

Global Energy Policy Research | GEPR

GEPR
http://agorajp.com/

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?? ?? · Tuesday, September 19th, 2023

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????????????????????https://t.co/LILraoNBVB

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— ??????? (@atomic_journal) September 15, 2023

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????????????????????85.7kW??

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原子力発電所の現状

2023年8月29日時点

再稼働 11基 稼働中 11基、停止中 0基 (送電再開日)	設置変更許可 6基 (許可日)	新規制基準 審査中 10基 (申請日)	未申請 9基	廃炉 24基
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????????LNG????????10????25????????????????????1.5????????????????????????

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Gwengoat/iStock

1980-1970-SED-83-SED-F

CDU-FDJ-30

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36-16



CSU CSU

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10875 1 6 36

Wikipedia

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Posted in ???, ?? | No Comments »

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?? ?? · Thursday, September 7th, 2023

2022????????????????????????F??

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???Quantum Korea 2023??

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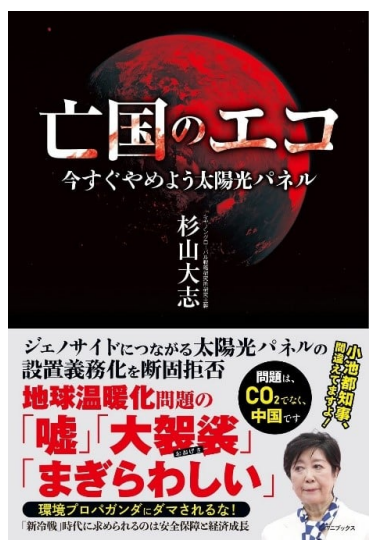
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Posted in ???, ????? | No Comments »

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?? ?? · Saturday, September 2nd, 2023



axz66/iStock

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2027????????????——????????????????????????????

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

????G7G20????????1.5????????

?? ? · Thursday, August 31st, 2023



photoschmidt/iStock

????????G20??28????????????????G20????????????????????????????
 ?????????????????????????????

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

????????????????63?

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

????????????????????????????G20????????????100????????????????G20????????????
 ?????????NDC????????????????????????????2023????????????2030????????????
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G20????????IPCC????????????????????????????G20????????
 ?2025????????????????2019???2035????60%????????????
 ?????????????????2030????????CO2????????



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????????G20????????????????????????????????????G20????
????????2040????????????????????

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

G7??IPCC?6????????????2025????????2035??60????????????12??COP28????????????
????????????G20????????IPCC????????????

??????Third World Network
?IPCC??
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G7?????1.5????????????2050????????????????????????????
????????G7????????????????????

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EU????????65?

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EU?CBAM????????6????????
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????????6?IPCC????????1.5????
?1.5????

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

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?? ? · Monday, August 28th, 2023



dima_zel/iStock

??GCR????????????????????[PDF](#)????12??????
 ??16????????????????????????????????????5????????????????????????????

??50??
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????????1997????????????????GCR????????????????????????????????????GCR????????????????
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????????CO2????????????????IPCC??

????????????????????????C¹⁴?GCR??GC
 R?????C¹⁴????????????????????????????????????

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????????????2019????????????GCR????78??
 ?????????GCR??2km????????????????

?????????7?12km????????????

?????????high-altitude clouds????????????2?7km????????????

????????????????????GCR????????????????????

????????????????????deep convective activities????????????

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?????????decadal?10????????????11???????????? GCR????????????1.4????????

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

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

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

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

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

????????????8????????????GCR????????????
????????GCR cycles????????????

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????????3????????GCR????????????

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

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?? ?? · Sunday, August 27th, 2023

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

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

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

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

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

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

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

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

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

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

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

Posted in ??, ????? | No Comments »

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

?? ?? · Saturday, August 26th, 2023

??1????????????????10????????????????
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??1????????????????????????????
1g????????????????????880????



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????12????????????????30??100????????????????????????
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Posted in ??????????, ??, ???????? | No Comments »

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?? ?? · Thursday, August 24th, 2023



NithidPhoto/iStock

2023?8?22?????????????????????9????????????????????????????????????



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

2022?3?15??

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

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

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

?? ?? · Tuesday, August 22nd, 2023



Artur/iStock

MIT? CO2?
 ”heavily
 saturated” EPA?
 ?

CO2???????

CO2???????

CO2 ????????

CO2???????

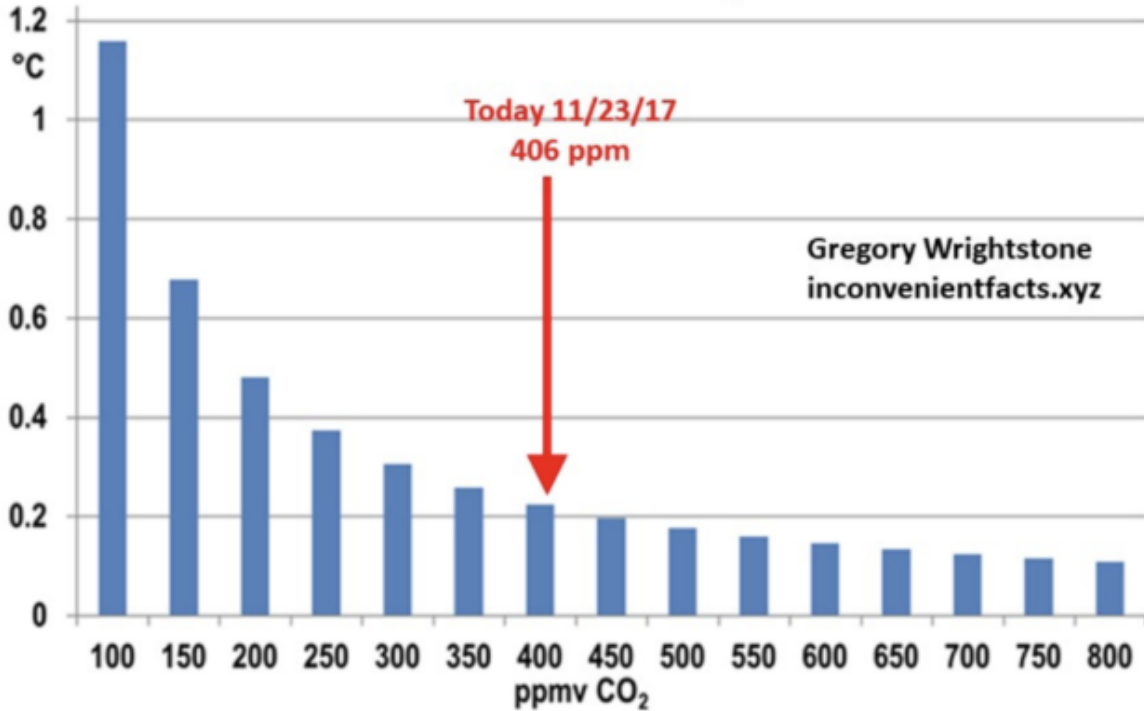
40???Gt? CO2?1?????

CO2???????

CO2?”heavily saturated”

CO2??50ppm? CO2?????
 = saturation? CO2?“heavily saturated”?????

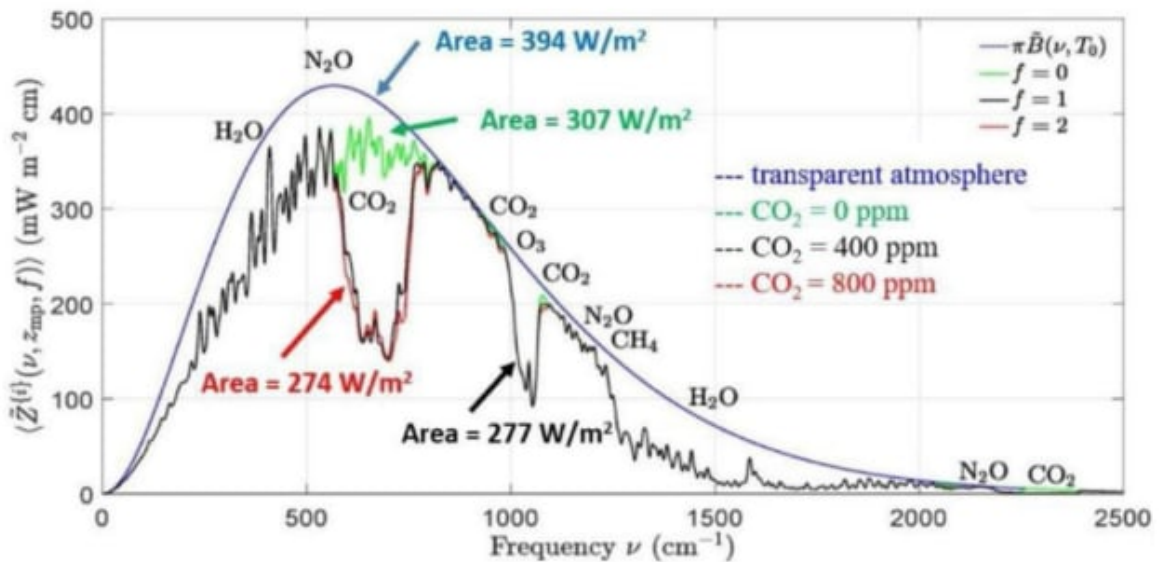
Figure I-3: Less global warming for each additional 50 parts-per-million-by-volume of CO₂ concentration



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

??CO₂????????????????????????????????CO₂?N₂O?O₃?CH₄????????????????????

??394 W/m²????????????????????????????????@transparent atmosphere????????????????27??



??CO₂ =

400ppm????????394W/m²????277W/m²??277/394 =

70????????????CO₂?400ppm??800ppm????????????????????????????????274

W/m²?69.5%????????????????????????????3W/m²????????????????????1????????????

????CO2??

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????????????????EPA????????????????”State Farm”????????????????????????????????????

? State Farm Test: ???

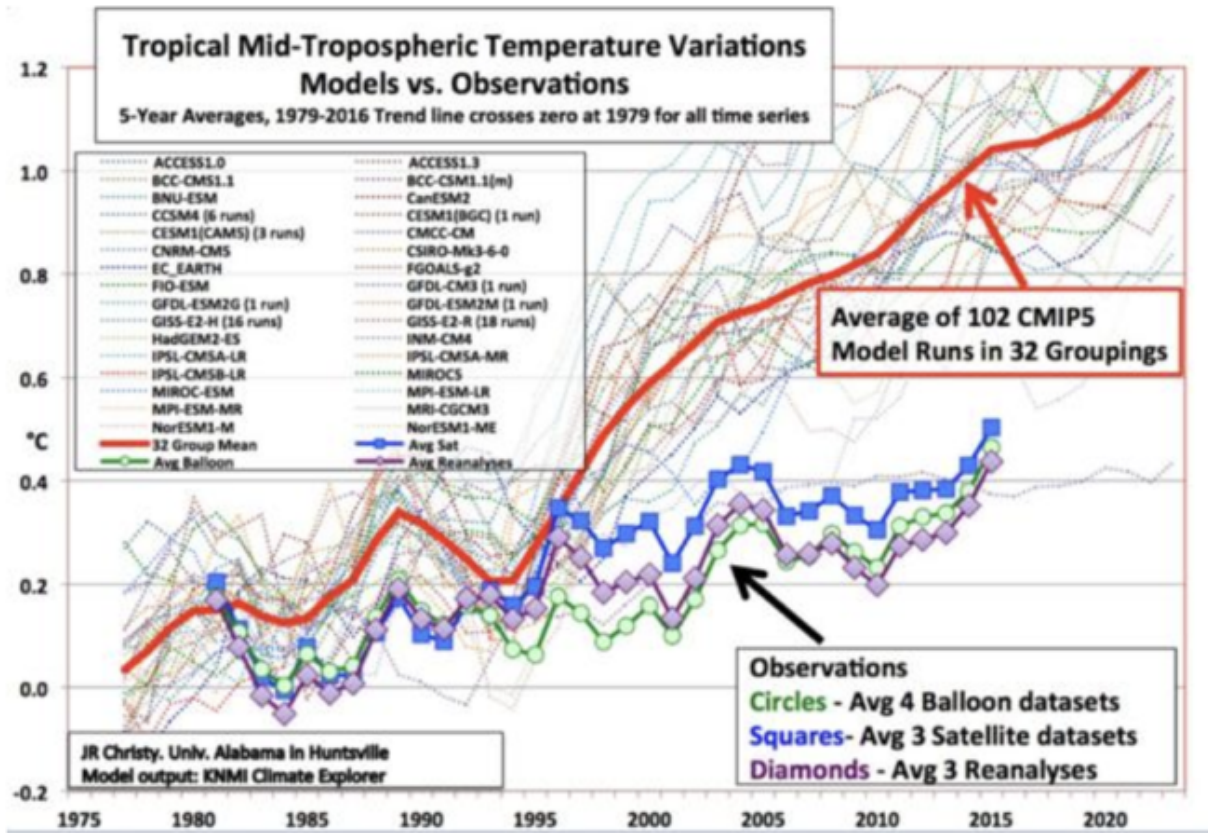
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1. EPA????????????????????????????????????
2. EPA????????????????????????IPCC??
3. ?????????????????????????

