

Global Energy Policy Research | GEPR

GEPR?
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EV????????????????

?? ?? - Monday, July 3rd, 2023



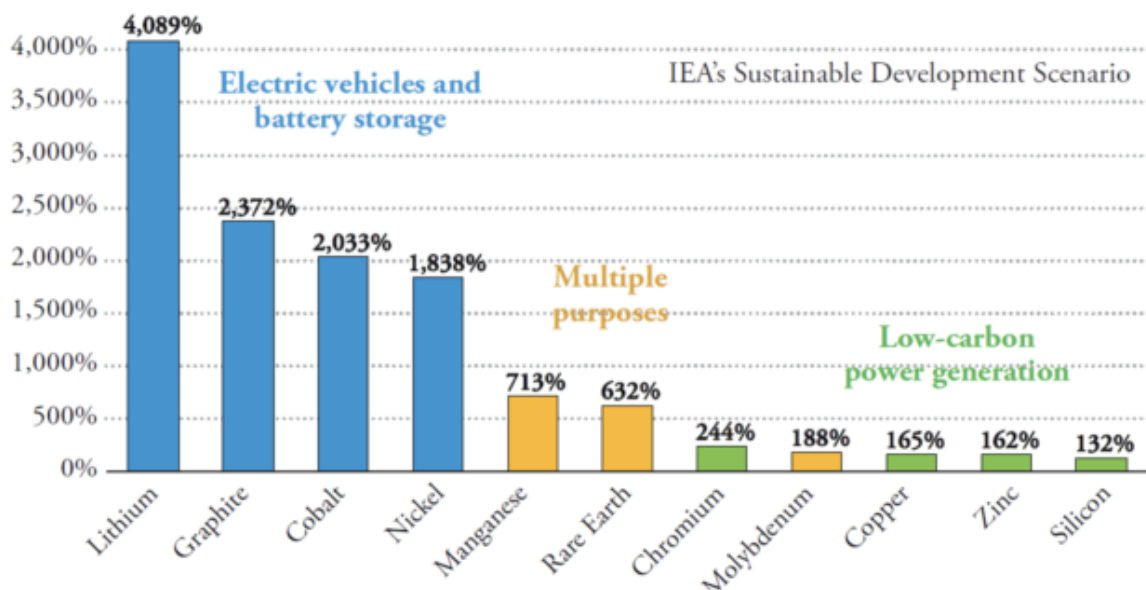
PhonlamaiPhoto/iStock

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

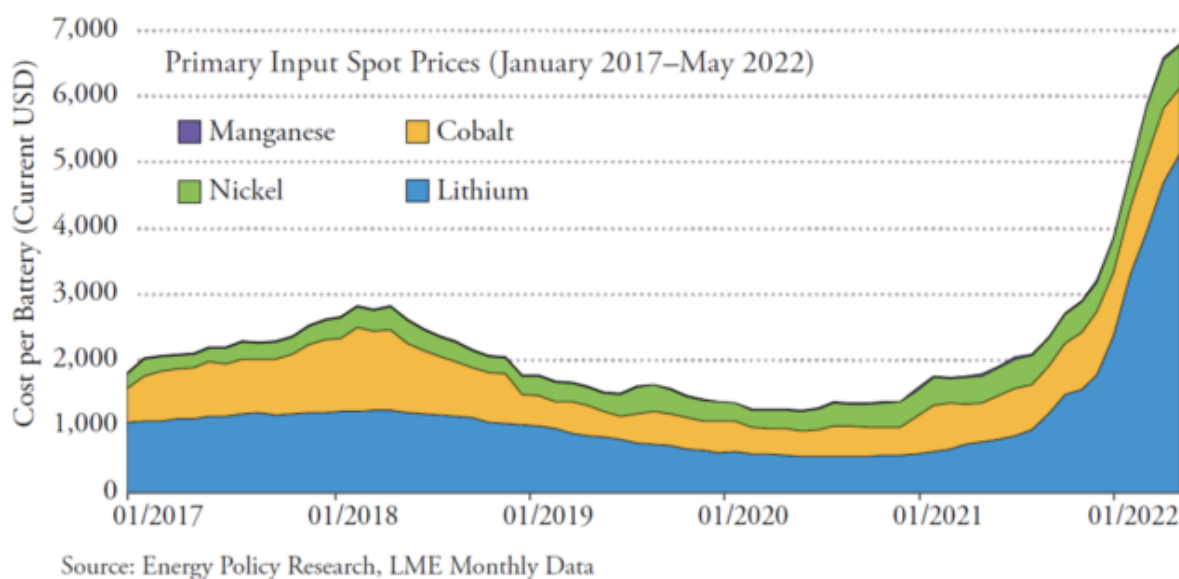
Mineral/Metal	NMC811	NMC523	NMC622	NCA+	LFP
Lithium	5	7	6	6	6
Cobalt	5	11	11	2	0
Nickel	39	28	32	43	0
Manganese	5	16	10	0	0
Graphite	45	53	50	44	66
Aluminum	30	35	33	30	44
Copper	20	20	19	17	26
Steel	20	20	19	17	26
Iron	0	0	0	0	41

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

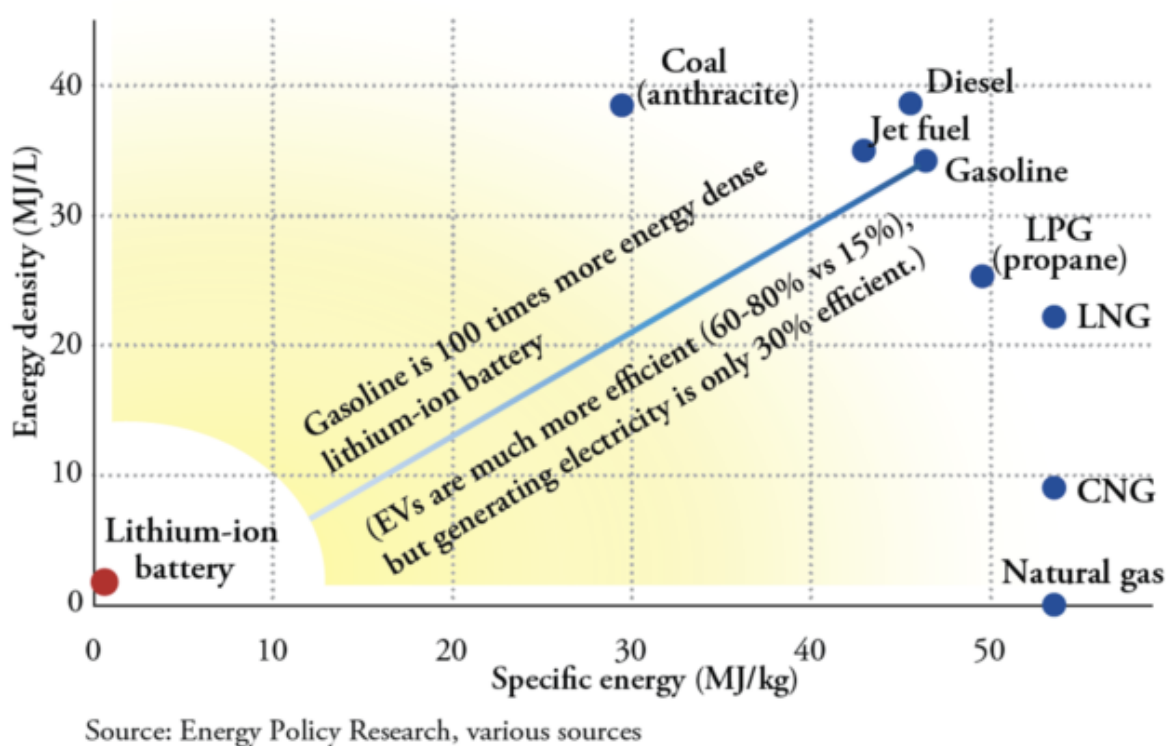
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Figure 34. Tesla Battery Cost Based on Monthly Average



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Figure 35. Energy Densities of Common Fuels, Li-ion battery



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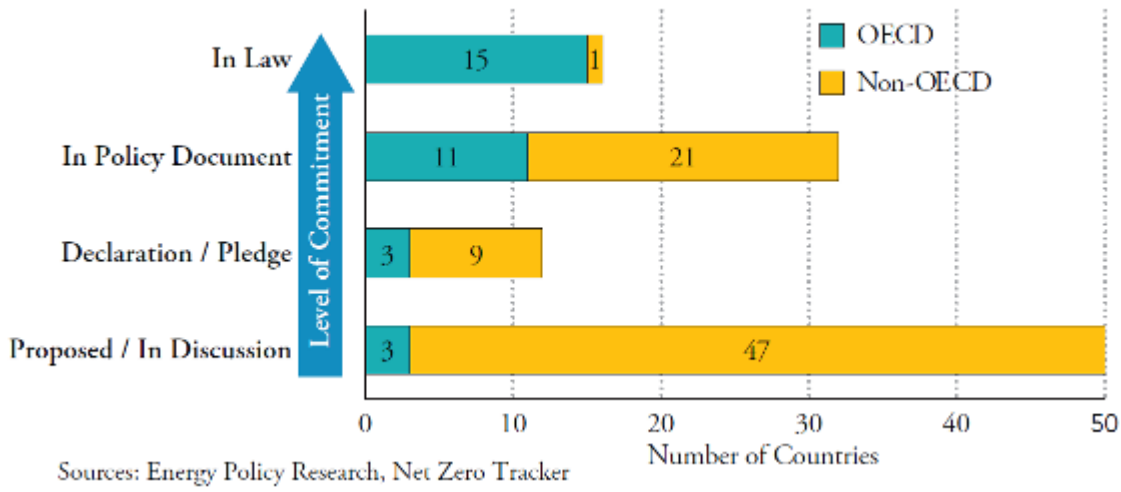
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IAE Net Zero Scenario, NZE

