

Global Energy Policy Research | GEPR

GEPR?http://agorajp.com/?
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?? ?? · Thursday, July 6th, 2023



Pixelci/iStock

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?? ?? · Tuesday, July 4th, 2023



xijian/iStock

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

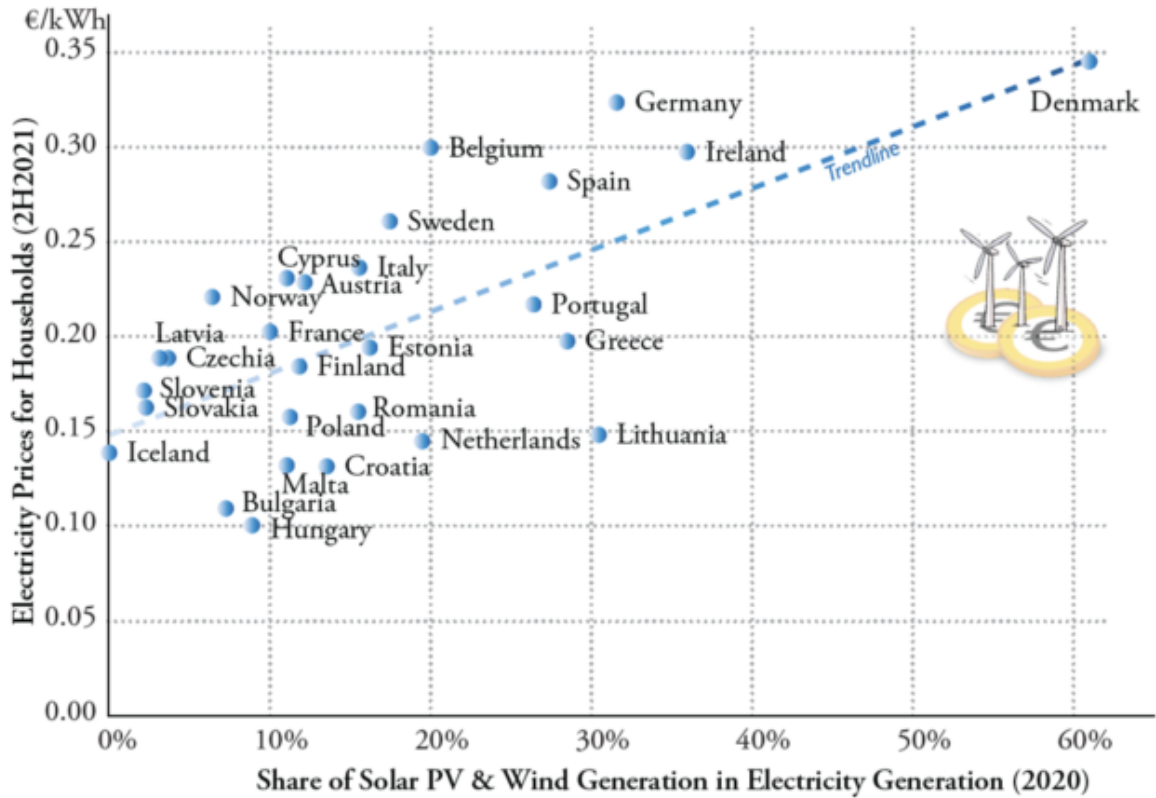
A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

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

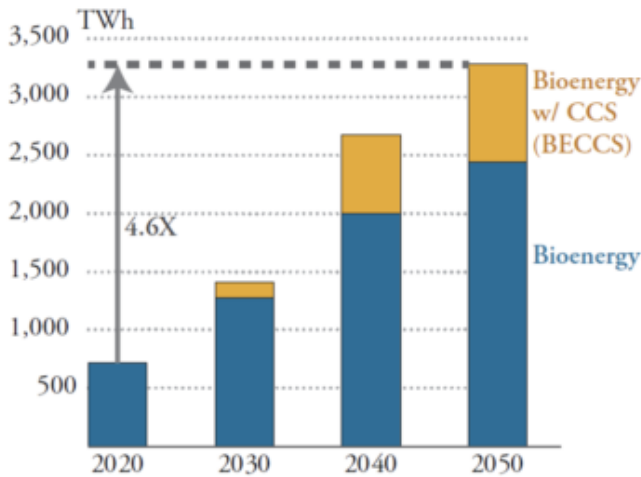


Source: Energy Policy Research, Eurostat, IEA

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



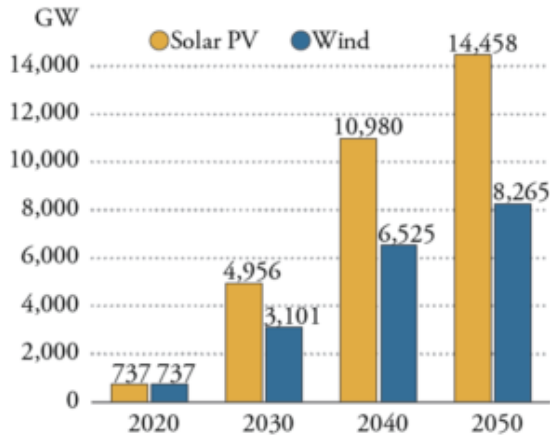
Source: IEA, Net Zero by 2050 (2021)

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



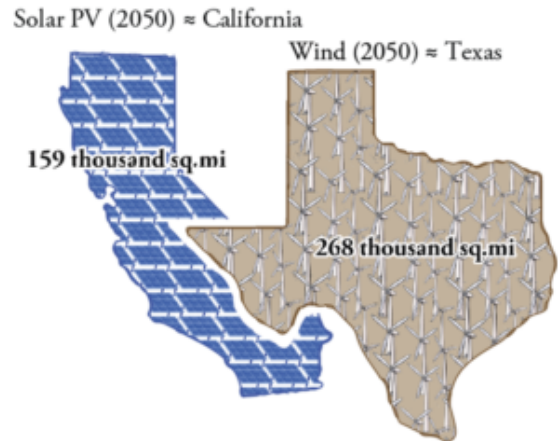
Source: Energy Policy Research. Land requirement calculations made using FreeingEnergy.

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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?? ? · Monday, July 3rd, 2023



CHUYN/iStock

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

?? ?? · Monday, July 3rd, 2023



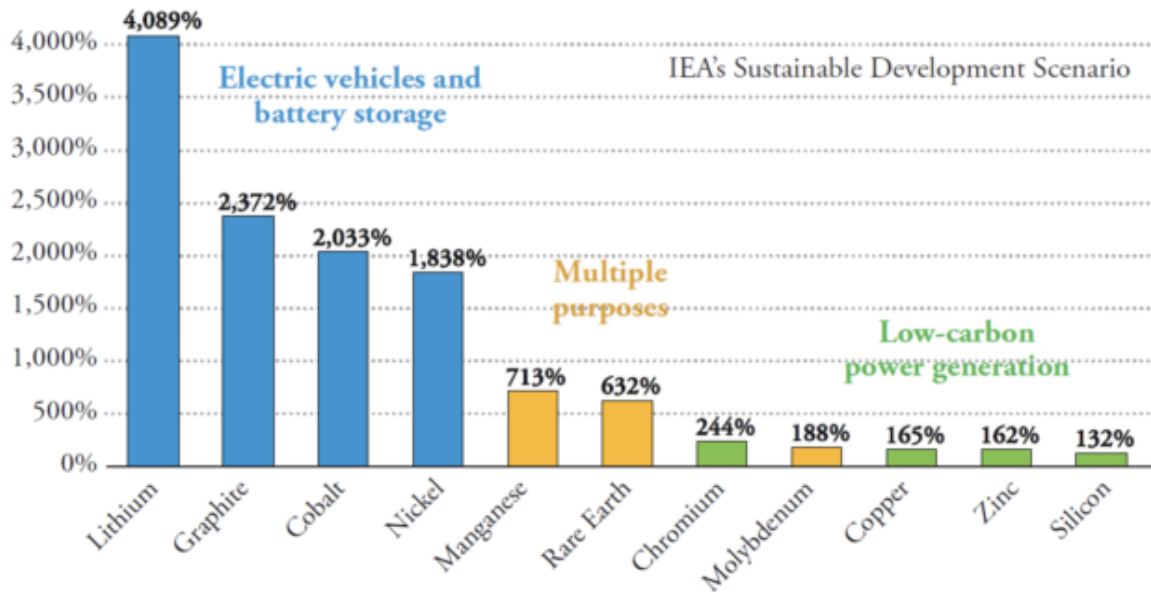
PhonlamaiPhoto/iStock

????????????????????????????????(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.

