

Table-and-figure comparison with explanatory notes

Comparison of Table 2

The following presents a comparison of the original and updated versions of Table 2, which reports the changes in installed capacities of nine energy types across all continents during 2015–2020. Several notable revisions occurred after correcting the underlying data.

First, the coal-fired capacity's growth rate in Asia is substantially lower in the updated table because the previously missing data for the Chinese mainland have now been incorporated.

Second, the geothermal values changed across all continents after correcting earlier copy-and-paste errors. The large percentage figure for South America (6857.14%) arises from a transition from zero to a small positive value, resulting in an extremely high relative increase despite the very small absolute capacity involved.

Third, the biomass growth rate for Europe increased markedly. This is primarily because the 87 previously blank regions included countries such as Sweden, which experienced significant biomass expansion during 2015–2020.

The other values in Table 2 have also been adjusted as a result of the comprehensive data corrections, but these revisions do not overturn the observed trends.

Original Table 2 Changes in installed capacity by energy type and continent (2015–2020)

	Coal	Gas	Oil	Bioenergy	Geothermal	Nuclear	Wind	Solar	Hydro
Asia	27.17%	20.75%	-1.15%	77.46%	20.74%	15.01%	89.92%	381.05%	12.32%
Africa	11.74%	30.91%	15.23%	7.16%	30.91%	0.00%	79.19%	193.85%	20.52%
Europe	-8.24%	-7.83%	-43.82%	-0.25%	-7.31%	-7.09%	40.21%	65.66%	3.72%
South America	12.13%	15.73%	4.30%	16.20%	15.73%	24.77%	163.70%	884.16%	12.04%
North America	-20.64%	1.72%	-24.42%	-7.23%	1.72%	-0.71%	57.56%	219.83%	1.77%
Oceania	-10.73%	0.56%	9.62%	9.43%	0.56%	0.00%	79.47%	4086.76%	2.96%

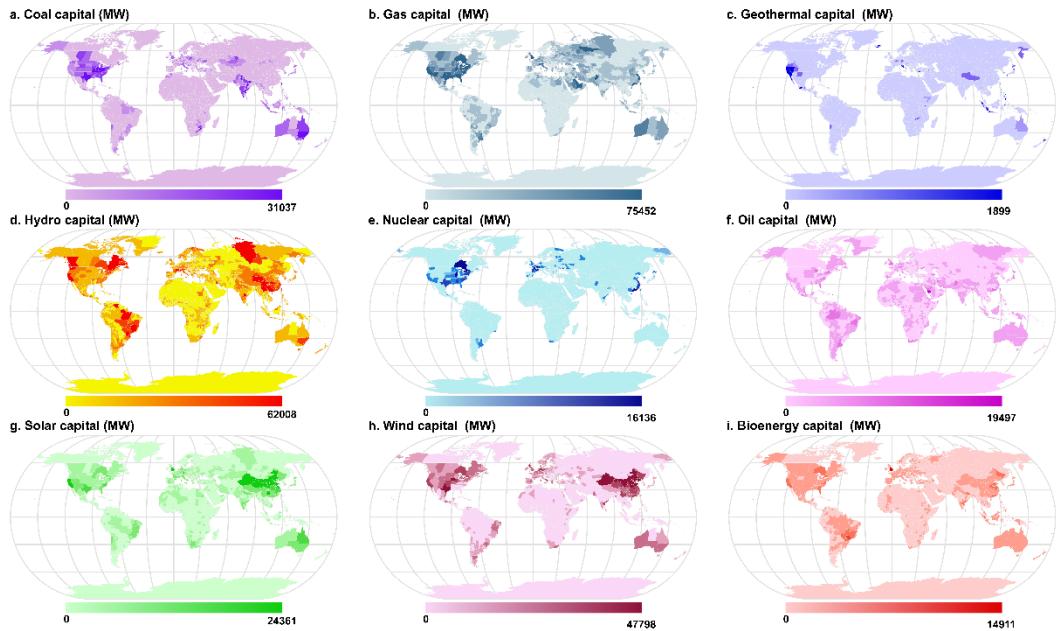
Updated Table 2 Changes in installed capacity by energy type and continent (2015–2020)

