

Introduction

Almost 137 countries have set timelines to achieve net-zero emissions. Net-zero emissions is a state where the amount of greenhouse gases being released into the atmosphere is equal to the amount being removed. This means that the net emissions of carbon dioxide and other greenhouse gases are reduced to zero.

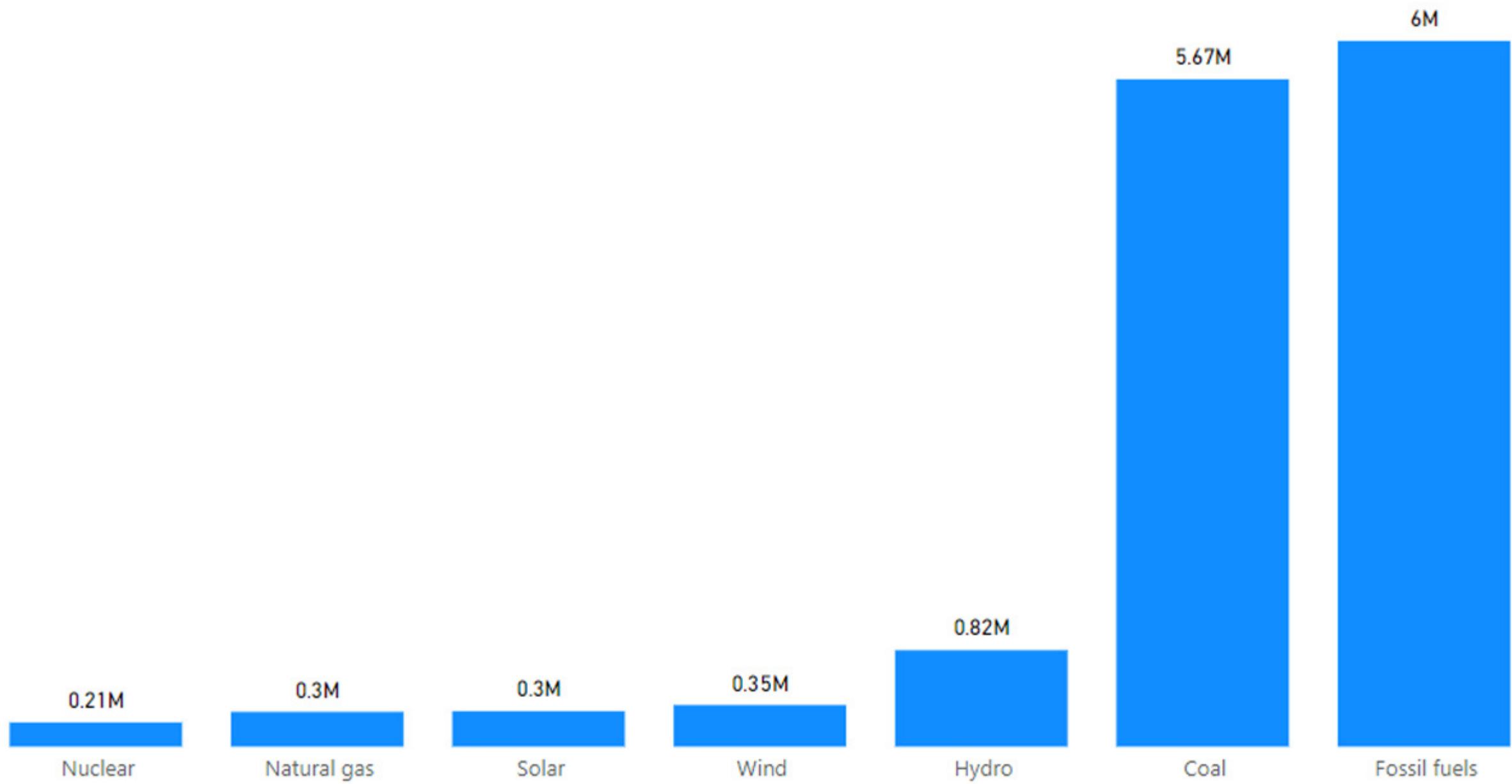
It is important to achieve net-zero emissions because these gases are the main drivers of climate change, which can lead to a range of negative consequences such as rising sea levels, more frequent and intense weather events, and habitat loss for plants and animals.

Achieving net-zero emissions will require a collective effort from individuals, businesses, and governments around the world. It will involve transitioning to cleaner sources of energy, such as wind and solar power, and reducing our reliance on fossil fuels like coal and oil.

It will also involve making changes to our lifestyles, such as using public transport instead of driving, and reducing our consumption of meat and dairy products, which have a high carbon footprint.

Electricity Production in GWh

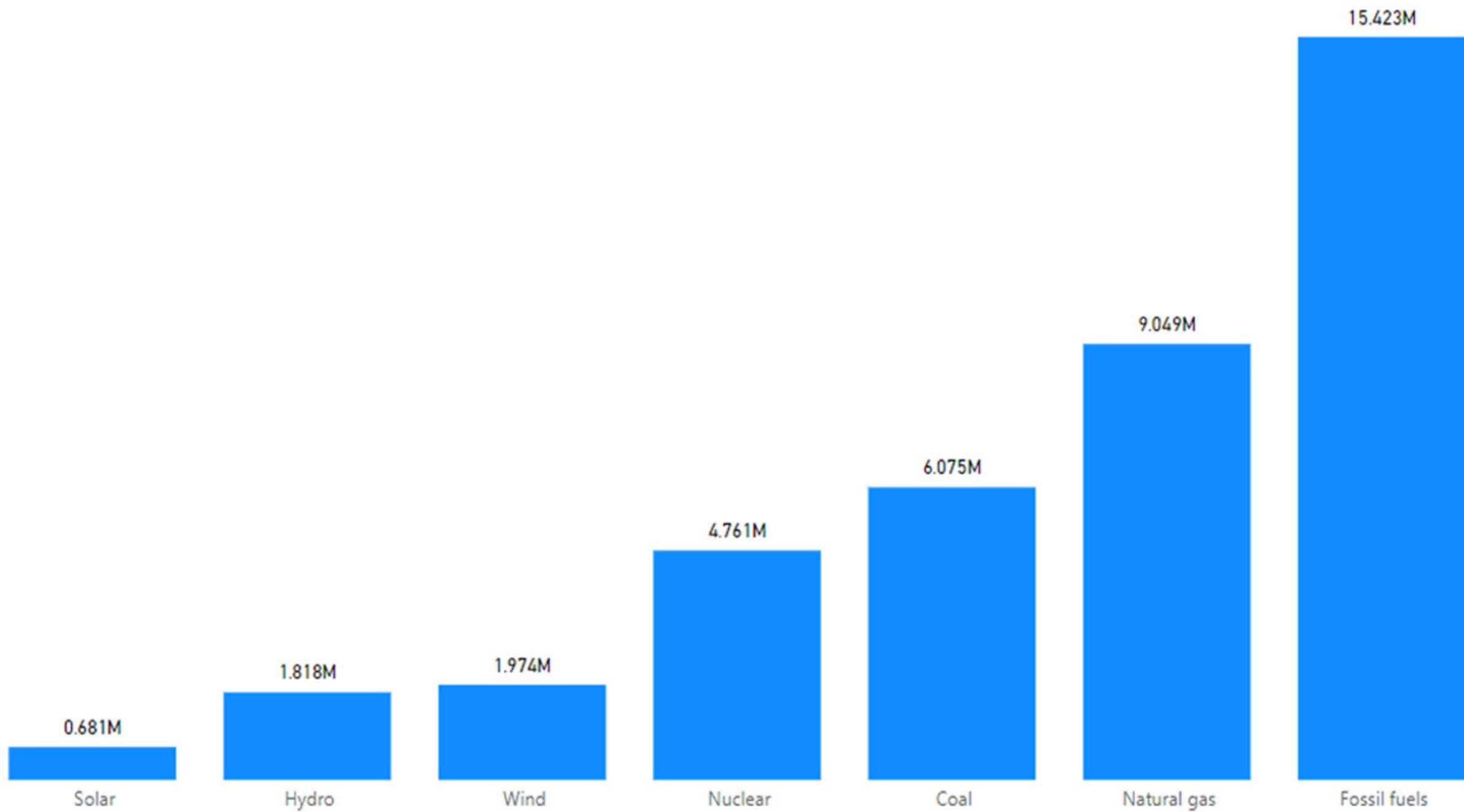
This visualization shows the electricity production sources in India, measured in GWh, from 2017 to 2022.



Fossil fuels were the major sources responsible for the highest level of electricity production in India over the last 5 years, followed by coal and hydro energy in second and third place, respectively. Renewable sources such as wind and solar took the fourth and fifth places.

