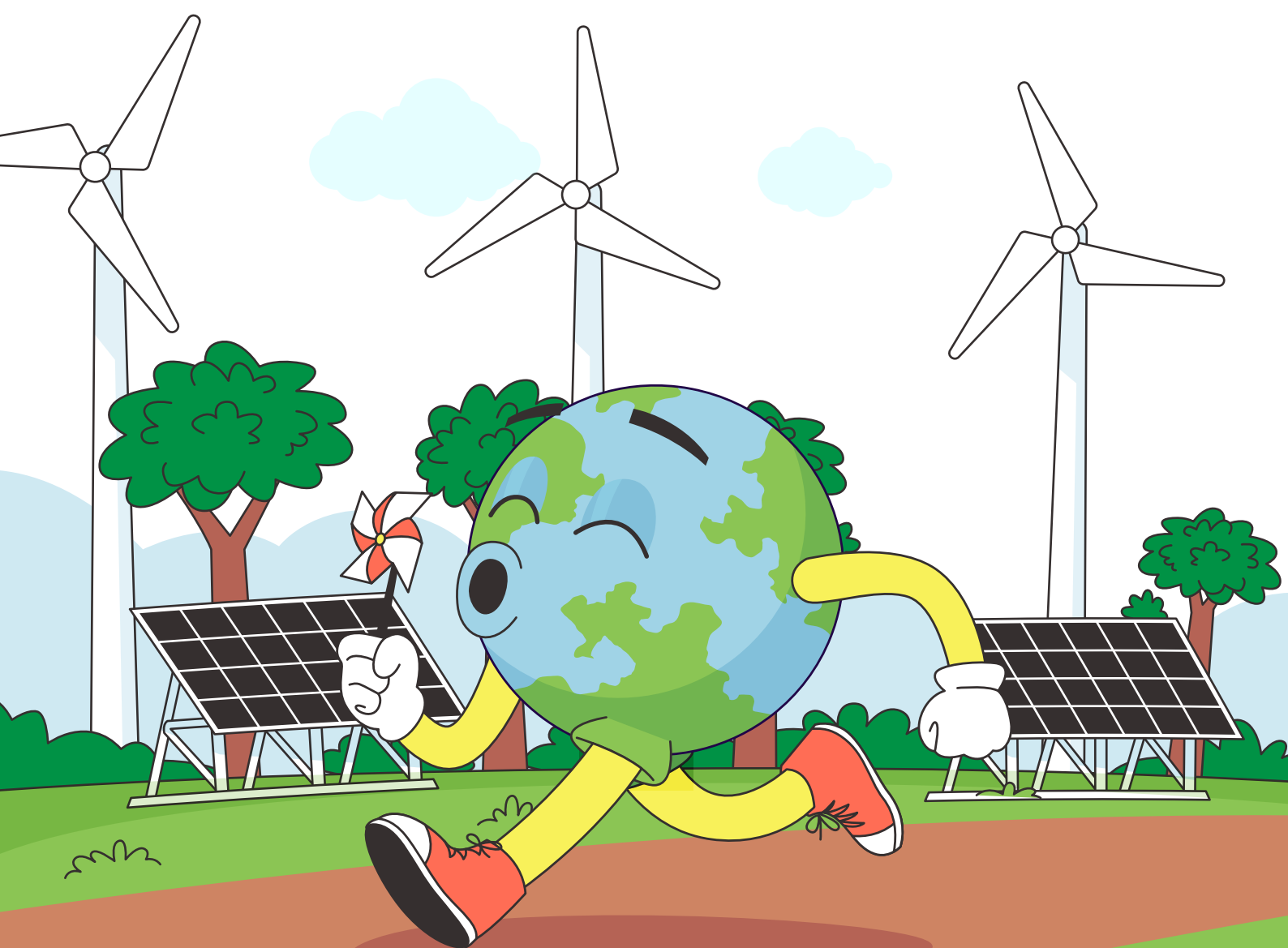




# CLIMATE CHANGE & ENERGY TRANSITION

Key concepts to understanding climate change and energy transition for children.



# Climate Change & Energy Transition

**Key concepts to climate change and energy transition  
for children.**



**Nigeria's Pathway to  
Carbon Neutrality by 2060**

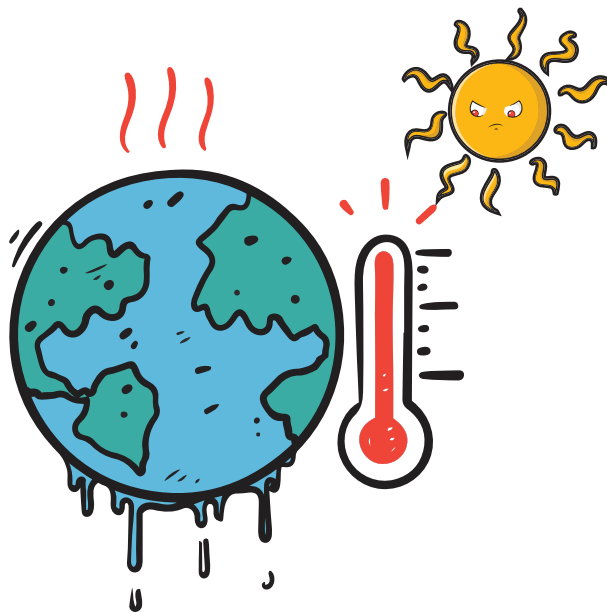
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# Let us tell you a story

## (Introduction)

Many years ago, scientists observed that the earth was getting very hot and at the rate it was warming, it would become inhabitable for humans. They conducted a study on the cause and discovered that fossil fuel burning was responsible for the carbon emissions. The carbon emissions were destroying the atmosphere and the environment and causing the earth to get hotter.



