

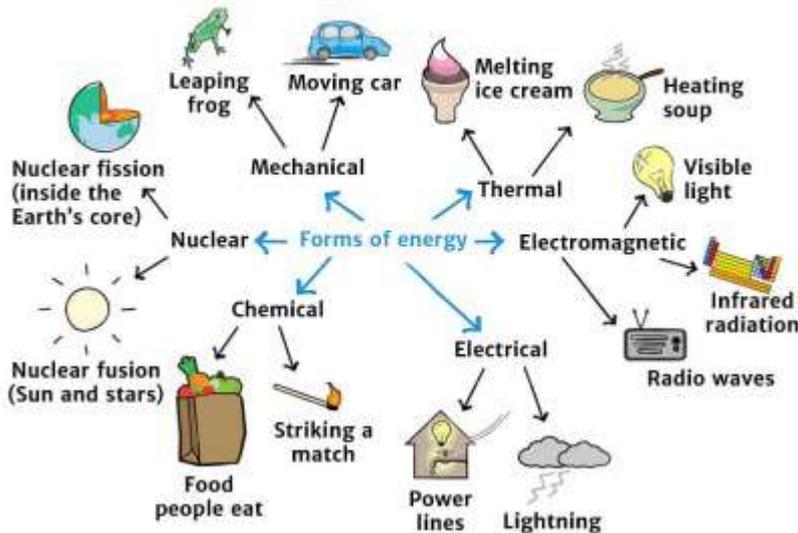
# Climate & Energy

## What is Energy?

Energy is all around us. It makes things move and grow. You are probably reading this sentence on a device which is powered by electrical energy or on a piece of paper illuminated by light energy. The food you eat provides the necessary chemical energy to keep you full of energy. You can hear music or talk to someone because of sound energy. Energy is vital in our life, but have you ever wondered where energy comes from?

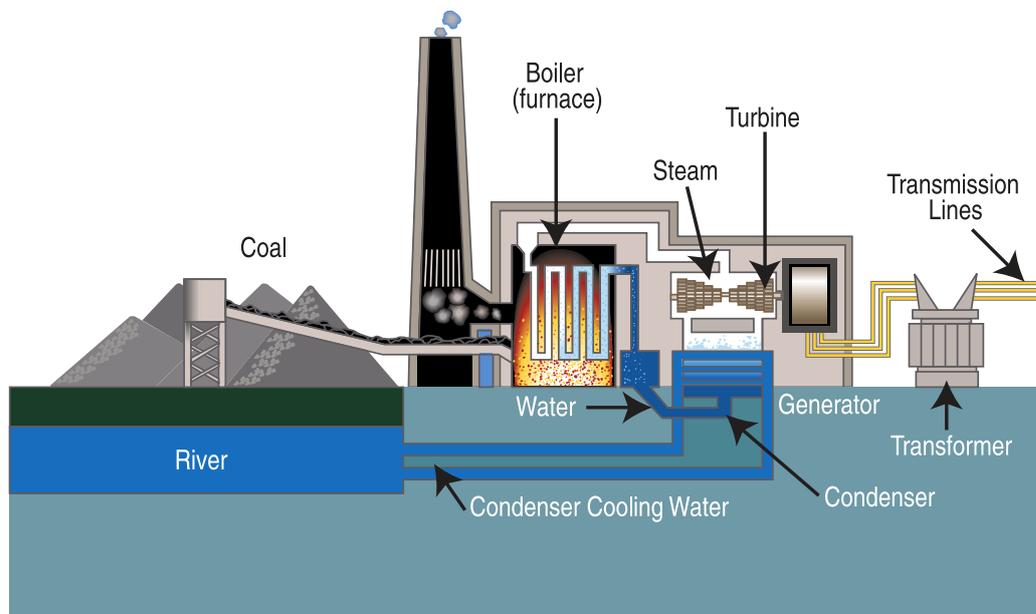


## Types of Energy



## Where does energy come from?

Let's take your smartphone or your computer or anything else that you have which runs on electricity. That electricity comes from the mains power where you plug in your device to charge it or use it. Now where does that electricity come from? Most of the electricity that comes to your house is typically generated by burning coal, gas and oil. Fossil fuel power plants burn coal or oil to generate heat. The heat is then used to change water into steam. The steam from the water then rotates turbines. The turbine is used to rotate a magnet. As the magnet spins, electrons are produced, and they power the electricity grid.



# What's the problem with fossil fuels?

Well, when these fossil fuels such as coal or oil are burnt, they produce large amounts of greenhouse gases such as carbon dioxide gas. These gases trap the energy we get from the Sun in our atmosphere. This causes the Earth to get hotter, and this is called global warming.



## Is global warming the same as climate change?

"Global warming" refers to the long-term warming of the planet. "Climate change" encompasses global warming, but refers to the broader range of changes that are happening to our planet. These include rising sea levels; shrinking mountain glaciers; accelerating ice melt in Greenland, Antarctica and the Arctic.



## Is weather the same as climate?

Weather refers to atmospheric conditions that occur locally over short periods of time—from minutes to hours or days. Familiar examples include rain, snow, clouds, winds, floods or thunderstorms.



Climate, on the other hand, refers to the long-term regional or even global average of temperature, humidity and rainfall patterns over seasons, years or decades.

## Can we produce energy that does not warm the globe?

Yes! There are ways of producing energy which does not release the greenhouse gases that warm the globe. These are green energy sources. As the name suggests, green energy comes from nature – and it uses natural resources like sunlight, wind, and water to produce power and reduce the negative impact on our planet.