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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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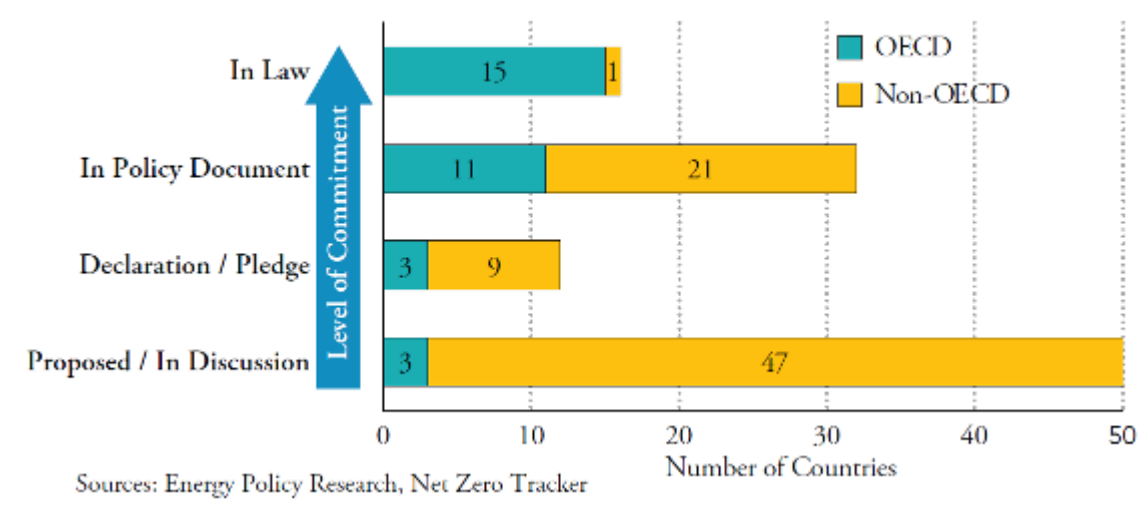
A Mokhtari/iStock

??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.

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



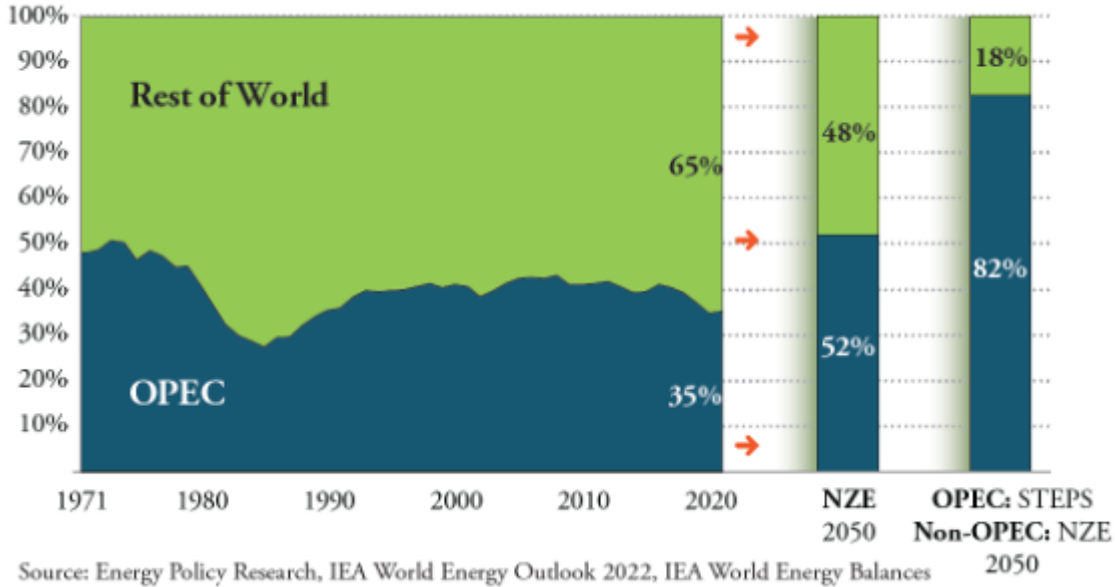
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Figure 17. OPEC Share of Global Oil Production

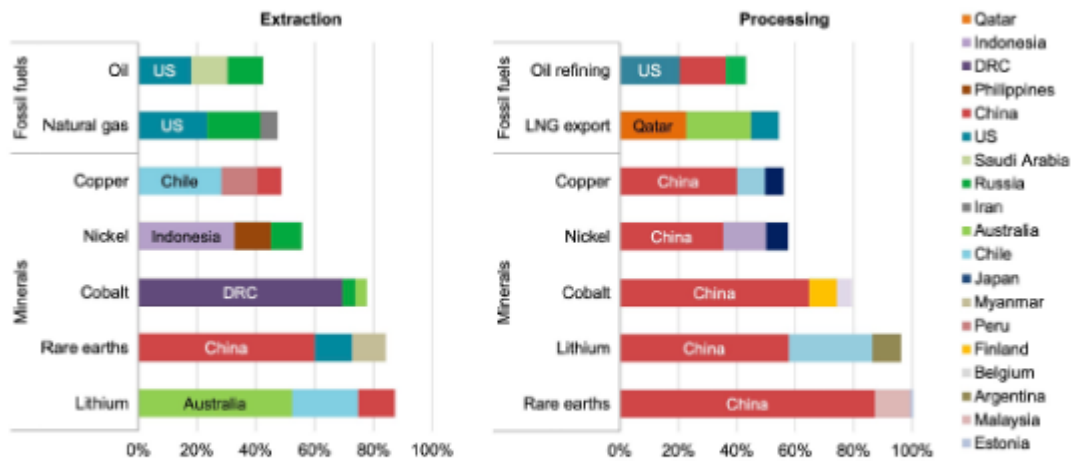


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NZE????????????PV????EV??
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Figure 18. Share of Top Three Producing Countries in Production of Selected Minerals and Fossil Fuels, 2019



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

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?? ?? · Saturday, July 1st, 2023

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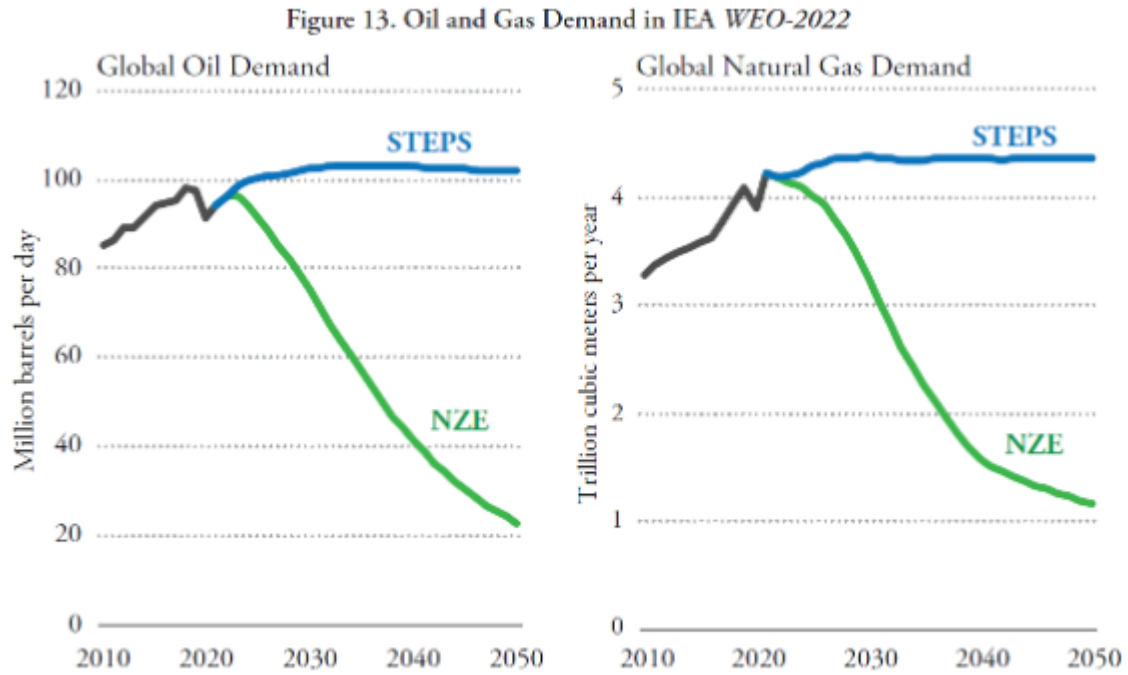
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????????IEA????????Net Zero Scenario, NZE????????

????????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.

