

????????????CN????????

????????????????????????????????20????????????????95????????????????????????????????
????????????????????????????????

????????????????????????????????CN??

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

????????????????????CN??
??CO2????CN????????

????????????????CN??
?????

??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????????????????????????????????
????????????4?12????????????4????????12????????
????????????2009????????2011????

??
????????????????????or ??????

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

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

??14????????????
????????????????

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

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

??
??

??
??CN????CO2????????????

??1981????????????????????4?10??pp.
949-954??
????????????????????????

??
????1????????2????????3????????4??

??2??
??

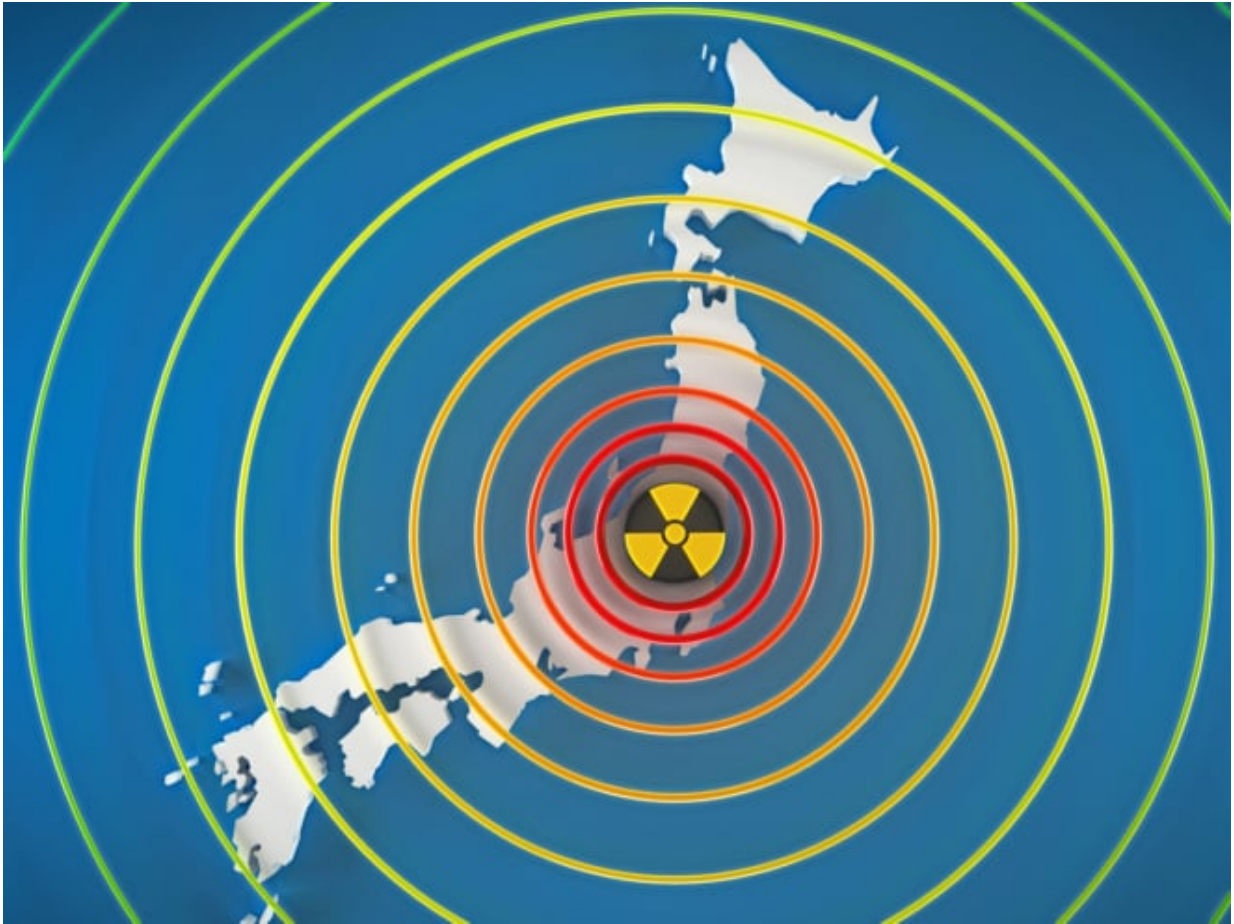
??3????????????????
????????????

??

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

??

?? ?? · Thursday, August 3rd, 2023



adventr/iStock

????????????728??

????????????????????????????X??????????????

????????????1??28????????????????????????????????????



??

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

← 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

??????????

????????????????????????????????3.11??
??

?????3????????????

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

??BWR
/Mark?I????????????????????PWR??
???



bluejayphoto/iStock

?????????40????????????????
????8????????7????????30????????

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

????????????????????
??13????????????????

????????????????41????????????
????“????”????

727????WMO??EU????2023????
????????????

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

????????????“????
????”???????? 2023????
????????

????????100????CO2????
????7????
????

????????

??

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

??85??
??
???

????????????????????15??2????????????????????
??

????????????????????130??
??
??

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

??WMO??
??COP????????????????

??EU??EU????????????????
??
??

??7????????????????????????10????????7????????????????
?1000????????????

????????????????????40??
??

??25??2????????????????????wetter.com????????2023?7????
????????????????????26????????????????????daswetter.com????200????????2023????????????
??
??

????????????7?30????????????????15????????24????????????????????????????????????

????????????????“?”??CO2????????????
????????????????????

?

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

????????G20????????

?? ? · Monday, July 31st, 2023

7?22????????G20??2022????????????
??



NHK??

????????????????29????????????22??

2??

??G20????????????
??

??
??
???

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

??????????

??
some
members????
others????

???

1.52050COP???

G7???

2050???

???

G7G20???

???



2030???

???

3G20G72030150GW1TW???

COP27???

G2012COP28???

UAE??

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

G20???

G201.5???

1.5???

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

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 1.5
1.5 2 1.5

1.5 2 67
IPCC

AR 6-
SPM GHG

1.5 2019 500 CO₂e 1150
21²

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 84 22²

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

???



AR6-SPM?C.2.4
2
39

?????

2
1.5

1.5 AR6-SPM?P26



1.5
24

?????

1.5
IPCC AR6
1.5
?

2030?21 GHG AR6-SPM?C.2.4

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



imply??
59

1.5

AR6
61

IPCC

AR6
1.5
2
1.5

????????IPCC??

????????????????AR6??
????????????????????????????????????



????????????????????????????????GHG????2019????2030????43????2050?84????????????????
????????????????????1.5????????????????????????????????1.7?1.8????????????????????
?????1.5????????????????

?1.5??2????
????????????????????1.5??

???1.5??
?????????????5?????????1.5????????????

?????IPCC

AR6??1.5????????????
??

?

?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 »

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

?? ? · Saturday, July 29th, 2023



BrianAJackson/iStock

??
??

??

??

?????????TV??
??
??

??
??

??
??

??

??
??

??
??

??
??

??

Posted in ???, ????? | No Comments »

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

?? ?? · Thursday, July 27th, 2023



JaCZhou/iStock

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

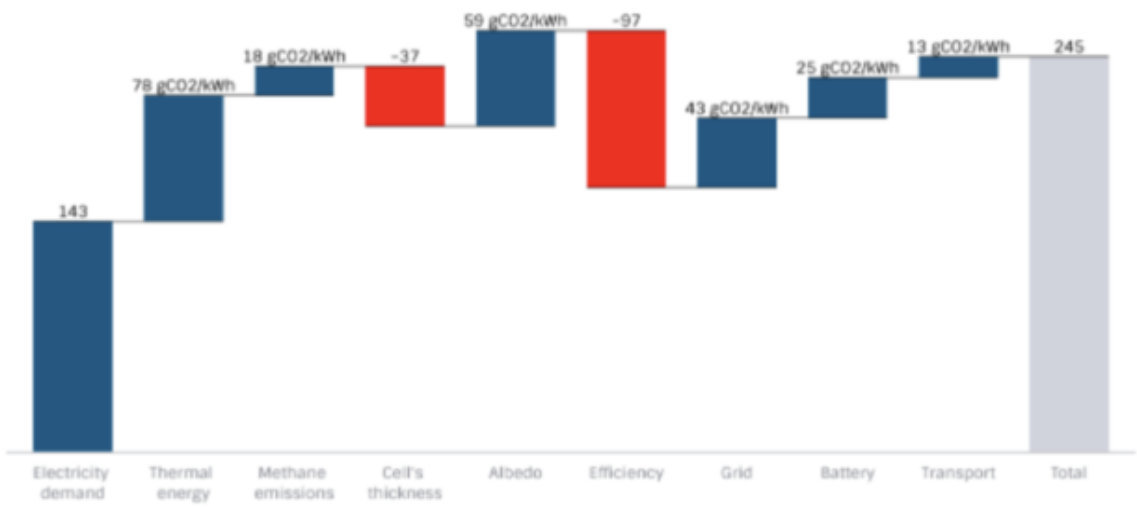
????????????????????CO2??CO2????????????????IEA?IPCC??

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

- ???CO2????????????
- ???CO2????????????????????????????????
- ???CO2????????????
- ???CO2????????????
- ???CO2????????????????????????????????

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

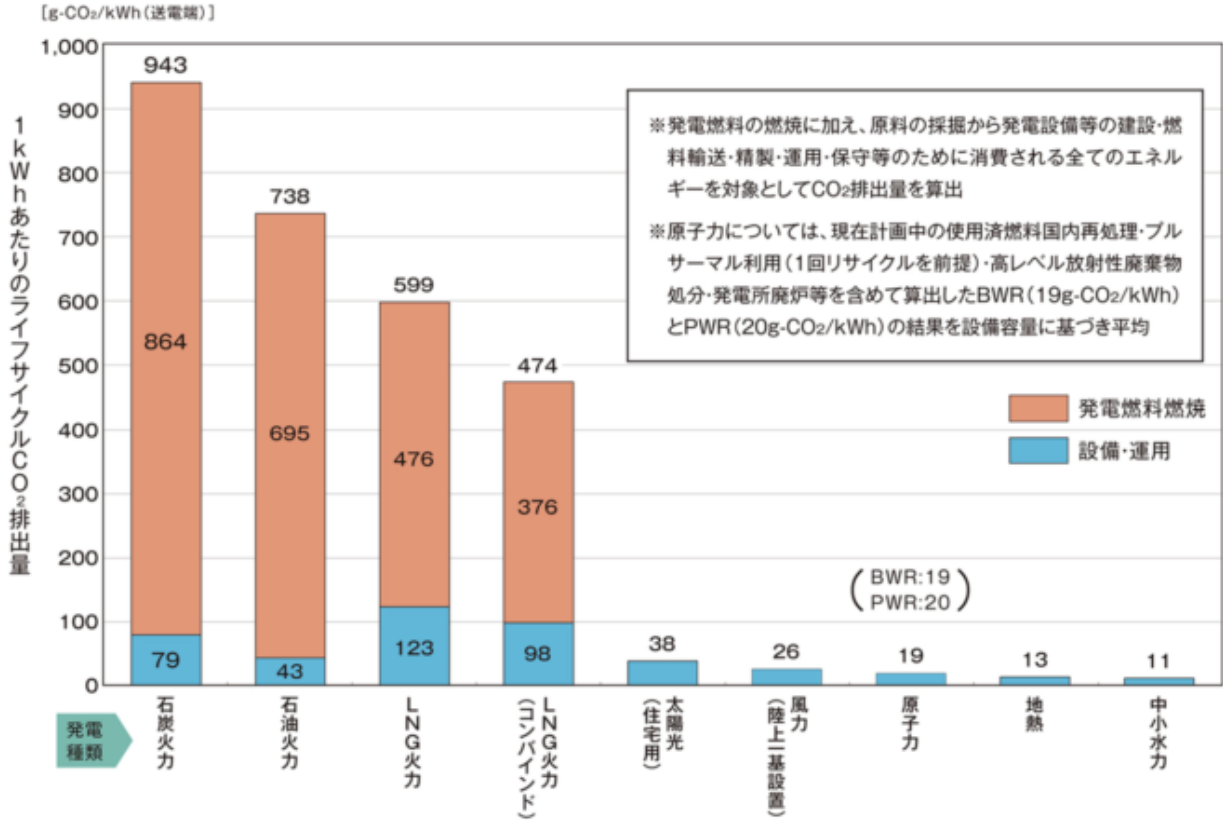
2022
Carbon intensity, Worst Scenario



??????????

