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?? ?? · Monday, December 5th, 2022



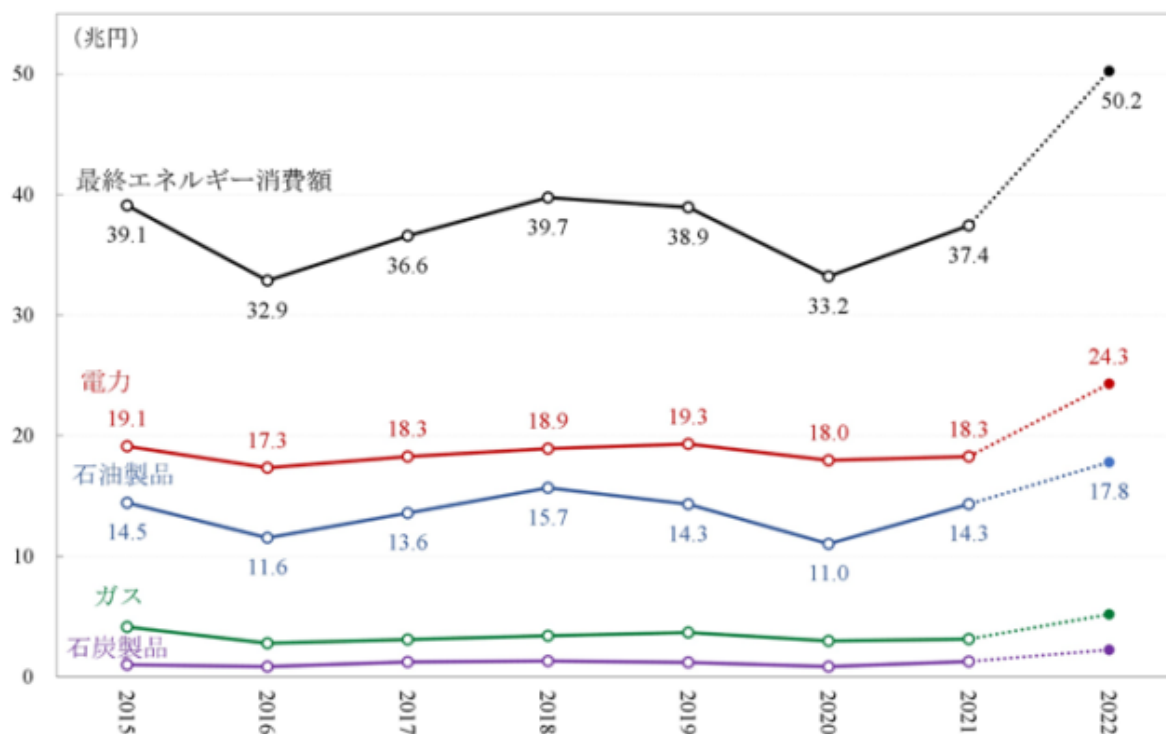
Daniele Mezzadri/iStock

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エネルギーコストの年次動向

- 2022暦年の最終エネルギー消費額（予測値）は50.2兆円、前年差で12.8兆円（前年比34.2%）の増加見込み。
- 2022暦年の電力消費額（予測値）は24.3兆円、前年差で6.0兆円（前年比33.1%）の増加見込み。



エネルギーコスト・モニタリング (ECM) ECM_JPN_202211 © 2022 慶應義塾大学産業研究所 野村研究室

単位：兆円。注：観測期間は2015年—2021年。2022年値は2022年10月値までを反映した予測値。

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

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

?? ?? · Thursday, December 1st, 2022



y-studio/iStock

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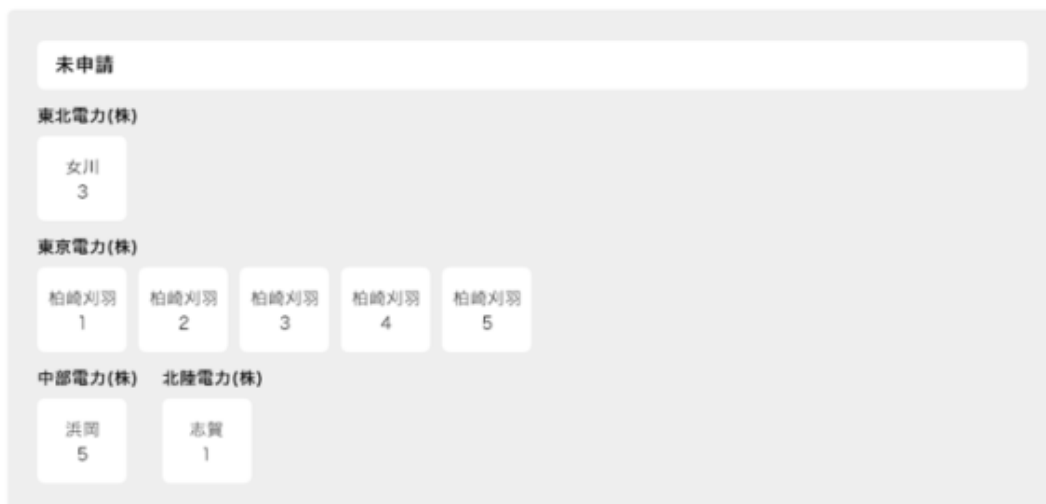
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????COP??????

?? ?? · Tuesday, November 29th, 2022

COP27????????1??COP????????????????????C
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dinn/iStock

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Posted in , | No Comments »

CO210

Monday, November 28th, 2022



Michael Piepgras/iStock

10CO2

ラベル	用途	項目		備考
A	住宅用	製造時CO2	2190.0	
B	住宅用	年間CO2削減量	531.0	設備利用率13.8%、電力のCO2排出係数は2020年の値(0.441)
C	住宅用	CO2回収年数	4.1	C=A/Bとして計算
D	メガソーラー	製造時CO2	3070.0	過積載率40%
E	メガソーラー	年間CO2削減量	662.0	設備利用率17.2%、電力のCO2排出係数は2020年の値(0.441)
F	メガソーラー	森林破壊CO2(建設時)	604.0	2ヘクタールを想定
G	メガソーラー	森林破壊CO2(年間)	17.6	2ヘクタールを想定
H	メガソーラー	CO2回収年数	5.7	H=(D+F)/(E-G)として計算
I	住宅用	CO2回収年数	7.3	電力のCO2排出係数を2030年の値(0.250)とした。I=C・(250/441)として計算
J	メガソーラー	CO2回収年数	10.1	電力のCO2排出係数を2030年の値(0.250)とした。J=H・(250/441)として計算

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ricochet64/iStock

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?? ?? · Friday, November 25th, 2022

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metamorworks/iStock

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	2020年	2030年(1)	設備稼働年数	設備利用率	2030年(2)
原子力	11.5円	11.7円	40年	70%	14.4円
太陽光（事業用）	12.9円	8.2～11.8円	25年	17.2%	18.9円
太陽光（住宅用）	17.7円	8.7～14.9円	25年	13.8%	
陸上風力	19.8円	9.9～17.2円	25年	25.4%	18.5円
洋上風力	30.3円	26.1円	25年	30%(33.2%)	
石炭火力	12.5円	13.6～22.4円	40年	70%	13.9円
LNG火力	10.7円	10.7～14.3円	40年	70%	11.2円

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	原子力発電	石炭火力発電	LNG火力発電
CO ₂ 対策費	0	3.9	1.8
社会的費用	1.9		
（事故リスク対応費用）	0.6		
（政策経費）	1.3		
発電原価	9.6		
（燃料費）	1.7	4.2	6.4
（追加的安全対策費）	1.3		
（運転維持費）	3.3	2.3	1.2
（資本費）	3.3	2.0	1.3
合 計	11.5円kWh	12.5円kWh	10.7円kWh

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COP27????????14????????

?? ?? · Wednesday, November 23rd, 2022



imagedepotpro/iStock

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The cover decision, known as the [Sharm el-Sheikh Implementation Plan](#), highlights that a global transformation to a low-carbon economy is expected to require investments of at least USD 4–6 trillion a year. Delivering such funding will require a swift and comprehensive transformation of

??4?6????????GDP??

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22. *Notes with grave concern*, according to information in the contributions of Working Groups II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, the growing gravity, scope and frequency in all regions of loss and damage associated with the adverse effects of climate change, resulting in devastating economic and non-economic losses, including forced displacement and impacts on cultural heritage, human mobility and the lives and livelihoods of local communities, and *underlines* the importance of an adequate and effective response to loss and damage;

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and *also welcomes* the adoption of decisions -/CP.27¹² and -/CMA.4,¹³ on matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change;

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30. *Highlights* that about USD 4 trillion per year needs to be invested in renewable energy up until 2030 to be able to reach net zero emissions by 2050,¹⁸ and that, furthermore, a global transformation to a low-carbon economy is expected to require investment of at least USD 4–6 trillion per year;¹⁹

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32. *Notes with concern* the growing gap between the needs of developing country Parties, in particular those due to the increasing impacts of climate change and their increased indebtedness, and the support provided and mobilized for their efforts to implement their nationally determined contributions, highlighting that such needs are currently estimated at USD 5.8–5.9 trillion²⁰ for the pre-2030 period;

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7. *Decide to establish new funding arrangements* for assisting developing countries that are particularly vulnerable to the adverse effects of climate change, *in responding to loss and damage, including* with a focus on addressing loss and damage by providing and assisting in *mobilizing new and additional resources*, and that these new arrangements complement and include sources, funds, processes and initiatives under and outside the Convention and the Paris Agreement;

8. *Also decide*, in the context of establishing the new funding arrangements referred to in paragraph 2 above, to *establish a fund for responding to loss and damage whose mandate includes a focus on addressing loss and damage*;

????????????????????Transitional

Committee????????COP28??10????????14????????

III. Composition

4. The Transitional Committee shall have 24 members, to be nominated no later than 15 December 2022, comprising *10 members from developed country Parties and 14 members from developing country Parties*, with geographical representation as follows:

- a) Three members from Africa, including a representative of the President of COP 27;
- b) Three members from Asia and the Pacific, including a representative of the incoming President of COP 28;
- c) Three members from Latin America and the Caribbean;
- d) Two members from small island developing States;
- e) Two members from the least developed countries;
- f) One member from a developing country Party not included in the categories listed above.

??COP28????UAE????????????????????????????1????
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COP21 in 2015 in Paris. The \$1 trillion per year is a very different concept – it is a requirement based on an analysis of the investment and actions necessary and the domestic finance potentially available, for an internationally agreed and vital purpose. The \$1 trillion is not the new \$100 billion. The latter was negotiated, not deduced from analyses of what is necessary for a purpose.

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Rich countries promised developing nations US\$100 billion a year in climate finance by 2020.

Year	Public finance (US\$ billion)	Private finance (US\$ billion)	Multilateral development banks (US\$ billion)	Total (US\$ billion)
2013	22	16	14	52
2014	23	21	18	62
2015	26	16	0	42
2016	28	19	11	58
2017	27	28	16	71
2018	32	30	16	78
2019	29	34	17	80
2020	Target	Target	Target	Target for 2020

*Including financing through multilateral development banks.

