

# Global Energy Policy Research | GEPR

GEPR??  
<http://agorajp.com/??>  
 ???

## COP27??????????14??????????

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



imagedepotpro/iStock

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

## COP27?? “??????” ??????????????????NHK?

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CO2CO2CO2

COP27

COP27

46

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

46GDP

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;

and also welcomes the adoption of decisions -/CP.27<sup>12</sup> and -/CMA.4,<sup>13</sup> on matters relating to funding arrangements responding to loss and damage associated with the adverse effects of climate change;

46

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,<sup>18</sup> 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;<sup>19</sup>

20305.85.9

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 trillion<sup>20</sup> for the pre-2030 period;

Nationally

Determined Contribution??

2030?????????6????????????????2024????2029??6????????????????1??????????????

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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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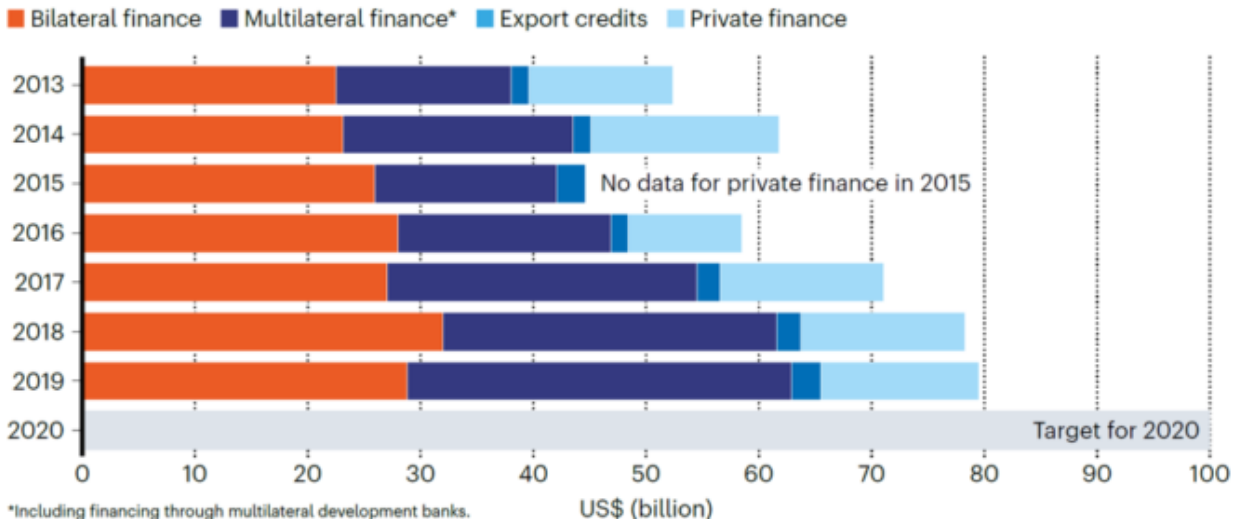
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COP21 in 2015 in Paris. The \$1 trillion per year is a very different concept – it is a requirement based on an analysis of the investment and actions necessary and the domestic finance potentially available, for an internationally agreed and vital 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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### MISSED TARGET

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



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???COP27??  
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Posted in ???, ????? | No Comments »

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?? ?? · Tuesday, November 22nd, 2022



Olga Burkova/iStock

????????COP27????????COP26??  
????????????(loss and damage)????????????????

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????(adaptation)????????????????????

1997????????????????????????????????????(mitigation)????????????????  
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COP26????????????????????????????????????1????????????????????  
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COP27??EU?1.5??  
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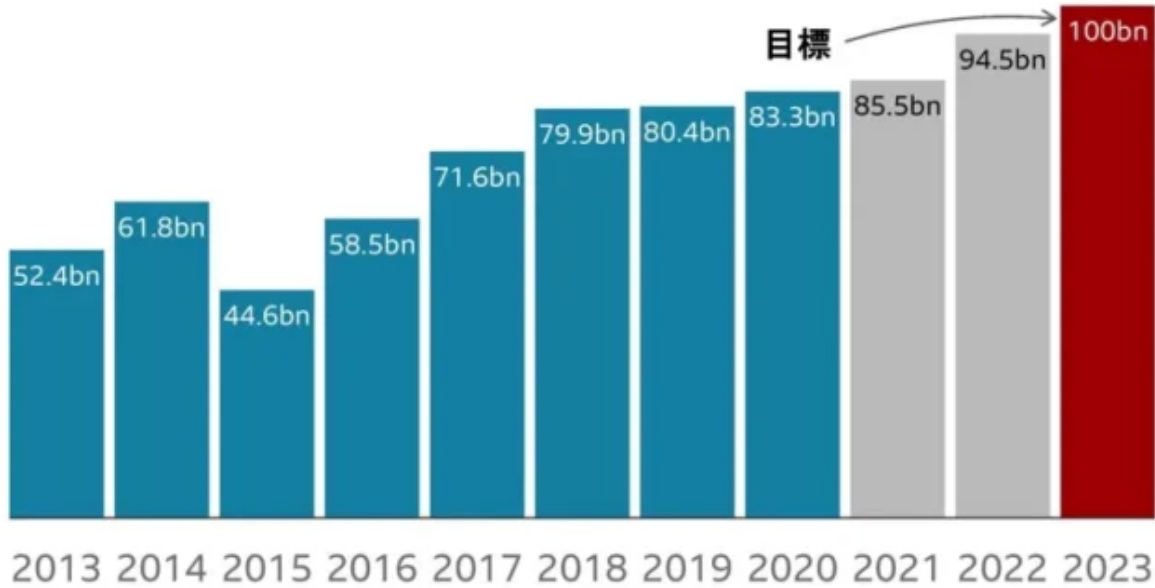
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## 気候変動対策の支援額 先進国が資金集めと供給を行った額(単位:10億米ドル)



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)



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COP27????????????????????COP28?UAE????????????????????1.5????????????????????  
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Posted in ???, ????? | No Comments »

