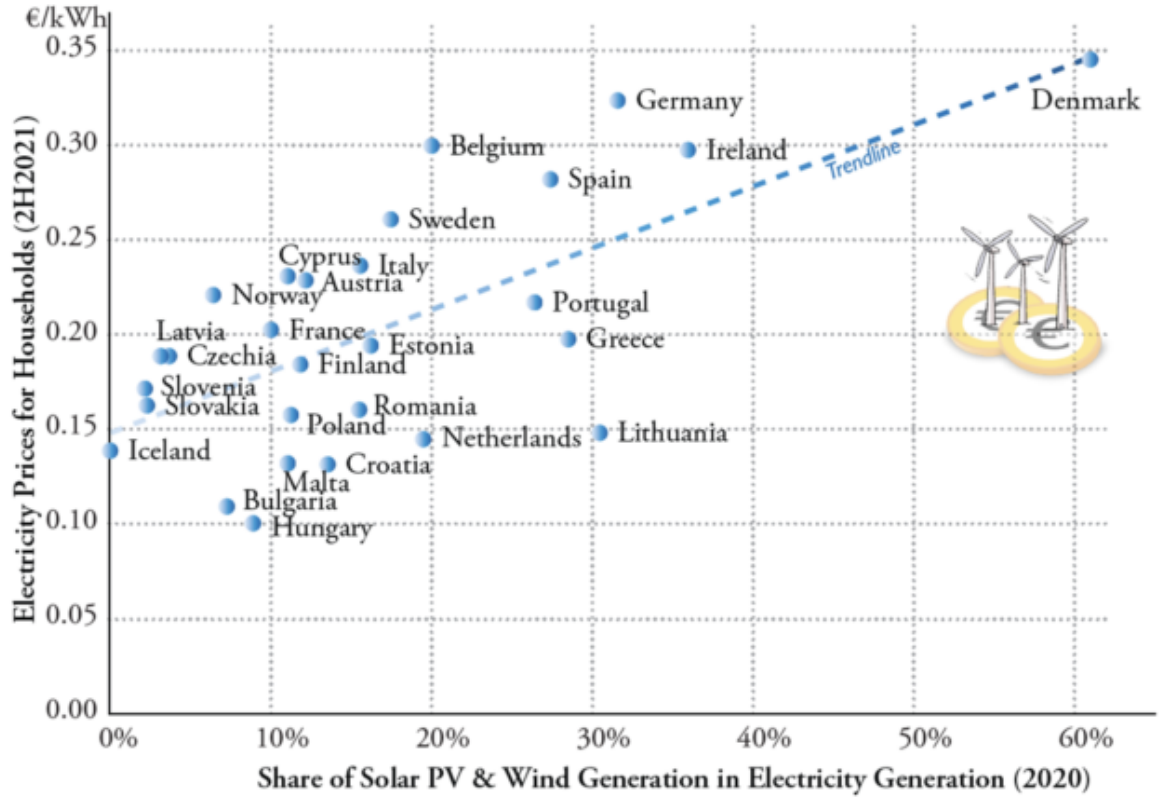
A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

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Figure 46: Solar and Wind Penetration and Electricity Prices in Europe

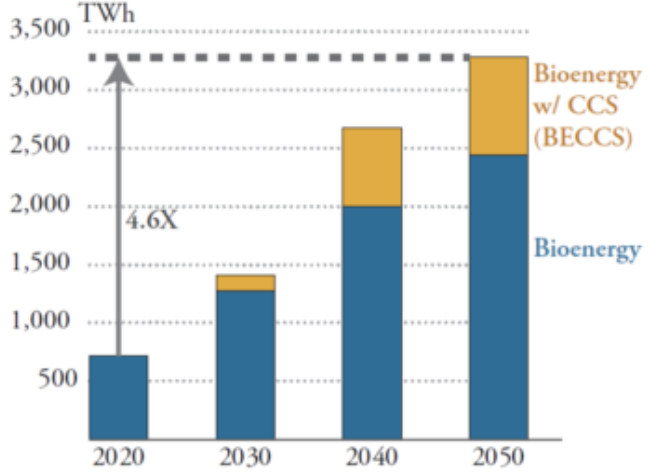


Source: Energy Policy Research, Eurostat, IEA

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IEA?NZE??2050??
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Figure 23. Bioenergy for Electricity Generation in NZE



