

# Global Energy Policy Research | GEPR

GEPR <http://agorajp.com/>

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?? ?? · Thursday, September 7th, 2023

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???Quantum Korea 2023????????????????

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Posted in ???, ????? | No Comments »

# ????????????ALPS ????????????????

?? ?? · Saturday, September 2nd, 2023



axz66/iStock

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2027??

Posted in ???, ????????, ?? | [No Comments](#) »

**?????G7?G20????????????1.5??????????**

?? ? · Thursday, August 31st, 2023



photoschmidt/iStock

????????G20??28????????????????G20????????????????????????????  
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????????????68????????????63?66????????????????G20??  
 ???G7????????????????????????????????

**????????????????63?**

5?G7????????IPCC?6????AR6????1.5????????????GHG????2025????????2019??  
 ?2030????43??2035????60????????????2030?NDC????????GHG????LTS??1.5??????  
 ??2050????????????????????????????????COP28????????2030?NDC????????LTS??  
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G20????????IPCC????????????????????G20????????  
 ?2025????????????2019???2035????60%????????  
 ?????????2030????????CO2????????



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????G20????3????G7????????????????????????????????

G7??IPCC?6????????2025????2035?60????12??COP28????  
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G7????1.5????2050????????  
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**EU????65?**

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EU?CBAM????6????  
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CBAM????

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1.5????

????1.5????

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

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?? ? · Monday, August 28th, 2023



dima\_zel/iStock

??GCR????????????????????[PDF](#)????12????  
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R????C<sup>14</sup>????????????????????????????????

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?????????GCR?????????12km?????????

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?????????Fig. 1?GCR?????0?3?????8?????1?????Fig. 2?????GCR?????5?6?7?8?????

?????????GCR cycles?????Fig. 3?????Fig. S5?????GCR?????GCR?????GCR?????

?????????Fig. 4?????GCR?????3?????GCR?????GCR?????

?????????GCR cycles?????Fig. 5?????GCR?????

?????????GCR?????10?????GCR?????



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

## ????????????”???? “????????????

?? ?? · Sunday, August 27th, 2023

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????????????IPCC????????????1.5????????????1.5????????????  
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### Don't overstate 1.5 degrees C threat, new IPCC head says

????????????Woke,  
Inc.: Inside Corporate America's Social Justice  
Scam????????????

### Vivek Ramaswamy says the 'climate change agenda' is a hoax

????????????Climate Change isn't  
Everything????????????

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??1????????????????????

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??2022??1600?????????????????????????????????WORLD CLIMATE  
DECLARATION????????????????????

**Nobel Prize winner Dr. John F. Clauser signs the Clintel World Climate Declaration**

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**IPCC????63????????????????????**

??????2019?9?23??500????????????????????????????????????  
??1600?????????

????6????????????????

- Natural as well as anthropogenic factors cause warming
- Warming is far slower than predicted
- Climate policy relies on inadequate models
- Global warming has not increased natural disasters
- Policy must respect scientific and economic realities
- CO2 is not a pollutant. It is essential to all life on Earth. Photosynthesis is a blessing. More CO2 is beneficial for nature, greening the Earth: additional CO2 in the air has promoted growth in global plant biomass. It is also good for agriculture, increasing the yields of crop worldwide.

Posted in ??, ????? | No Comments »

**??????10??????????????**

?? ?? · Saturday, August 26th, 2023

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

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?? ?? · Thursday, August 24th, 2023



NithidPhoto/iStock

2023?8?22??

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??2050????????????????????2030??CO2????46%????????????????  
GX??

2022?3?15??



??CO2????2030?46%????????????????????????????  
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GX??  
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?SDGs????????

Posted in ????????????, ??? | [No Comments »](#)

?????2??????CO2????????????????????????????????

?? ?? · Tuesday, August 22nd, 2023



Artur/iStock

MIT? CO2?  
"heavily  
saturated"? EPA?  
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**CO2???????**

CO2???????

CO2 ????????

CO2???????  
80???????

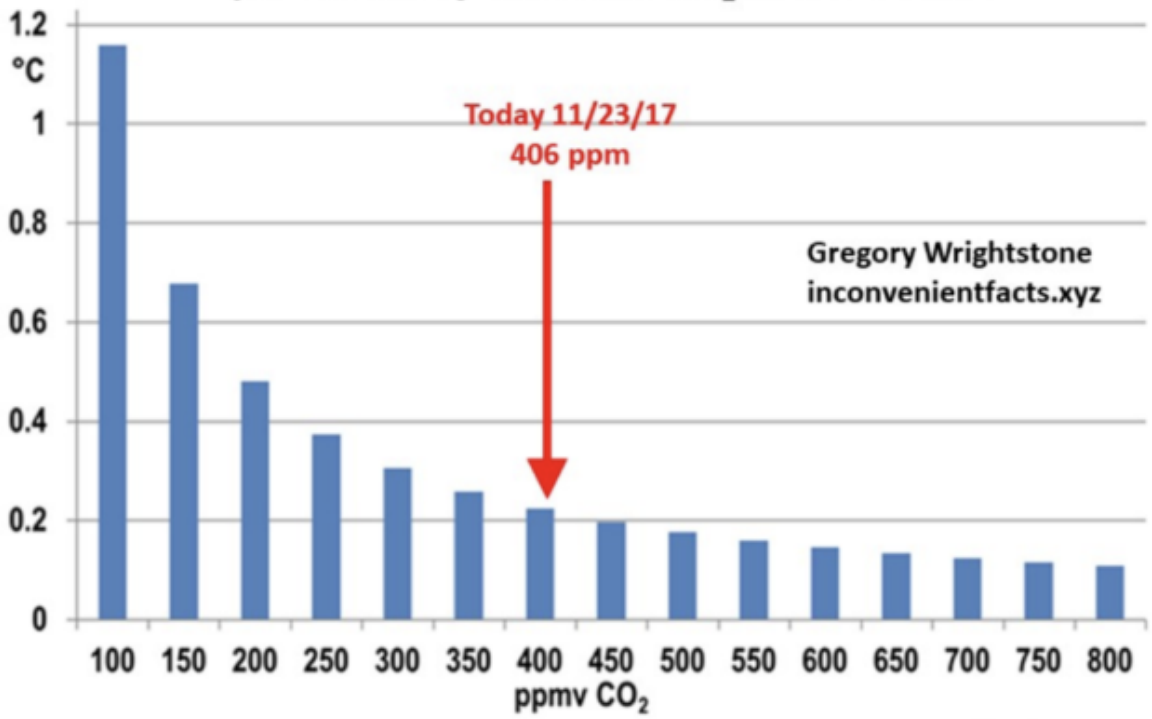
40?????Gt?????CO2?1?????  
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CO2???????

**CO2?"heavily saturated"**

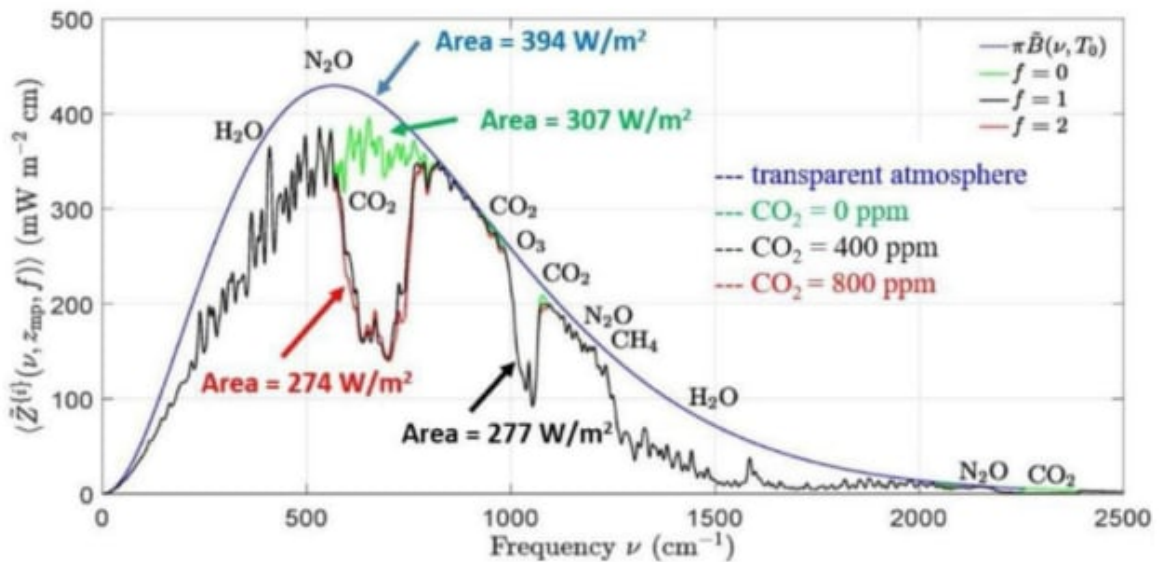
CO2???50ppm?????CO2?????  
= saturation?????CO2?"heavily saturated"?????

Figure I-3: Less global warming for each additional 50 parts-per-million-by-volume of CO<sub>2</sub> concentration



????????CO2?????2?800ppm????????????????????????????CO2????????????????????????????????

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??394 W/m<sup>2</sup>????????????????????@ transparent atmosphere????????????????27??



????????????????????????????????????CO2  
400ppm?????????394W/m<sup>2</sup>?????277W/m<sup>2</sup>??277/394  
70????????????CO2?400ppm??800ppm????????????????????????????????????274  
W/m<sup>2</sup>?69.5%????????????????????????????3W/m<sup>2</sup>???????????????????? 1????????????



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? State Farm Test: ???