# ????????????????CO2??????

?? ?? · Saturday, November 19th, 2022



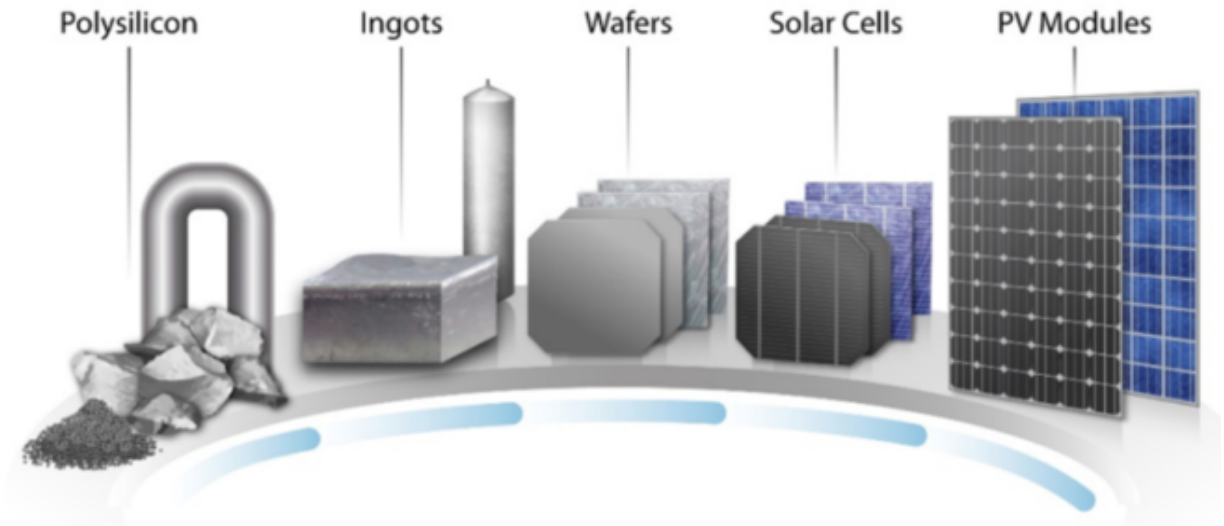
chuyu/iStock

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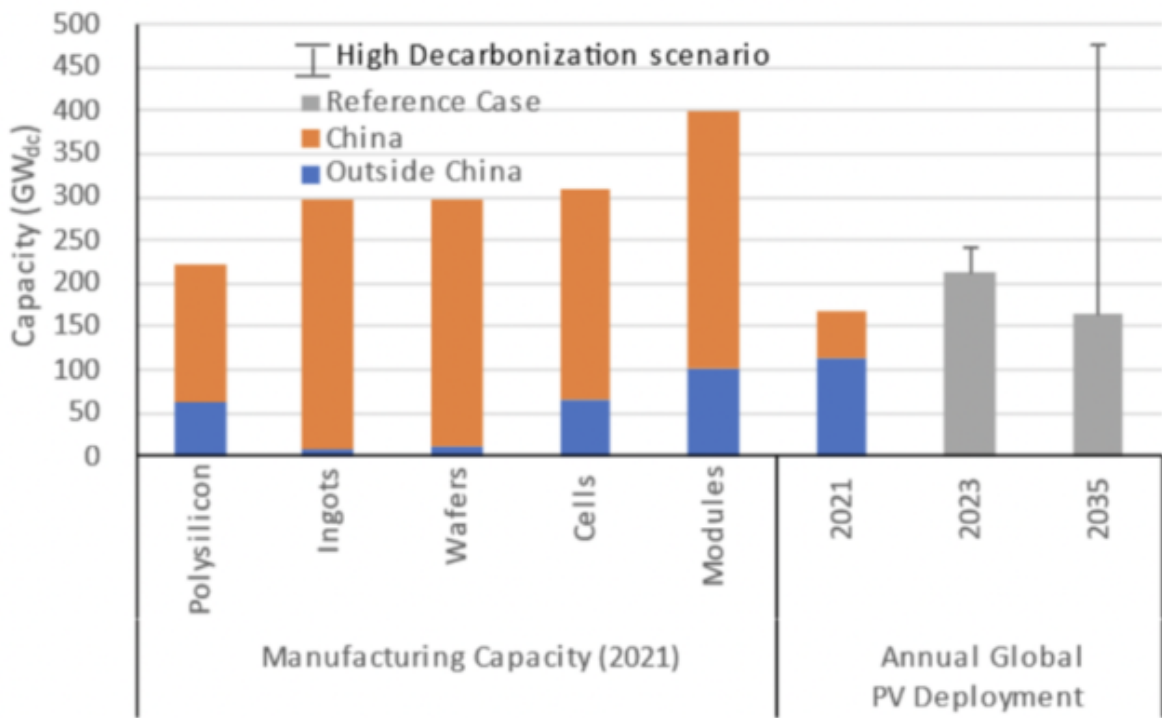
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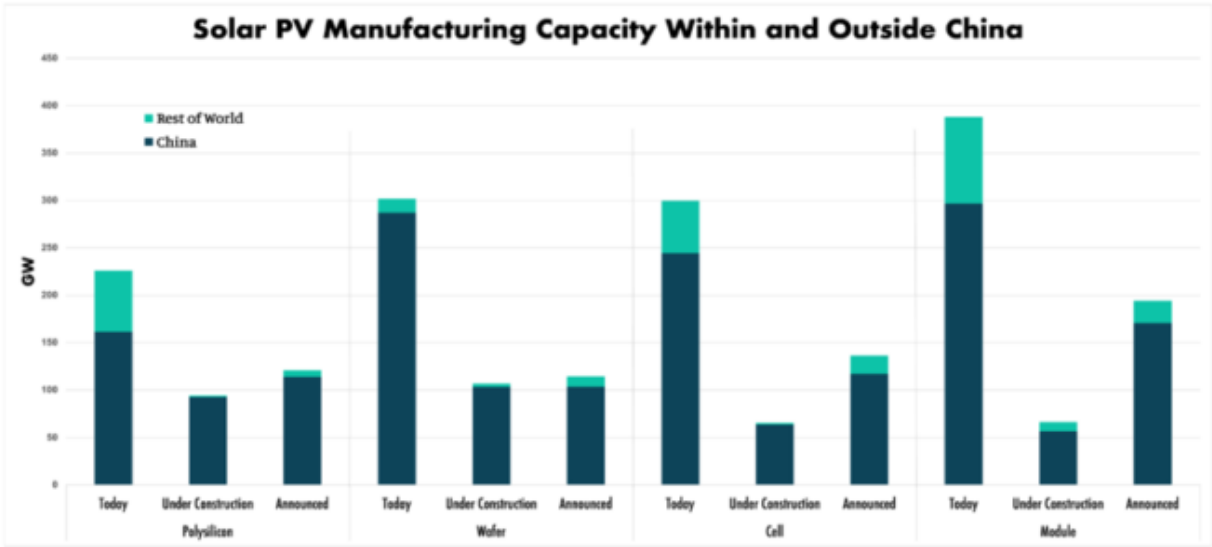


5????????????????2021??



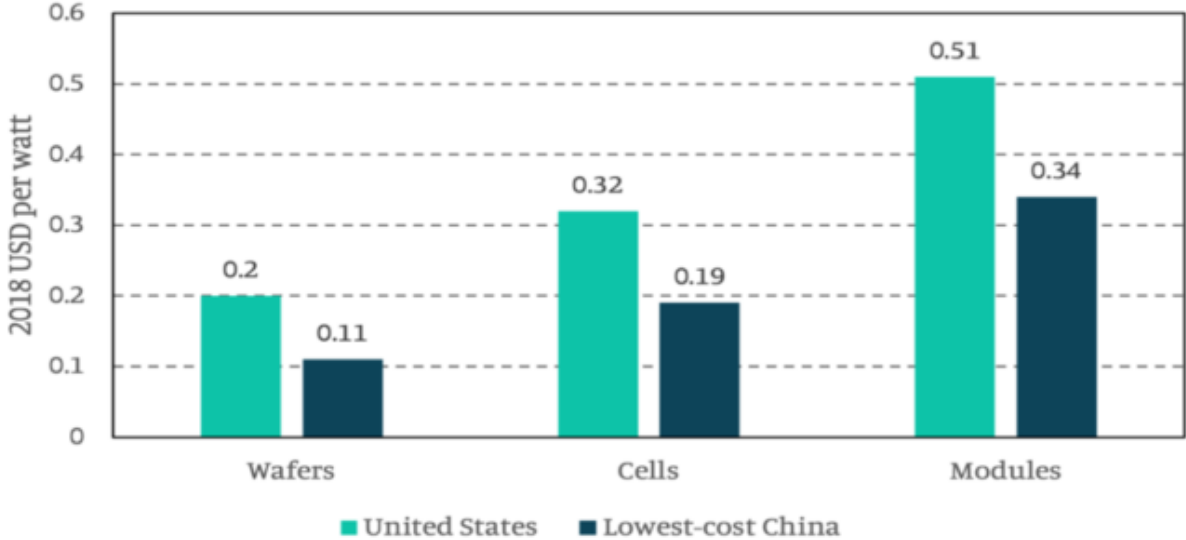
????????????????????????????????Xinjiang????????????????????????KWh????6??????????





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### Minimum Sustainable Price (MSP)



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Posted in ???, ????? | No Comments »

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?? ? · Saturday, November 19th, 2022



Nastco/iStock

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Kalghatgi??

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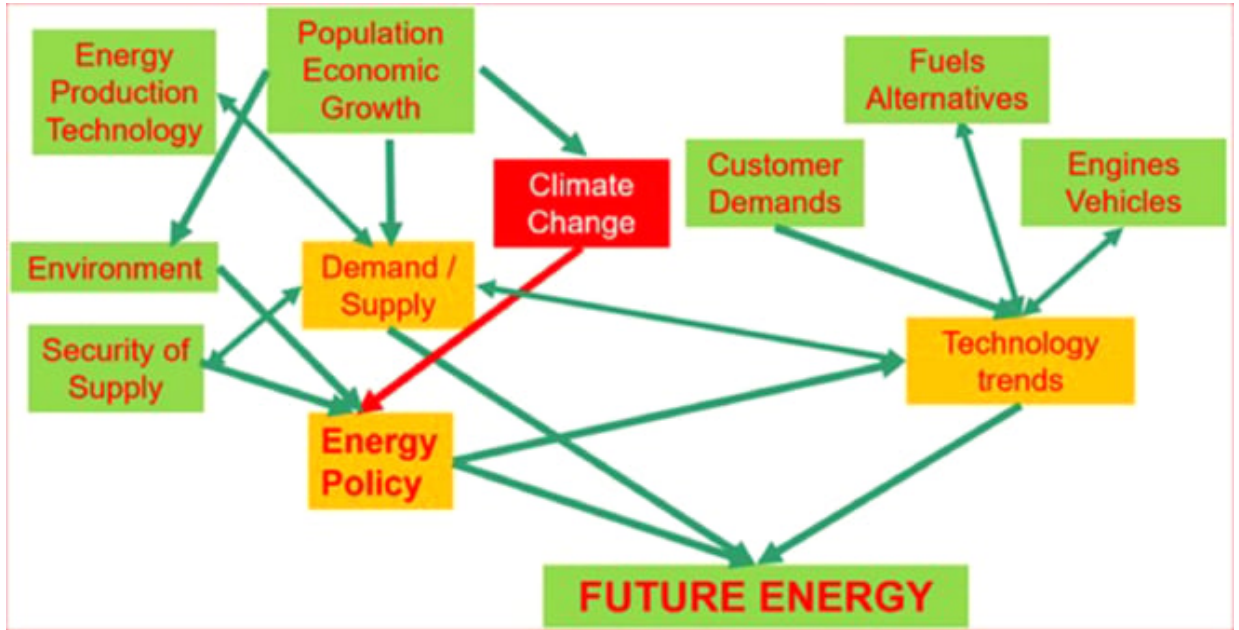
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1. ??

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CO2

2

2021 BP 82.3% 489.66 EJ / 595.15 EJ 1.75%

Table 1. Primary energy and electricity sources in exajoules, EJ (10<sup>18</sup> 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
<b>Total fossil fuel, EJ</b>	<b>489.66</b>	<b>130.93</b>	<b>75.66</b>	<b>31.74</b>	<b>5.48</b>
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
<b>Total Primary Energy, EJ</b>	<b>595.15</b>	<b>157.65</b>	<b>92.97</b>	<b>35.43</b>	<b>7.18</b>
<b>Electricity Generation</b>					
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.

1

BP IEA

1 EJ = 277.8 TWh = 10<sup>18</sup> joules = 10<sup>12</sup> Wh = 1 EJ = 277.8 TWh = 10<sup>18</sup> J

2.778x10<sup>-7</sup>kWh??10<sup>18</sup>????????????????????????????????

??????1kWh????????????????????1kWh = 860.6kcal = 3.6kJ????100????????????????????100????????????????????40????????

??????1kWh??860.6kcal????860.6kcal????1kWh????????????????Wh????????

