

Global Energy Policy Research | GEPR

GEPR???
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?? ? · Saturday, July 29th, 2023



BrianAJackson/iStock

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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???

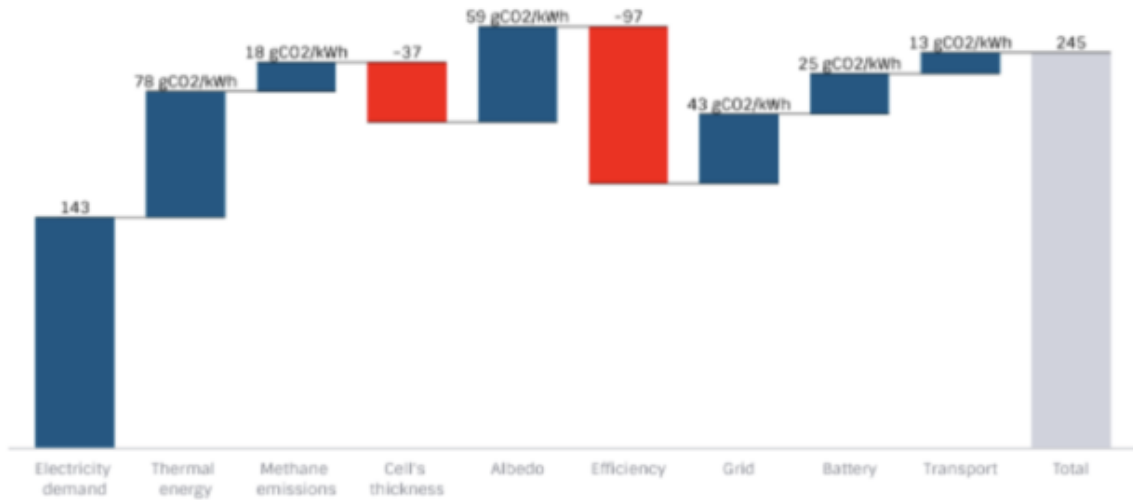
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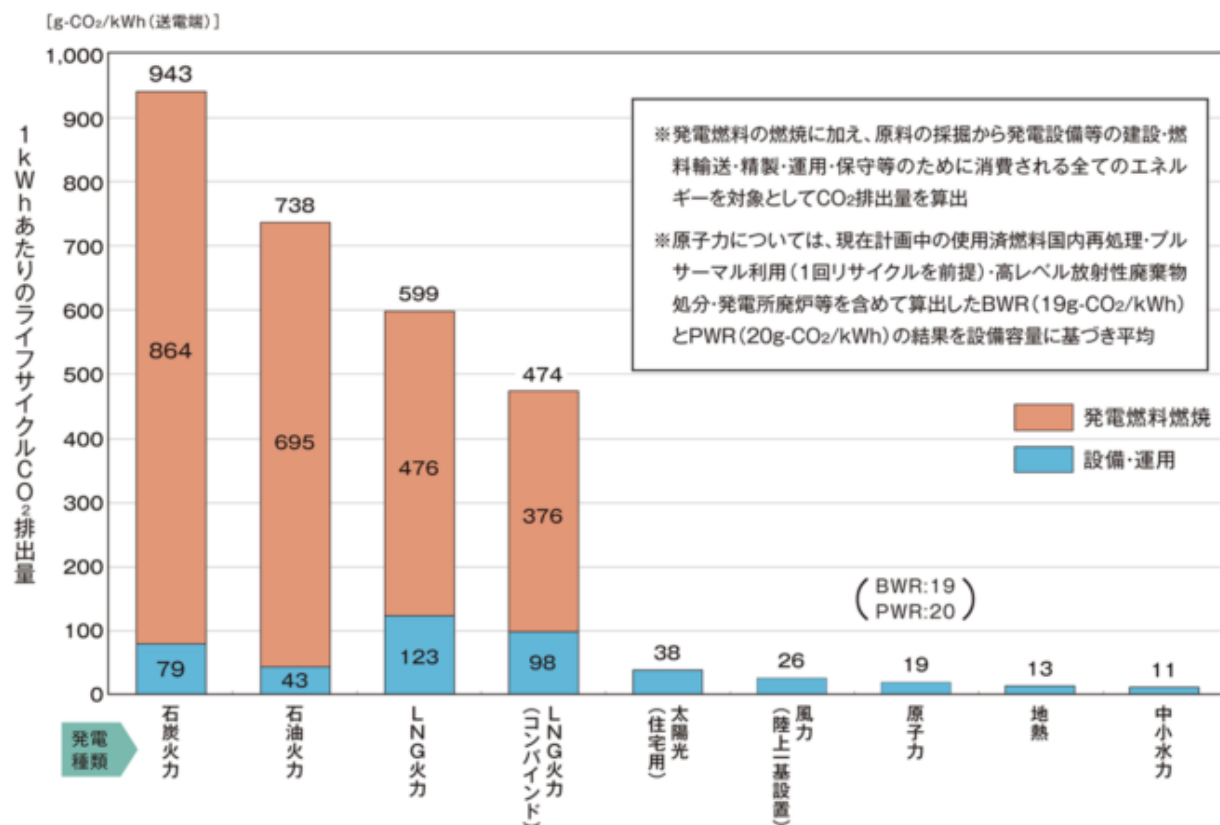
2022
Carbon intensity, Worst Scenario



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

??1kWh??245????????????2016????????
????kWh??38????2????



※発電燃料の燃焼に加え、原料の採掘から発電設備等の建設・燃料輸送・精製・運用・保守等のために消費される全てのエネルギーを対象としてCO₂排出量を算出

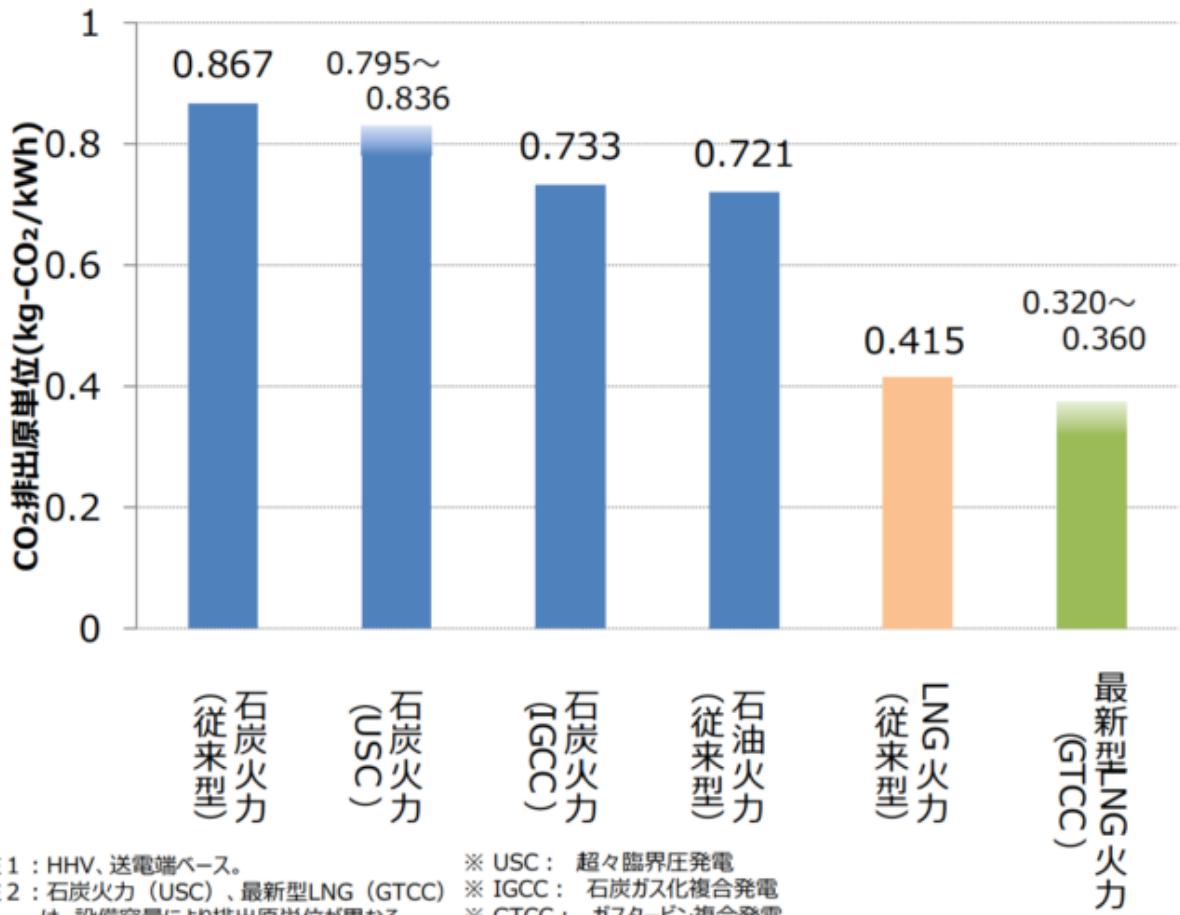
※原子力については、現在計画中の使用済燃料国内再処理・プルトウニウム利用（1回リサイクルを前提）・高レベル放射性廃棄物処分・発電所廃炉等を含めて算出したBWR（19g-CO₂/kWh）とPWR（20g-CO₂/kWh）の結果を設備容量に基づき平均

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1kWh???245????CO₂??2022??

??LNG????????????CO₂???????1kWh???320??360????????????????????3??



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??????EV????????????????

?? ?? · Friday, July 21st, 2023

????????????????EV??EPA?EV?
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EV????????????????????????????????



jetcityimage/iStock

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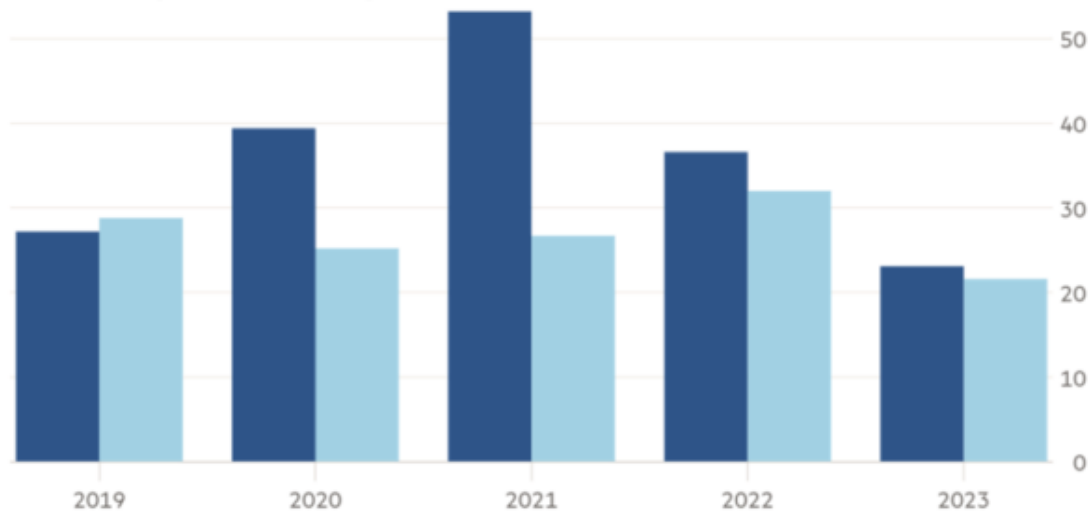
????????????????????ESG????????????????????????????

Investor support drops for environmental, social issues at US companies

Average (%)

Climate change

Human rights



Source: Sustainable Investments Institute © FT

FINANCIAL TIMES??

?????EPA?????

4?12?EPA?????2032?????
???67?EV?????50?????35?????25?EV?????

????EPA??67?????EV?????
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?????EV?????

????EPA?????EPA?????