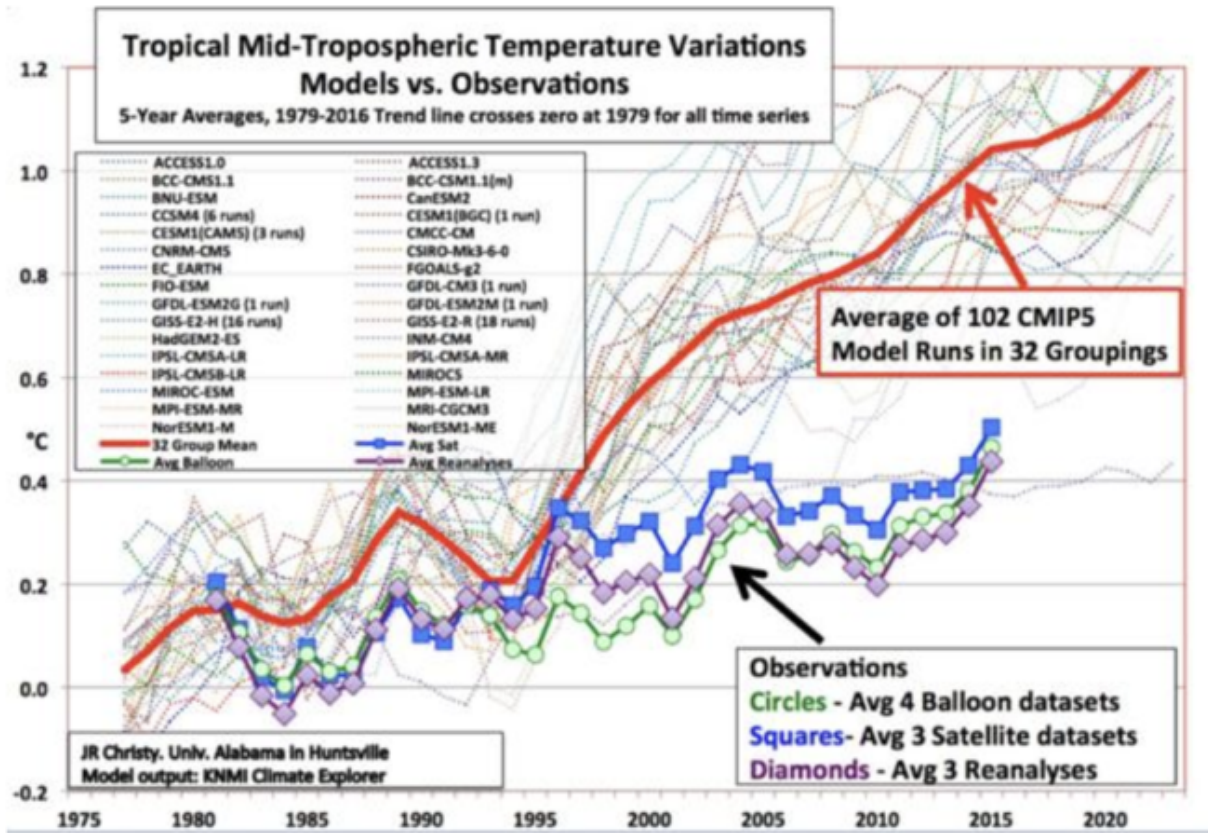
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1. EPA????????????????????????????????????
2. EPA????????????????????????????IPCC??
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The main conclusion of this part of the study is that even an order of magnitude increase of CO<sub>2</sub> in the atmosphere by human activities, which at the present rate of input is not expected within the next several thousand years, may not be sufficient to produce a runaway greenhouse effect on Earth. On the short time scale, if CO<sub>2</sub> is augmented by another 10 percent in the next 30 years, the increase in the global temperature may be as small as 0.1°K.

Posted in ???, ????? | No Comments »

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?? ?? · Friday, August 18th, 2023



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Luisa Trescher Photos/iStock



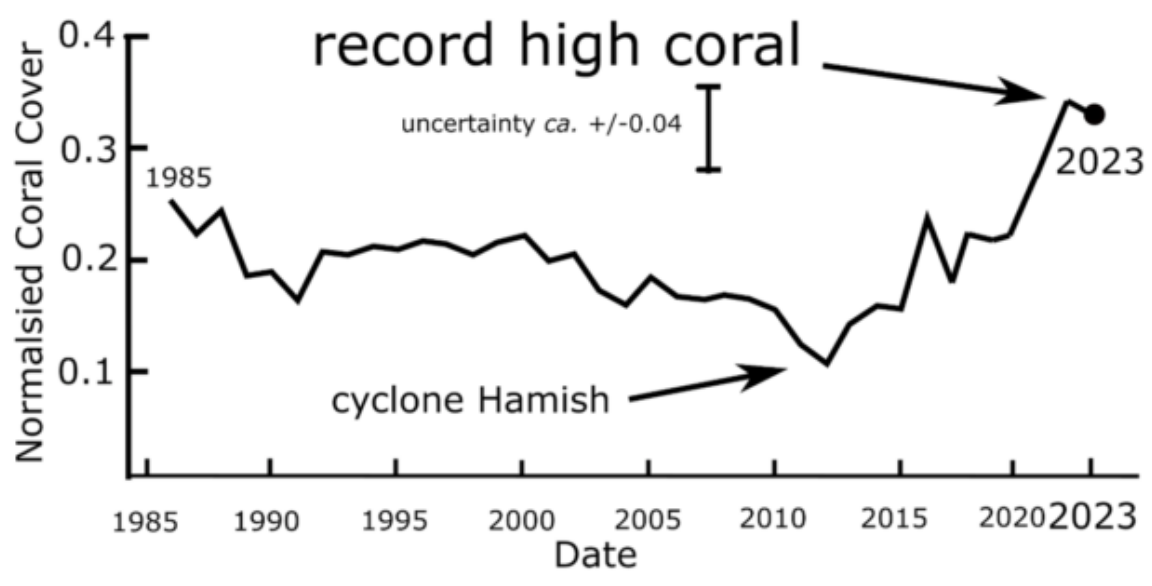
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60????????????????????

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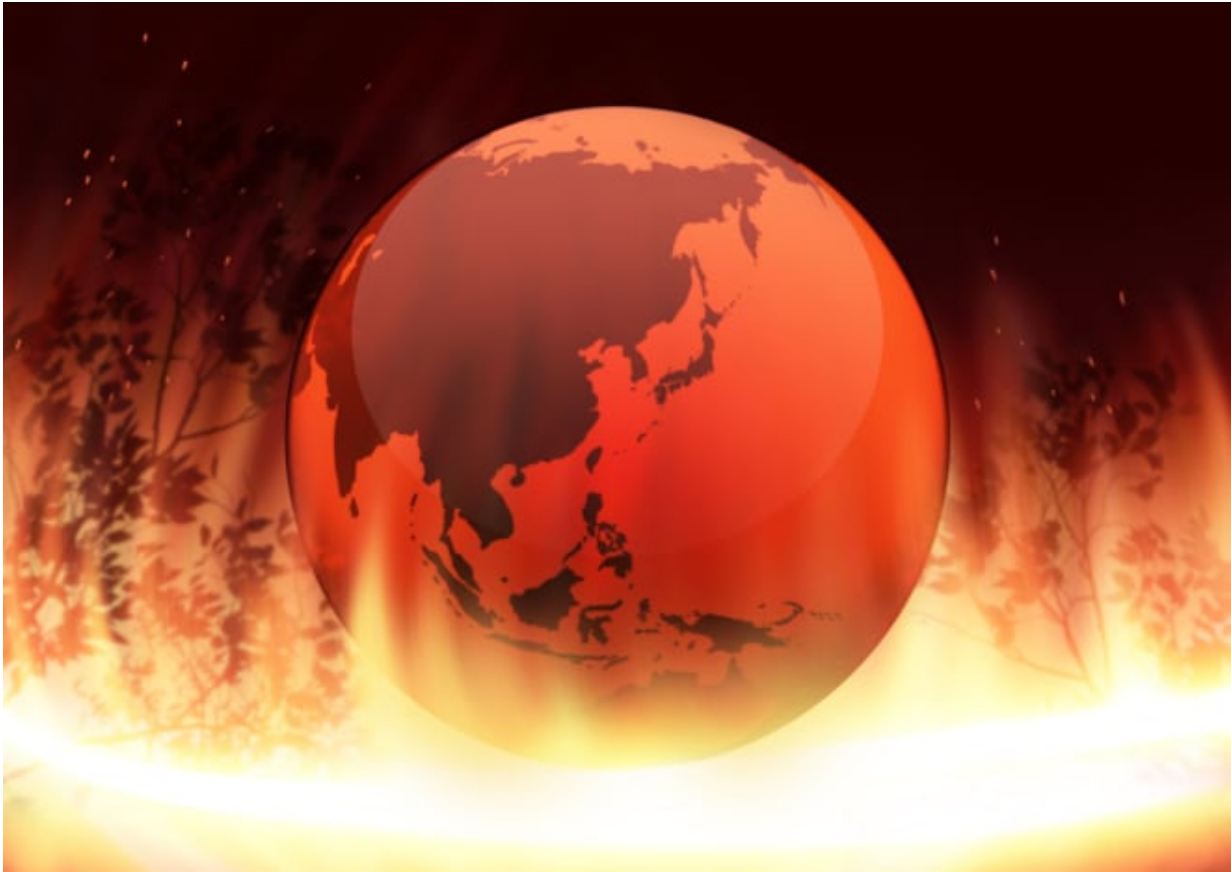
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Tr6/iStock

global warming global boiling

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2023 “”

100 15 100

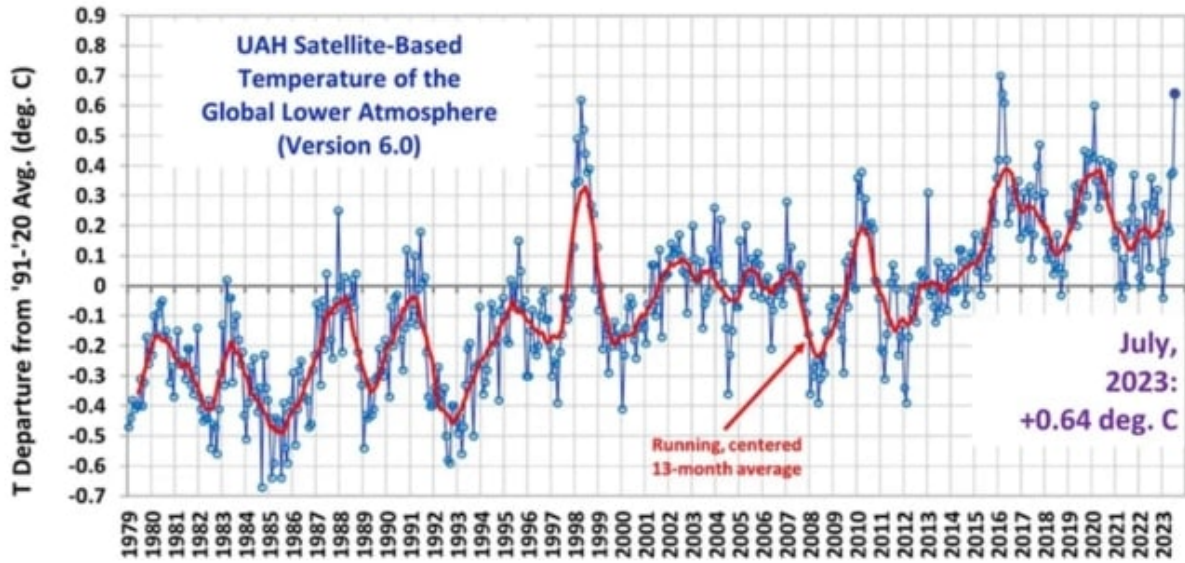
50 5

BBC 1



Climate Etc.