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????EPA????????????CO2????????????CO2????????????????????????????????????

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The main conclusion of this part of the study is that even an order of magnitude increase of CO2 in the atmosphere by human activities, which at the present rate of input is not expected within the next several thousand years, may not be sufficient to produce a runaway greenhouse effect on Earth. On the short time scale, if CO2 is augmented by another 10 percent in the next 30 years, the increase in the global temperature may be as small as 0.1°K.

Posted in ???, ????? | No Comments »

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?? ?? · Friday, August 18th, 2023



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Luisa Trescher Photos/iStock



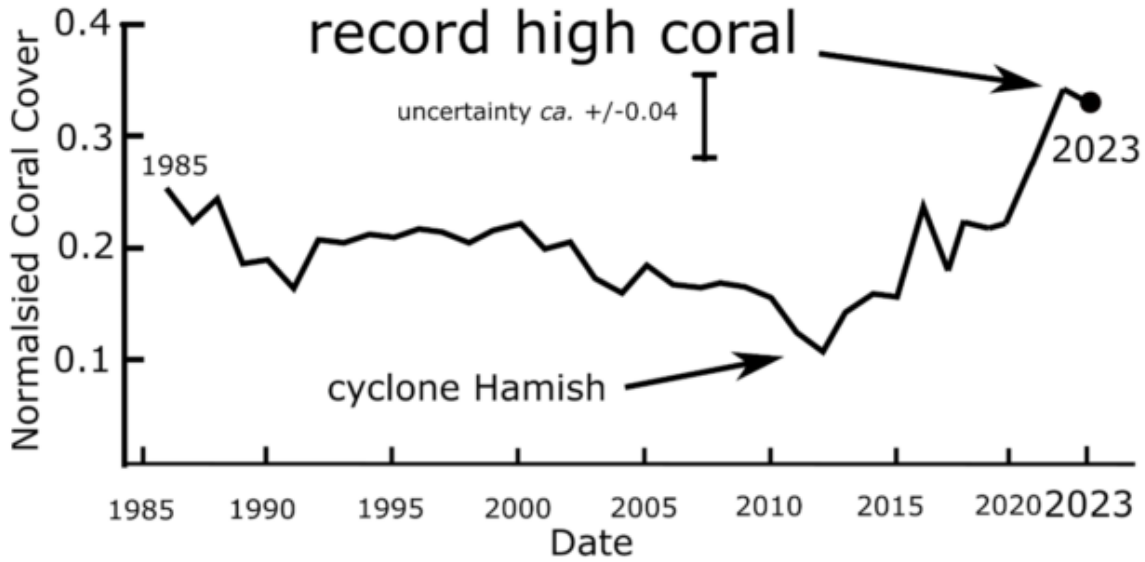
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60????????????????????

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2023??

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2022??
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??60????????????????????????????

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Foundation??

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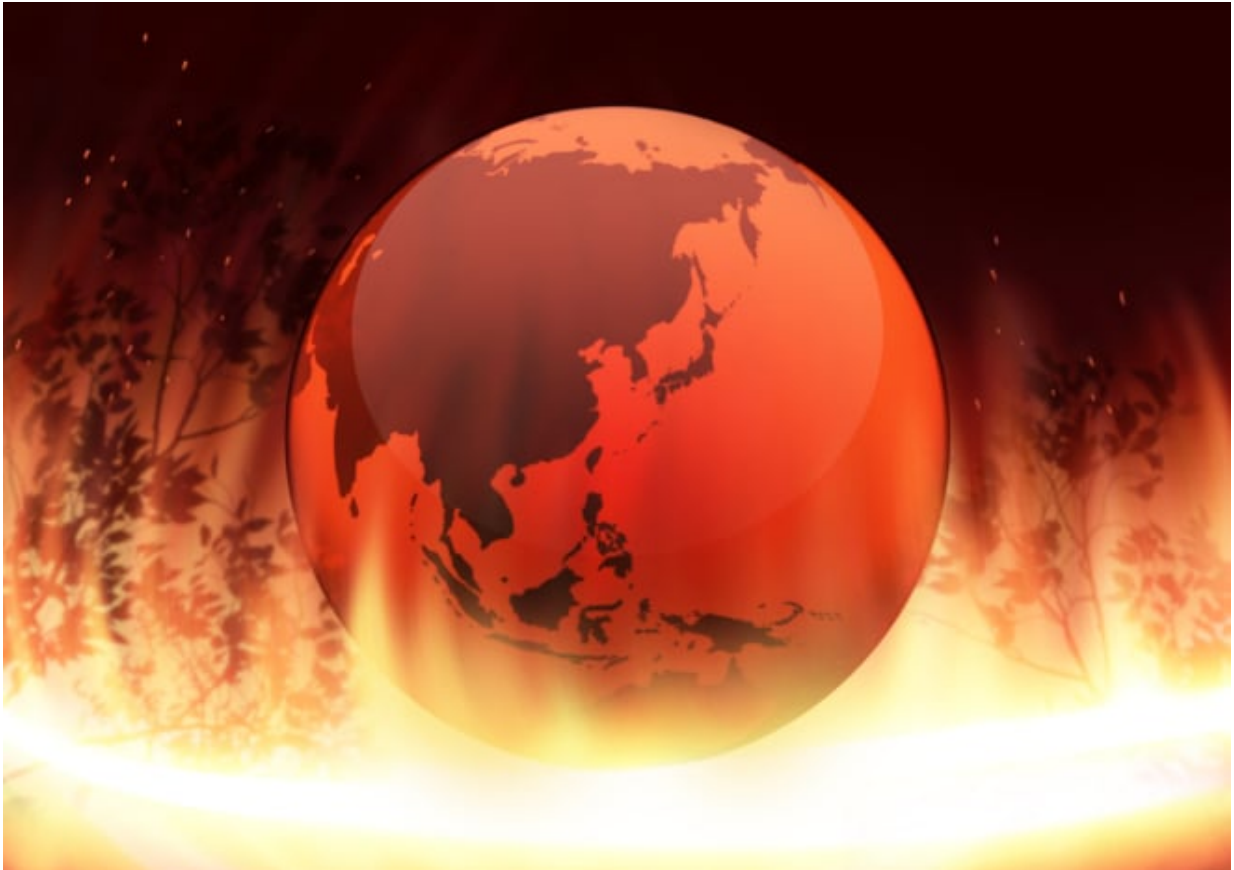
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Posted in ???, ????? | No Comments »

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?? ?? · Thursday, August 17th, 2023



Tr6/iStock

global warming global boiling

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2023 “”

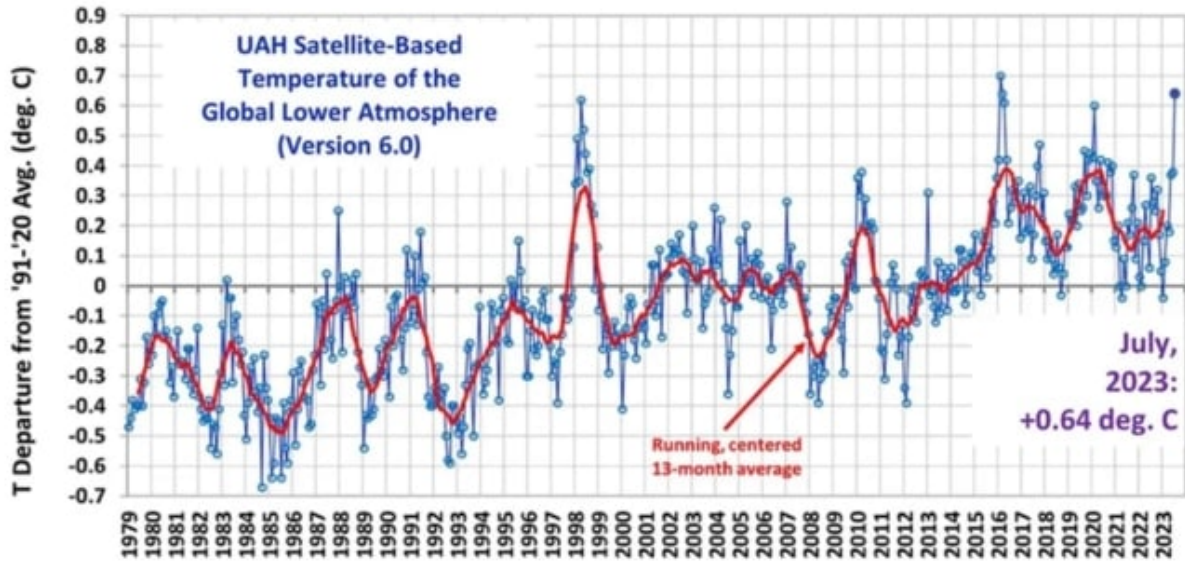
100 15 100

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BBC 1

Climate Etc.

9000 UAH



3

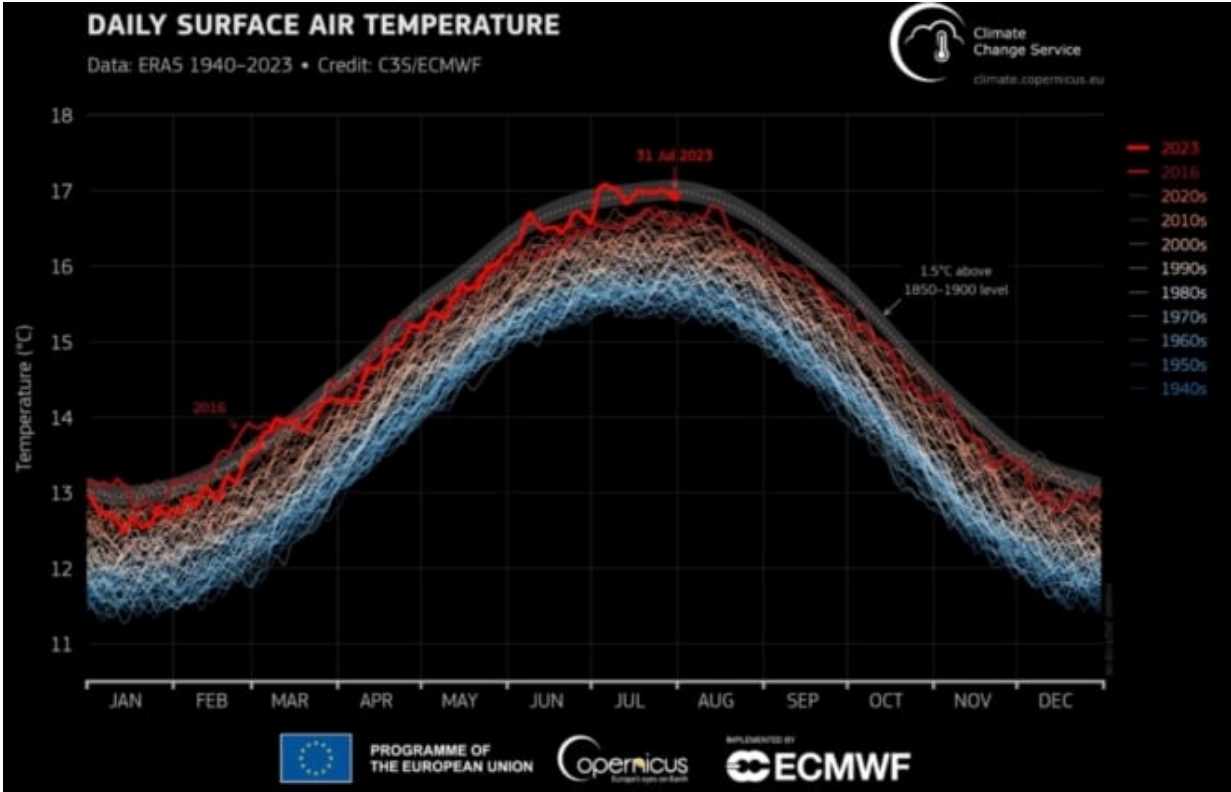
Climate Etc.