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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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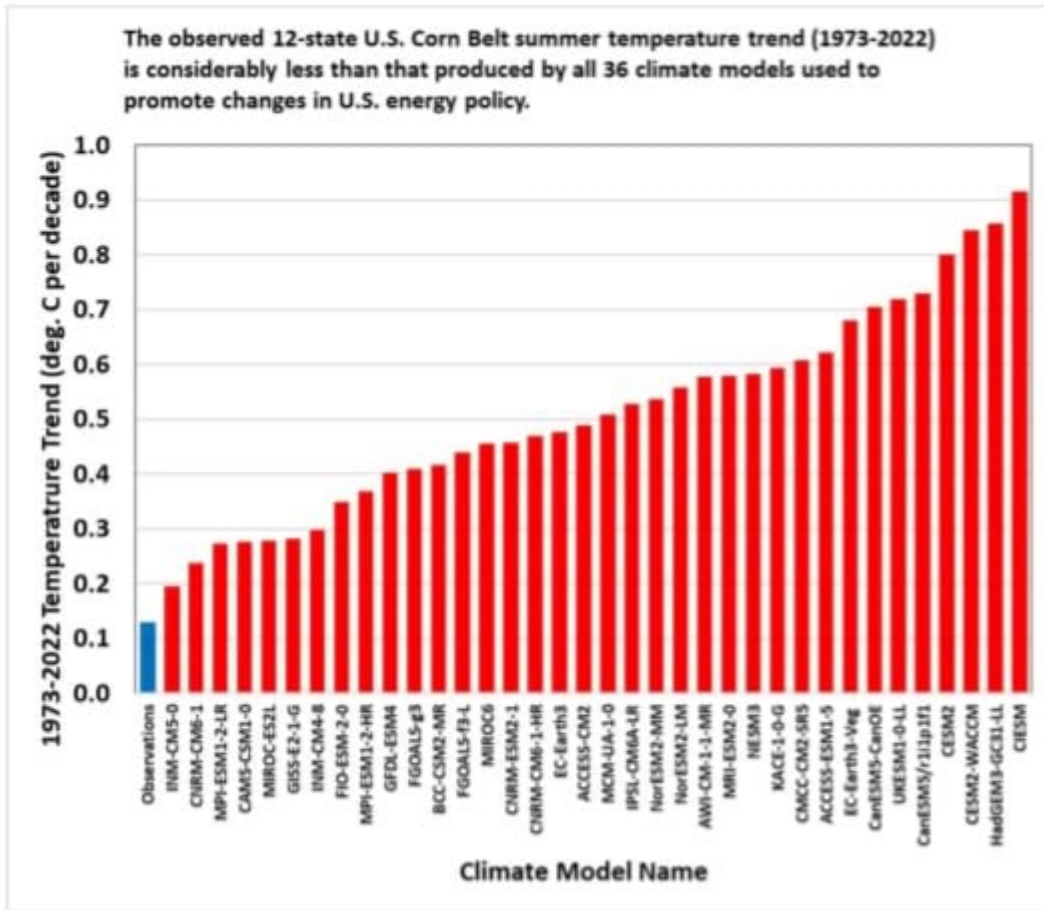
?? ?? · Friday, June 23rd, 2023



feellife/iStock

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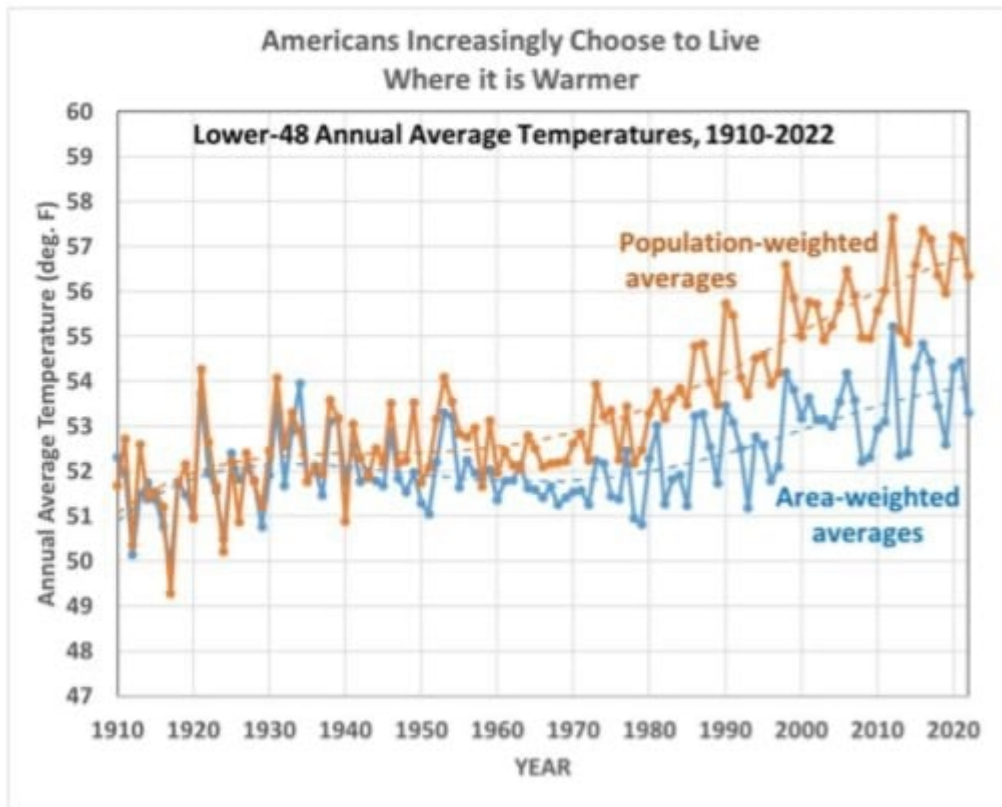
?? ?? · Sunday, June 4th, 2023



Darwel/iStock

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?? ? · Monday, May 29th, 2023

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?? ?? · Sunday, May 28th, 2023



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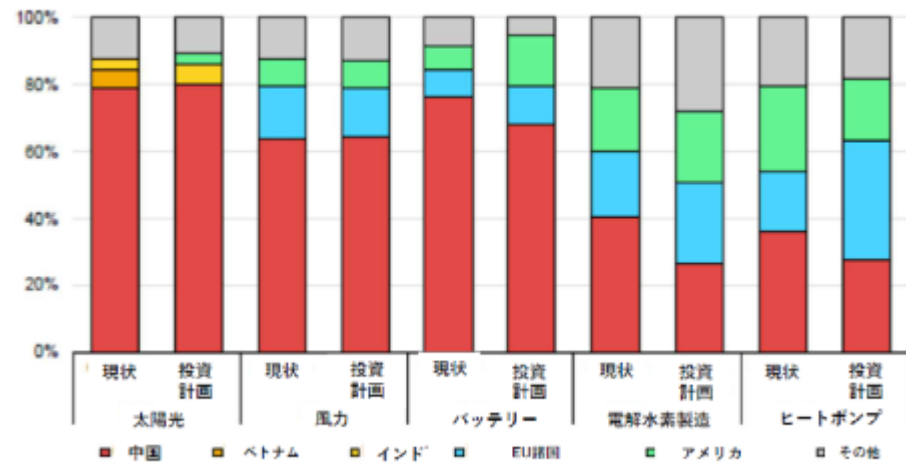
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図3. グリーン技術製造の地域集約度—現状と将来



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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?? ?? · Monday, May 22nd, 2023



Wikipedia??

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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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- EV1????????????12,000????????????????????200????????????????????????????
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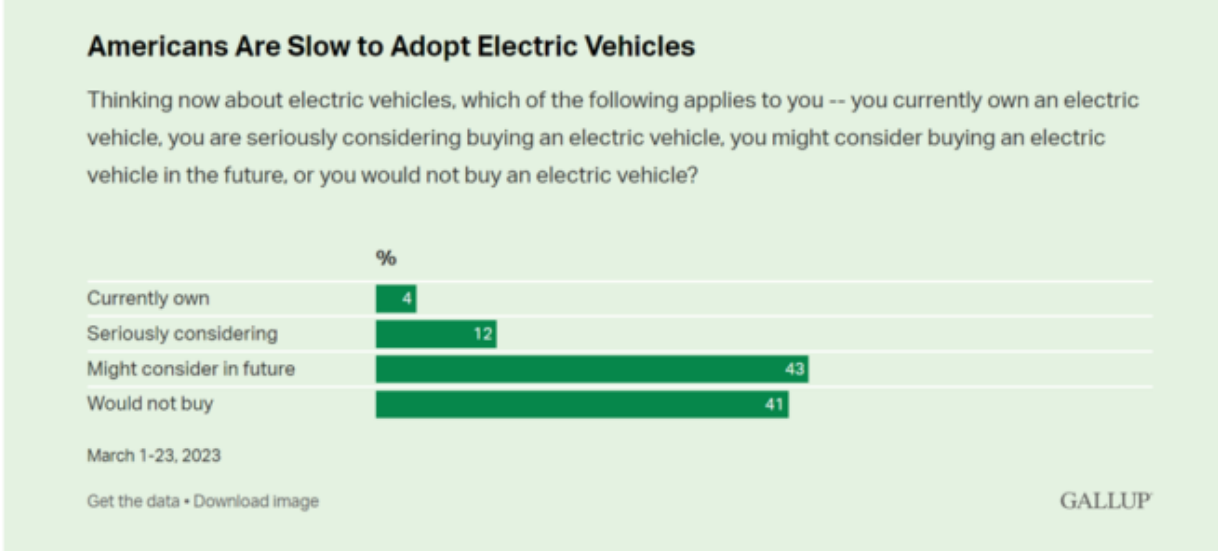
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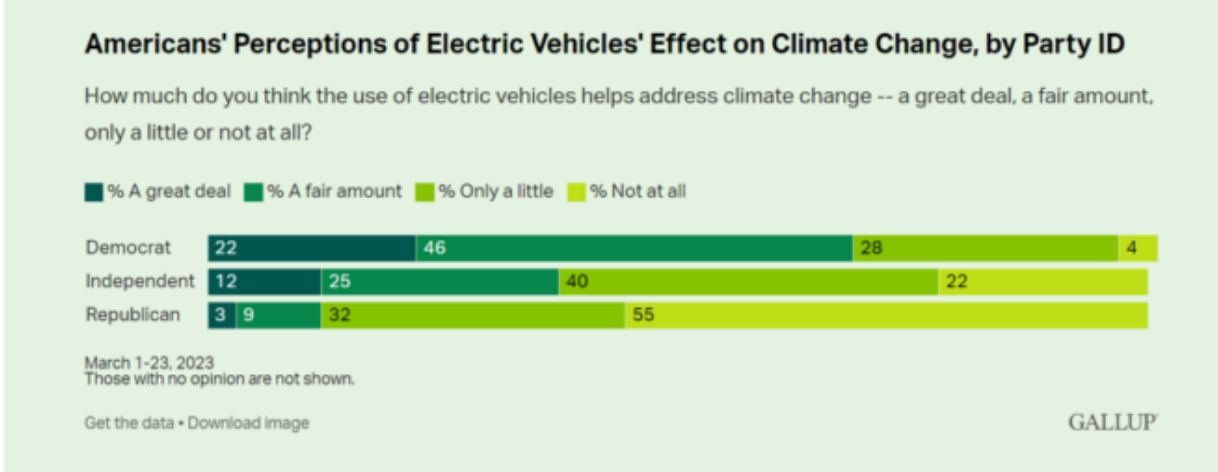
Most Americans Are Not Completely Sold on Electric Vehicles