Electricity Production in GWh

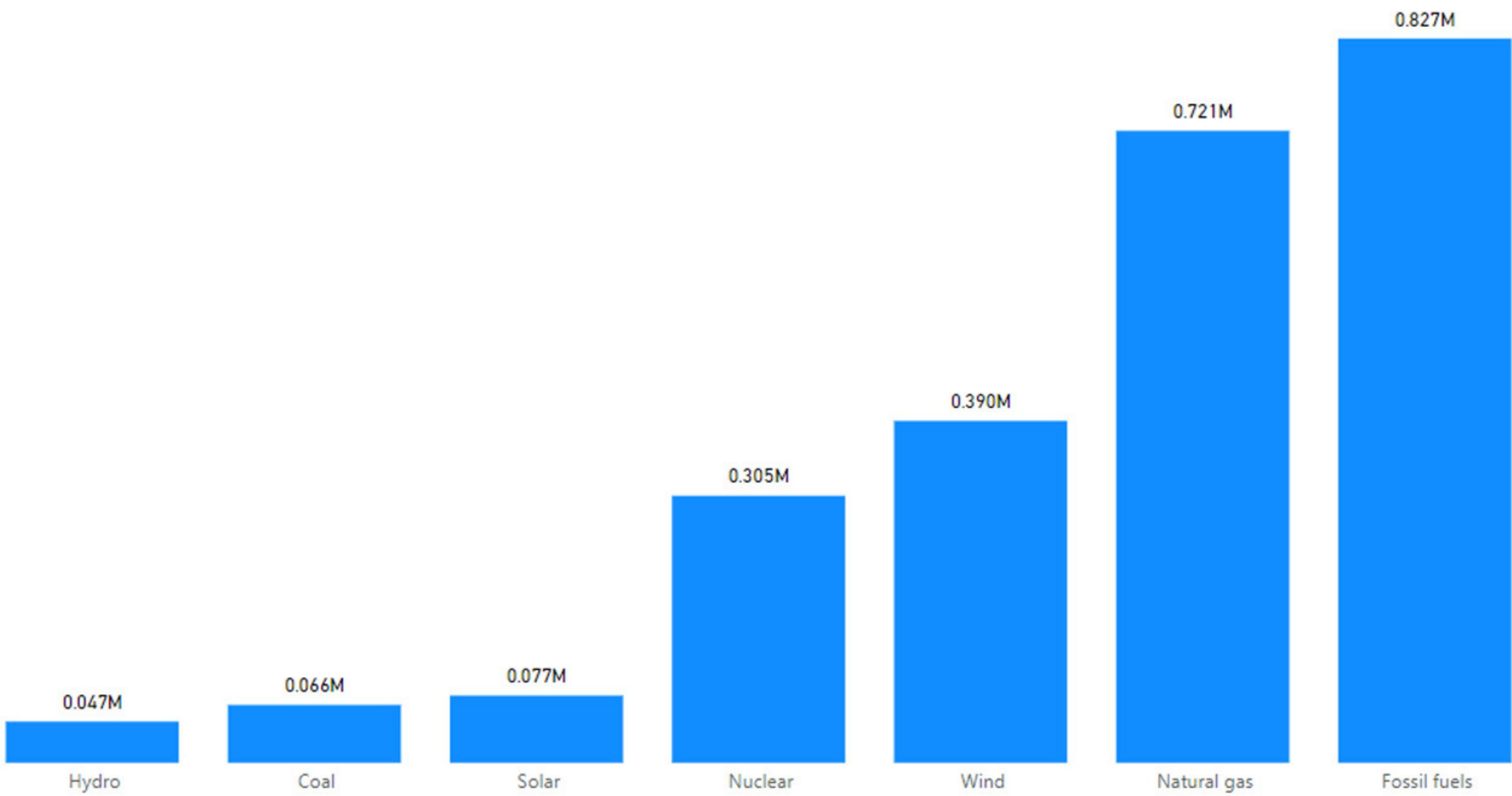
This visualization shows the electricity production sources in the United States, measured in GWh, from 2017 to 2022.



Compared to India, the United States has a higher dependency on non-renewable sources, such as fossil fuels, natural gas, coal, and nuclear energy, for energy production. Despite having a smaller population, the USA produces more energy than India and exports it to other countries for profit.

Electricity Production in GWh

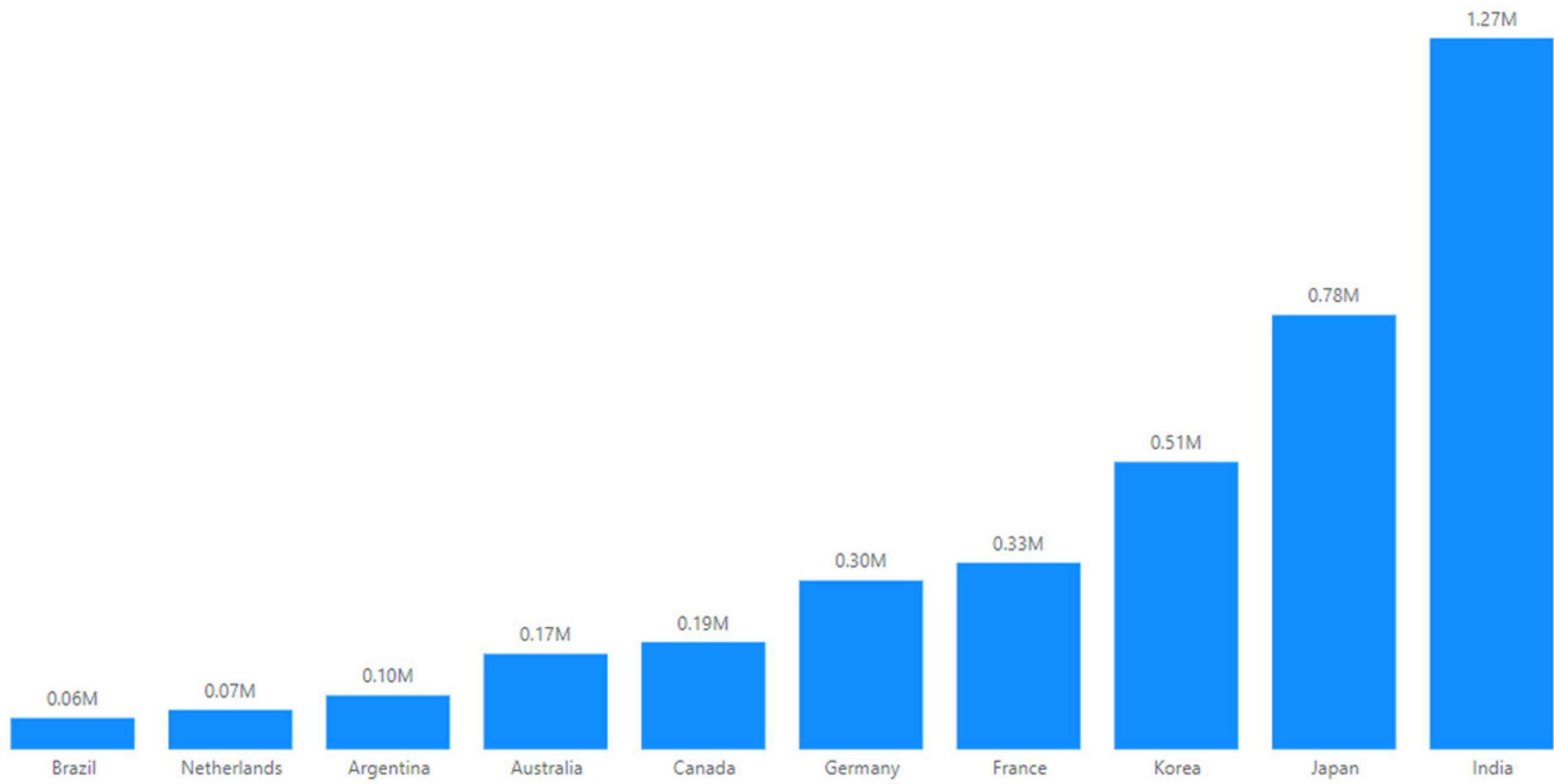
This visualization shows the electricity production sources in the United Kingdom, measured in GWh, from 2017 to 2022.



The United Kingdom is currently in a phase of transition, where its dependence on non-renewable resources is decreasing while its reliance on renewable sources is steadily increasing. However, the decline in North Sea oil and gas production has resulted in the UK becoming increasingly dependent on energy imports.