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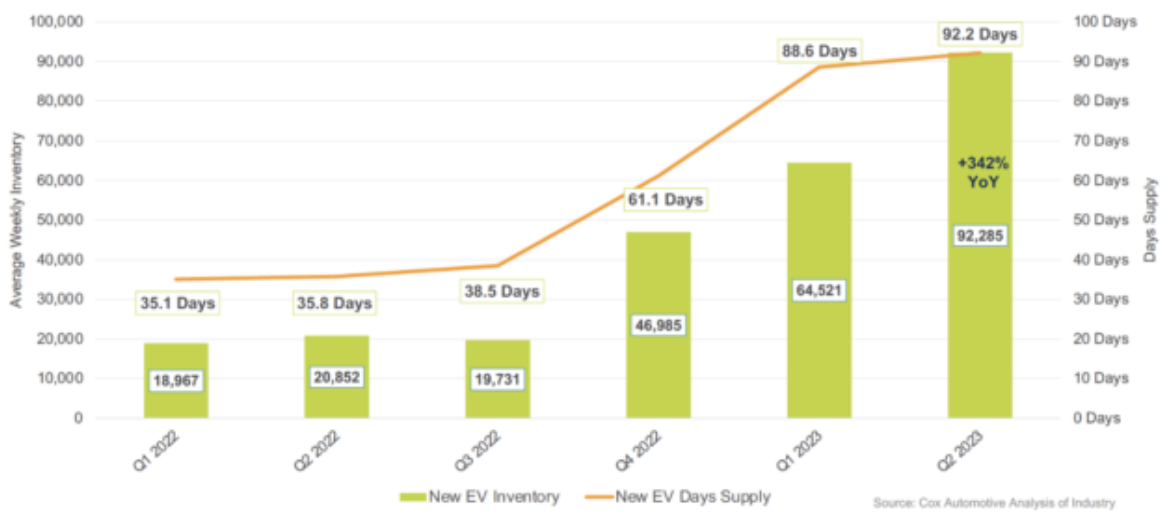
?????EV?????JD?????EV?????
??3?????21?EV?????1?17.8?????

??10?????EV?????
?????EV?????

2023 Cox Automotive Mid-year Review?????2023??2?????
92,000?????2022??2?????342% ?????

NEW EV INVENTORY & DAYS' SUPPLY ESTIMATES

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



COX AUTOMOTIVE

EV????????????????????

????????2050????????????????????EV????????????????????

??12????????????????????EV????????????????????

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????EV????????EPA????????

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

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?? ? · Thursday, July 20th, 2023

????????G7????????COP????????

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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????????????????????????????????????

????????????????????BEV??ICE????????????????????????????????????BEV??????
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CE????EV????????????????????????????????

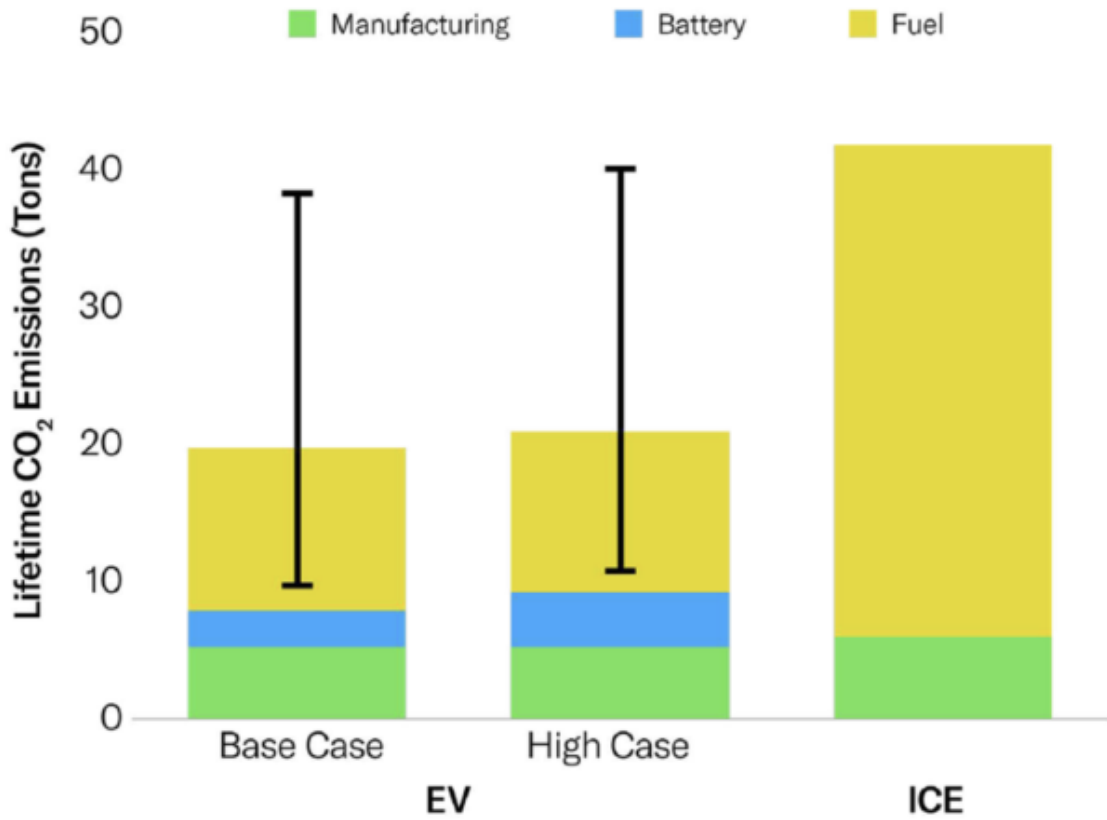
?????2??????CO2????????EV????CO2????????????????????

??1?CO2

??BEV????ICE????????????CO2????????????????

Figure 3

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



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

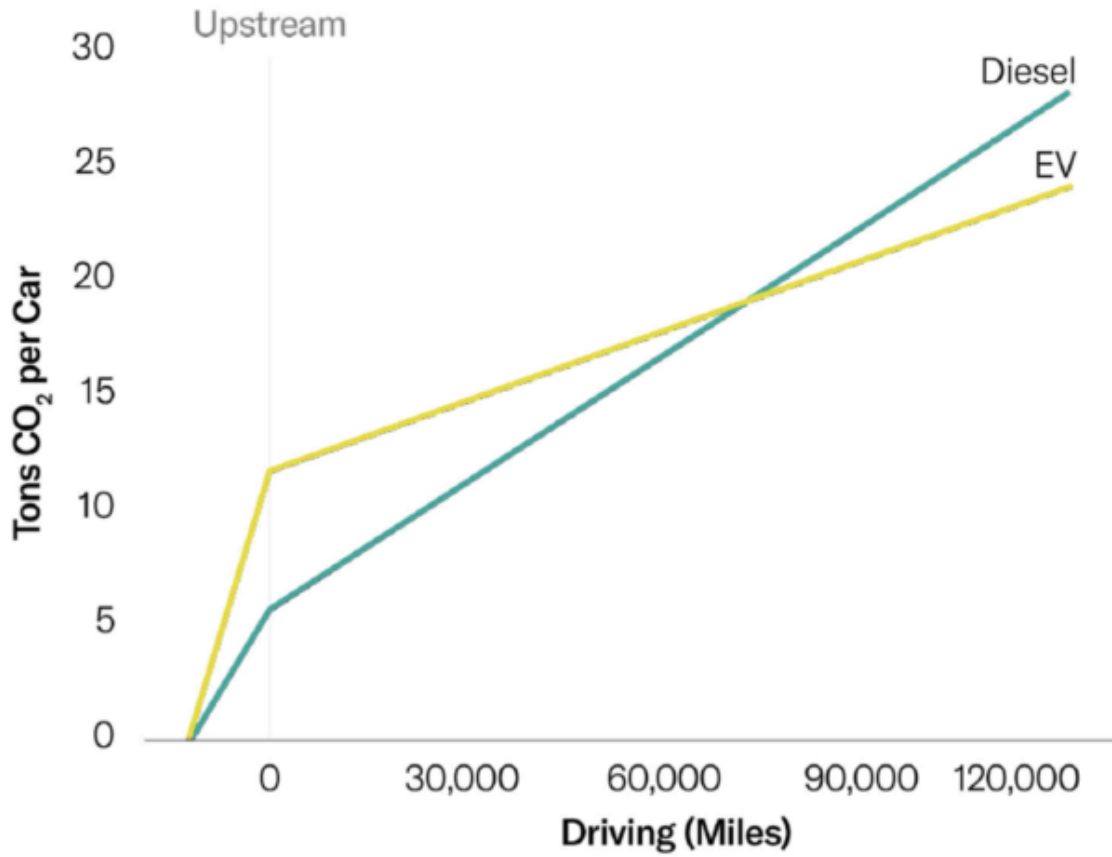
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????IEA??
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????????ICE?EV????????CO2????????????6????????????????????????EV????CO2????????????????
??EV????????????

Figure 4

Life-Cycle Emissions: Volkswagen EV vs. Diesel



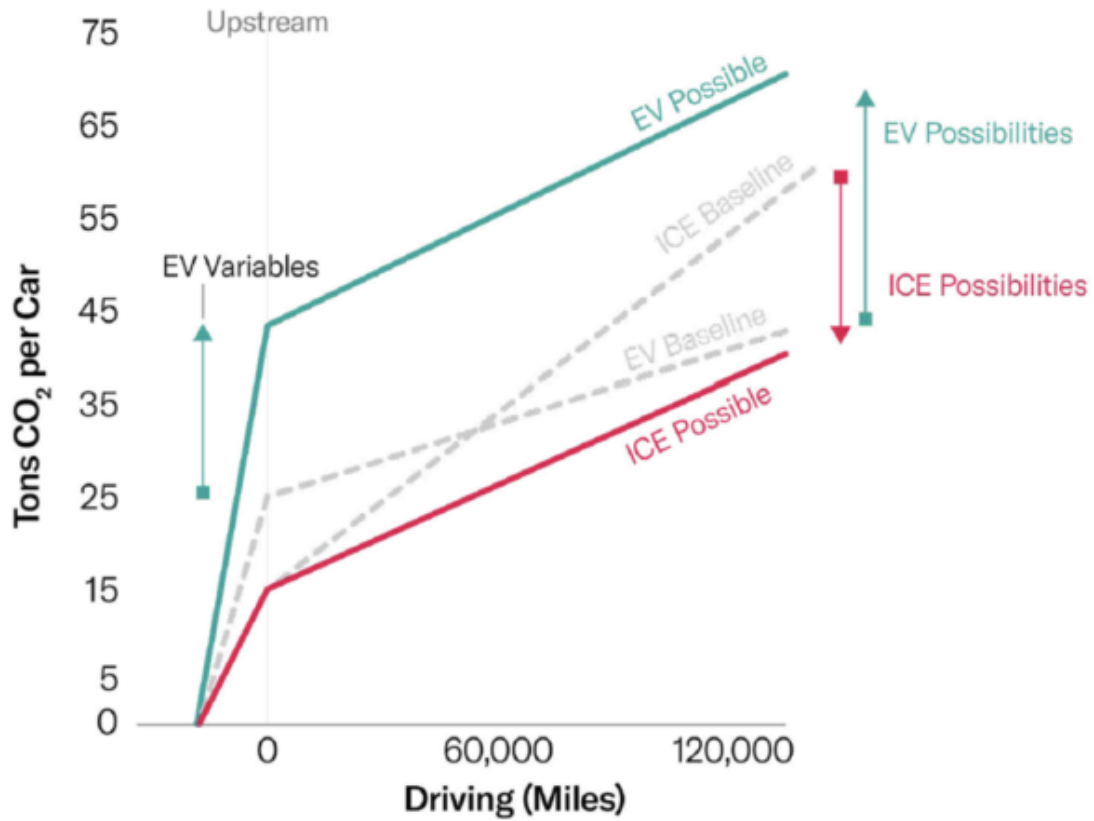
Source: Maciej Neugebauer, Adam Żebrowski, and Ogulcan Esmer, "Cumulative Emissions of CO₂ for Electric and Combustion Cars: A Case Study on Specific Models," *Energies*, Apr. 6, 2022