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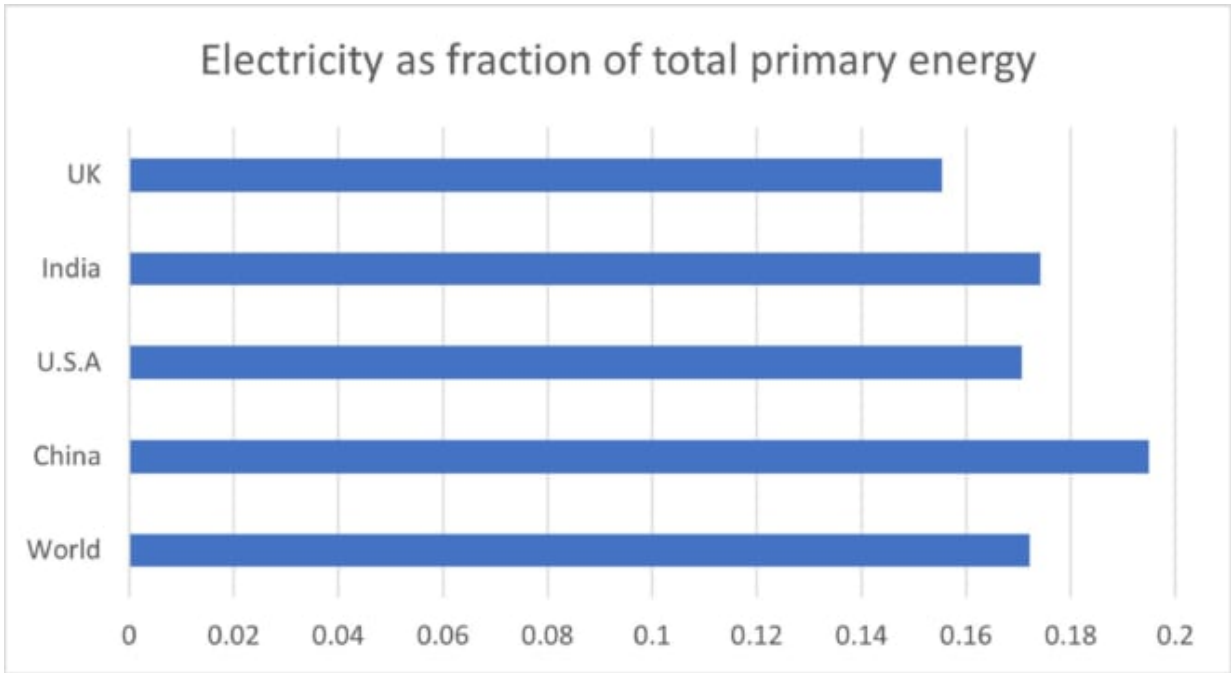
????????????BP????1kWh = 860.6kcal = 3.6kJ?IEA????41.5%????0.415????1kWh = 2074kcal = 8.67kJ????0.415????

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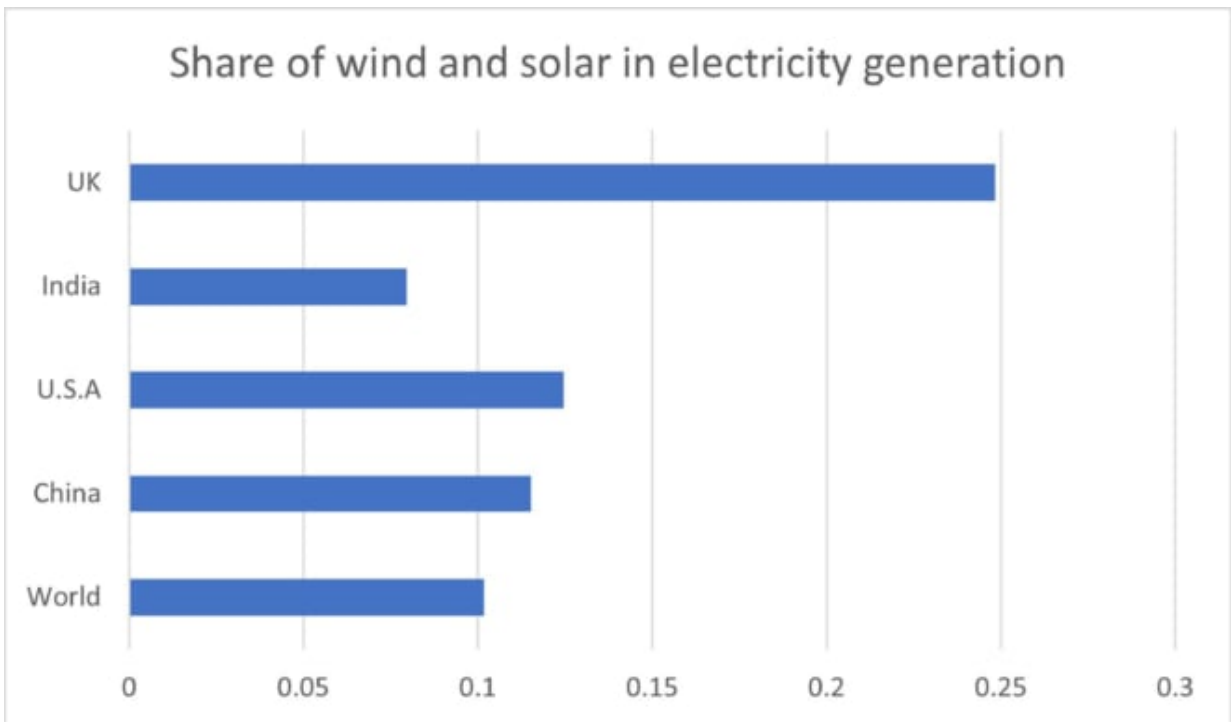
????????1????489.66EJ????105.49EJ??254.19EJ????0.415????2.4????5 95.15EJ??743.85EJ????17.7%?=106.49/595.15????34.2%?=254.19 /743.85????

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



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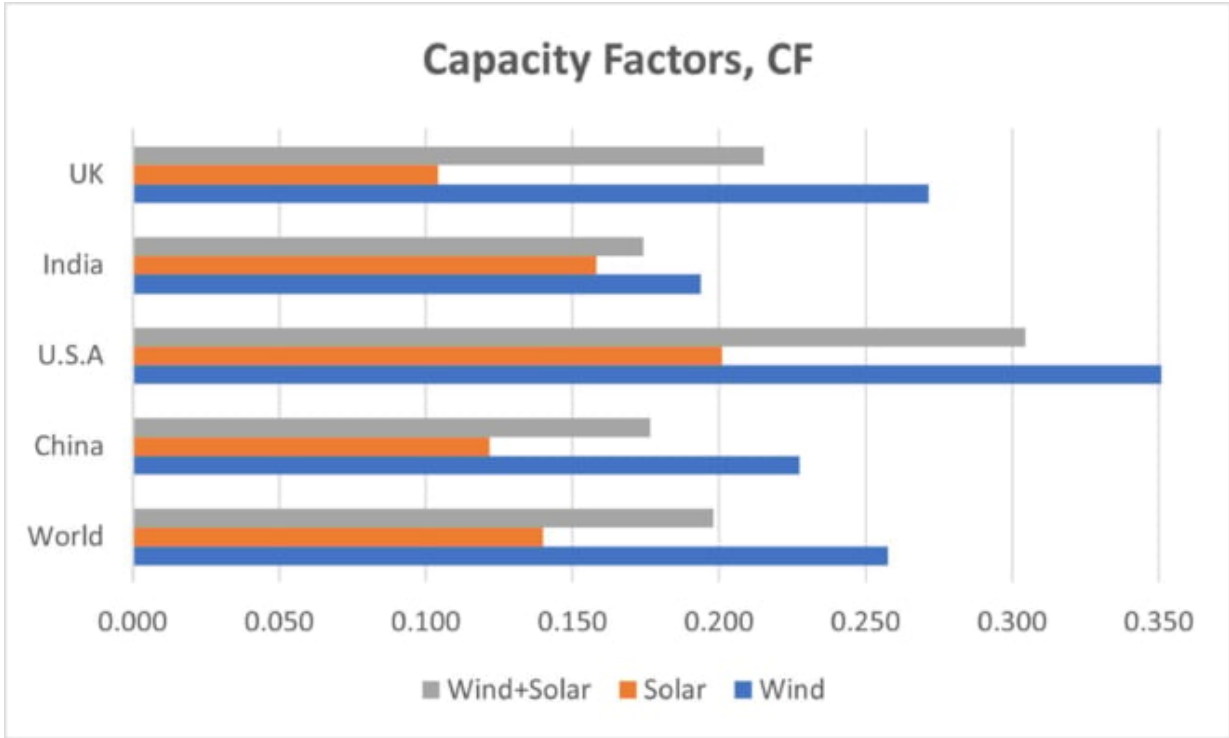
25% of total primary energy is electricity. 10% of total primary energy is CO2 emissions.   
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Capacity Factors,   
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Posted in ???, ????? | No Comments »

### ??140????????COP27????????????

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



fergregory/iStock

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Posted in ???, ????? | No Comments »

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



Nebasin/iStock

??27????????COP27??CSR???

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**??2022?11?9??**



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

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CO2

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NGO CO2

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CO2

CSR ESG?SDGs

SDGs?ESG

CO2 ESG

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11?15

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Posted in ???? | No Comments »

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?? ? · Sunday, November 13th, 2022



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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

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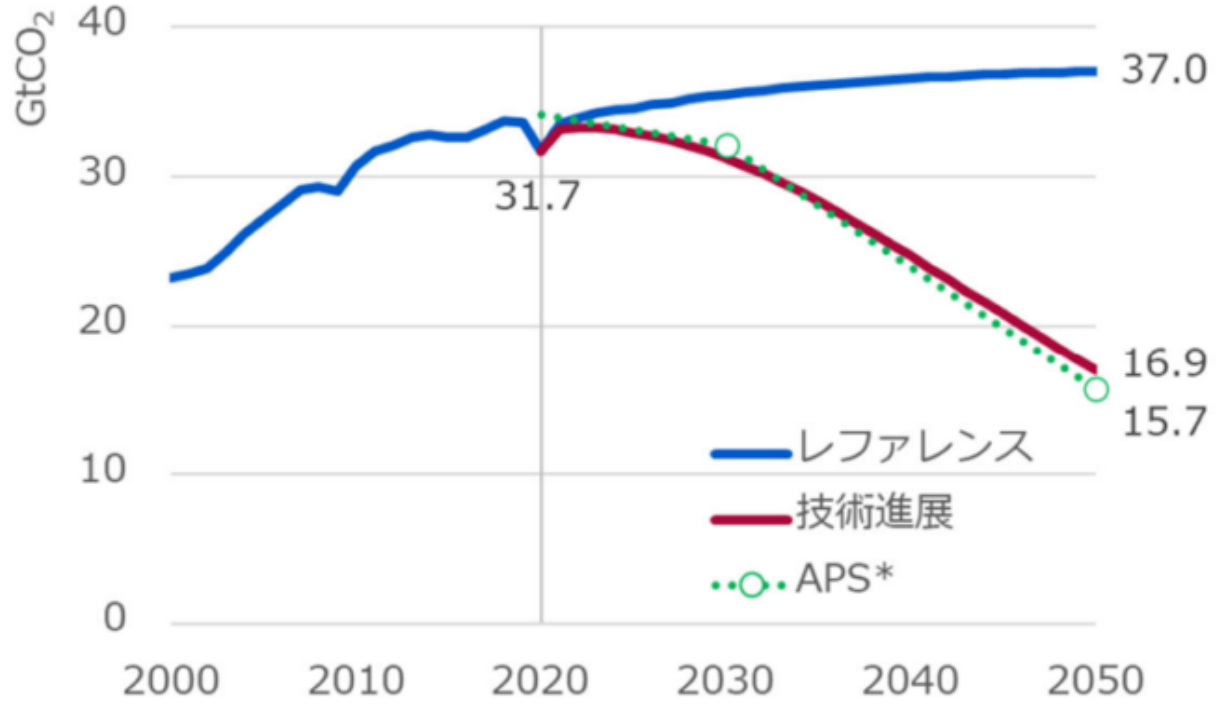
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CO2??CO2???????????????????????????????????? 2050  
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# エネルギー起源CO<sub>2</sub>排出量の見通し