In 2016, 190 countries from around the world came together to sign the Paris Climate Agreement. This agreement was to get countries of the world to reduce and maintain the earth's temperature at 1.5 degrees Celsius. To do this, countries around the world agreed to reduce and ultimately stop the use of fossil fuel.

Examples of fossil fuels are; coal, oil, gas.

**Examples of fossil fuels are:**



Coal



Oil



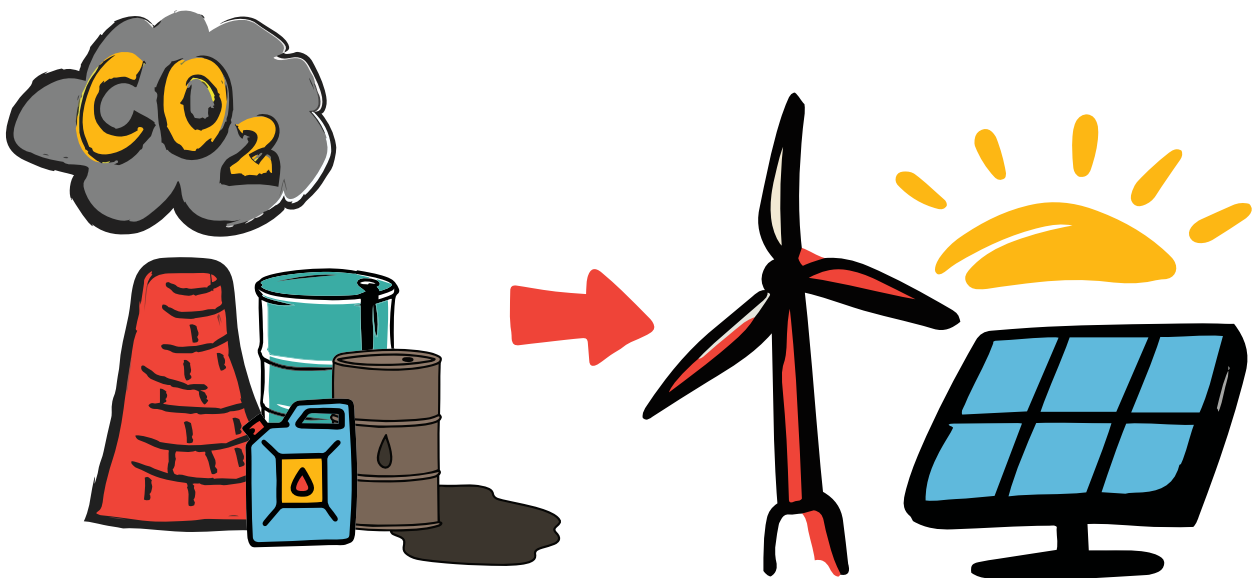
Gas

Many countries picked a target date in the future by which they would have stopped using fossil fuel. Nigeria picked 2060. That date is our Net Zero Date.

The period between today and 2060 is a transition.



The change in the sources of energy to cleaner/renewable sources of energy by 2060 is energy transition.



# What is Climate Change?

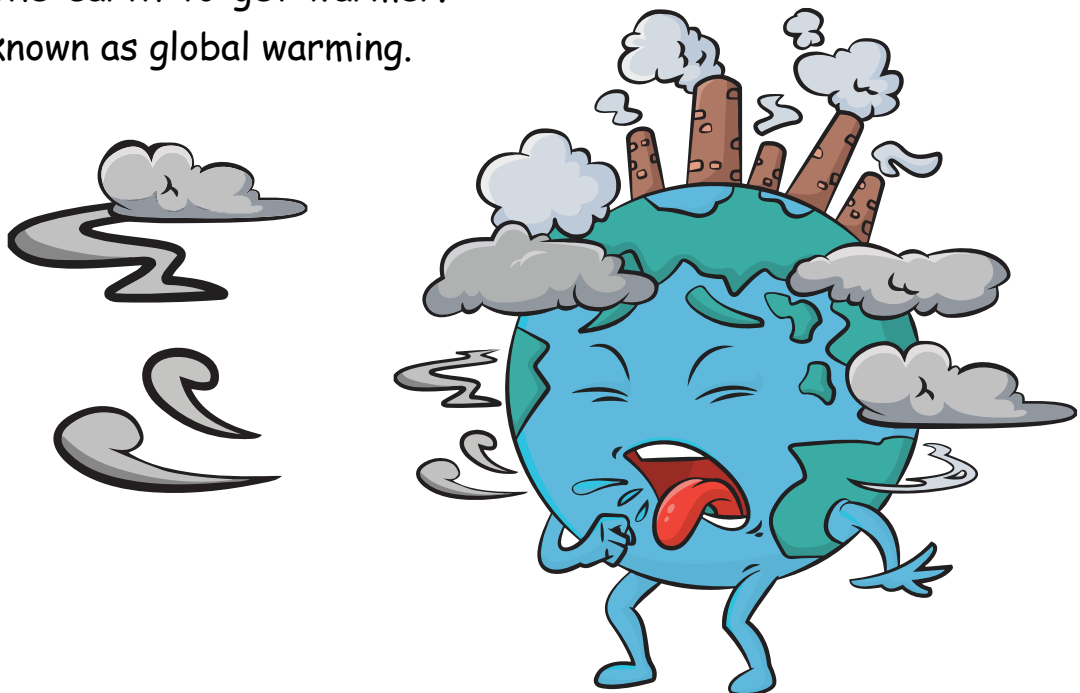
The weather found in a certain place over a long period of time is known as the climate. An area's climate determines what kinds of plants can grow and what kinds of animals can survive there.