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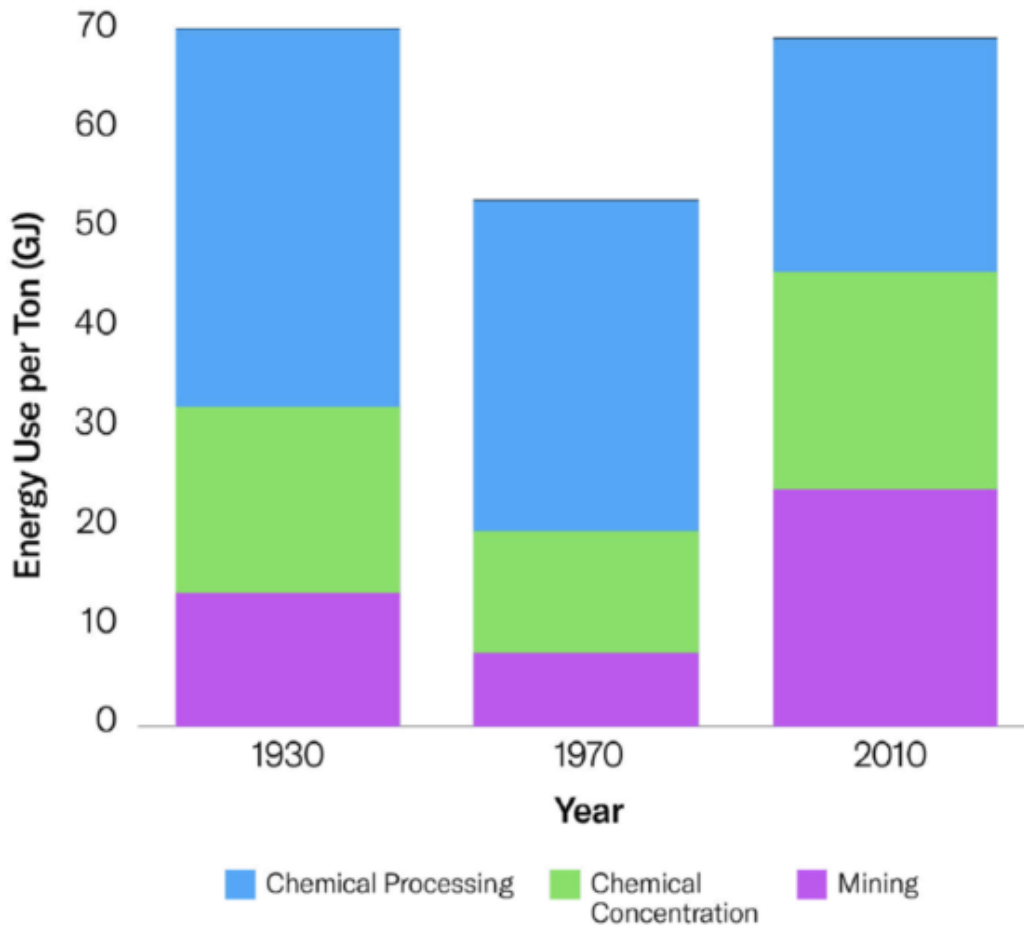
CO₂?????????1????????????????? EV??ICE????????????????????????????????

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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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??ICE?HEV????????????????????
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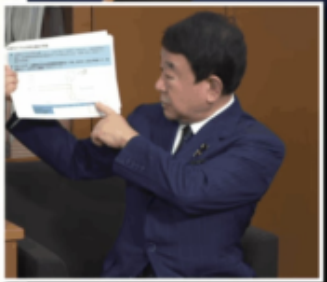
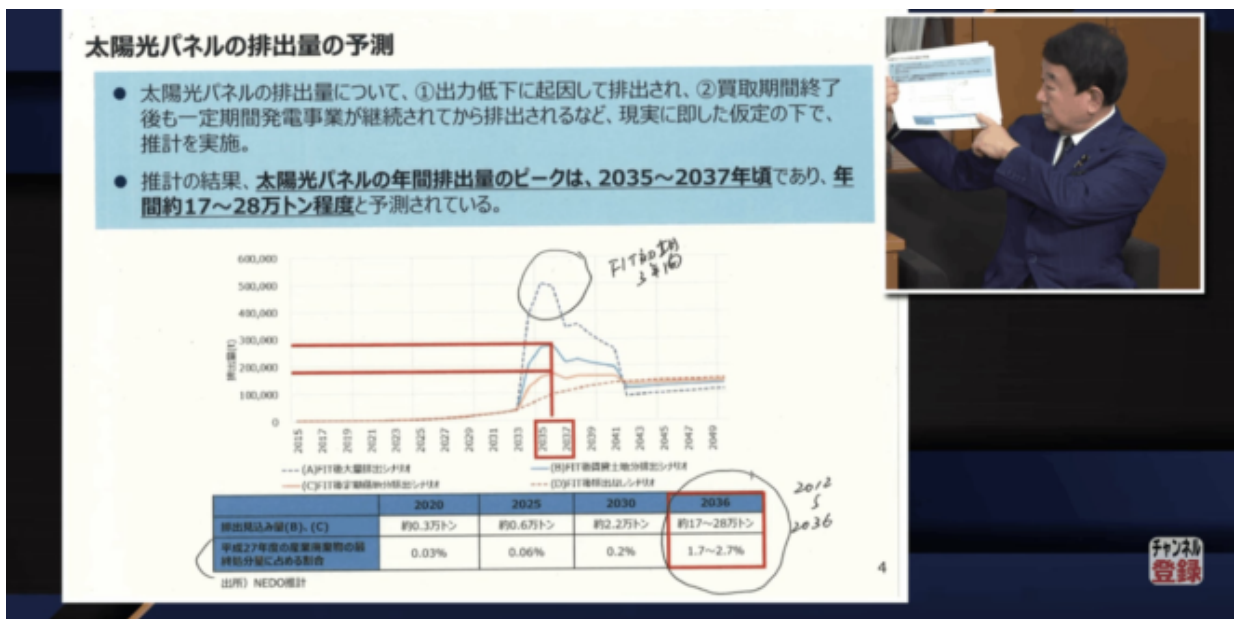
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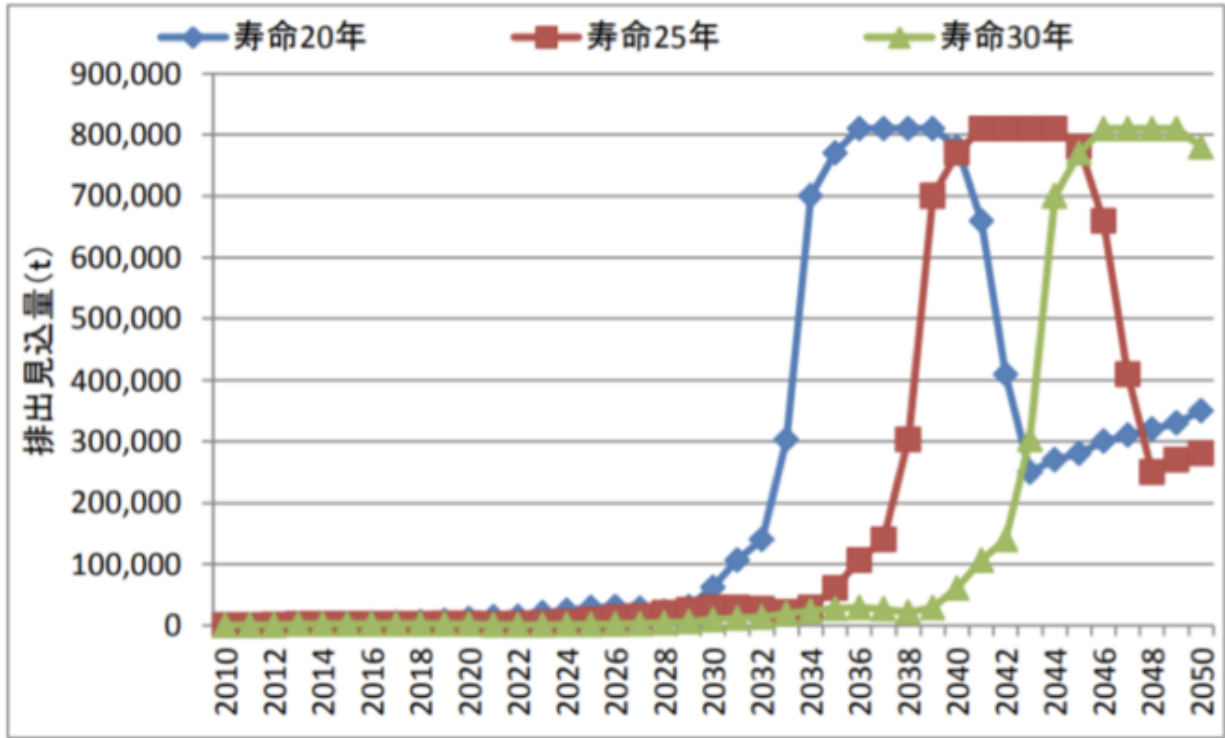


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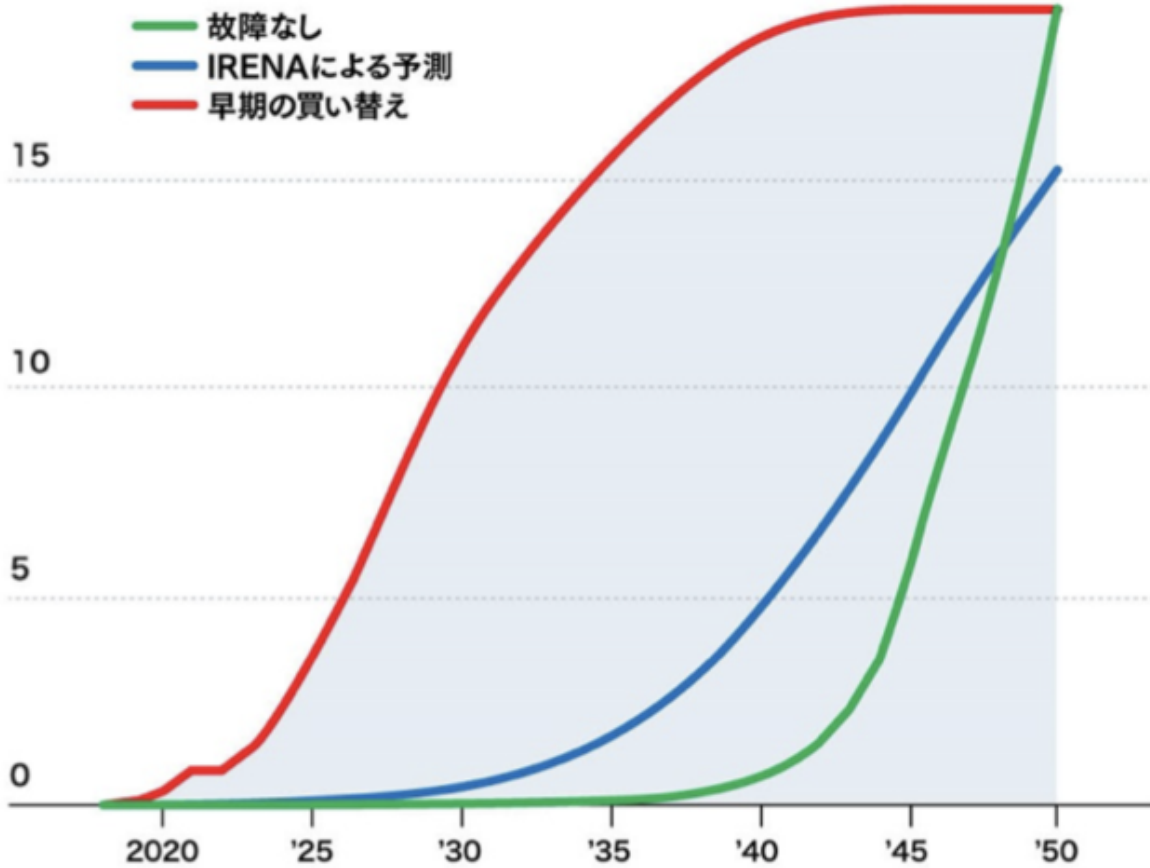
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廃棄物の累計
 (発電容量ベース)

20ギガワット



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1972??PCB????????????????????????????????PCB????????????????????????2001??PCB??????
2004????????????????????JESCO????????????????????????????????????30????????????
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PCB????????2016????????????????JESCO????????????????????????????????PCB??????
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Posted in ??????????, ??? | [No Comments »](#)

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?? ?? ? - Sunday, July 9th, 2023



Grafissimo/iStock

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77? 77? 77?

77? 77?