	Coal	Gas	Oil	Bioenergy	Geothermal	Nuclear	Wind	Solar	Hydro
Asia	20.64%	21.30%	-1.02%	77.22%	36.08%	15.01%	89.91%	377.82%	12.29%
Africa	11.52%	41.43%	16.10%	6.88%	27.91%	0.00%	79.78%	207.45%	20.61%
Europe	-8.34%	-4.81%	-42.25%	16.16%	10.88%	-1.96%	39.10%	62.46%	3.63%
South America	10.80%	25.62%	7.73%	16.23%	6857.14%	24.77%	163.70%	884.16%	12.04%
North America	-19.86%	2.11%	-19.60%	-6.94%	-1.60%	-0.71%	60.07%	248.42%	1.79%
Oceania	-8.48%	0.56%	12.50%	9.76%	2.22%	0.00%	79.51%	4086.76%	1.89%

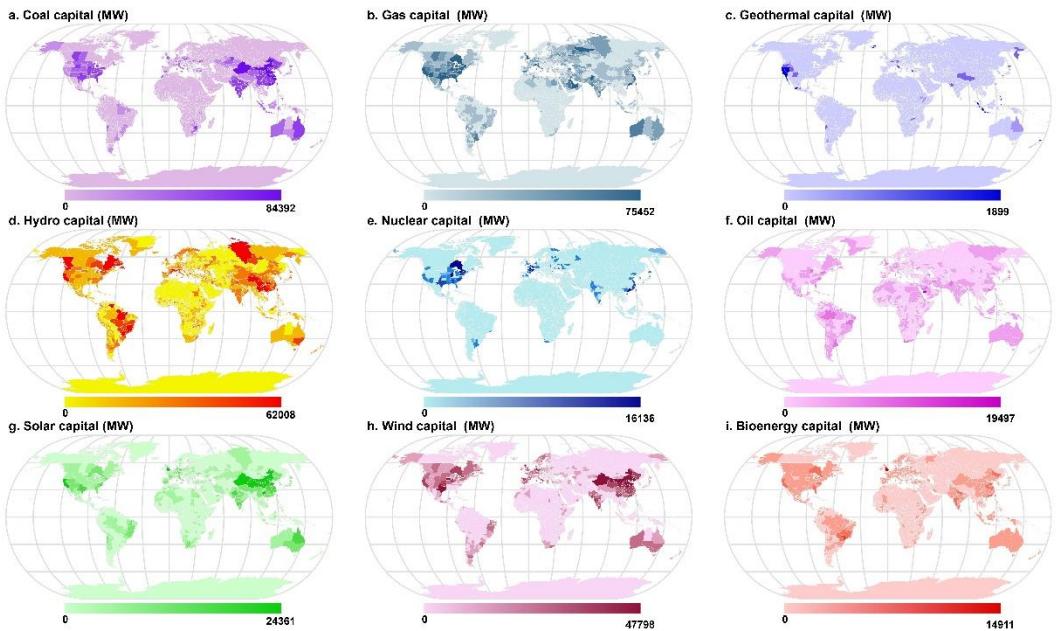
Comparison of Fig. 1

The primary change in Fig. 1 occurs in panel (a). After incorporating the previously missing data for the Chinese mainland, the maximum subnational coal-fired level increased from 31,037 MW to 84,392 MW.

The data ranges for all other energy types remain unchanged. Only slight, visually subtle shading differences appear in a small number of regions due to the data corrections.