Many factors affect the climate. These factors include the sun, oceans, winds, types of land, clouds, and human activities.

When people burn fuels such as oil and coal to run cars and heat homes, the fuels release certain gases into the air. These gases trap heat on Earth and this heat causes the earth to get warmer. This is known as global warming.

This extra warmth might not feel like much each day, but over many years, it starts to make a big difference. The Earth becomes warmer and warmer, and that's what we call "climate change."

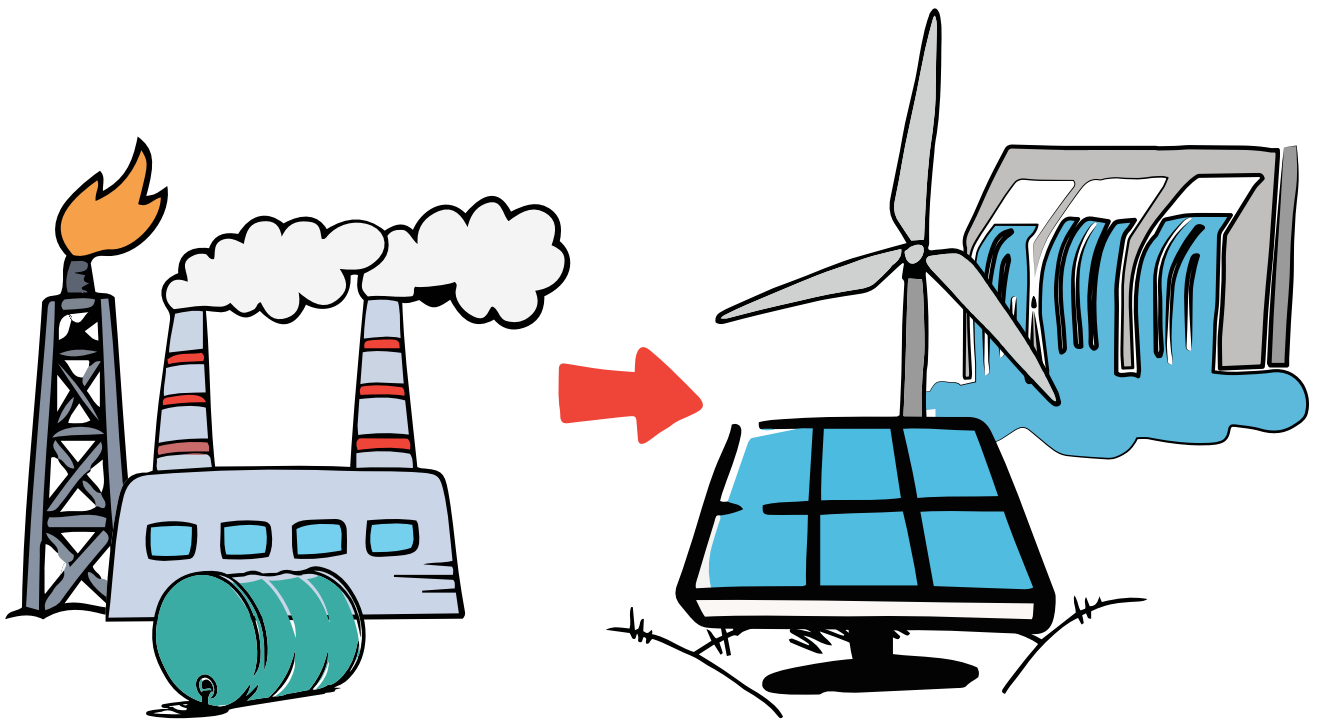
Climate change can make some places hotter some places colder, cause big storms, or even make some areas very dry. It can also melt ice in places like the North and South Poles, which can increase the sea level and flood some areas.



# What is Nigeria's Energy Transition Plan?

The Nigerian Energy Transition Plan is a plan that focuses on changing the way Nigeria creates its energy. Energy is what we use to power our homes, schools, and recreation centres.

The Nigerian Energy Transition Plan is a special plan made by the government and its development partners like SEForAll to change Nigeria's sources of energy to cleaner energy that will not run out, like the sun, wind, and water.

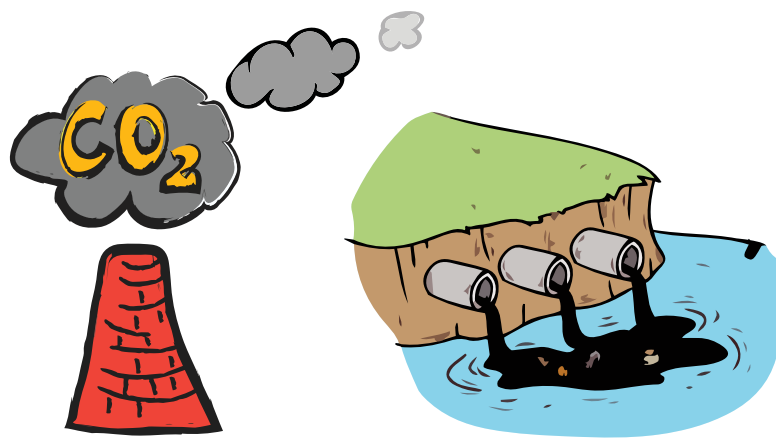


Fossil fuels from oil  
and gas.