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Posted in ???, ????? | No Comments »

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?? ?? · Thursday, November 3rd, 2022



bee32/iStock

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

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?? ?? · Monday, October 31st, 2022

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

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0??????????

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兵研施設で技術者らと言葉を交わす金正恩・朝鮮労働党委員長。写真はKCNAが2016年3月配信。

©?Reuters

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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

**????????COP26????????**

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

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9????????G20????????????????G7????????????1.5????????????????????????????????  
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**COP27????????????????????**

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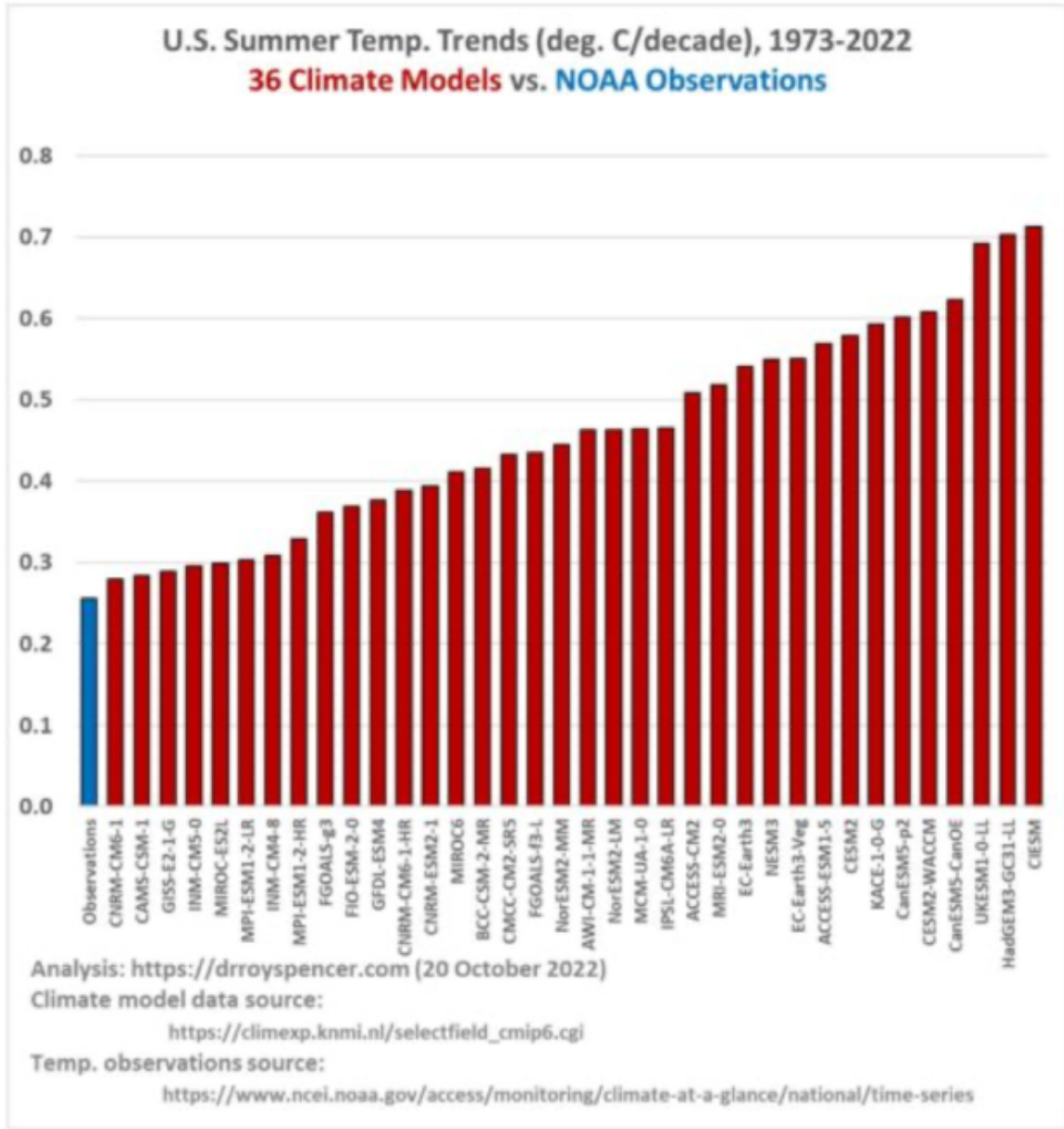
?? ?? · Friday, October 28th, 2022



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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10,500????????????39????NZBA????????2050????????????????????????????????????  
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Research????????????????????ESG????????????????????????????????????  
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**ESG Watch: Banks' net-zero pledges in the spotlight at Climate Week New York**

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????????????????BLK????????????ESG????????BLK?ESG????????????  
????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**

????????????????????BLK????

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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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??IPCC????????2.8??  
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Posted in ???, ????? | No Comments »

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

GEPR??? · Monday, October 24th, 2022

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Parradee Kietsirikul/iStock

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2021??GHG????????????????IEA??2050??????

??GH  
G??

????2050????GHG??20  
50????GHG??

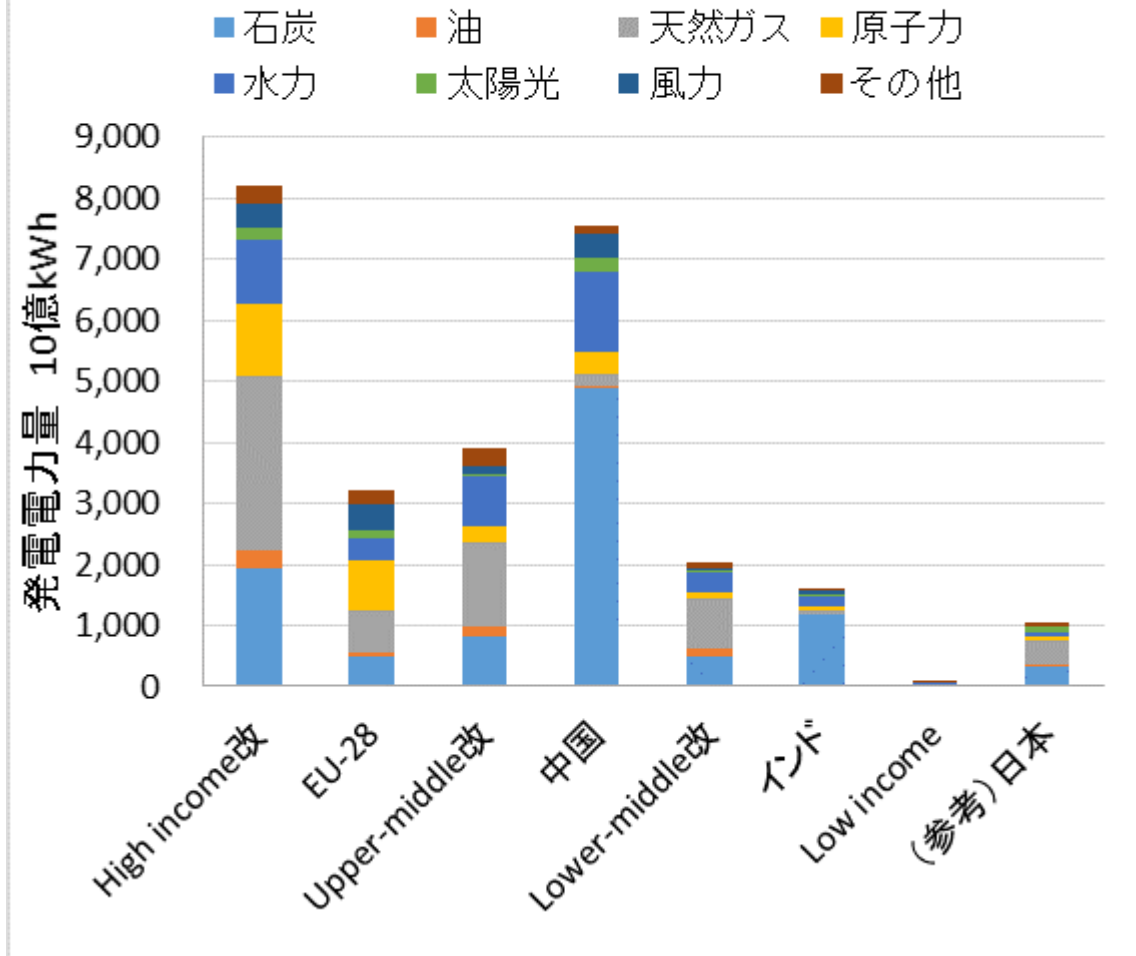
????2050?????????????????????? ??