2023

1 7

2 1 3

2023 4 1 2 1 7



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

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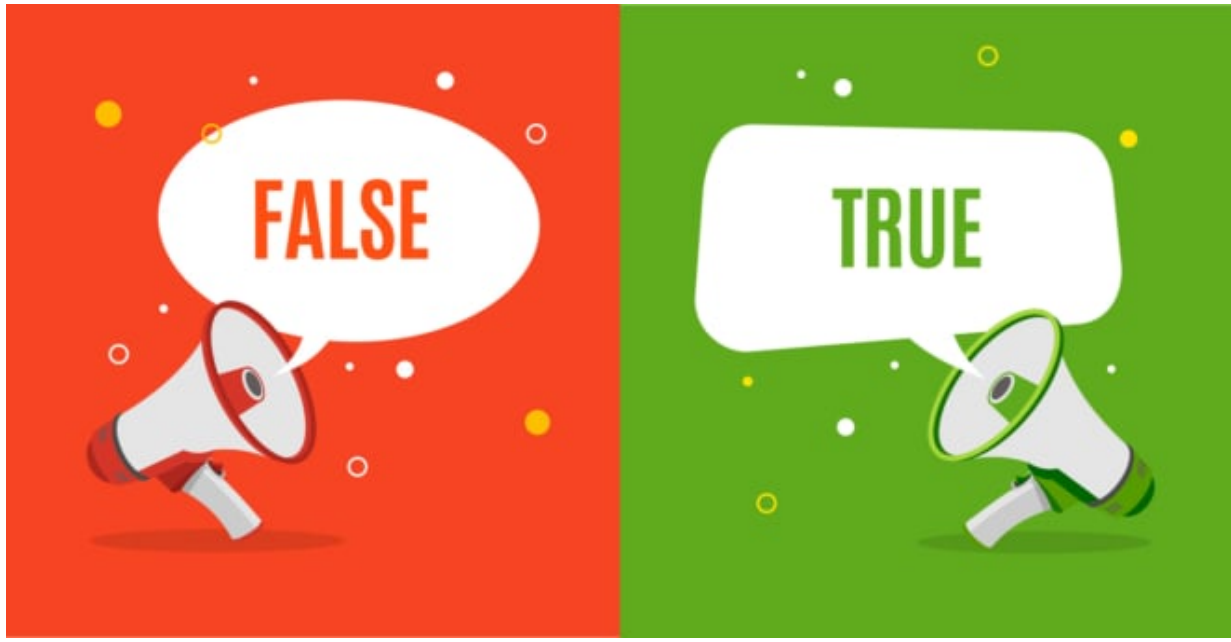
2023??2022??
 ?2015?????????2020??CO2??
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Posted in ???, ????? | No Comments »

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?? ? · Saturday, August 5th, 2023



midwllw/iStock

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??CO2????????



CO2
CO2

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

??1981????????????????4?10??pp.
949-954??
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????1????2????3????4????????????????????????????????

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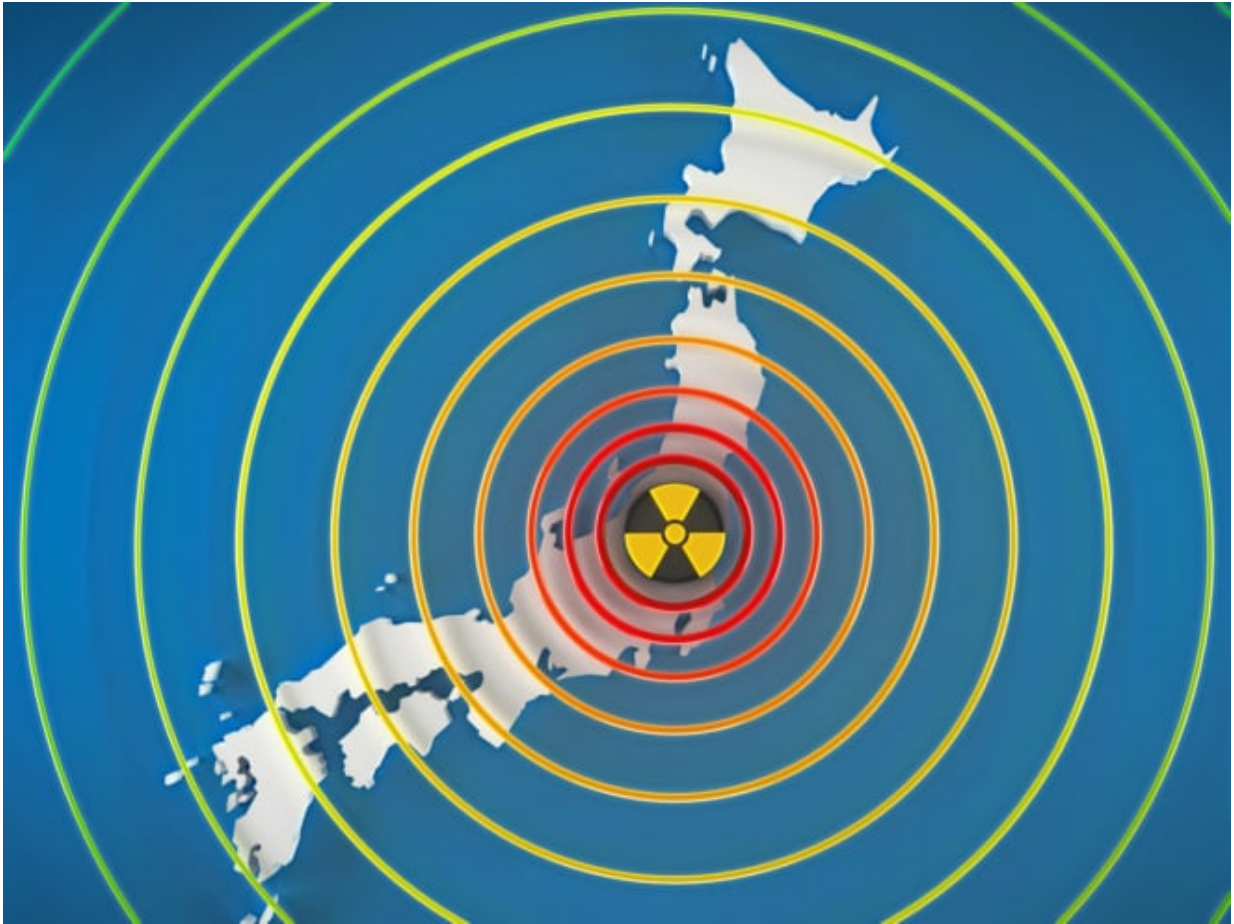
??3????????????
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Posted in [??](#), [????????](#) | [No Comments](#) »

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?? ?? · Thursday, August 3rd, 2023



adventr/iStock

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← ツイート



村本大輔(ウーマンラッシュアワー)
@WRHMURAMOTO

...

事故があった時、地元の人だけじゃなく日本中が被爆しますように

NHKニュース @nhk_news · 7月28日

福井県にある関西電力の高浜原子力発電所1号機が、28日午後、原子炉を起動し、12年ぶりに再稼働します

www3.nhk.or.jp/news/html/2023...

#nhk_video



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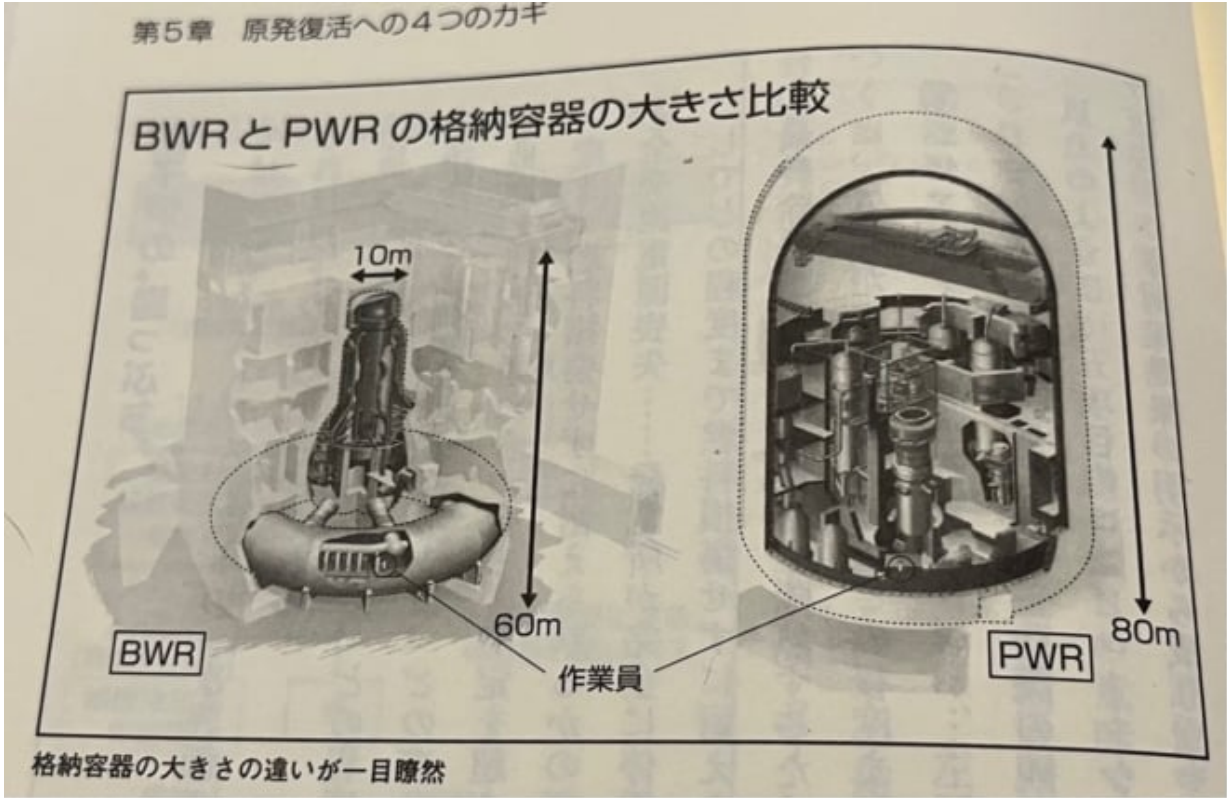
?????3????????????

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??BWR
/Mark?I????????????????????PWR??
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第5章 原発復活への4つのカギ

BWRとPWRの格納容器の大きさ比較



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

????????2012, WAC, 219???

????????10????????2?????

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????35????????Mark-I????????

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3.11????PWR????????H?????