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

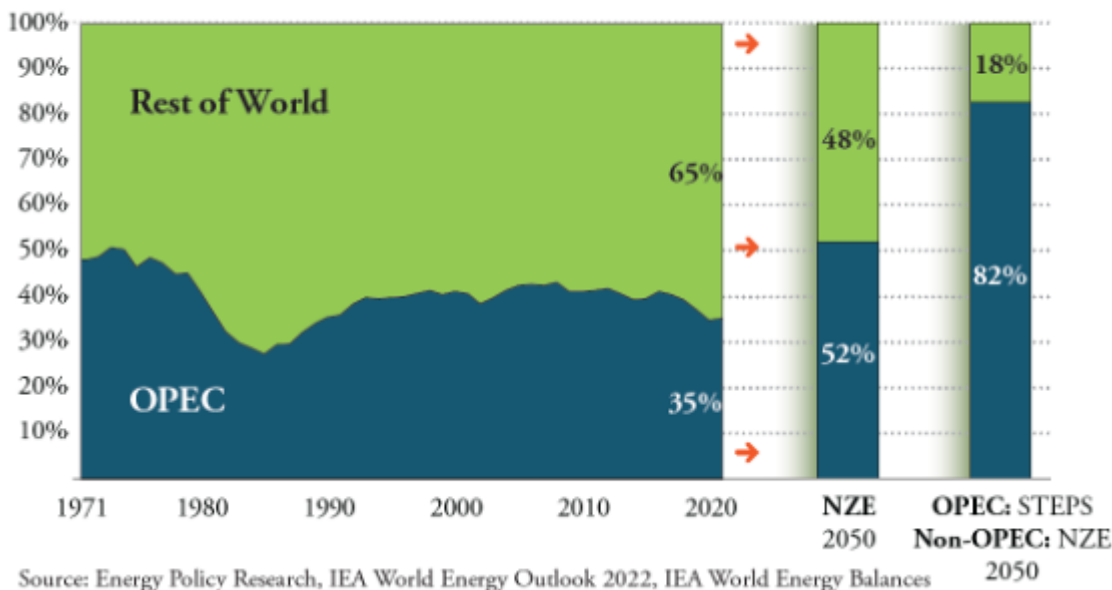


IEA NZE OPEC 35% 52% 1973

NZE OPE

OPEC NZE STEPS OPEC 82%

Figure 17. OPEC Share of Global Oil Production

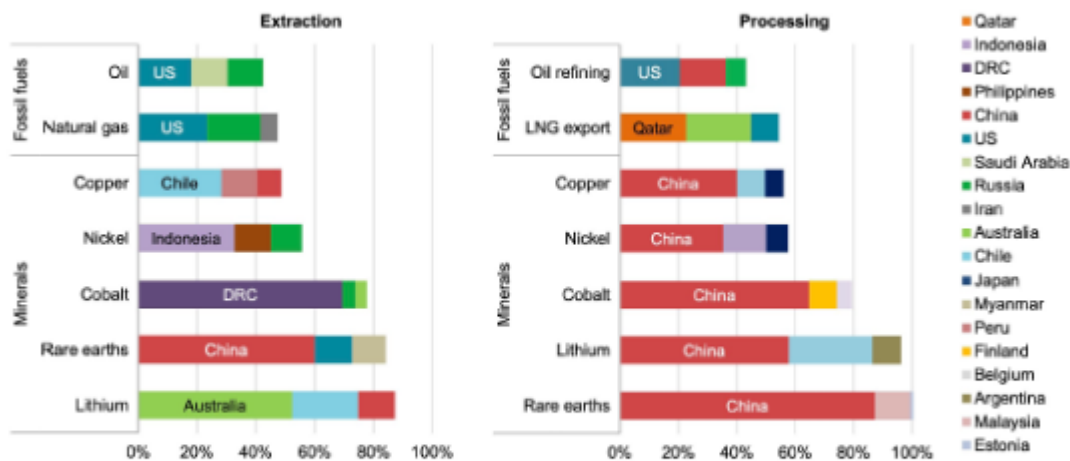


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Figure 18. Share of Top Three Producing Countries in Production of Selected Minerals and Fossil Fuels, 2019



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

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?? ?? · Saturday, July 1st, 2023



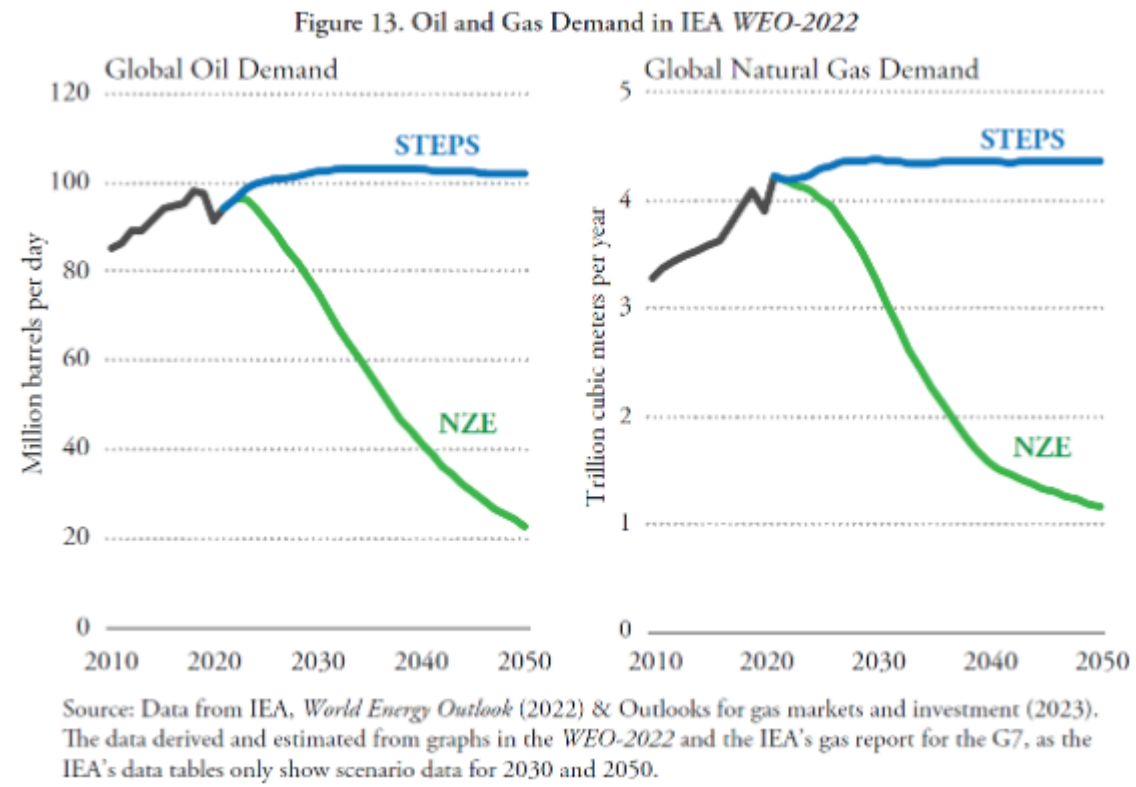
privetik/iStock

????????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.

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Rawf8/iStock

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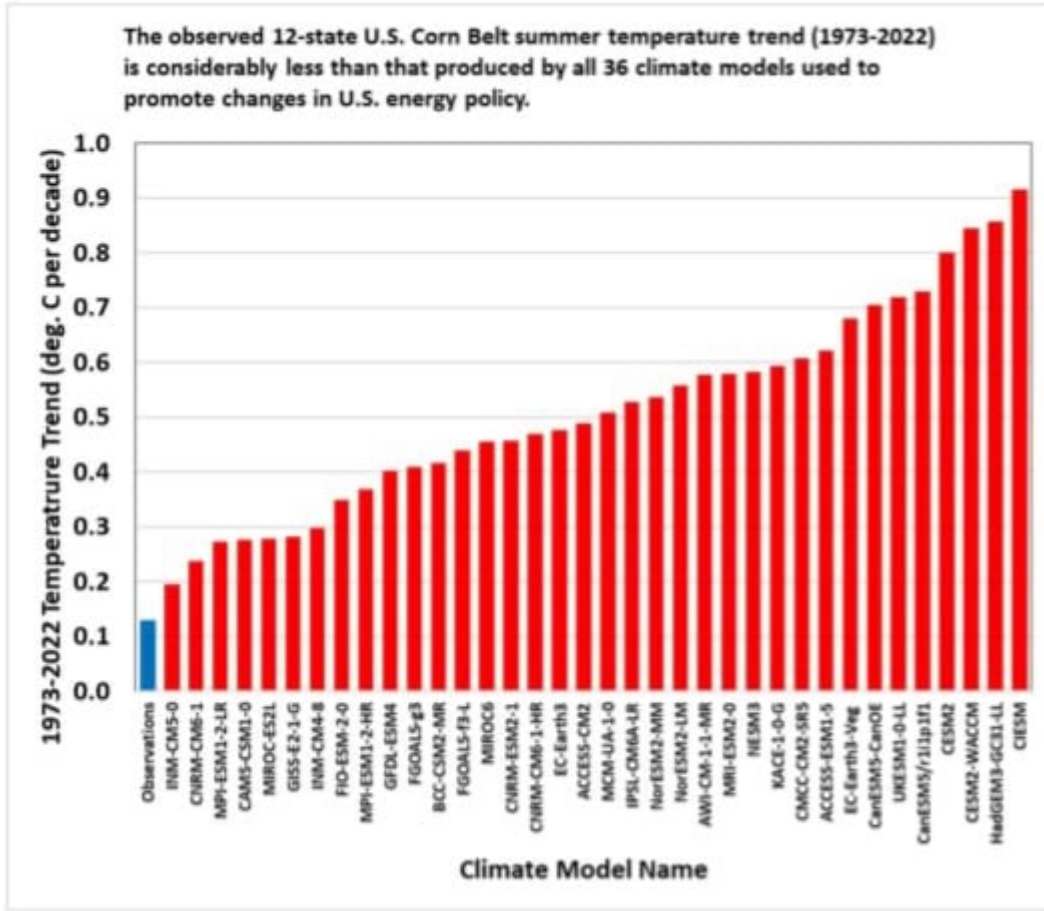
?? ?? · Friday, June 23rd, 2023



feellife/iStock

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【参考】今後10年間の火力供給力の増減見通し

- 今後も、主に緊急時に活用されていた石油火力発電設備の廃止が継続する見込み。
- 当面は火力の新設計画も予定されている一方、供給力全体としては減少傾向にあり、稼働率低下や卸電力取引市場の価格の低迷に伴う採算性悪化から、さらに加速する懸念。



注1. 2017~2021年度：新設実績は真源エネルギー「石炭火力発電所一覧」および電気事業便覧（2021年版）、廃止実績は各年度供給計画および各社HP等より。
 注2. 2022年度以降（新設）：2022度供給計画より

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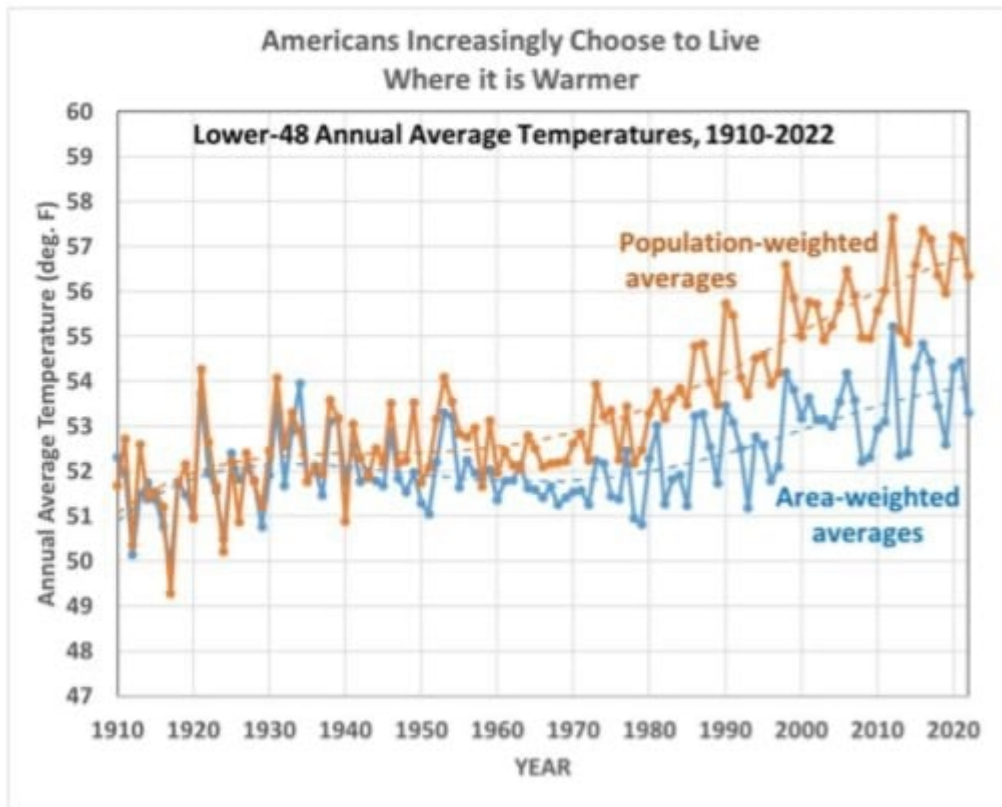
?? ?? · Sunday, June 4th, 2023