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GHG??-6  
?2019??IEA????????????????????????????  
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図-6 発電電力量(2019年)

出所:IEAデータベース



76

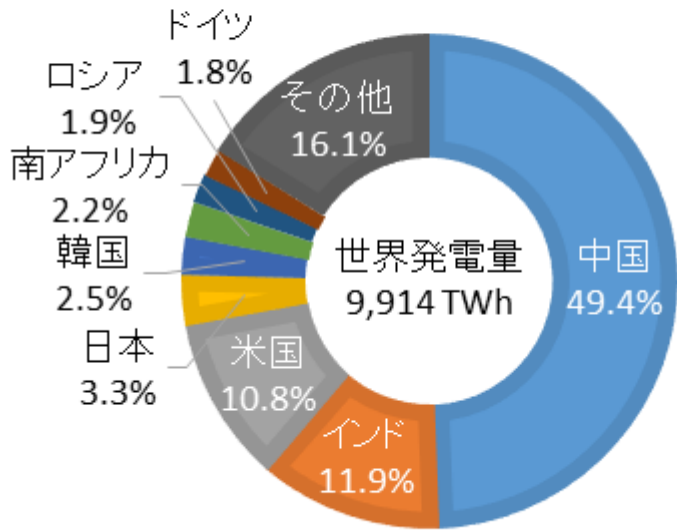
図-6のデータによると、2019年の発電電力量は、高所得国改が最も高く、約8,200億kWhに達しています。これは、天然ガスと水力の貢献が大きいことを示しています。一方、低所得国は約100億kWhと非常に低い水準に留まっています。また、中国は約7,500億kWhの発電電力量を記録しており、これは主に石炭と水力によるものです。

この図表は、2019年の世界の発電電力量の構成を示しています。高所得国改は、天然ガスと水力の割合が高く、原子力も一定の割合を占めています。EU-28は、水力と天然ガスの割合が高いことがわかります。Upper-middle改は、天然ガスと水力の割合が高い一方で、石炭の割合も一定です。中国は、石炭が最大の割合を占めており、水力も重要な役割を果たしています。Lower-middle改は、天然ガスと水力の割合が高いことが特徴です。インドは、水力と天然ガスの割合が高いことがわかります。Low incomeは、水力と天然ガスの割合が高い一方で、石炭の割合も一定です。(参考)日本は、水力と天然ガスの割合が高いことがわかります。

GHGの削減目標は、2019年を基準として、2030年までに45%削減することを目指しています。これは、2019年のGHG排出量を基準として、2030年には約55%の削減を意味します。この目標は、再生可能エネルギーの拡大とエネルギー効率の向上による削減が期待されています。

図-7 世界の石炭火力(2019年)

出所: IEAデータ



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????????31.5% ?????????????????1970 ???  
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EU-28????25% ?EU????????????????14% ???  
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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-middle 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

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????????????9% ??High income????????-6??GHG??

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??GHG??capacity factor?????????????

????????????????EU-27????????????????????????30-35% ???

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??2??20-30% ???

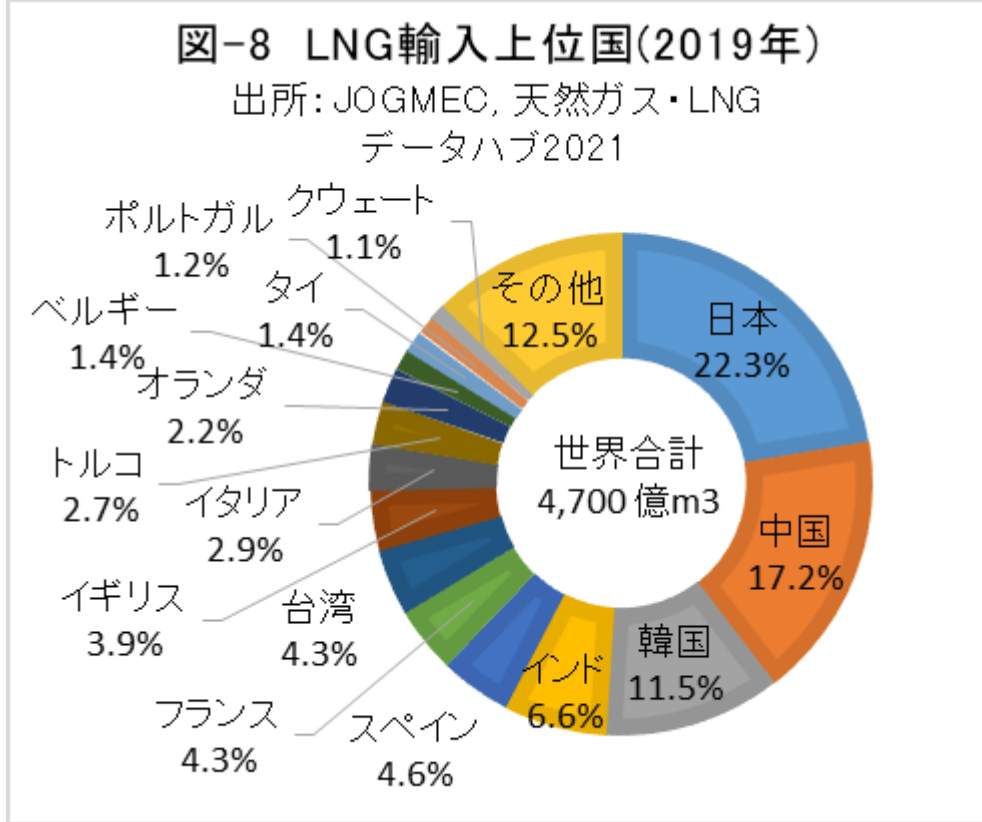
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????????????????????????????GHG??Upper-middle income??Lower-middle income??

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

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?????GHG?????2050????????????????????????????????????2050????????????????

GHG?????CO2?????CCS?????CCS?????  
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?????CCS?????

????2050????2080?2100?????

????2050????2080????30?????GHG?????  
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GHG?????GHG????1%?????GHG?????  
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?????2050?GHG?????250?????30?????  
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?????1970?????????kindle?????  
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Posted in ?????????, ??? | No Comments »

2050????????? ?

GEPR??? · Sunday, October 23rd, 2022

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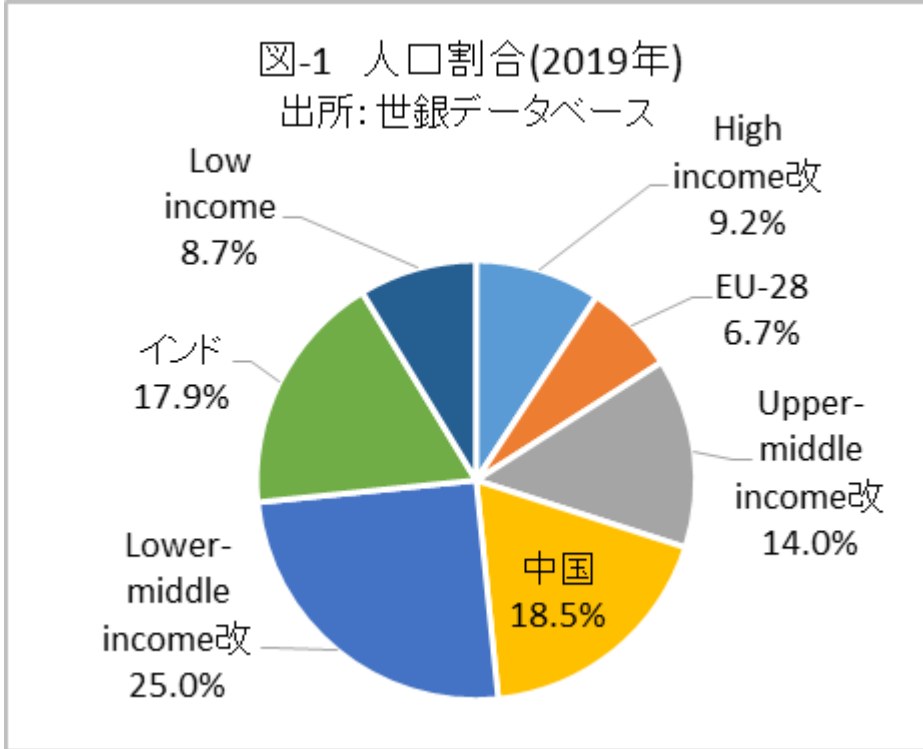




?????EU-28????????High income????????High income????????Upper-middle income?Lower-middle income????????