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?? ?? · Tuesday, November 22nd, 2022



Olga Burkova/iStock

????????COP27????????COP26????????????????????????????????
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1997?????????????????????????(mitigation)????????????
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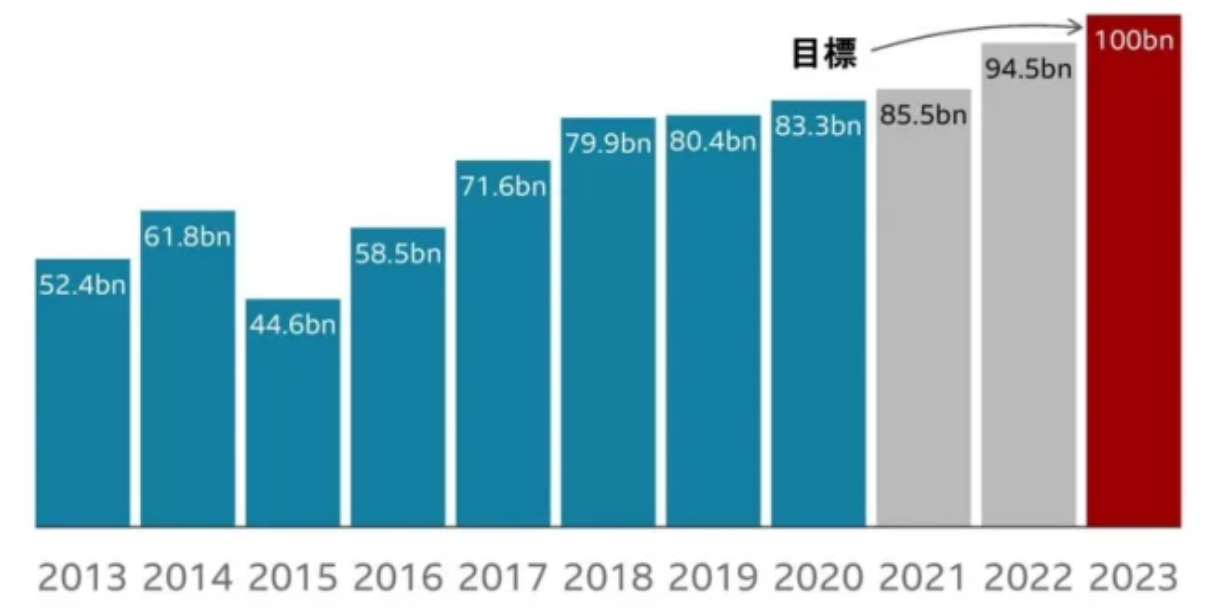
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気候変動対策の支援額 先進国が資金集めと供給を行った額(単位:10億米ドル)



2021年と2022年のデータはOECDによるシナリオの平均値
出典:経済協力開発機構(OECD) BBC

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

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?? ?? · Saturday, November 19th, 2022

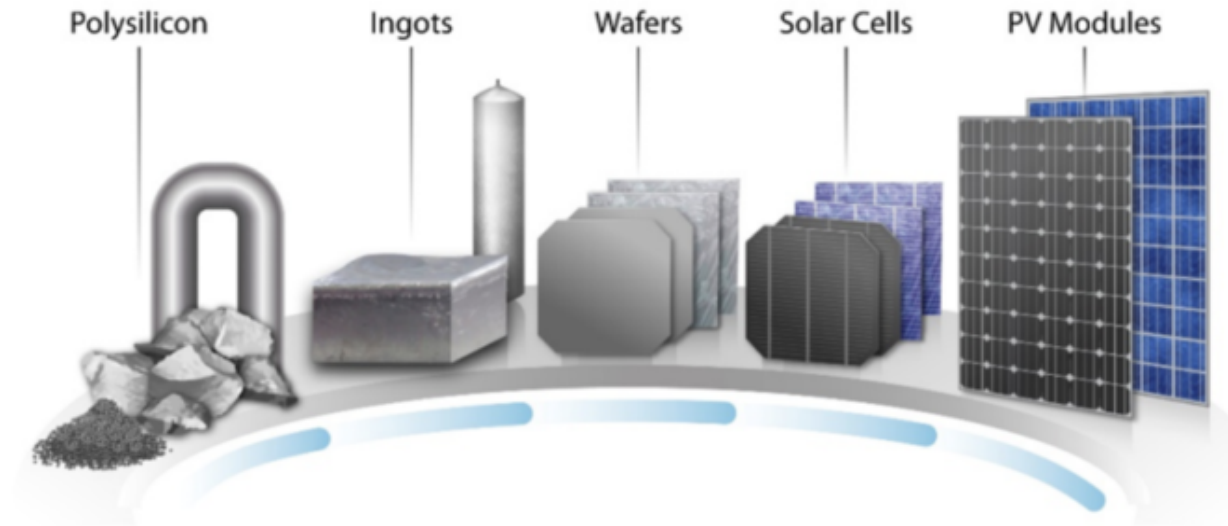


chuyu/iStock

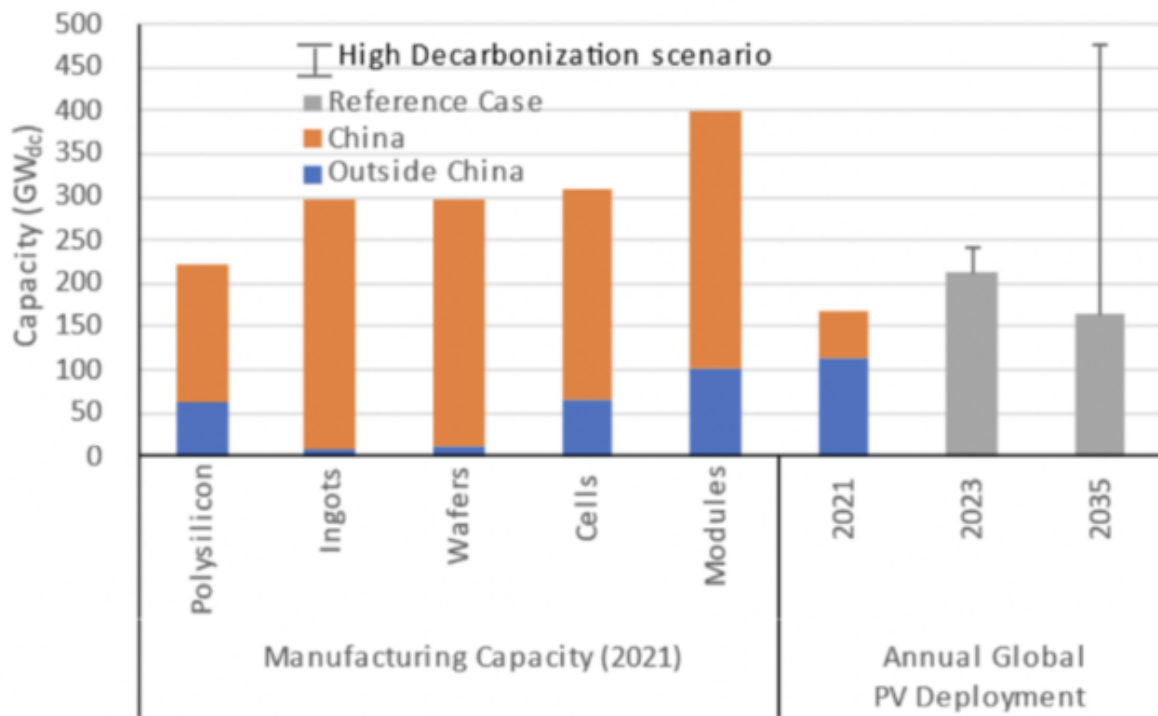
????????????????(Sins of a solar empire)??10????CO2??????????????

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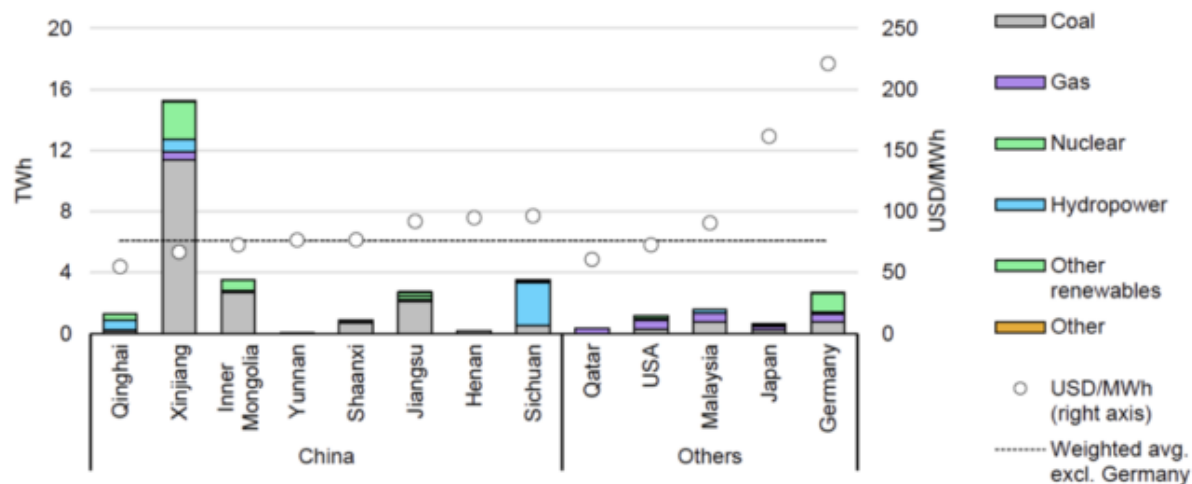
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2 coal units