Darwel/iStock

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?? ?? · Sunday, May 28th, 2023



sasun bughdaryan/iStock

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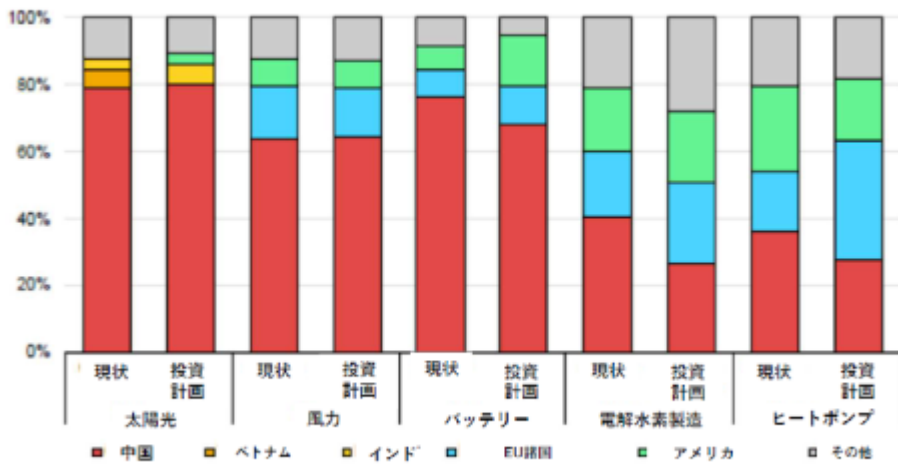
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図3. グリーン技術製造の地域集約度—現状と将来



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

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?3?“Securing Clean Energy Technology Supply Chains”, IEA, July 2022 / “The State of Clean Technology Manufacturing”, IEA, May 2023

?4?Reuters, 2011?1?17?

?5??WTO??

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

G7??CO2??

?? ?? · Wednesday, May 24th, 2023

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



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?? ??? · Monday, May 22nd, 2023



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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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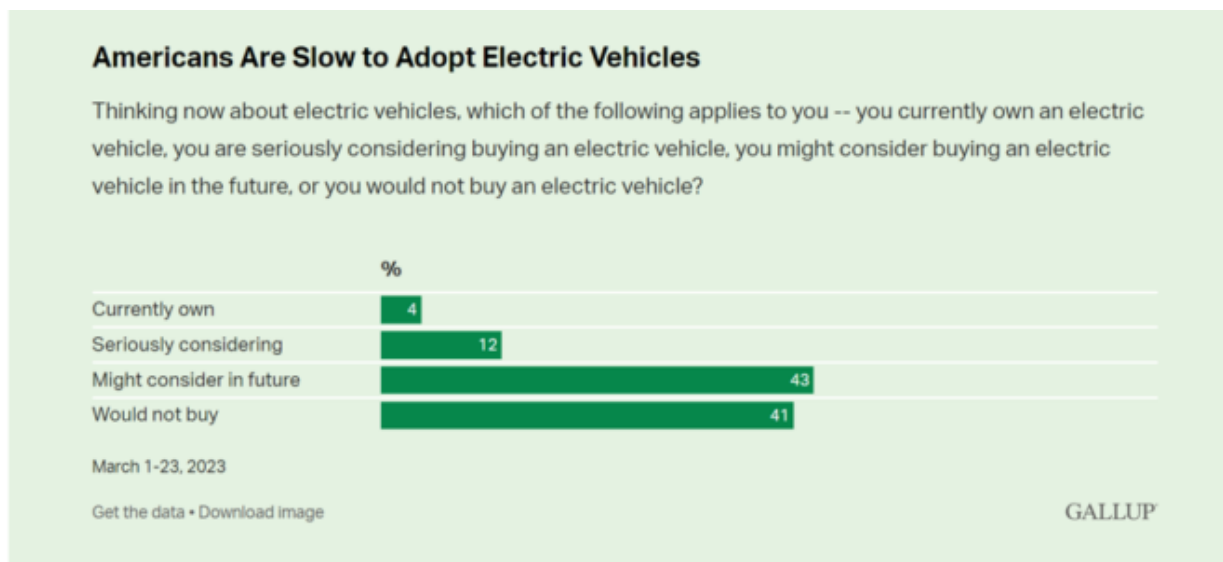
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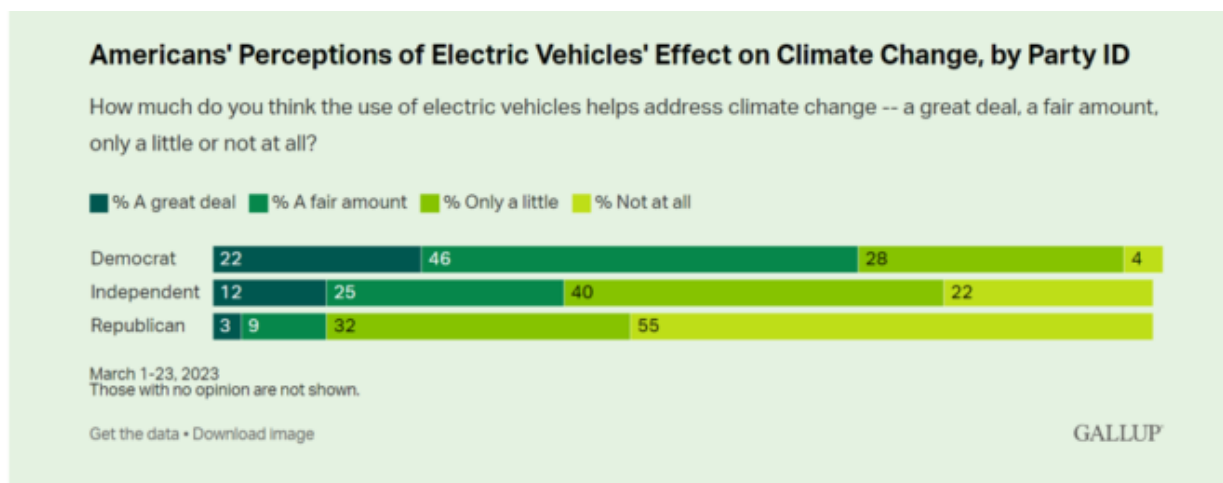
Most Americans Are Not Completely Sold on Electric Vehicles

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?? ?? · Tuesday, May 16th, 2023