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

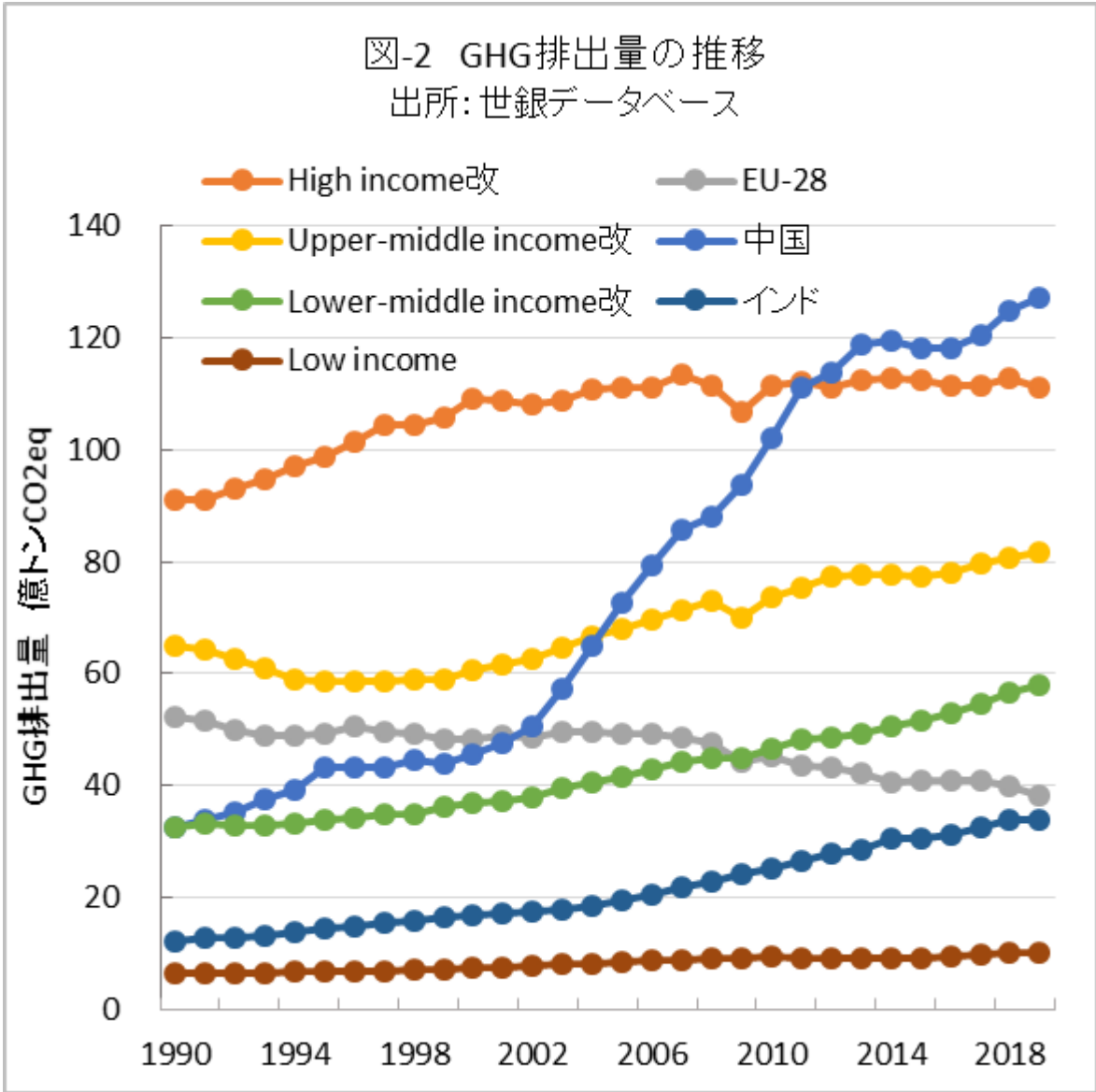
?-1?????????2019?????????16%?????



?1

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

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

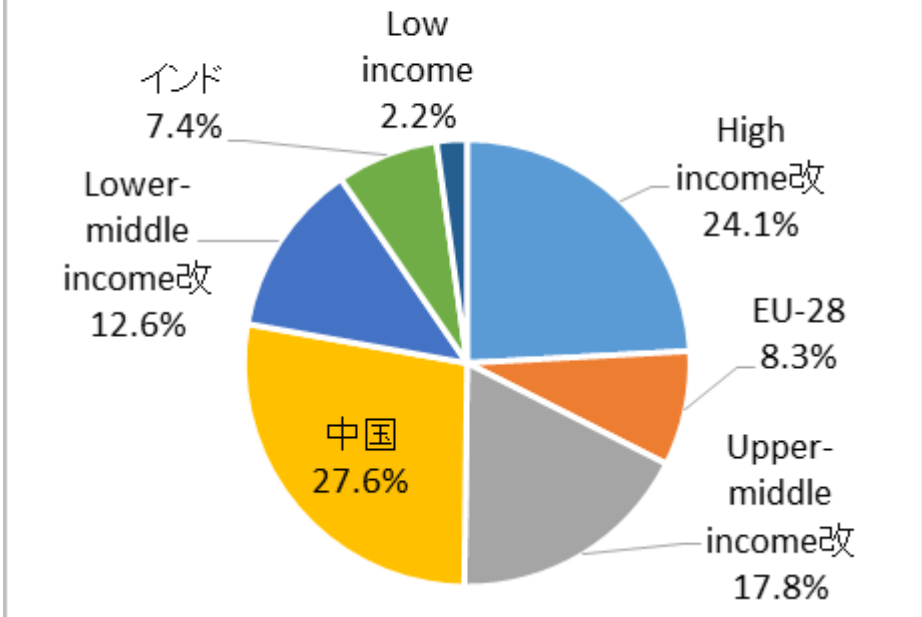


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?-3?2019??GHG????????????????????1/3????????????????2/3????????????????GHG????????????2%??  
 ?????????????GHG????????????????????????????

図-3 GHG排出量割合(2019年)

