

## **ROLE OF INDIA: NEED AND PRIORITIZE MASS AWARENESS TO SWITCH ON TO RENEWABLE ENERGY RESOURCES TO SAVE OUR MOTHER EARTH**

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### **Abstract**

*Renewable energy is generated by utilising naturally occurring resources that regenerate themselves as time passes. Solar energy, wind energy, hydroelectric energy, geothermal energy, biomass energy, marine energy, and other renewable energy sources are examples. There are not an infinite number of these resources available at any given time. Renewable energy emits fewer pollutants and greenhouse gases. Renewable energy represented 11.4% of total energy consumption in the United States in 2019. Over the past year, India has increased its renewable energy producing capacity by 12.13%. To diversify and satisfy renewable energy requirements, many Indian enterprises have extensively embraced renewable energy in their portfolios by creating green energy trading and issuing renewable energy certificates (REC) .The following top companies primarily engaged in the business of power generation, transmission and distribution through conventional and renewable sources are: Indian Energy Exchange (IEX), Olectra Greentech ,Tata Power , Adani Green Energy, Borosil Renewables, NTPC andReliance Industries. To check the general awareness among the literate population regarding the use of renewable sources of energy in place of fossil fuels and role of India leading in renewable energy for which the researcher made a small scale and tried to check the crucial awareness about the same. There were limitations of the study as small study to support the paper researcher only circulated the tool among 100 participants of standard 10th students of CBSE and SSC board. On the basis of the findings, it can be concluded that the attitude of the literate people has to change a lot and use of renewable sources of energy should be increased. It is the need of the hour to protect our mother Earth and also it is the need for sustainable development.*

**Keywords:** *Renewable energy, Green hydrogen, Geothermal energy, Biomass.*

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## **INTRODUCTION**

Renewable energy is defined as energy derived from renewable resources that is naturally replenished at a faster pace than it is consumed on a human time scale. Renewable resources include sunlight, wind, water movement, geothermal heat, and so on. Some renewable energy resources are not sustainable, despite the fact that the majority are. Renewable energy emits fewer pollutants and greenhouse gases. Renewable energy represented 11.4% of total energy consumption in the United States in 2019. Over the past year, India has increased its renewable energy producing capacity by 12.13%. Many Indian enterprises have extensively embraced renewable energy in their portfolios to diversify and satisfy renewable energy targets by implementing green energy trading and issuing renewable energy certificates (REC) to deliver renewable energy based on demand. The present study attempts to find out the awareness of the modern generation about the different types of renewable natural resources, their availability and use of renewable energy and the factors influencing them to use it for future benefits.

## **NEED AND SIGNIFICANCE OF STUDY**

It has been noticed that the present generation is more inclined to consume nonrenewable natural resources such as fossil fuels than renewable natural resources. This has been a source of concern for future generations. People are less aware of the repercussions of over usage of nonrenewable resources. The use of such nonrenewable resources contradicts Agenda 21 and sustainable development. The researcher wonders if there has been a shift in the mindset of today's generation regarding the utilisation of renewable energy sources. As a result, the current study is being conducted to learn about the attitudes and awareness of literate people towards sustainable development.

The need for renewable energy consumption has grown in recent years, as renewable energy can now support sustainable development. Energy depletion and climate change are having a significant impact on the world. In today's world, coal, oil, and gas provide the majority of our energy, yet their use has had a significant influence on our environment.

## **TOP INDIAN COMPANIES GENERATING POWER USING RENEWABLE RESOURCES**

The following top companies primarily engaged in the business of power generation, transmission and distribution through conventional and renewable sources are: Indian Energy Exchange (IEX),

Olectra Greentech, Tata Power, Adani Green Energy, Borosil Renewables, NTPC and Reliance Industries. As India goes on a seismic shift where traditional energy sources get replaced by green energy like solar, wind, and green hydrogen there's massive scope.

### **Indian Energy exchange**

This company accounts for 95% of the short-term electricity contracts and leading in the use of renewable energy race. To diversify and meet renewable energy targets the company has extensively included renewable energy in its portfolio by introducing green energy trading and issuing renewable energy certificates to renewable energy provisors.

### **Tata Power**

Tata group company has set forth some ambitious plans for its renewable energy segment. The company is primarily engaged in the business of power generation, transmission and distribution through conventional and renewable source.

### **Olectra Greentech**

The firm is the world's largest manufacturer of pure electric hydrogen buses. It is a world leader in electric bus manufacture, with a market share of roughly 35%. These hydrogen buses are completely carbon-free and will serve as an excellent alternative to the classic red buses used in public transportation. The corporation stated that it made this decision due to natural resource depletion and the detrimental effects of air pollution and emissions.