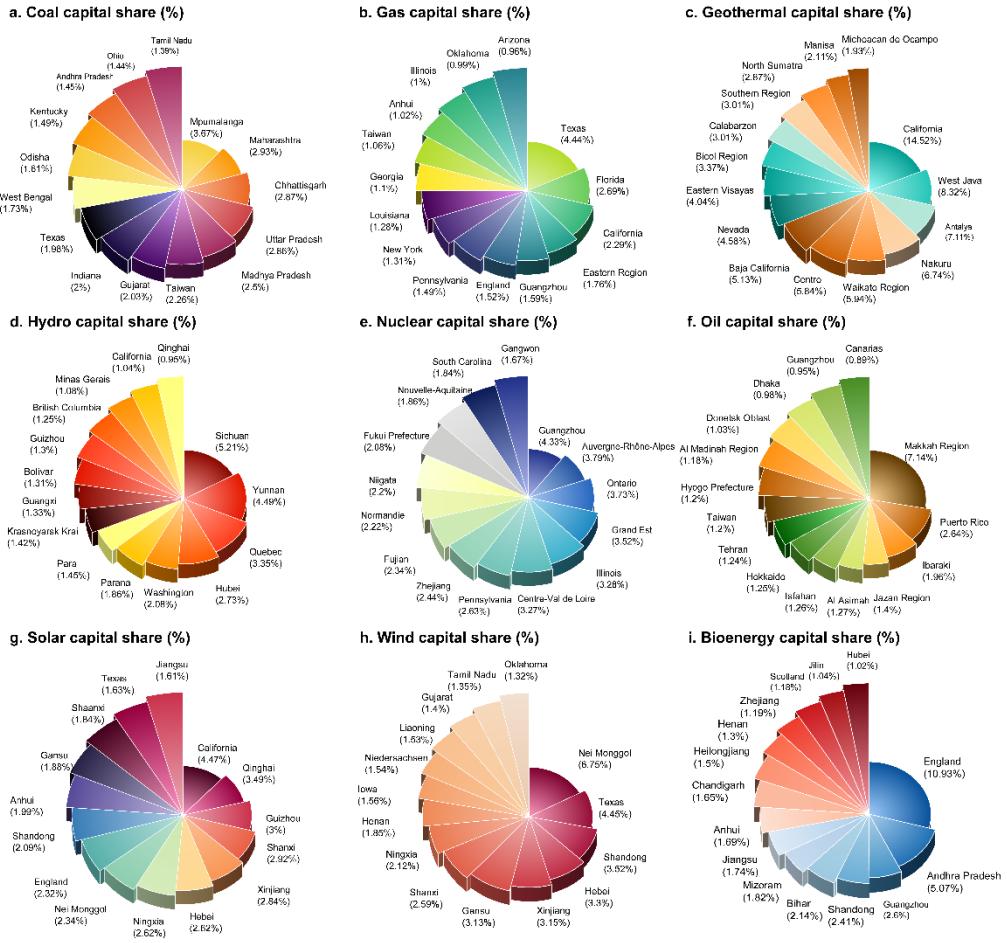
Original Fig. 1 Global patterns of installed power capacity in 2020. Subnational regions with darker colors represent higher total installed power capacity (in megawatts).