Renewable Energy from  
sun, wind, and water.

# Why is the change important?

It is important because using fossil fuels to create energy, releases harmful gases that can hurt the air, land, and water. But using clean sources of energy doesn't create those harmful gases, so it's better for our health and the planet we live on.



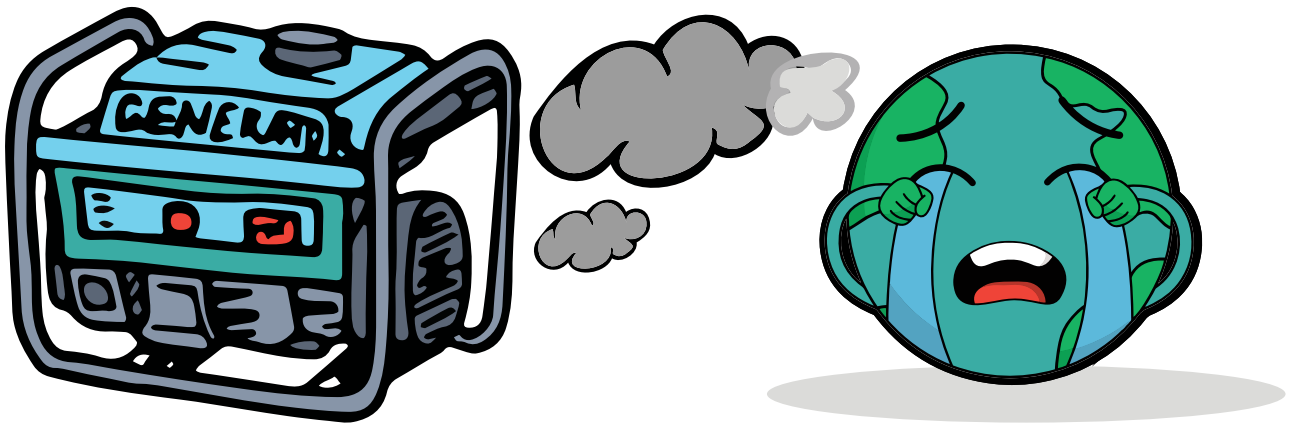
Imagine you have a toy car that needs batteries to move. These batteries give the car energy, just like the food you eat gives you energy to run and play. Now, our big world also needs energy to work, like powering our homes, schools, and things we use every day.





**But guess what?**

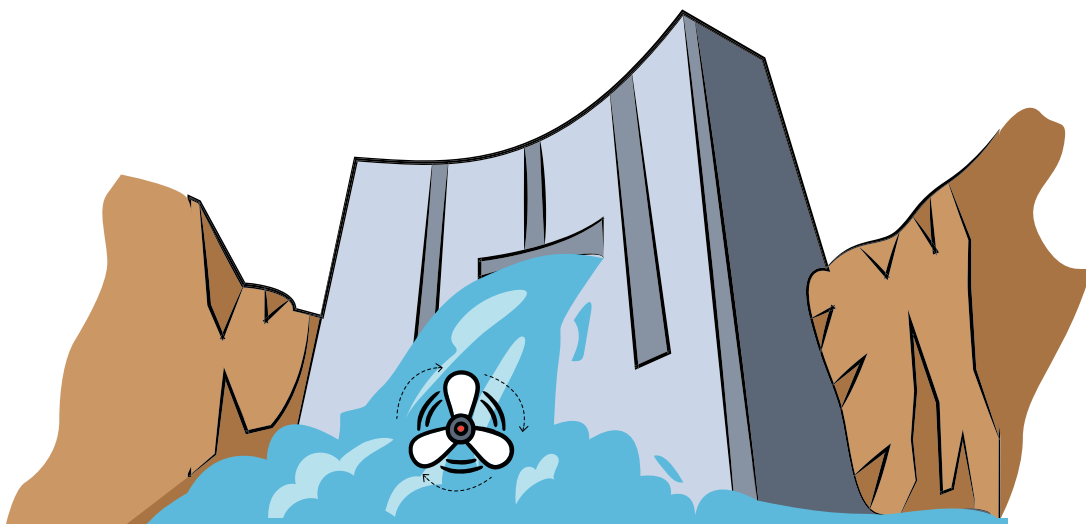
Right now, most of the energy we use comes from things like coal and oil. While they give us electricity, they also cause a lot of pollution and make the earth sick for example the smoke that comes out of a generator is not good for our planet.