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



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?? ?? · Tuesday, May 16th, 2023



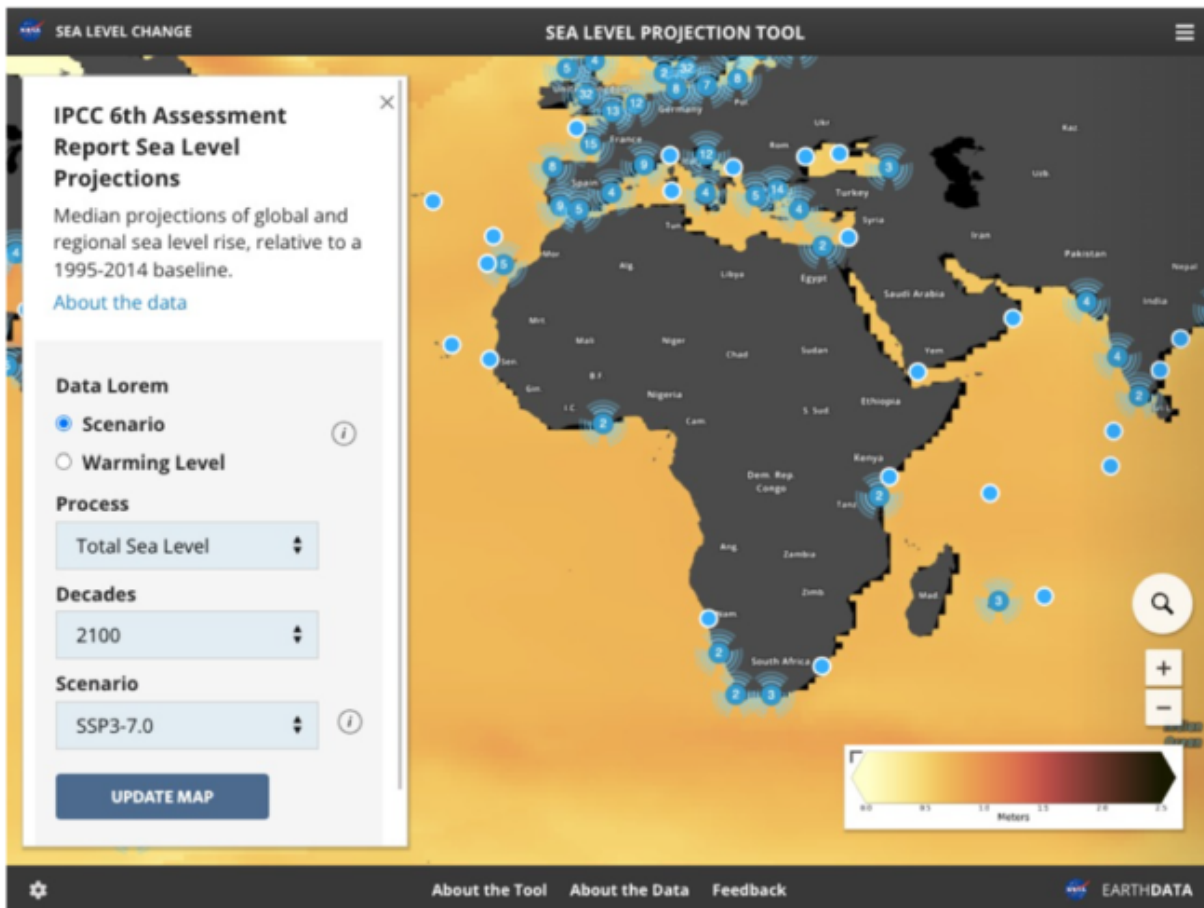
remotefx/iStock

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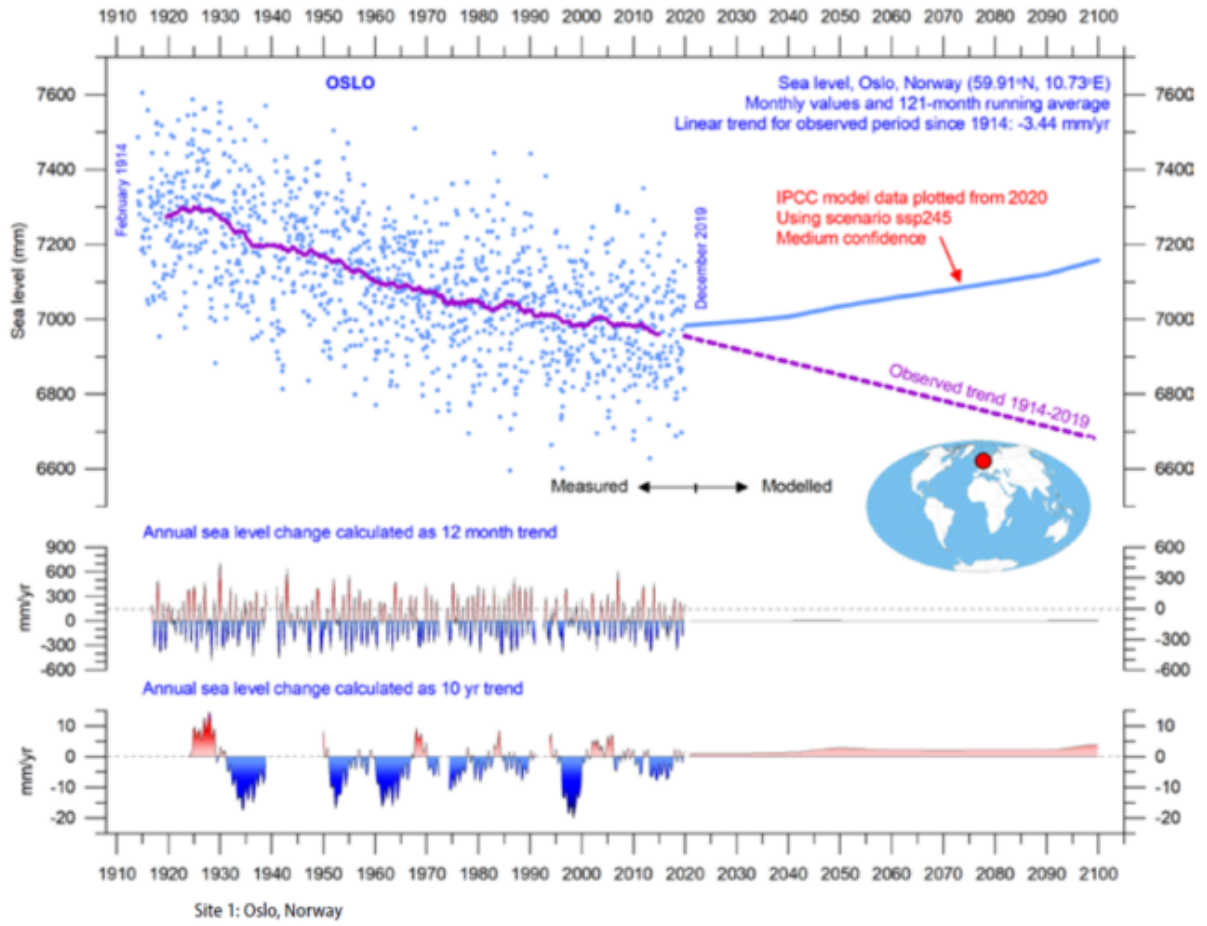
IPCC AR6 Sea Level Projection Tool