Electricity Production in GWh

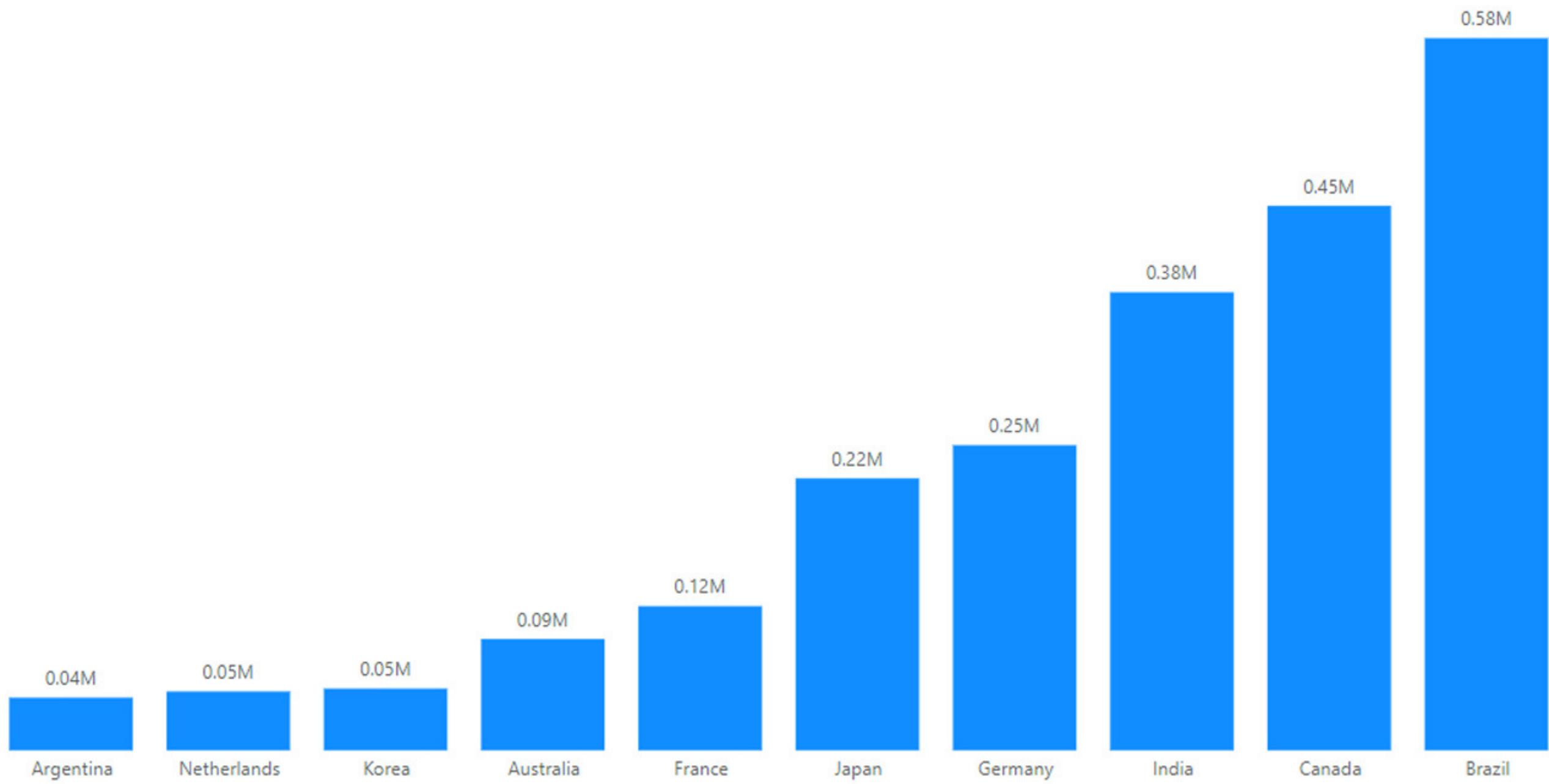
This visualization shows the non renewable electricity production sources, measured in GWh, in 2022



The data for 2022 shows the amount of electricity produced by different countries from non-renewable resources, in comparison to India.

Electricity Production in GWh

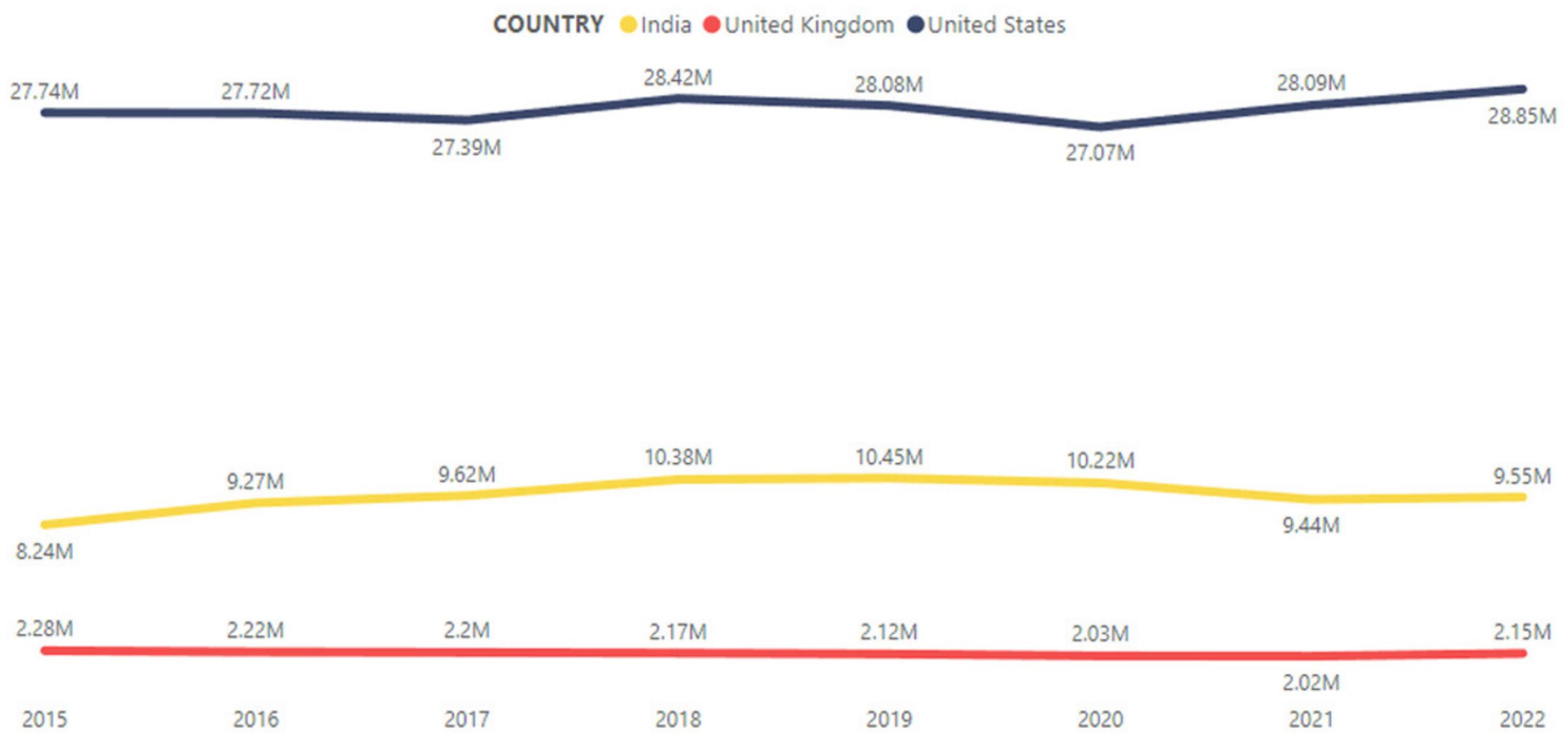
This visualization shows the renewable electricity production sources, measured in GWh, in 2022



The data for 2022 shows the amount of electricity produced by different countries from renewable resources, in comparison to India.