9000 UAH



3

Climate Etc.

2023

1 7

2 1 3

2023 4 1 2 1 7









CO2  
CO2

CO2  
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**??????????**

CN  
CO2  
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2009  
4  
14  
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

CO2  
CO2  
2-09  
p.55  
Table 2?

HP  
Vol.44  
vol.37

CO2  
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12  
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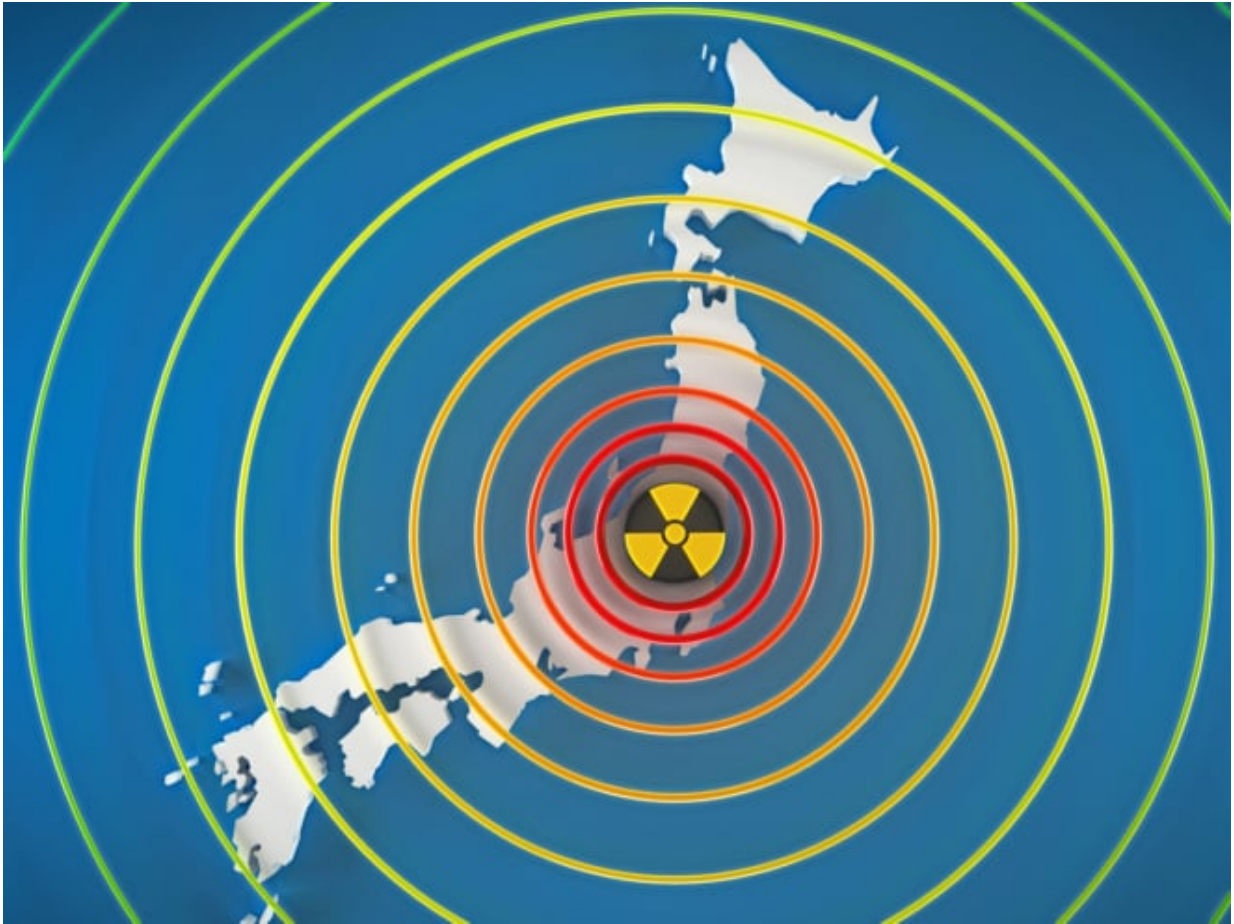
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Posted in [??](#), [????????](#) | [No Comments](#) »

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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



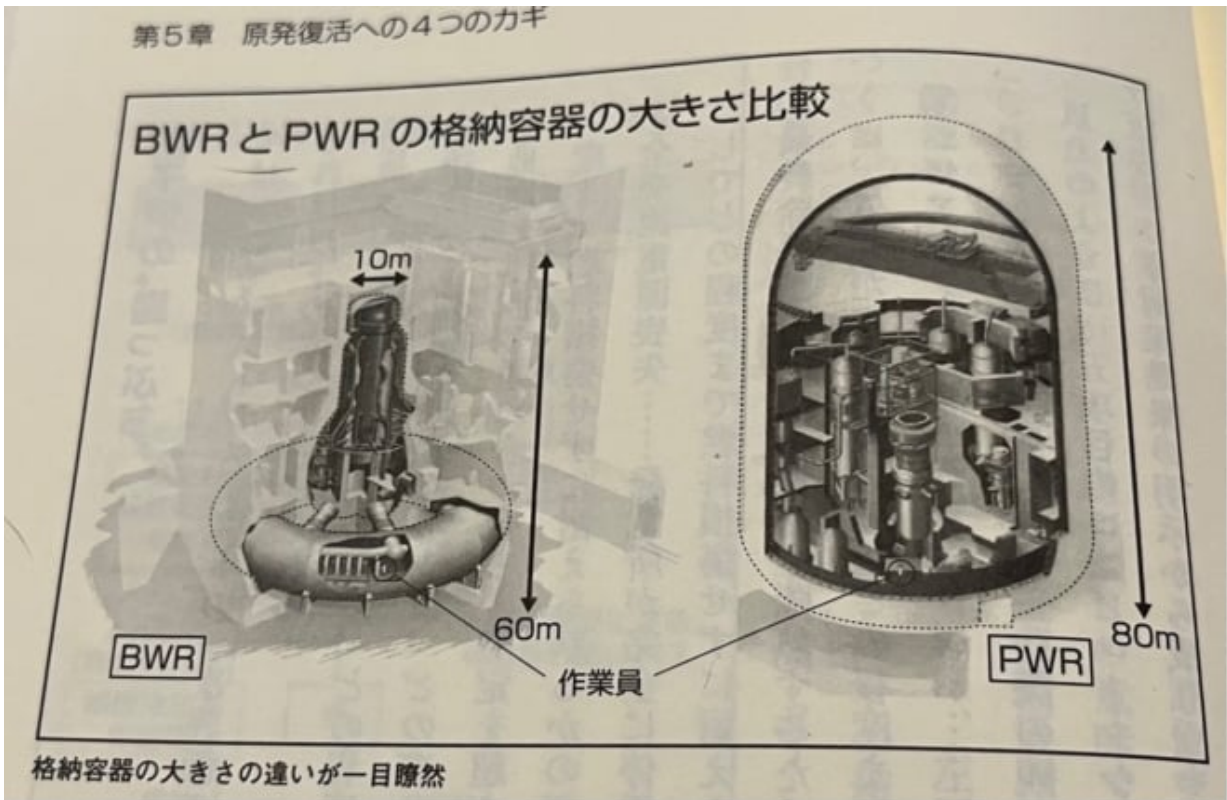
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??BWR  
/Mark?I????????????????????PWR??  
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©? japan.cnet.com

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bluejayphoto/iStock

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7?27?????WMO??EU?????2023?7?????  
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Posted in ???, ??, ????? | No Comments »

# ????????G20????????

?? ? · Monday, July 31st, 2023

7?22????????G20??2022????????????  
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**some**  
**members??**??  
**others??**??

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1.5°C COP  
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G7

2050  
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G7 G20

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2030  
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3 G20 G7 2030  
150GW 1TW

COP27  
???

G20 12 COP28

UAE

- ? 2030
- ? 2030
- ? 2030
- ? ?

G20

G20 1.5°C by or around mid century G20

1.5

Posted in | No Comments »

## IPCC AR6 “Summary”

01 July · Sunday, July 30th, 2023

01 July 2023 IPCC Summary for Policymakers Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

Working Group I Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

Summary for Policymakers: The Science of Climate Change. This report provides a comprehensive overview of the science of climate change, including the current state of climate change, its drivers, and the impacts on natural and human systems.

The report highlights the urgent need for action to limit global warming to 1.5°C above pre-industrial levels by the end of the century. It also outlines the pathways for achieving net-zero emissions by 2050 and the role of different sectors in reducing greenhouse gas emissions.

The report also discusses the impacts of climate change on human health, ecosystems, and infrastructure. It emphasizes the need for a just transition to a low-carbon economy that leaves no one behind. The report concludes with a call for increased ambition in national climate policies and international cooperation to address the global climate crisis.

The report is structured into six main sections: 1. The Current State of Climate Change, 2. Drivers of Climate Change, 3. Impacts, Risks, and Adaptation, 4. Energy Systems, 5. Land, Ocean and Ecosystems, and 6. Urban and Infrastructure. The report is supported by a range of scientific evidence, including observations, climate model simulations, and expert assessments.



NicoElNino/iStock

AR6 COP26 1.5 IPCC 2014 5  
AR5 2021 1.5

2 1.5 2 2 67 1.5 5  
0 1.5

1.5 2 1.5 1.5 5  
1.5 2 1.5

1.5 2 67  
IPCC 1.5

AR 6-  
SPM GHG

1.5 2019 500 CO<sub>2</sub>e 1150  
21<sup>2</sup>

2020 50 GHG 1.5 10 23 7

IPCC 1.5 2 0.5  
650

AR 6-  
SPM Table SPM.1 2050 2019 64 2030  
21 2070 Table

SPM.1 1.5 2030 43 2050 84 22<sup>2</sup>

1.5 1.5 50 1.5  
0.2 0.3

AR6 1.5 1.7 1.8 1.5  
500 500 1.5 1150 2 825  
825 GHG 1.5

AR6 1.5

1.5

AR6-SPM?C.2.4

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AR6-SPM?C.2.4  
2  
39

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2  
1.5

1.5 AR6-SPM?P26



1.5  
24

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1.5  
IPCC AR6  
1.5  
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2030?21 GHG AR6-SPM?C.2.4

1.5 30?43?50?84 AR6-SPM?C.2.5



imply??  
59

1.5

AR6  
26  
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IPCC

AR6  
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1.5

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AR6??1.5????????????????  
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?1?AR6-SPM?B5.2????????1.5??

????????GHG????CO2????????????1.5????2050?99????2030?48????????????30????50????????????