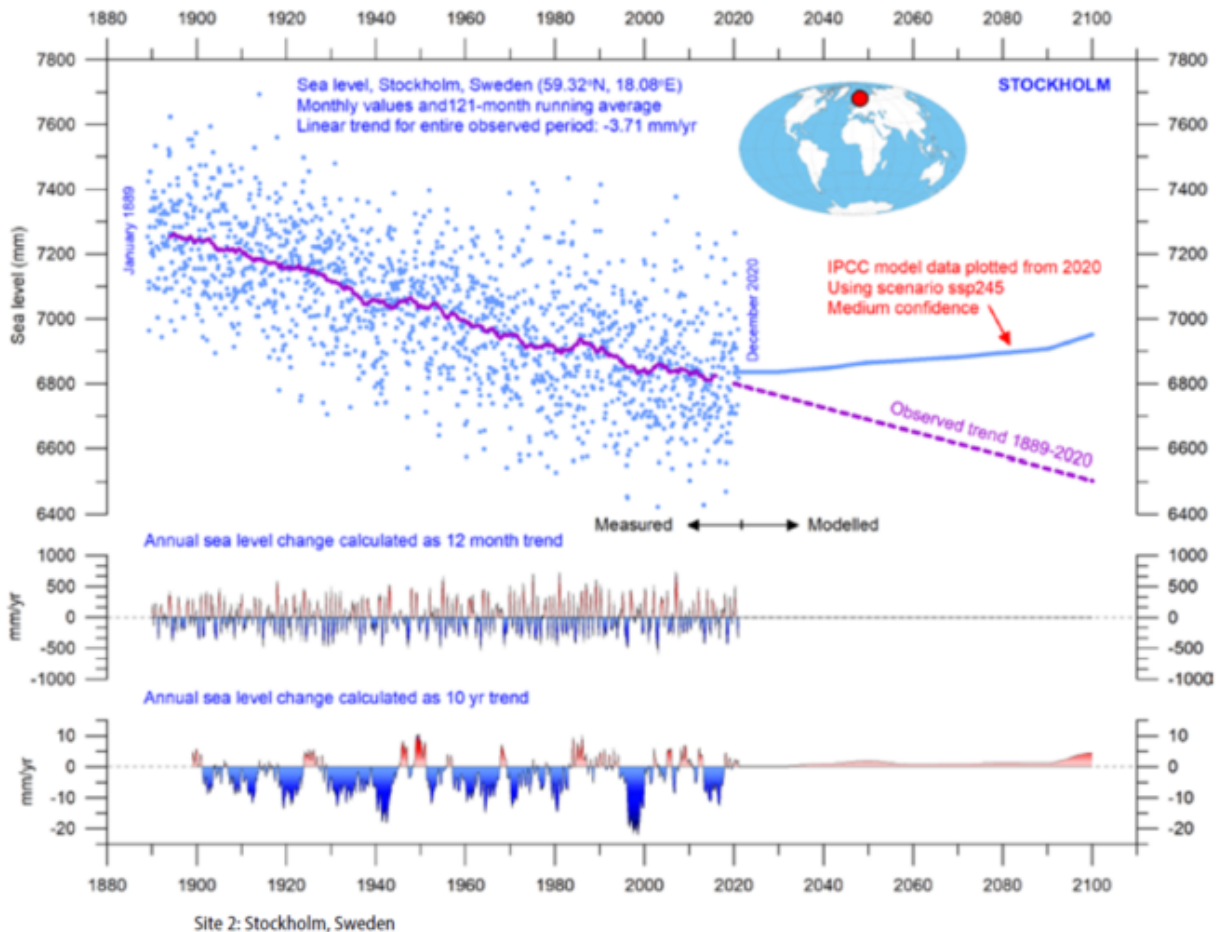
IPCC AR6 Sea Level Projection Tool

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

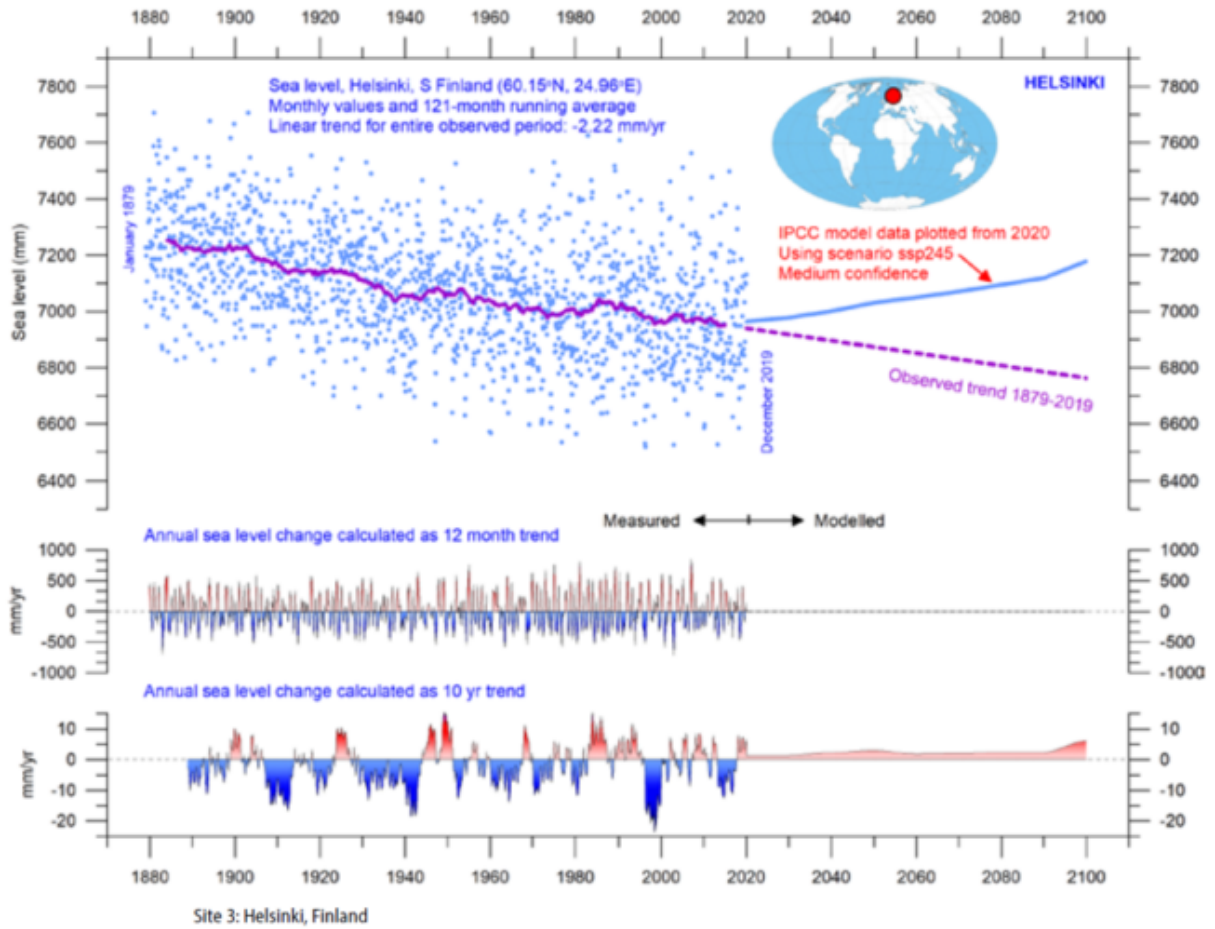
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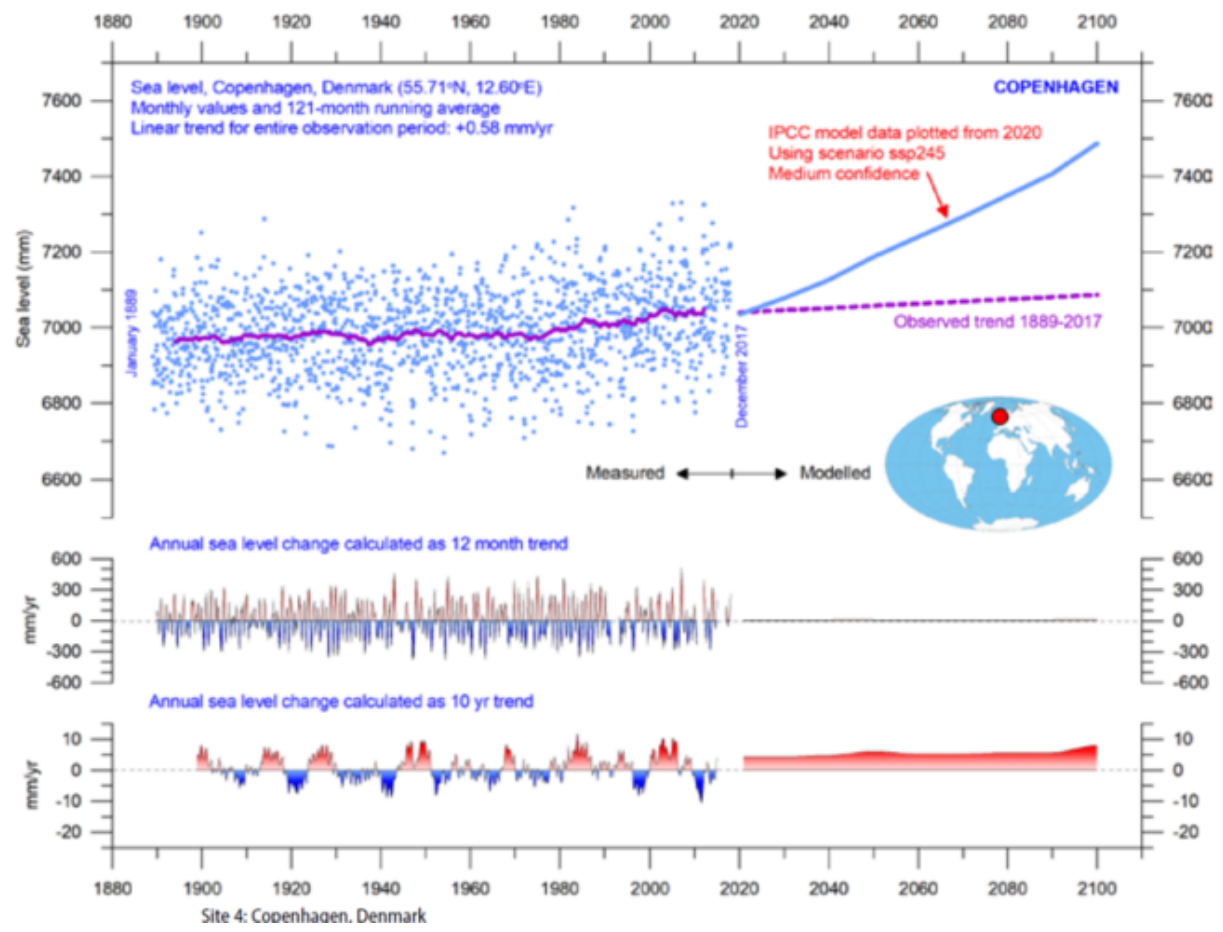
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?? ?? · Monday, May 15th, 2023