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

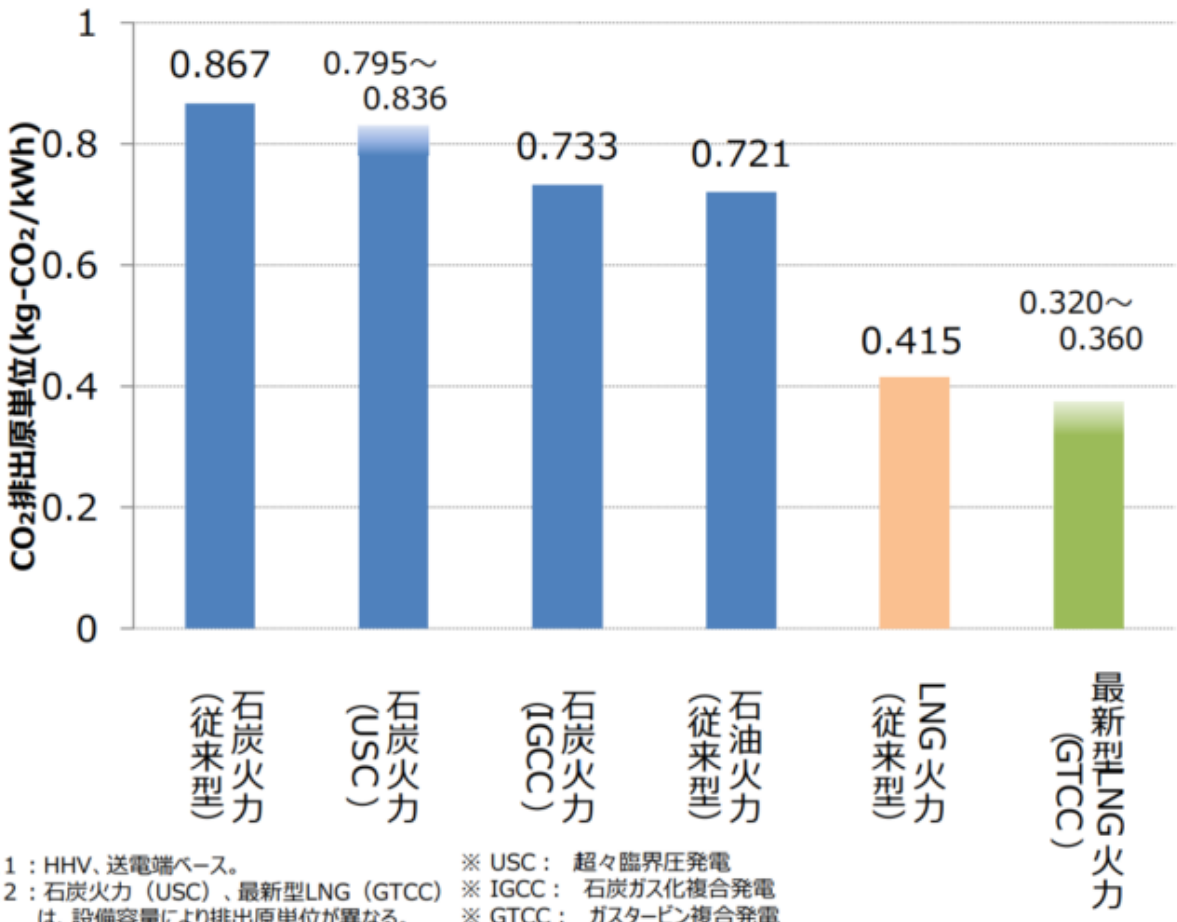
??1kWh??245??2016????????????????????????????
?????kWh??38????????????2??????????



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

CO2 9

1kWh 245 CO2 2022 LNG CO2 1kWh 320 360



3

CO2

CO2

??

??
“????????
“????????20??

??

??CO2??
??

?



Posted in ???, ????? | No Comments »

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

?? ?? · Friday, July 21st, 2023

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

EV??



jetcityimage/iStock

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

??EV??
??

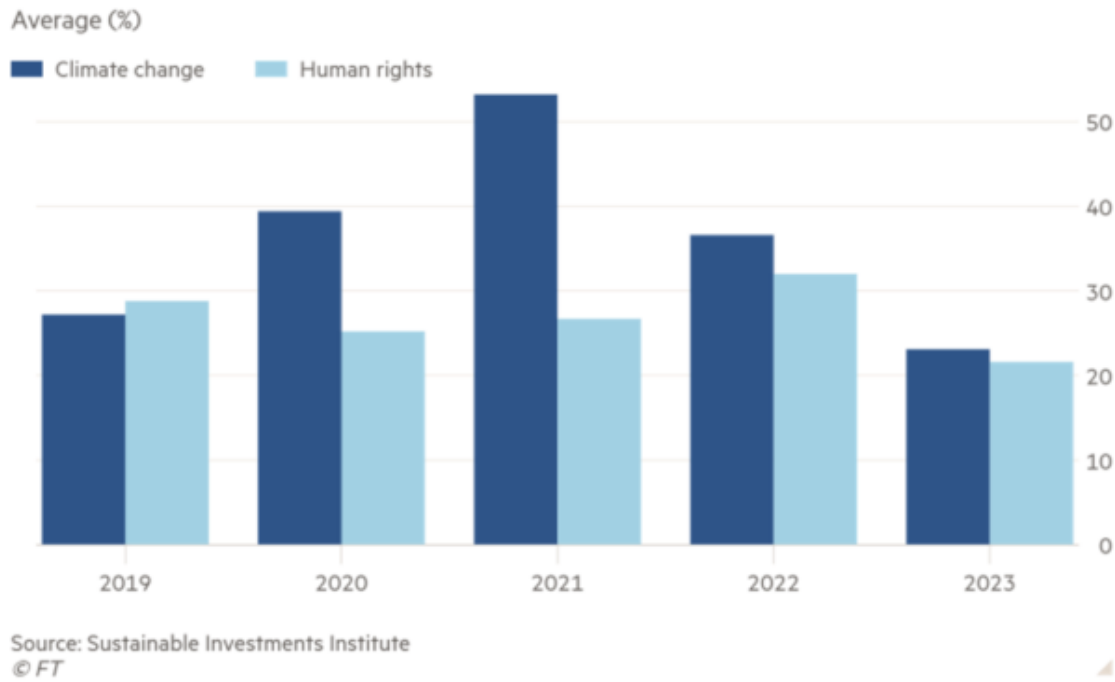
????????????????5??3????????ESG????????????????????????????????????
????????????????????

????????????4,000????????????????????????????3??
??

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

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

Investor support drops for environmental, social issues at US companies



FINANCIAL TIMES??

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

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

4?12??EPA??2032????????????????????

????67??EV????????????????????50????????????????35????????????????25??EV?????????

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

????

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

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

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

??

????????????????????EV????????????????????????????????JD????????????????EV????????????????

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

???10????EV??

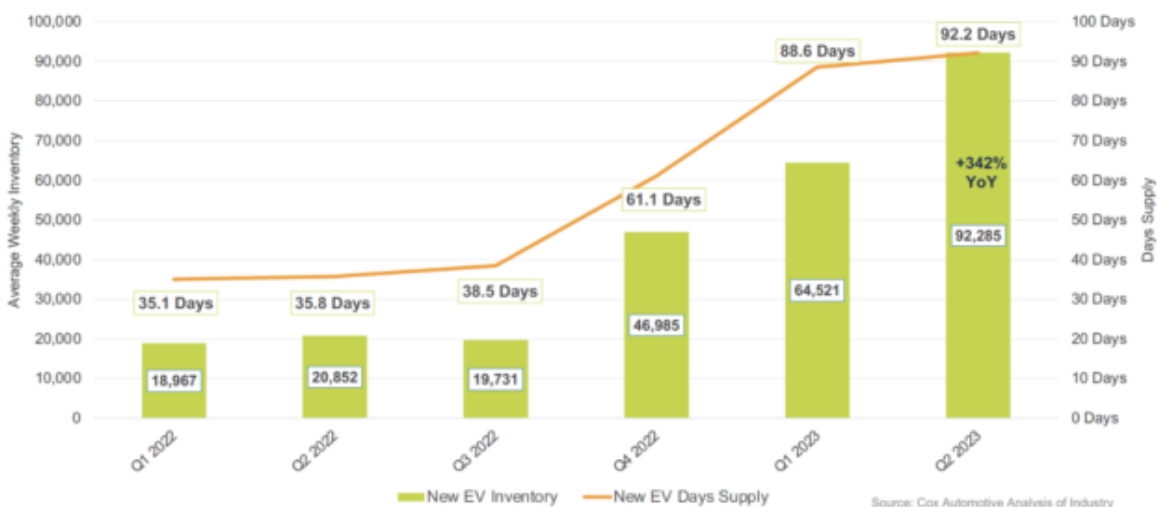
????????????????????EV??????????????????

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



Source: Cox Automotive Analysis of Industry

COX AUTOMOTIVE

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

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

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

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

????????CEO????????EV??

??EV???

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

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

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

?? ? · Thursday, July 20th, 2023

??

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

??

??
??



NickS/iStock

??21?5?????50??
????????

??

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

?????????narrative??

??300??
????????????????????????

??300??

??
????????????????????????????????????21?5????????????????????????

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

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

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

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

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

1??100????0.72??1979????????????????1.4
????IPCC????????????3?5????????????????????????????

2????CO2?????????2ppm????????????4????40????????????????CO2????????????IPCC?????????
????????CO2????????????????CO2????????????????????????????????

????????????????????CO2????200????????????????IPCC????????????????????????????200
????????CO2?????????5????????????CO2?5?????????2ppm?????5????0.1ppm????????????
??2ppm????????????

????????????????CO2????????????????????????????2009????????????2021????????????????
????2022????????????????????????????CO2????????????????????????????????

?????????????0.1ppm????????????20?????????????0.02ppm????????????????????
????????????????????????????????

3????????CO2??CO2????????
??

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

??
????????????????????????????????IPCC????????????????????????????????

??
????CO2??

1?????CO2?????CO2?????2????CO2????????????????3????????????????

3????1????????????????CO2????????????????

????????????1?2????????????3????????????????????????????????

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

??1000????????????1000????
??
????????????????

??TV????????????
????????????? 10????????????????

????????????????GX??

??

??

Posted in ???, ????? | No Comments »

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

?? ?? · Wednesday, July 19th, 2023



Max Lirnyk/iStock

??
Electric Vehicles for Everyone? The Impossible Dream??

????????????????????BEV??ICE??BEV????????
????????????ICE????????????HEV??