Electricity Production in GWh

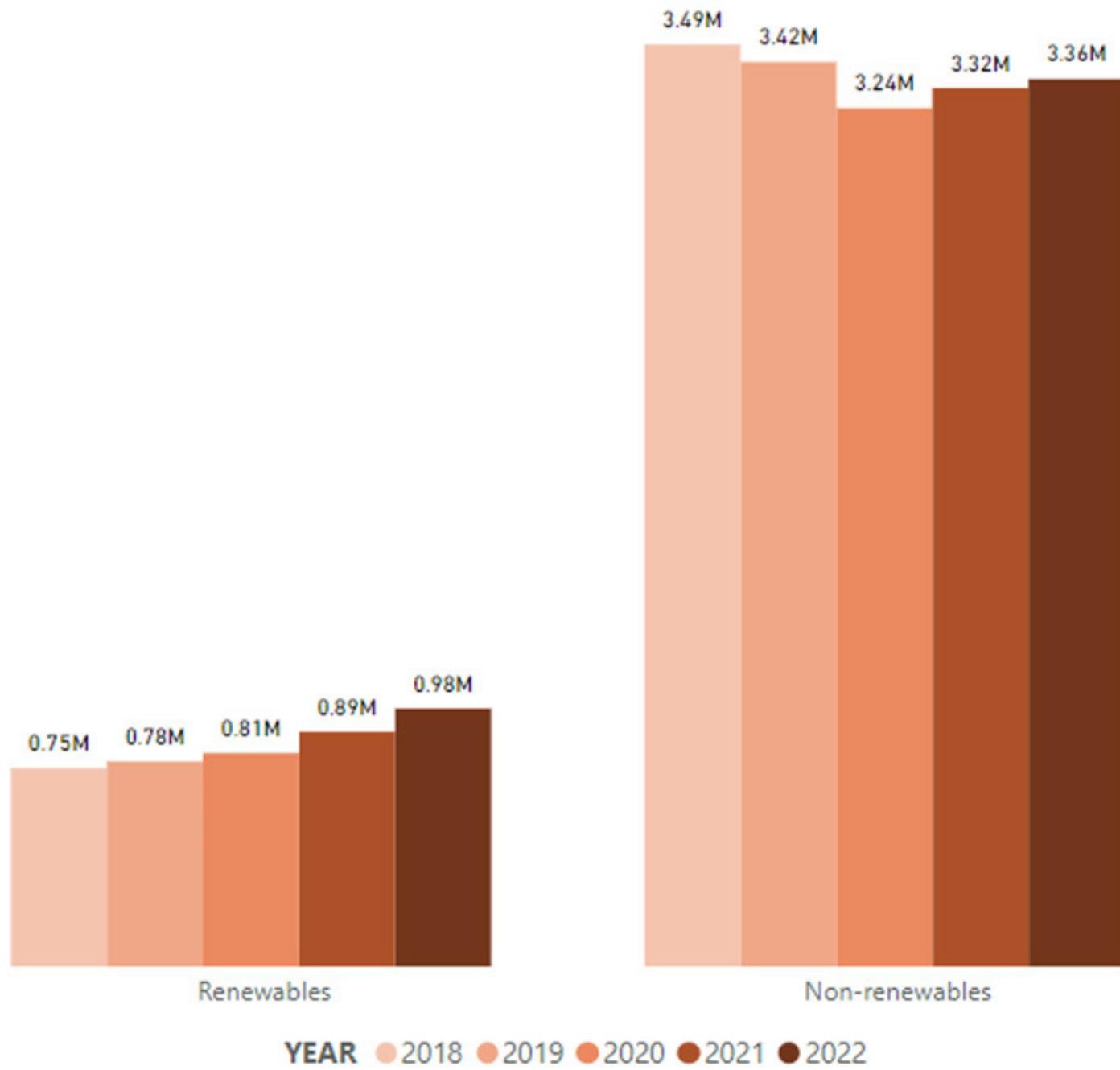
Comparison of electricity production between India, the United States, and the United Kingdom from 2015 to 2022.



The United States produces the most electricity among the three countries in the list. Even though the US has a smaller population than India, it still produces more electricity to fuel its large industrial needs. It even exports some of this electricity to other countries, such as Mexico, Canada, Jamaica, and more.

Electricity Production in GWh

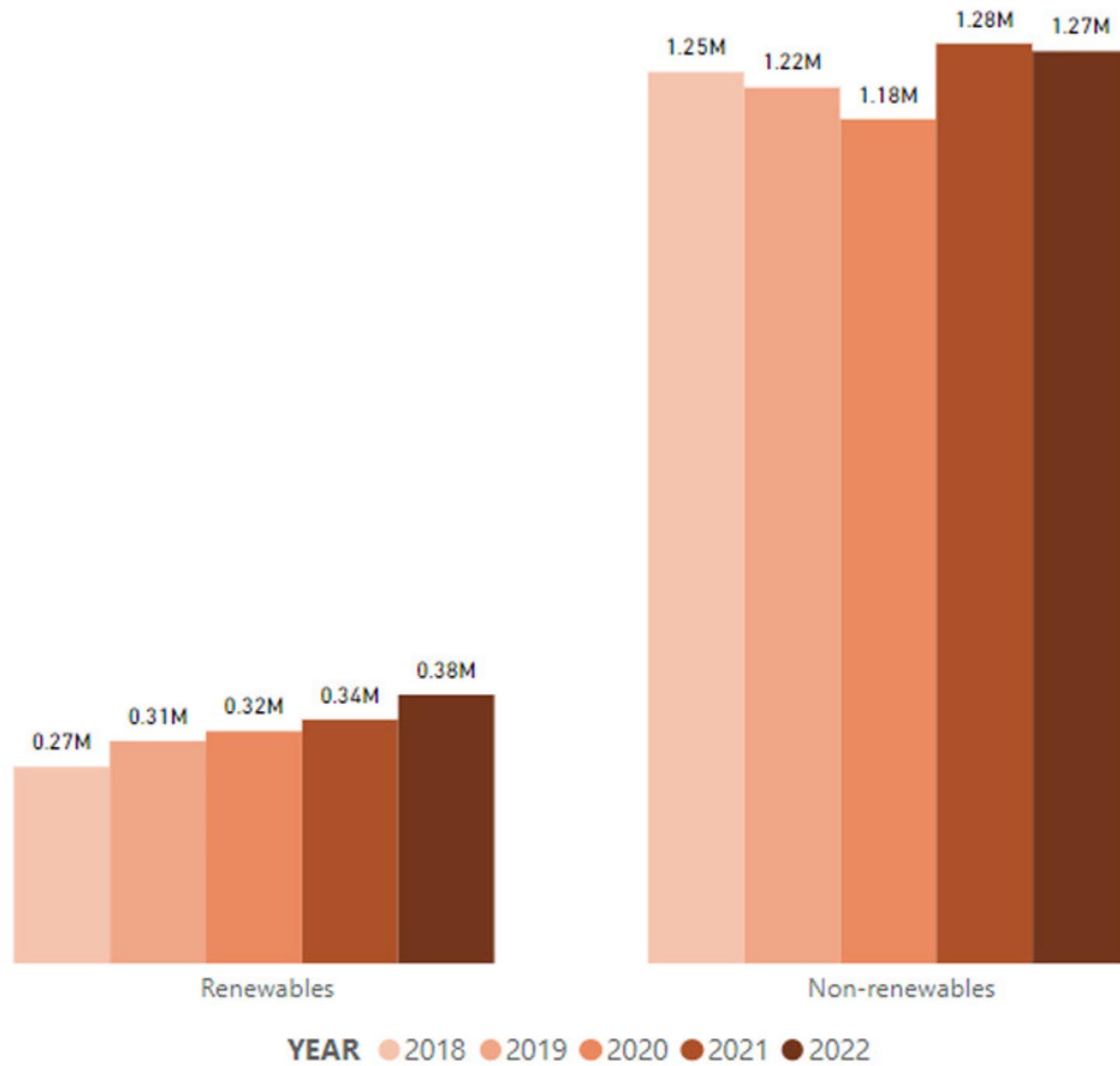
This visualization shows the electricity production sources in the United States, measured in GWh, from 2018 to 2022.



Despite its promises to become carbon neutral by 2050, the USA's dependency on renewable sources is not growing at the desired pace. They continue to heavily rely on non-renewable resources for electricity production, which they then export.