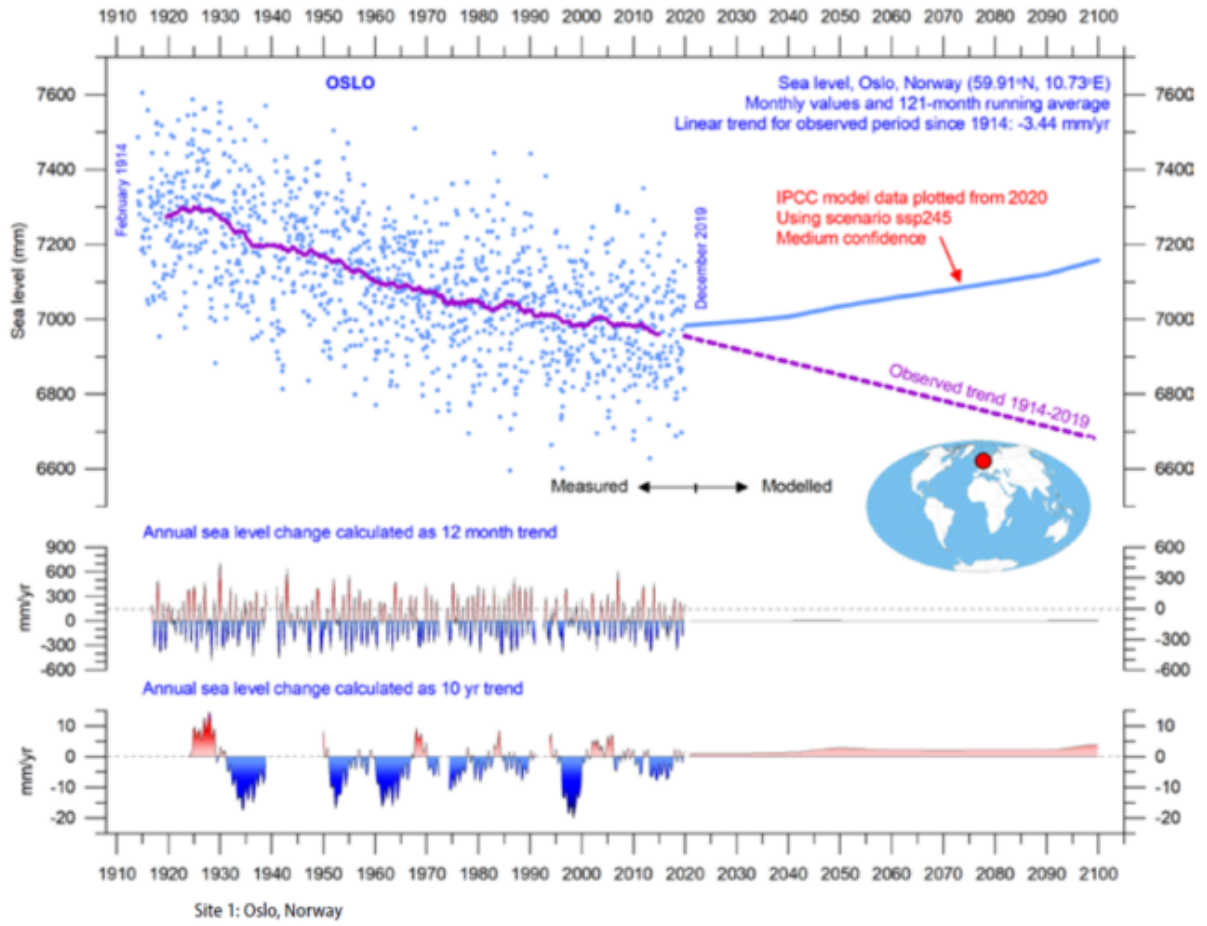
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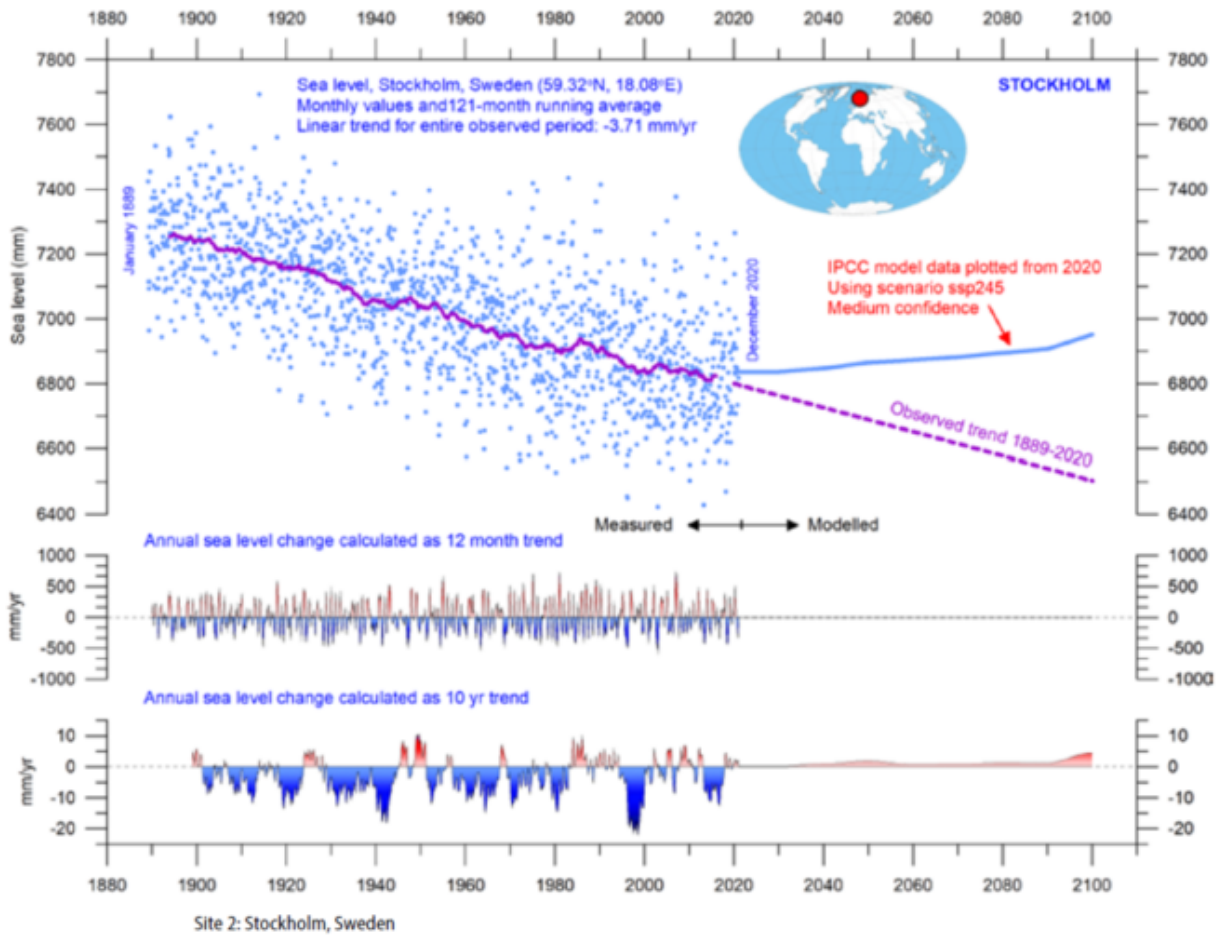
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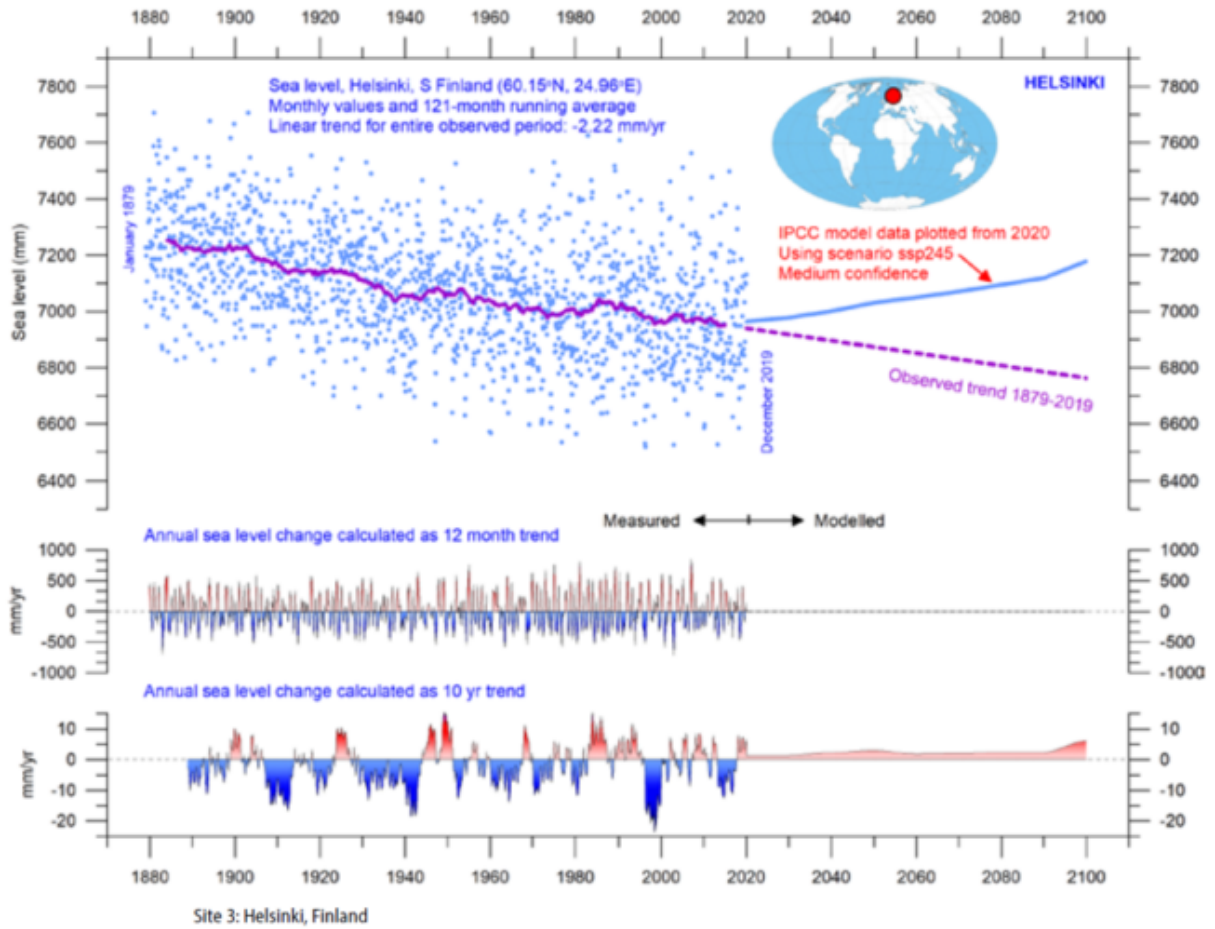
IPCC AR6 Sea Level Projection Tool



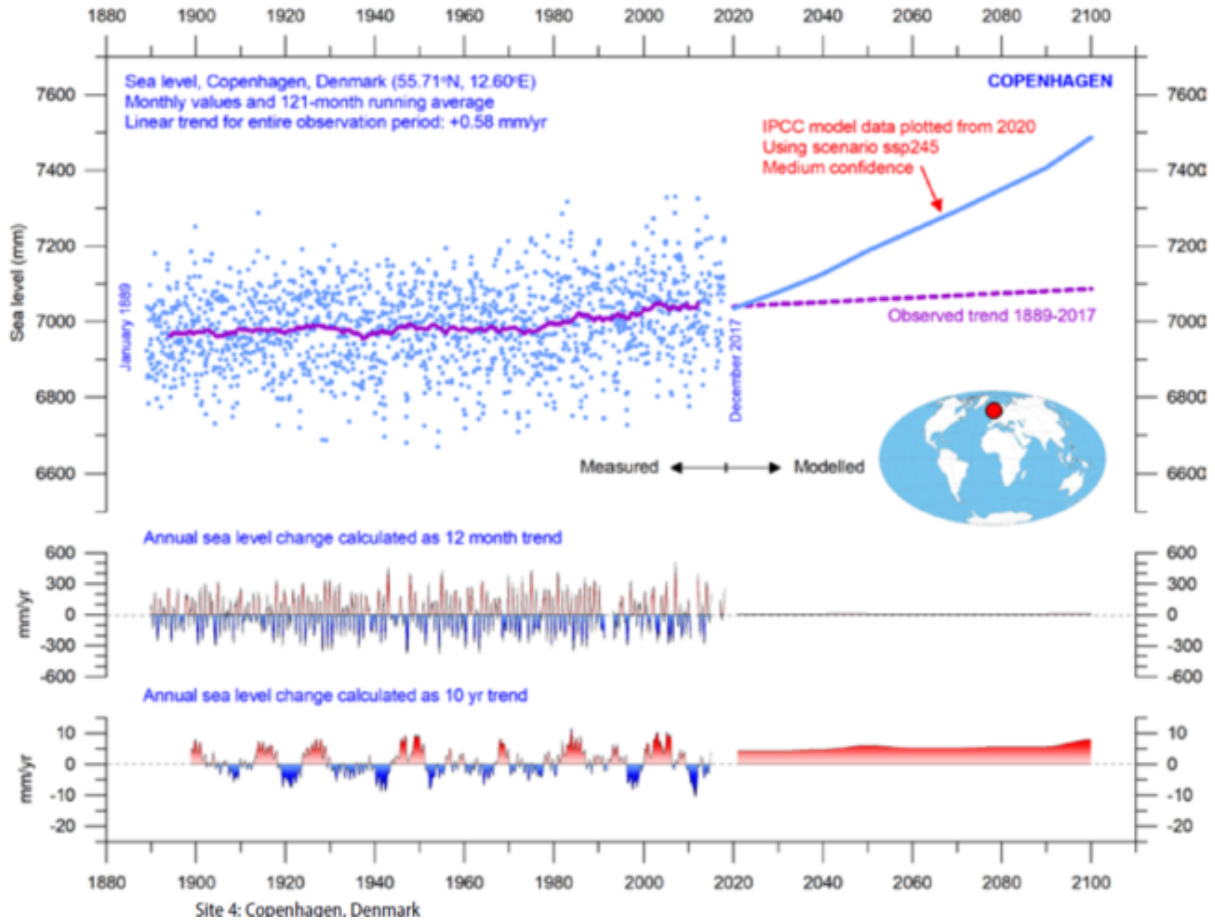
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[Wikipedia??](#)

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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??

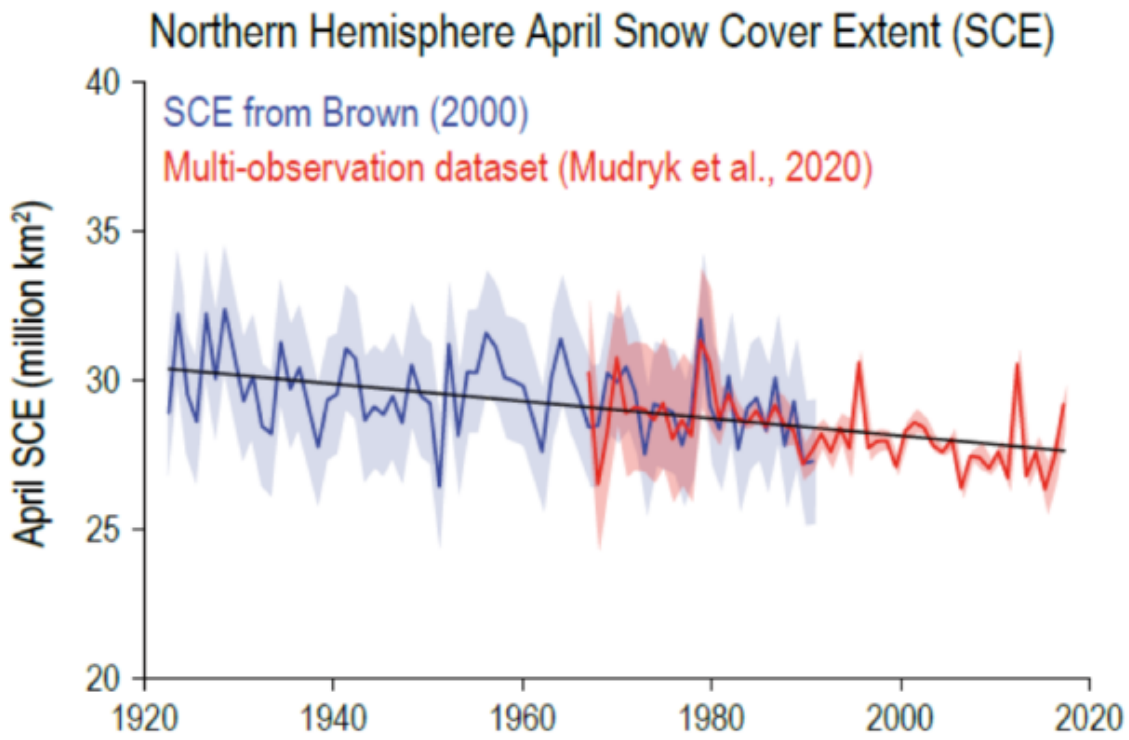


Figure 2: April snow cover extent (SCE) for the Northern Hemisphere. From: AR6, chapter 2.