?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





BrianAJackson/iStock

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

# ??????CO2????????????????????????????

?? ?? · Thursday, July 27th, 2023



JaCZhou/iStock

??????CO2????????????????????2023?7?4??Enrico Mariutti????????????????????????????????The Dirty Secret of the Solar Industry???

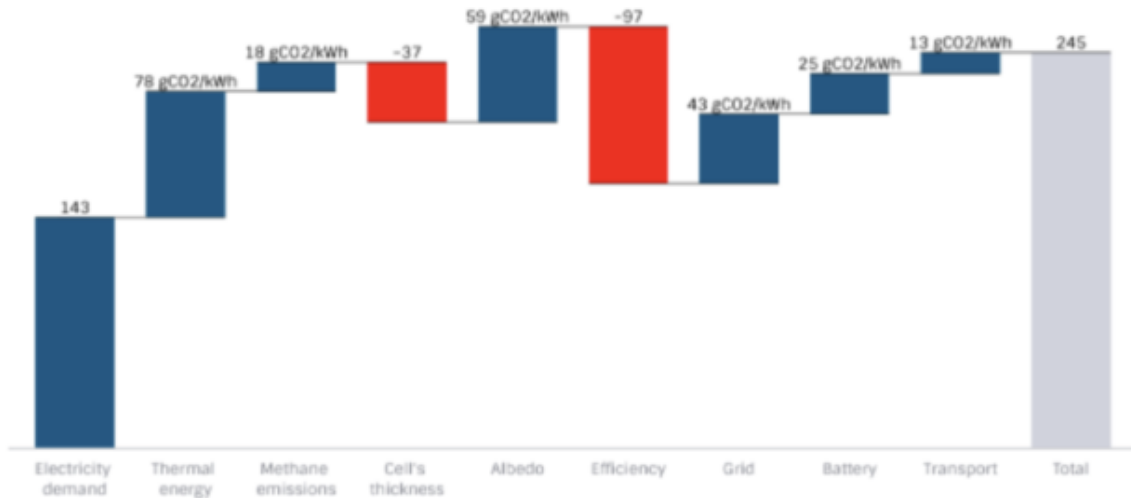
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??CO2????????????????kWh????245gCO2????????????1?

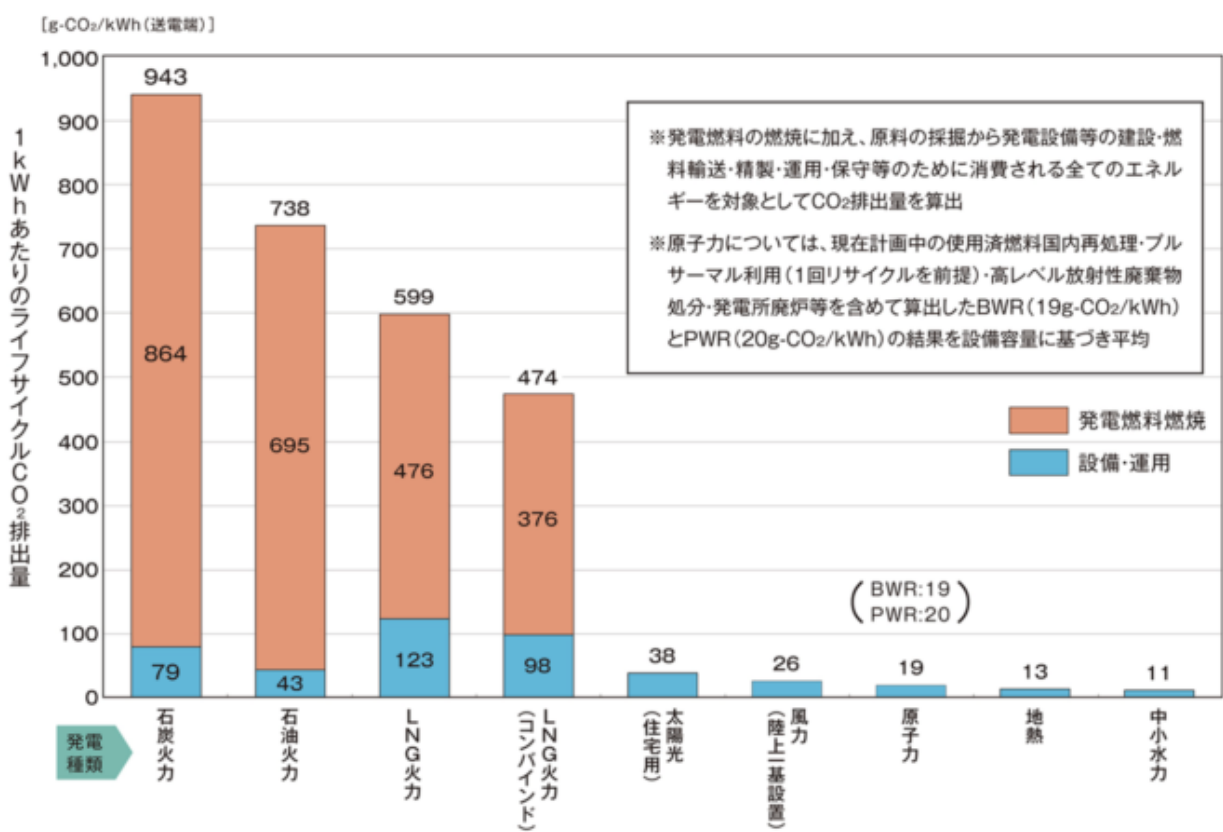
2022  
Carbon intensity, Worst Scenario



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??CO2??CO2????????????  
245????????

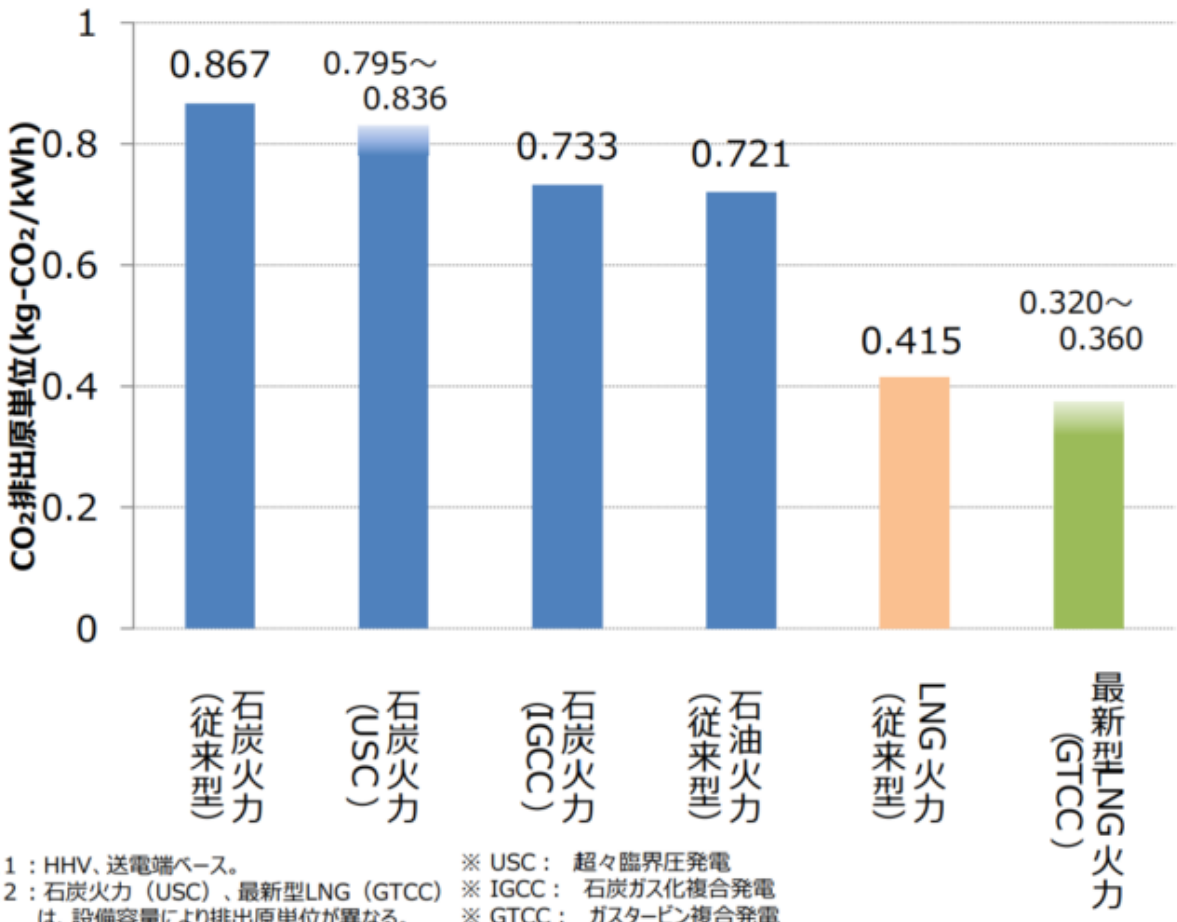
??1kWh??245??2016????????????????????????  
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Vertical text block containing multiple lines of text, possibly a list or detailed notes.

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Posted in ???, ????? | No Comments »

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?? ?? · Friday, July 21st, 2023

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jetcityimage/iStock

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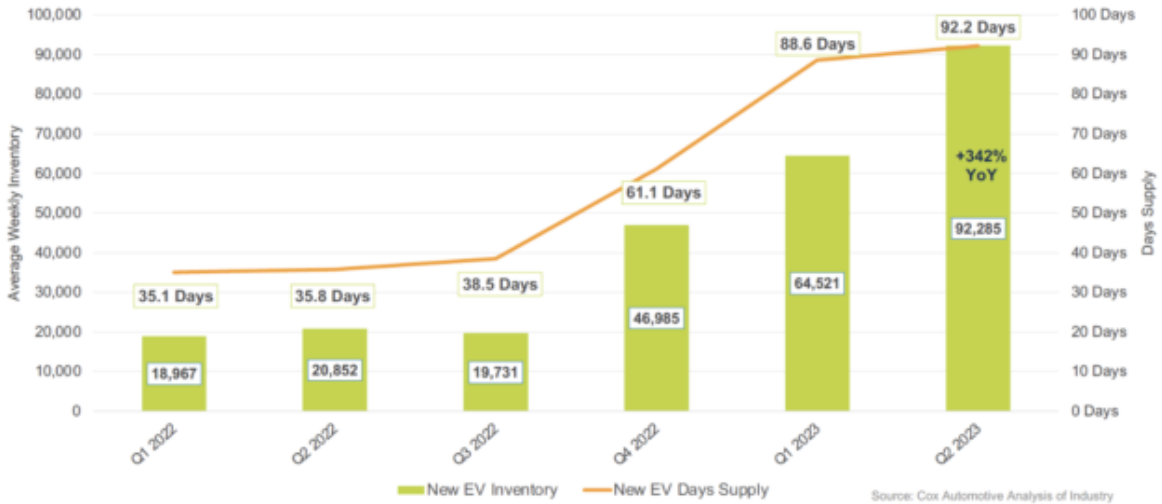
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# NEW EV INVENTORY & DAYS' SUPPLY ESTIMATES

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



COX AUTOMOTIVE

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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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EV??I  
CE????EV????????????????????????????????