Electricity Production in GWh

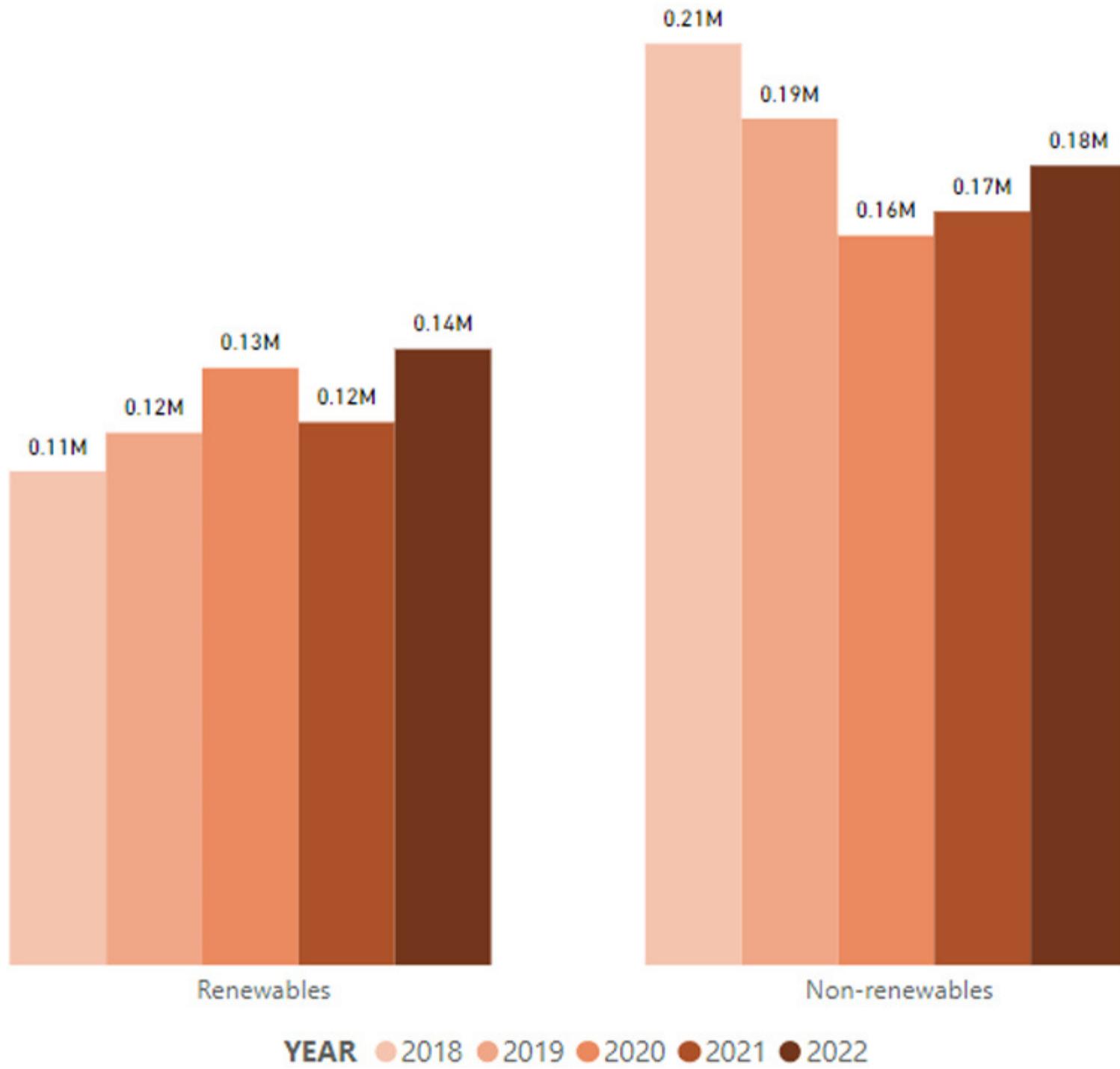
This visualization shows the electricity production sources in India, measured in GWh, from 2018 to 2022.



India has also been increasing its reliance on renewable resources. However, it is important to note that India has a large population, and meeting the electricity demand of the entire country using only renewable resources will take a considerable amount of time. This is why India has set the year 2070 as the target for becoming carbon neutral.

Electricity Production in GWh

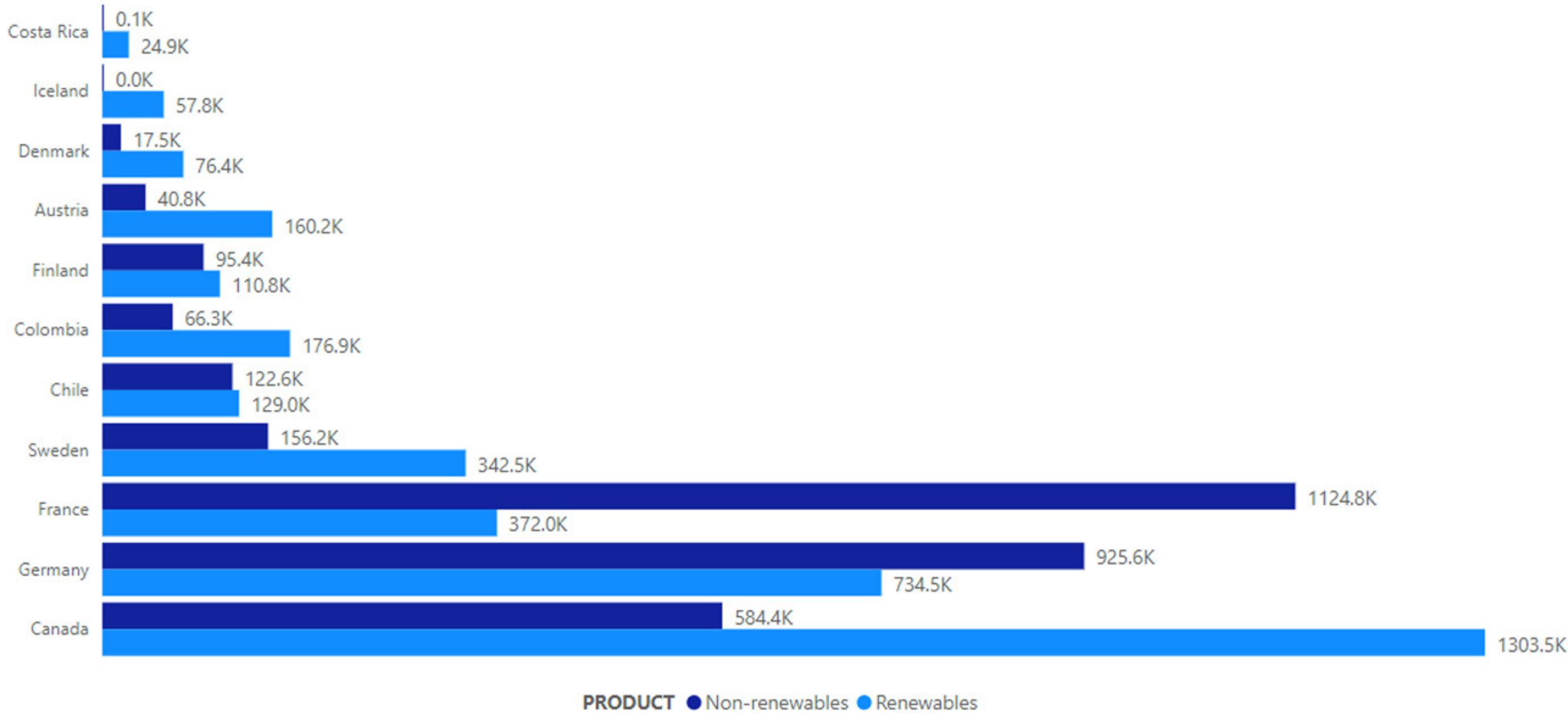
This visualization shows the electricity production sources in the United Kingdom, measured in GWh, from 2018 to 2022.



From the available data, it is evident that the use of non-renewable sources has been steadily declining since 2018. However, in the last two years, there has been a slight increase in the dependency on non-renewable resources due to rising energy demands and the impact of climate change.

Electricity Production in GWh

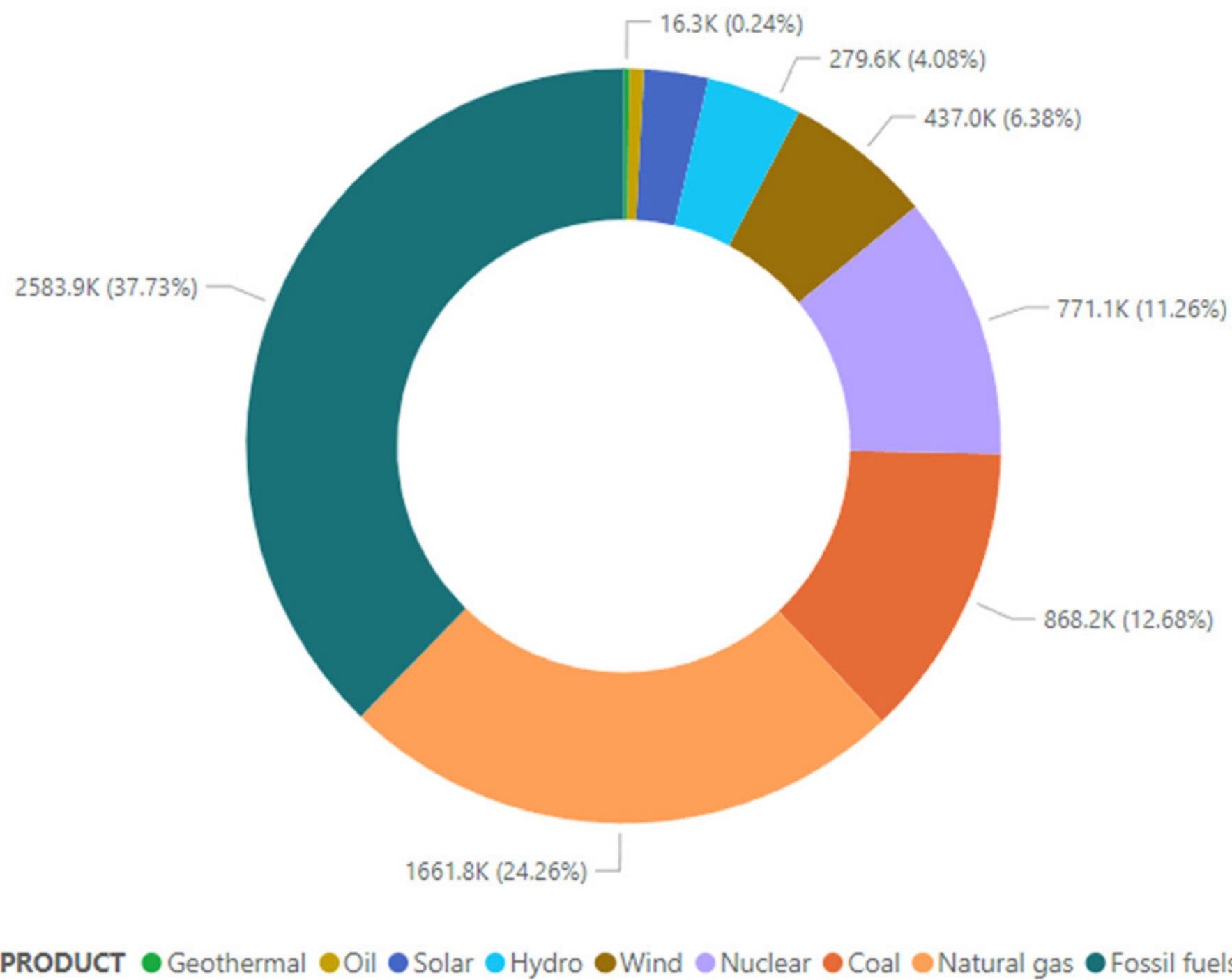
Here is a representation of some of the countries that have pledged to achieve carbon neutrality before 2050, along with an overview of their current progress.