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

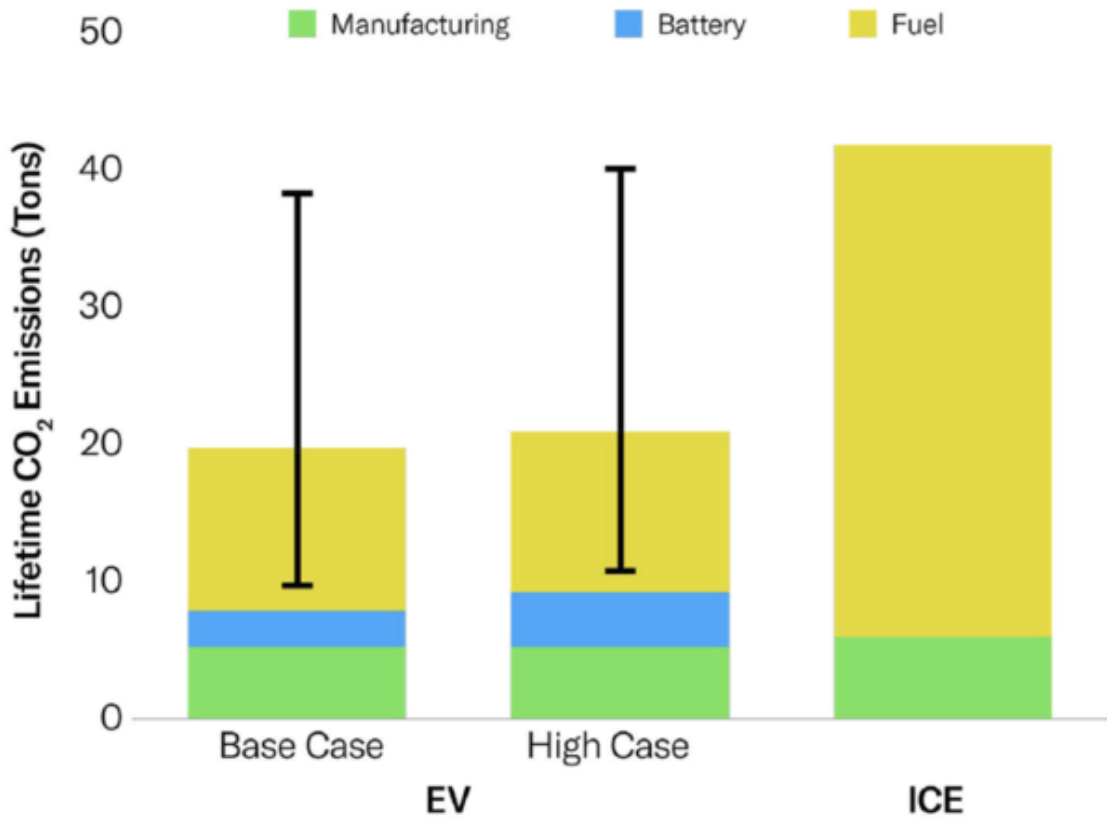
?????2??????CO2????????EV????CO2????????????????????

??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"

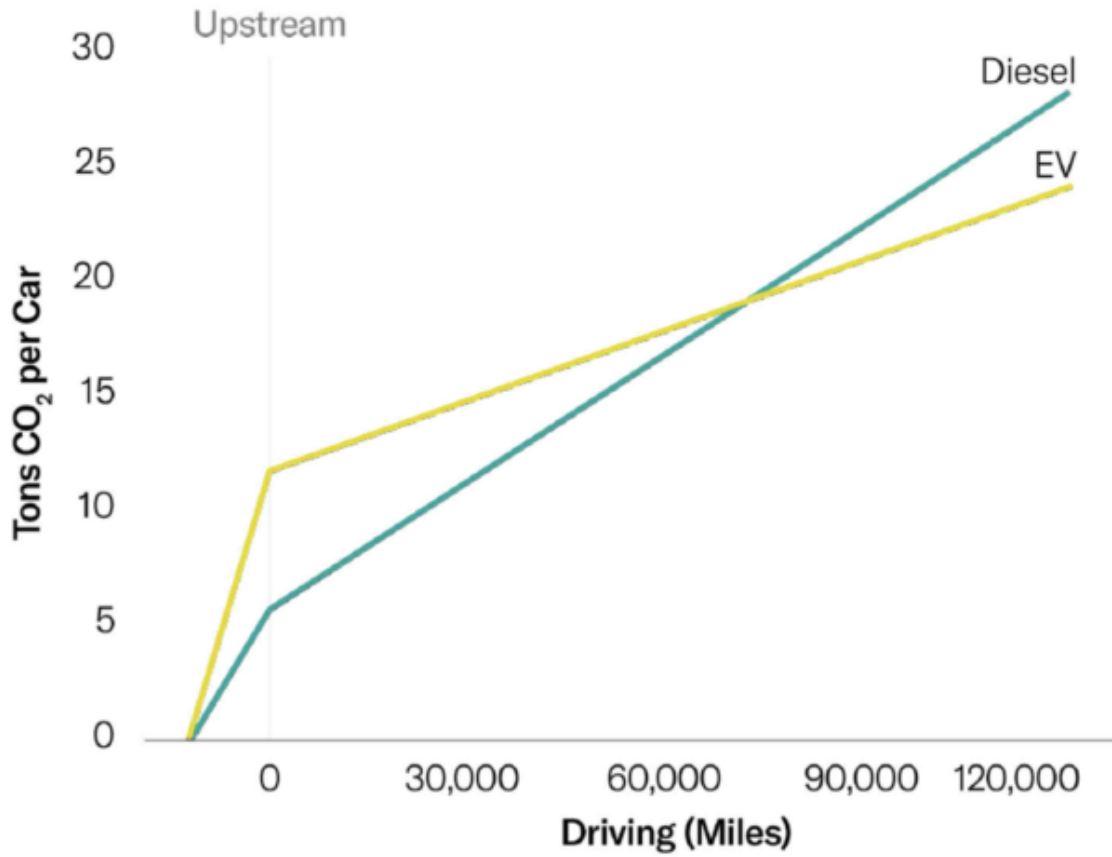
??

????IEA??
??

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

Figure 4

Life-Cycle Emissions: Volkswagen EV vs. Diesel



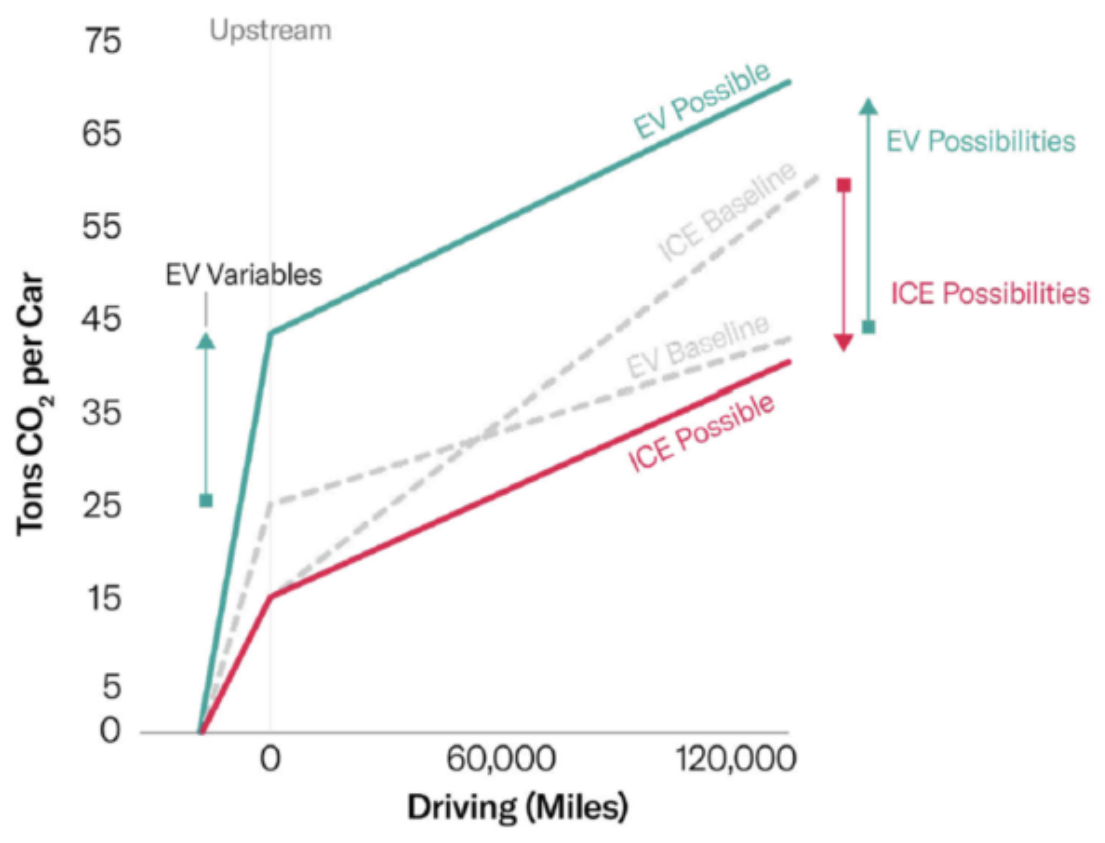
Source: Maciej Neugebauer, Adam Żebrowski, and Ogulcan Esmer, "Cumulative Emissions of CO₂ for Electric and Combustion Cars: A Case Study on Specific Models," *Energies*, Apr. 6, 2022

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

????????????????EV????????CO2????????????ICE????????????????????????????????????12????????
?EV???ICE???CO2?????????????????????????????????

Figure 6

EV vs. ICE CO₂ Emissions: Scenarios with Known Unknowns



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

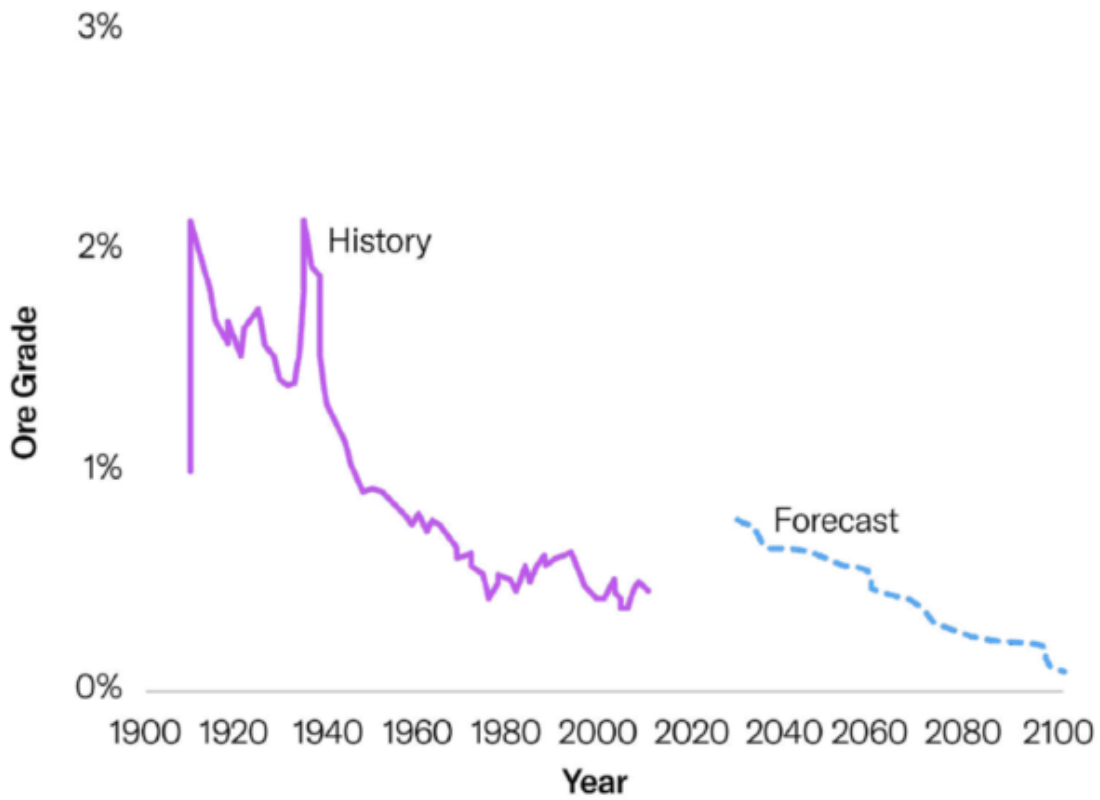
??????