2 coal units

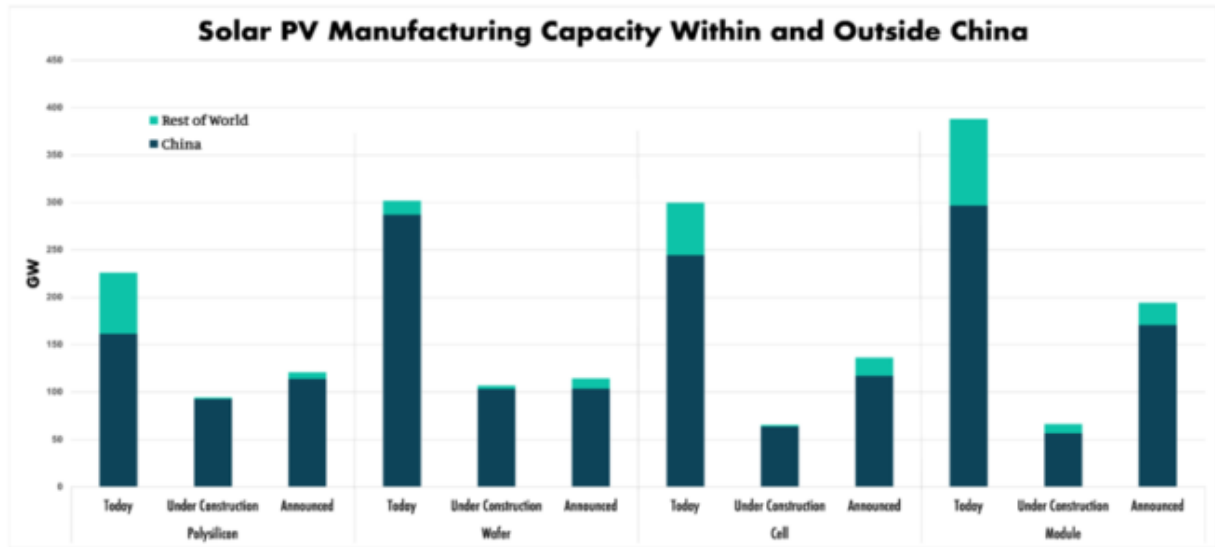
Solar-grade polysilicon plant

Coal conveyor to factory

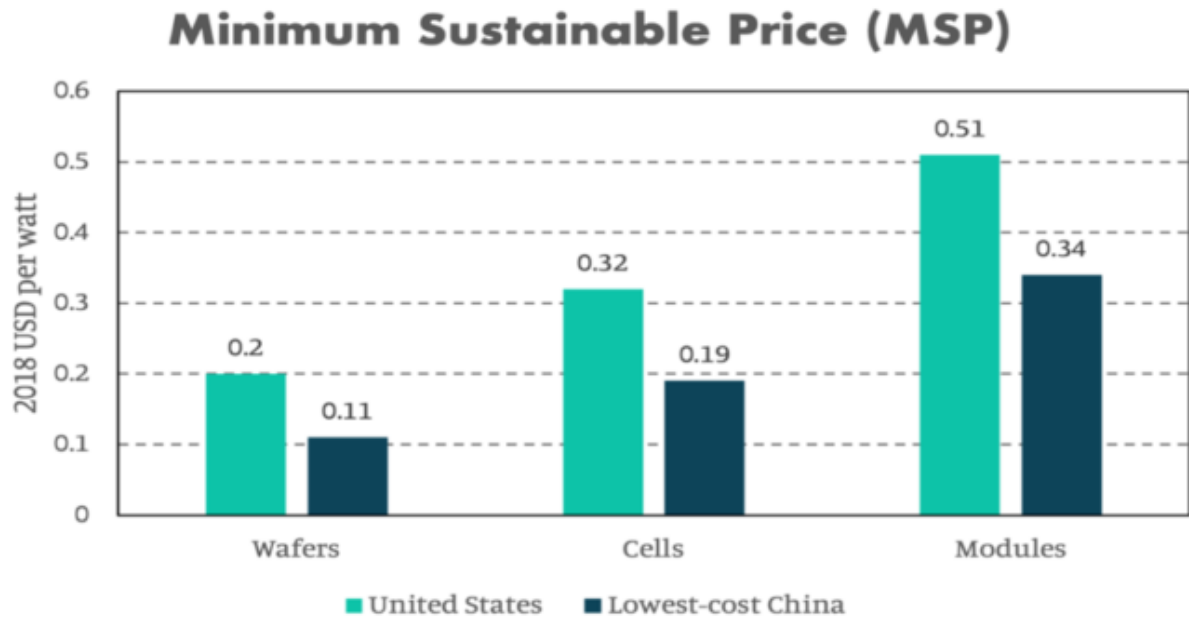
Open-pit coal mining

	CO ₂ payback time for panel installed in California	CO ₂ payback time for panel installed in China
High CO ₂ intensity solar PV	9.8 years	3.2 years
Low CO ₂ intensity solar PV	2.6 years	0.8 years

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?? ? · Saturday, November 19th, 2022



Nastco/iStock

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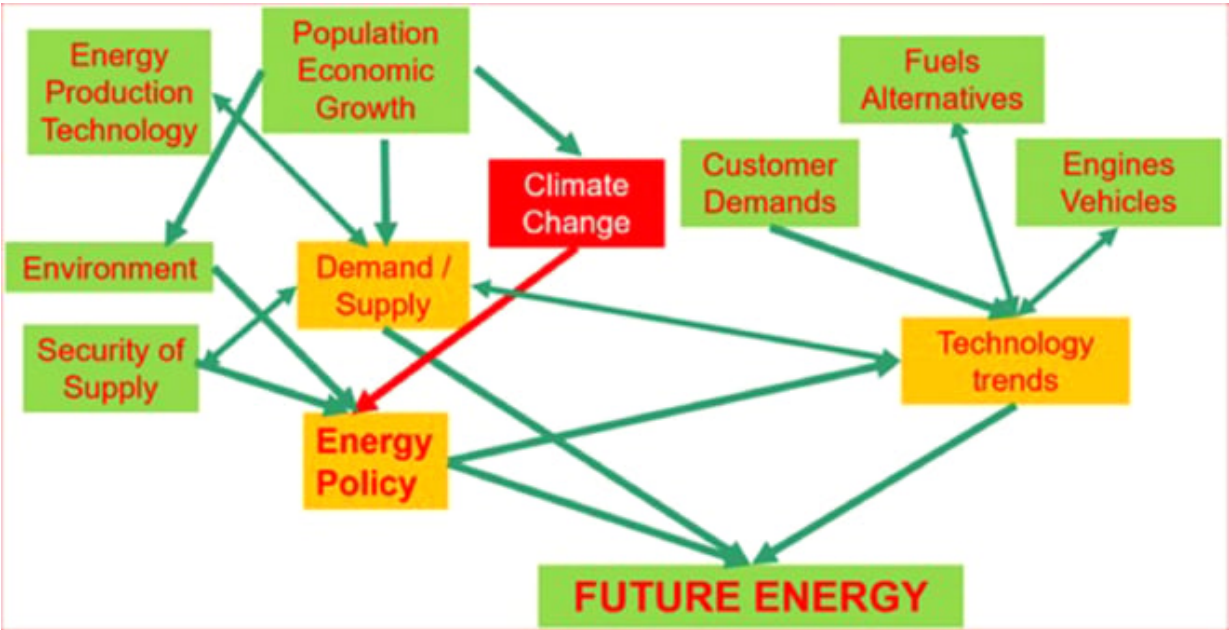
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EJ????????????????1.75%????????

Table 1. Primary energy and electricity sources in exajoules, EJ (10^{18} joules) and installed wind and solar capacity in GW for 2021 [7]. Electricity generation converted to EJ from TWh. 1 EJ= 277.8 TWh.

Country	World	China	U.S.A	India	UK
Oil, EJ	184.21	30.6	35.33	9.41	2.5
Natural Gas, EJ	145.35	13.63	29.76	2.24	2.77
Coal, EJ	160.1	86.7	10.57	20.09	0.21
Total fossil fuel, EJ	489.66	130.93	75.66	31.74	5.48
Actual delivered Wind, EJ	6.7	2.36	1.38	0.245	0.232
Actual delivered Solar, EJ	3.72	1.177	0.594	0.246	0.045
Nuclear, EJ	25.31	3.68	7.4	0.4	0.41
Hydro, EJ	40.26	12.25	2.43	1.51	0.06
Other, EJ	29.5	7.253	5.306	1.289	0.953
Total Primary Energy, EJ	595.15	157.65	92.97	35.43	7.18
Electricity Generation					
Installed wind capacity, GW	824.9	329	132.7	40.1	27.1
Installed Solar Capacity, GW	843.1	306.4	93.7	49.3	13.7
Total electricity generated, EJ	102.47	30.72	15.86	6.173	1.116

Other includes bioenergy, geothermal etc.

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[illegible]

?1?????????????EJ?10¹⁸joules?????T?10¹²Wh??EJ?????1 EJ =
 277.8TWh????????????????????????????????1J =

2.778×10⁻⁷kWh???10¹⁸????????????????????????????????

????????1kWh????????????????????1kWh = 860.6kcal =
3.6kJ????100????????????????????100????????????????40????
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????1kWh???860.6kcal????860.6kcal???1kWh????????Wh????
????J???cal????????????????

????????2020????????????????????????????????IEA???
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cal????41.5%????IEA????10????33?
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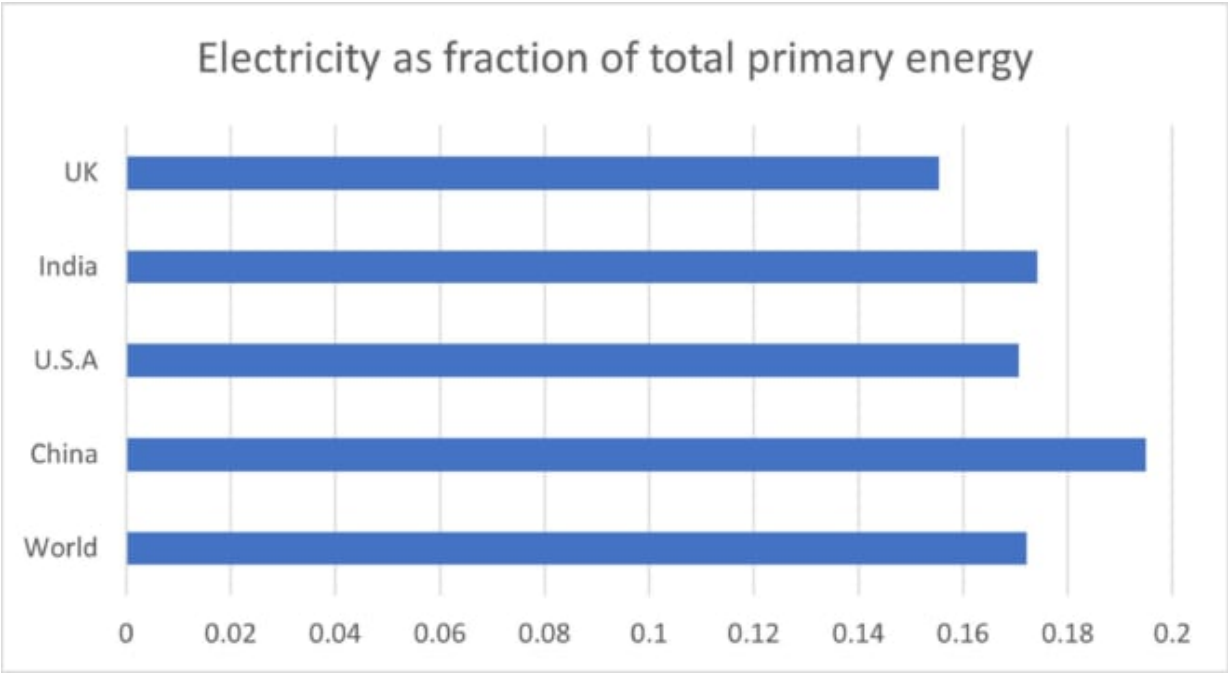
????????BP????1kWh = 860.6kcal =
3.6kJIEA????41.5%????0.415???1kWh = 2074kcal =
8.67kJ????0.415????

????????IEA????????????

????1kWh????0
.1?0.33?1.0????