The renewable and non-renewable sources that are being used to produce electricity vary between countries. Bhutan and several others have already achieved carbon neutrality, which serves as a lesson for other countries to take carbon neutrality seriously.

Electricity Production in GWh

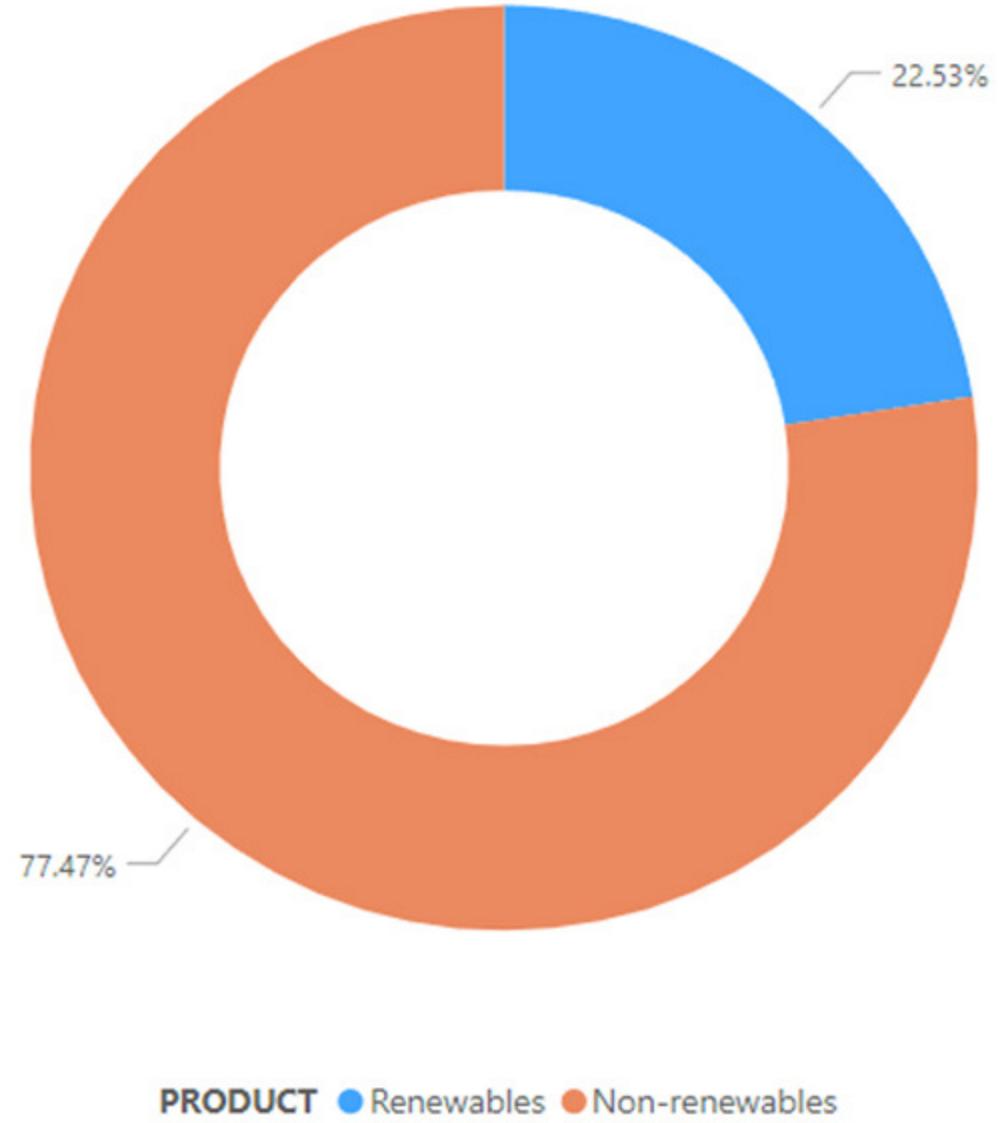
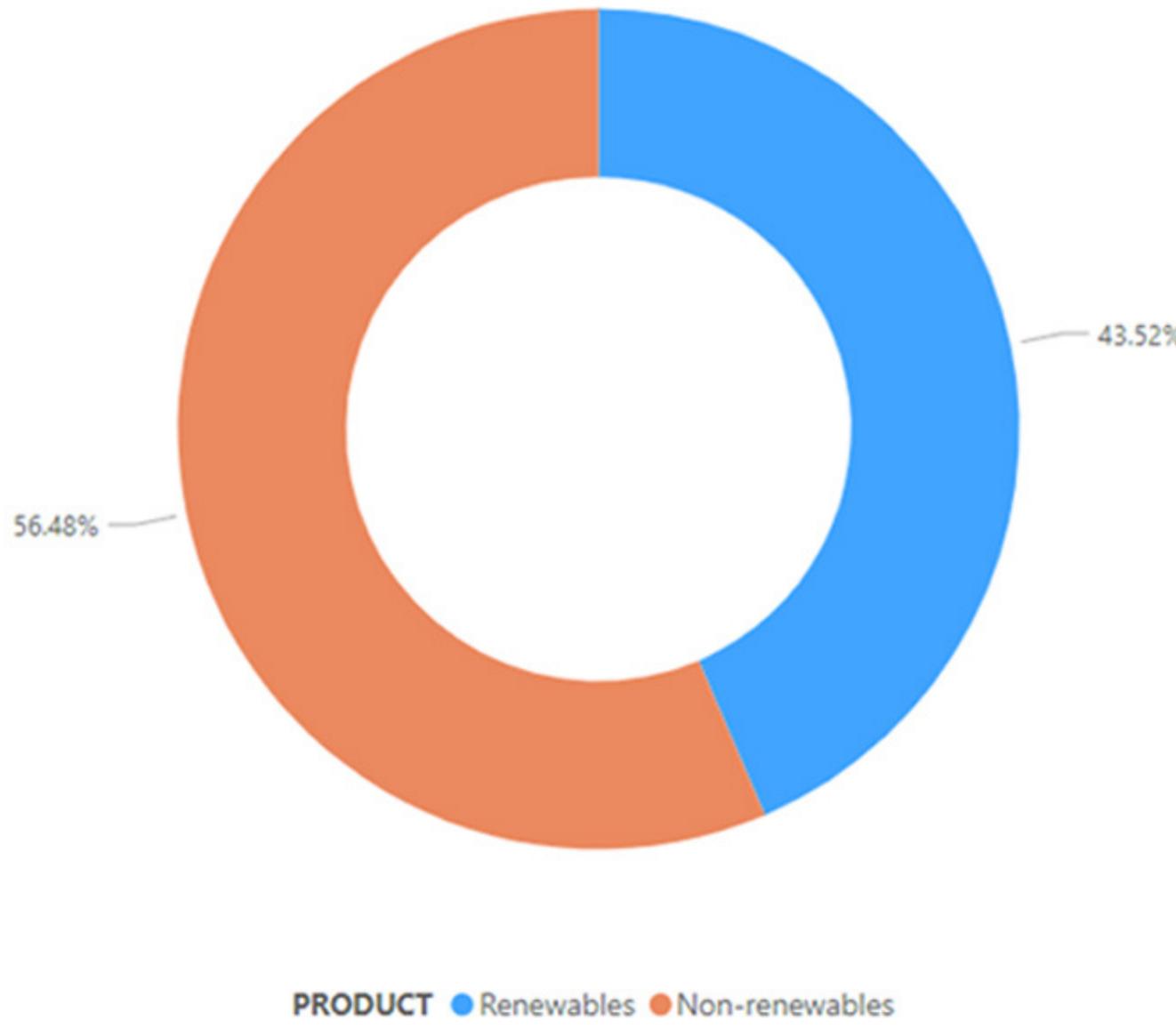
Here are the sources of electricity production for the United States and their respective percentages of the country's total electricity production in 2022.