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

??1?????????????????????EV??

?????????????????????????1??2?????????????????0.5????????????????????????????????????
?????????????????????????

Figure 8
Two Centuries of Global Copper Ore Grades



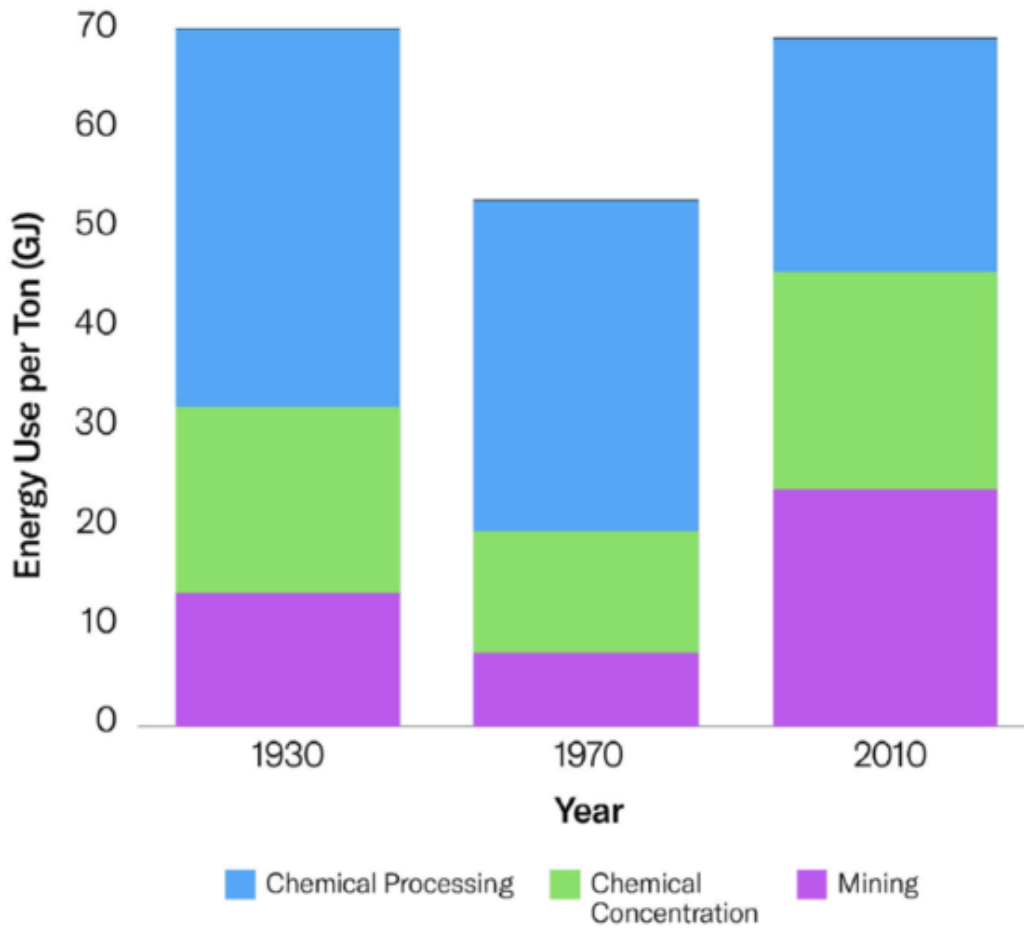
Source: S. Northey et al., “Modelling Future Copper Ore Grade Decline Based on a Detailed Assessment of Copper Resources and Mining,” *Resources, Conservation and Recycling* 83 (February 2014): 190–201

??
 ???

???????????????mining???????????chemical
 concentration??BEV????
 ????????????????????

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)

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

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



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

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

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

?

????????????????10????????1????????????????????????????

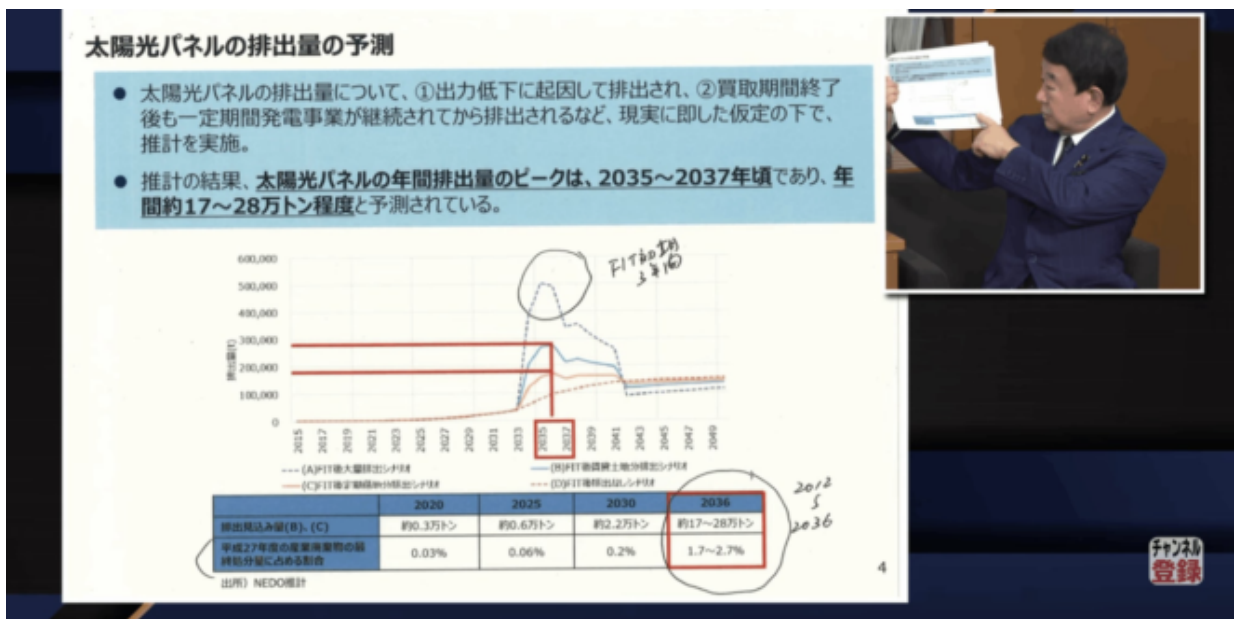
????????????????????????????????1????????????????????3????5????????????

????????????????????????????1????3????????????????????????????12????25??
????????????????????????????1????????????

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

????????????????????????????2030????????????????????????????????????
??

????????????????????????????????2035????????????????2015????????????3%????
????????????1??

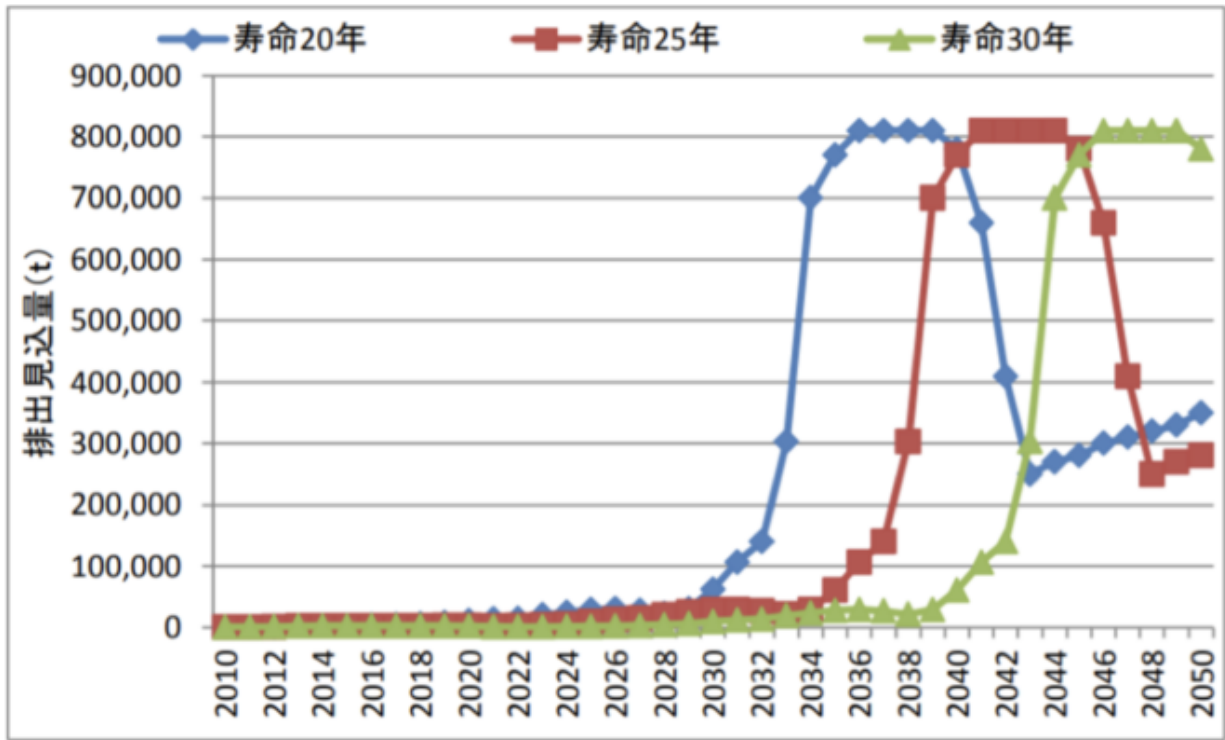


?1????????????

????????????????446????????????????

????????????????9????????1????????????????????????????10%??
????????????????????

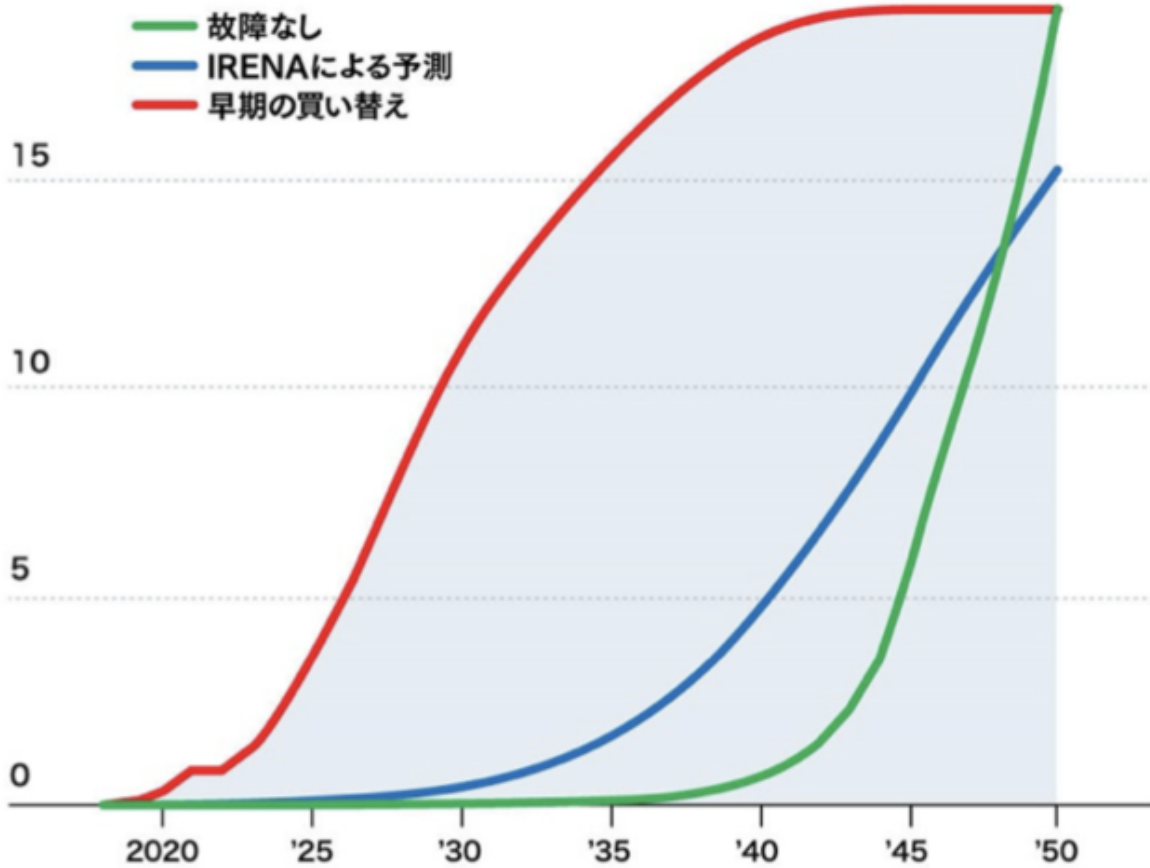
????????????????2035????????????2????????????????3??