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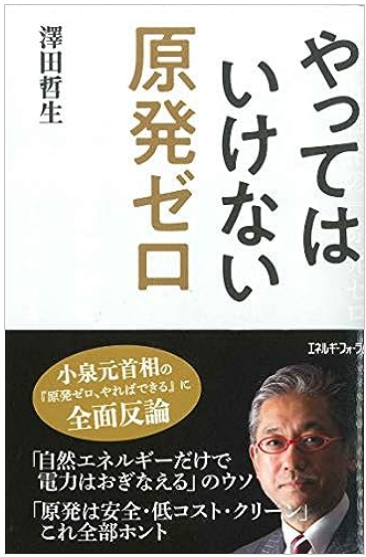
2014年7月26日発行の『エネルギー未来』Vol.56, No.10, p. 62 (2014)年
 『エネルギー未来』Vol.56, No.10, p. 62 (2014)年

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??100%?1????????????????????????????????????3????
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Posted in ???, ?????????? | No Comments »

“????????”???????? ???????????????????

?? ???? · Wednesday, August 2nd, 2023



bluejayphoto/iStock

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7?27?????WMO??EU?????2023?????

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??85??
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??CO2????????????????????????????

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

??EU??EU????????????????
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?1000????????????

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

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?? ? · Monday, July 31st, 2023

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

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??G20????????????
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some
members????
others????

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????1.5??2050????COP????

G7?????

2050????

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???G7????G20????

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????2030????

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????3????G20????G7????2030????
?150GW????1TW????

???COP27????
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G20????12?COP28????

??UAE??

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

????G20????

????G20????1.5????by or around mid century????G20????

????1.5????

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

IPCC AR6 “Summary for Policymakers”

?? ?? · Sunday, July 30th, 2023

??6??23??IPCC??

??3??IPCC??6??AR6??

1.5??GHG??7??

2040??

AR6??GHG??

6??AR6-SPM??Longer Report??



NicoElNino/iStock

AR6?COP26????????????????????1.5????????????????IPCC????????????2014????5????
?AR5????2021????????1.5??

????????????????????????????2????1.5????????????????????2????????????????????
????????2????67????????????????????1.5????????????????????????????????5
0????1.5????????????????????????

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

????1.5??1.5????2????67????
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SPM????????GHG????????????????????

????1.5????????2019????????????500????CO₂e????????2????????1150????
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????2020????????50????GHG????????1.5????????10????23????7????
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????????????????IPCC????????1.5????2????????????0.5????????
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??AR 6-
SPM?TableSPM.1????2????????????????GHG????2050??2019??64????2030??
21????????2070????????Table

SPM.1?1.5????????2030?43??2050?84????????²²?

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

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AR6-SPM?C.2.4

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AR6-SPM?C.2.4
2?
3?

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2?1.5

1.5?AR6-SPM?P26?



1.5
24?

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1.5?IPCC?AR6?
1.5?
?

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

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



imply?
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1.5?

AR6?
26?
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??IPCC

AR6?
2?
1.5?

????????IPCC??

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



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????????????????????1.5????????????????????????????????1.7?1.8????????????????????
?????1.5????????????????????

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

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

?????IPCC

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

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

?3?AR6.SPM?C.2.4?“Even without accounting for all the benefits of avoiding potential damages the global economic and social benefit of limiting global warming to 2°C exceeds the cost of mitigation in most of the assessed literature” (medium confidence)

?4?AR6-SMP P26 ??50?“The evidence is too limited to make a similar robust conclusion for limiting warming to 1.5°C. Limiting global warming to 1.5°C instead of 2°C would increase the costs of mitigation, but also increase the benefits in terms of reduced impacts and related risks, and reduced adaptation needs.”

?5?AR6.SPM C.2.5: “Ambitious mitigation pathways imply large and sometimes disruptive changes in existing economic structures, with significant distributional consequences within and between countries.”

?6?AR6-SPM E.1.3: “Strengthened and coordinated near-term actions in cost-effective modelled global pathways that limit warming to 2°C (>67%) or lower, reduce the overall risks to the feasibility of the system transitions, compared to modelled pathways with relatively delayed or uncoordinated action.”

Posted in ???, ????? | No Comments »

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?? ? · Saturday, July 29th, 2023



BrianAJackson/iStock

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Posted in ???, ????? | No Comments »

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

?? ?? · Thursday, July 27th, 2023



JaCZhou/iStock

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

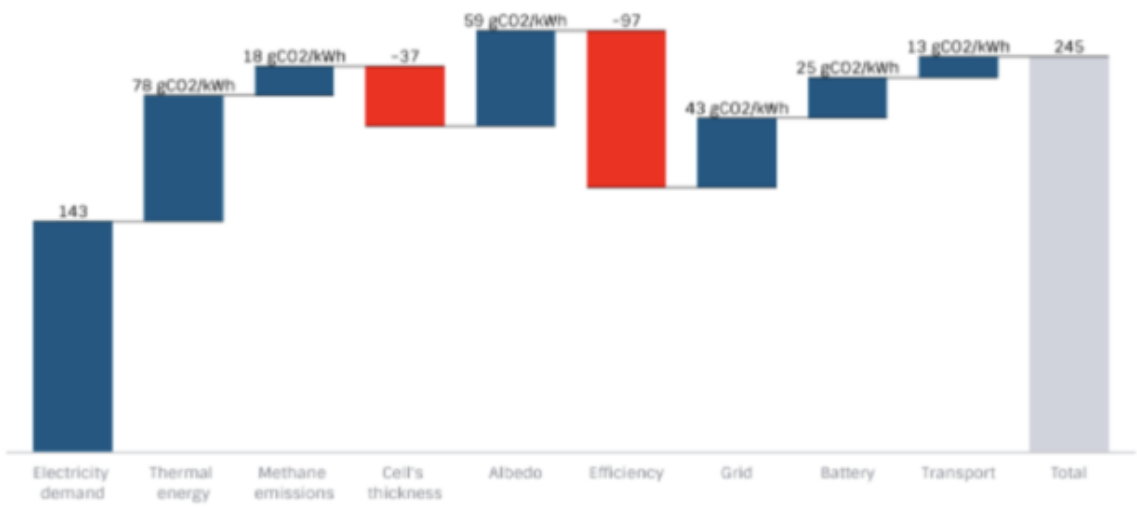
????????????????????CO2??CO2????????????????????IEA?IPCC??

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

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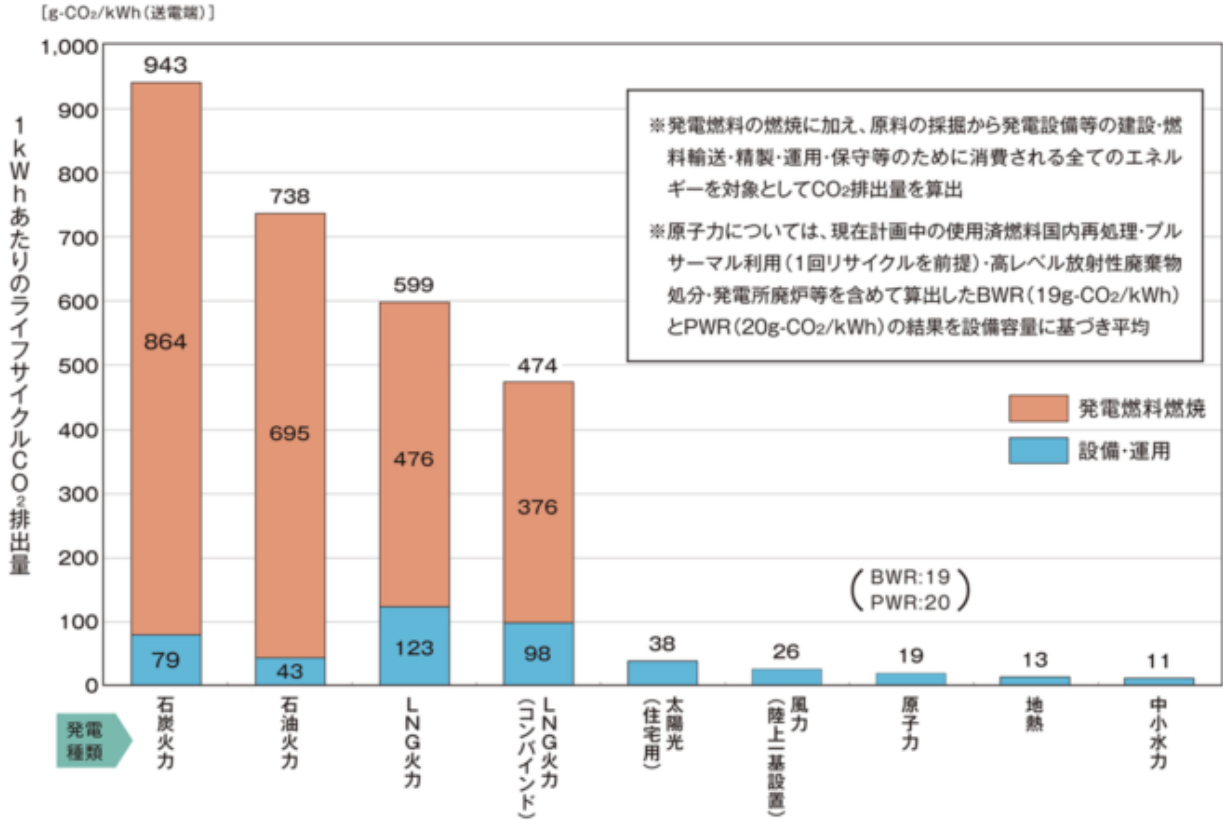
2022 Carbon intensity, Worst Scenario



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

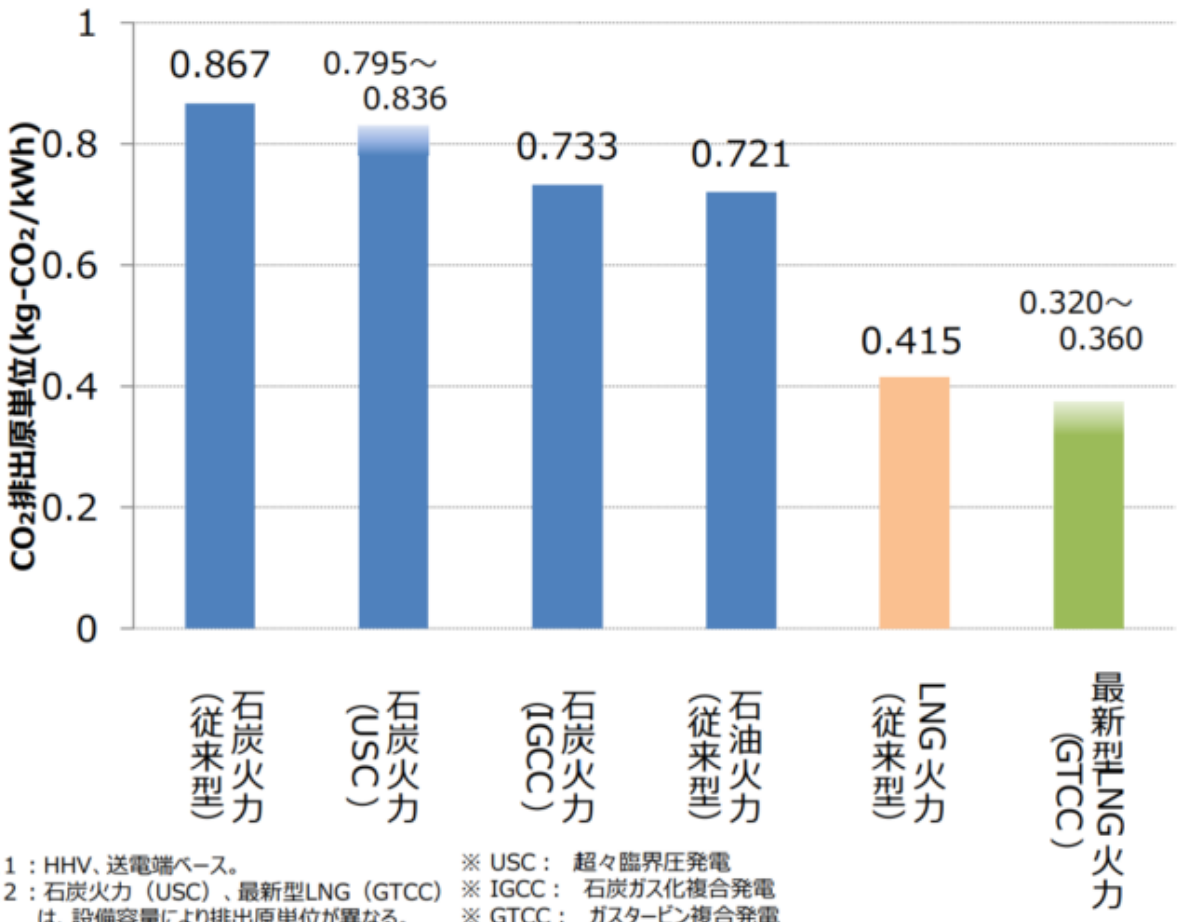
??1kWh??245??2016????????????????????????
?????kWh??38????????????2??????????