??IPCC????4??

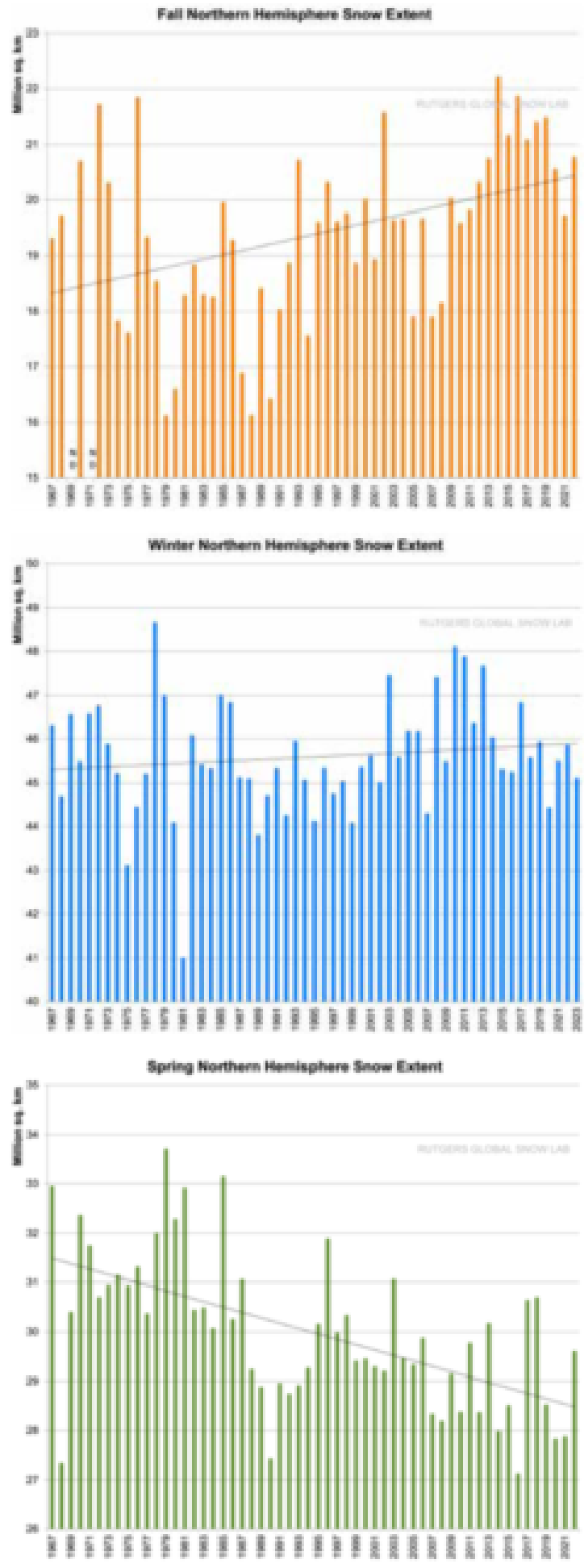


Figure 4: Snow cover extent (SCE) for the Northern Hemisphere for autumn, winter and spring. From: Rutgers Global Snow Lab (2023)

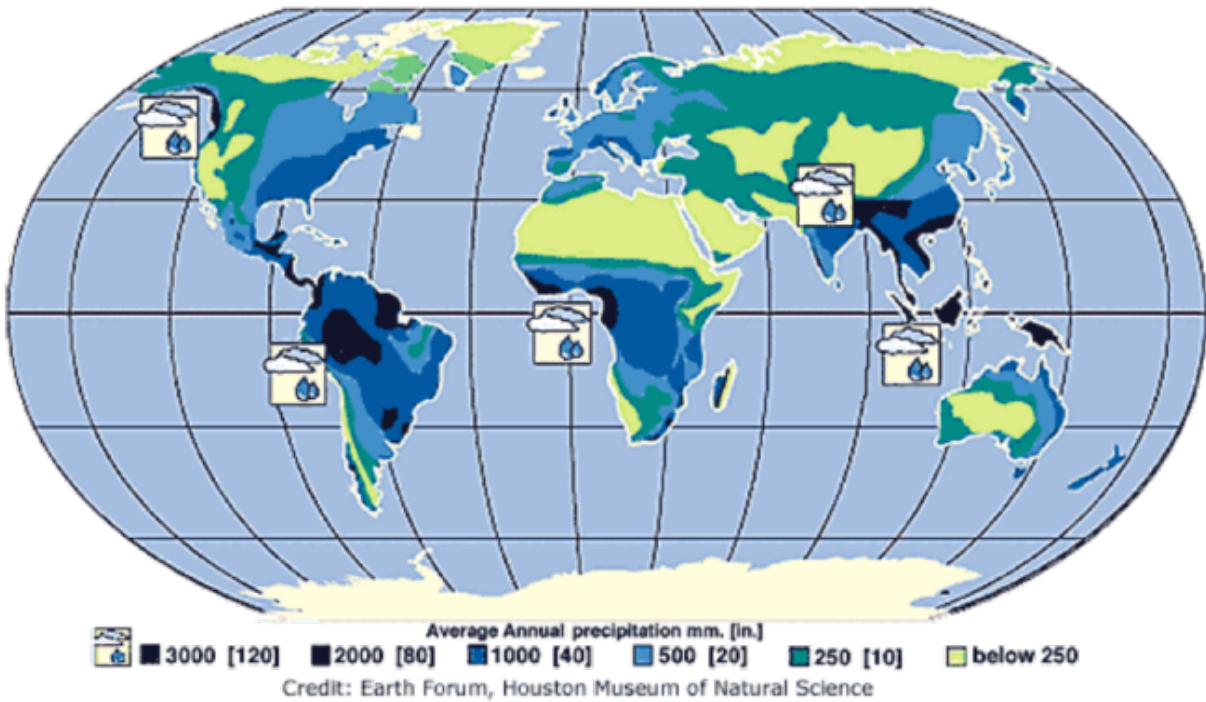
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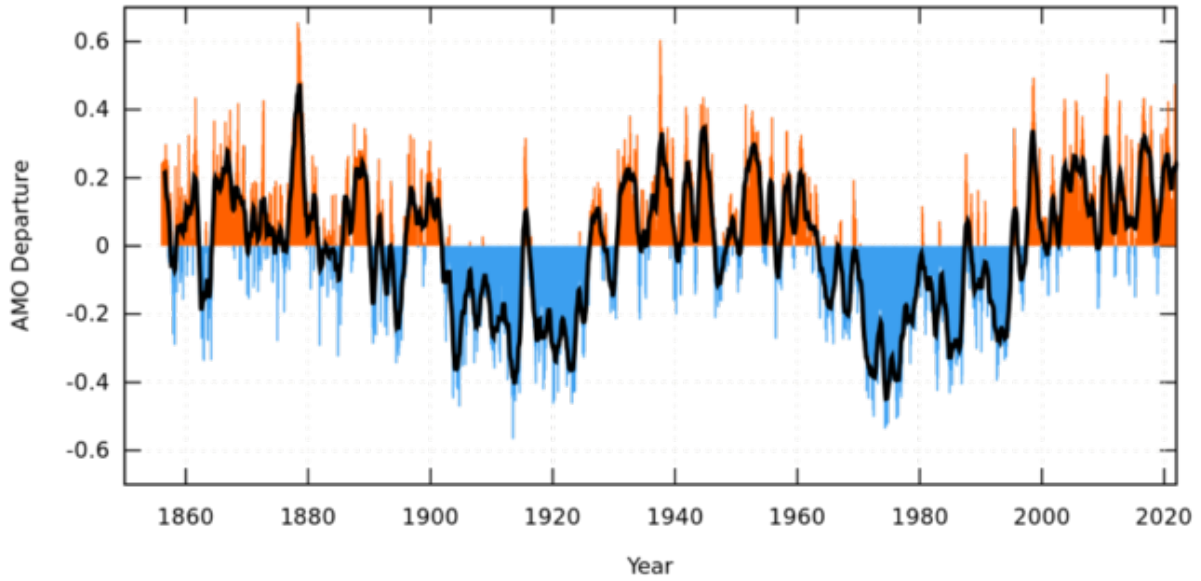
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Monthly values for the AMO index, 1856 - 2022



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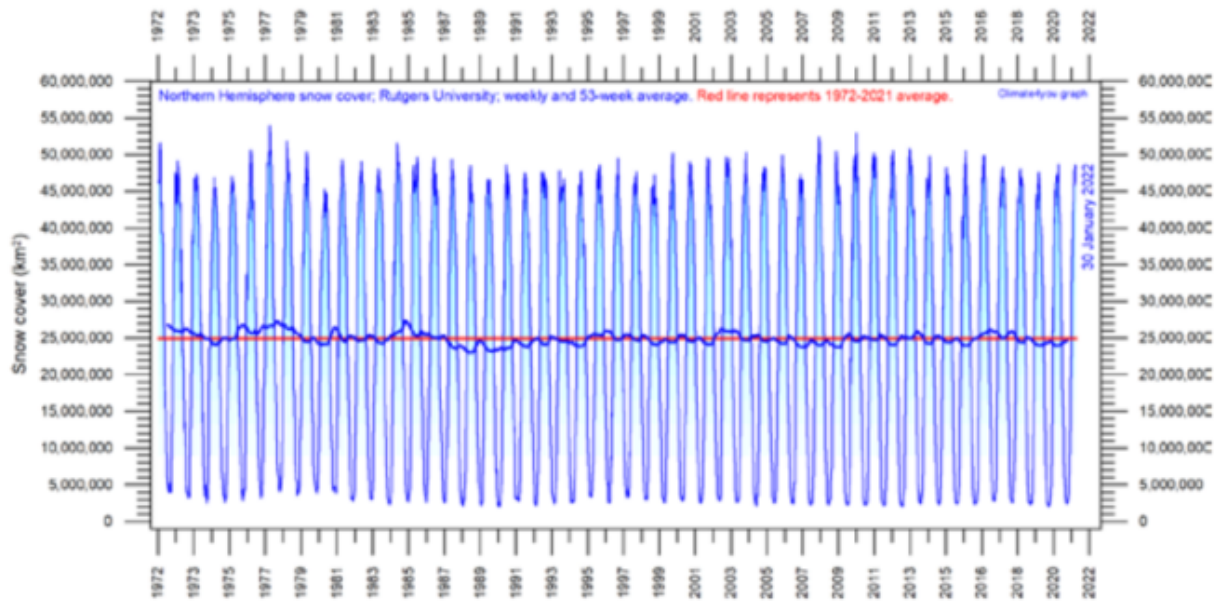


Figure 7: Northern hemisphere weekly snow cover since January 1972 according to the Rutgers University Global Snow Lab (<http://climate.rutgers.edu/snowcover>), the thin blue line is the weekly data, and the thick blue line is the running 53 week average (approximately 1 year). The horizontal red line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

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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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kennedy24.com??