????????????????????20?25?30??
 ??????

廃棄物の累計
 (発電容量ベース)

20ギガワット



3?????????
??DIAMOND ??????????

????????2035????????????????????????????????

????????????????????????????????PCB????????????????????????PCB????????????
????????????????????????PCB????????????????

?PCB???

PCB??Poly Chlorinated Biphenyl????????????????????
????????????PCB????????????????????????????????????
??

?PCB????

??PCB????????????
????????1968????43????????????????????PCB????????????
????????43?10????????????????????????????????????
????????????????????????????

?PCB????????

PCB????????????????????????????1972????47????????????????30????
????????????????????????????????
??13?6?22????
????????????????PCB ?????????????15????????

1972??PCB????????????????????PCB????????????????2001??PCB????
2004????????????????JESCO????????????????????????????30????
????PCB????????

PCB????????2016????????????JESCO????????????????????PCB????
????????????????????????PCB????????????????????
????????????????????????

??

????????????????PCB????????????????????????????
????????????????PCB????????????

????????????????????PCB????????????????????
????????????????????

??

??21??
??
????????????????????

??“?????”????????????
??

?????22?12??
?????????????????23?????

??
????????

??
?????????????????200??????

??YouTube??
??

?????????????????????22?6??
???48????????????????
???4??

??

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

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

????????????????????????????GPS??
??????????????????

???2??YouTube?1????????
?????????????????????1????????????????????????????????

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

??

?????????????????2??7?3??
??

?????2??
??

??

1?LCA?????????2?CFP?????????

????????????????????3??
????????????????????????

??
??
?

??

??
??
?????SDGs?SBT????????????????????
?????

????????ESG????????ESG????????E????S????G????????ESG????????
????????????????ESG??

??
??
??

??

??CFP??
??
??

??
??

???????

??
??
??

??
??

??CFP????????????

??
??
??

??
??

??
??

??

??
??

4/24??

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

?

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

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

?SDGs????????

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

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

?? ?? · Tuesday, July 4th, 2023



xijian/iStock

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

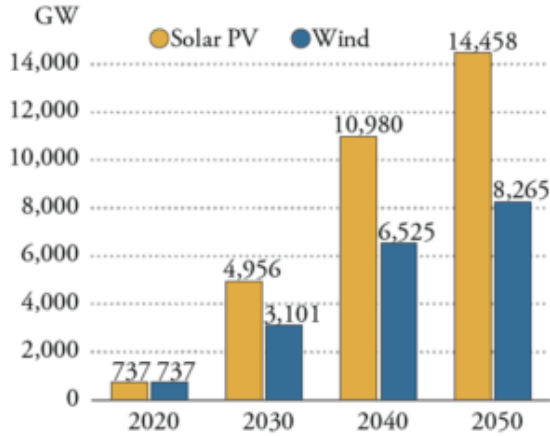
A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

??PV??
????????????

??PV??PV????????????????????????
????????????

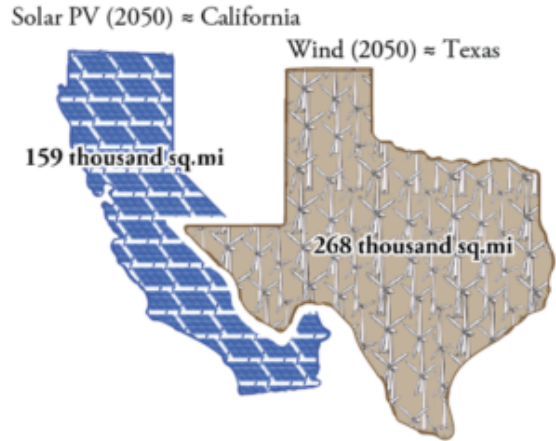
????????????????PV??PV????????????
????????????

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

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

PV???1??
 ?????2??
 ?????5??

????

????????????????????????????????1244?km2??????6??1??
 ???

??

?



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

?????????COP28????????????????????????????????

??? · Monday, July 3rd, 2023



CHUYN/iStock

?????????G7????????????????????????????????

????????

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

????????

?????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?????
?????3?????

??GST?????
???

GST?????IPCC?6?????
?????1.5?????GST?2025?????
?????

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

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

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

- IPCC?6?????3?????2,425?????1,202?????
?????
- ??????UNFCCC?????
?????...?????
?????

- 10 ?????????????????????? ?IPCC
 WGIII??
 ???

????????IPCC????????????????????????????COP28????????????????????????????GST????????
 ?????????????????

Posted in ???, ????? | No Comments »

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

?? ?? · Monday, July 3rd, 2023



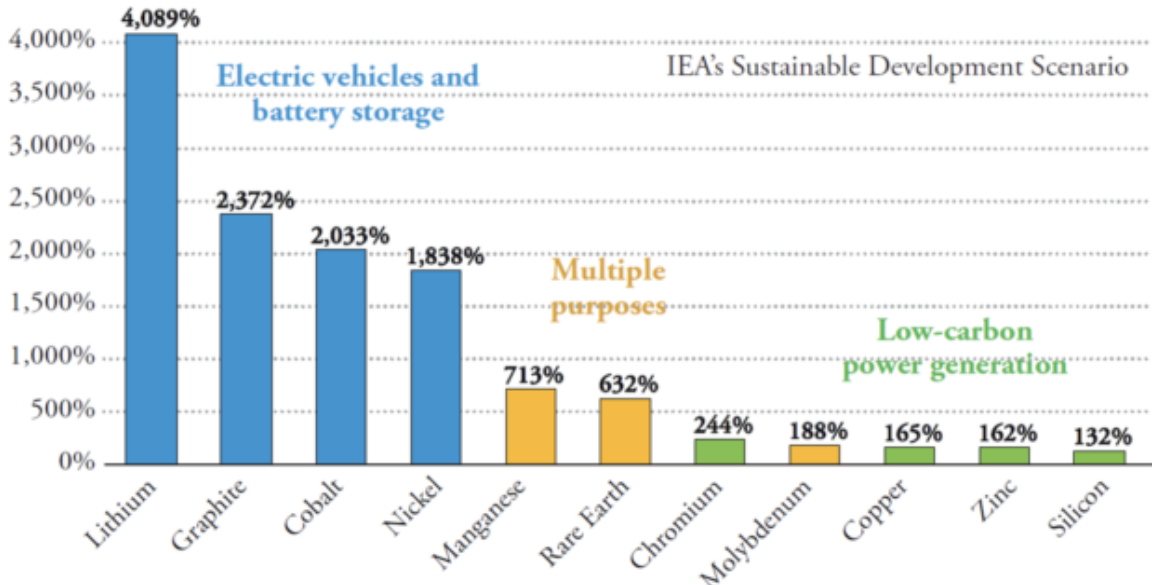
PhonlamaiPhoto/iStock

????????????????????????????????????(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??

?