Source: IEA, Net Zero by 2050 (2021)

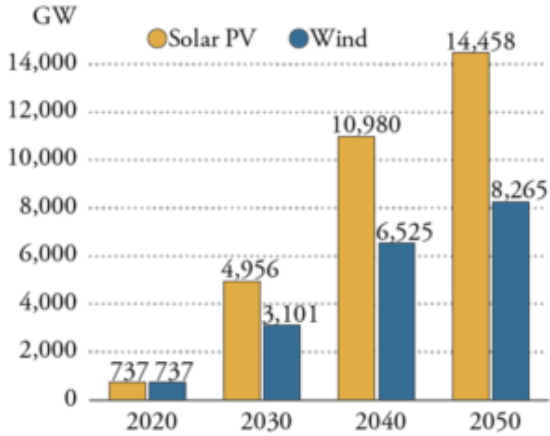
Figure 24. Global Land Requirements for Bioenergy for Electricity Generation in NZE



Source: Energy Policy Research. Land requirement calculations made using FreeingEnergy.

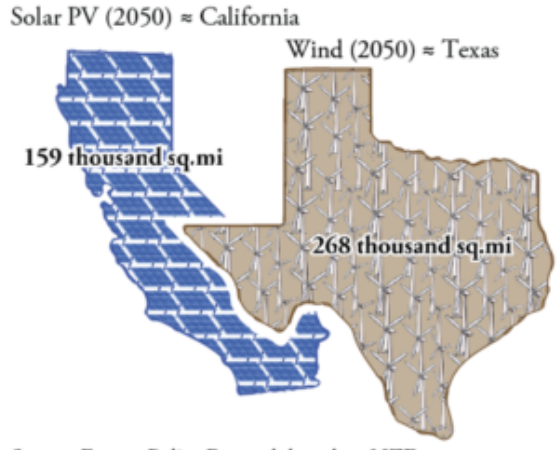
Batt Odgerel, Lucian Pugliaresi, Michael Lynch 38

Figure 25. Global Solar and Wind Capacity in NZE



Source: IEA, Net Zero by 2050 (2021)

Figure 26. Global Land Requirements for Solar/ Wind Farms in NZE



Source: Energy Policy Research based on NZE
Assumes sufficient/optimal grid infrastructure (transmission, storage) and current rate of efficiency