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?? ?? · Tuesday, July 4th, 2023



xijian/iStock

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

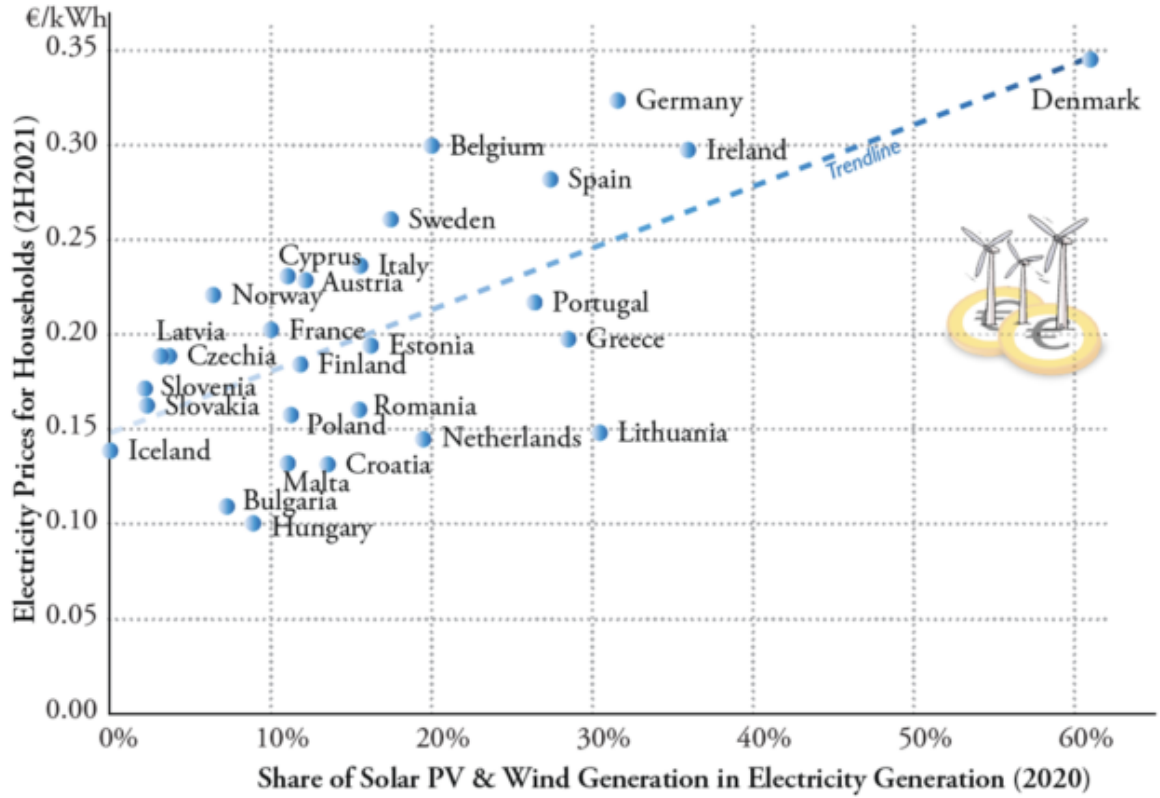
A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

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

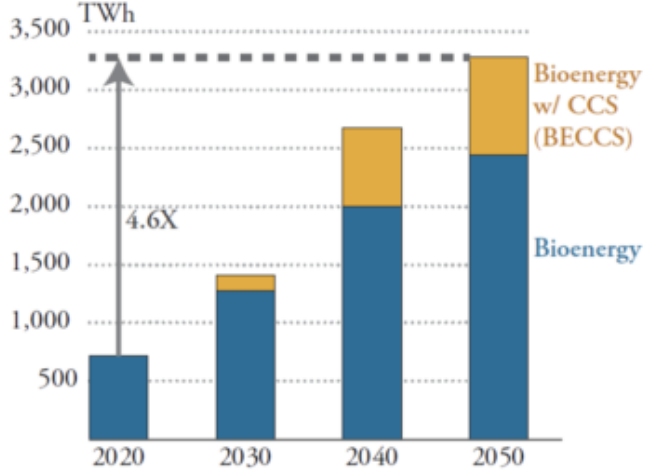


Source: Energy Policy Research, Eurostat, IEA

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



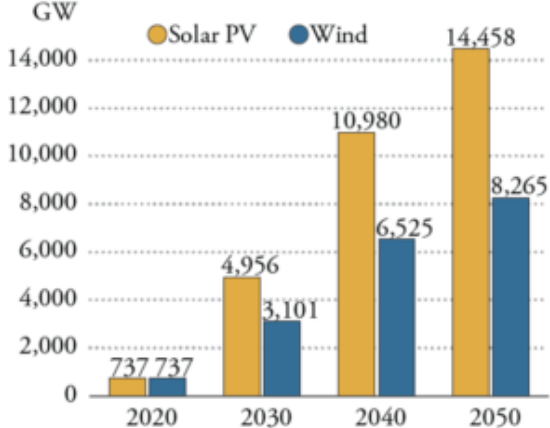
Source: IEA, Net Zero by 2050 (2021)

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



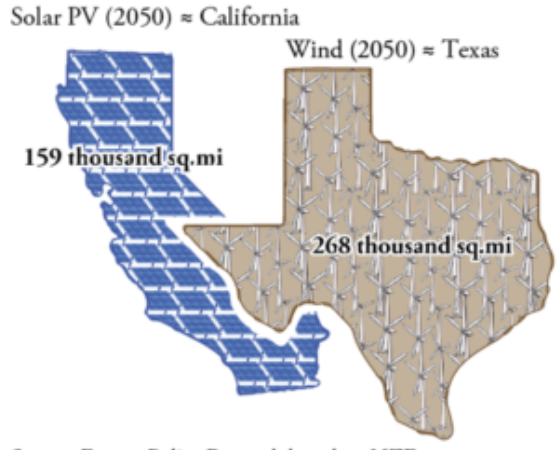
Source: Energy Policy Research. Land requirement calculations made using FreeingEnergy.

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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PV???1??
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?? ? · Monday, July 3rd, 2023



CHUYN/iStock

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- 2025?????GHG?????2050?????10?????
?????IPCC?????2030?43%?2035?60%?????
- 2030?NDC?????GHG?????LTS?1.5?????2050?????
?????COP28?????2030?NDC?????2050?????

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?????G20?????1?30?12?12?COP28?????G7?????
?????6?5?15?????

?????EU?????LMDC?????

?????LMDC?????

?????2030?45?????10?????
?????COP27?????LMDC?????

??COP28?????GST?????GST?????
??2023??5?????COP28??GST?????

GST?????3?????

????2021?11?????IPCC?6?????
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GST?????IPCC?6?????
?????1.5?????GST?2025?????

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??2020?????1000?????2030?????6?????
?????GST?????2024?????

?????IPCC?6?????IPCC?????2025?????2030?43?2035?6
0?????2019?????GST?????

?????TWN?Third World Network??IPCC?????

- IPCC?6?????3?????2,425?????1,202?????
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EV???????????????????

?? ?? · Monday, July 3rd, 2023



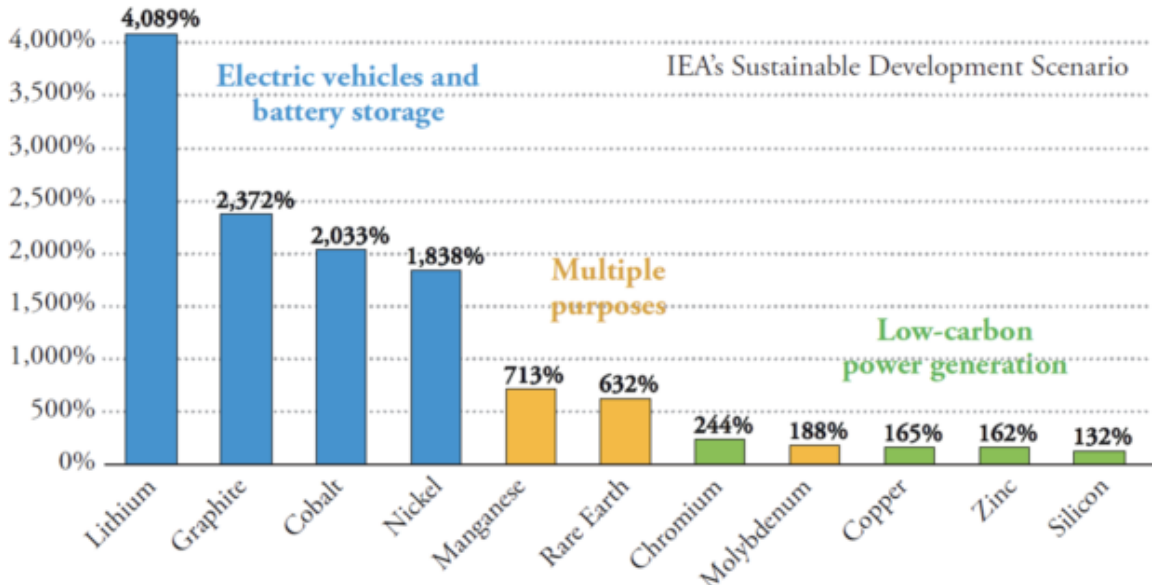
PhonlamaiPhoto/iStock

??(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????????????????????
????????????????????????4089?????????40??20?????????????

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%) LFP Lithium iron phosphate
 NMC622 Nickel (60%) Manganese (20%) Cobalt (20%)

Source: Bhutada, G. VC Elements

EV??7000????????????????
 100????????????????????EV????????????????????

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?? ?? · Sunday, July 2nd, 2023



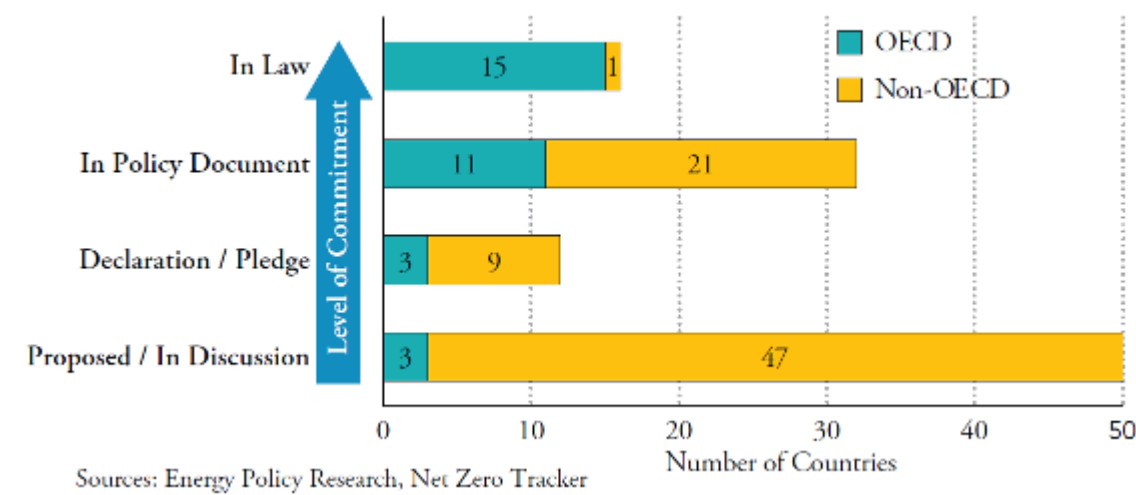
A Mokhtari/iStock

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

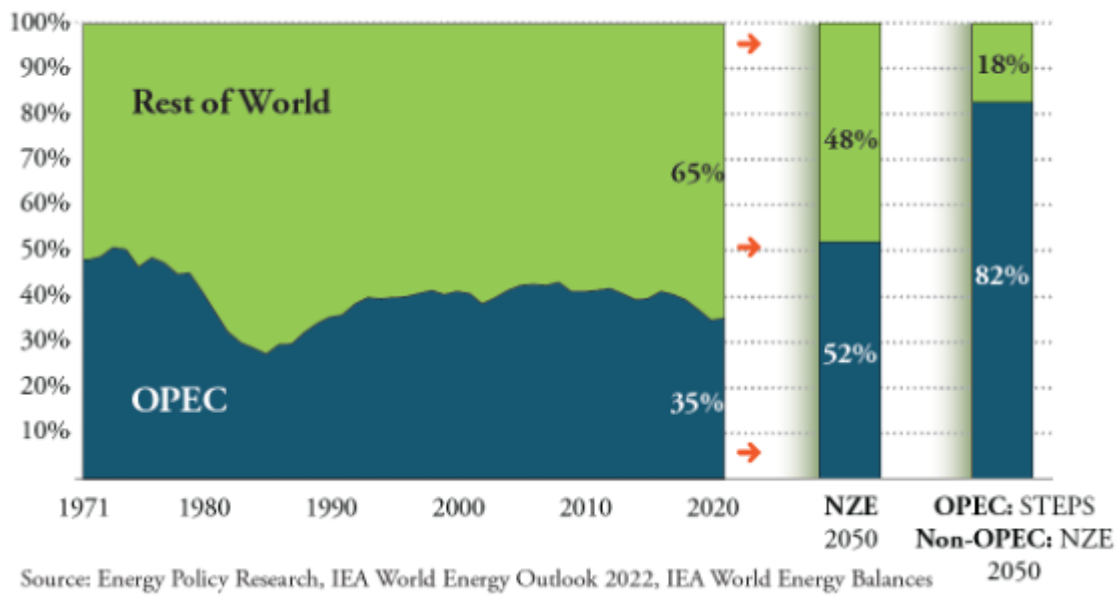


IEA NZE OPEC 35% 52%

NZE OPEC

OPEC NZE STEPS OPEC 82%

Figure 17. OPEC Share of Global Oil Production

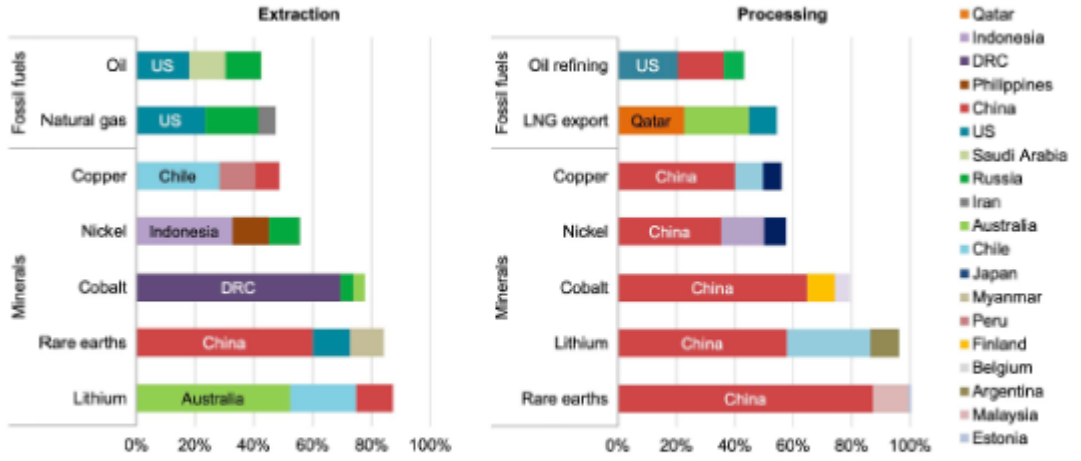


??OPEC??