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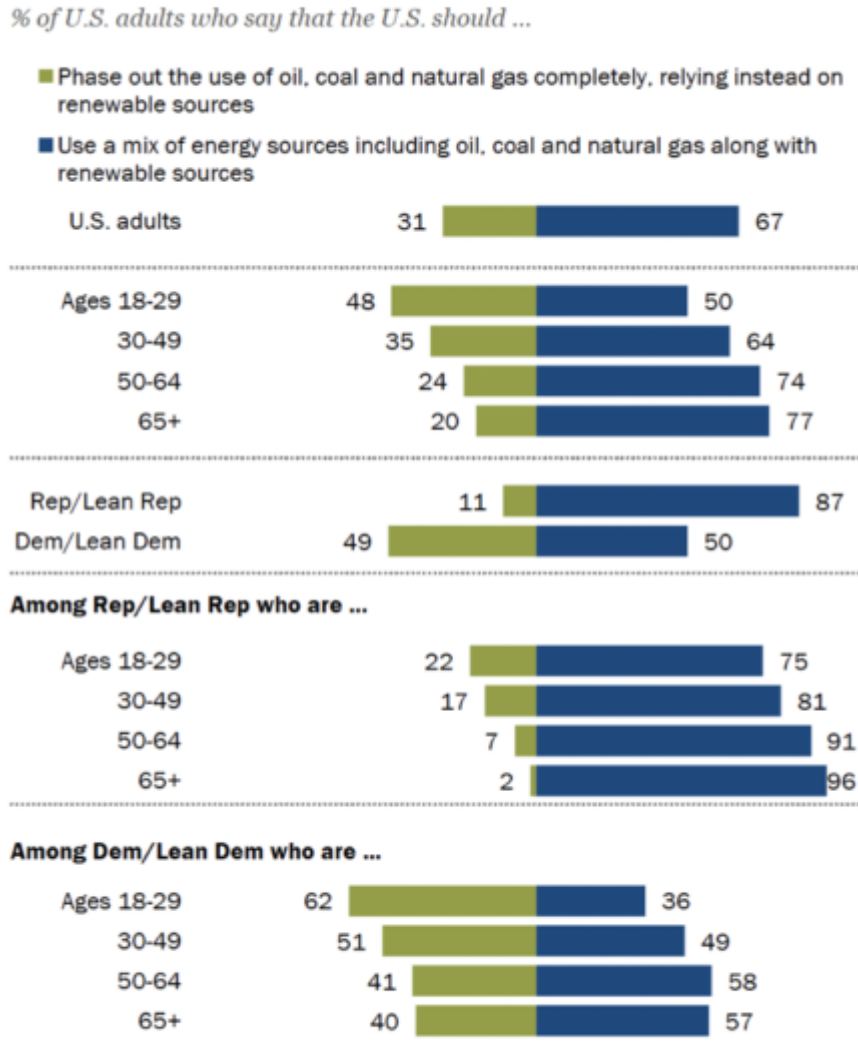
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RFK Jr. Says Climate Change Being Exploited to Push ‘Totalitarian Controls’
(theepochtimes.com)?

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Younger U.S. adults more open than older adults to phasing out fossil fuels completely



Note: Respondents who did not give an answer are not shown.
Source: Survey conducted Jan. 24-30, 2022.

PEW RESEARCH CENTER

What the data says about Americans' views of climate change? Pew Research Center ?

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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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2023????????EU????????????????????????????????????2035?EV????????????????????????????????????ESG???

ESG 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 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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Development Impact Meetings????????????????????????

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

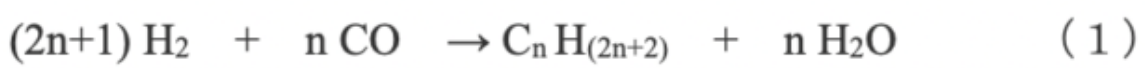
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Tropsch?FT????????????????????FT????1920????????????????FT????????????????
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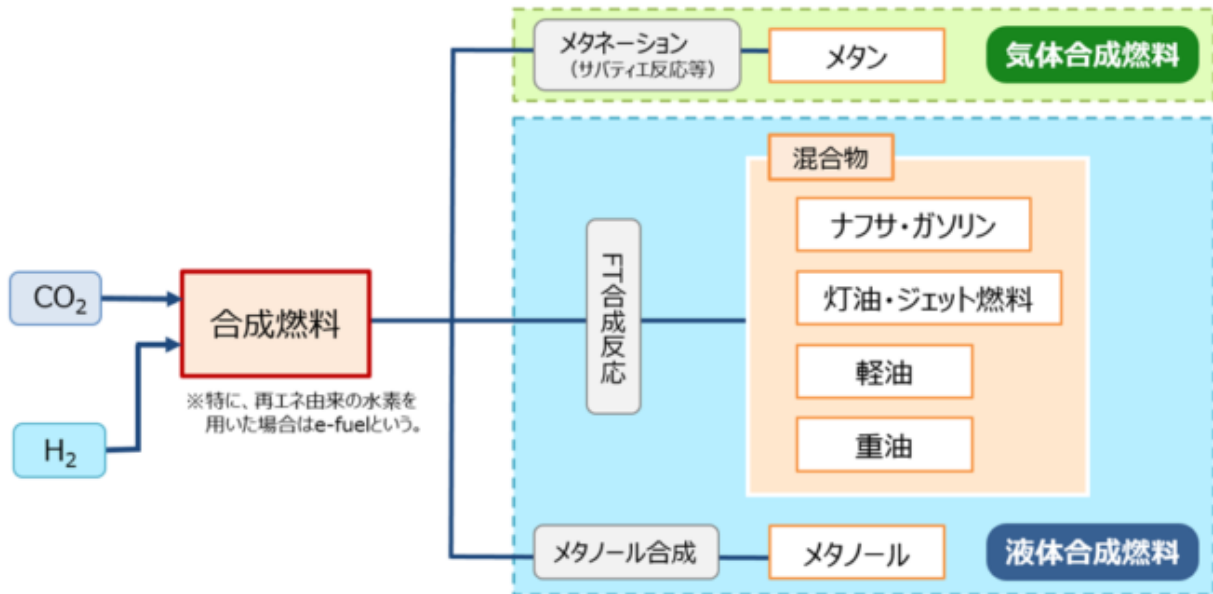
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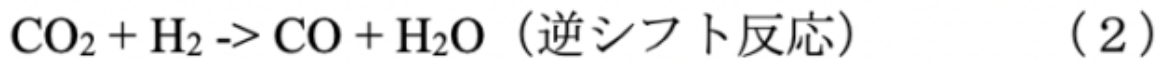
????????????????CO????CO₂?H₂?????FT????????????????????????????CO₂?CO????????
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O₂?????700?800?????????????????



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H ₂	CO ₂	製造コスト	製造コスト	備考
100円/Nm ³ × 6.34Nm ³ /L	5.91円/kg × 5.47kg/L	33 円/L	約700 円/L	国内の水素を活用し、国内で合成燃料を製造するケース
(32.9円/Nm ³ + 14.65円/Nm ³) × 6.34Nm ³ /L	32 円/L	33 円/L	約350 円/L	海外の水素を国内に輸送し、国内で合成燃料を製造するケース
32.9円/Nm ³ × 6.34Nm ³ /L	32 円/L	33 円/L	約300 円/L	合成燃料を海外で製造するケース
20円/Nm ³ × 6.34Nm ³ /L	32 円/L	33 円/L	約200 円/L	将来、水素価格が20円/Nm ³ になったケース

※NEDO「CO₂からの液体燃料製造技術に関する開発シーム発掘のための調査(2020.8)」の結果に基づき試算。

2021

2050

Posted in | No Comments »

G7

Tuesday, April 25th, 2023

41516 G7



G7 HP

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

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?? ?? · Monday, April 24th, 2023



nndanko/iStock

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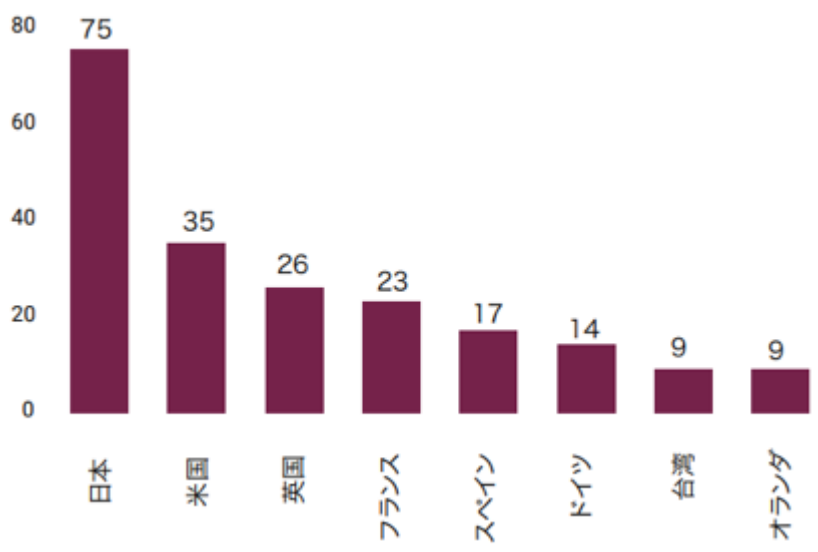
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気候変動 Aリスト 2022

Aリスト国・地域別企業数(上位8か国)



1) CDP A 2022
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2022 6 8 SDGs Google SDGs CDP

CDP 4
 CDP
 CDP

CDP CO2 CO2 Tier1
 CDP 100%

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CO2

(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)
A社				
B社				
C社				
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a b Tier1

c d CO2

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2021 6 2022 3 5

CO2

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A CO2 1 CO2 100 500 1000

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

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?? ?? · Sunday, April 16th, 2023



deepblue4you/iStock

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

Hydrogen

Friday, April 14th, 2023



Leestat/iStock

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Hydrogen
 Hydrogen

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?? ?? ? · Wednesday, April 12th, 2023



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?? ?? · Sunday, April 9th, 2023



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

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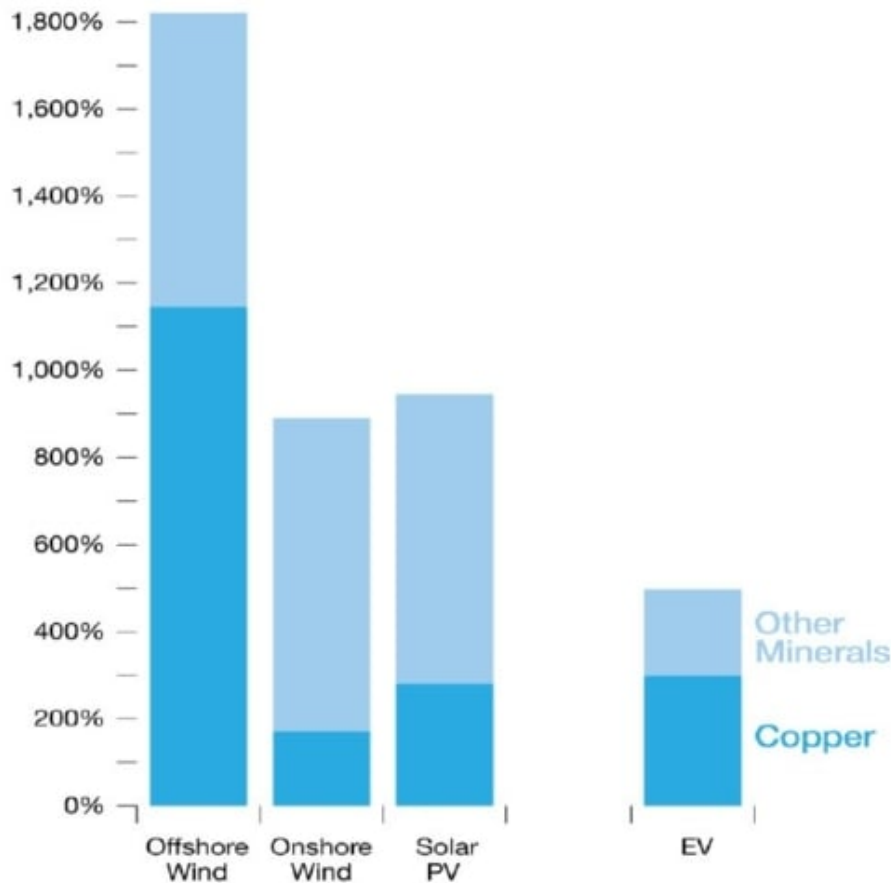
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Mineral Demands for Solar, Wind, and EV to Replace Hydrocarbon Machines