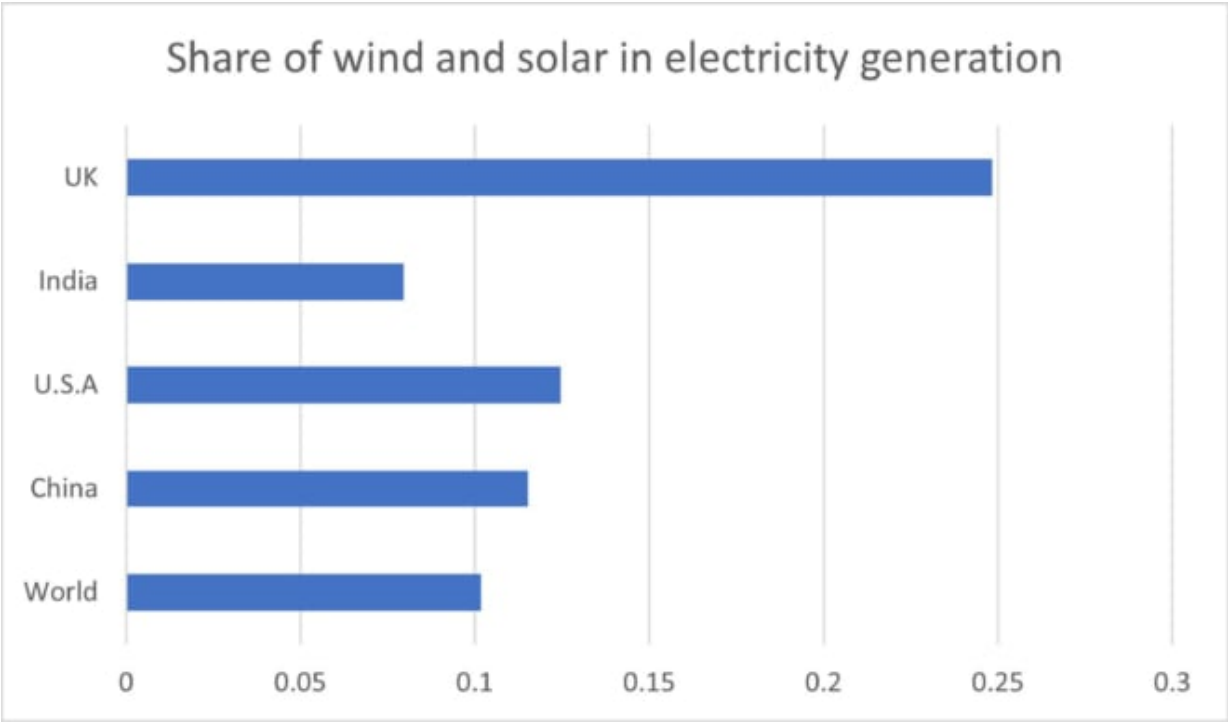
????1????489.66EJ????105.49EJ?254.19EJ????0.415????2.4????5
95.15EJ?743.85EJ????17.7%?=106.49/595.15????34.2%?=254.19
/743.85????

?2????10????2????34.2%????40????



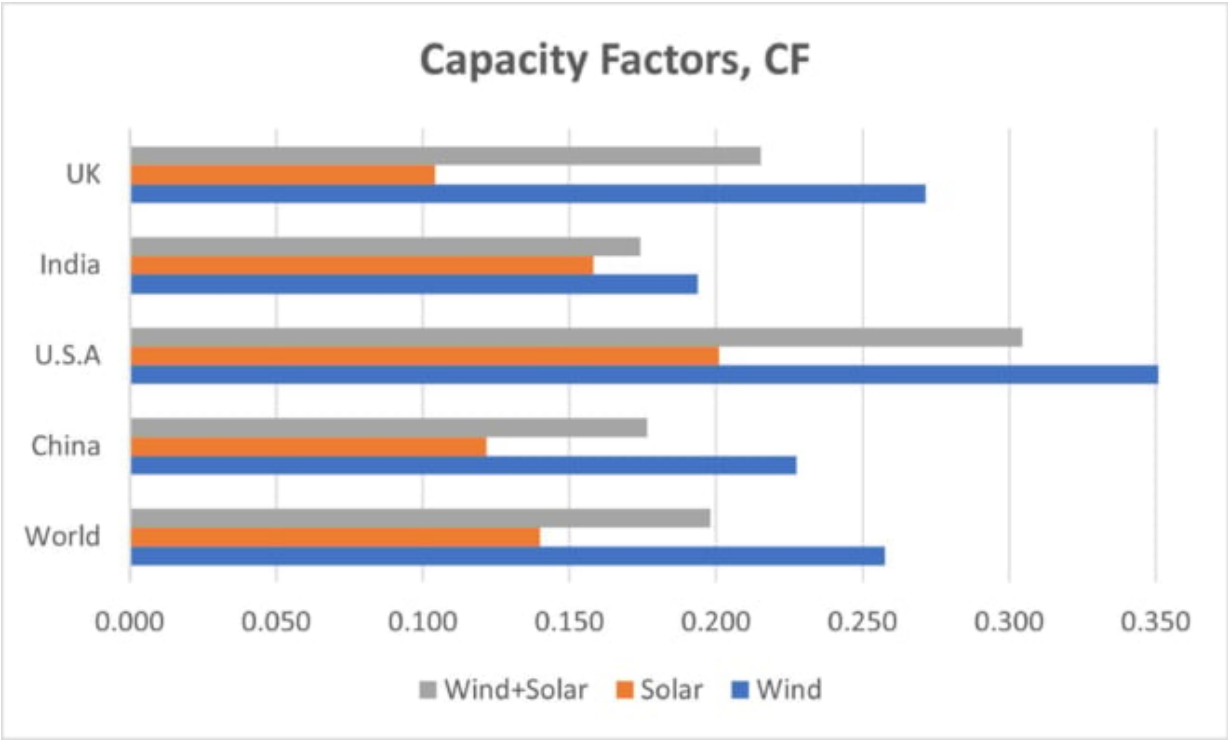
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?3????????????????????????????????????25????????????????????10????????????????CO2????????????????????
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?4????????Capacity
CF??1????????????????????????????????????
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Posted in [???, ???? | No Comments »](#)

140COP27

?? ?? · Wednesday, November 16th, 2022



fergregory/iStock

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A 3D rendering of a wooden block with the text "ECO friendly" on it. The block is made of wood with a visible grain pattern. The text "ECO" is in large, bold, yellow letters, and "friendly" is in smaller, yellow, lowercase letters. Above the block, there are several floating letters and numbers in a 3D font, including "E21", "E17", "E216", "E240", "E128", "E123", and "E12". The background is a solid blue color.

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??2022?11?9??

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2050????????????2030?CO2??

2030?CO2??2030?46????????????????????????????
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?1??????8??CO2????????????????????????????????CO2????????????????
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11?15????????????????????

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

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?? ? · Sunday, November 13th, 2022

???TBS????????????????????????????????YouTube????????????????????

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????????????????????16%????????10%????8.8%????2.3%????0.5%????????
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alle12/iStock

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324????276??(??)????????
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Posted in [???, ????](#) | [No Comments »](#)

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?? ?? ? · Saturday, November 12th, 2022



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

????CO2????????????????0.1?

?? ?? · Thursday, November 10th, 2022



hanibaram/iStock

?2050????????????????????

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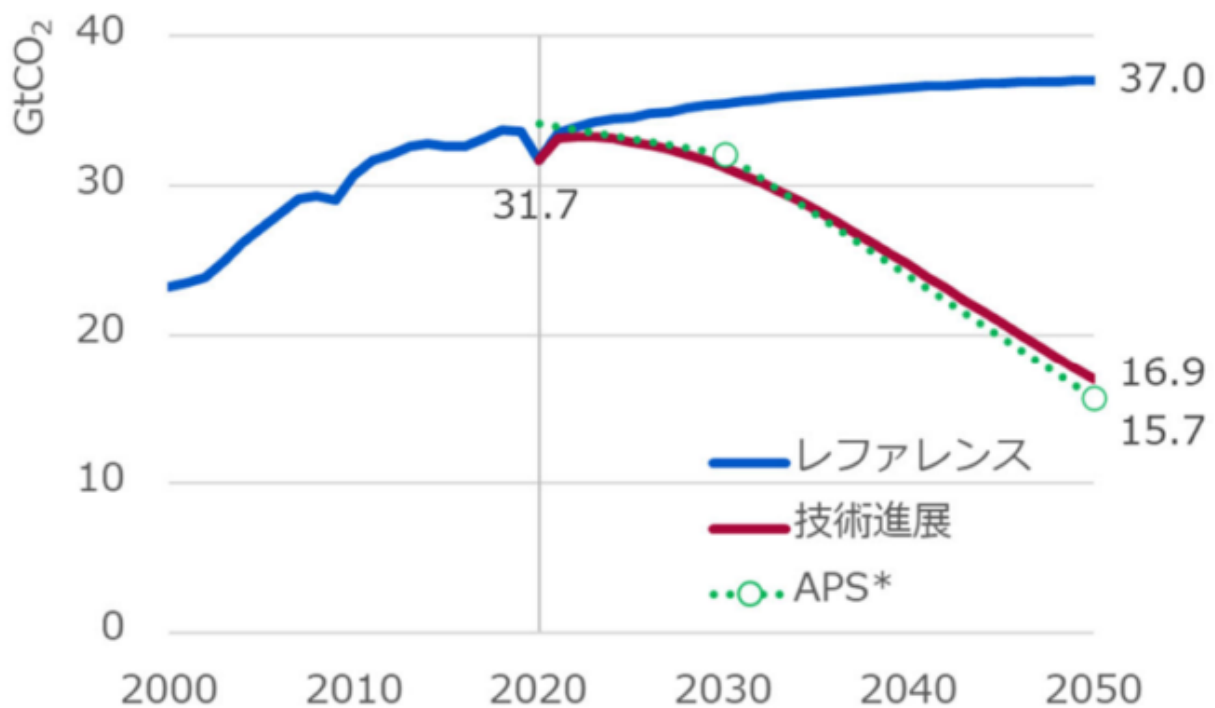
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CO₂????????????????????????????????CO₂????????????????????????????

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エネルギー起源CO₂排出量の見通し



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Posted in ???, ????? | No Comments »

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

?? ?? · Thursday, November 3rd, 2022



bee32/iStock

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

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?? ?? · Monday, October 31st, 2022

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

????????COP27

?? ? · Sunday, October 30th, 2022

11?7??18????????????COP27????1????????COP????17????

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Heiness/iStock

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COP27????????????????????????????????