Although the USA has promised to become carbon neutral by 2050, it heavily depends on non-renewable sources to produce electricity. Fossil fuels account for 37% of its electricity production, with natural gas coming in second at 24%, and coal in third place at 13%.

Electricity Production in GWh

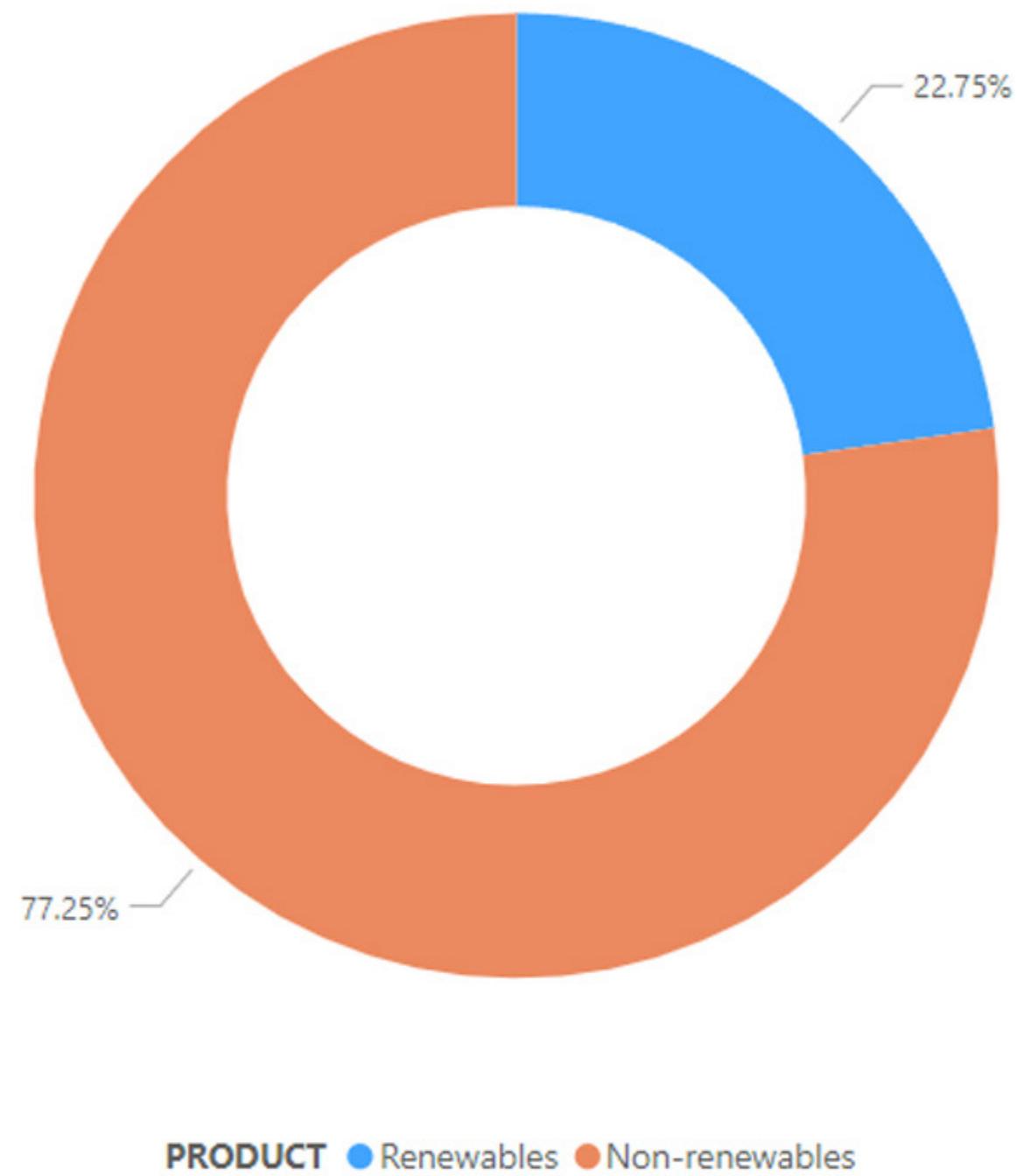
Here are the sources of electricity production for the United Kingdom & USA and their respective percentages of the country's total electricity production in 2022.



In the United Kingdom, 56% of the electricity produced comes from non-renewable resources, while in the USA, 77% of their electricity comes from non-renewable sources such as coal, fossil fuels, and others.

Electricity Production in GWh

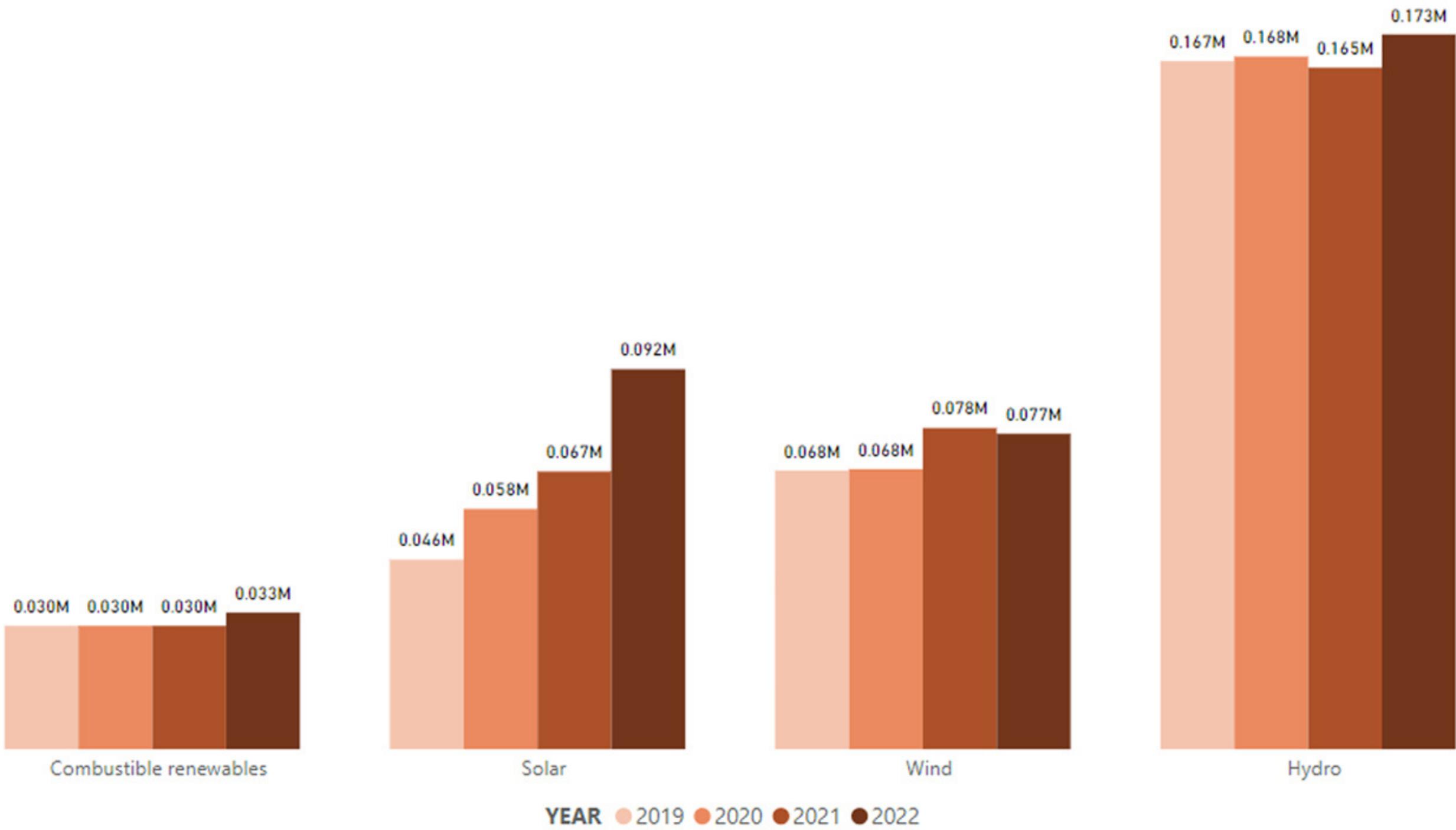
Here are the sources of electricity production in India and their respective percentages of the country's total electricity production in 2022.



Similar to the US, 77% of India's electricity production comes from non-renewable resources such as coal, fossil fuels, and others. However, it's important to remember that India has set a later goal to become carbon neutral than the US and also has a larger population.