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IPCC?????61?????????????

?? ?? · Sunday, May 14th, 2023



borchee/iStock

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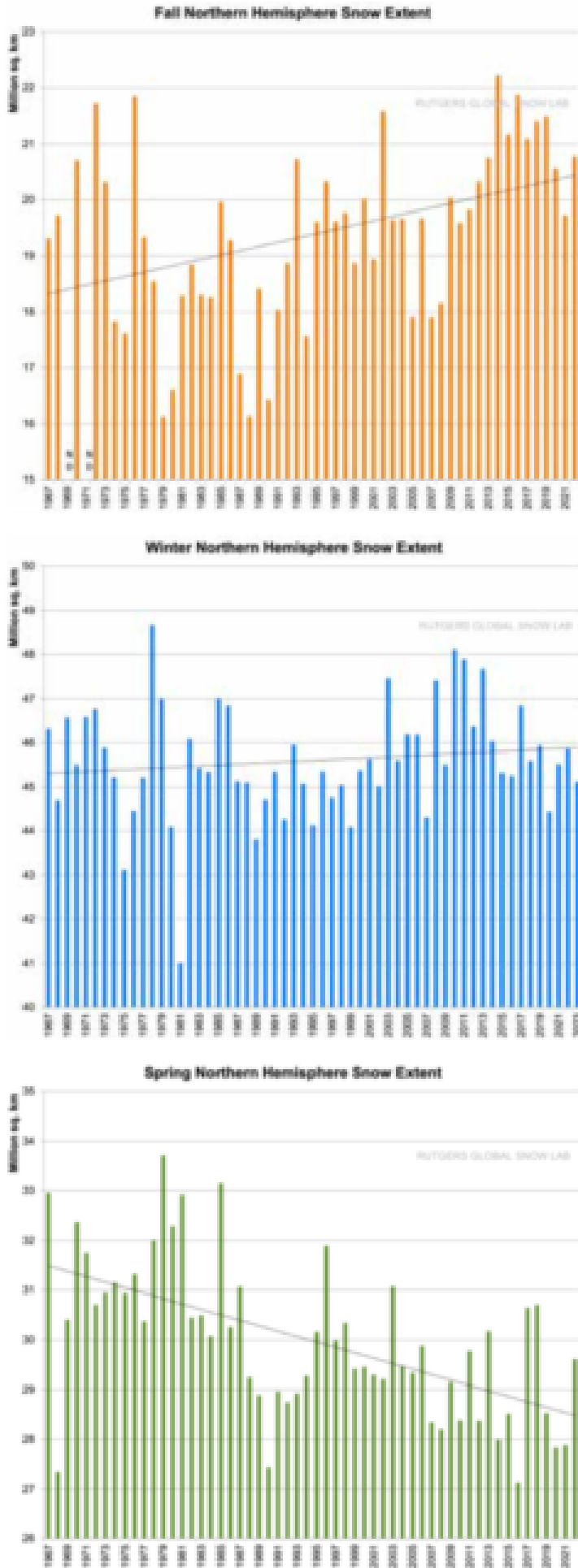


Figure 4: Snow cover extent (SCE) for the Northern Hemisphere for autumn, winter and spring. From: Rutgers Global Snow Lab (2023)

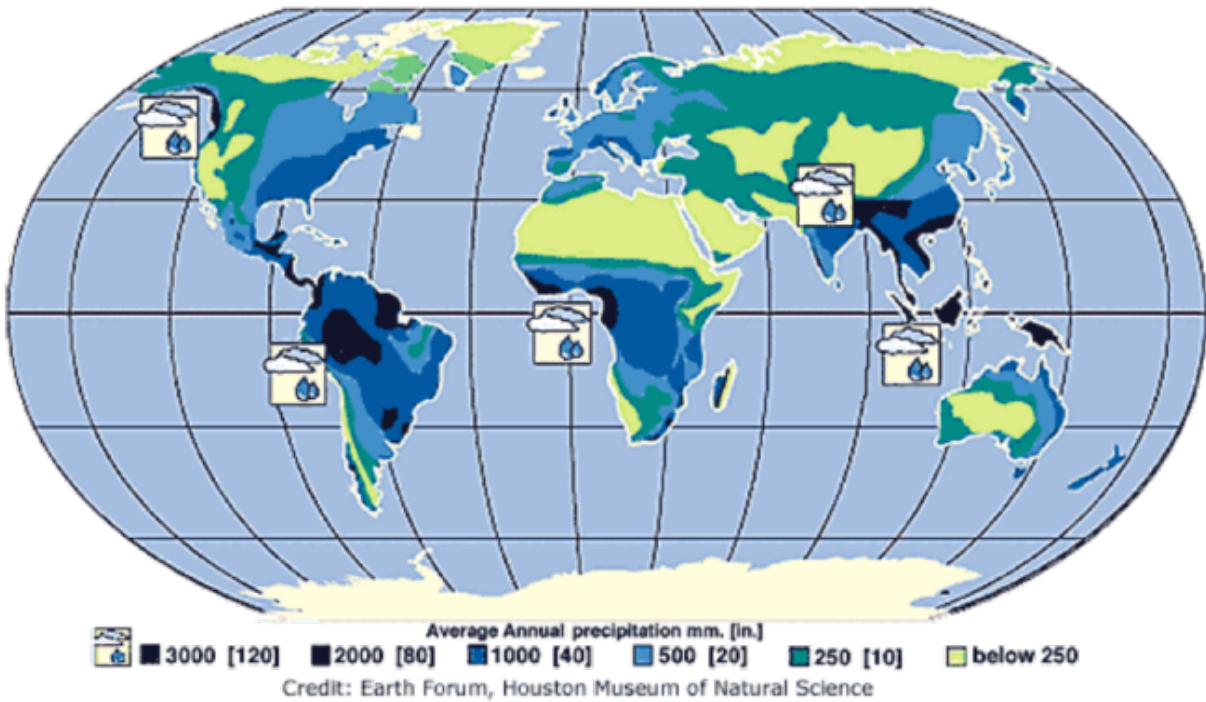
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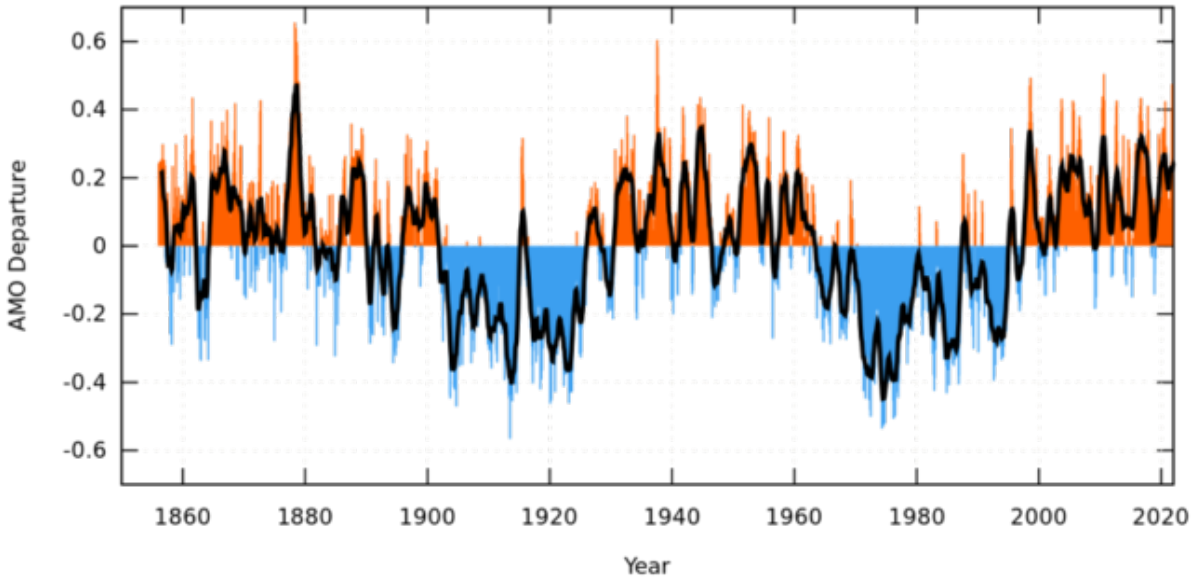
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Monthly values for the AMO index, 1856 - 2022