### **Adani Green Energy**

The Adani group, via its subsidiary Adani Green Energy, has the largest renewable energy company in India, with a current portfolio of 20 GW.

### **Borosil Renewables**

The company is the first and the only manufacturer of solar glass in India. The glass it manufactures is used in photovoltaic panels. Currently, it has a 40% market share in the domestic market and exports its products to the USA, Turkey, and Europe.

### **NTPC**

NTPC has been trying hard to green its portfolio. The country's largest electricity generator has shifted to green energy as demand rises to restrict coal consumption due to the fuel's involvement in global warming and its negative impact on the environment and human health.

### **Reliance Industries**

For its green energy goals, Reliance Industries has created a host of alliances. This includes

investments in solar, batteries, and hydrogen. The corporation recently announced plans to become a zero-carbon enterprise by 2035. It intends to replace fossil fuels with clean electricity and hydrogen. The corporation intends to concentrate on renewable energy and lower its carbon footprint.

There is enormous potential as India undergoes a seismic transition in which old energy sources are replaced with green energy such as solar, wind, and green hydrogen. The largest energy producing firms in India have increased their investments in renewable energy in recent years.

### **TYPES OF RENEWABLE ENERGY SOURCES**

**Solar power.** Photovoltaic cells on solar panels trap sunlight to generate solar energy. The sunlight is then converted into electricity that can be used in your home via an inverter. **Wind power.** Wind energy is generated by using air movement to turn the blades of gigantic wind turbines. The kinetic energy of the rotation is subsequently converted to mechanical power and, finally, electricity by the turbines. **Hydroelectric energy,** also known as hydropower. Hydropower was one of the first energy sources used to generate electricity. The force of moving water rotates the blades of a turbine, which then spins the generator, which generates energy.

**Geothermal energy.** Geothermal energy comes from heat located deep within the earth's interior. It works by drilling wells into the ground, which then allows steam or water to reach the surface and power the turbines that create electricity.

**Biomass power.** Biomass is a renewable resource derived from plants and animals. Wood, agricultural crops, and municipal solid waste are all popular biomass sources. Several techniques exist for converting biomass into energy, but the most common is to burn the biomass to heat buildings or power steam turbines that generate electricity. **Energy from the sea.** Marine energy, which is still in its early stages, harnesses the natural movements of the water to generate electricity. Several forms of marine energy sources are being developed, including wave energy, tidal energy, and energy from ocean currents.

The research on renewable energy awareness shown above will provide insight into the factors that influence the utilisation of green energy in place of fossil fuels.

### **OBJECTIVE OF THE STUDY**

The researcher wanted to study and to identify what the modern generation feels about renewable energy and what are the factors that influence them to use it and its future benefits.

## DELIMITATION OF THE STUDY

The researcher gave the self-made tool to 100 randomly selected literate population.

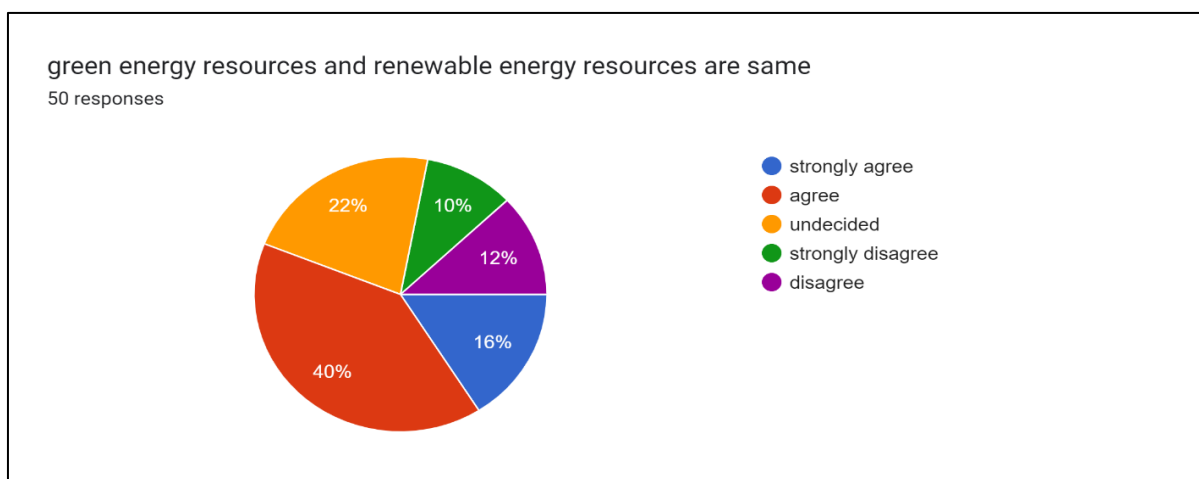
There were limitations of the study as small study to support the paper researcher only circulated the tool among one hundred class 10<sup>th</sup> students of CBSE and State board. The study was conducted only on sample that were literate and had basic knowledge of the use of reading English and e-tool.