Electricity Production in GWh

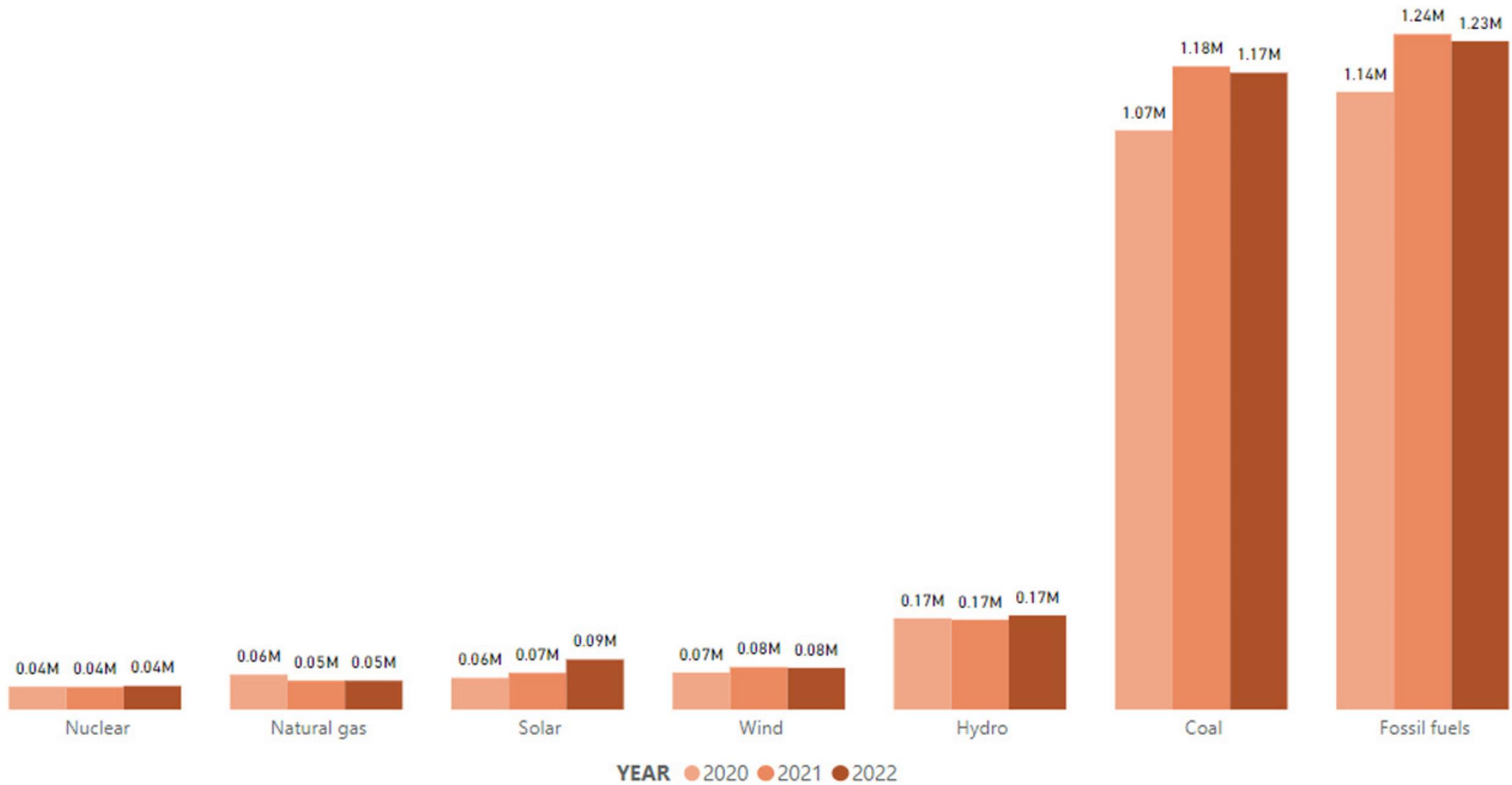
This visualization shows the renewable electricity production sources in India, measured in GWh, from 2019 to 2022.



There has been a slow but steady rise in the use of renewable sources for electricity production in India. India has set a goal to become carbon neutral by 2070, which is a later timeline compared to other countries. As a huge country with a large population, India faces unique challenges in transitioning to cleaner energy sources.

Electricity Production in GWh

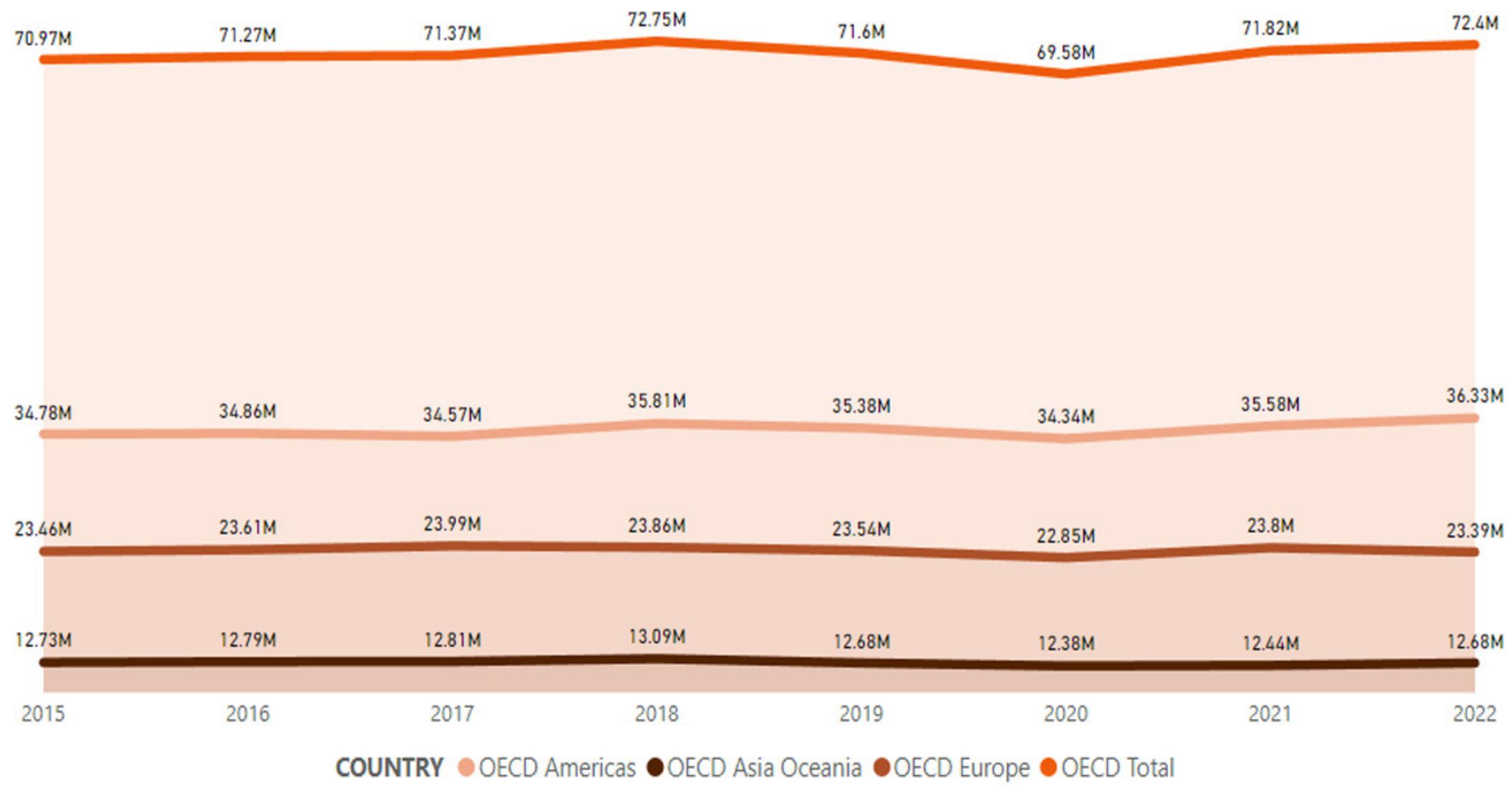
This visualization shows the electricity production sources in India, measured in GWh, from 2020 to 2022.



We can see that India has been reducing its dependency on non-renewable energy sources, such as coal and fossil fuels. While the drop is minor, there is a clear trend towards increasing the use of renewable sources, such as solar and wind energy. India aims to become carbon neutral by 2070.

Electricity Production in GWh

Comparison of electricity production between different OECD (Organisation for Economic Co-operation and Development) regions from 2015 to 2022.



The OECD Americas region leads the pack primarily due to the electricity production from the United States. There are a total of five countries in the OECD Americas, namely the United States, Canada, Mexico, Chile, and Colombia. The OECD Europe is the second-largest producer of electricity, followed by the OECD Asia-Oceania.