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COP27????????????????????COP26????????????????????COP27????????????????????
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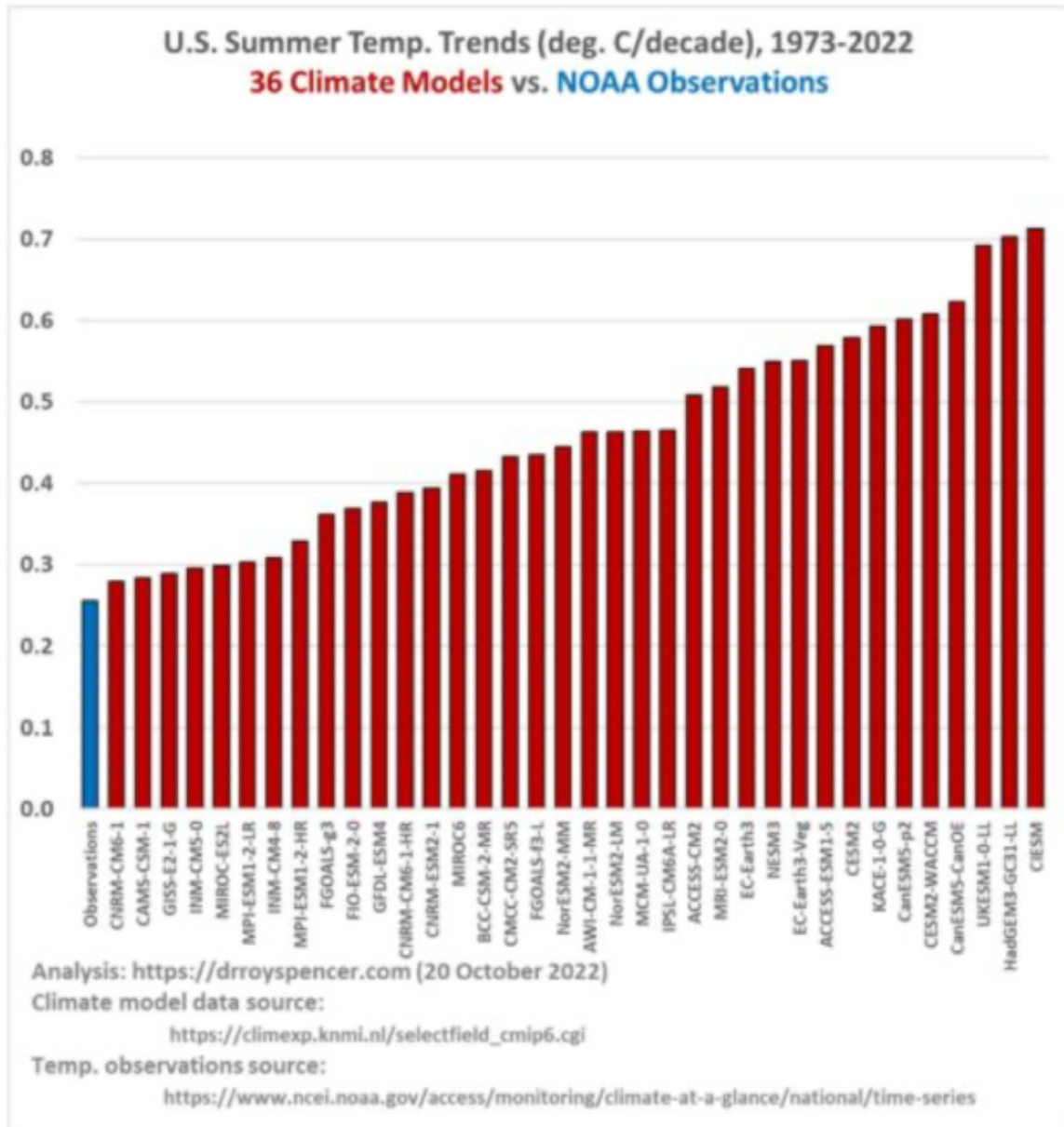
?? ?? · Friday, October 28th, 2022



Tr6/iStock

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Posted in ???, ????? | No Comments »

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

?? ?? · Friday, October 28th, 2022



AleksandrVS/iStock

??21????????????????ESG????????????????????

??21????????????????ESG??????????

ESG??The Epoch Times????????????????????????????????

??19????????NZBA????????????????????

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Research????????????????????ESG????????????????????????????????????
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ESG Watch: Banks’ net-zero pledges in the spotlight at Climate Week New York

????????ESG????????UBS????????

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????UBS????????????????700????585????????

????????BLK????????3????ETF?MMF????8????????BLK????
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AG Paxton Demands BlackRock Account for its Underperforming, Potentially Illegal ?‘ESG’ State Pension Fund Investments

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????????1860????????ESG????8????????ESG????
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Governor Ron DeSantis Eliminates ESG Considerations from State Pension Investments

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

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?? ?? · Thursday, October 27th, 2022



RapidEye/iStock

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Parradee Kietsirikul/iStock

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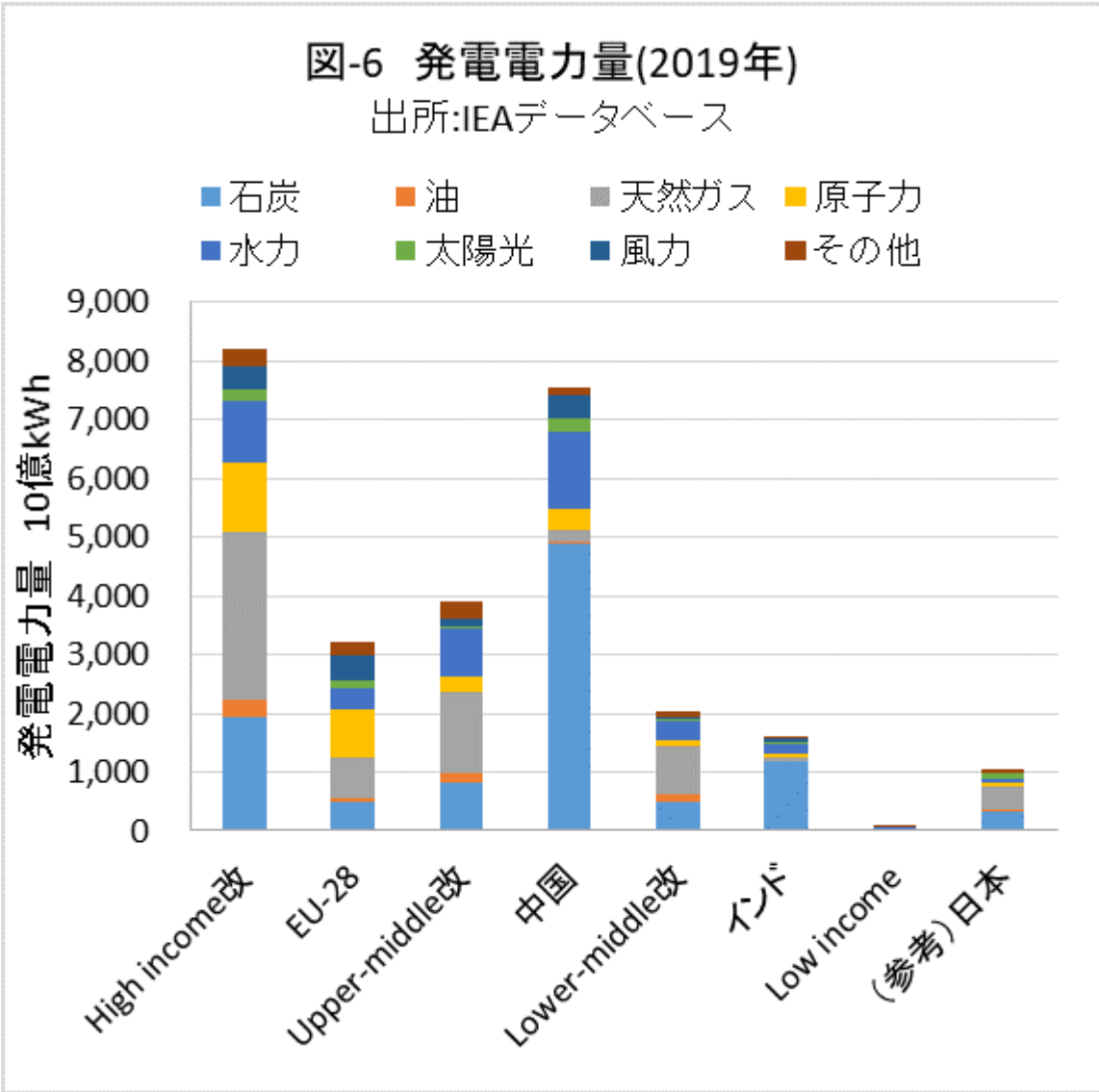
2021?5??GHG?????????????????IEA???2050?????
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50????GHG??

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GHG??-6
?2019??IEA????????????????
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76

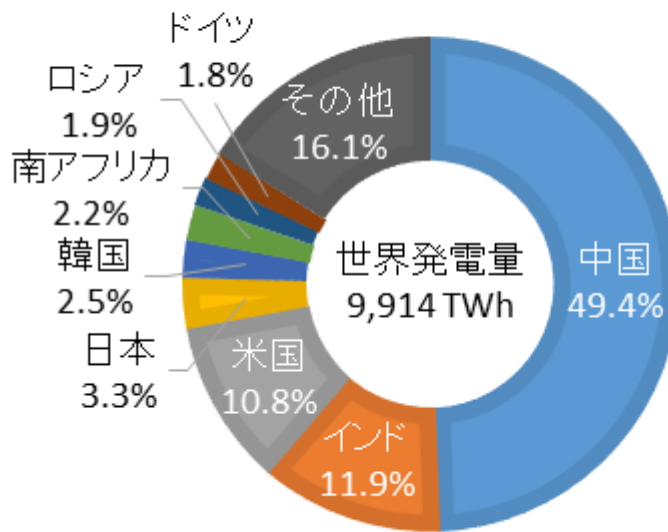
?-6????1????????????65%????????????????????????????????????-2????????G
HG??

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GHG????????????????????????-7????????????????????????????????GHG????????????
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図-7 世界の石炭火力(2019年)

出所: IEAデータ



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????????31.5%????????1970??
 ???GHG??EU-28????????15.
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EU-28????25%?EU????????14%????????????????BRICs????????????????????
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 ???GHG????EU????????????

表-2 太陽光発電と風力発電の総電力量比 %

グループ	太陽光発電	風力発電	合計
High income改	2.6	4.6	7.2
Upper-meddle income改	1.0	3.0	4.1
Lower-middle income改	0.8	1.0	1.8
Low income	0.8	0.6	1.4
EU-28	4.1	13.4	17.5
中国	3.0	5.4	8.4
インド	3.1	4.3	7.4
(参考)日本	6.6	0.7	7.3

2

9% High income-6GHG

GHG capacity factor

EU-2730-35%

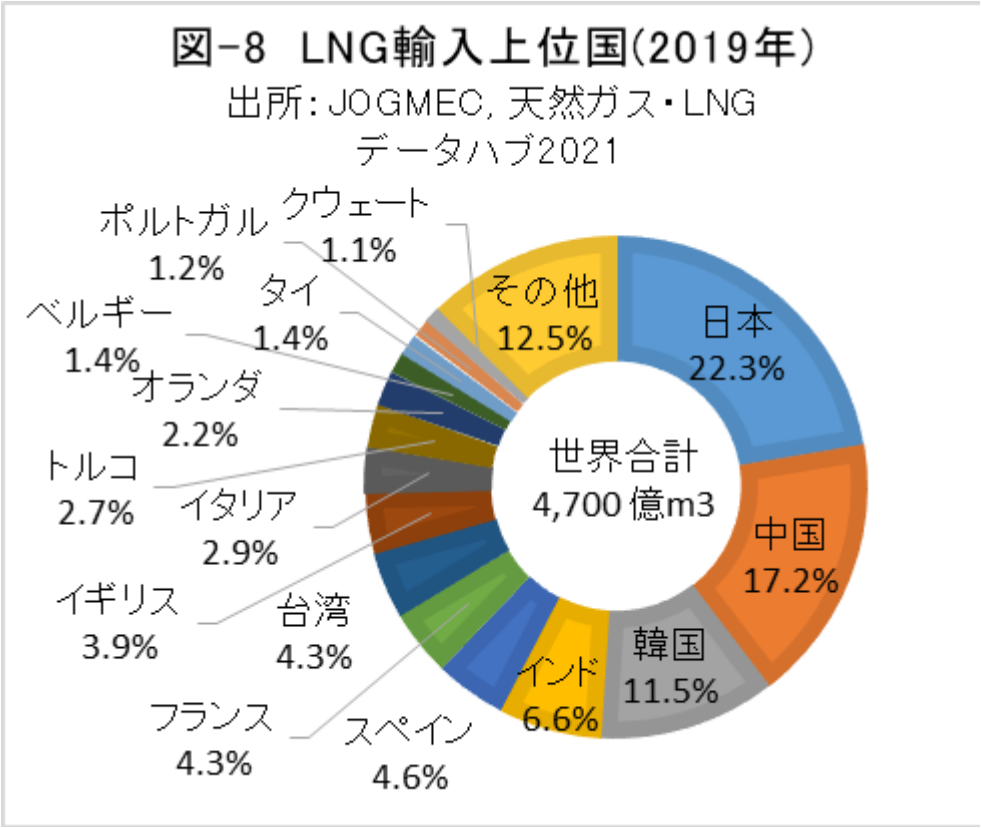
220-30%

Upper-middle income Lower-middle income

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LNG??LNG????????????????LNG????????-8?L
NG????????????????LNG????????????????????????????????