	万 km2	日本=1
メキシコ	197	5.2
フランス	55	1.5
カリフォルニア	42	1.1
テキサス	70	1.8
日本	38	1.0

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CHUYN/iStock

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- 2025?????GHG?????2050?????10?????
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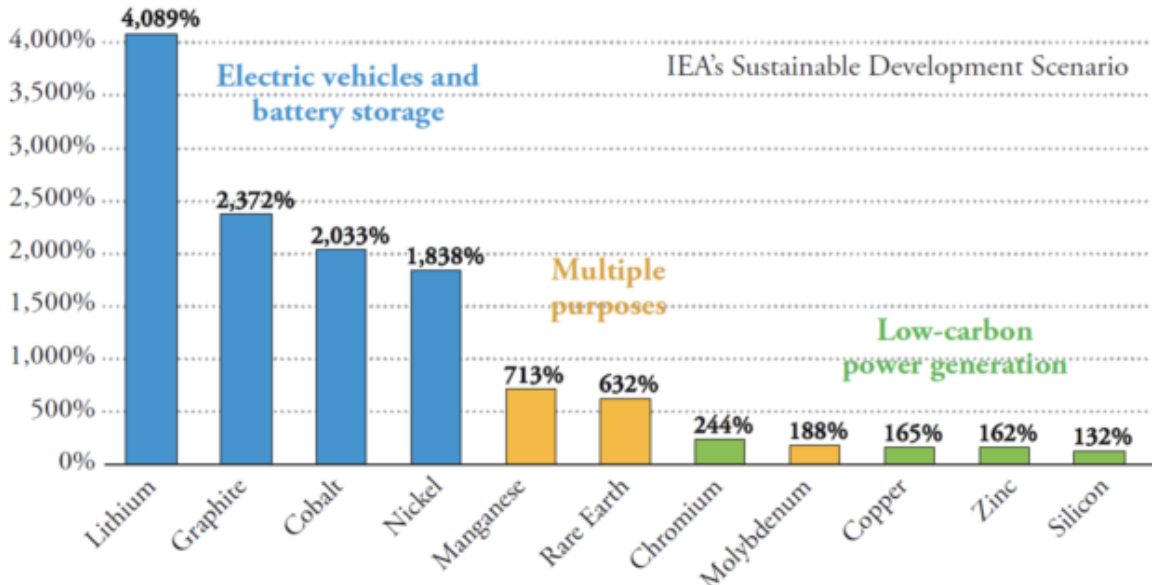
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Figure 33. Required Growth of Critical Mineral Supply (IEA's SDS scenario, 2020–40)



Source: Energy Policy Research, IEA, *The Role of Critical Minerals in Clean Energy Transitions* (2021)

EV??60kWh????????????????????????????????
 150??200????????????????????

Table 13. Battery Chemistry by Content, Kg (60 kWh Lithium-Ion)

Mineral/Metal	NMC811	NMC523	NMC622	NCA+	LFP
Lithium	5	7	6	6	6
Cobalt	5	11	11	2	0
Nickel	39	28	32	43	0
Manganese	5	16	10	0	0
Graphite	45	53	50	44	66
Aluminum	30	35	33	30	44
Copper	20	20	19	17	26
Steel	20	20	19	17	26
Iron	0	0	0	0	41

NMC811 Nickel (80%) Manganese (10%) Cobalt (10%) NCA+ Nickel Cobalt Aluminum Oxide
 NMC523 Nickel (50%) Manganese (20%) Cobalt (30%)
 NMC622 Nickel (60%) Manganese (20%) Cobalt (20%) LFP Lithium iron phosphate

Source: Bhutada, G. VC Elements

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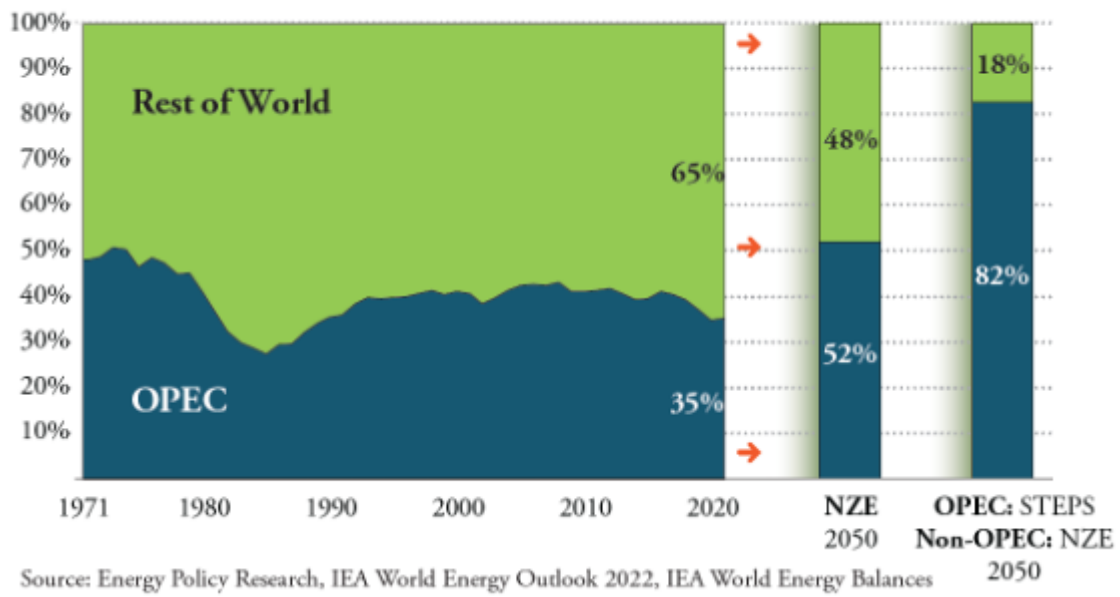
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Figure 17. OPEC Share of Global Oil Production