Simple percentage was used for analysis and graphical presentation of the findings of the study. Researcher employed pie-chart for the above findings. Here below are presented the findings of the survey undertaken by the researcher.

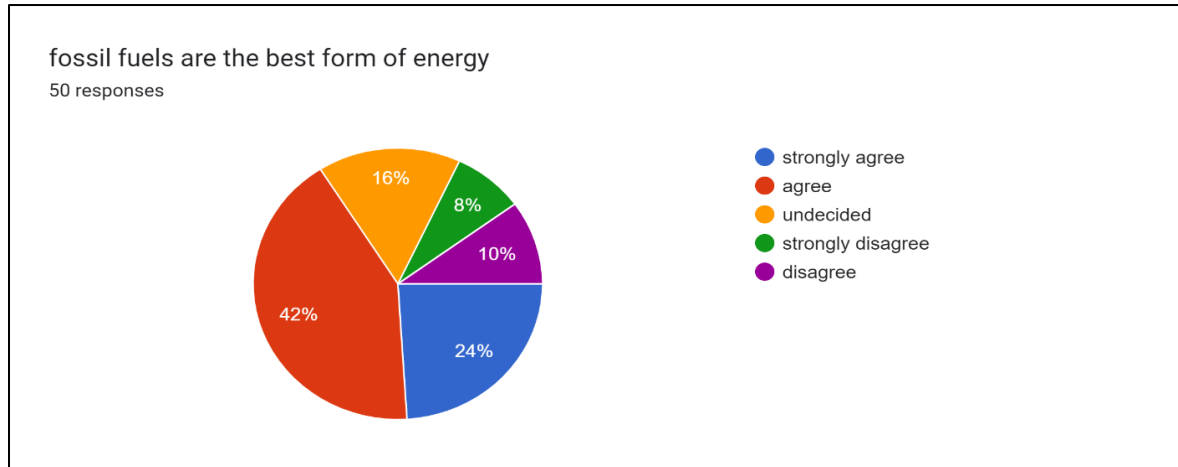
## FINDINGS OF THE STUDY

Findings of the study are as follows. To study various concessions researcher made a small-scale self-made consisting of 11 statements worded in such a form to have awareness and knowledge about renewable resources. Statements were framed to test the general awareness about the use of natural resources and its consequences.

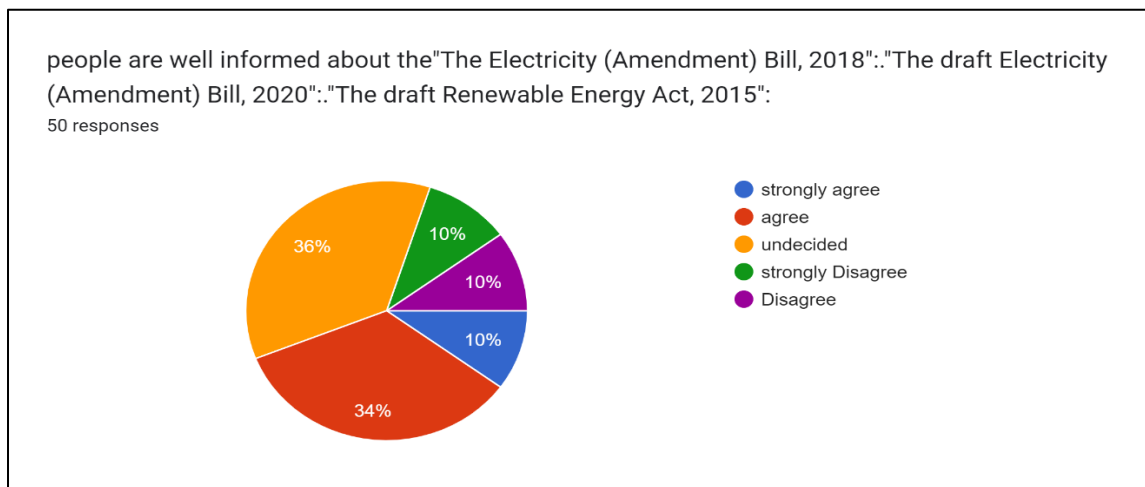
From the chart below, we find that 42% participants agree that fossil fuels are the best form of energy while 8% strongly disagree that fossil fuels are not the best form of energy.