8

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????????GHG?????2.5%????????2050?GHG????????????2030????????????GHG????
????????????????1%????????

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GHG????CO2????CCS????????????????????CCS????????????????????
??GHG?
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????2050????????2080????????30????????????????GHG????????
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GHG????????????????????????????GHG????1%????????GHG????????
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Posted in [????????](#), [???](#) | [No Comments »](#)

2050???????????? ?

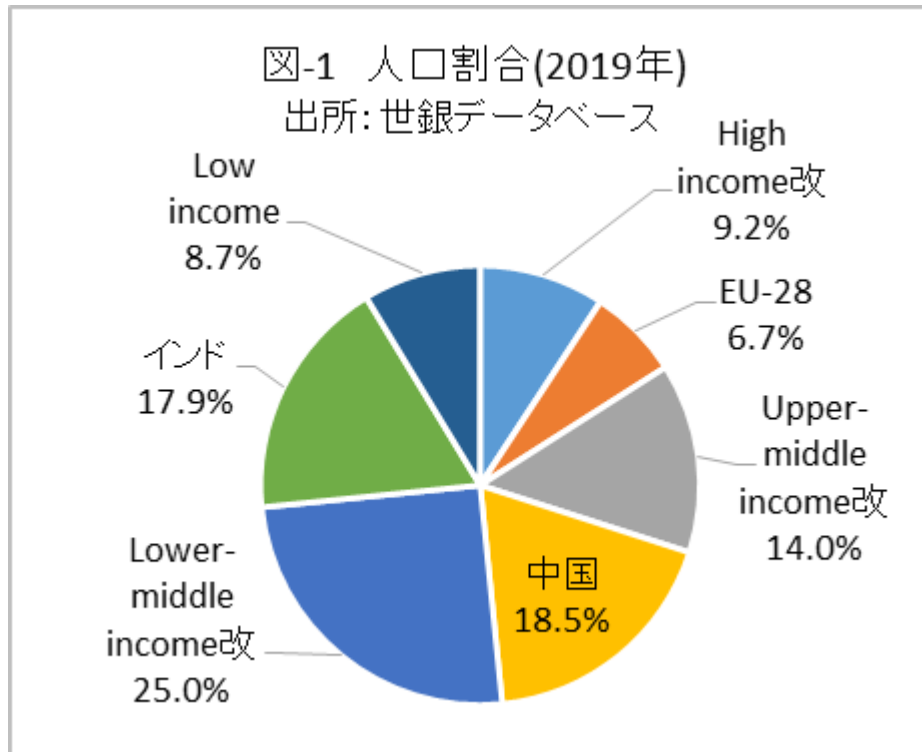
GEPR??? · Sunday, October 23rd, 2022

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?????EU-28?????????High income?????????High income?????????Upper-middle income?Lower-middle income?????????

?????EU-28???High income?????????Upper-middle income?Lower-middle income?????Low income?????????

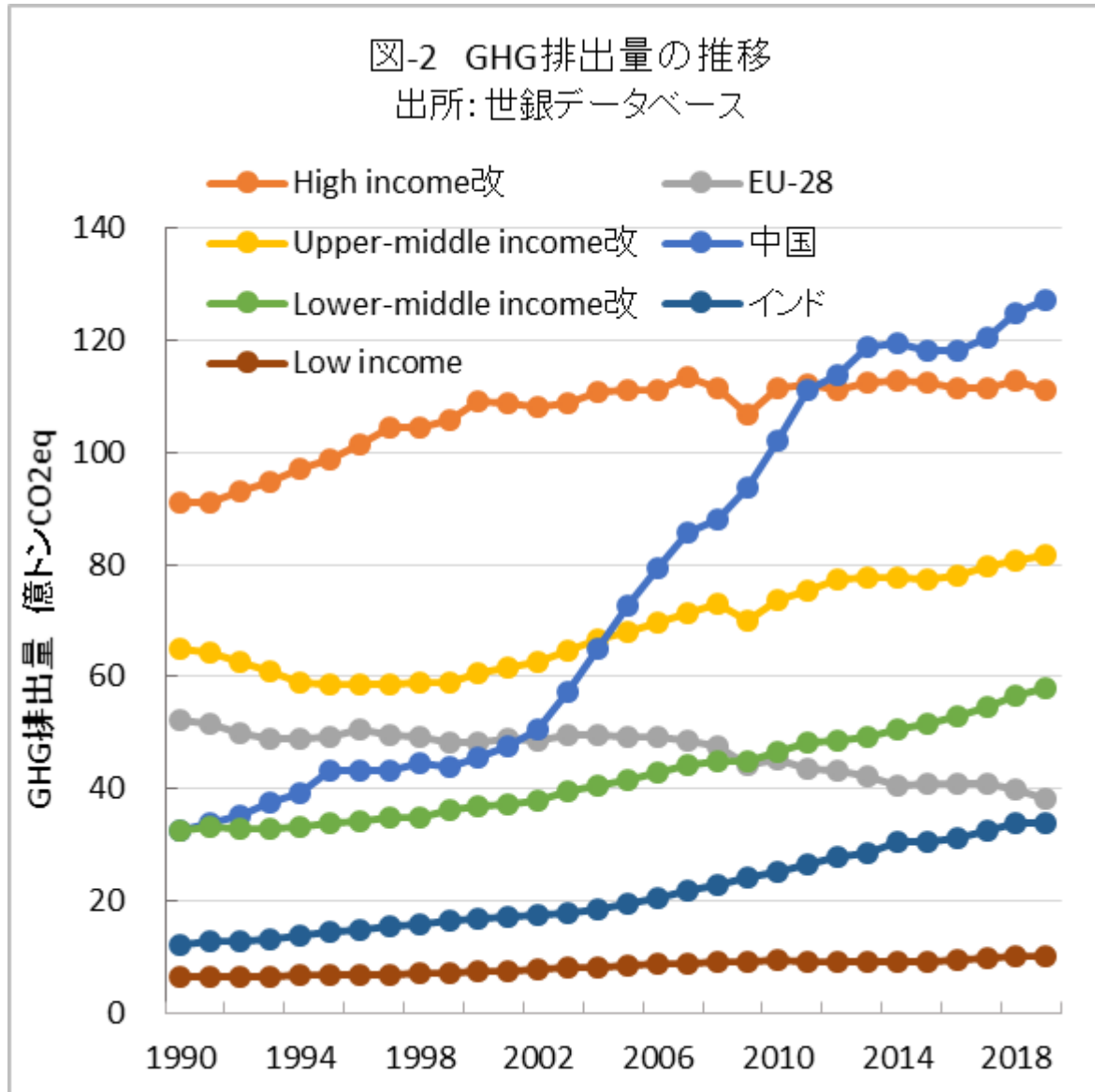
?-1?????2019?????????16%?????



?1

?GHG????2/3?????

?-2?????GHG?????????GHG?????????EU-28?GHG?????????High income??2010?????????

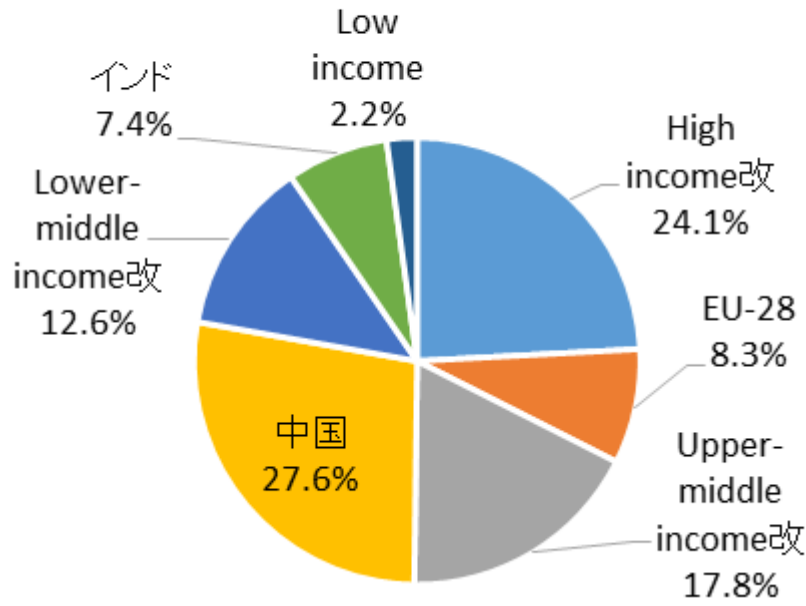


22

?-3?2019??GHG????????????????1/3????????????2/3????????????GHG????????2%??
????????????GHG????????????????????