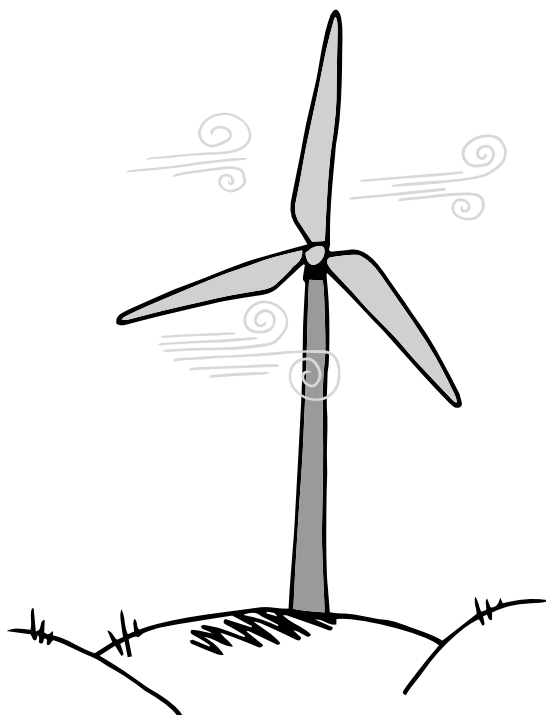
**So, what can we do?**

We can use cleaner and greener energy sources, like the Sun, water and the wind! Just like how the Sun gives us warmth and light during the day, we can use its energy to create electricity.

Water can be used to create electricity by flowing or falling over special machines called turbines, which turn the water's energy into electricity that can power our homes and devices.



Wind can also spin big turbines and create power without any pollution.



By using clean energy, we can help keep our planet happy and healthy for a long, long time.



# Why is the Energy Transition Plan Important?



## 1. To reduce harmful gases in the air.

The Energy Transition Plan is important because it helps protect our planet and makes it a better place to live for us and our friends. Using clean and renewable energy sources like the sun, wind, and water instead of harmful substances like coal and oil, helps reduce pollution and makes the air cleaner, making us healthier and happier.

## 2. To save the nature and animals.

The nature, forests, and animals can be harmed by pollution and flood. Energy transition helps to save trees, animals, and their habitats.

## 3. Preserving Resources.

It is important to save resources like coal and oil because they are running out and will not last forever. But renewable resources like sun and wind are infinite, which means they will never run out and can be used forever.

#### 4. Bright Future for Nigeria.

The Energy Transition Plan can make Nigeria a more prosperous country. With clean energy, Nigeria can create more jobs, have stable electricity for schools, hospitals, and homes, and build a stronger economy.

#### 5. Global Responsibility

All the countries around the world are working to transition to clean energy, and Nigeria will do its part to help the planet and set a positive example for others on the continent.

#### 6. Young Energy Heroes

You can be young energy heroes, making small changes that have a big impact, heroes who are making a difference worldwide.



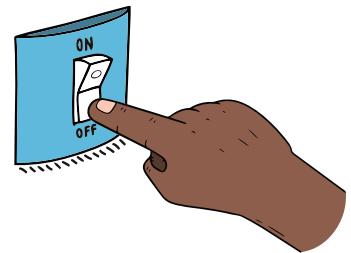
# What can we do to help the Energy Transition Plan?

As school children, we can do simple things to help energy transition. We can turn off lights and appliances when we're not using them to save electricity. We can also remind our parents to use clean sources of energy, like solar power for lighting or heating water.

Children can play a crucial role in helping the Energy Transition Plan in Nigeria by taking small yet impactful actions like:

## 1. Save Energy at Home and in school:

- Turn off lights, fans, computers and other electronics when not in use to conserve electricity.
- Use natural light during the day and limit screen time to save energy.



## 2. Promote Renewable Energy:

- Encourage your parents and family members to consider installing solar panels or using other renewable energy sources at home.

## 3. Be Water-Wise.

- Use water responsibly by turning off taps while brushing your teeth and take shorter showers.





#### 4. Reduce, Reuse, Recycle:

- Practice the 3 Rs to minimize waste and conserve resources.

**Reduce:** Use less! Reduce means using fewer things to help save resources and protect the planet. Turn off lights when you're not in the room, use only what you need, and avoid wasting food.

**Reuse:** Give things a second life! Reuse means finding creative ways to use things again instead of throwing them away. For example, you can use old jars as pencil holders or turn an empty box into a fun craft project. By reusing, we can make less garbage and help our environment.

**Recycle:** Make old things new again! Recycling means turning old materials like paper, plastic, and glass into new things. Remember to put recyclables in the right bins so they can be transformed into useful items. Recycling helps us keep our planet clean and beautiful.

#### 5. Support Eco-Friendly Transportation:

- Walk, cycle, or carpool whenever possible instead of relying on cars.



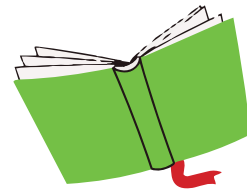
## 6. Plant Trees and Gardens:

- Participate in tree-planting events and help create small gardens to promote green spaces.



## 7. Learn About Renewable Energy:

Participate in tree-planting events and help create small gardens to promote green spaces.



## 8. Spread Awareness/Teach others what you know:

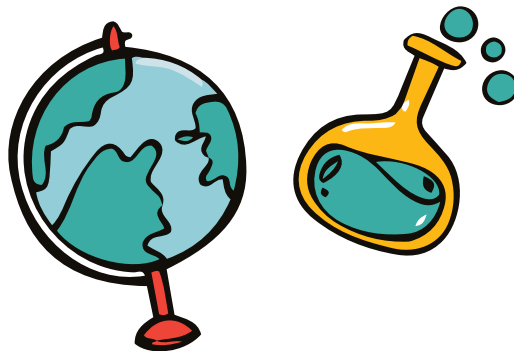
Share what you've learned about the Energy Transition Plan with friends, family, and teachers.