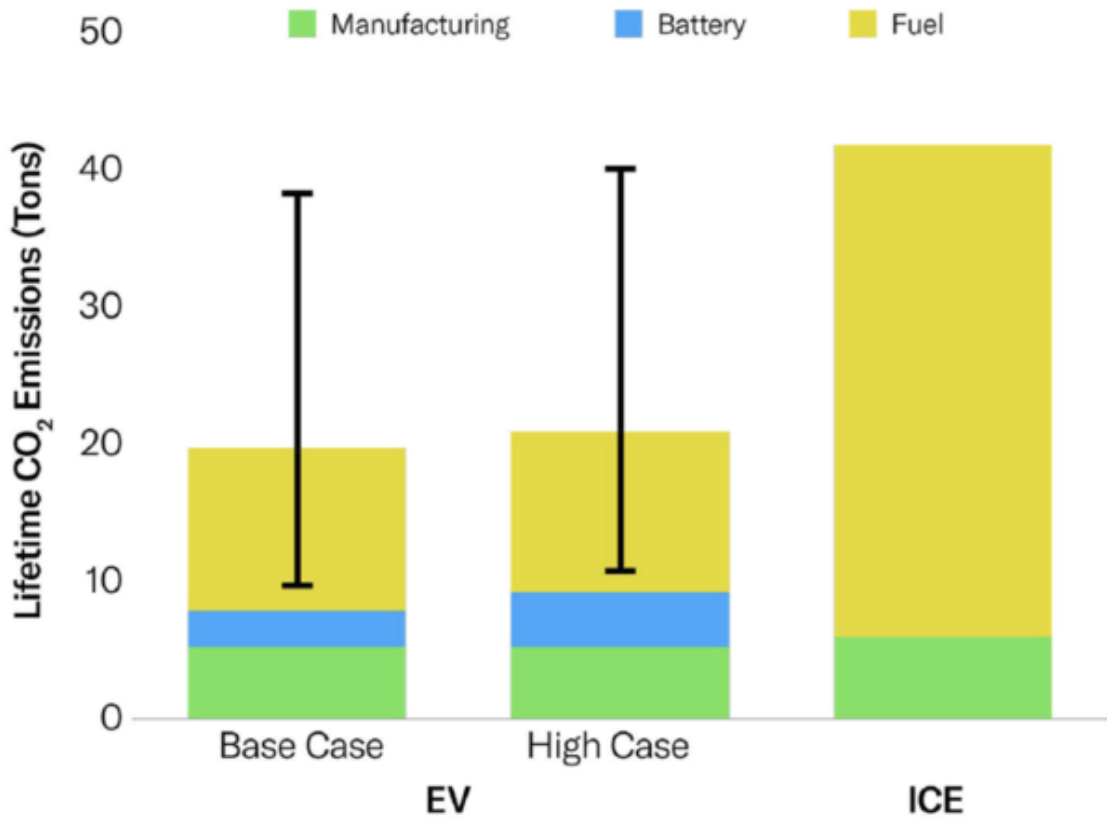
?????2??????CO2????????EV????CO2????????????????????

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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"

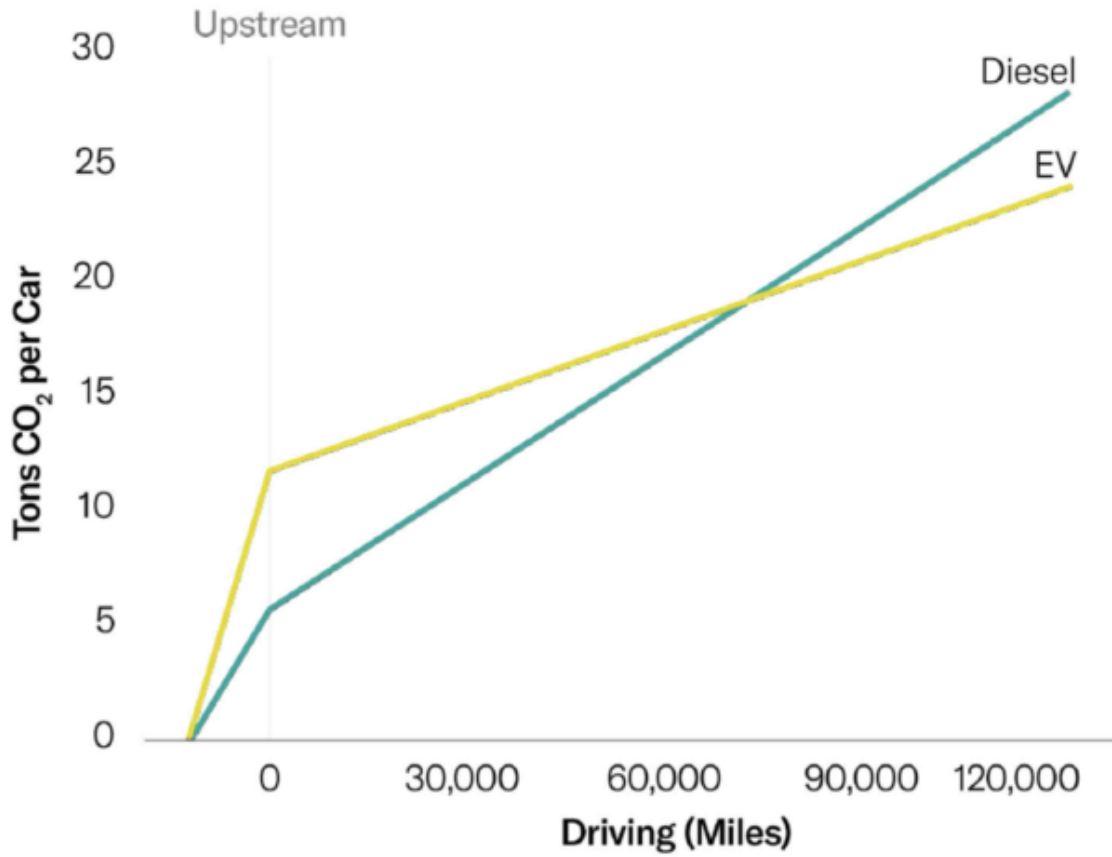
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Figure 4

Life-Cycle Emissions: Volkswagen EV vs. Diesel



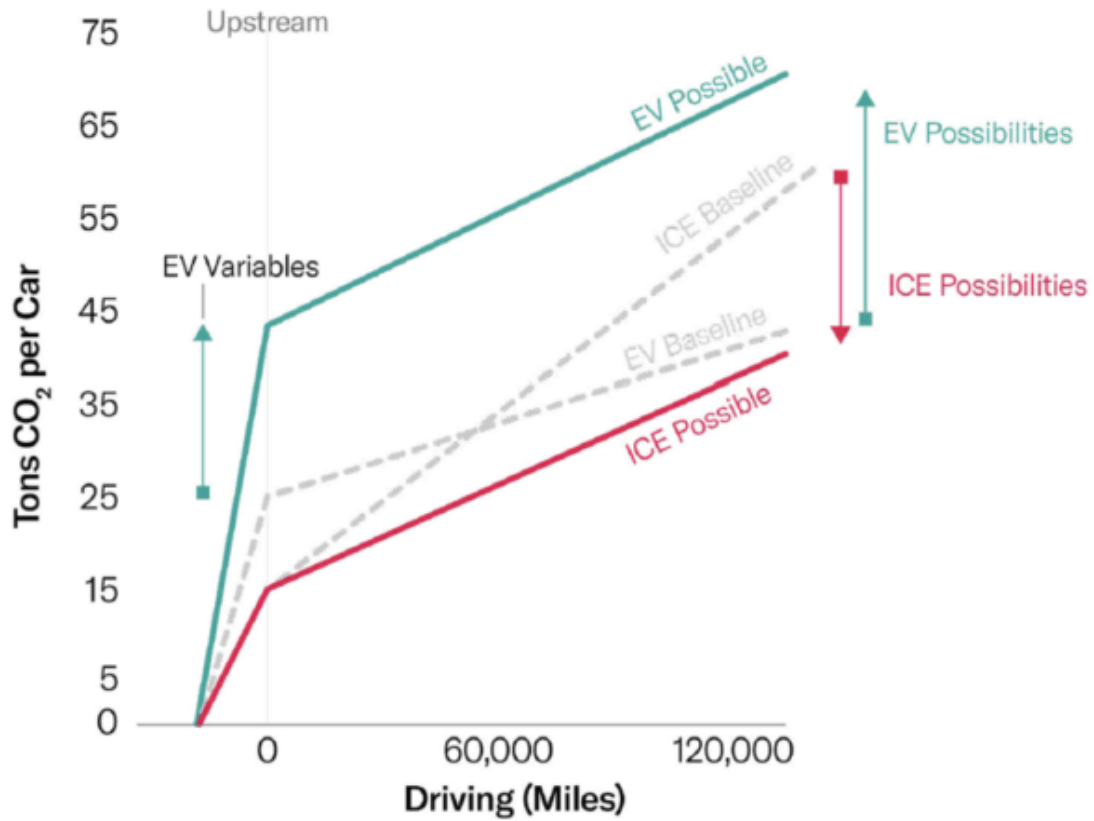
Source: Maciej Neugebauer, Adam Żebrowski, and Ogulcan Esmer, "Cumulative Emissions of CO<sub>2</sub> for Electric and Combustion Cars: A Case Study on Specific Models," *Energies*, Apr. 6, 2022