図-3 GHG排出量割合(2019年)

出所: 世銀データベース



3

2050 GHG EU-28 GHG GHG
GHG EU GHG EU
GHG

High

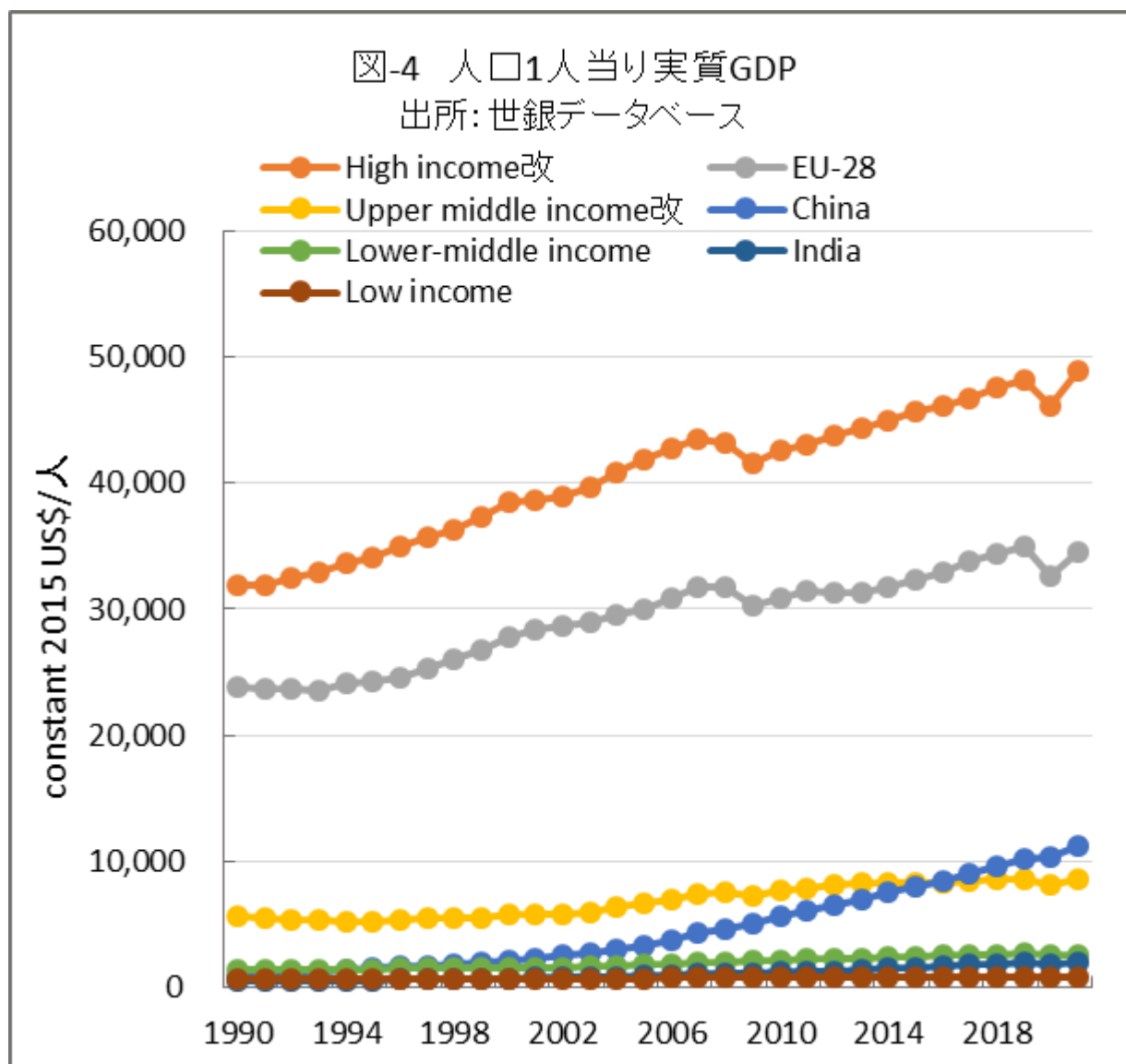
income 2019 GHG 90%
2060 2050

GHG
GHG

GHG

2050 GHG

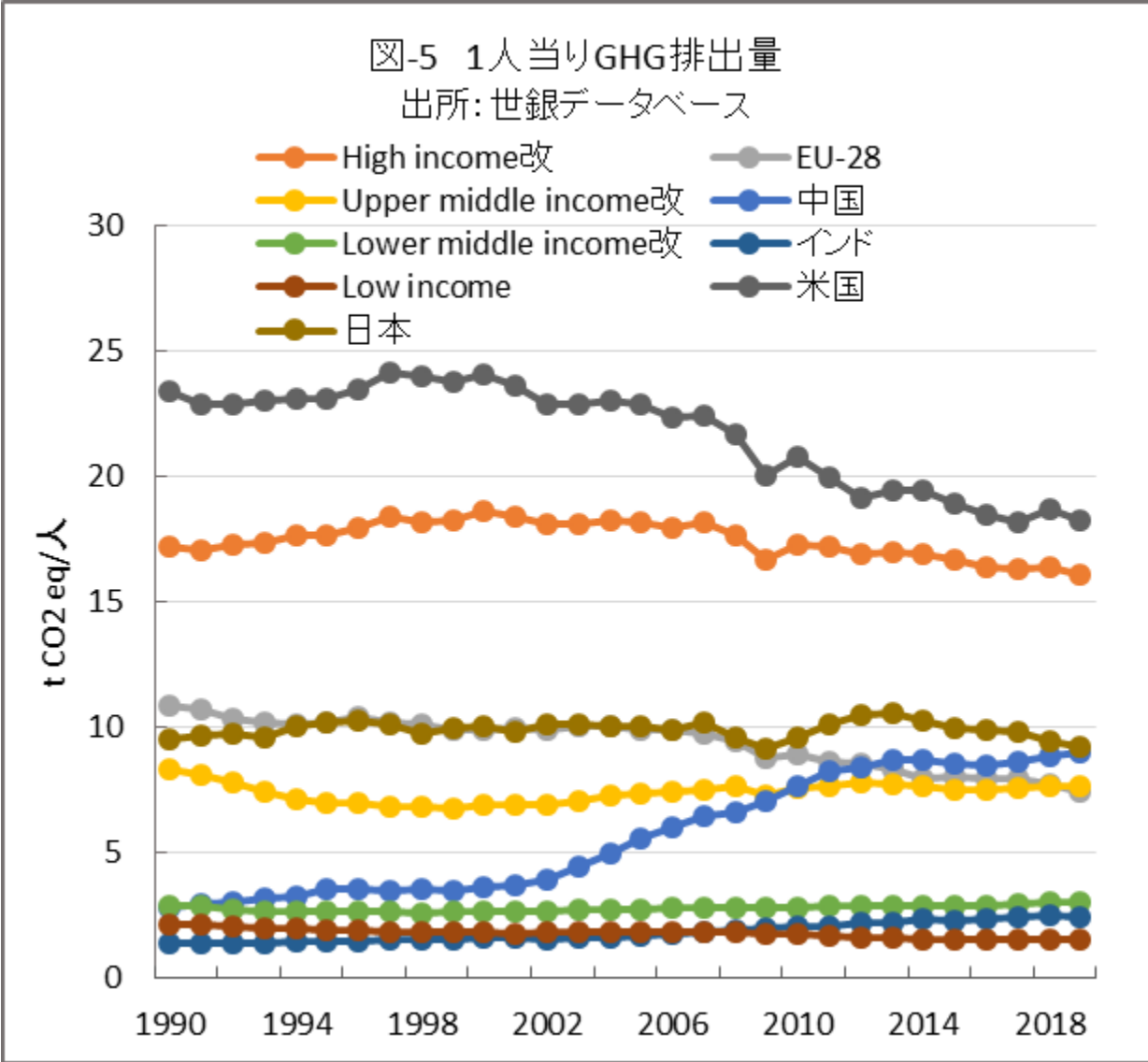
-4 1 GDP -1 GNI GDP G
DP GNI GDP GHG 1



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GHG????????EU????2019??1????????????Upper-middle
income?EU-28????????????1990???GHG????????????????????EU-28???High
income??GHG?????2????????????????Lower-middle
income????????????GHG????????????????????
??2????????????????GHG????????????????
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1980??COP26???
??2070???GHG????????????????????20????????30???GHG?????
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??????GHG???2/3????????2050???GHG????????GHG????????
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IEA???2050???CO2?????

????????IEA??2021?11??Figure
1.1???2050????CO2????????APS????????????GHG????????NDCs??
2050????????????????

WEO-2021 APS?2021?5????????Updated
APS?2021?10????????????????????????????????GHG???CO2????????
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1?5????2050????????????



LewisTsePuiLung/iStock

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NEW – UN Secretary for Global Comms says they "own the science" on "climate change," and opposing viewpoints have now been pushed down in search results through their partnership with Google.<https://t.co/fMaPYsHGUT>

— Disclose.tv (@disclosetv) [October 2, 2022](#)

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Disinformation????????????????WEF????????????????COVID-19????????????????????
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Posted in [???, ?????](#) | [No Comments »](#)

ESG????????3E?S????????????

?? ?? · Thursday, October 20th, 2022



ipopba/iStock

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

???COP26????????????ESG????????????

??6?10??

EU??

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??6?27????????????????????????????????ESG2.0????????ESG????????????????????????????ESG????????????????????????
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??ESG????????????????????????????????

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??9?9??NZAOA????????????????????
??NZAOA???

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??10?10????????????????????ESG????????????????????????COP26????????????????

????????GFANZ????????????????JP????????????????????????????????

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??ESG????????????????3????????

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

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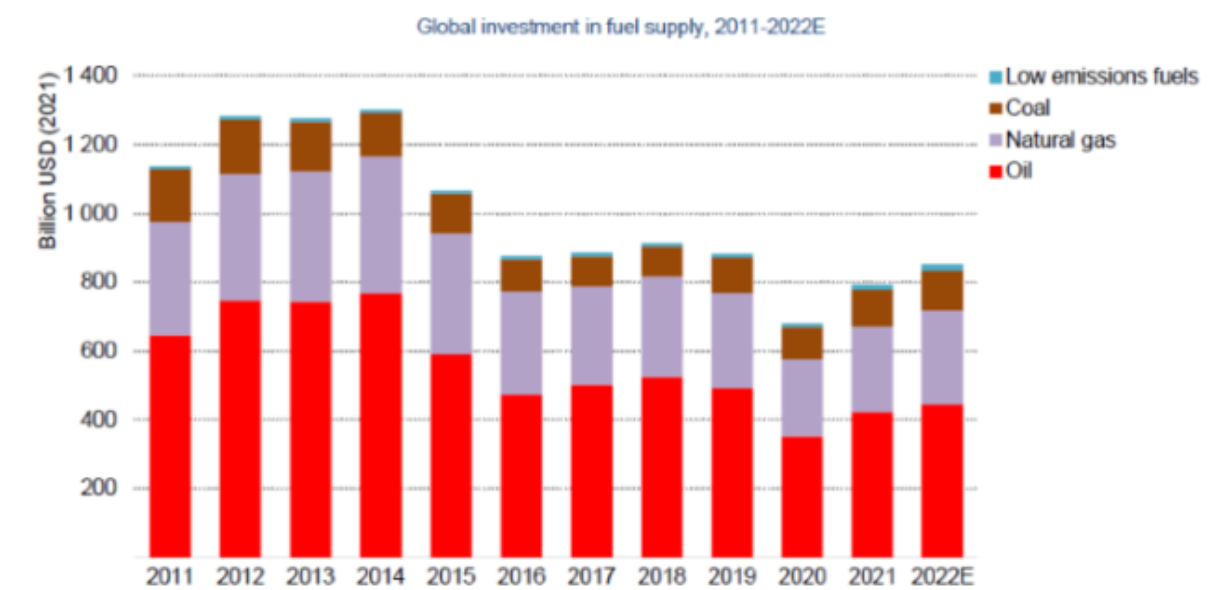
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????ESG??

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????????????2021??

????????????2015??



??World Energy Investment 2022, IEA

????????2015????????????????????????????????????25????????????

??5????????????????????20????????????????????
??2021????????????????????????????
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????IEA????????Net Zero by 2050????????2050????????????????????1.5????????????????????
????????????8????????2050????????2????????2030????????3????2????????
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????2050????????????????????????????????IEA?21????World Energy Outlook
2021????????????????????????????????????STEPS????2030????????????
????????8????7????1????????????????????????????????

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???????3E?S?