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CO2 9

1kWh 245 CO2 2022 LNG CO2 1kWh 320 360



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CO2

CO2

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Posted in ???, ????? | No Comments »

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

?? ?? · Friday, July 21st, 2023

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EV??



jetcityimage/iStock

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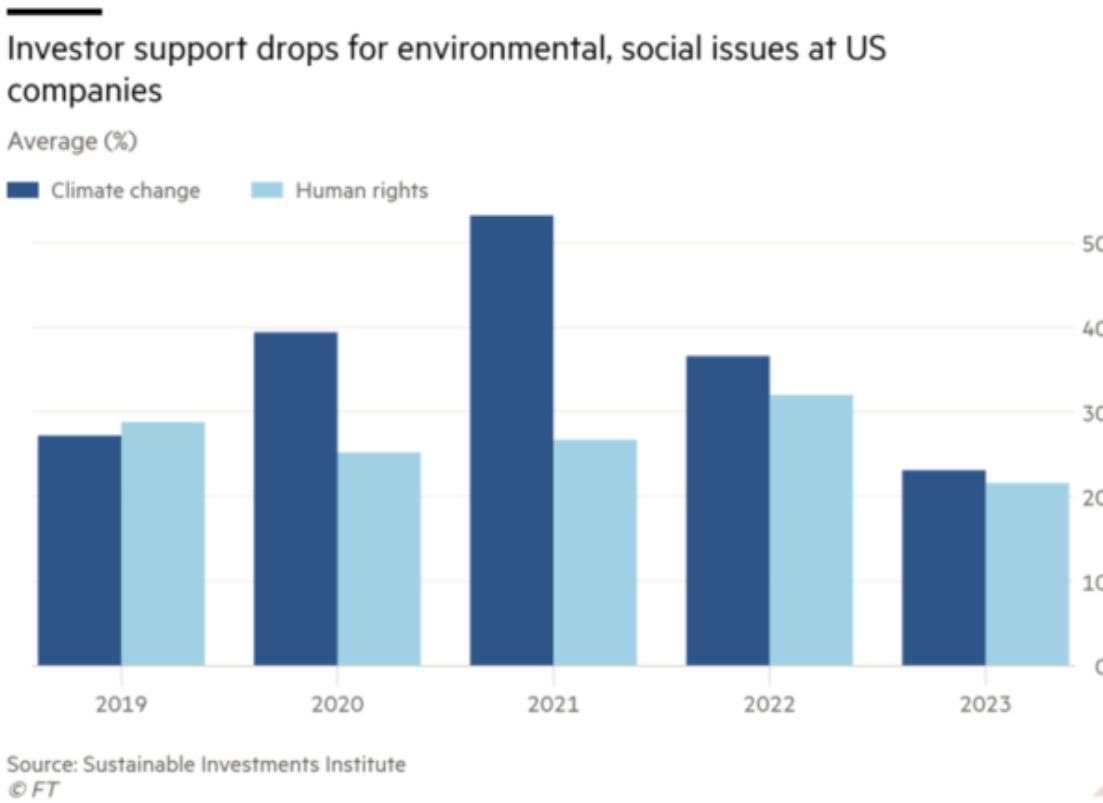
??EV????????????????????????????????????
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FINANCIAL TIMES??

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

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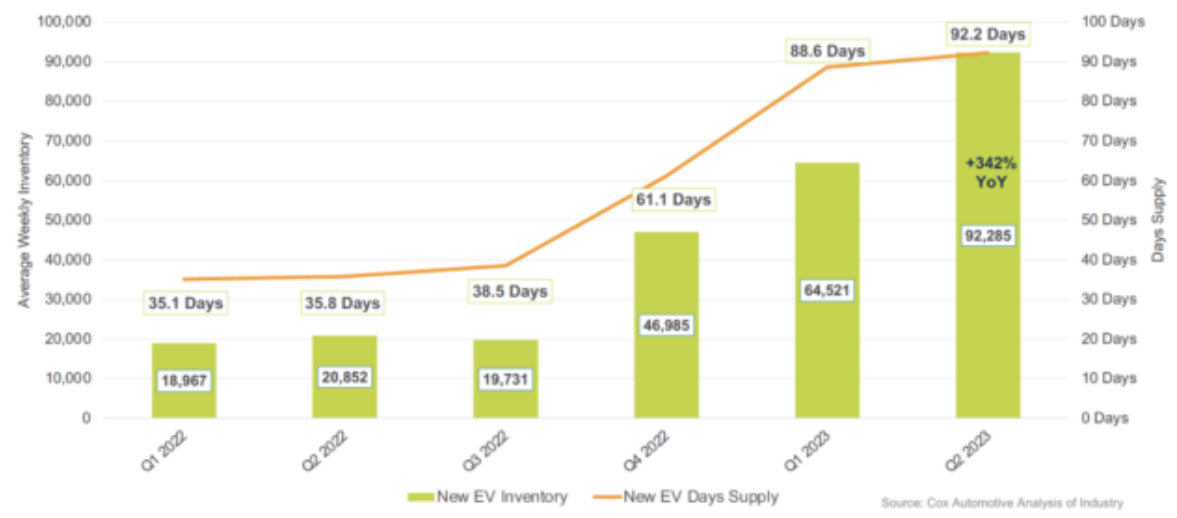
????EV?????JD?????EV?????3?????21??EV?????1??17.8?????

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

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?? ? · Thursday, July 20th, 2023

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1????????????100??0.72??1979????????1.4
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2????CO2????2ppm????40????CO2????IPCC????
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3????CO2????CO2????

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

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Posted in ???, ????? | No Comments »

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

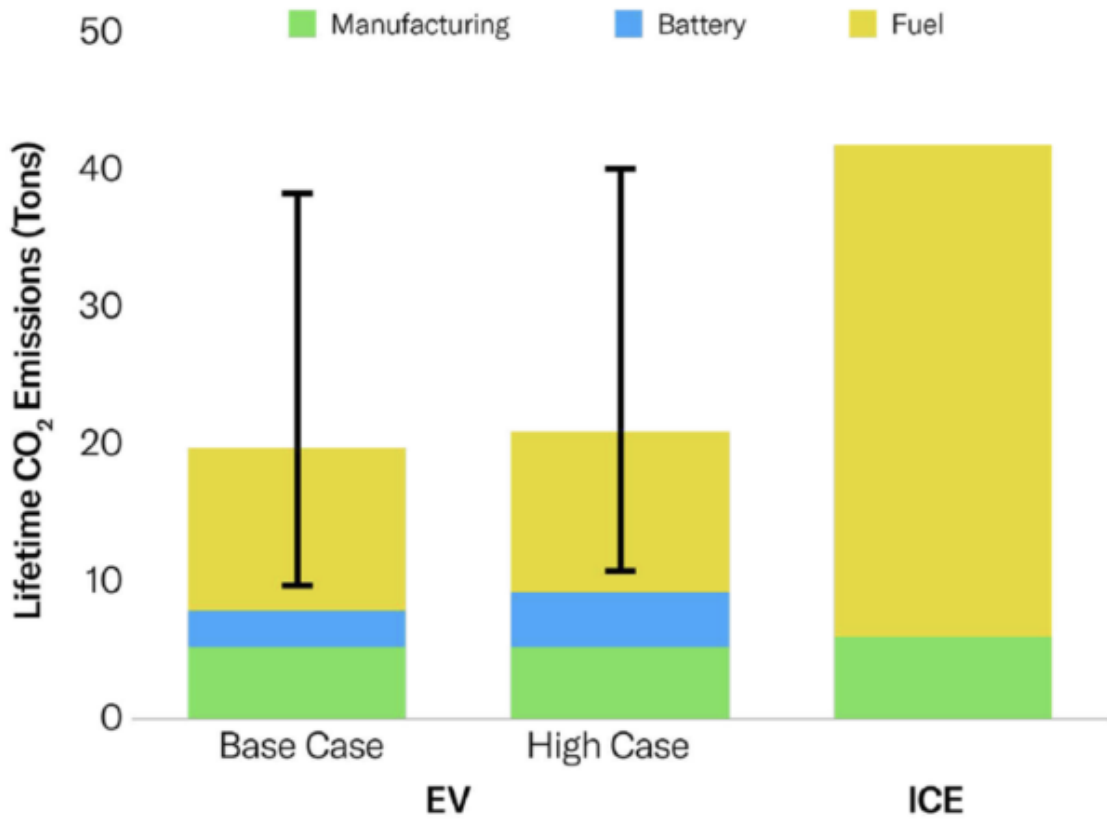
?????2???????CO2????????????EV????CO2????????????????????????????

??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"

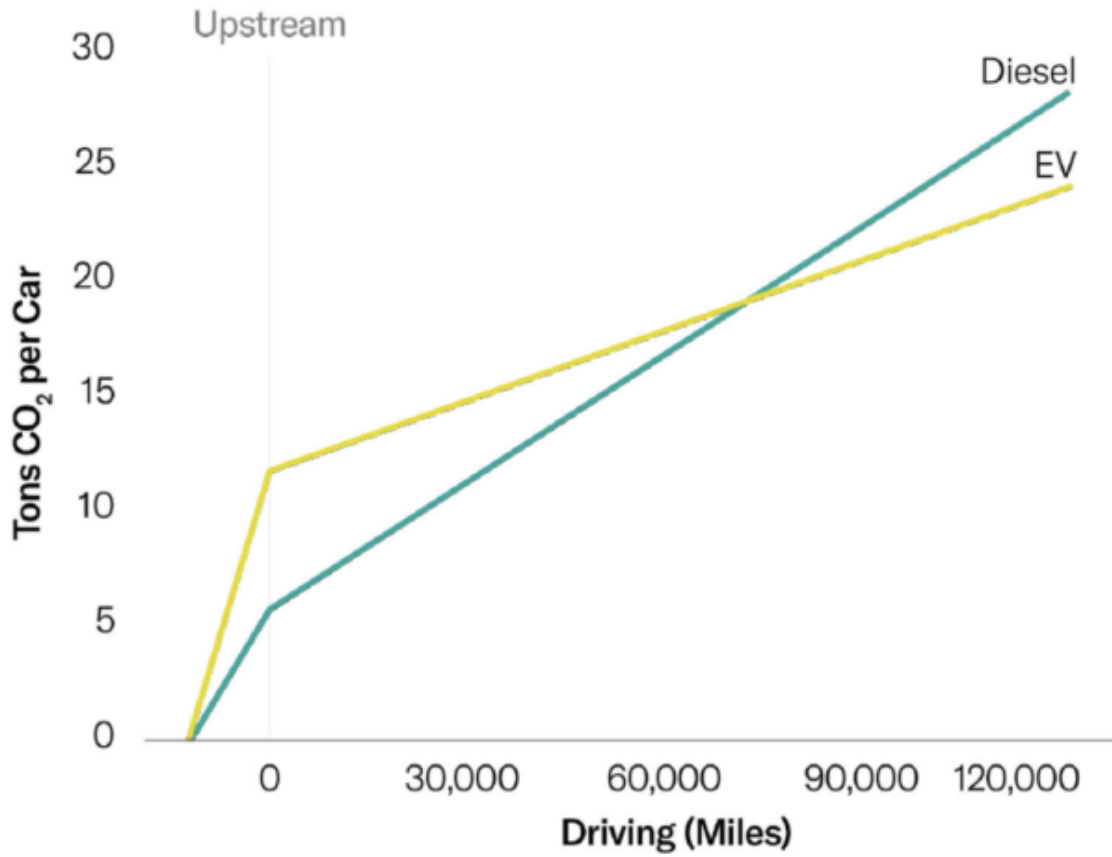
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????IEA??
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????????ICE?EV????????CO2????????????6????????????????????????EV????CO2????????????????
??EV????????????