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

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

?? ?? · Sunday, July 2nd, 2023



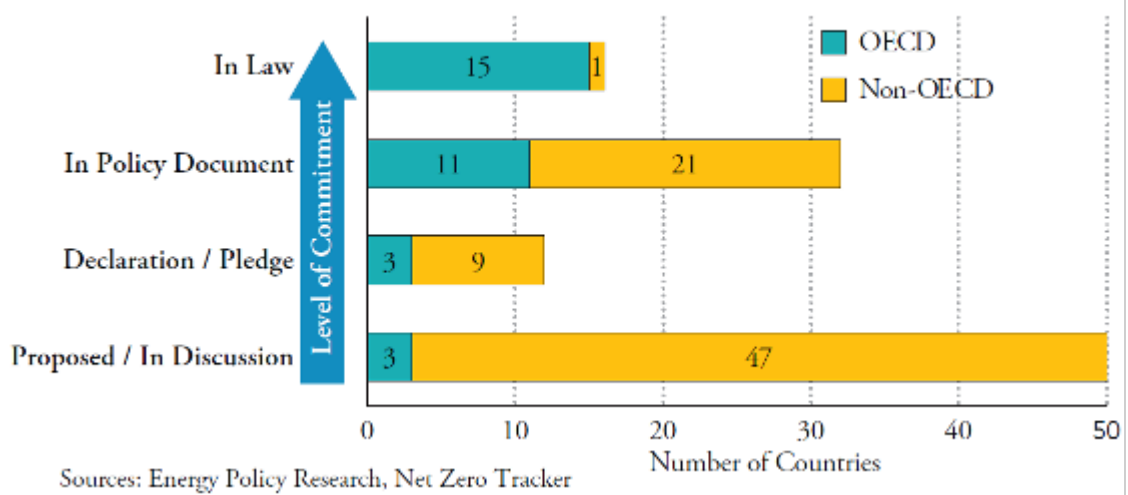
A Mokhtari/iStock

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

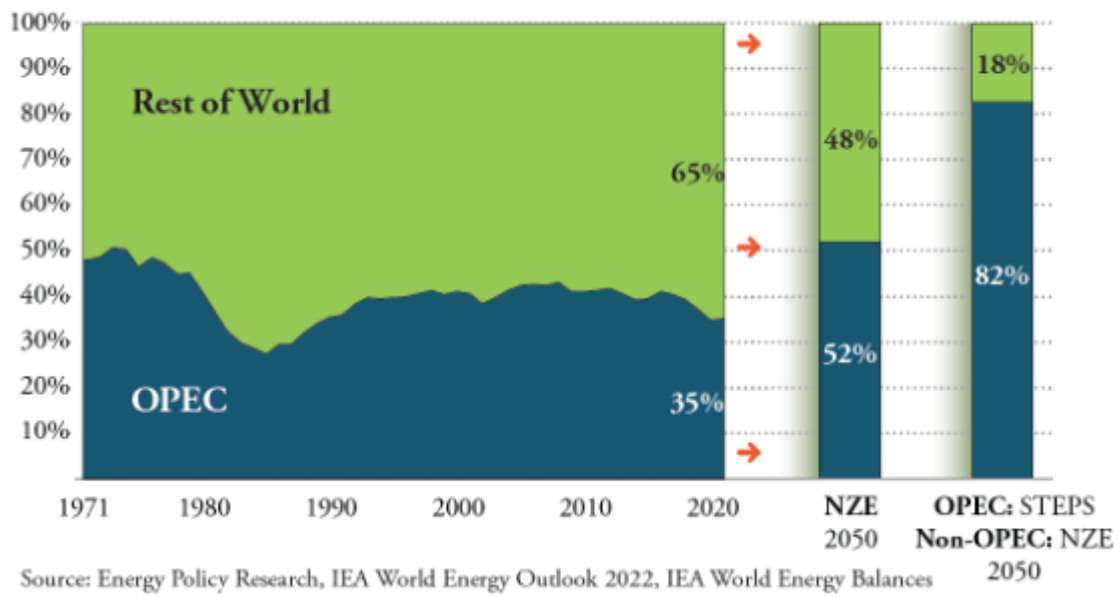


IEA NZE OPEC 35% 52% 1973

NZE OPE C

OPEC NZE OPEC NZE STEPS OPEC 82%

Figure 17. OPEC Share of Global Oil Production

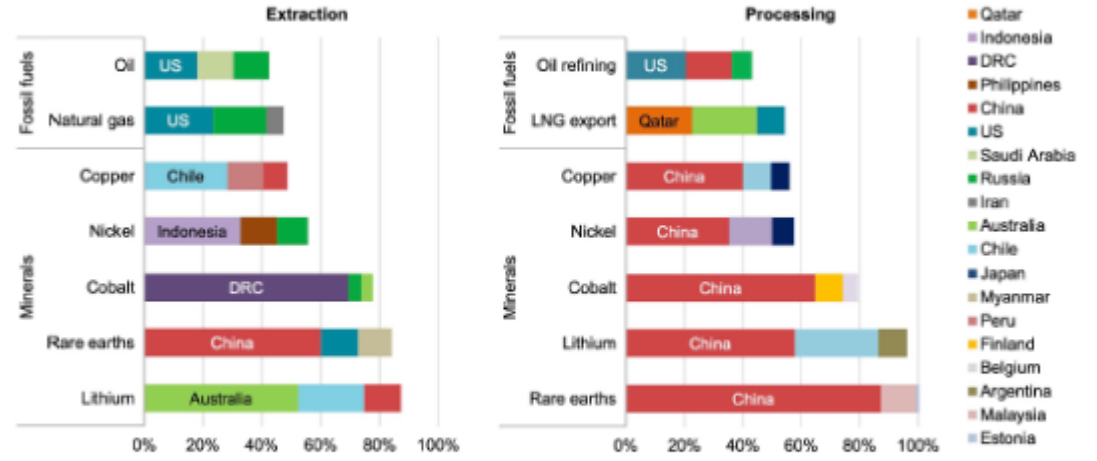


????????????????????????????????????OPEC??

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

????????????OPEC????PV????EV??

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??
??? NZE??

?

12????????????34????????????????????????????????????

????????????3????????????????7????????????12????????????4????????????

??



????????3?????4??

???????

?????????

????34????????2012??2???

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

??10???????

2022????????????????????

10??

??

??

???????SRZ-1200

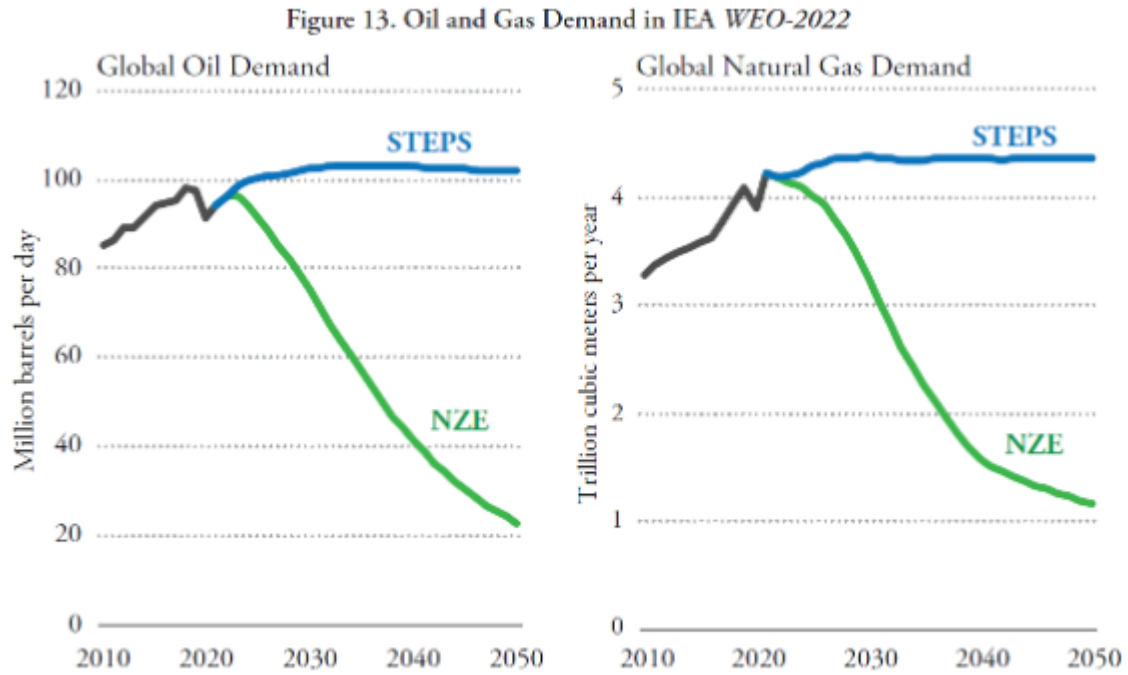
??GX????????????????????????

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

????????IEA????????ESG??
????????

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



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??

??
IEA?NZE??
STEPS??NZE????????????
????????

??WTI????????????????
200????400????????
????????????MMBtu??15????30????????????????????????????????????



Rawf8/iStock

??6????????????????????ZDF????????????????
 ?????????????????NATO????????????????

????????????3??
 ?????????????????????



????????????????EF-2000
 Wikipedia??

????????NATO??10????????????????????

????????10??MAD????????????????
??????

????MAD????????????????????NATO??
????????????????????????????

????????????2014??
??

??????1????H?2013??
?H????????????????ZDF????????????

????????????S????????H????????????????????????13????????????????????????????????????
??
??

J??13????
????????????????????????????

??
??

?10??
??

??
??
??

??
?10??
????????????????????????

?????????????????3?????????????????2??
??

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

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

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

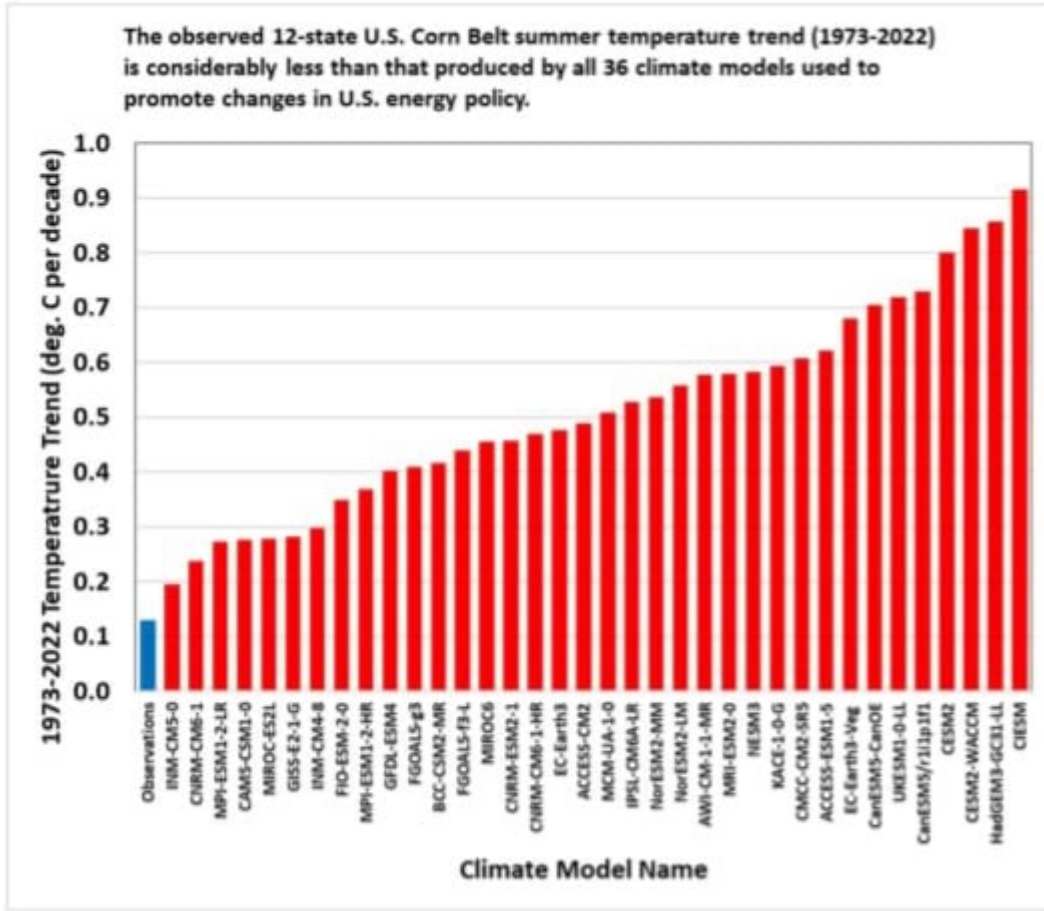
?? ?? · Friday, June 23rd, 2023



feellife/iStock

IPCC??
???NOAA????????????????????????????

????????NOAA????????????????????IPCC????????36?CMIP6????????????SSP245????????
??



????????????????????????????????12????????????????????6??7??8????????1973????2022????50??????????
??????????

????????????10????0.1??
??????????????????????????????

??

??

???NOAA??

?

- ??????????????????????
- ??????????????????????
- ??????????????????????

?????1kW?????????????1kW??5000kW??
 ?????????????????????5000kW?????????????

??
 ???

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

??BWR????????????????
 ??????????????

??2013??
 ??????????????????????

??
 ????????

??10??
 ??????

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

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

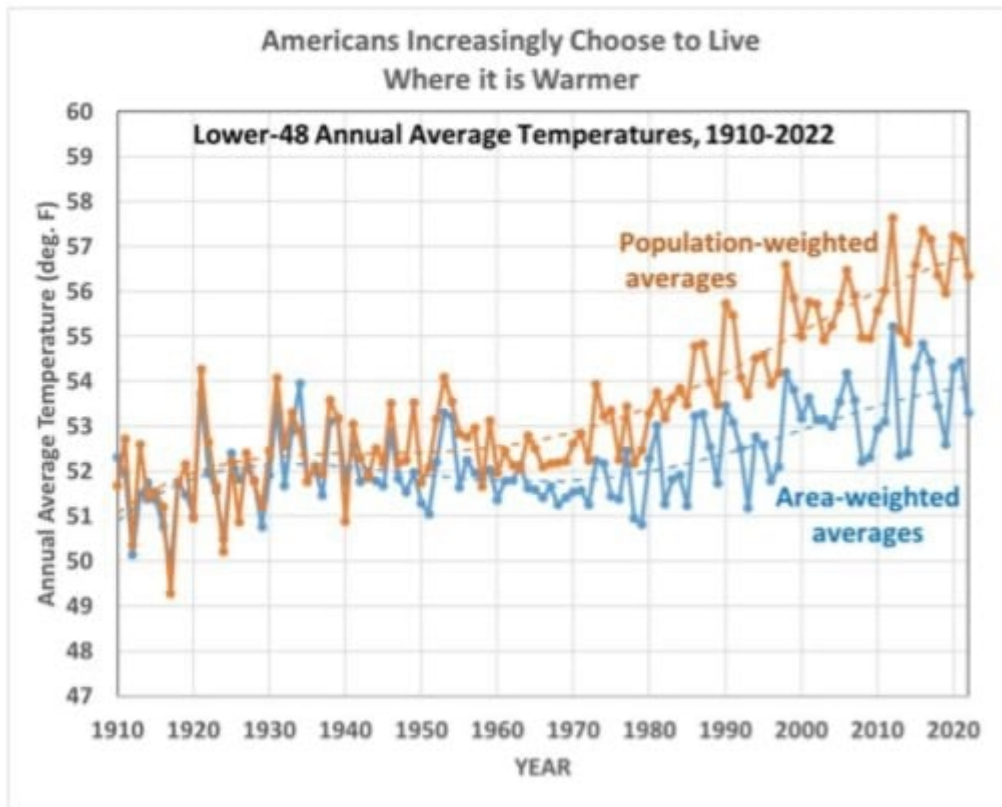
?? ?? · Sunday, June 4th, 2023



Darwel/iStock

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

?NASA????????????????????????????????????