??3E?S
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Economy?????Environment?????Energy
Security????????????3?E????????3E????????2011????????????????Security????????????3E
?S????????

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??ESG????????????????E?????
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??Social?
?S????????????Sustainability????????????3E?S????????????????????????????????????
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?ESG??????2.0???????

??3E?S????????????????
??ESG????????????????
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????????????????????????????2050????????????????????2030????????????????
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SG??
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????????80????????????????????????????

????????10??
????????3E?S????????????????????????????????

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

????????????????ESG????????????3E?S????????????
????????????????ESG??????2.0????????

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?? ?? · Thursday, October 20th, 2022



1?2050????????????2030??
??
2??
3???4?10?25??

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??2022?2????????????????????????????????????
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MadamLead/iStock

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??21?????
????????????ESG????????????...????2022?10????????????????????????
????????????????????
????????????CO2??
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?SDGs????????????????????????????????

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

11??COP27????????????????????????????

?? ?? · Sunday, October 16th, 2022

11?6??????11?18??27??????COP27????????

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Asiya Hotaman/iStock

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????????????COP26??/????????????????

????????COP27????????????COP27??

????????COP27??
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COP26??

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Reuters????????????????????????????????Africa Oil Week 2022
Conference????????????

- ?????????????????COP27??
- ?????????????????????????1????????????????????????????????????
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- ?????????????????????????????????????
- ?????????????????????????????????????6????????????10????????
????????????????????????????????????

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2021?4????????????????????????????????COP26????UNFCCC Race to
Zero????????????????????????????GFANZ????????

GFANZ????????45????500????????????GFANZ????????Race to
Zero????????????

???COP27????GFANZ????????????

??9??Climate Change Dispatch????????JPMorgan Chase, Morgan Stanley, Bank of
America????????????????????????GFANZ????????????????????
??????

**U.S. Banks Threaten To End Support For UN Climate Edicts Over Legal Risks – Climate
Change Dispatch**

?GFANZ????????????????????????????????GFANZ????????
????????????????

????????????????2050????????????????????

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

????????????????JP Morgan Chase
????????CEO????????????????

???CEO????????????????CO₂????

‘Road to hell for America’: JP Morgan CEO snaps back at Rep. Tlaib on fossil fuels

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COP??26????COP????????????
??CO₂?????

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26????????????????????????CO₂????????????????
CO₂??
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??COP27????????????????

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????????????SO_x?NO_x??
????????HELE: High Efficiency Low Emissions ?????????????????????????????????



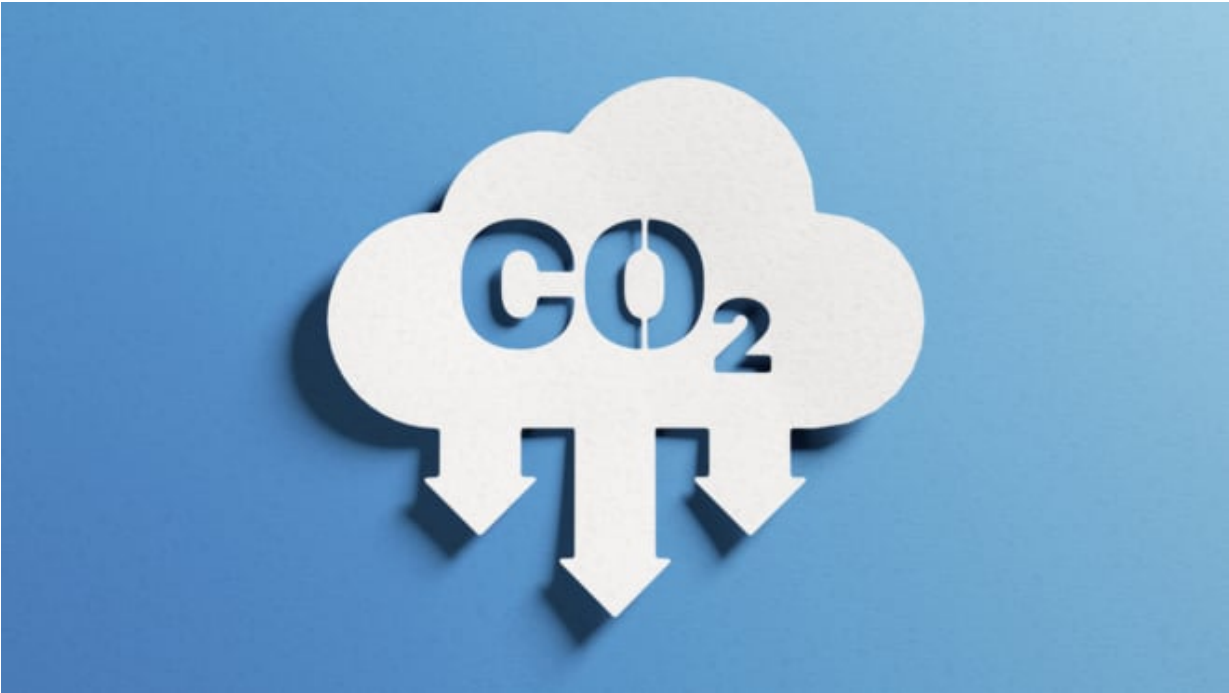
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?? ?? · Tuesday, October 11th, 2022

??2030??CO2????????????????????????
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NicoElNino/iStock

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????2030????CO2????2000????????????????????????????????????2000????CO2????5775?????
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1. 2000????2030??CO2????????????????????2030????????????????????CO2????????????????
2000???2030????????????????????????????
2. ?????????????????????????????CO2????????????????????????CO2?1????????????????0.5????
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3. ?????????????2030????1??100????????????????????????????????????1????????
??????6????????????
4. ?????????????????????????????????????

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1. ?????????????CO2????????
????????????CO2????5775??×31=17.9????

- ????????CO2????5775??×31×3÷4=13.4????
- ????????CO2????5775??×31×1÷4=4.48????
2. ?????4.48×0.5÷10000=0.00022??
3. 100????100×0.00022×0.06=0.0013??

???

1. 4.5??
2. 0.00022??
3. 0.0013??
4. ?????CO2????6.5????
- ????CO2????CO2??
- ??1????6????

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

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1. ?????????

■エネルギー起源CO2排出量

各部門が、それぞれ現状（2019年）から半減を目指すものとして提示（ただし、現状までに大幅削減の部門は考慮）

(単位：万t-CO2eq)

	2000年 (基準)	2019年 (現況)		2030年 (目安)			東京都 環境基本計画 (現行) (2000年比)
	排出量	排出量	2000年比	排出量 (目安)	部門別目標 (2000年比)	2019年比	
産業・業務部門	2,727	2,763	1.3%	1,381	約50%程度削減	▲50.0%	20%程度削減
産業部門	679	381	▲43.9%	222		▲41.8%	
業務部門	2,048	2,382	16.3%	1,159	約45%程度削減	▲51.3%	(20%程度削減)
家庭部門	1,283	1,612	25.6%	728	約45%程度削減	▲54.8%	20%程度削減
運輸部門	1,765	940	▲46.7%	612	約65%程度削減	▲34.9%	60%程度削減
エネルギー起源CO2計	5,775	5,315	▲8.0%	2,721		▲48.8%	

(参考)

廃棄物部門 計	120	190	58.3%	137	2017年比 40%削減 ※1	▲27.9%	
その他ガス (フロン等) 計	325	706	117.2%	252	2014年比 約65%程度削減 ※2	▲64.3%	
温室効果ガス排出量 合計	6,220	6,211	▲0.1%	3,110		▲49.9%	

- ※ 1 家庭と大規模オフィスビルからの廃プラスチック焼却量の削減目標
- ※ 2 代替フロン (HFCs) の削減目標

2030???????????????????? 2022?2??

2.

???CO2????????????????IPCC????????????????????CO2????????????????????1
000GtCO2????1???CO2????????0.5????????

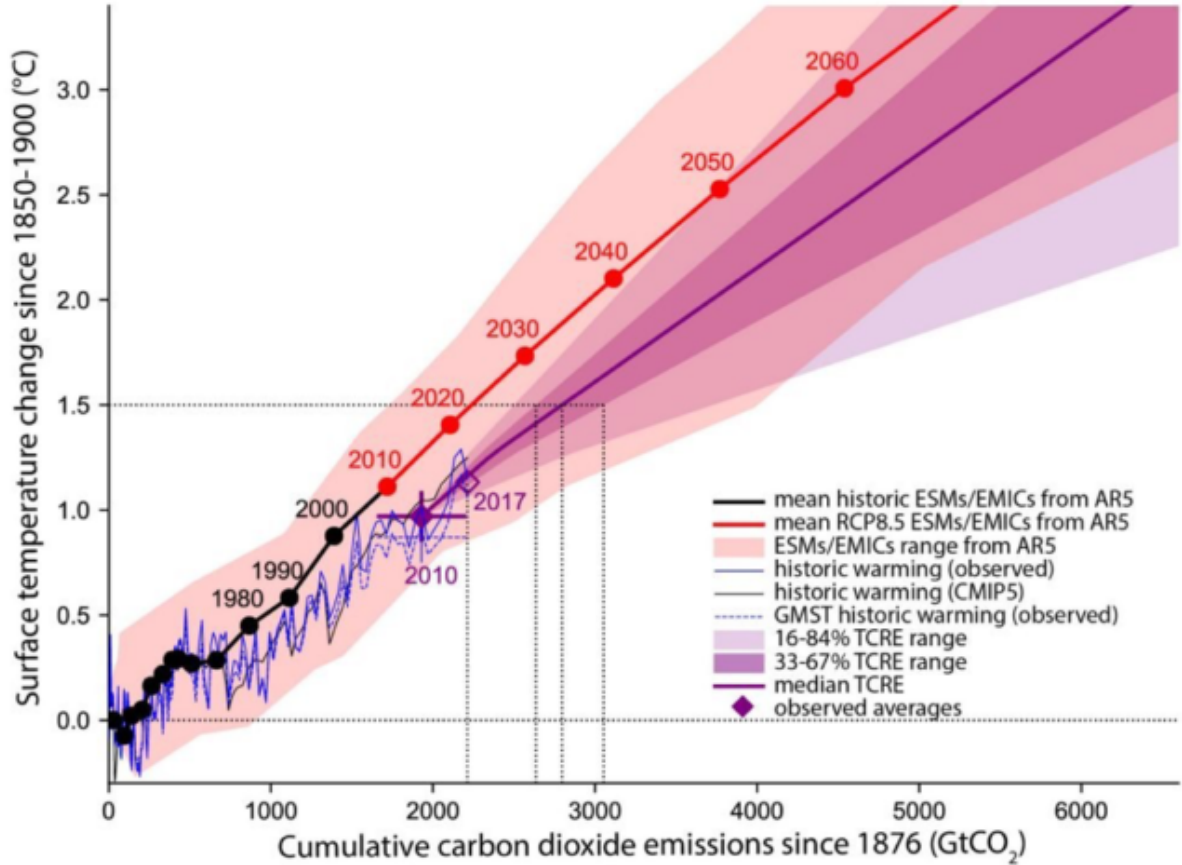


FIGURE 2.3?Temperature changes from 1850–1900 versus cumulative CO2 emissions since 1st January 1876.

???IPCC

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

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

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