

For a named country or area you have studied, describe and explain the importance of different sources of energy.

Name of country or area- China

- Government policy
- Lack of air pollution
- Fossil fuels (eg oil, coal, natural gas)
- Hydroelectricity
- Renewable forms of energy (eg wind, wave power, HEP),
- Geothermal,
- Nuclear power,
- Wood/charcoal
- Locational details/named areas within country/Specific details/locations of energy supplies, Statistics etc
- Percentages for each of the energy forms

- China is now the world's largest consumer of energy, the largest producer and consumer of coal, and the largest emitter of carbon dioxide.
- **Coal-** Over the last half century, China's large manufacturing-based economy has primarily been fueled by coal. Since 2011, China has consumed more coal than the rest of the world combined.
 - In 2017, coal made up 59.3% percent of China's energy.
- **Natural gas-** Over the past two decades, new extraction techniques have made shale gas, a type of natural gas trapped in sedimentary rock, into a viable energy source. Natural gas is less carbon-heavy than coal when efficiently combusted, emitting up to 60 percent less CO₂.
 - In 2017 natural gas made up 6.0% of China's total energy consumption.
- **Renewable energy-** China is also the world's largest investor in clean energy as it aims to reduce air pollution due to burning of fossil fuels. Between 2013 and 2018, the country's investments in renewables grew from \$53 billion to an impressive peak of \$125 billion.
- **Nuclear-** China is also turning to nuclear power to decrease its reliance on fossil fuels. As of January 2020, China operated 47 nuclear power reactors. China's 13th Five-Year Plan reaffirmed the country's commitment to nuclear energy.
 - In 2017, nuclear energy made up 1.7% of China's energy.
- **Hydropower-** Due to large-scale investments in massive infrastructure projects, hydroelectric power has become China's main source of renewable energy production. The controversial Three Gorges Dam is the largest hydroelectric dam in the world. The dam generates 60 percent more electricity than the second-largest hydropower dam. As a result of the Three Gorges Dam and other projects, China became the world leader in hydropower in 2014.
 - In 2017, hydroelectricity made up 8.1% of China's energy.
- **Solar-** Over the past decade, China has also emerged as a global leader in wind and solar photovoltaic (PV) energy. Due to rapidly decreasing costs, aggressive policy incentives, and low-interest loans from local governments, China has dramatically

increased its production of solar panels. In 2014, China became the world's largest producer of solar panels. China is now home to two-thirds of the world's solar-production capacity.

- In 2017, solar PV made up approximately 0.9% of China's energy consumption and solar thermal made up 0.8%.
- **Geothermal-** The country's 13th Five-Year Plan for geothermal energy calls for an additional 500 MW by 2020.
 - In 2017, geothermal energy made up 0.4% of China's energy.
- **Wind energy-** China accounted for over a quarter of global wind-energy generation in 2017 due to a surge in this year.
 - In 2017, wind energy made up 2.0% of China's energy consumption.
- Apart from these sources, according to data collected in 2017, Oil made up 17.3% and Biofuel and waste made up 3.4% of China's energy supply.

Source used for percentages of different energy sources:

<https://www.worldenergydata.org/china/>

Notes provided by Samyukta Natarajan