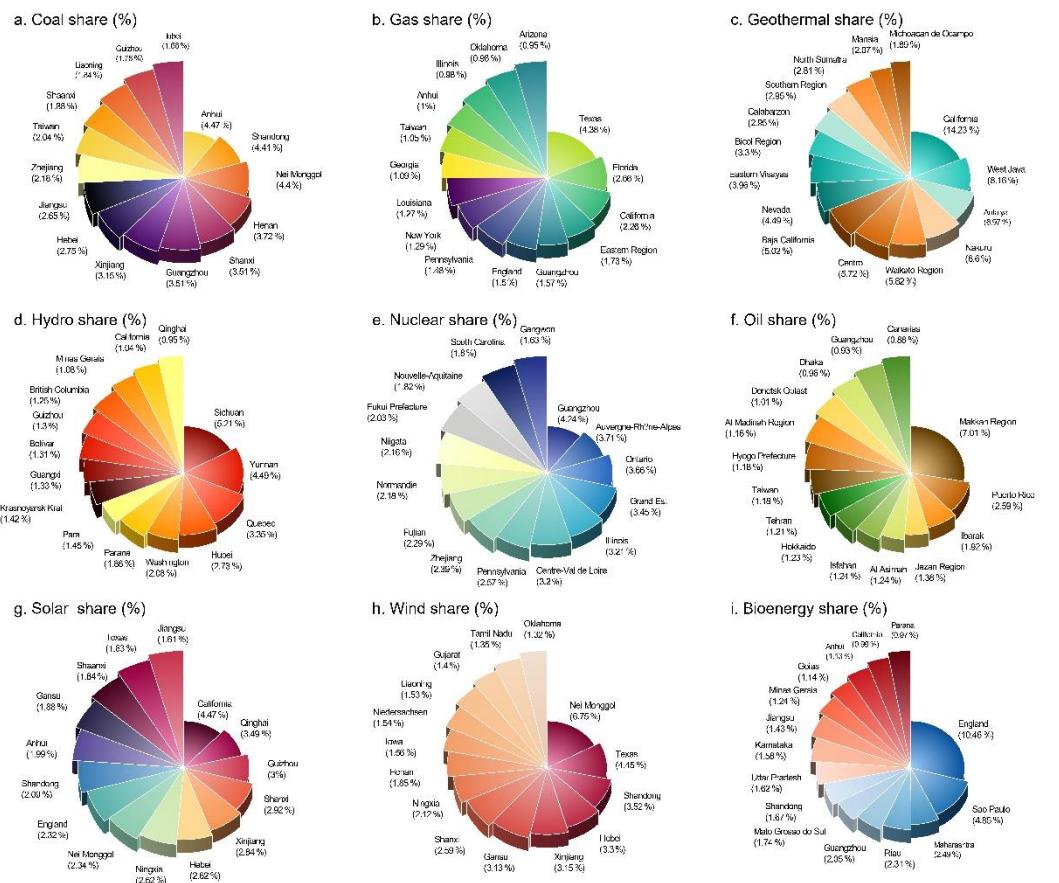
Updated Fig. 1 Global patterns of installed power capacity in 2020. Subnational regions with darker colors represent higher total installed power capacity (in megawatts).

Comparison of Fig. 3

The main change in Fig. 3 occurs in panel (a). Because the Chinese mainland has extremely large coal-fired totals, the updated version shows that all the top 15 subnational regions are all from Chinese mainland. Panel (i) also shows some changes in ranking after filling in the previously blank data. The top-15 lists for the other energy types remain unchanged.



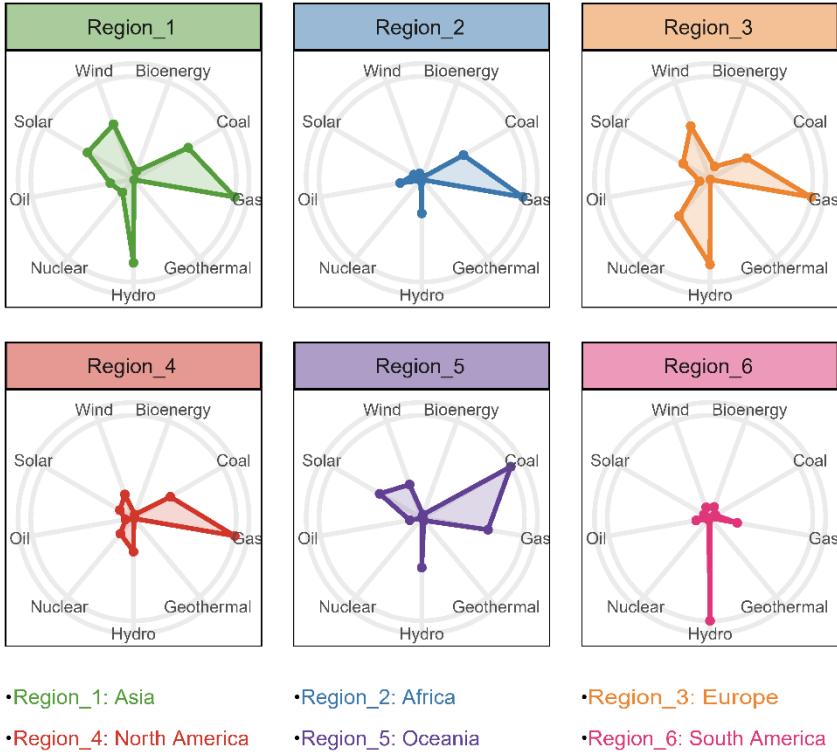
Original Fig. 3 Subnational-level heterogeneity in power generation capacity structure and dominant energy mix. Each pie chart illustrates the top 15 subnational administrative units where a specific electricity source accounted for the highest share of local power generation in 2020.