Figure 4

Life-Cycle Emissions: Volkswagen EV vs. Diesel



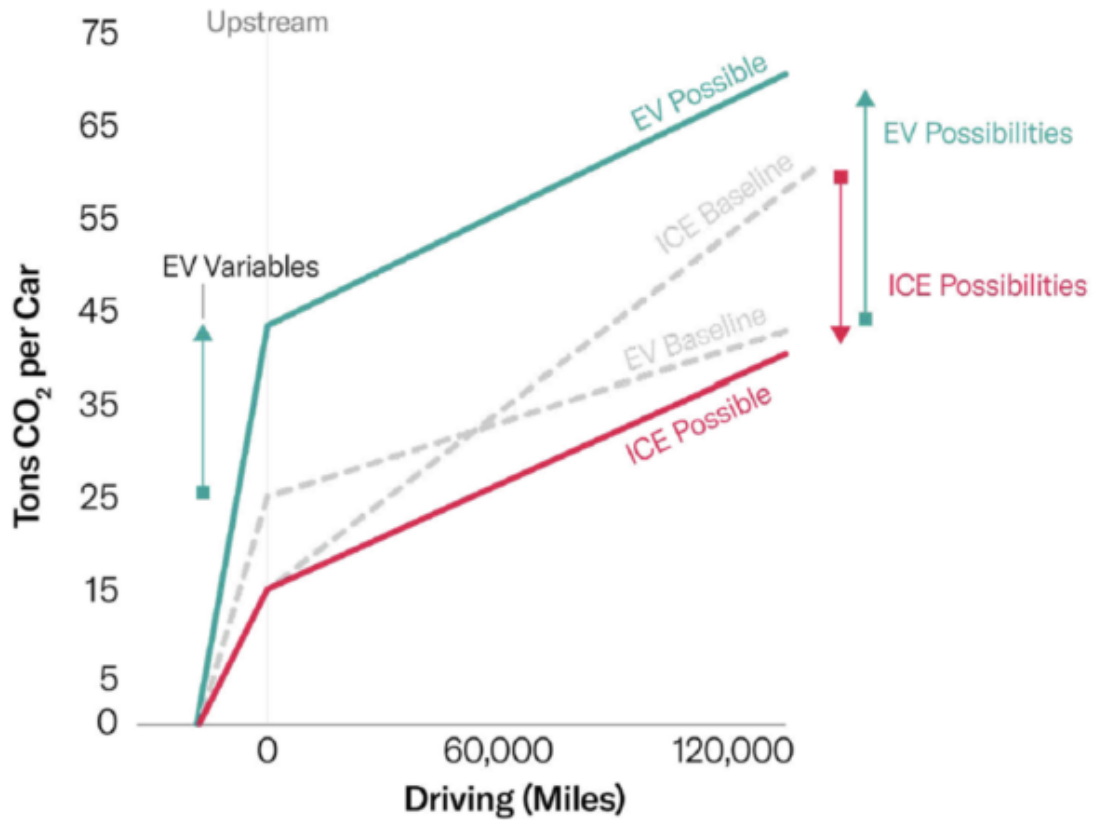
Source: Maciej Neugebauer, Adam Żebrowski, and Ogulcan Esmer, "Cumulative Emissions of CO₂ for Electric and Combustion Cars: A Case Study on Specific Models," *Energies*, Apr. 6, 2022

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

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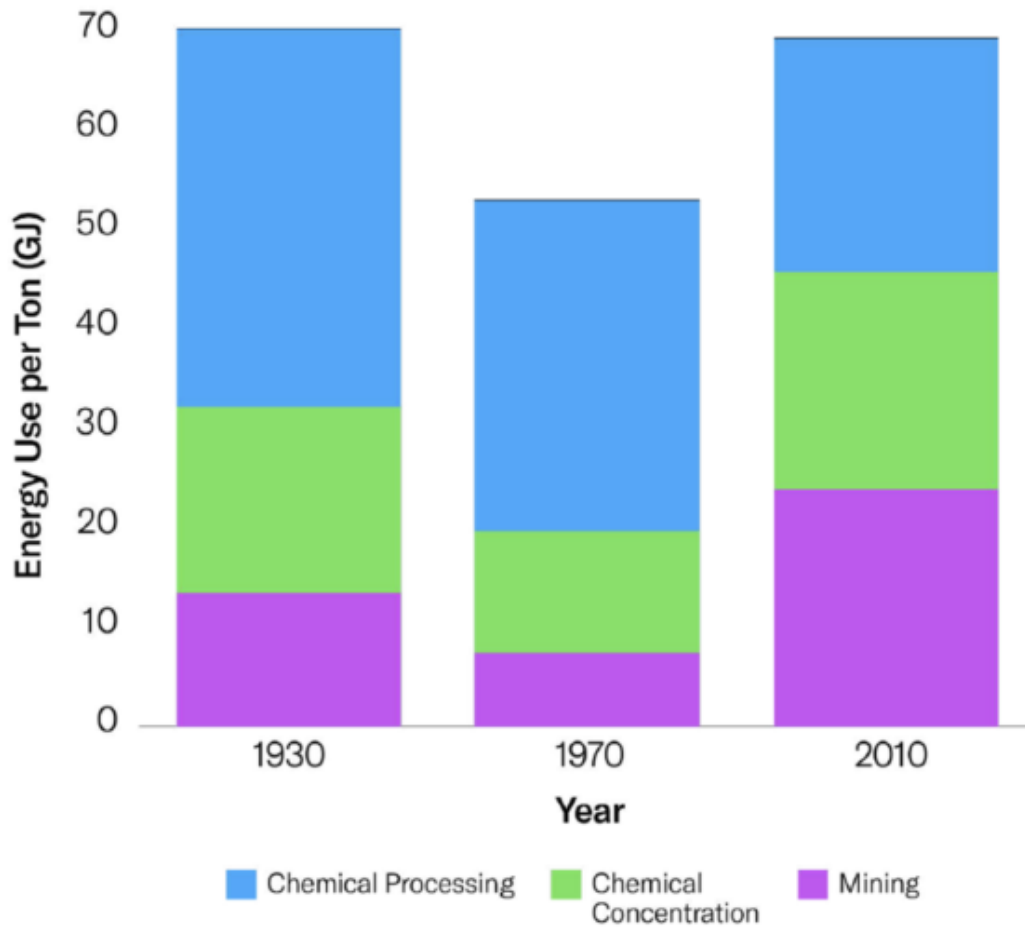
CO₂?????????1????????????????? EV??ICE????????????????????????????????

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

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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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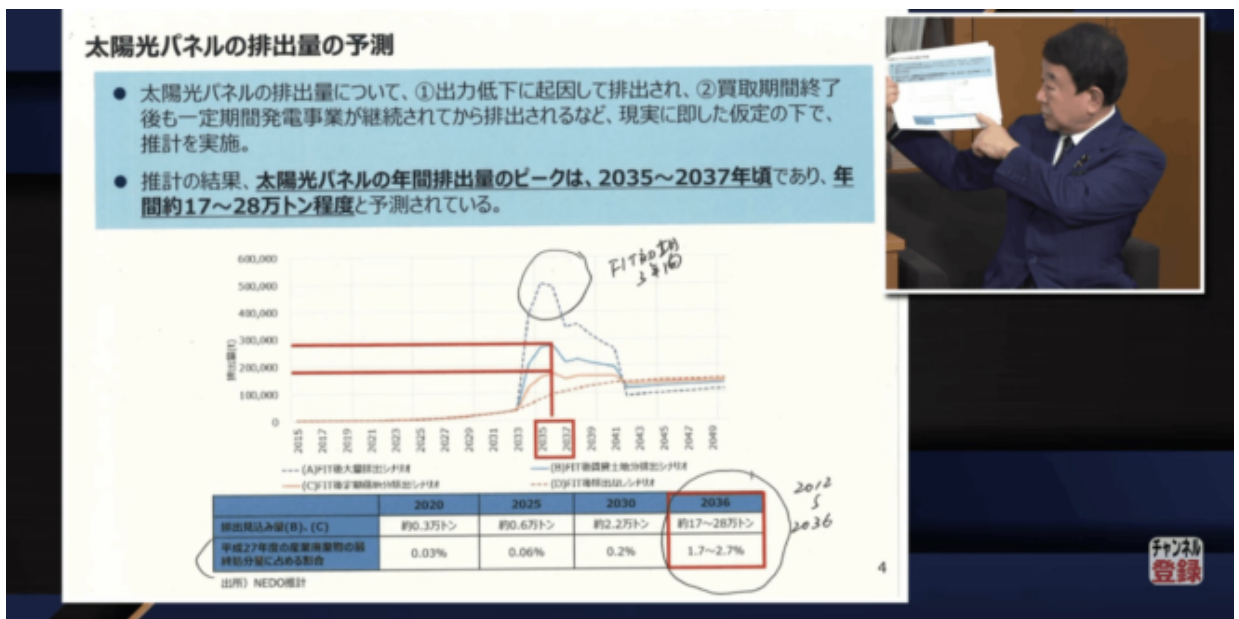
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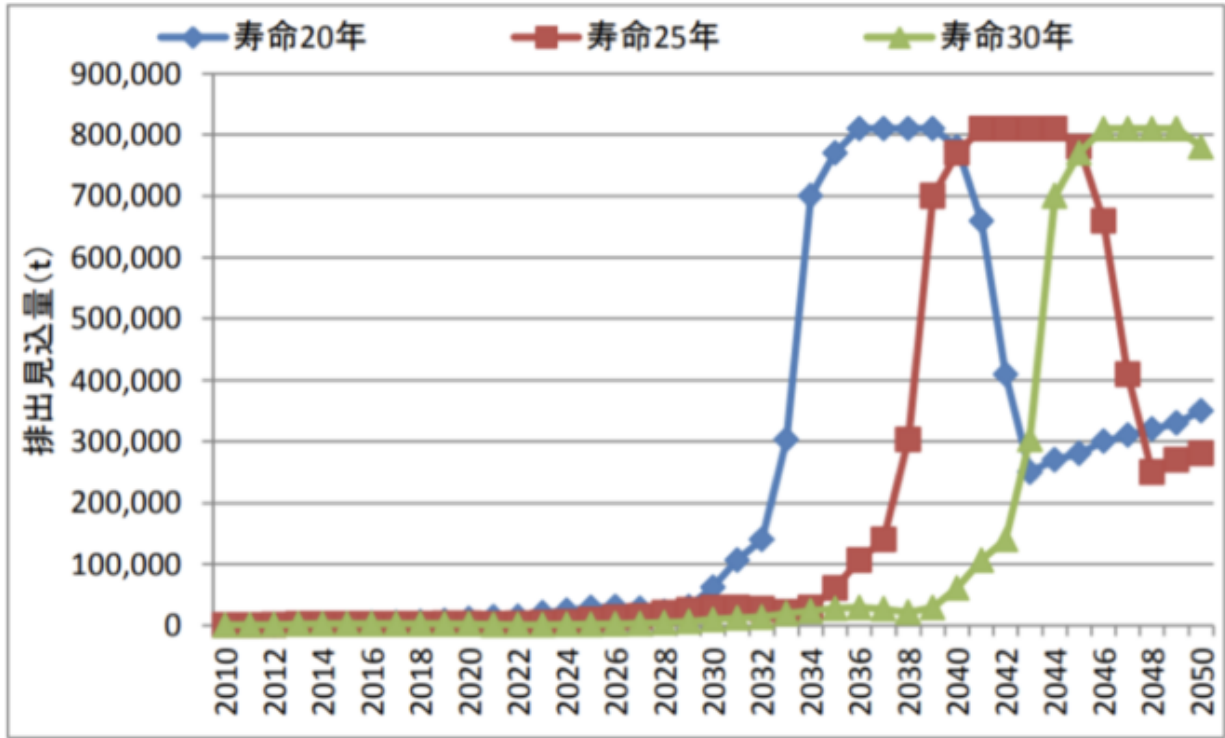