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Figure 6

EV vs. ICE CO<sub>2</sub> Emissions: Scenarios with Known Unknowns



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

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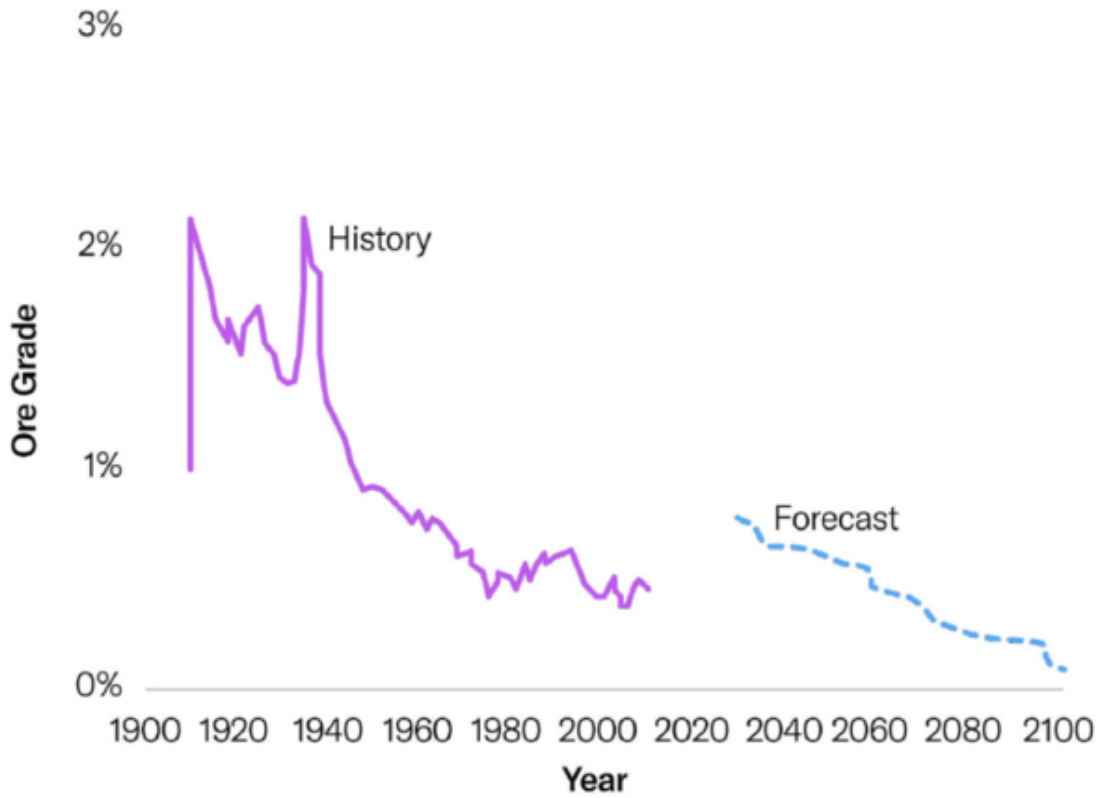
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Figure 8

Two Centuries of Global Copper Ore Grades



Source: S. Northey et al., "Modelling Future Copper Ore Grade Decline Based on a Detailed Assessment of Copper Resources and Mining," *Resources, Conservation and Recycling* 83 (February 2014): 190–201

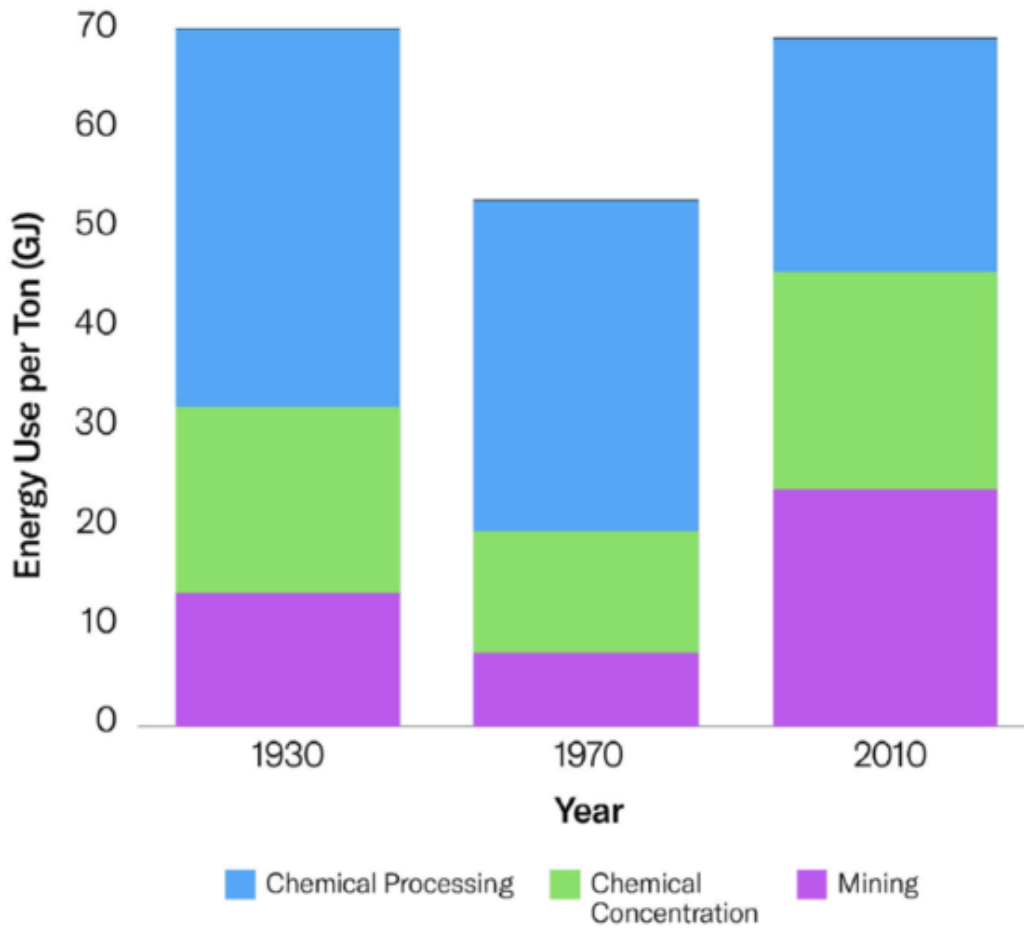
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Figure 10

### 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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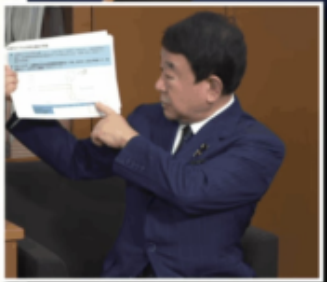
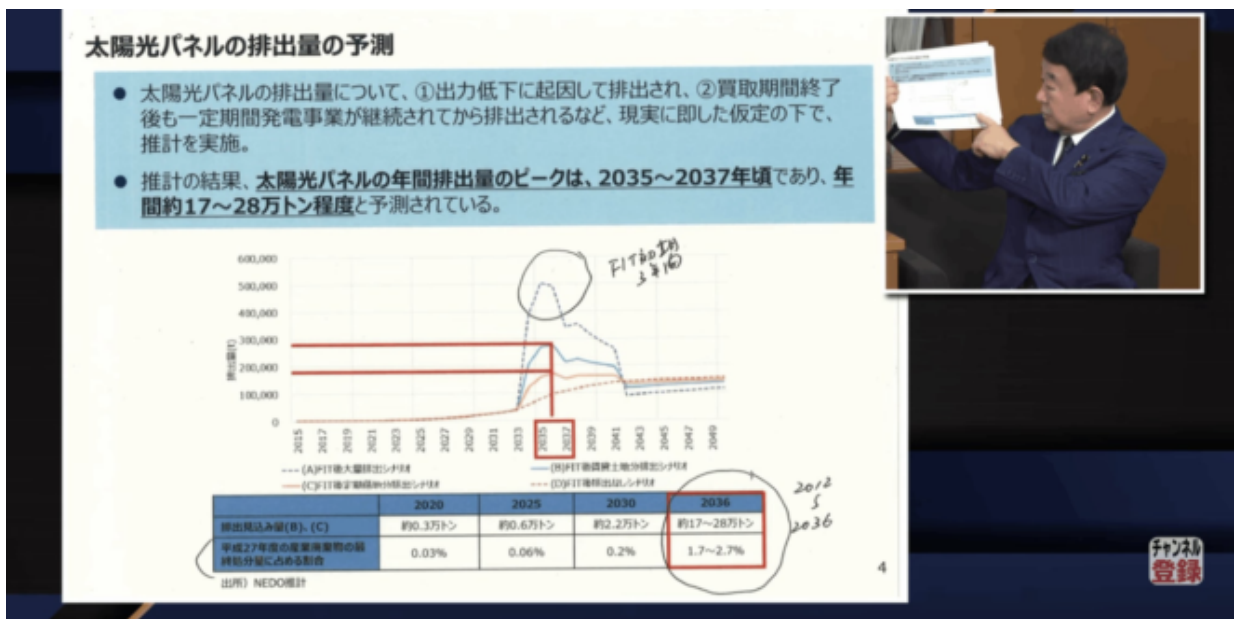
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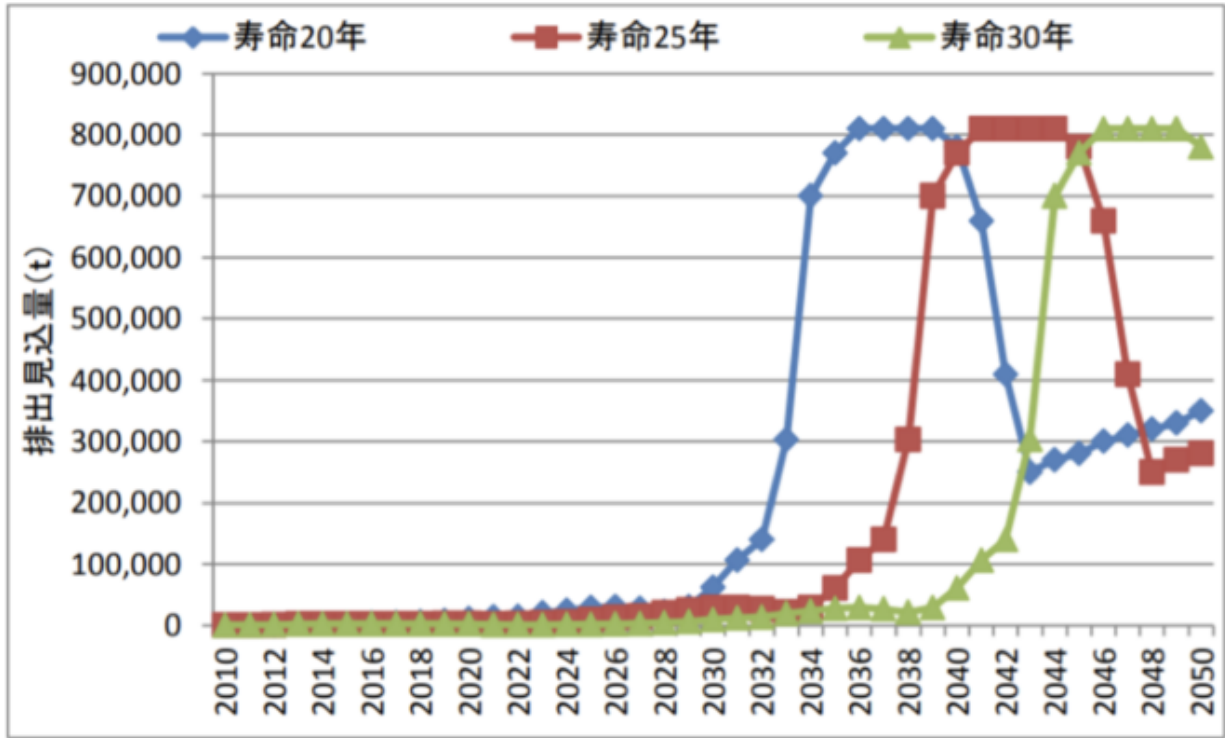