????????48????????????????????48????????????????????1????????????????????2????
?????

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

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

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

?

????????????????_?? ?????????????????



Posted in ???, ????? | No Comments »

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

?? ? · Monday, May 29th, 2023

????????????G7????????????5??1??
??G7????????????

?????G7??
????????????????????????????????????1.5??2050????????????????????????



spooH/iStock

“The Energy Transition Confronts Reality” 2023

- RePower EU
- 2021
- 100

????????????????80%??
??How The World Really
Works????4??
??1??5????????
??80????????
??

- ???
??
??
??GDP????50?
60??
??
- ???Big Oil????Big
Shovel??S&P????205
0??2????????????????????????????EU????IEA????
??16?25????????
??
- ???

??1.5?2050????????????????
????????

??G7?1.5?2050????????????
??

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

??3????????????????????

?? ?? · Sunday, May 28th, 2023



sasun bughdaryan/iStock

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

????????????????????????????????????3????????????????

????????1????????????????????????????????????5?19????????6????????????????????

????????????2????????????????????????



??????

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

3??????

????????2020?11????????????2????????

????????NUMO????????????2????????

??
??

??
??

??NUM
O????????????????

?????3????????????NUMO????????2????????????

???100????????????

?2????????????

?2????????????????10????NUMO????????????????
????????????????????

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

????????

??

??

????????3????????????

????????NUMO?????5?10????????

????????????100????500????????????
????1718????792????743????183????

??
????????20????????

??????

????4?28????8????

????NUMO?100????????100??

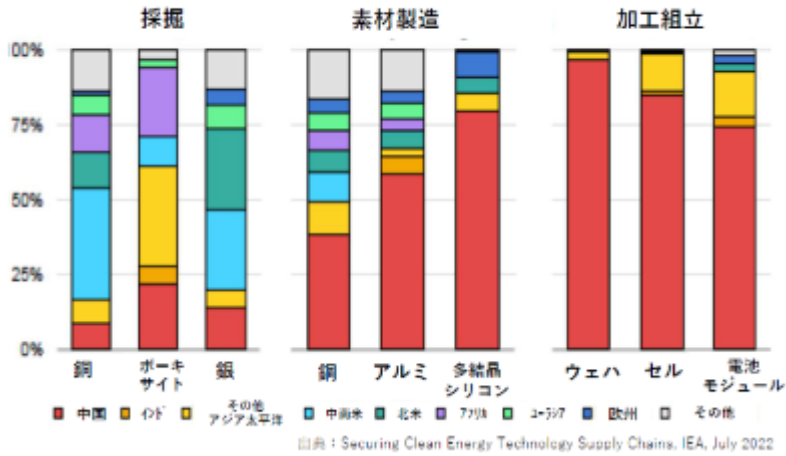
GX????????

??
????????EV????????????????GX??
??????

????????????????2022?????????????5????????????????????????????IEA?????23??????????????

????1??

図1. 太陽光モジュールの部材製造シェア

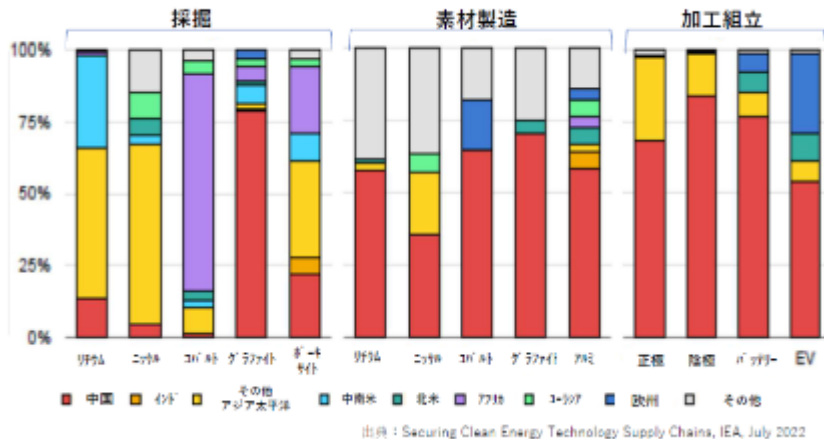


??
??

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

??EV??
????

図2. EV・バッテリーの部材製造シェア



??
??



??CO₂????????????????????????????????

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

?????60??CO₂????????????

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

1960??SO₂????????????????????????????
??SO₂????????????????????????????

??



??1960????????????????????????

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

????????????????????SO₂????????????????????SO₂????????????????????

??SO₂????64????????????????????
??

??
????????????????????????????????puff??
??????

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

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

????SO₂????64????????????????CO₂????????????CO₂????????????44????????????N₂?79????
O₂?21????????29????SO₂????CO₂?50????????

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

????CO₂??
????????????????????

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

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



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

???????CO₂?????50%

????????????????????????????????3300m????????????????CO₂????????????????????????????

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

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

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

??

??

????????????G7???????????????????

??SO₂????????CO₂??

??

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

????????CO₂????????3????????????????8??

????????0.00X???????????????

CO₂
?

???

?????

CO₂ CO₂ CO₂
?

CO₂ CO₂ CO₂
O₂ CO₂

CO₂ CO₂ CO₂ CO₂
80 1000ppm

Posted in ?, ???? | No Comments »

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

?? ??? · Monday, May 22nd, 2023



Wikipedia??

G7??????????

G7??

??2????????????????START????????????????????????????????
????????????????????3??2035????????????4????????????????????
??

??

2010????????????????????????????

????????????????2009?9??PMDA?????????
????????START????????????????????????????????????34????????????????????1?7????????????????
??????????????

????????????????????????????BN600???BN800????????????????MOX????????????????????

??
????????????????????Jr.????2007????????????MFFF???MOX????????????????????MOX????????????
?????

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

2009??
????PMDA????????????????????????

??MOX????????????????????????????????

????????2012??MFFF????????????????????????????²¹²????MOX????????????????????????

??2014????????????????8????????????
????MFFF????????????2016?2??
????????????3????????

????????????????????????????10??PMDA??
????????????????????MOX????????????????BN800????????????BN600????MOX????????????
????????????

??MFFF????????????????????????????????1?7????????????????????PMDA????
??MOX?
????????????????????????

??

???IF??????

MFFF????????????????????78????????????????1????????????????????????
????????????????????PMDA????????????????????

????????????????????????????????1????731????10????????????????????????????????
????????????????????1????????????

??IF????MFFF??
??
?PMDA??

PMDA??

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

?

?1??
??

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

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

?? ?? · Saturday, May 20th, 2023

????????????????2035????????????????????????EV????????????????????

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



Allkindza/iStock

??????????

??4?12??

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

??????????

- ????CO₂????2????100????CO₂????????????????????????????????
- EV1????????????12,000????????????????????200????????????????????????????
- ?????????????2032????????????????SUV????????????67????????????????50????????
????????35????????????????25????????

??3????????????????

- CO₂????????????????????????????????????5000ppm????????????????????1000ppm????????????????
- ?????CO₂??430ppm??
- EV1????????12,000??
- ???
- ?????????????????XL??
??
????????????????

??

??

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

??????????

57??
??????????

????????EV????????????????????????????????????FCV????????????????????????HV????????????????????????
????EV??????????????????????

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

IPCC?????63????????????????????????????????

?? ?? · Tuesday, May 16th, 2023



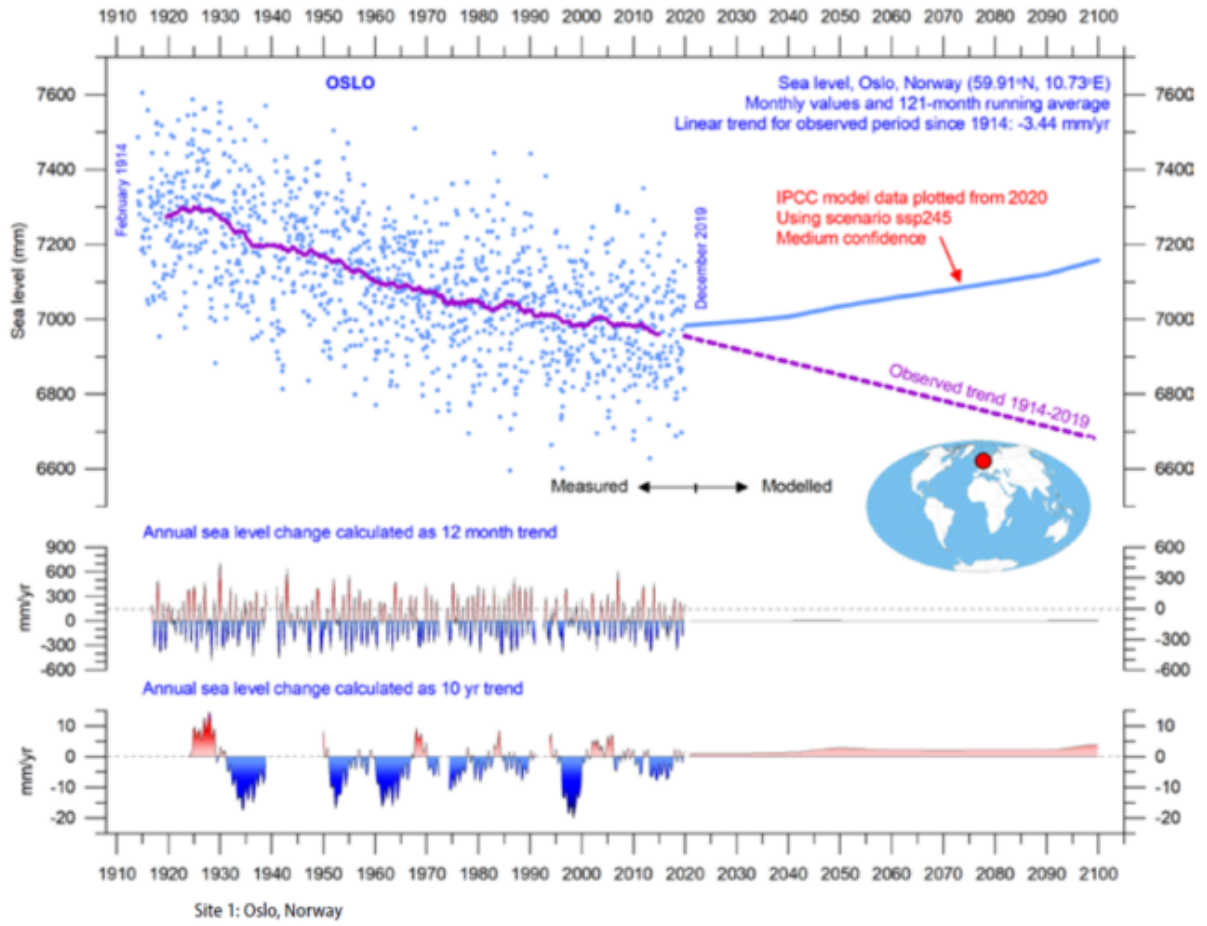
remotefx/iStock

????????????????IPCC????????????????????????????????????2023?4????????????????????????????????????