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



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

OPEC??NZE??
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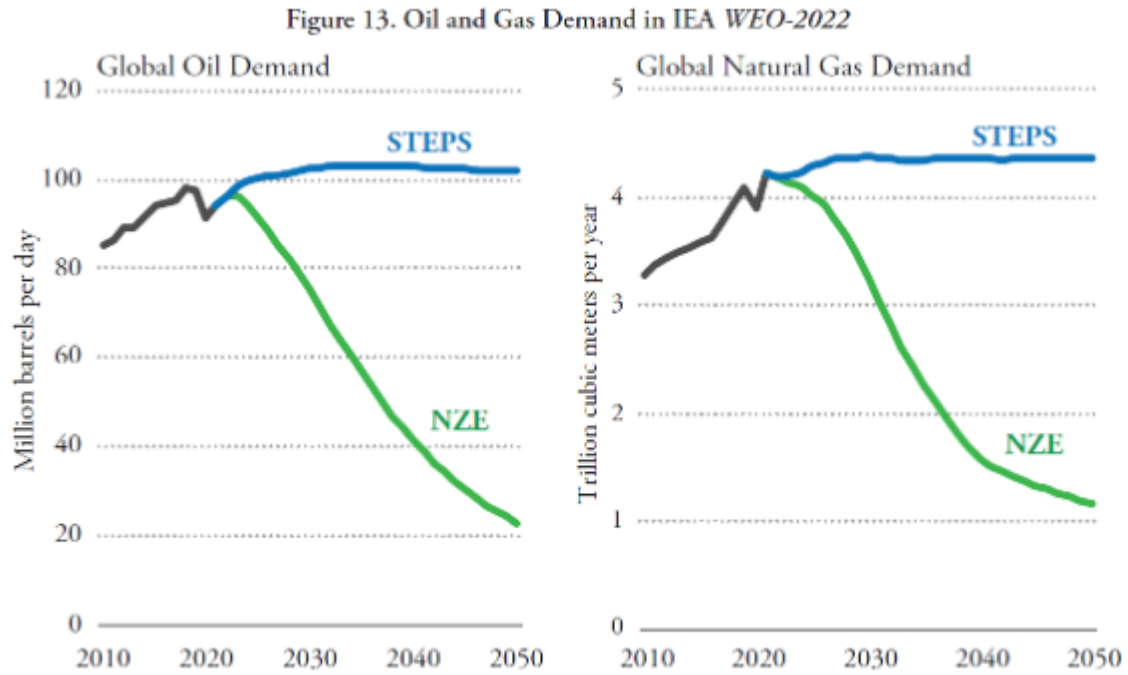
??GX????????????????

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

????????IEA????????ESG??
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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.

??NZE??

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ZE??STEPS??NZE????????
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??WTI????????????200????400????????
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Rawf8/iStock

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

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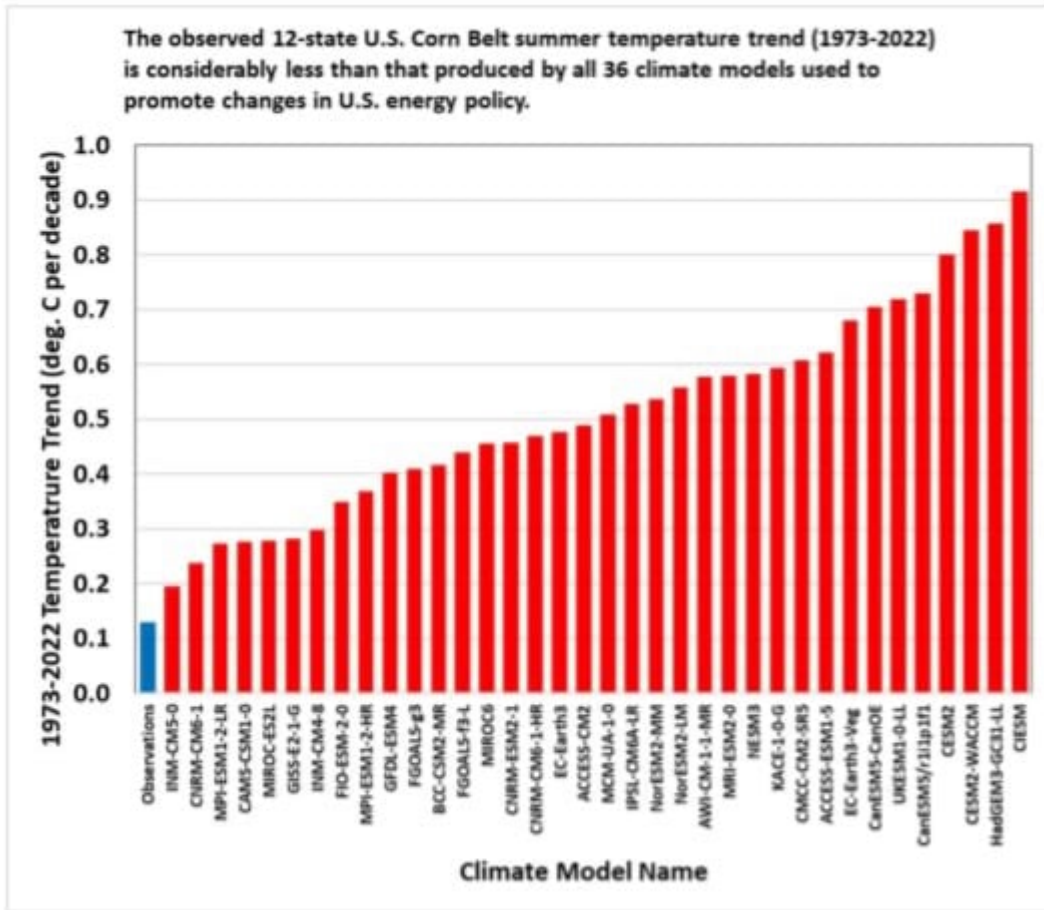
?? ?? · Friday, June 23rd, 2023



feellife/iStock

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?? ?? · Sunday, June 11th, 2023

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BBC???? – ?????20?????????????????????????????????????https://t.co/pF1RfWUM94

— BBC News Japan (@bbcnewsjapan) February 18, 2021

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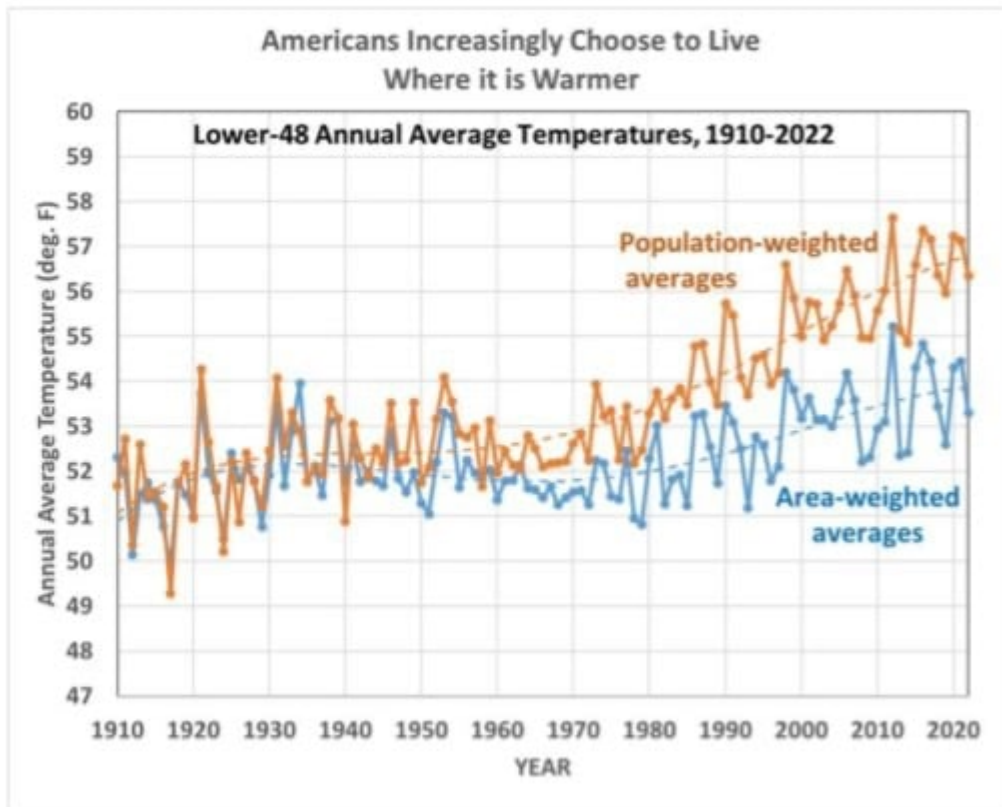
?? ?? · Sunday, June 4th, 2023



Darwel/iStock

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Posted in ???, ????? | No Comments »

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?? ? · Monday, May 29th, 2023

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spoooh/iStock

“The Energy Transition Confronts Reality” 2023

- **RePower EU**
- **2021**
- **LNG**
- **100**

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Works????4??
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Posted in ??????????, ??? | [No Comments »](#)

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?? ?? · Sunday, May 28th, 2023



sasun bughdaryan/iStock

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

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?? ?? · Saturday, May 27th, 2023



PhonlamaiPhoto/iStock

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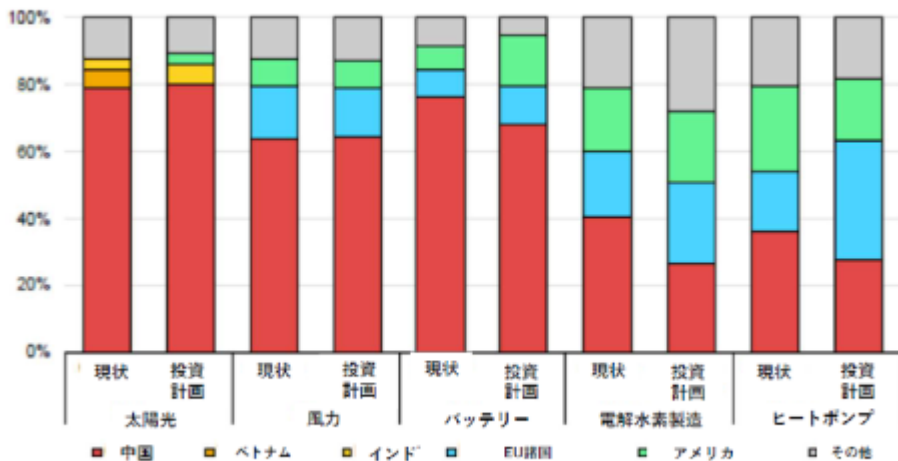
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図3. グリーン技術製造の地域集約度—現状と将来



出典：The State of Clean Energy Technology Manufacturing, IEA, May 2023

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???Twitter by True Science PEng, DFP, ADFS, MA, MBA

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80?? CO₂? 1000ppm?
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Posted in [???, ?????](#) | [No Comments »](#)

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?? ?? · Monday, May 22nd, 2023



Wikipedia??