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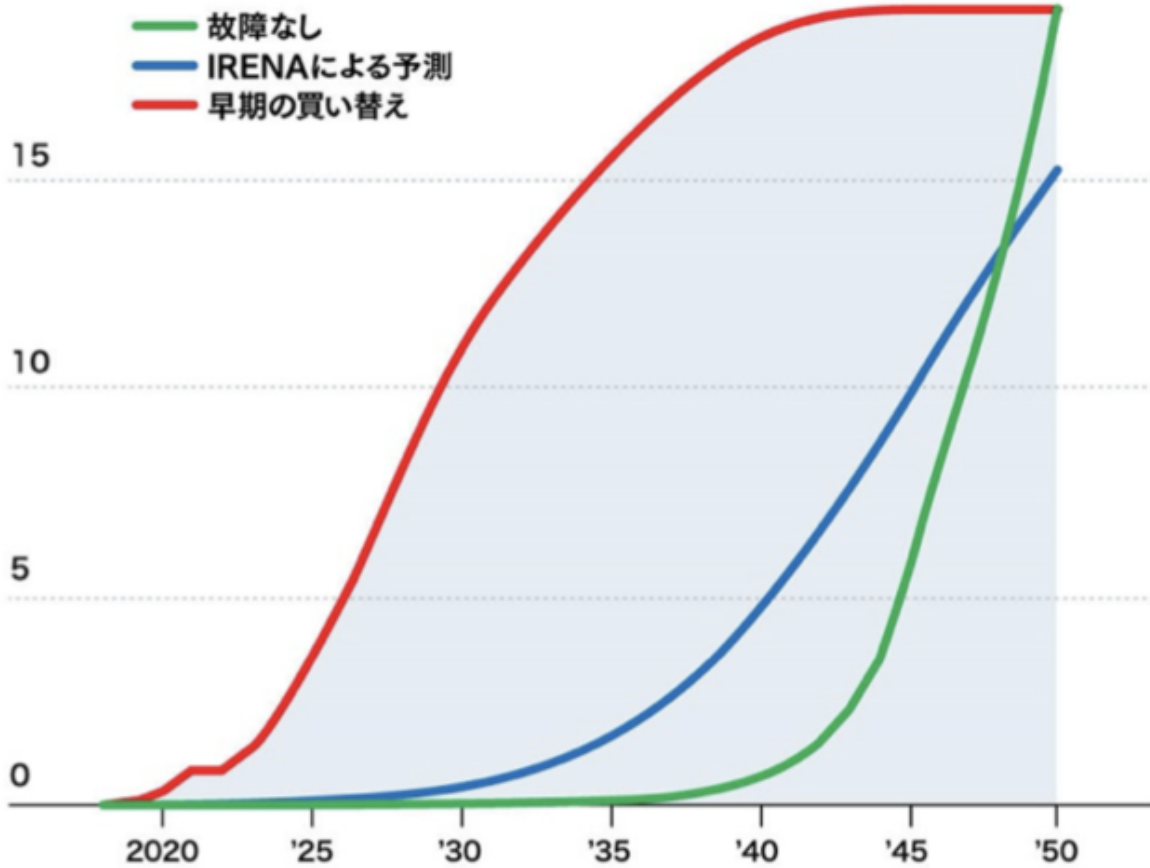
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**廃棄物の累計**  
 (発電容量ベース)

20ギガワット



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Pixelci/iStock

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?? ?? · Tuesday, July 4th, 2023



xijian/iStock

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

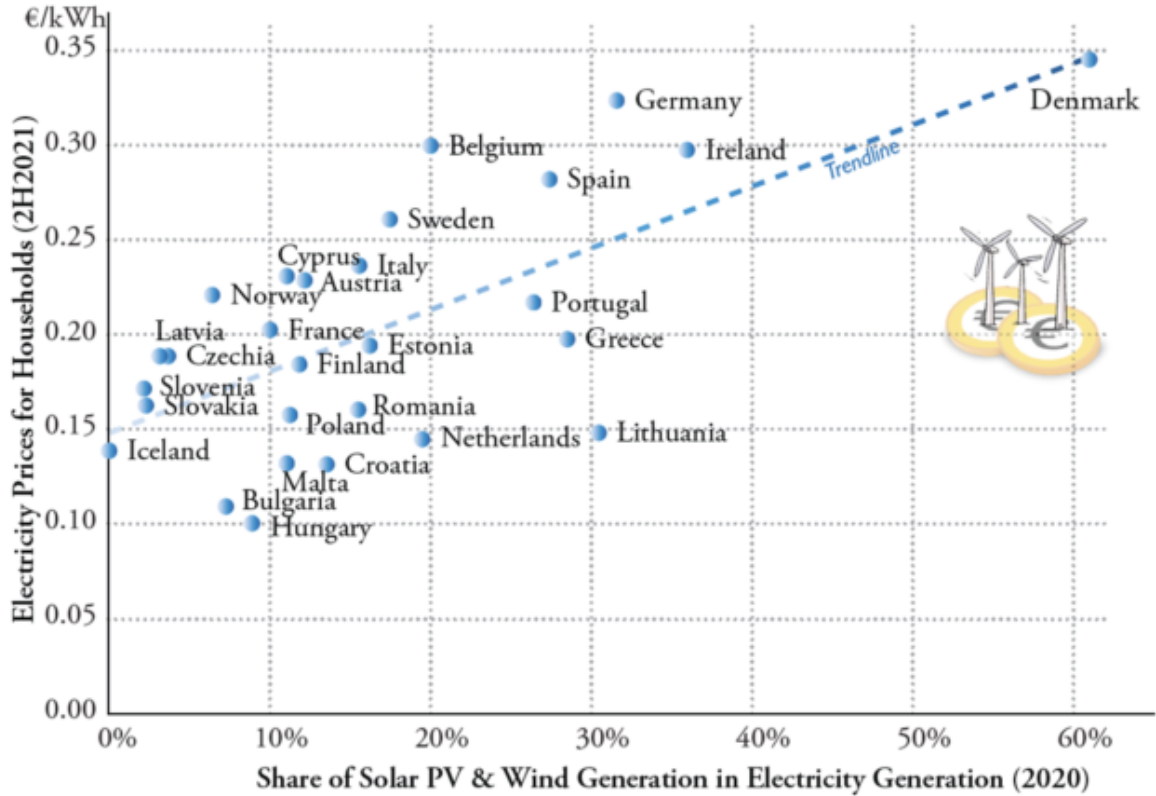
**A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.**

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

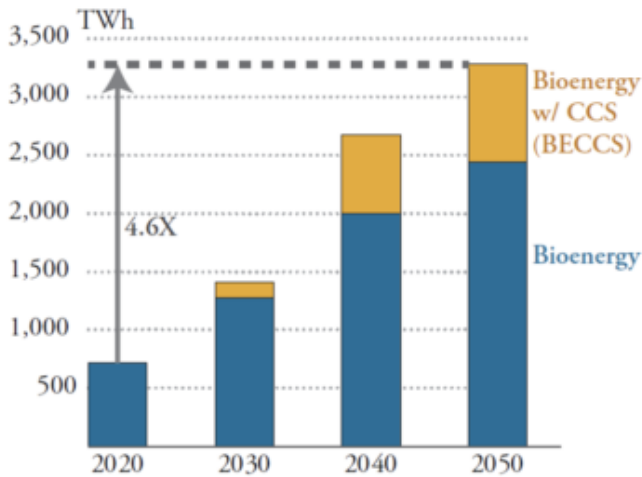


Source: Energy Policy Research, Eurostat, IEA

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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)

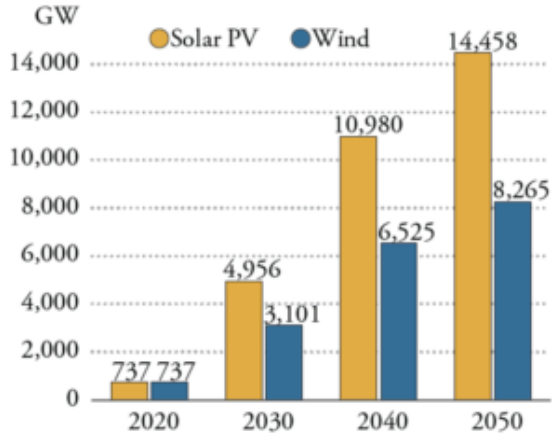
Figure 24. Global Land Requirements for Bioenergy for Electricity Generation in NZE



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

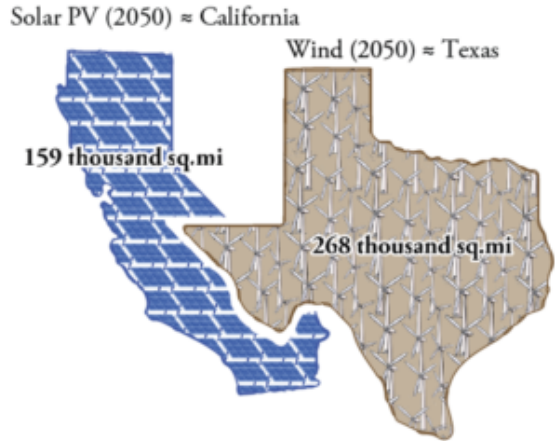
Batt Odgerel, Lucian Pugliaresi, Michael Lynch 38

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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# ????????COP28????????????????????