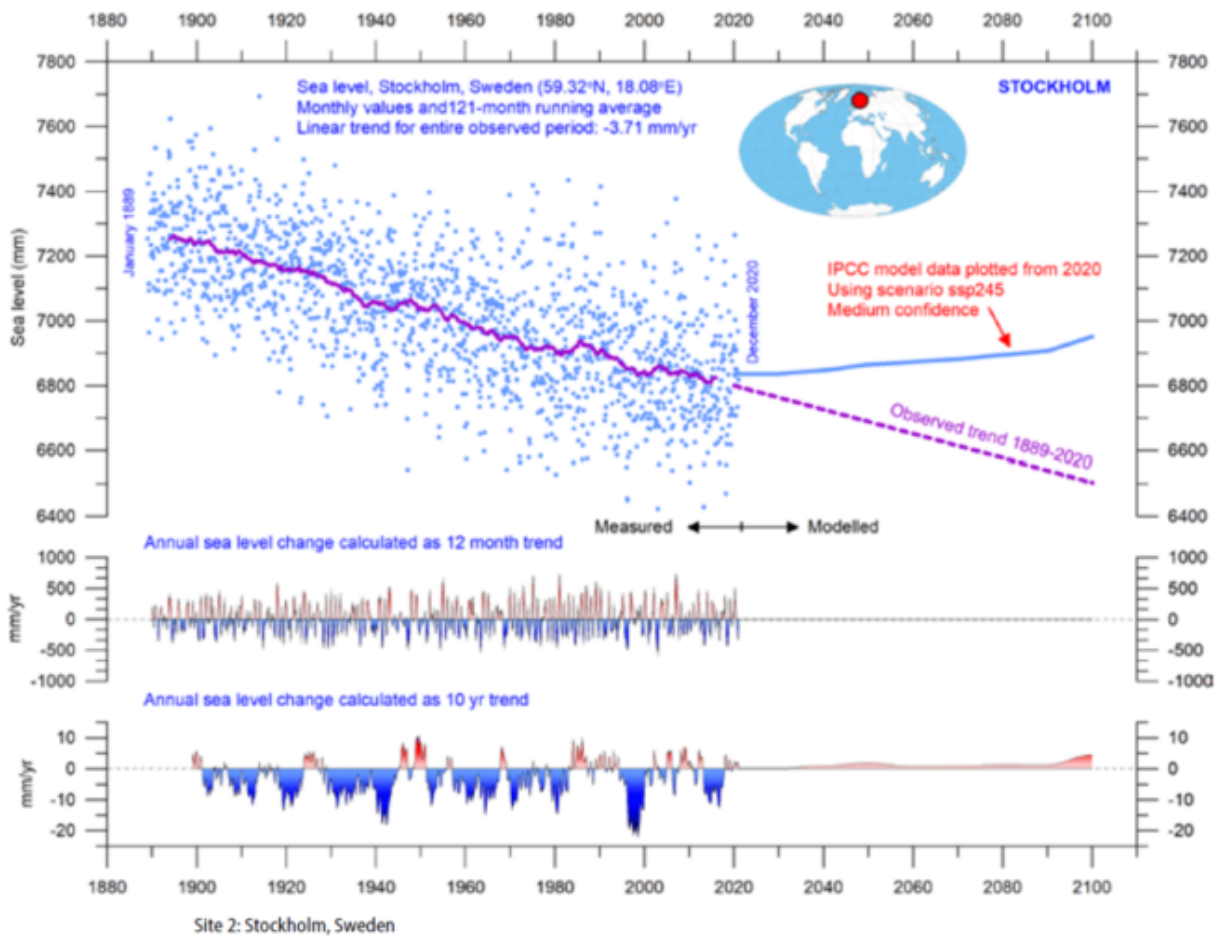
?

IPCC??

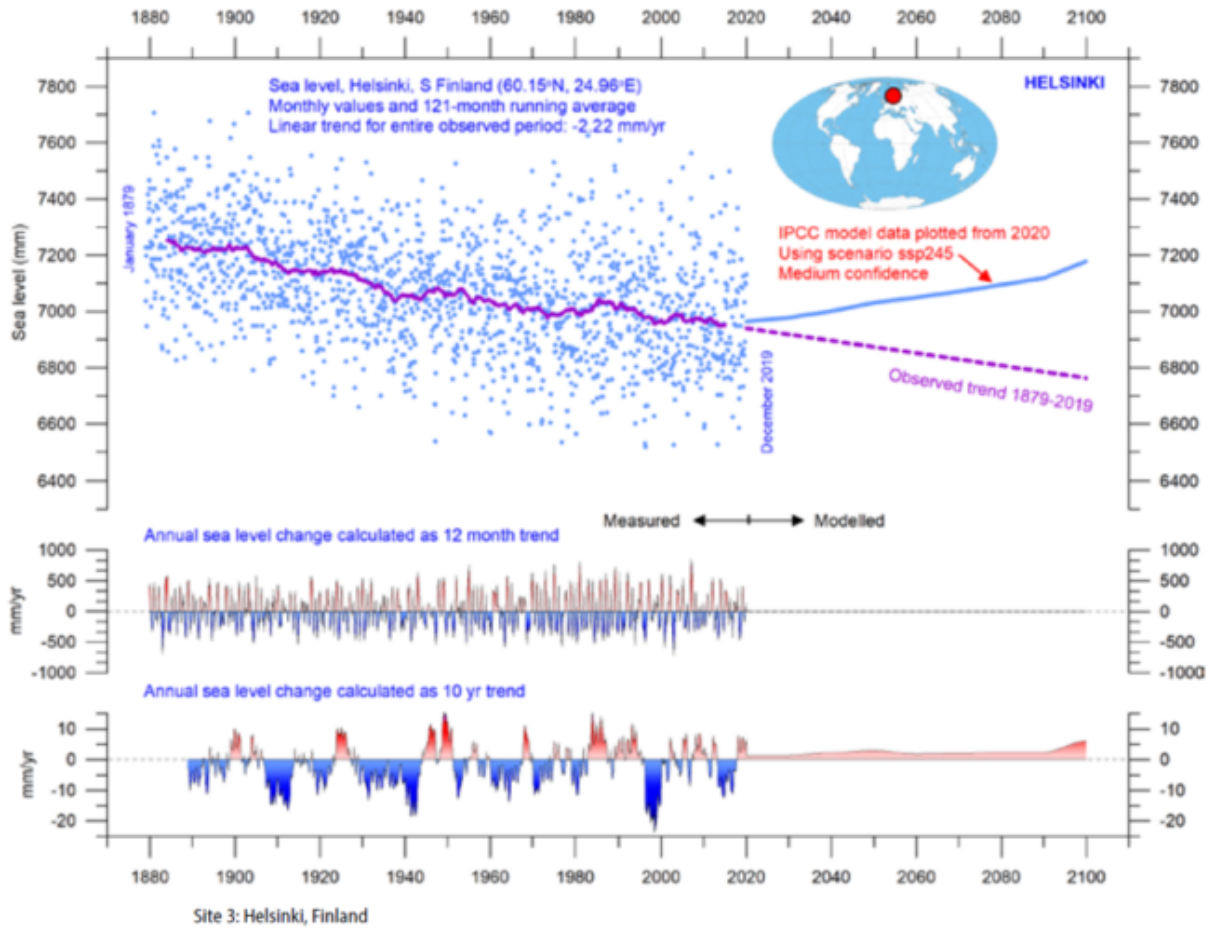
IPCC AR6 Sea Level Projection Tool



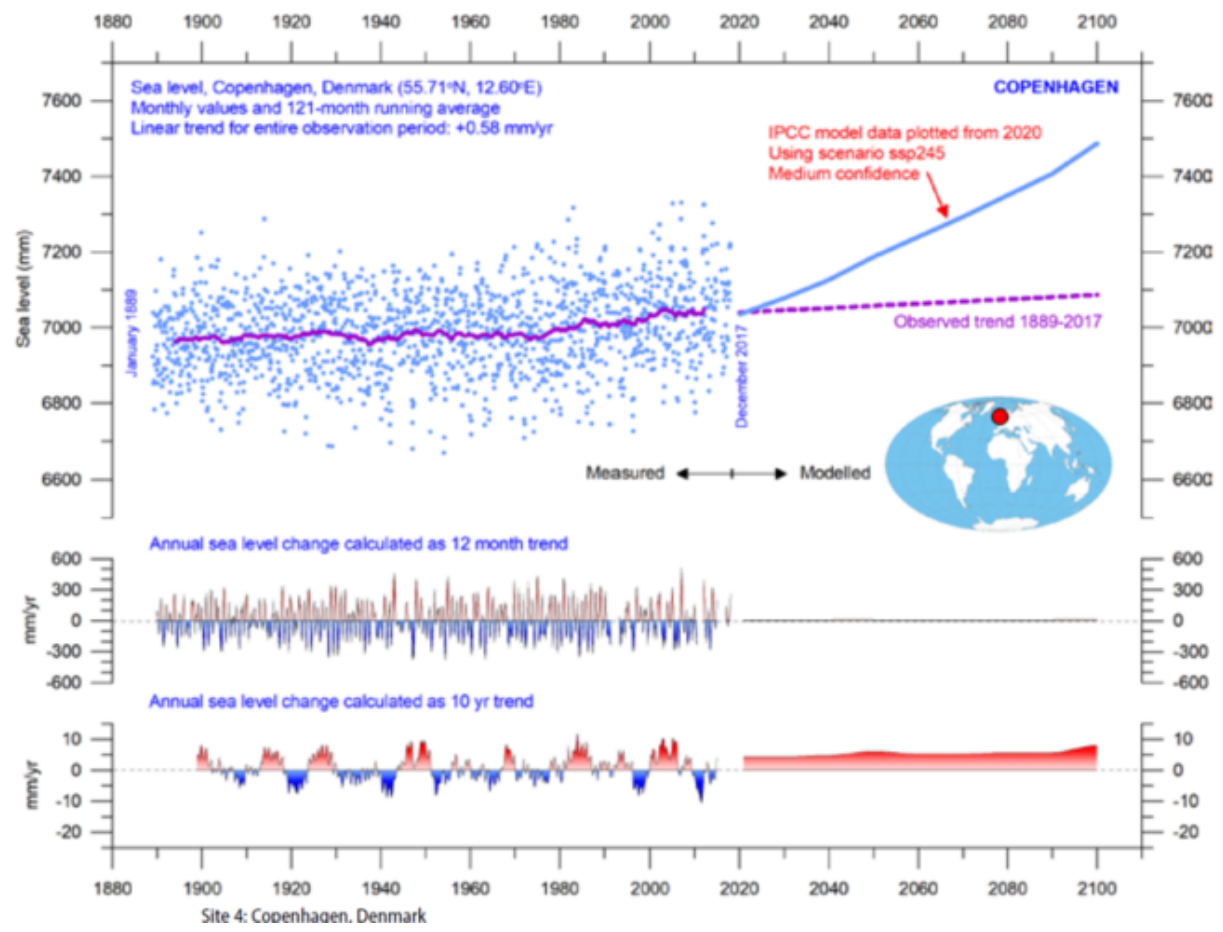
??????????



??????



??



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

??2000?????????????????
??

??
??

??

?IPCC??

??????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????CO2?????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

?IPCC????????????????????????????

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

?

????????????????_?? ?????????????????????



Posted in ???, ????? | No Comments »