## 9. Support Renewable Energy Initiatives:

Encourage your parents and community members to support renewable energy projects and initiatives.

## 10. Engage in School Projects:

Participate in school projects that promote energy conservation and renewable energy solutions.





### 11. Advocate for Change:

Write letters to advocate for cleaner energy policies and support the Nigerian Energy Transition Plan.

### 13. Inspire Others:

Set an example for friends and family by being a role model in adopting eco-friendly practices.

### 14. Participate in Clean-up Drives

Join clean-up drives in your community and school to keep the environment clean and free from pollution.

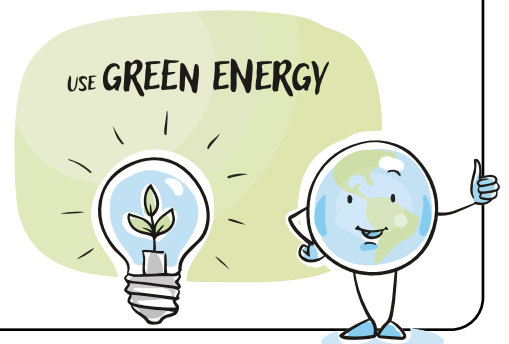


### 15. Get Involved in Environmental Clubs:

Join or start an environmental club at school to work together on sustainability activities.



Remember, every little action counts, and when children actively participate in supporting the Energy Transition Plan, we contribute to building a better and greener future for Nigeria and the entire world.



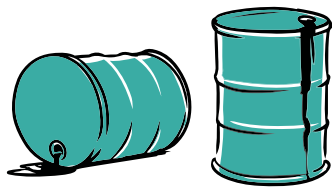


# Energy Terms

Here are some Energy terms you should know;

## Fossil Fuels

Fossil fuels are old, special rocks that we burn to get energy. Coal, Oil and gas are types of fossil fuels.



Coal



Oil



Gas

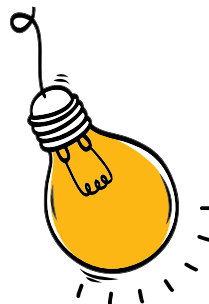
## Energy

Energy is what makes things work. It gives power to do things like move, play, and think.



## Electricity

Electricity is a special kind of energy that we use to power our homes and gadgets. It comes from power plants and can flow through wires to make things light up or work.



## Electricity Terms:

- a. **Joule:** A joule is a unit that helps us measure energy. It's like a special way of counting how much energy something has.
- b. **Kilowatt:** A kilowatt is a measure of how much electricity is being used at a given time. It helps us understand how much power different appliances or devices need.
- c. **Kilowatt/hour:** Kilowatt/hour is a way to measure how much electricity is used over time. It tells us how much energy is consumed by something in an hour.
- d. **Megawatt/hour:** A megawatt/hour is a way to measure a large amount of electricity used over time. It's even bigger than a kilowatt/hour and is often used to measure the energy produced by power plants.

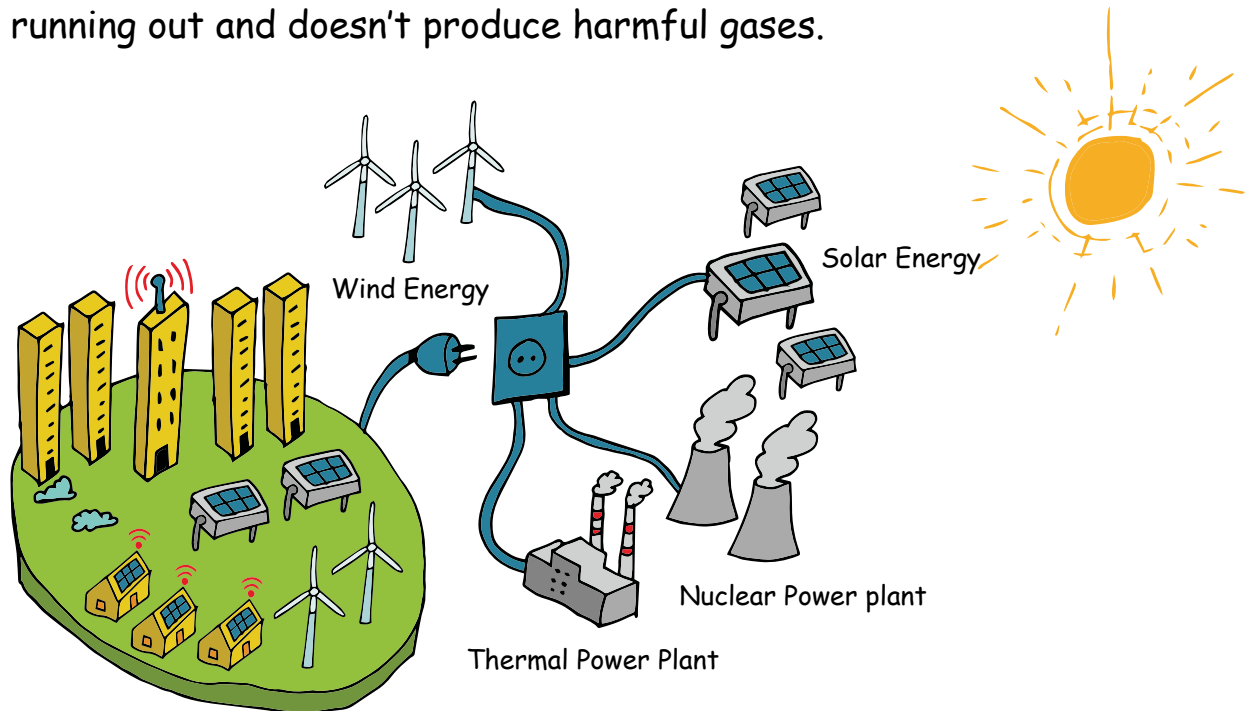
## Grids:

- a. **Grid:** A grid is like a big network of wires that carries electricity from power plants to homes, schools, and other places where it's needed. It helps distribute electricity to different areas.
- b. **Mini-grid:** Mini-grids are smaller versions of the main grid. They can provide electricity to a smaller area, like a village or a group of buildings, without needing to be connected to the main grid.
- c. **Off-grid:** Off-grid means that something doesn't rely on the main electricity grid. It can be a house or a place that generates its own electricity, usually through solar panels or other renewable energy sources.



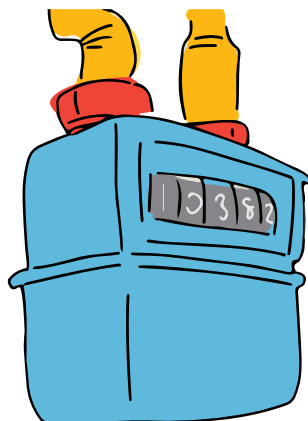
## Clean Energy/Renewable Energy:

Clean energy or renewable energy is a type of energy that doesn't harm the environment when it's produced. It comes from sources like the sun (solar power), wind (wind power), or water (hydroelectric power). Unlike fossil fuels (like coal or oil), clean energy can be used without running out and doesn't produce harmful gases.



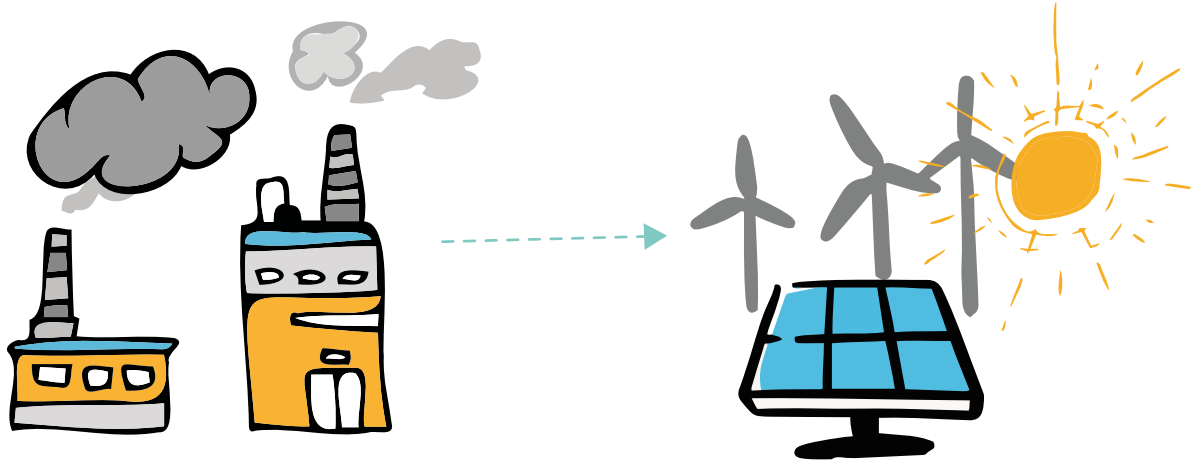
## Meter:

A meter is a device that measures how much electricity is being used in a home or building. It helps us keep track of our energy consumption and understand how much electricity different appliances or devices are using.



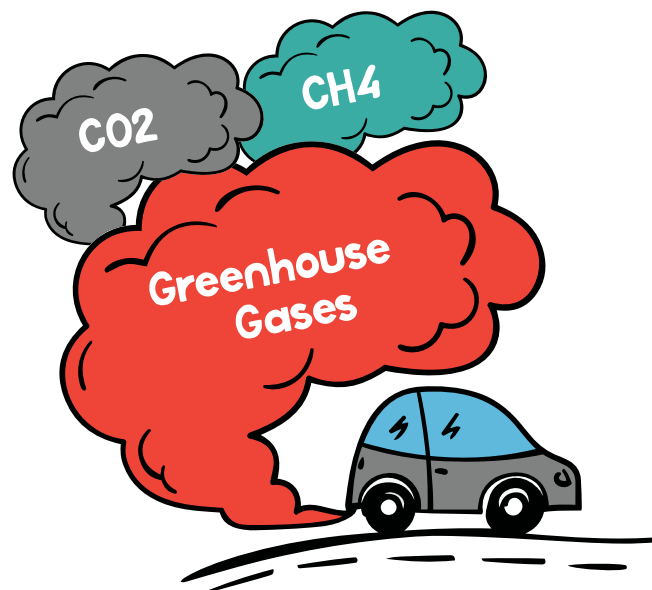
## Energy Transition:

Energy transition refers to the process of shifting from using dirty and polluting sources of energy (like fossil fuels) to cleaner and more sustainable sources (like renewable energy). It involves changing the way we produce, distribute, and use energy to protect the environment and reduce pollution.