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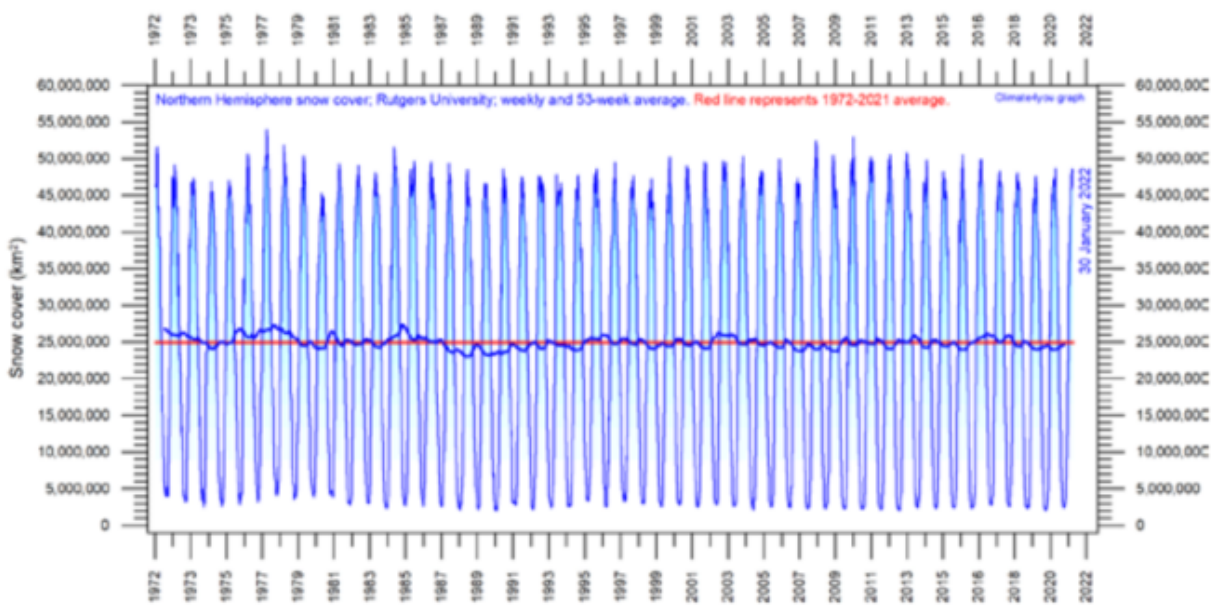


Figure 7: Northern hemisphere weekly snow cover since January 1972 according to the Rutgers University Global Snow Lab (<http://climate.rutgers.edu/snowcover>), the thin blue line is the weekly data, and the thick blue line is the running 53 week average (approximately 1 year). The horizontal red line 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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Posted in ???, ????? | No Comments »

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?? ??? ?? · Thursday, May 11th, 2023



mirza kadic/iStock

“The German government has announced that it will... 2020...?”

2005... 2021... CDU... 6...?”

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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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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 ESG

CO2

ESG CO2 CO ESG

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SDGs

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

EU?EV????????????????e-fuel????

?? ?? · Sunday, April 30th, 2023



a-image/iStock

EU?EV?????

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UN Secretary for Global Comms says we “own the science” on “climate change,”
and we think that “the world should know it.”

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?? ? · Tuesday, April 25th, 2023

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

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?? ?? · Monday, April 24th, 2023



nndanko/iStock

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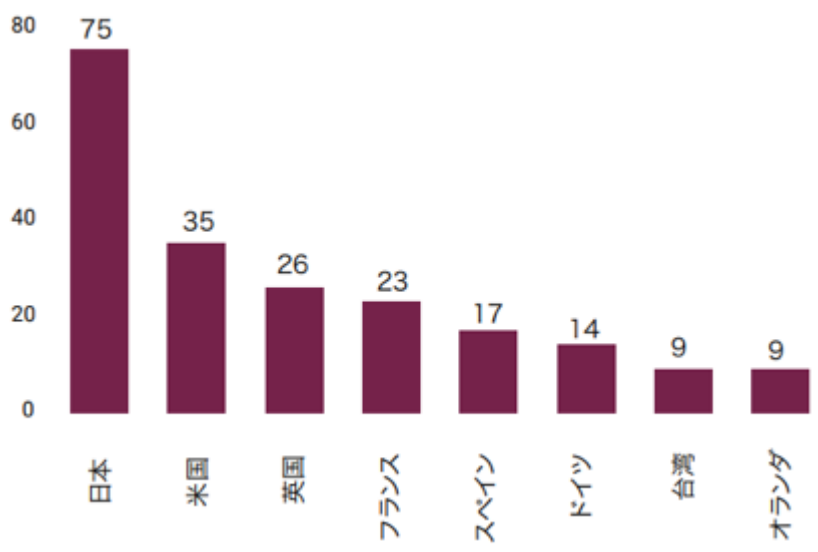
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気候変動 Aリスト 2022

Aリスト国・地域別企業数(上位8か国)



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(a)会社名	(b)調達金額 (円)	(c)各社の売上高 (円)	(d)各社の CO2 排出量 (トン)	(e)=(d) × (b) ÷ (c) (トン)
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?? ?? · Sunday, April 16th, 2023



deepblue4you/iStock

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Hydrogen

Friday, April 14th, 2023



Leestat/iStock

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Hello my names is james,I'm photographer./iStock

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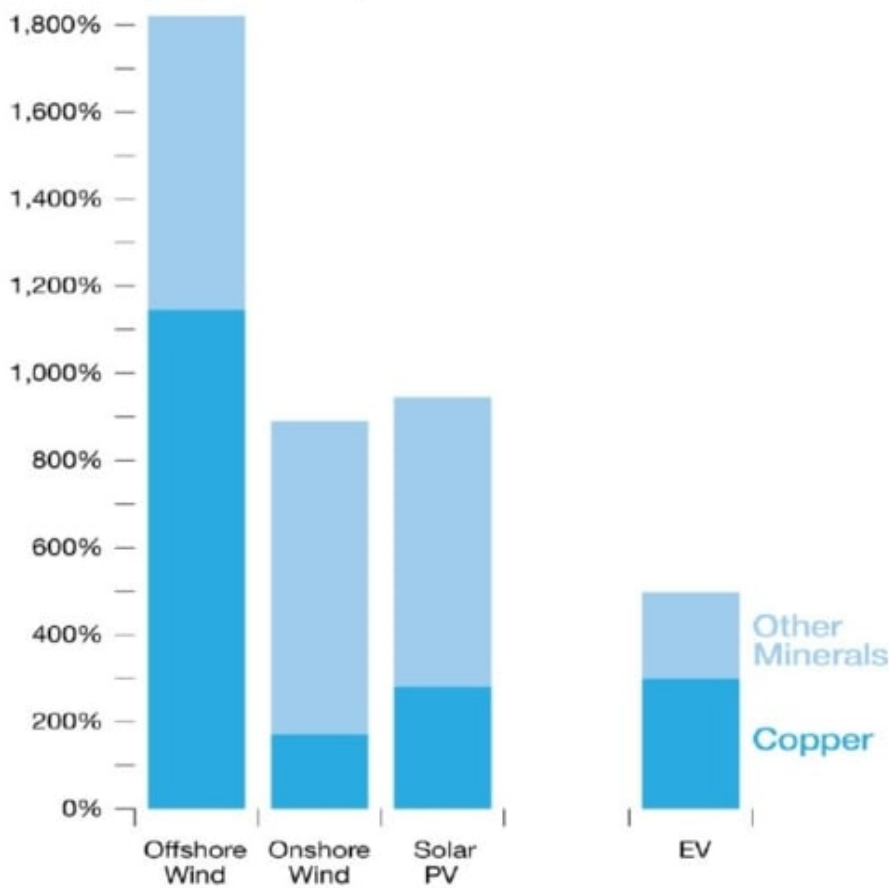
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Mineral Demands for Solar, Wind, and EV to Replace Hydrocarbon Machines