?? ? · Monday, July 3rd, 2023



CHUYN/iStock

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- 2025?????GHG?????2050?????10?????  
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**EV??????????????????**

?? ?? · Monday, July 3rd, 2023



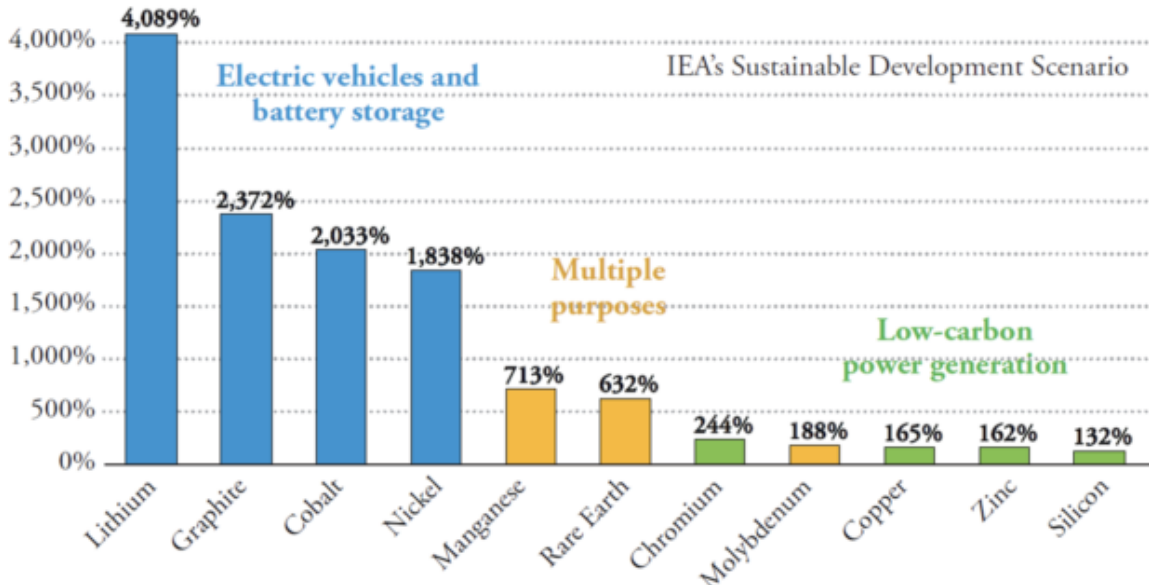
PhonlamaiPhoto/iStock

??(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.**

????????EV??2020????2040????20????????????????????  
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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

EV??7000????????????????  
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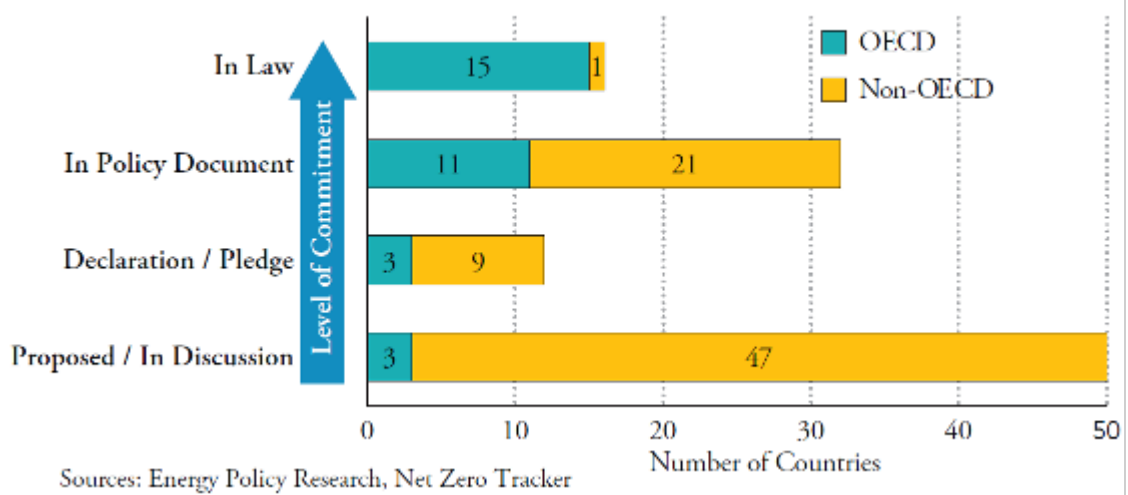
A Mokhtari/iStock

IAE 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.

OECD 2050

Figure 49. Two-Speed Transition: Net Zero by 2050 Level of Commitment

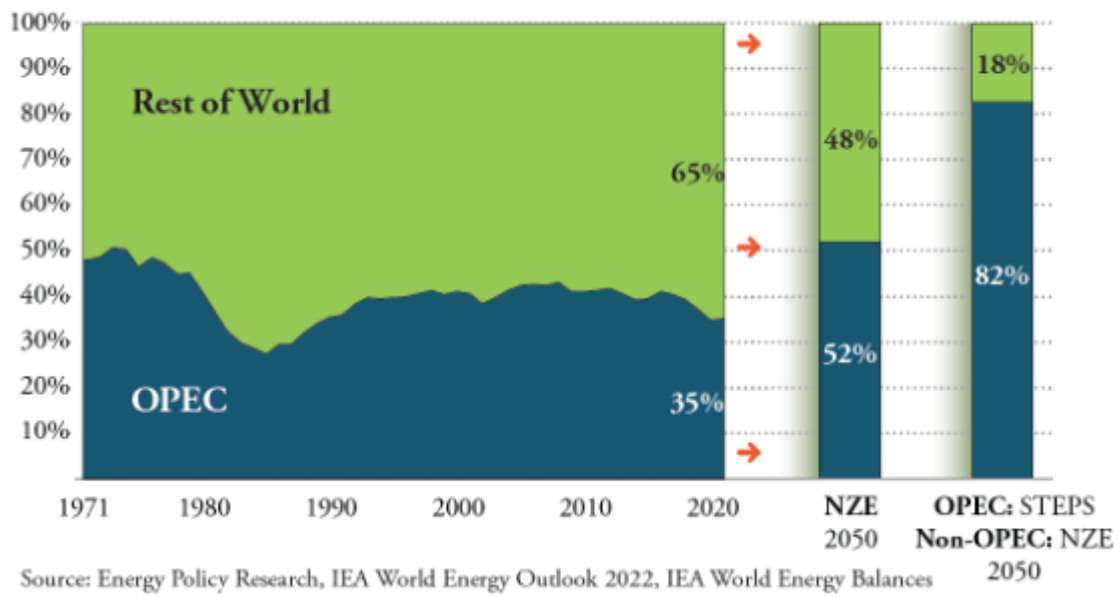


IEA NZE OPEC 35% 52% 1973

NZE OPE C

OPEC NZE OPEC NZE STEPS OPEC 82%

Figure 17. OPEC Share of Global Oil Production

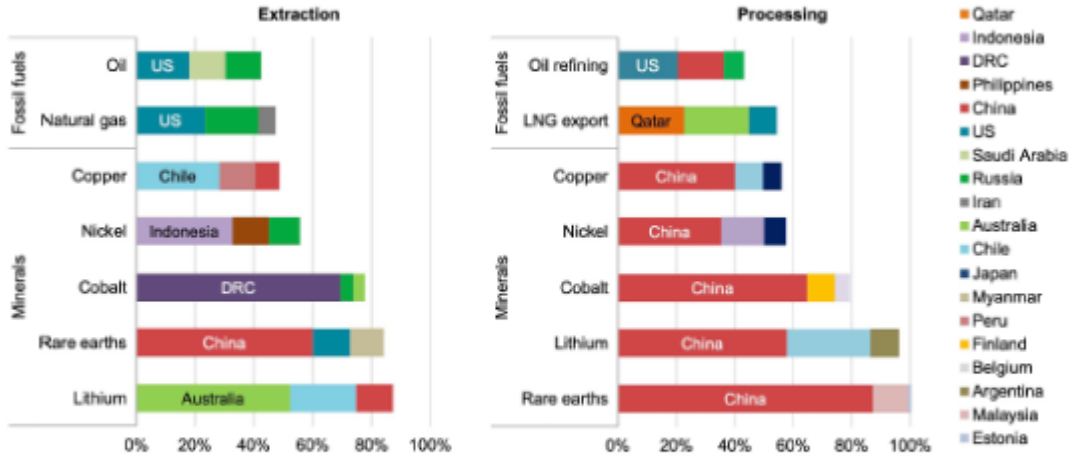


??OPEC??

NZE????????????PV????EV??  
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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)

OPEC??NZE??  
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# IEA????????????????????????????????????

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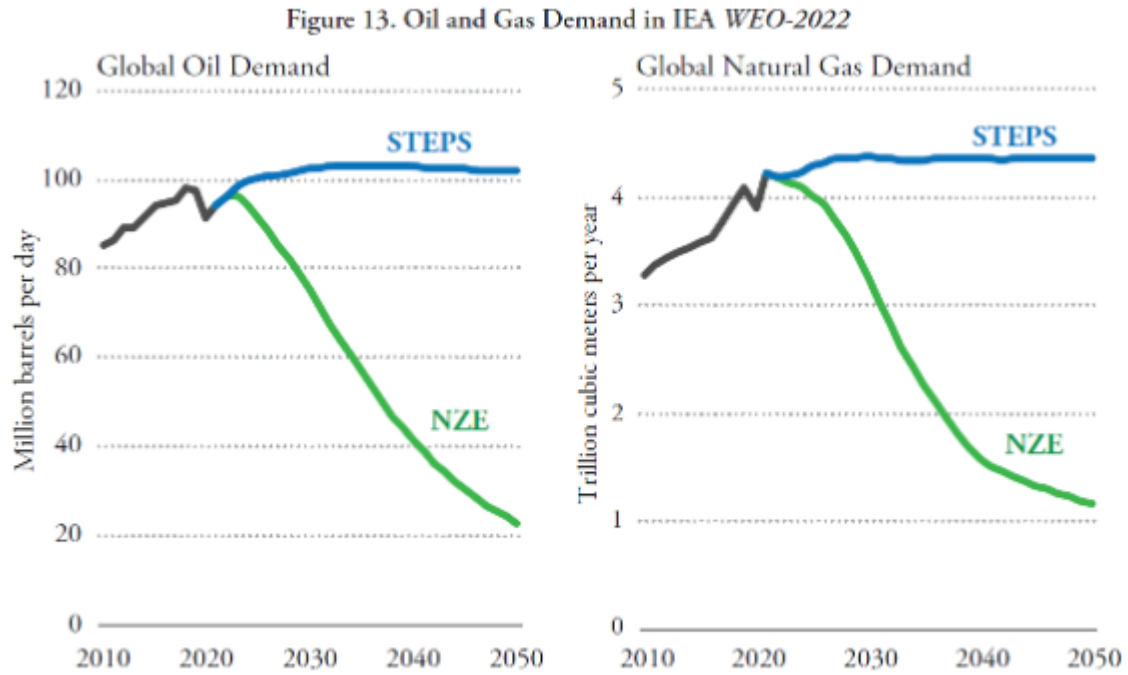
privetik/iStock

????????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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Rawf8/iStock

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