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

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?? ?? · Saturday, May 20th, 2023

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Allkindza/iStock

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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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- ????CO₂????2????100????CO₂????????????????????????????????
- EV1????????????12,000????????????????????200????????????????????????????
- ?????????????2032????????????????????SUV????????????67????????????????????50????????
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- CO₂??5000ppm????????????????????1000ppm????????????????
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- EV1????????12,000??
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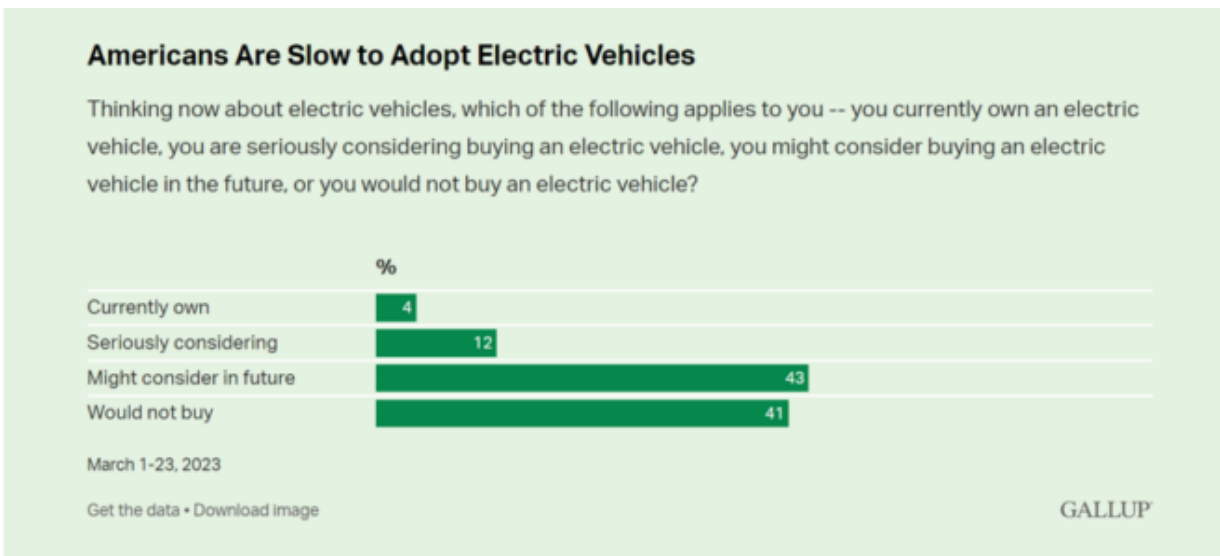
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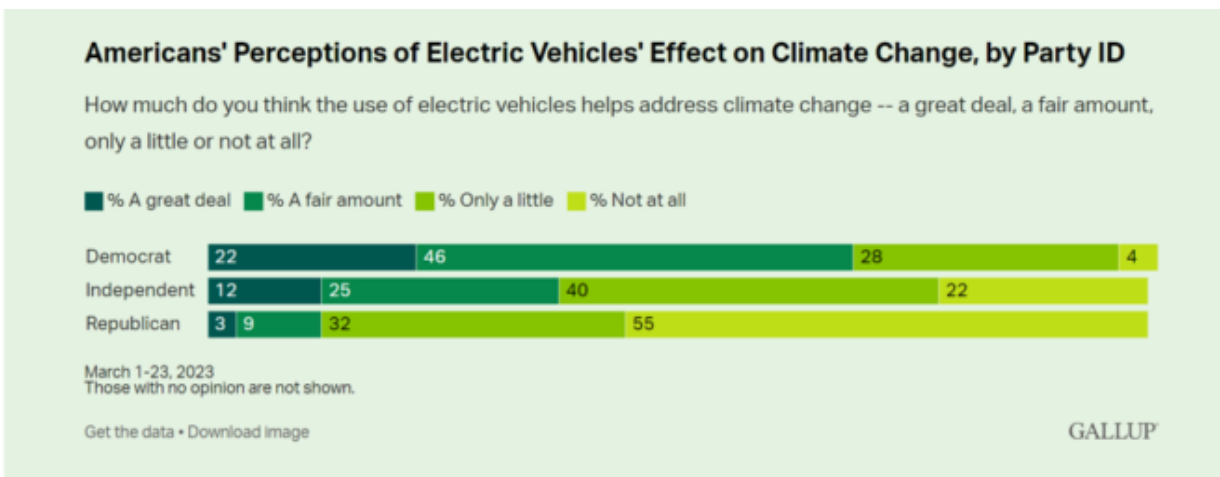
Most Americans Are Not Completely Sold on Electric Vehicles

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- EV????????4????????????????12????????????????EV?????????
- ?????43% ?????EV????????????????41% ?????????????



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?? ?? · Tuesday, May 16th, 2023



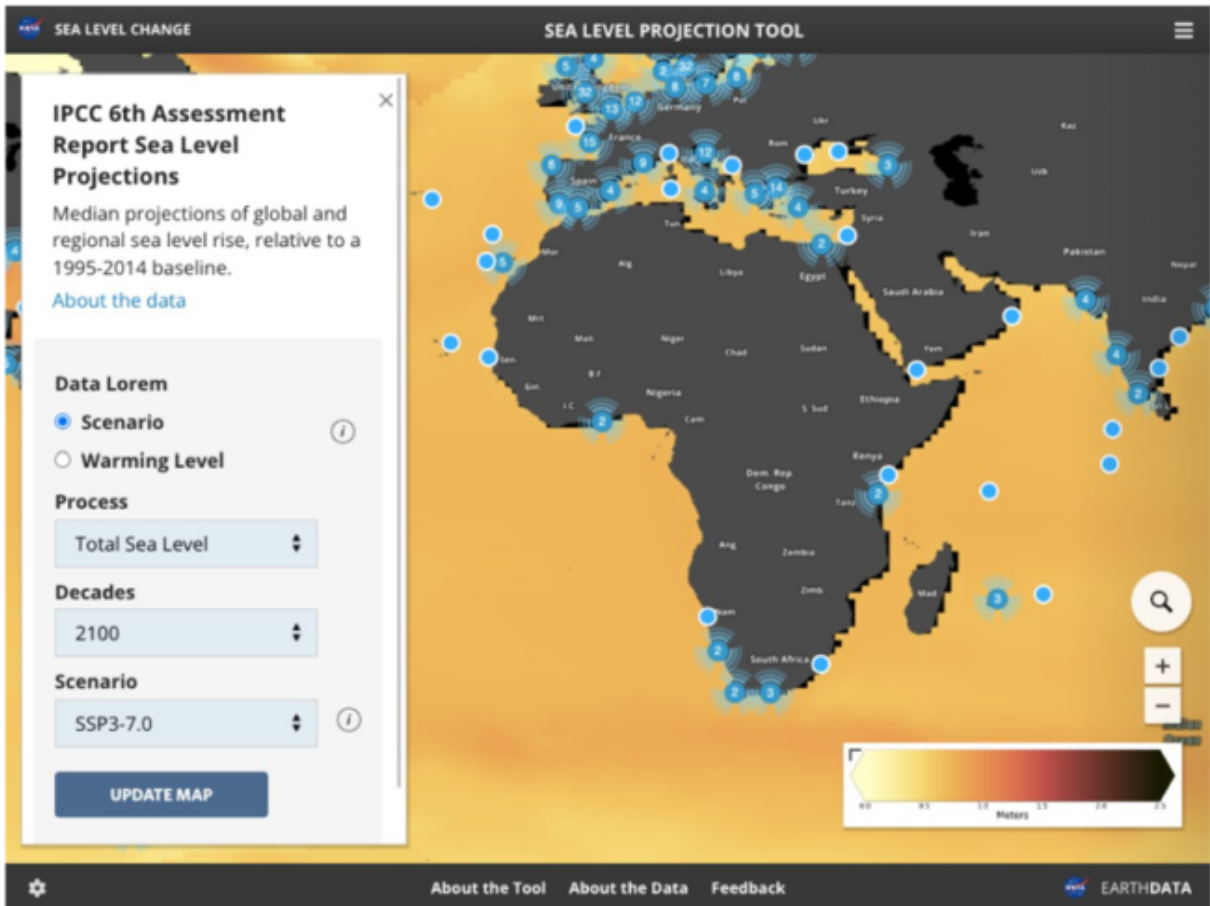
remotefx/iStock

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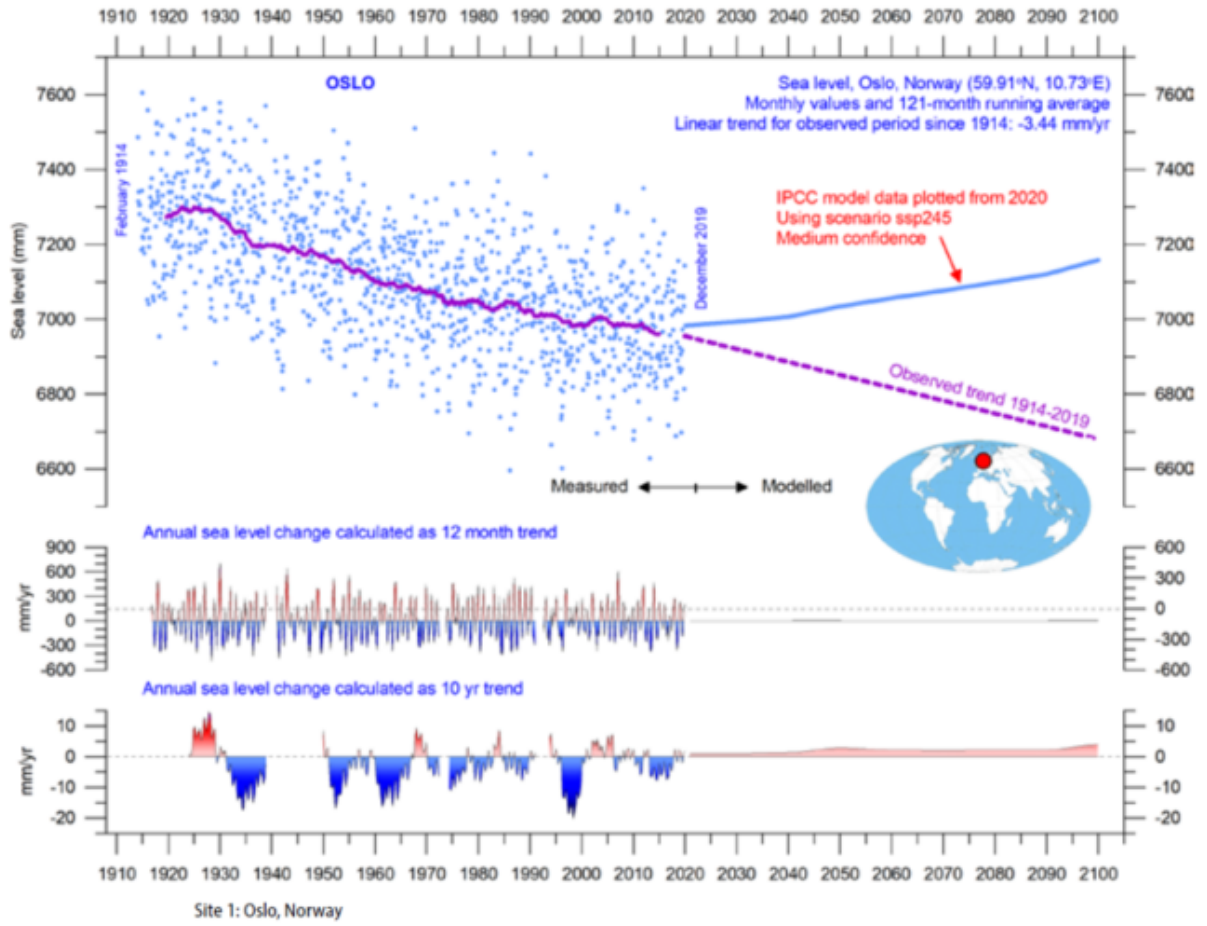
IPCC AR6 Sea Level Projection Tool



