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The Global Energy Mix

Electricity doesn't just appear from our plug sockets; it has to be generated somewhere. We can generate electricity from lots of places! However, some places impact the world's climate more than others, so countries must be careful with where they choose to generate their electricity from.

Up to now, most electricity has been generated from dirty fossil fuels. Fossil fuels include coal, oil and natural gas [1]. They are called fossil fuels as they have been around for a very long time and are made from decomposing plants and animals [2].

Fossil fuels like coal, oil and natural gas are non-renewable. Coal, oil and natural gas take such a long time to form that once they have been used up, they are gone forever. They also contribute a great deal to global warming and climate change [2].

However, we can also generate our electricity from cleaner, renewable energy resources. Renewable means that it is a source that can continue generating electricity for a very long time with little damage to the planet [3]. The wind, sun and even the tides can provide energy for us to make into electricity! [3]

We get all of our electricity from something called the grid [4]. Electricity from the grid can be generated from all sorts of energy resources: non-renewable and renewable. This is called the energy mix [4]. Every country has its own energy mix. Mixes with a high proportion of renewable energy are better for the planet than those with a low proportion of renewable energy [2].

As a result of the climate emergency, countries want to transition their mix so that a higher proportion of it is made up of renewable energy [2].

Take a look at the data on the next page and colour in the bars to accurate show each country's energy mix!

The Global Energy Mix

| United Kingdom | Japan | India | Germany | France | China | Brazil | Country |
|----------------|-------|-------|---------|--------|-------------|--------|-----------------|
| 3% | 27% | 57% | 17% | 3% | 55% | 6% | Coal |
| 35% | 37% | 27% | 33% | 31% | 19% | 38% | <u>o:</u> |
| 39% | 21% | 6% | 26% | 17% | 9% | 13% | Gas |
| 6% | 3% | 1% | 5% | 37% | 2% | 1% | Nuclear |
| 1% | 4% | 4% | 1% | 6% | 89 % | 27% | Hydropower |
| 9% | 0.5% | 2% | 9% | 4% | 4% | 5% | Wind |
| 2% | 5% | 2% | 4% | 1% | 2% | 1% | Solar |
| 6% | 2% | 1% | 5% | 1% | 1 % | 9% | Other renewable |

^{*}Data gathered from Our World In Data. https://ourworldindata.org/energy-mix

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| Brazil | |
|--------------|--|
| | |
| China | |
| | |
| France | |
| | |
| Germany | |
| | |
| India | |
| | |
| Japan | |
| | |
| South Africa | |
| | |

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- **[1] Ouma, nd.** 'Assessing Locations for Wind Power Generation' Available at: https://exploringgreentechnology.com/wind-energy/assessing-locations-for-wind-power-generation/ Accessed 05.08.22
- **[2] National Geographic, nd.** 'Fossil Fuels'. Available at: https://education.nationalgeographic.org/resource/fossil-fuels/. Accessed 05.08.22
- [3] United Nations Climate Action, nd. 'Causes and Effects of Climate Change'. Available at: https://www.un.org/en/climatechange/science/causeseffects-climate-change. Accessed 05.08.22
- **[4] Handsley-Davis, 2022.** 'Explainer: what is the grid?'. Available at: https://cosmosmagazine.com/technology/energy/explainer-what-is-the-grid/. Accessed 24.05.22