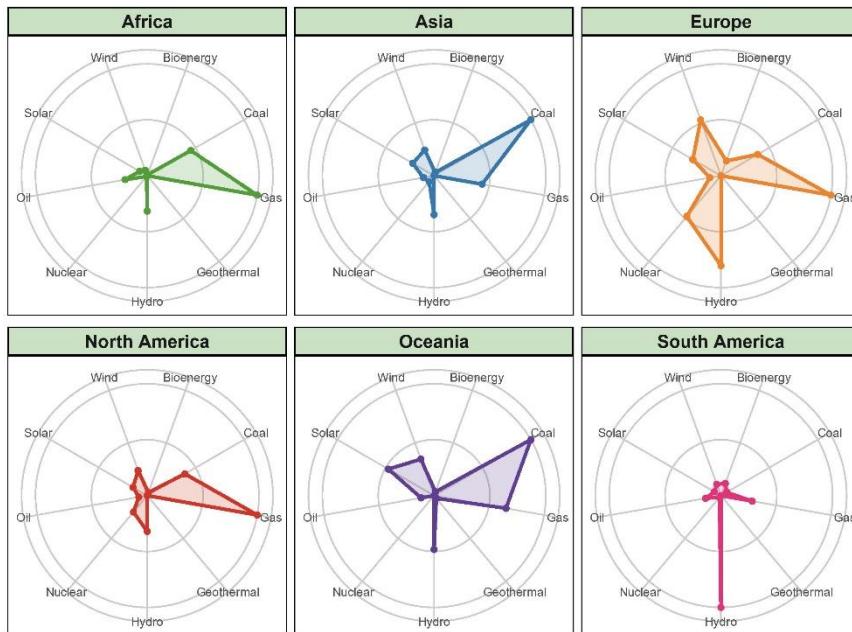
Updated Fig. 3 Subnational-level heterogeneity in power generation capacity structure and dominant energy mix. Each pie chart illustrates the top 15 subnational administrative units where a specific electricity source accounted for the highest share of local power generation in 2020.

Comparison of Fig. 4

The main change in Fig. 4 occurs in panel (a). Because China accounts for roughly half of Asia's coal-fired plants, completing the missing data leads to a substantial change in the power-mix distribution for Asia. The power-mix compositions of the other continents show no notable changes.



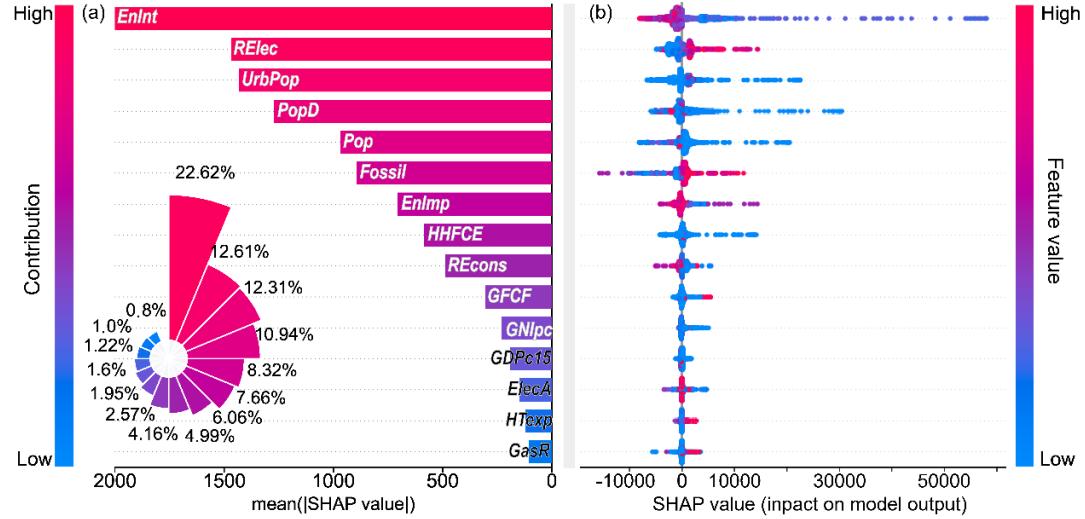
Original Fig. 4 Heterogeneity in the structure of installed electricity across continents. Radar charts are employed to visualize the share of nine energy types in each continent.