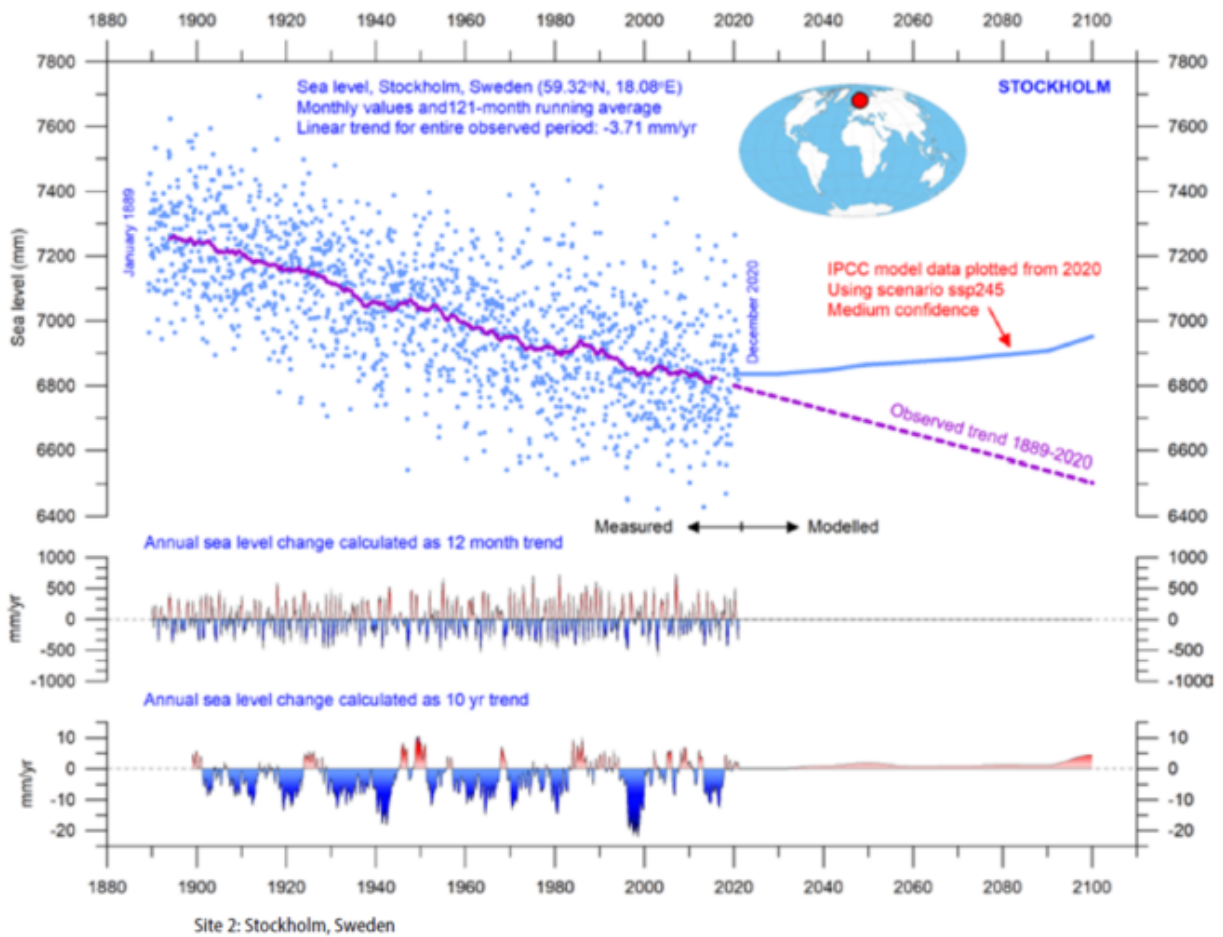
IPCC AR6 Sea Level Projection Tool

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??SSP245??????????

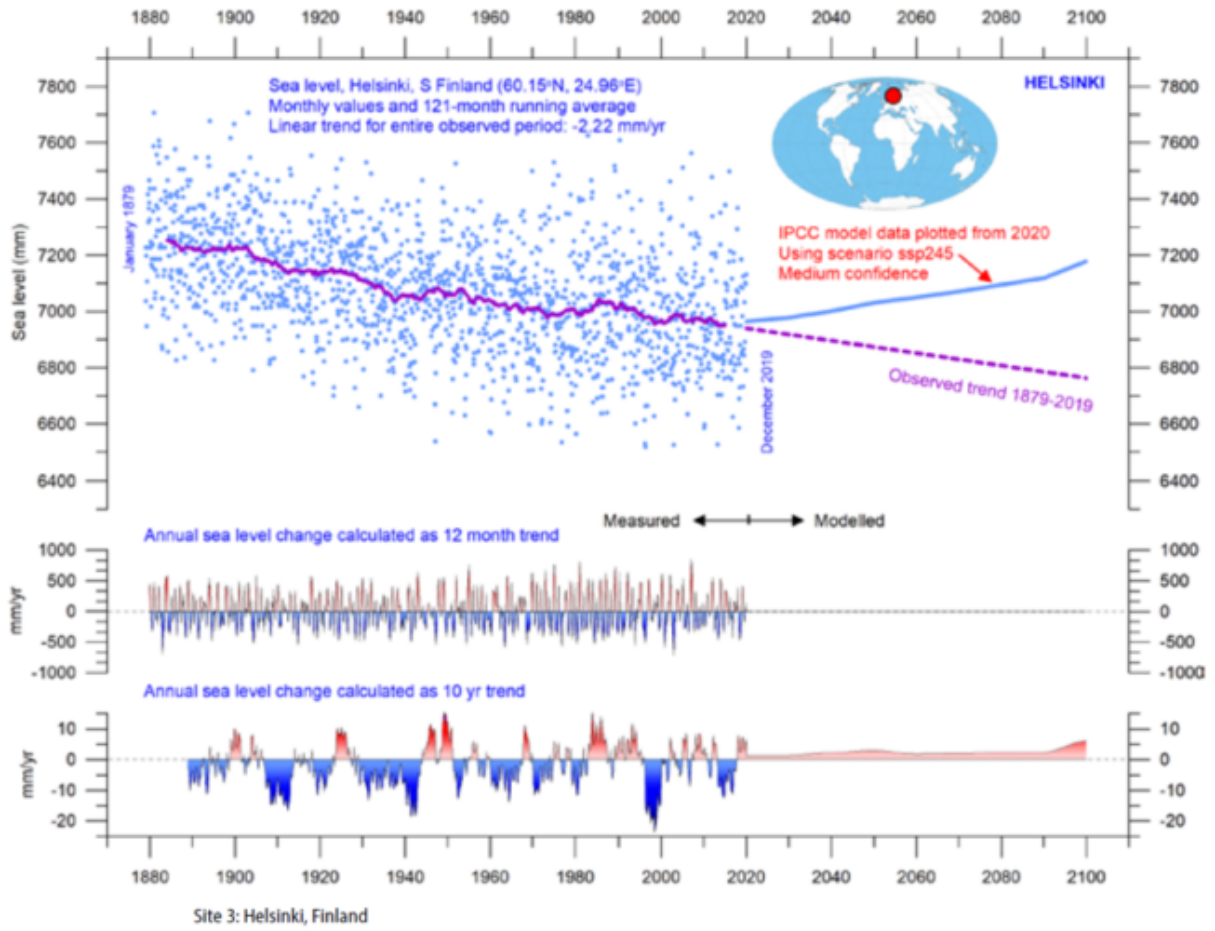
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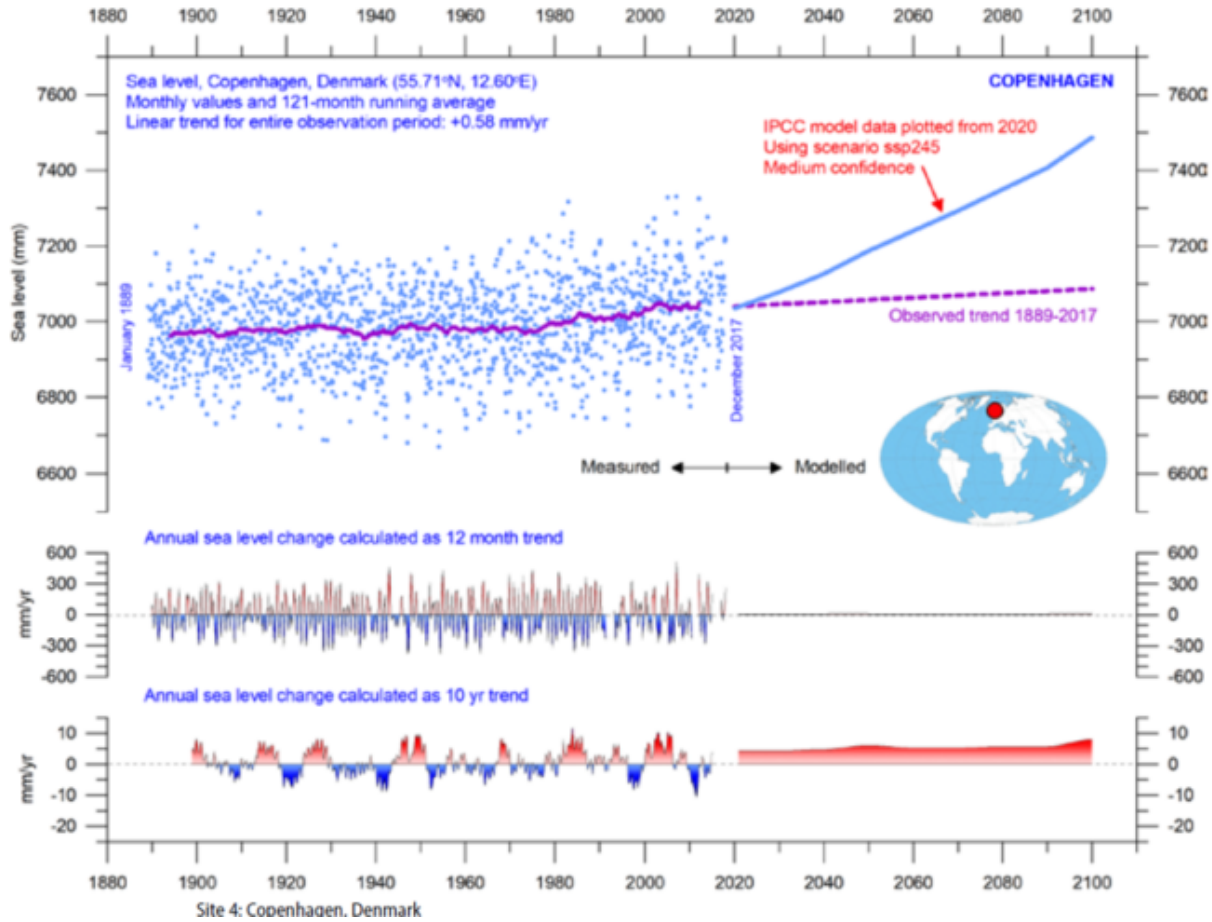
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Posted in ???, ????? | No Comments »

IPCC?????62????????????

?? ?? · Monday, May 15th, 2023

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[Wikipedia??](#)

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Posted in ???, ????? | No Comments »

IPCC?????61?????????????
?? ?? · Sunday, May 14th, 2023



borchee/iStock

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IPCC??????4??????Snow Cover Extent, SCE??

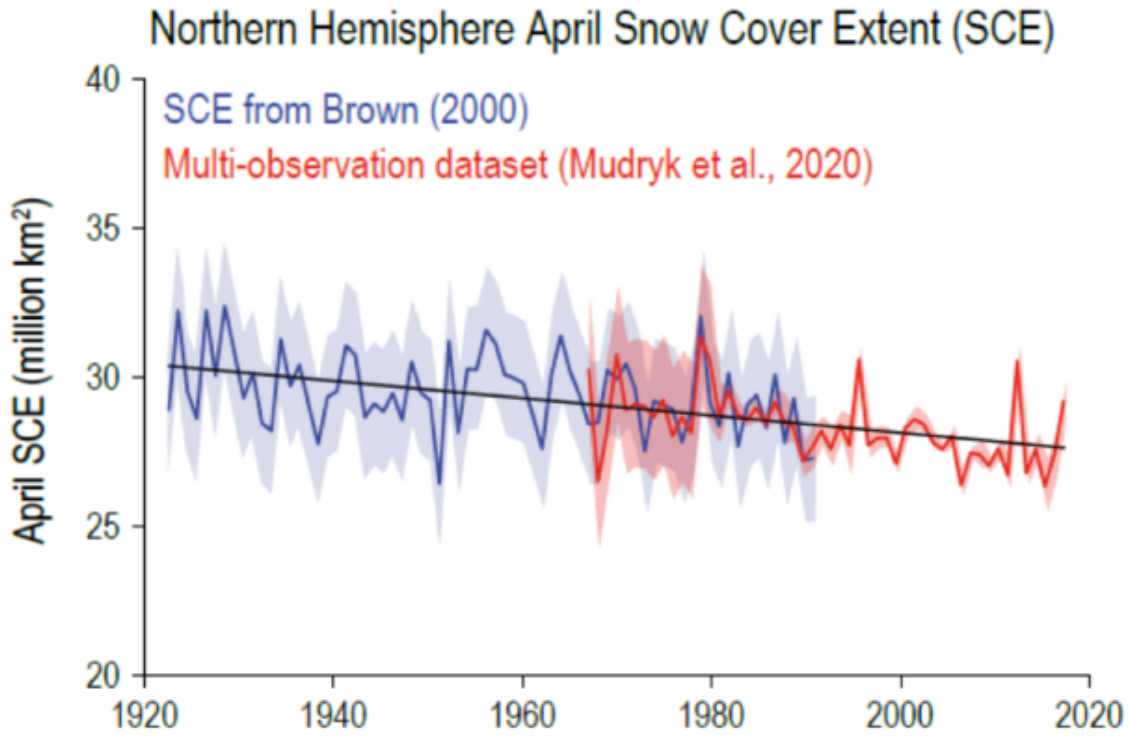


Figure 2: April snow cover extent (SCE) for the Northern Hemisphere. From: AR6, chapter 2.