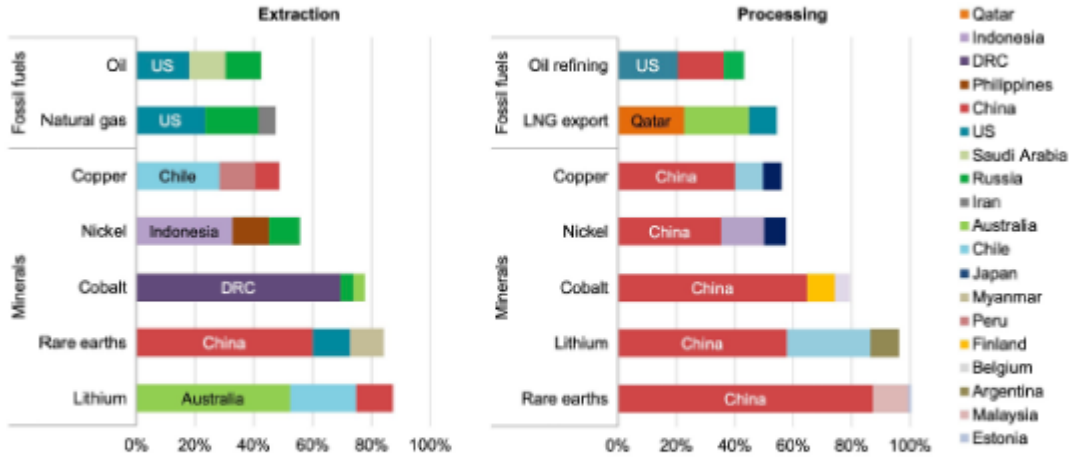


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Figure 18. Share of Top Three Producing Countries in Production of Selected Minerals and Fossil Fuels, 2019



Notes: LNG = liquefied natural gas; US = United States. The values for copper processing are for refining operations. Sources: IEA (2020a); USGS (2021); World Bureau of Metal Statistics (2020); Adamas Intelligence (2020).

Source: IEA, The Role of Critical Minerals in Clean Energy Transitions (2021)