Increased Weight per Watt or per Car



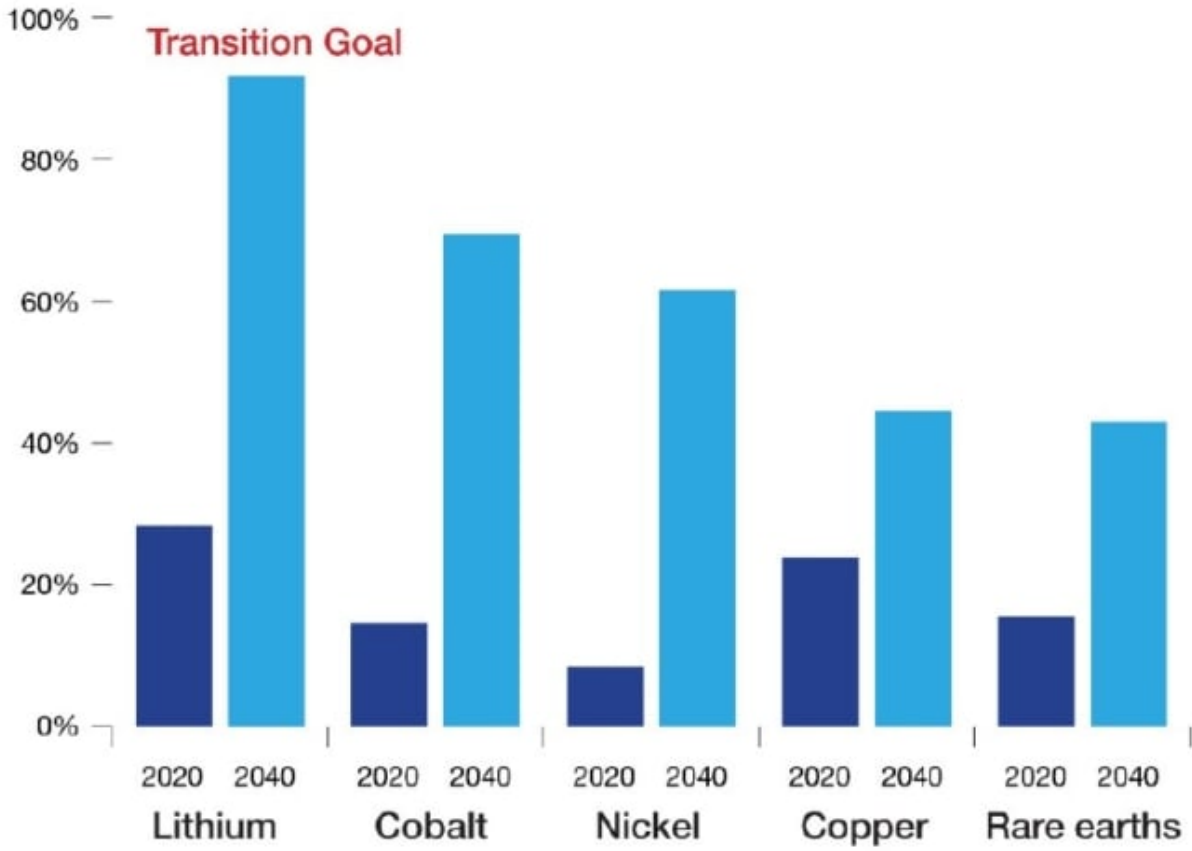
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2. ?????????????????????????????????????

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Energy Sector Share of Mineral Demands for All Purposes

Share of All Uses



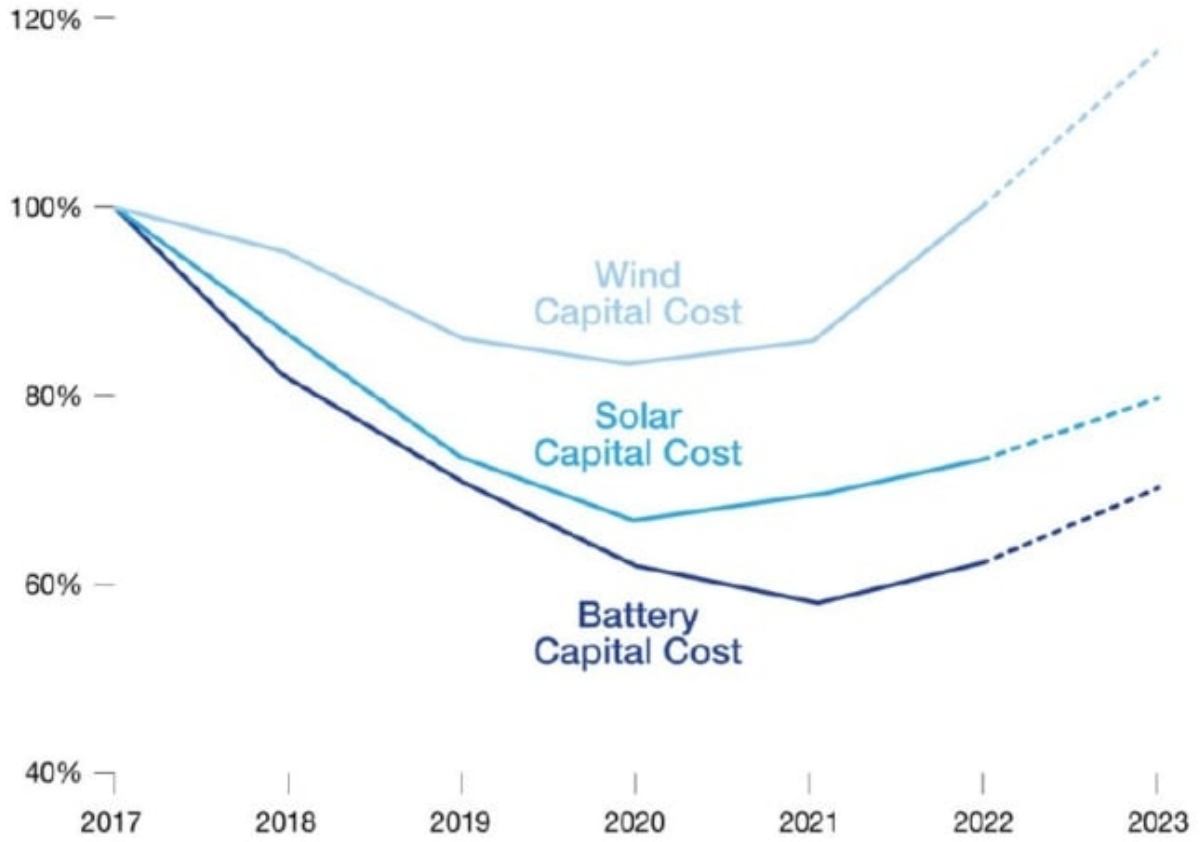
??10?20????????????????????????IEA????????????Transition Goal??50?70????????????????????

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3. ???

Costs of Wind, Solar, and Battery Hardware

Change from 2017

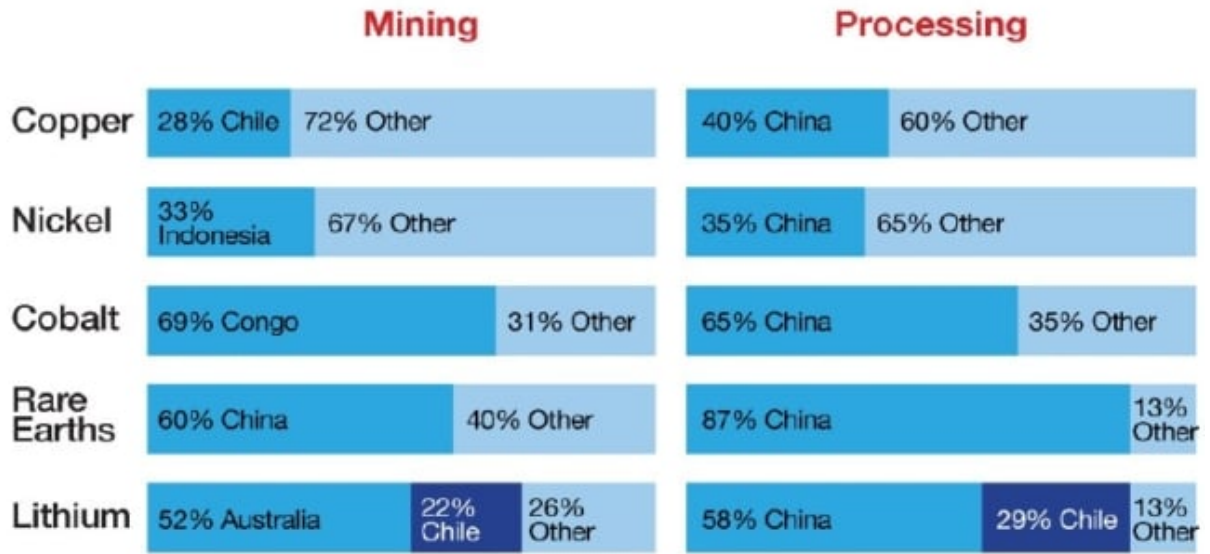


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Sources of Key Energy Transition Minerals



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Posted in ???, ????? | No Comments »

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?? ?? · Saturday, April 8th, 2023



HiddenCatch/iStock

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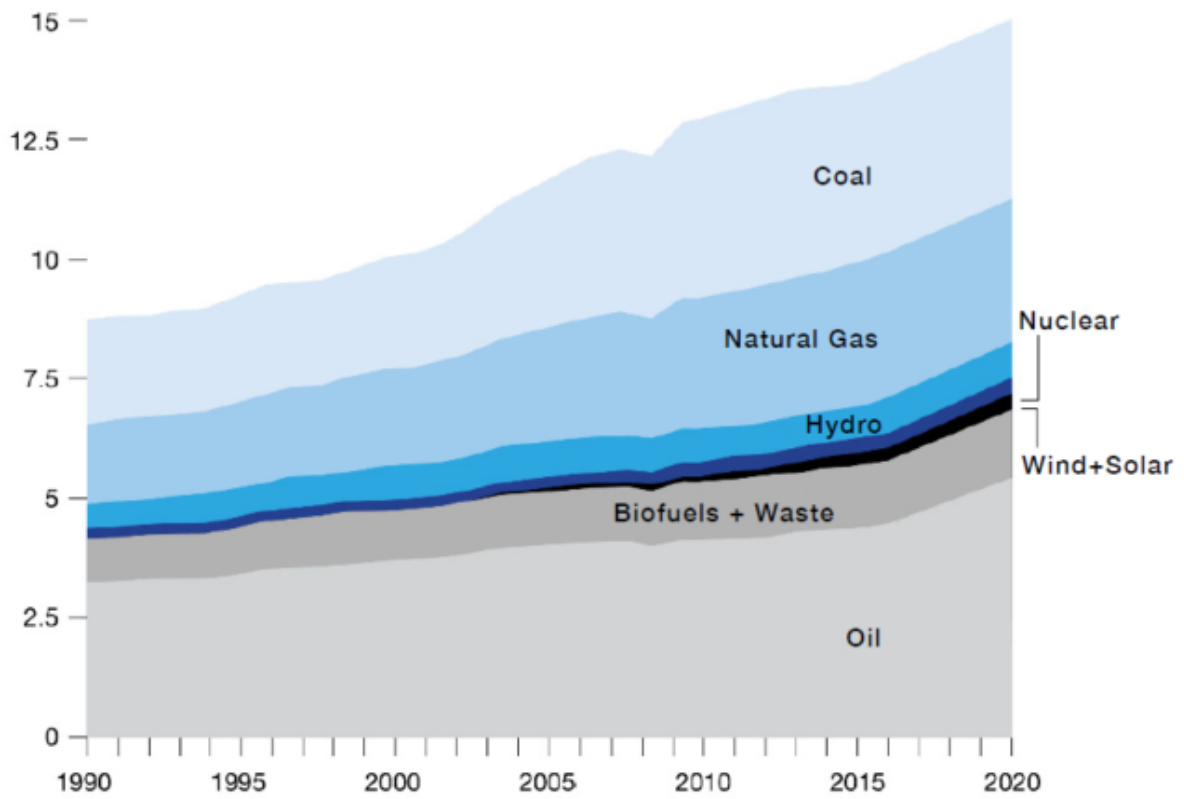
2050??