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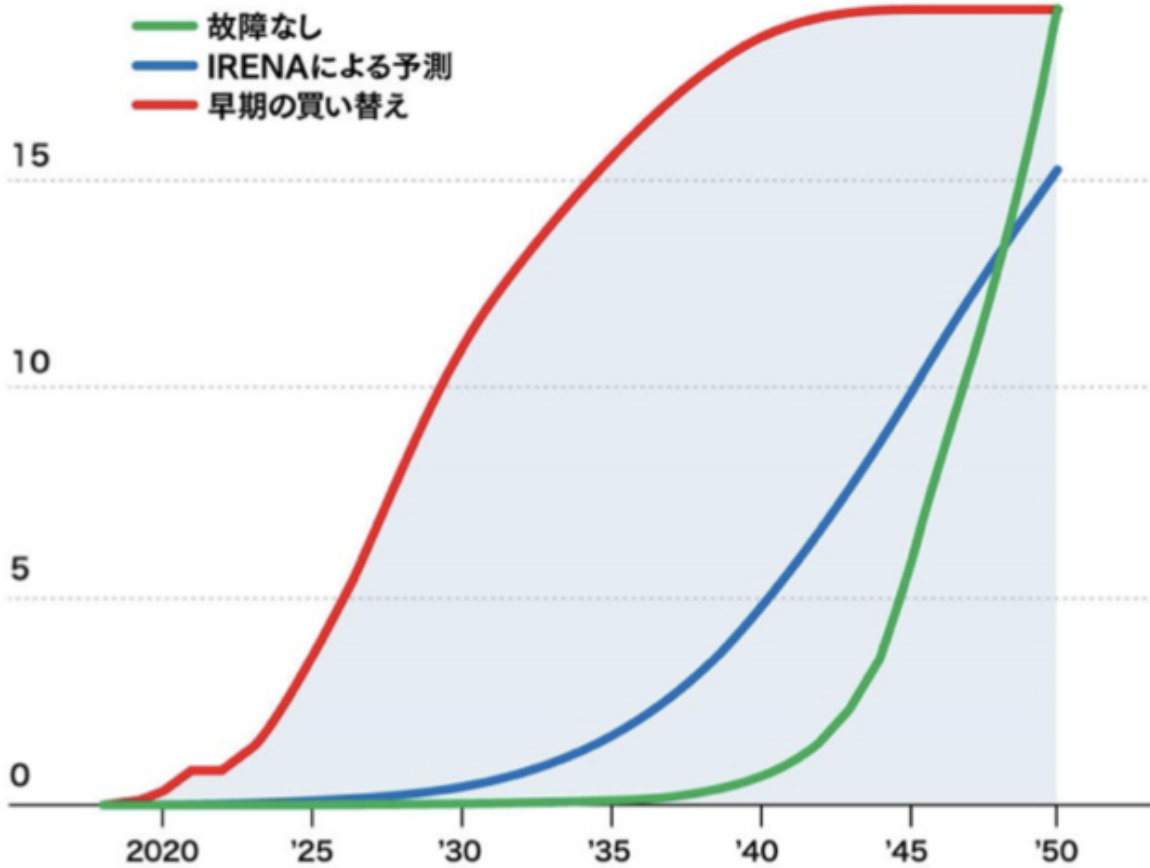
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廃棄物の累計
 (発電容量ベース)

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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?? ?? · Thursday, July 6th, 2023



Pixelci/iStock

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?? ?? · Tuesday, July 4th, 2023



xijian/iStock

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

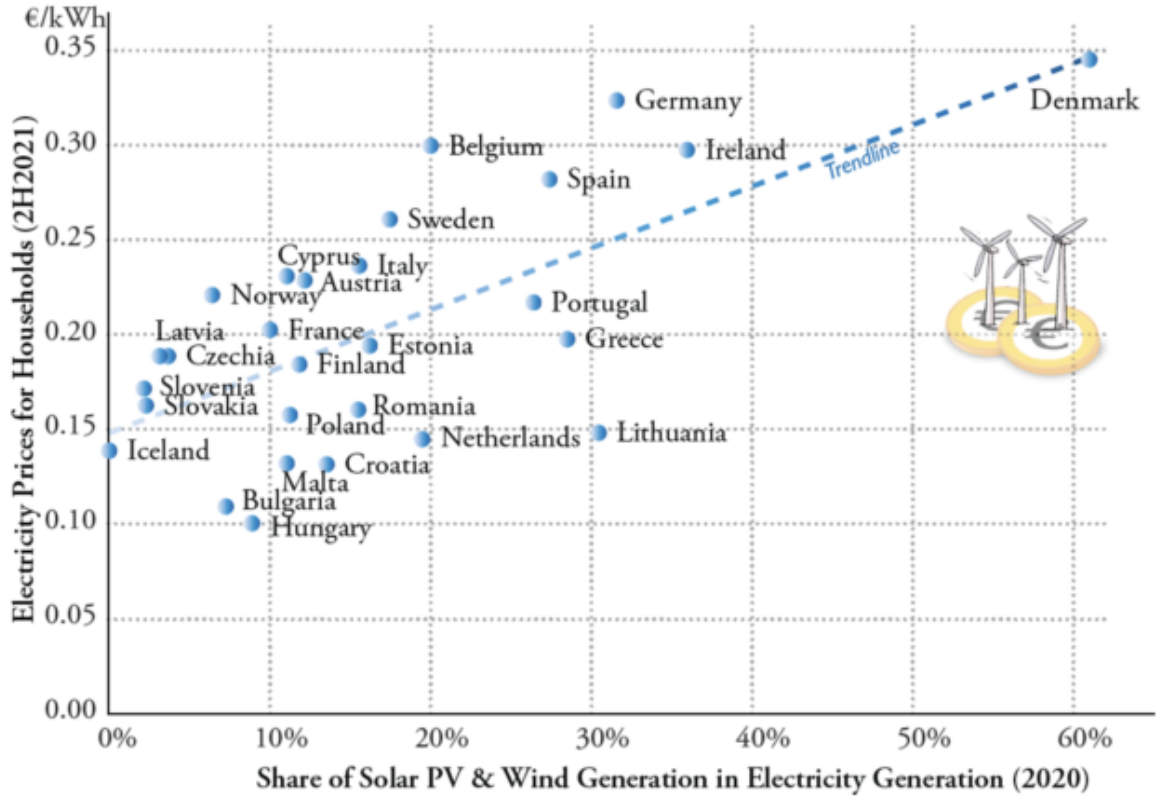
A Critical Assessment of the IEA’s Net Zero Scenario, ESG, and the Cessation of Investment in New Oil and Gas Fields.

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

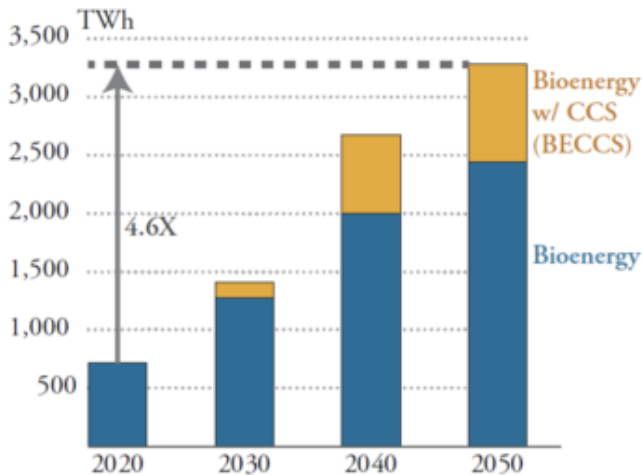


Source: Energy Policy Research, Eurostat, IEA

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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)

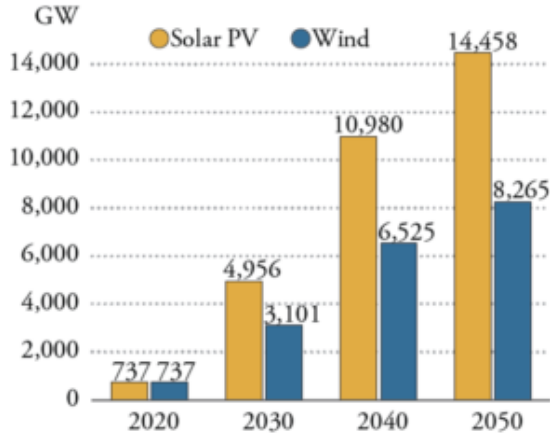
Figure 24. Global Land Requirements for Bioenergy for Electricity Generation in NZE



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

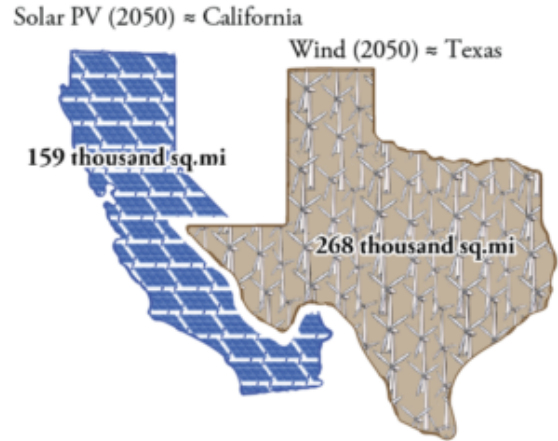
Batt Odgerel, Lucian Pugliaresi, Michael Lynch 38

Figure 25. Global Solar and Wind Capacity in NZE



Source: IEA, *Net Zero by 2050* (2021)

Figure 26. Global Land Requirements for Solar/ Wind Farms in NZE



Source: Energy Policy Research based on NZE
Assumes sufficient/optimal grid infrastructure (transmission, storage) and current rate of efficiency

	万 km2	日本=1
メキシコ	197	5.2
フランス	55	1.5
カリフォルニア	42	1.1
テキサス	70	1.8
日本	38	1.0

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PV???1??
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????????COP28????????????????????

?? ? · 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?????

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?????COP27?????LMDC?????
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GST?????3?????

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GST?????IPCC?6?????
?????1.5?????GST?2025?????
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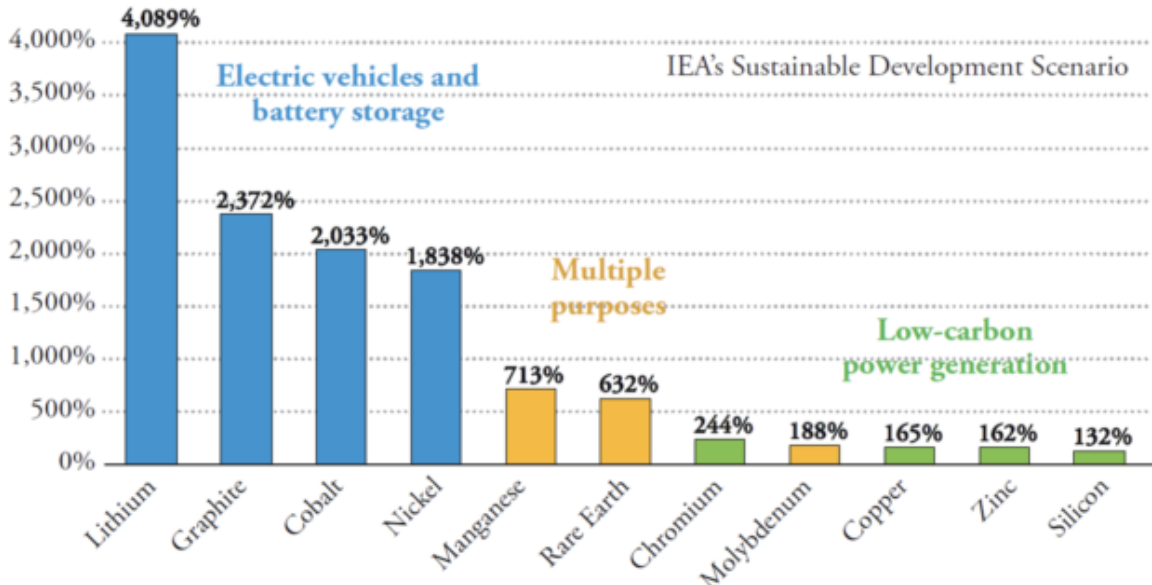
?????2024?????
??2020?????1000?????2030?????6?????
?????GST?????