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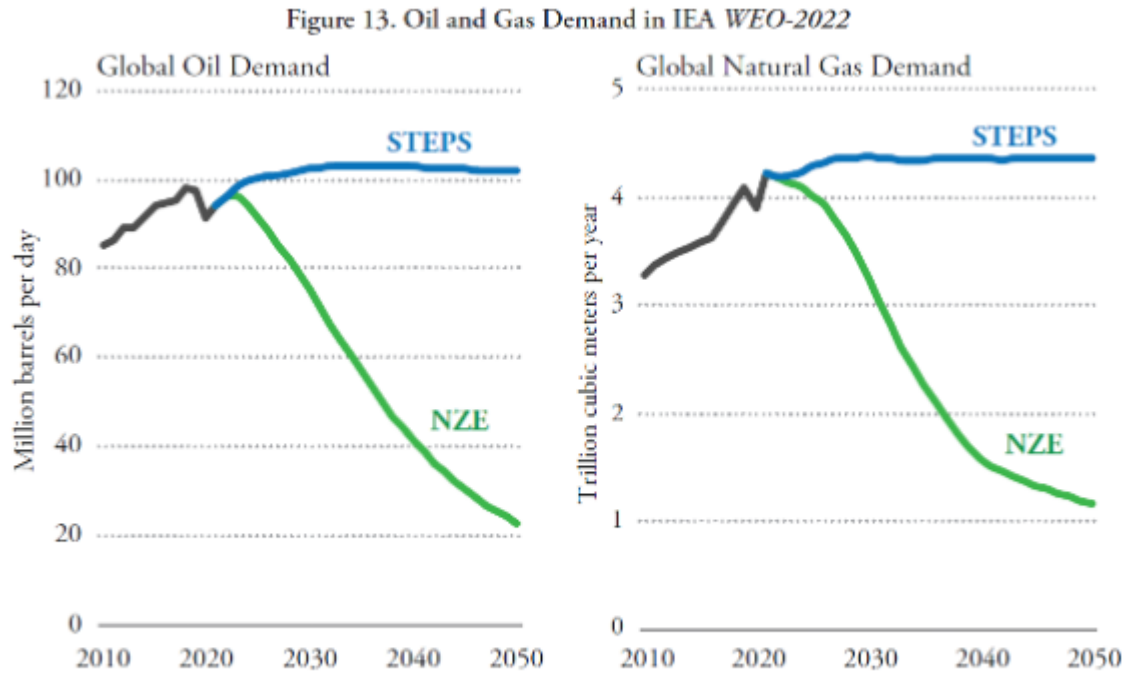
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????????IEA????????Net Zero Scenario, NZE????????

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A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

????????????????NZE??2050????CO2????????????STEPS????????????
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Source: Data from IEA, *World Energy Outlook* (2022) & *Outlooks for gas markets and investment* (2023). The data derived and estimated from graphs in the *WEO-2022* and the IEA’s gas report for the G7, as the IEA’s data tables only show scenario data for 2030 and 2050.