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Growth in Global Energy Supplies

Oil Equivalent (Billion Tons/Year)*



2. ???????????????

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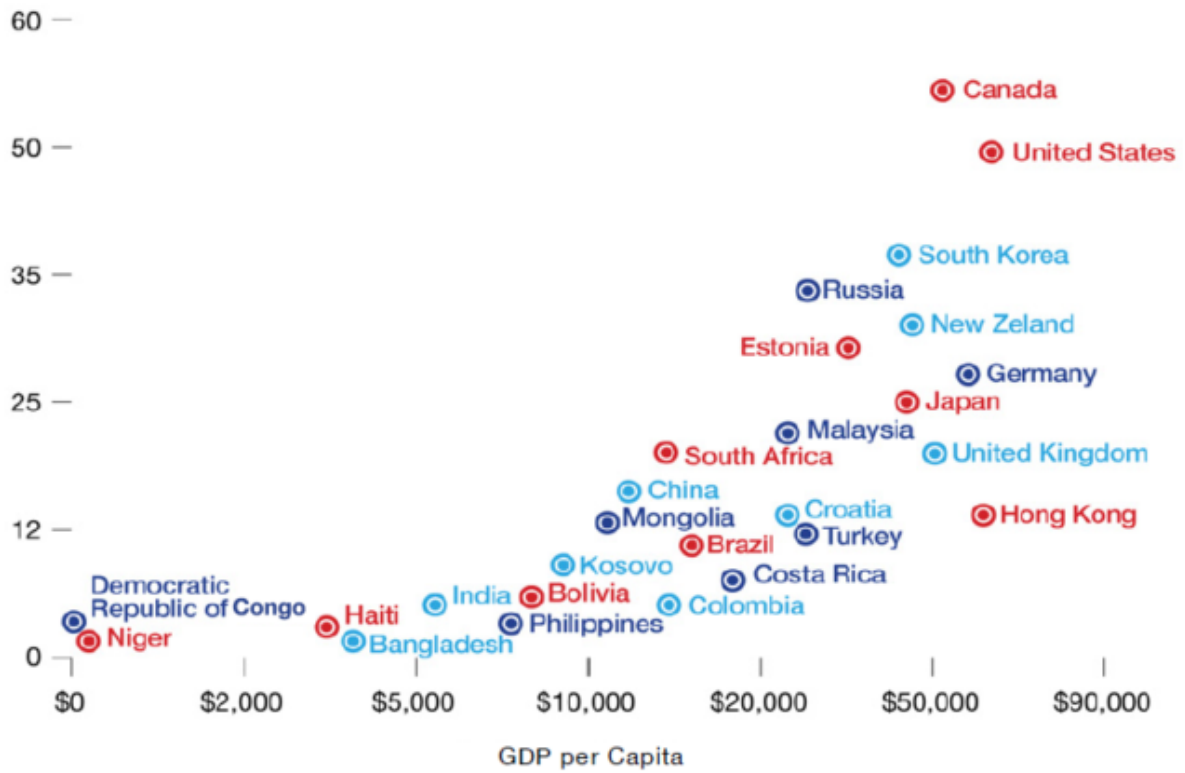
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Per Capita Wealth vs. per Capita Energy Use

Energy per Capita (BOE/year)*

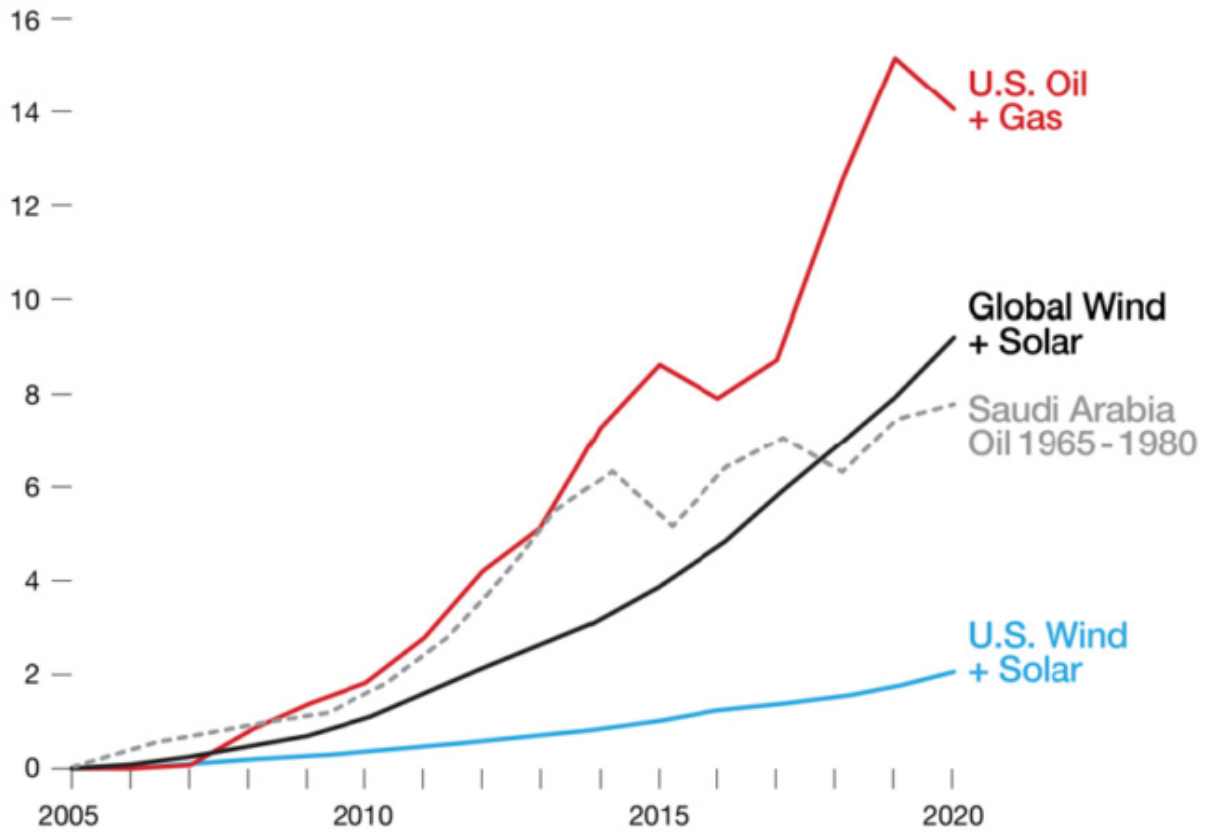


3. ?????????????????????

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Growth of Shale Energy vs. Wind+Solar 2005–20, Compared with Saudi Arabia Oil 1965–80

Increased Production (Million BOE/Day)

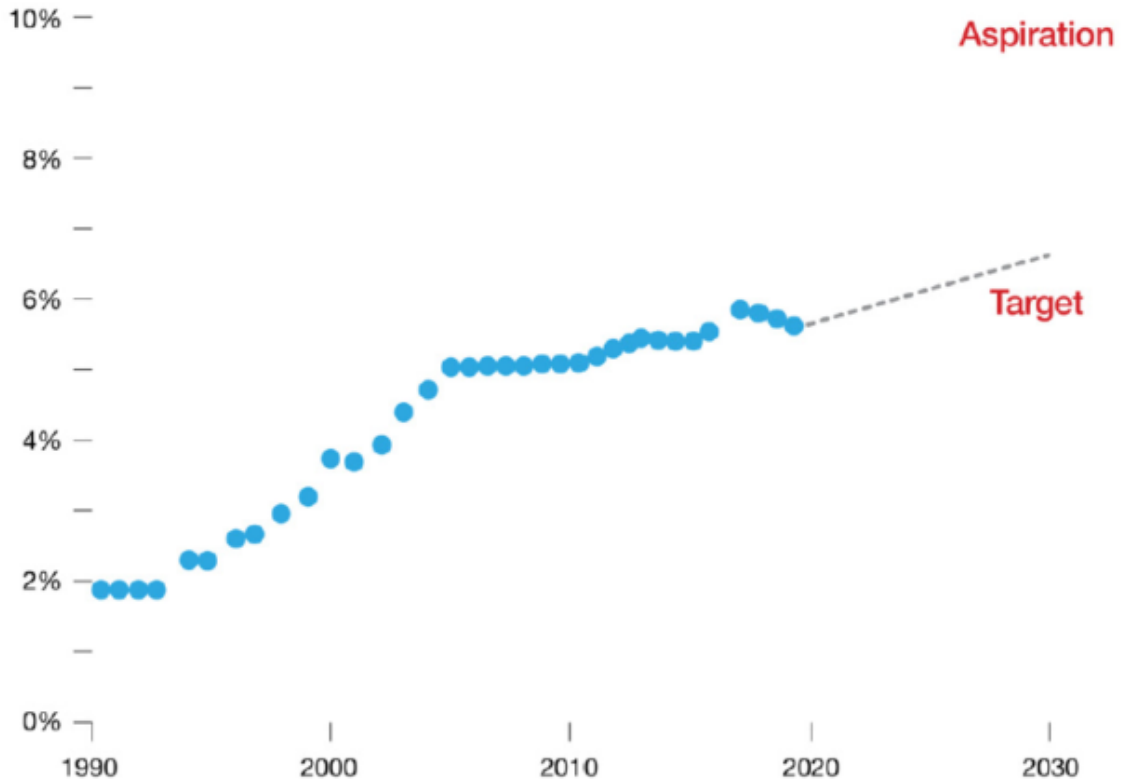


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Battery Energy Density* (% of Gasoline Density)



*Note: Density comparison incorporates the doubly superior efficiency of a battery+motor vs. gasoline+engine.

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Posted in ???, ????? | No Comments »

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?? ?? · Friday, April 7th, 2023



Manakin/iStock

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??How Do You Escape Net Zero??The U.K. shows the peril of not ditching the policy openly.????????????????????????????????

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Posted in ???, ????? | No Comments »

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?? ?? · Thursday, April 6th, 2023

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