??IPCC????4??

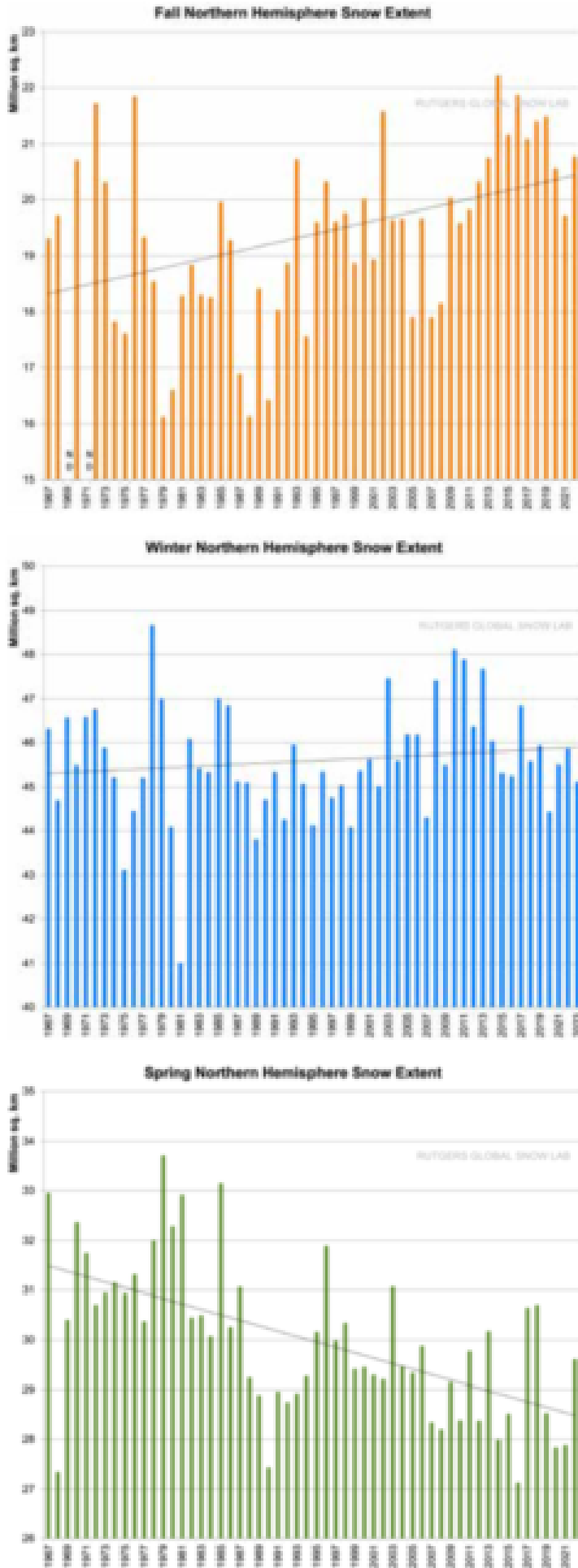


Figure 4: Snow cover extent (SCE) for the Northern Hemisphere for autumn, winter and spring. From: Rutgers Global Snow Lab (2023)

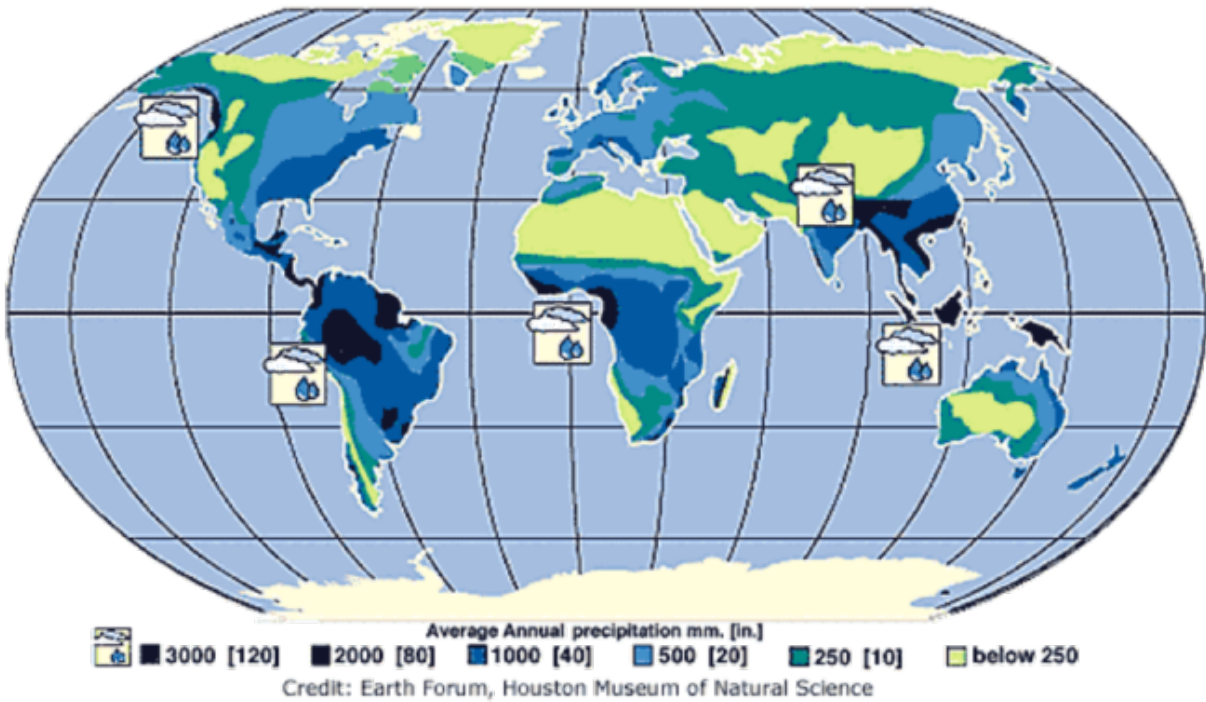
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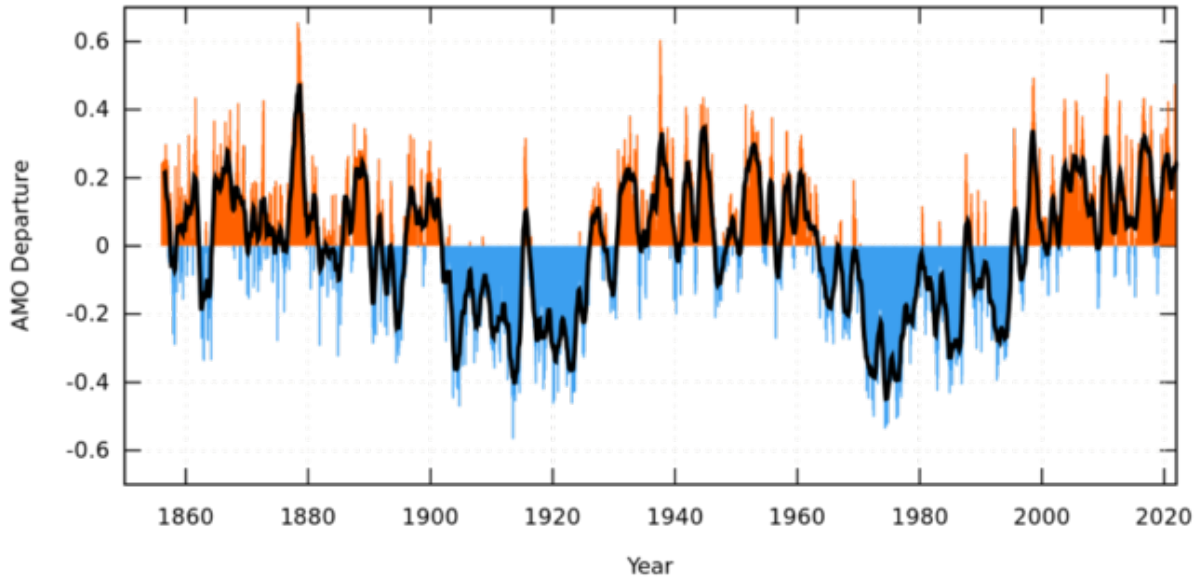
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Monthly values for the AMO index, 1856 - 2022



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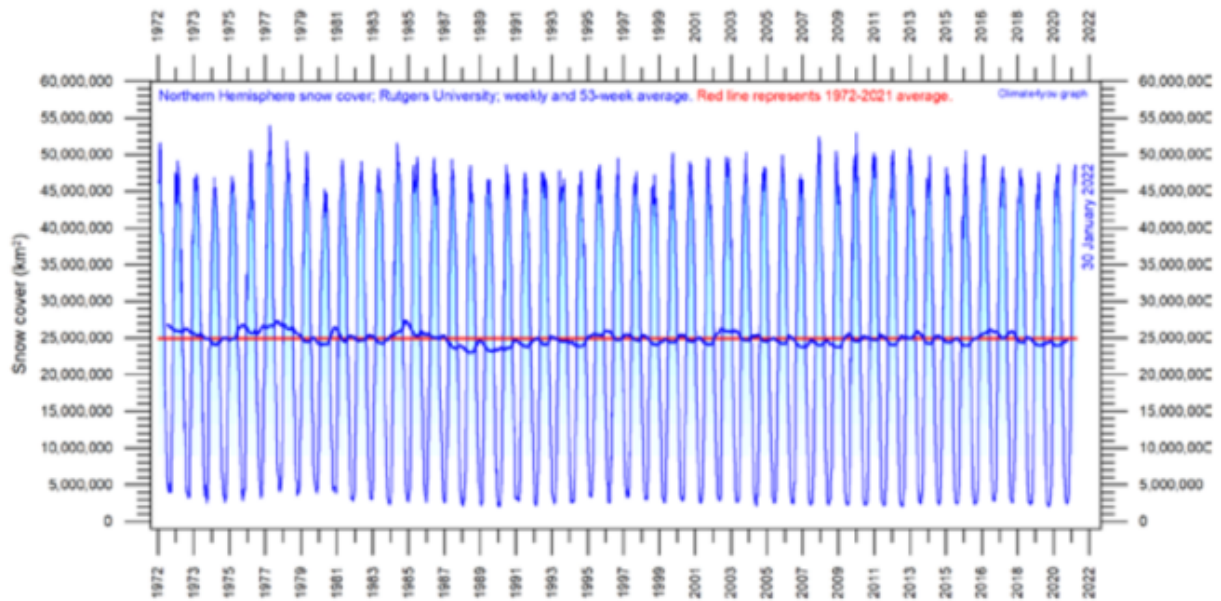


Figure 7: Northern hemisphere weekly snow cover since January 1972 according to the Rutgers University Global Snow Lab (<http://climate.rutgers.edu/snowcover>), the thin blue line is the weekly data, and the thick blue line is the running 53 week average (approximately 1 year). The horizontal red line is the 1972-2021 average. Last week shown: week 1 in 2022. Last figure update: 11 January 2022. Source: Ole Humlum, climate4you.com

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?? ??? ?? · Thursday, May 11th, 2023

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Posted in ???, ?? | No Comments »

RFK Jr.?2024????????????????

?? ?? · Wednesday, May 10th, 2023

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

2023??ESG??????????
?? ?? · Saturday, May 6th, 2023



Kanur Ismail/iStock

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initiative??NZBA????????19????????????
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ESG 19 ESG

2024

CO2

年	日本	米国
1997年	▲6% (橋本政権)	▲7% (クリントン政権)
2015年	▲26% (安倍政権)	▲26% (オバマ政権)
2021年	▲46% (菅政権)	▲50~52% (バイデン政権)

CO2

CO2 CSR

2021 2021 46% 2024 ESG

ESG

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SDGs

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