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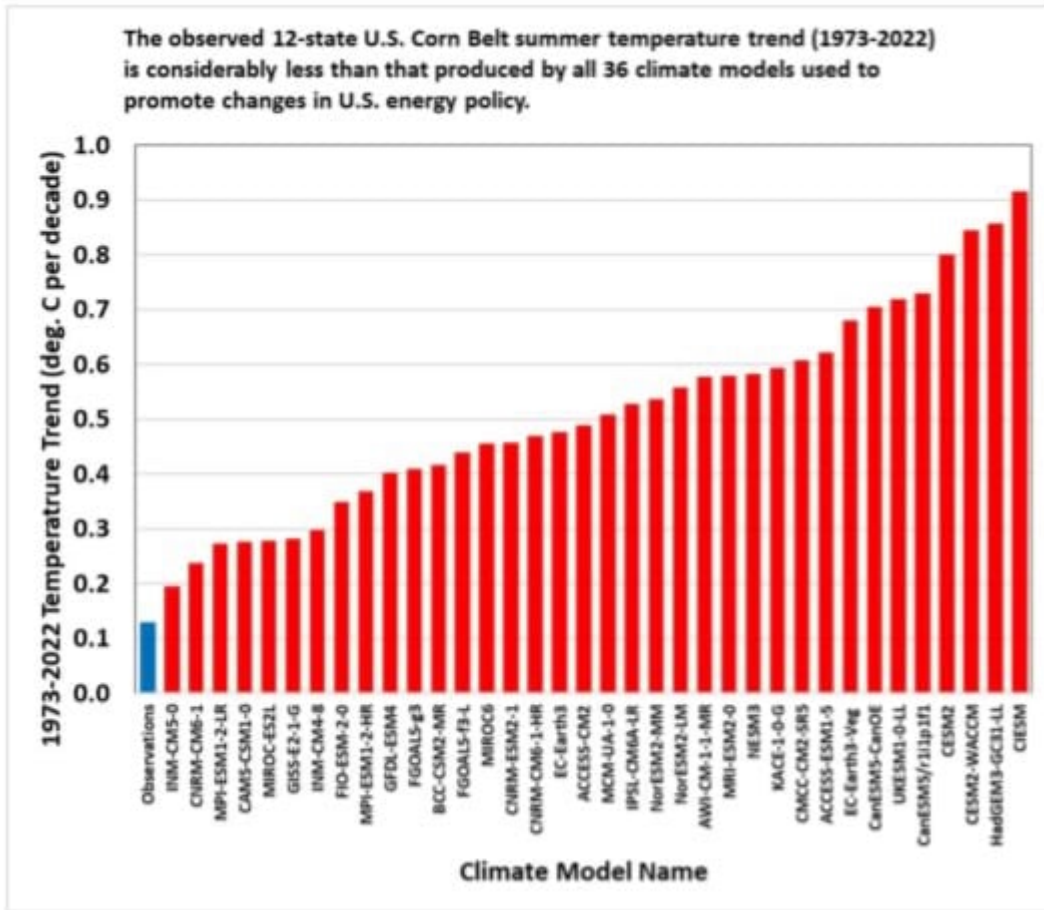
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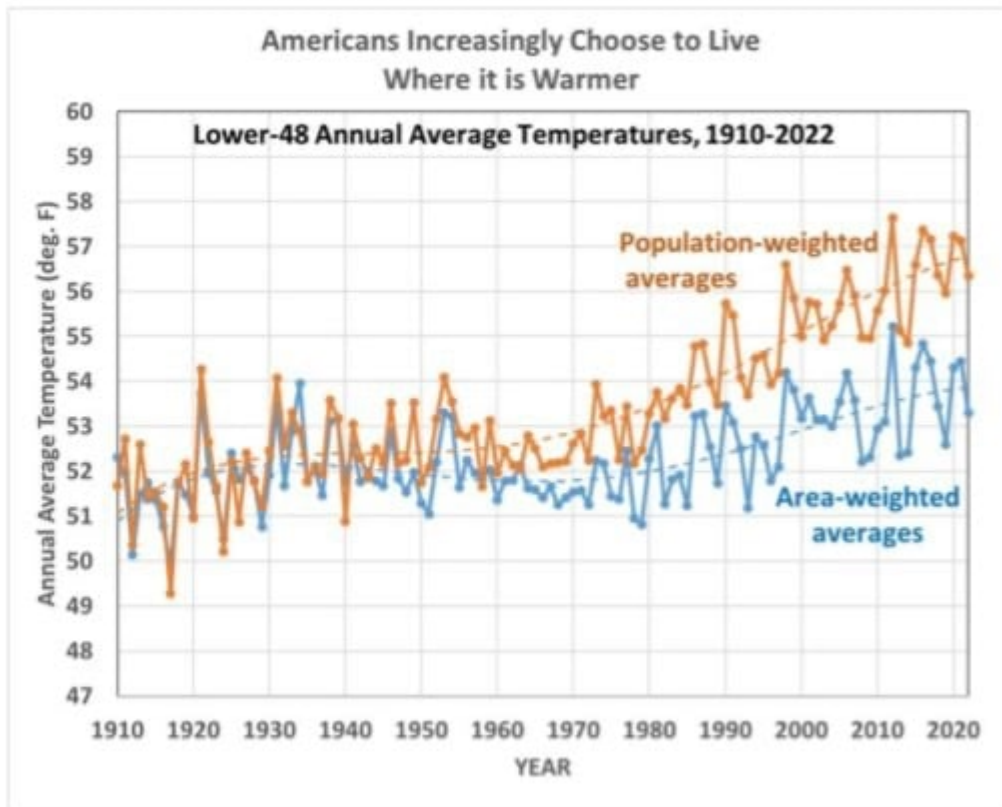
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FACT SHEET: Biden-Harris Administration Proposes New Standards to Protect Public Health that Will Save Consumers Money, and Increase Energy Security

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