出所: 世銀データベース



23

2050 GHG EU-28 GHG GHG

High income 2019 GHG 90% 2060 2050

GHG GHG

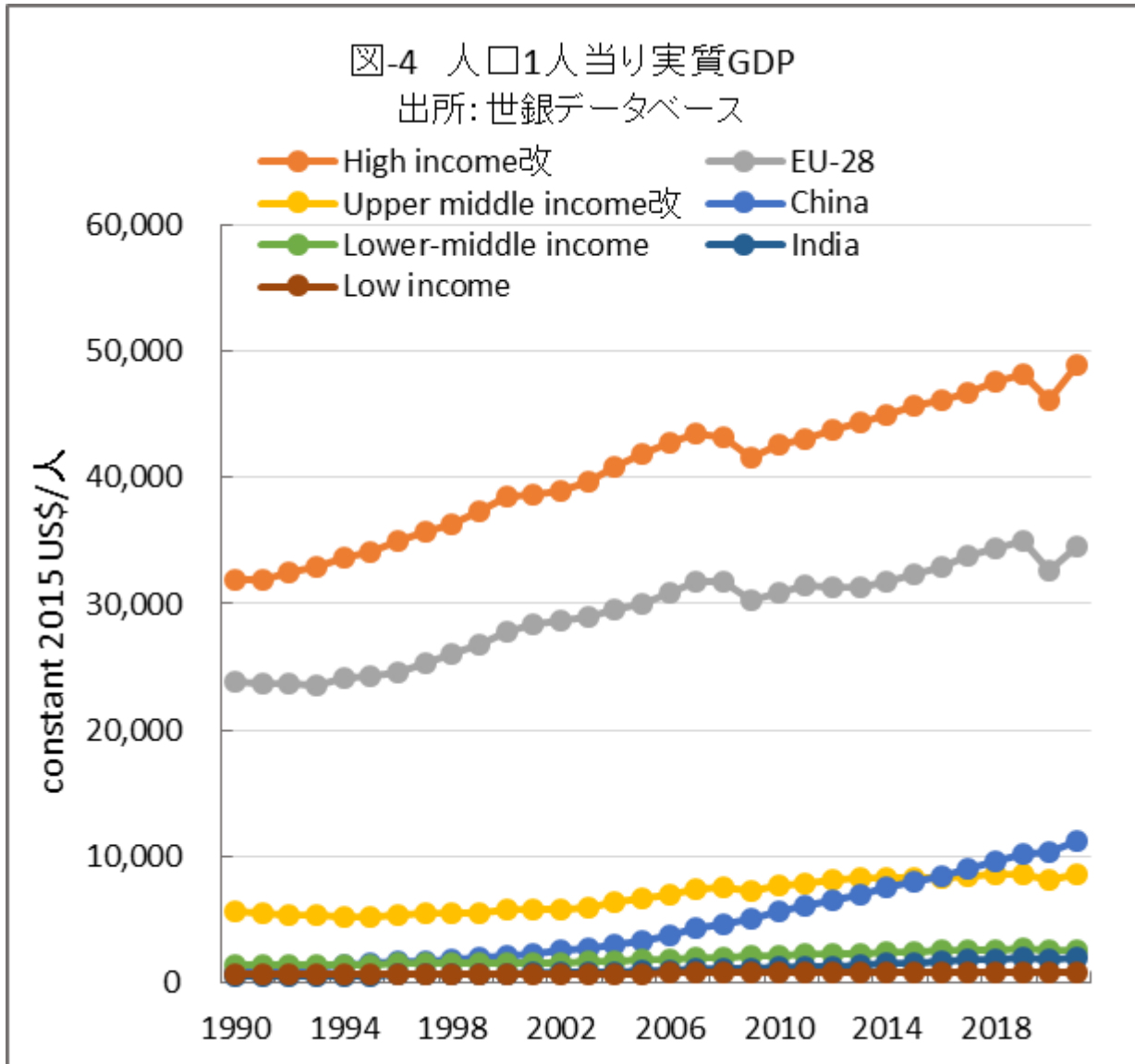
GHG

2050 GHG

4 GDP 1 GNI GDP G DP GNI GDP GHG 1

### 図-4 人口1人当り実質GDP

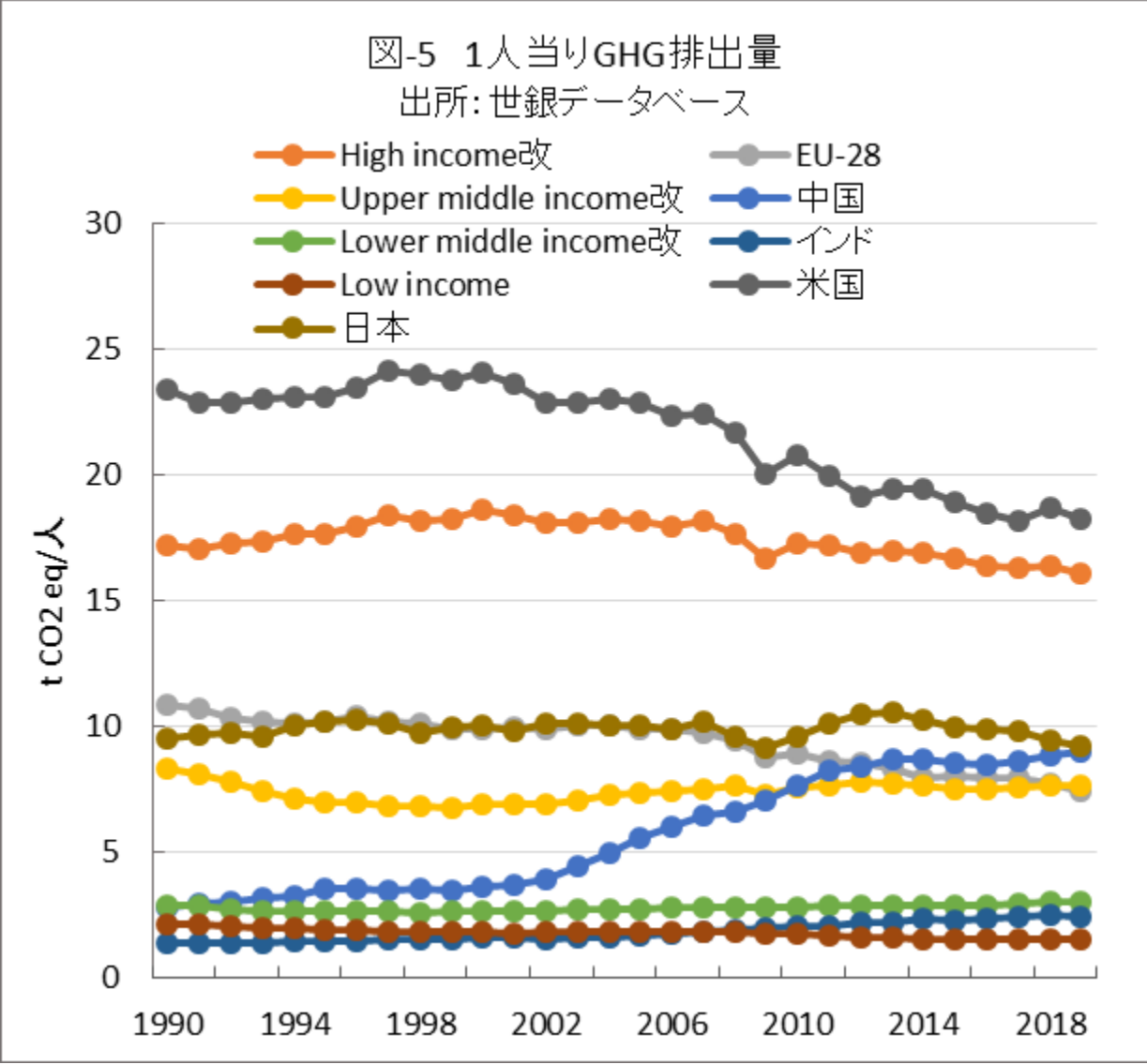
出所: 世銀データベース



24

????????????????GDP??  
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?-5???1?????GHG??



25

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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??????2001????WTO????????????????????????????????????

????2020??3????????1000????6????????????????????  
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??GHG????????CO2????2030????????????????2060????????????????????????2030????????????????  
????????????????????30??CO2??CO2????????2060????????????  
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1980??COP26????  
??2070????GHG??20????????????????30??GHG????????  
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????GHG?????1?23??  
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????GHG??2/3????????????2050????GHG????????????GHG????????????????  
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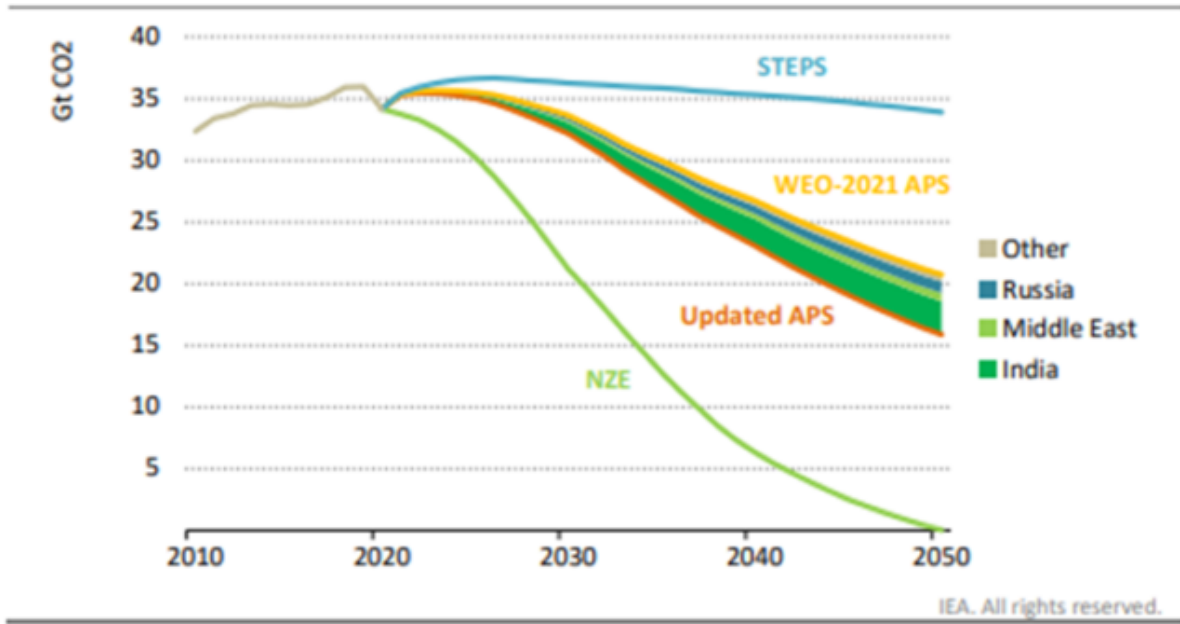
**IEA??2050??CO2??????**

????????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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????STEPS?NDCs??NZE?IEA?202  
1?5????2050????????????

Figure 1.1 ► CO<sub>2</sub> emissions in the WEO-2021 scenarios and emissions reductions from recent pledges



Note: Other = net zero pledge by Australia and commitment to the Global Coal to Clean Power Transition Statement by Indonesia. Middle East = net zero pledges by Saudi Arabia and the United Arab Emirates.

Updated APS CO<sub>2</sub> 2020 35 Gt CO<sub>2</sub> 2050 16 Gt  
CO<sub>2</sub> 75% STEPS 2020 2050 CO<sub>2</sub>

2050 IEA GHG 2050 GHG

2050 GHG GHG

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1970 kindle

Posted in ?, ? | No Comments »

### ?????”We own the science”????????

?? ?? · Friday, October 21st, 2022





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

??????9????????????????????WEF??  
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?Tackling

Disinformation??COVID-19????????????????????????????????  
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- ??????????Google??
- ??????????????????own?????

You Tube??TikTok?????????Team  
Halo????????????????????





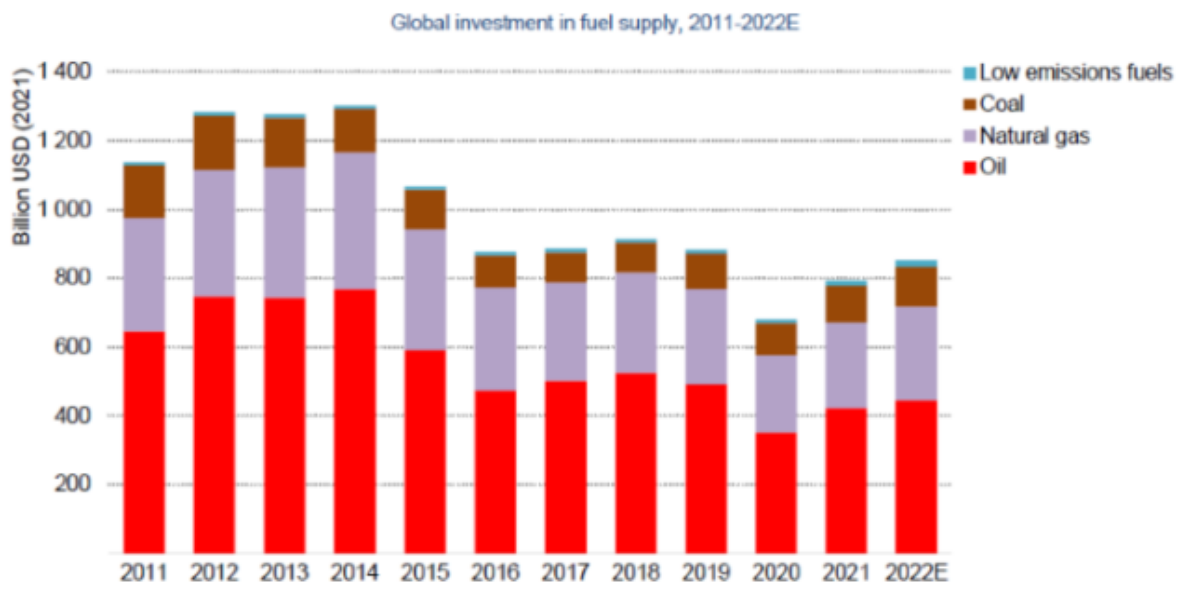
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???World Energy Investment 2022, IEA

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???IEA?????????Net Zero by 2050????????2050????????????????????????????????1.5????????????????????????????????  
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????????2050??IEA?21????????World Energy Outlook  
2021??STEPS????????2030????????????  
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ESG?

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Economy  
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Security  
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ESG 2.0

ESG  
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2050  
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ESG 2.0

Posted in | No Comments »

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?? ?? · Thursday, October 20th, 2022



1?2050????????????2030??  
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??2022?2????????????????????????????????????  
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MadamLead/iStock

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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??

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

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

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

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

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

??JPMorgan Chase  
????????????CEO????????????????????????????????????

????CEO??CO<sub>2</sub>????????