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

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

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

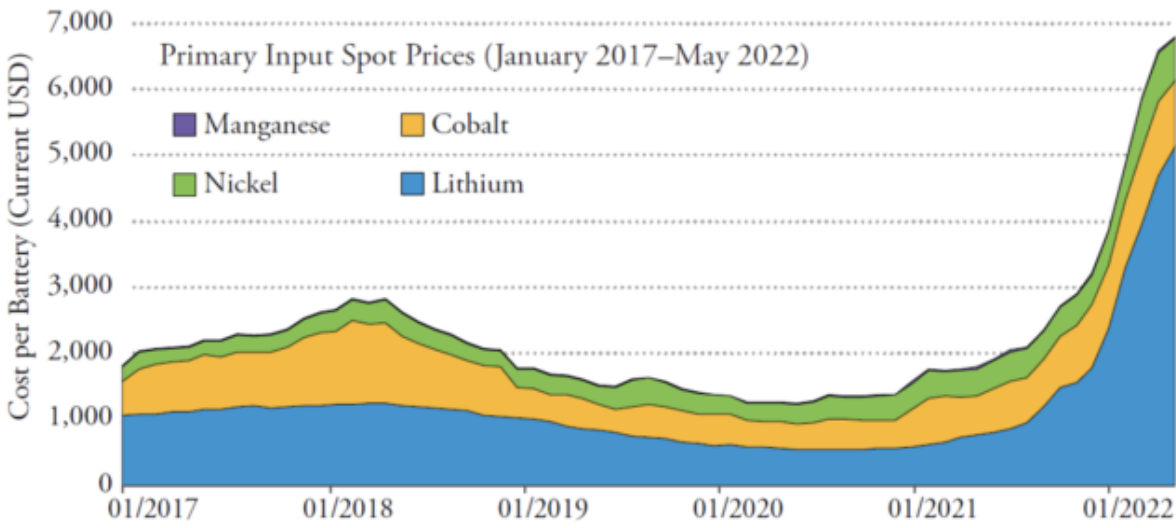
Mineral/Metal	NMC811	NMC523	NMC622	NCA+	LFP
Lithium	5	7	6	6	6
Cobalt	5	11	11	2	0
Nickel	39	28	32	43	0
Manganese	5	16	10	0	0
Graphite	45	53	50	44	66
Aluminum	30	35	33	30	44
Copper	20	20	19	17	26
Steel	20	20	19	17	26
Iron	0	0	0	0	41

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????????????????
 100????????????????????EV????????????????????

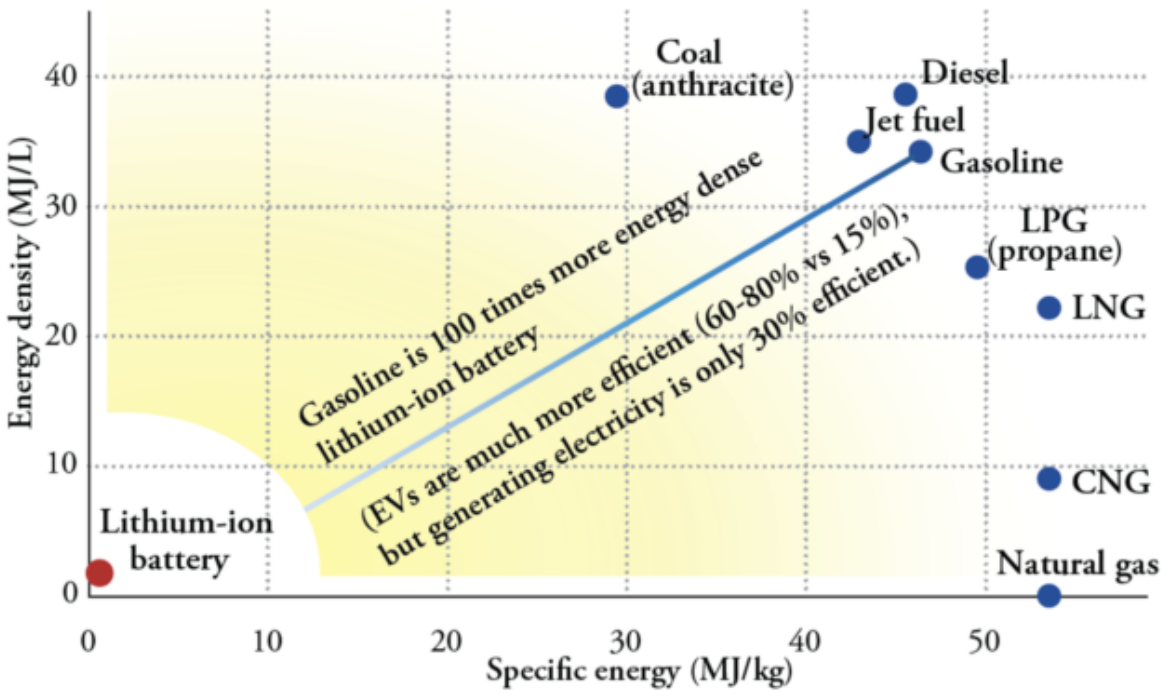
Figure 34. Tesla Battery Cost Based on Monthly Average



Source: Energy Policy Research, LME Monthly Data

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



Source: Energy Policy Research, various sources

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 2027?2028??

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?? ?? · Sunday, July 2nd, 2023



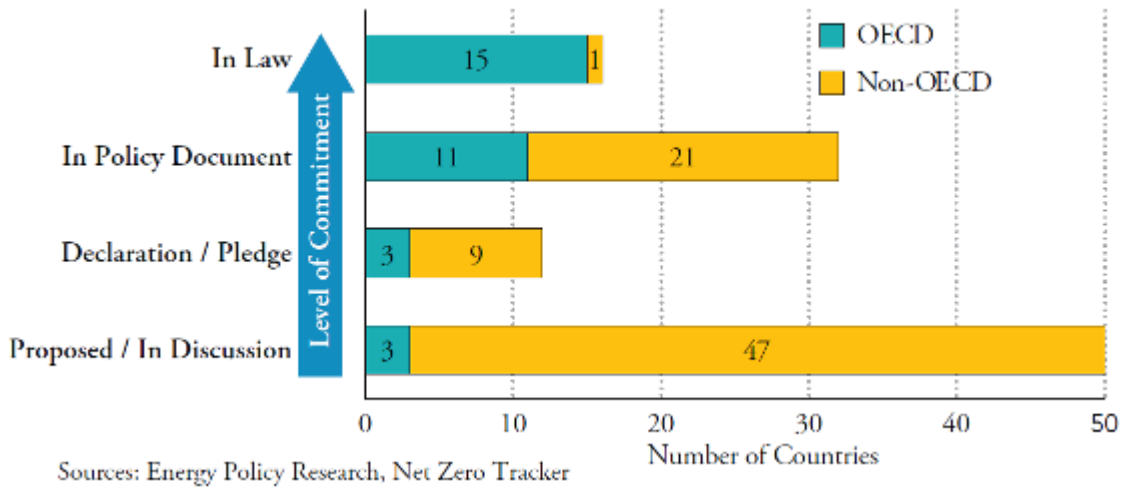
A Mokhtari/iStock

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

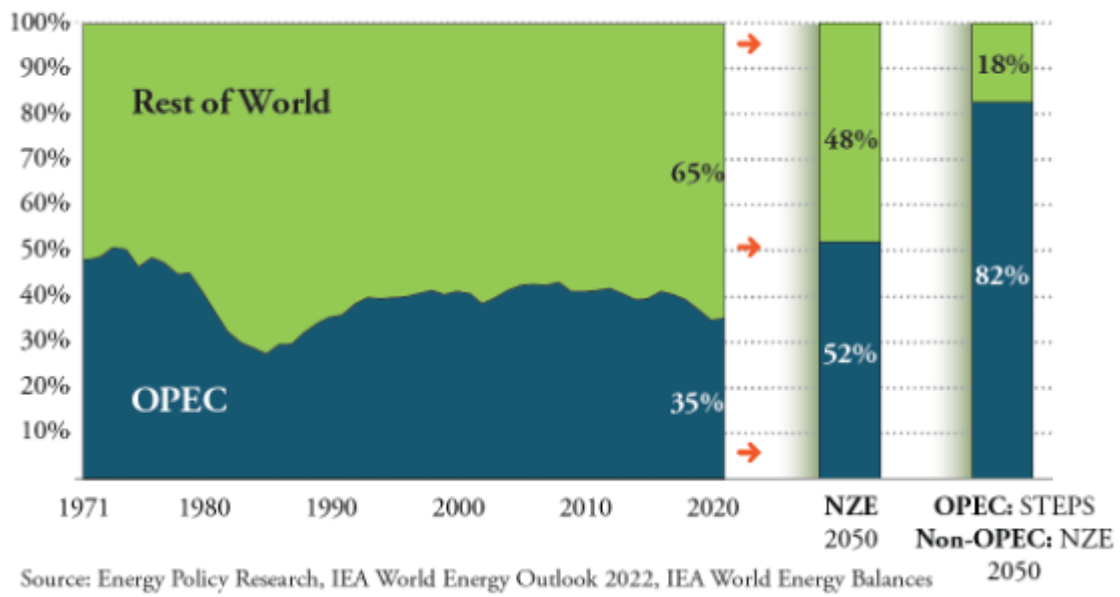


IEA NZE OPEC 35% 52% 1973

NZE OPEC

OPEC NZE STEPS OPEC 82%

Figure 17. OPEC Share of Global Oil Production

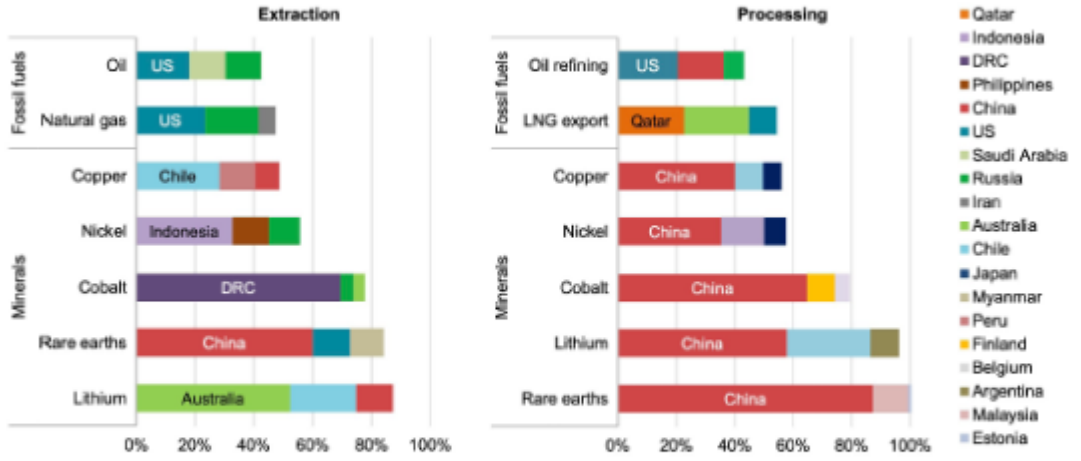


??OPEC??

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