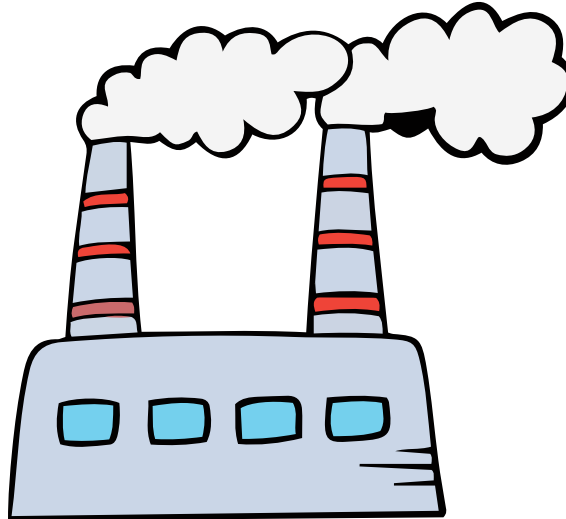
## Greenhouse Gases:

Greenhouse gases are gases that trap heat in the Earth's atmosphere and contribute to global warming and climate change. Examples of greenhouse gases include carbon dioxide ( $\text{CO}_2$ ) and methane ( $\text{CH}_4$ ). They come from burning fossil fuels and other human activities.



## Carbon Emission:

Carbon emissions refer to the release of carbon dioxide (CO<sub>2</sub>) and other greenhouse gases into the atmosphere. They come from burning fossil fuels, such as coal, oil, and natural gas. Carbon emissions are a major cause of climate change.



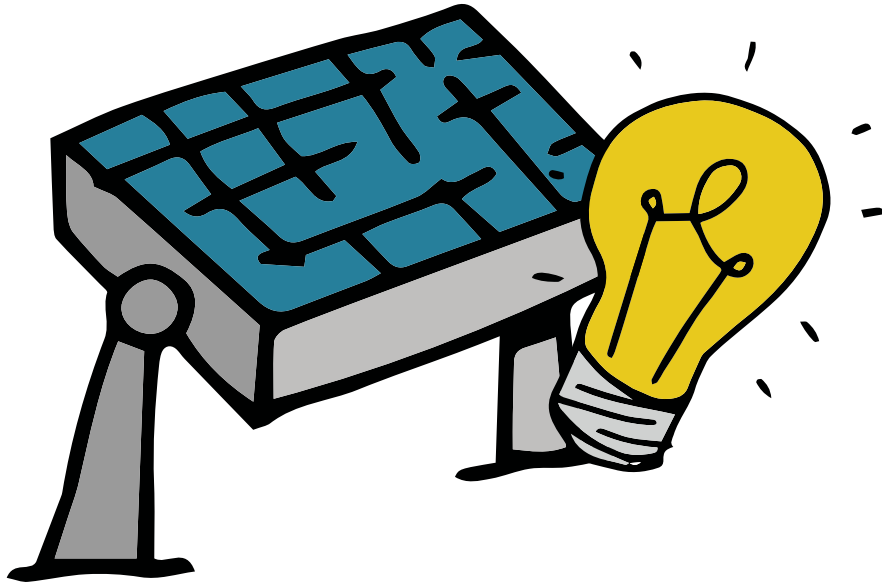
## Net Zero:

Net zero means achieving a balance between the amount of greenhouse gases emitted into the atmosphere and the amount removed or offset. It involves reducing emissions as much as possible and using methods to remove or offset the remaining emissions, such as through carbon capture or planting trees.



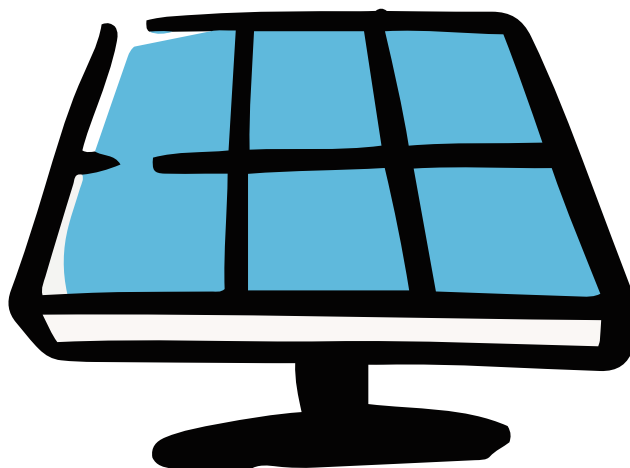
## Solar Power:

Solar power is a type of renewable energy that comes from the sun. Solar panels collect sunlight and convert it into electricity that can be used to power homes, buildings, or devices.



## Solar Panel:

A solar panel is a device made up of many small cells that convert sunlight into electricity. They are usually placed on rooftops or in sunny areas to collect as much sunlight as possible. Solar panels are used to generate solar power.



# Be Energy Heroes!

And you know what's even cooler? You all are **energy heroes!** We can turn off lights when not needed, use less water, and tell our families and friends about the importance of clean energy. Together, we can make a big difference and make our Earth smile!

So remember, energy transition is about clean energy sources like the sun and the wind, which keeps our planet clean and green. Let's be energy heroes and take care of our beautiful earth.





## Nigeria's Pathway to Carbon Neutrality by 2060



[www.energytransition.gov.ng](http://www.energytransition.gov.ng)