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



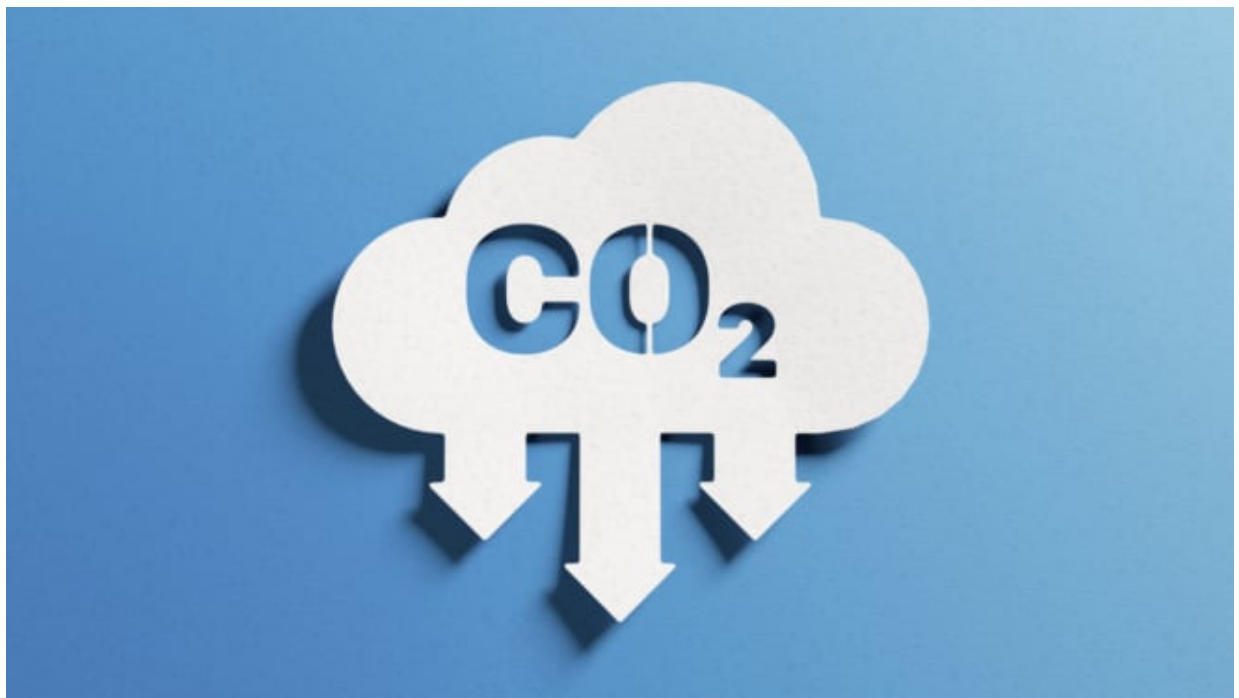


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?? ?? · Tuesday, October 11th, 2022

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

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- 4.5???
- 0.00022??
- 0.0013??
- ????????CO2????0.5????  
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 ?1????6????????

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### ■エネルギー起源CO<sub>2</sub>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-CO<sub>2</sub>eq)

	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CO <sub>2</sub> 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





Posted in ???, ????? | No Comments »

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?? ?? · Monday, October 10th, 2022

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

# ????????????????

?? ?? - Sunday, October 9th, 2022

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bee32/iStock

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allanswart/iStock

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

**????????????????????**

?? ?? · Tuesday, October 4th, 2022



Daniele Mezzadri/iStock

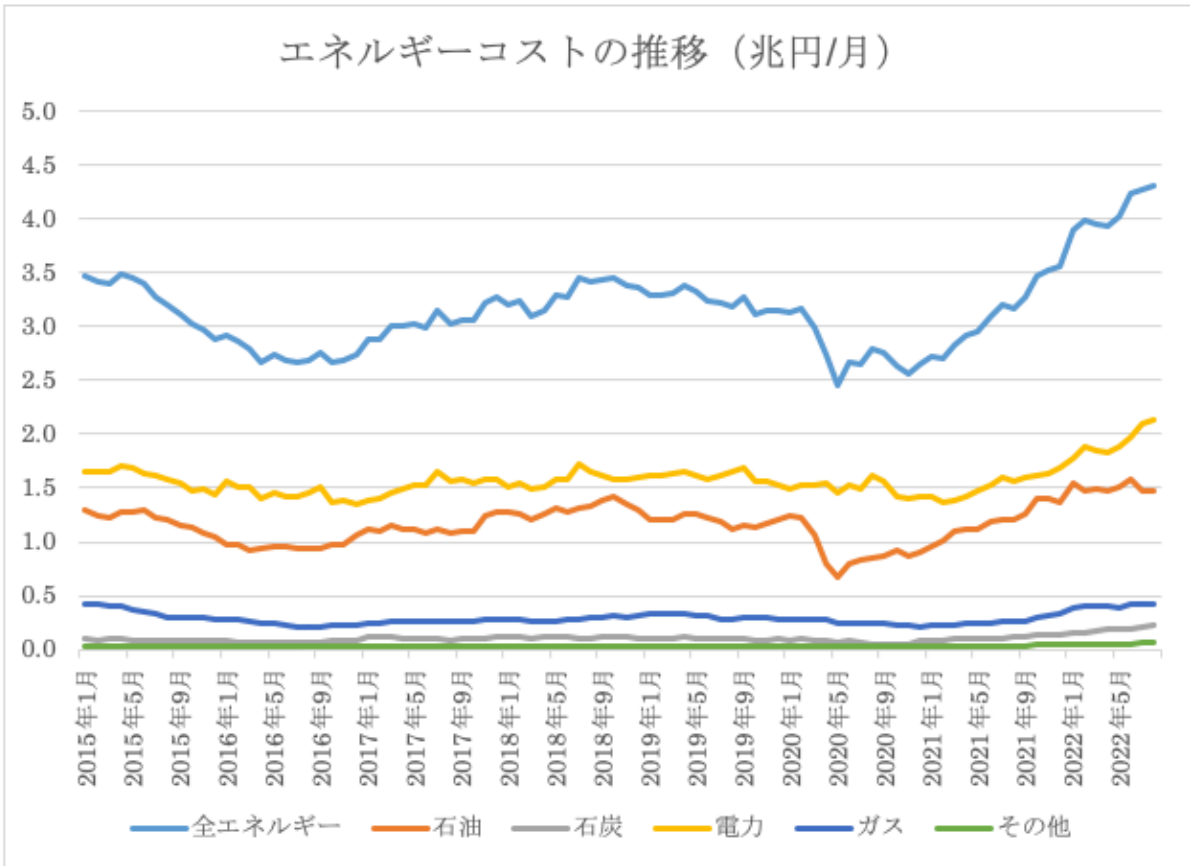
??25????????28????????????????

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

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?? ?? · Monday, October 3rd, 2022



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

### ????????SRZ1200?????

?? ?? · Sunday, October 2nd, 2022

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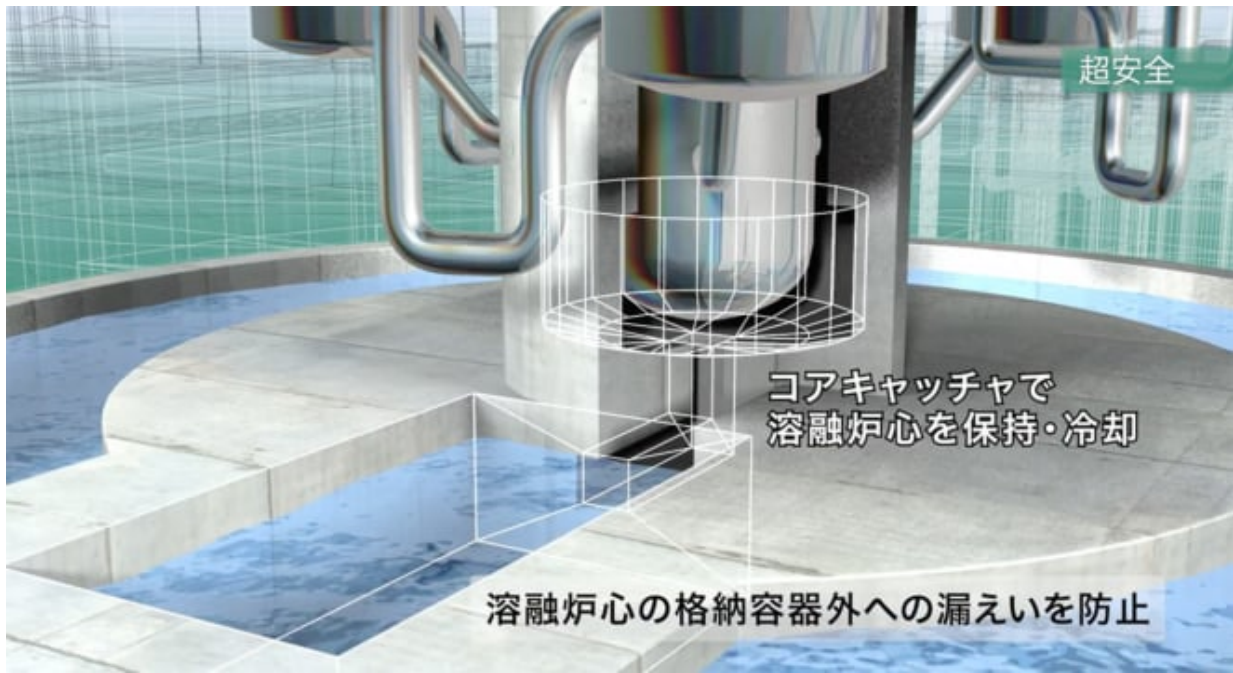
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**SRZ1200?????**

S????Super-safe????????????Sustainability?R????(Resilience)???Z????????Zero-Carbon????????

1200????????????????????120kW??



DiscoverMHI (Mitsubishi Heavy Industries, Ltd.)??

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

# NHK????????????????????????????

?? ?? · Sunday, October 2nd, 2022



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?2020??CO<sub>2</sub>????????????

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??2050??1.5????  
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2021??8??2030????????????????????????????2030????????????1kW  
h????8.2??11.8??

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??21????ESG????????????????????  
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??JP????????????????CEO????????????????????????????????????

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?1??1.5??2030?46????????????????2050????????????????????1.5??  
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????????2030????45????????????????????2030????????????????????CO2????????????????2030????????????

?1.5??ASEAN????????????1.5????????????????????????????????  
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## ????????ESG????????????

?? ?? · Thursday, September 29th, 2022

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