Increased Weight per Watt or per Car



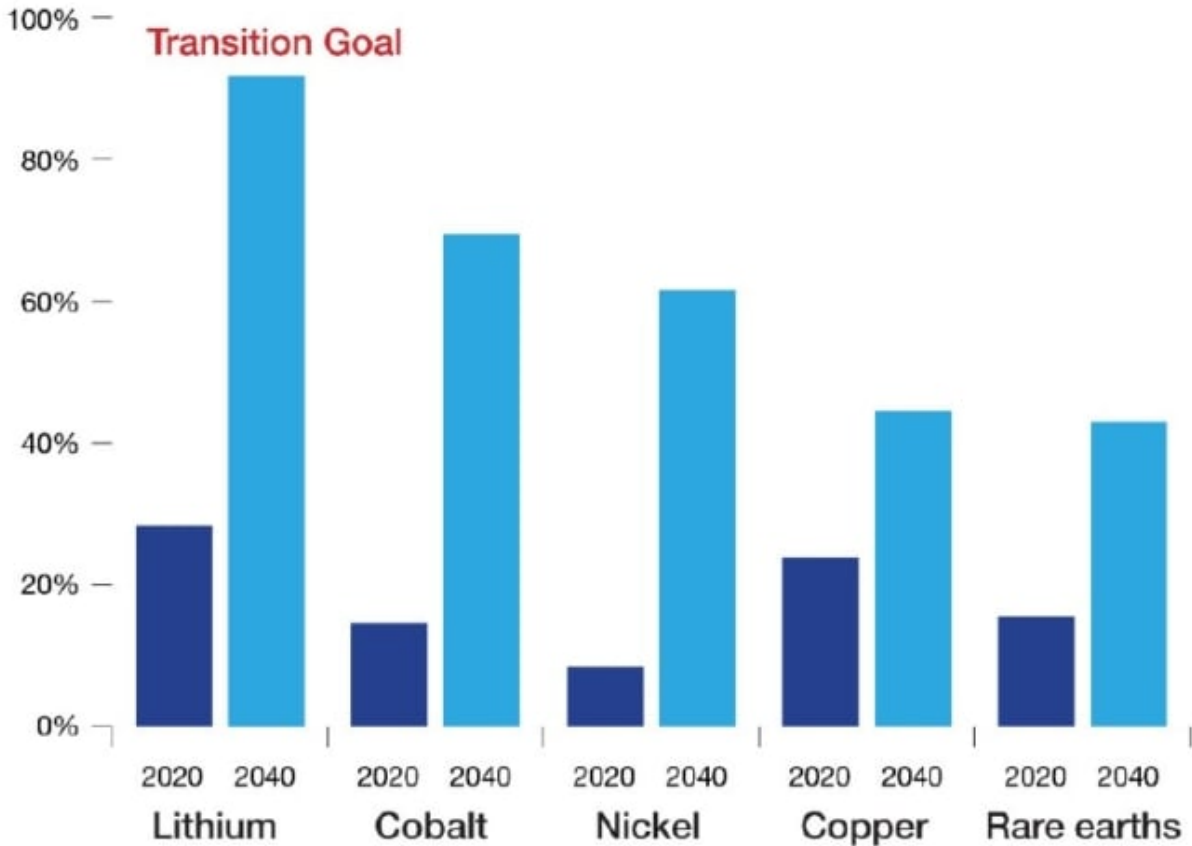
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Energy Sector Share of Mineral Demands for All Purposes

Share of All Uses



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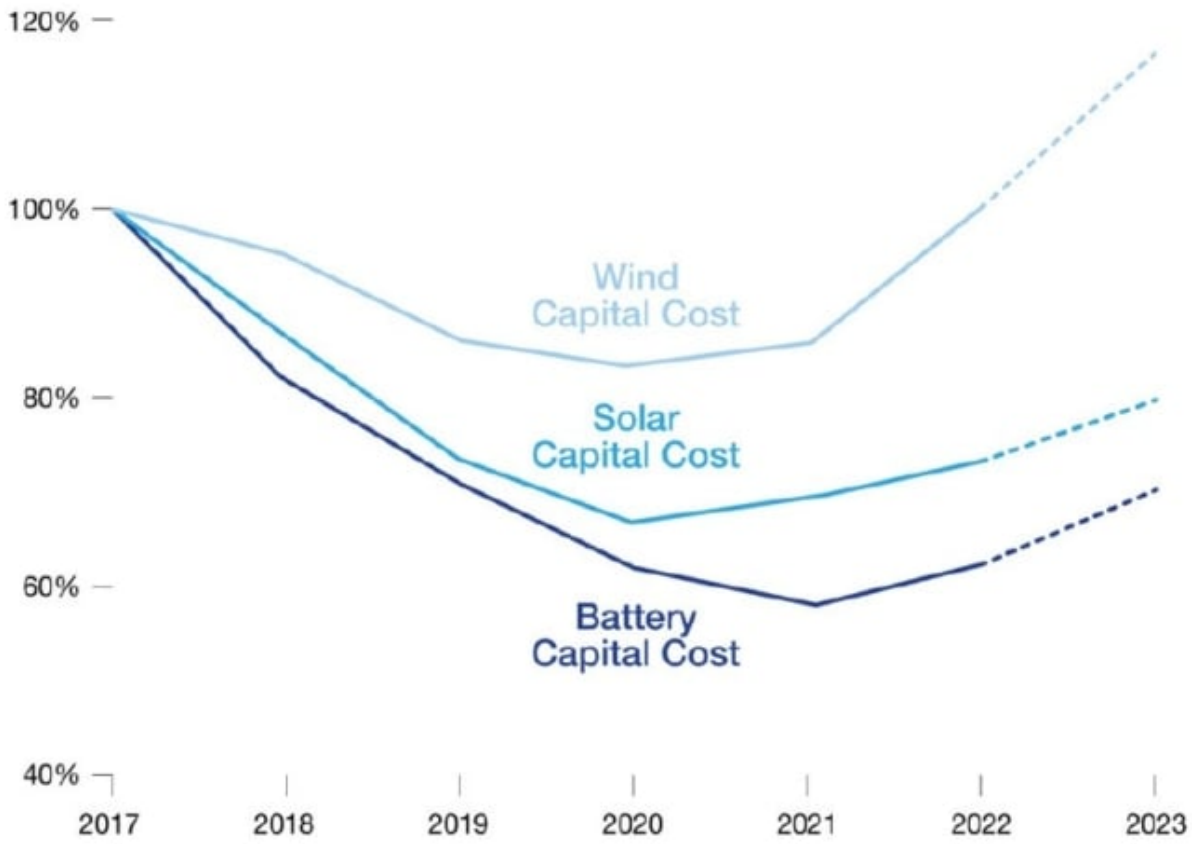
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Costs of Wind, Solar, and Battery Hardware

Change from 2017

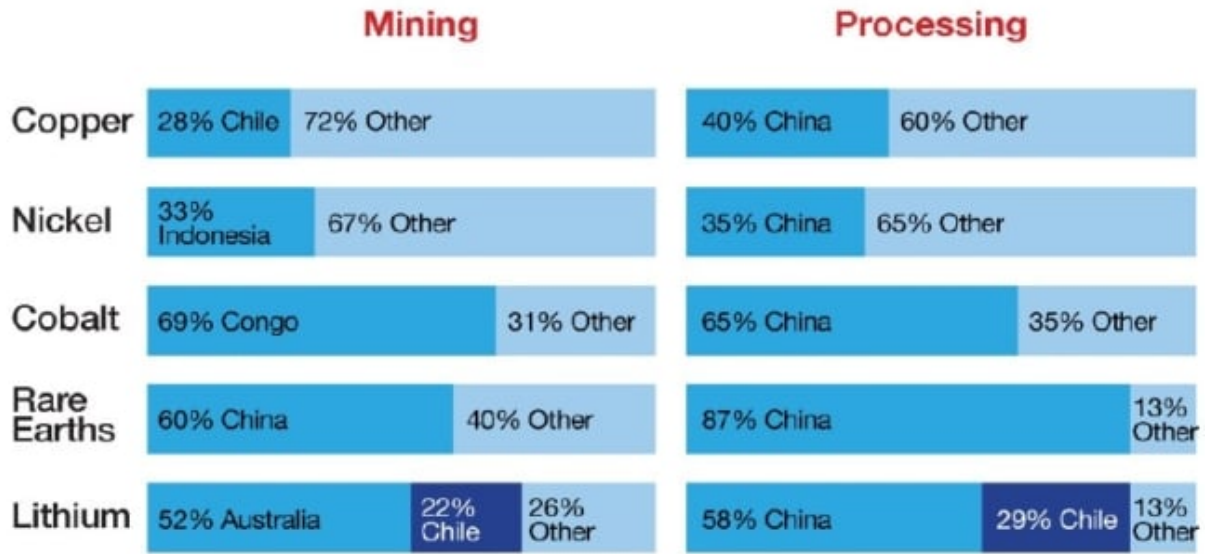


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Sources of Key Energy Transition Minerals



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