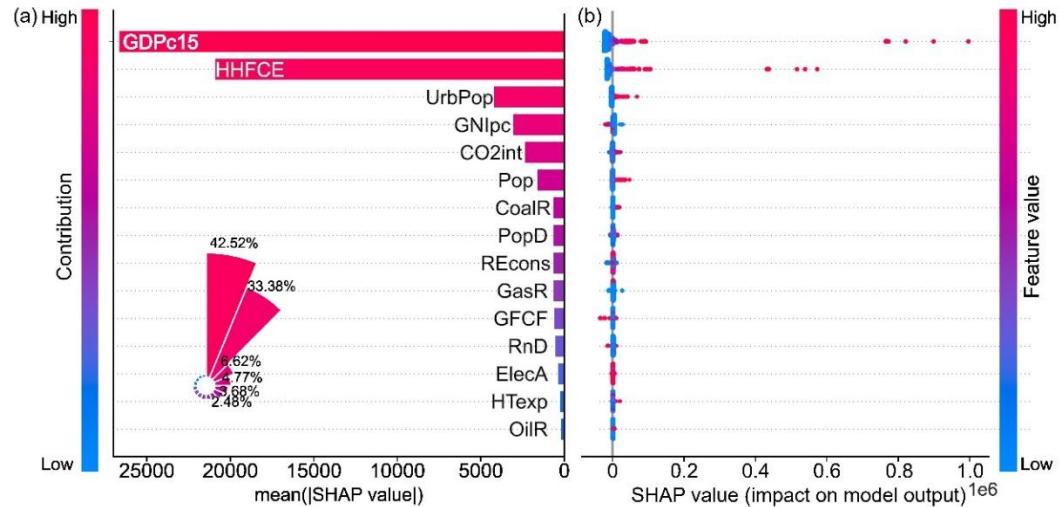
Updated Fig. 4 Heterogeneity in the structure of installed electricity across continents. Radar charts are employed to visualize the share of nine energy types in each continent.

Comparison of Fig. 5

Fig. 5 underwent substantial adjustments. After recalculating the machine learning analysis with the updated data, GDP and Household & NPISH final consumption expenditure were identified as the dominant driving factors. The SHAP beeswarm plot was also updated accordingly to reflect the revised machine-learning outcomes.



Original Fig. 5 Top 15 positively contributing country-level drivers worldwide (SHAP value). (a) shows the global feature importance ranking based on normalized mean absolute SHAP values. To maintain clarity, only the top 15 of 19 variables are shown, ~~accounting for 98.79% of the total contribution. The remaining four variables—OilR, RnD, CO2int, and CoalR—are omitted due to their minor combined impact (1.21%).~~ (b) is a SHAP beeswarm plot, where each point represents the signed SHAP value (x-axis) of a sample for a given feature. Color indicates the original feature value from low (blue) to high (red). Points on the right (>0) indicate a positive contribution to the average installed capacity (across nine energy types), while those on the left (<0) indicate a negative effect.



Updated Fig. 5 Top 15 positively contributing country-level drivers worldwide (SHAP value). (a) shows the global feature importance ranking based on normalized mean absolute SHAP values. To maintain clarity, only the top 15 of 19 variables are shown. (b) is a SHAP beeswarm plot, where each point represents the signed SHAP value (x-axis) of a sample for a given feature. Color indicates the original feature value from low (blue) to high (red). Points on the right (>0) indicate a positive contribution to the average installed capacity (across nine energy types), while those on the left (<0) indicate a negative effect.