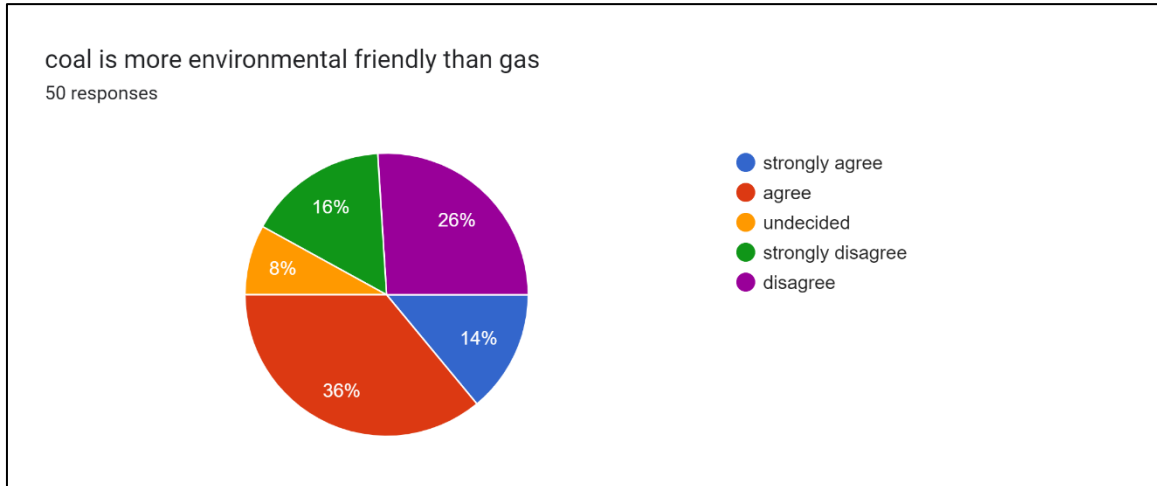
From the chart below, we find that 40% participants agree that green energy resources and renewable energy resources are same while 10% strongly disagree green energy resources and renewable energy resources are same.



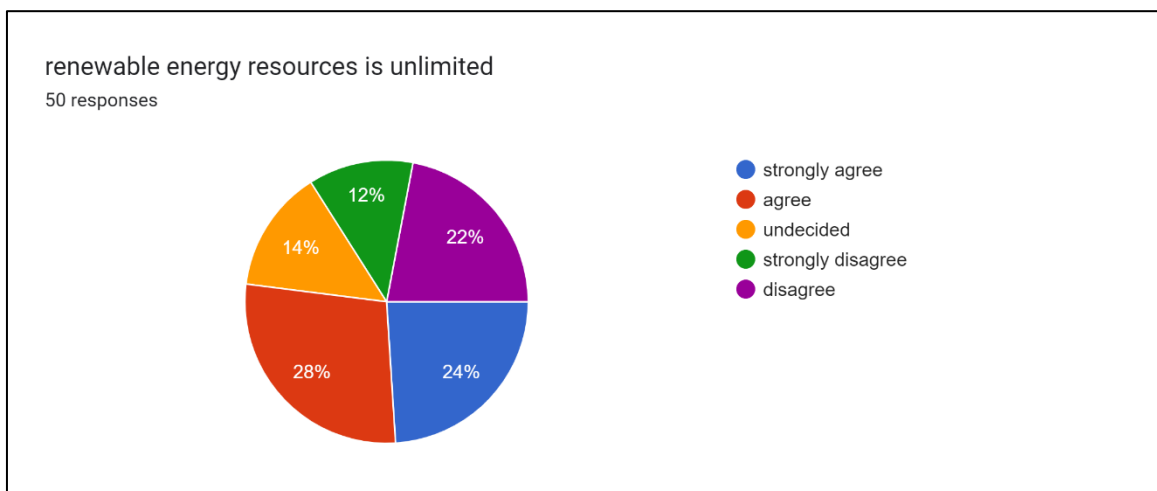
From the chart below, we find that 28% participants agree that people are well informed about the "The Electricity (Amendment) Bill, 2018":."The draft Electricity (Amendment) Bill, 2020":."The draft Renewable Energy Act, 2015": while 12% are uninformed about the "The Electricity (Amendment) Bill, 2018":."The draft Electricity (Amendment) Bill, 2020":."The draft Renewable Energy Act, 2015":



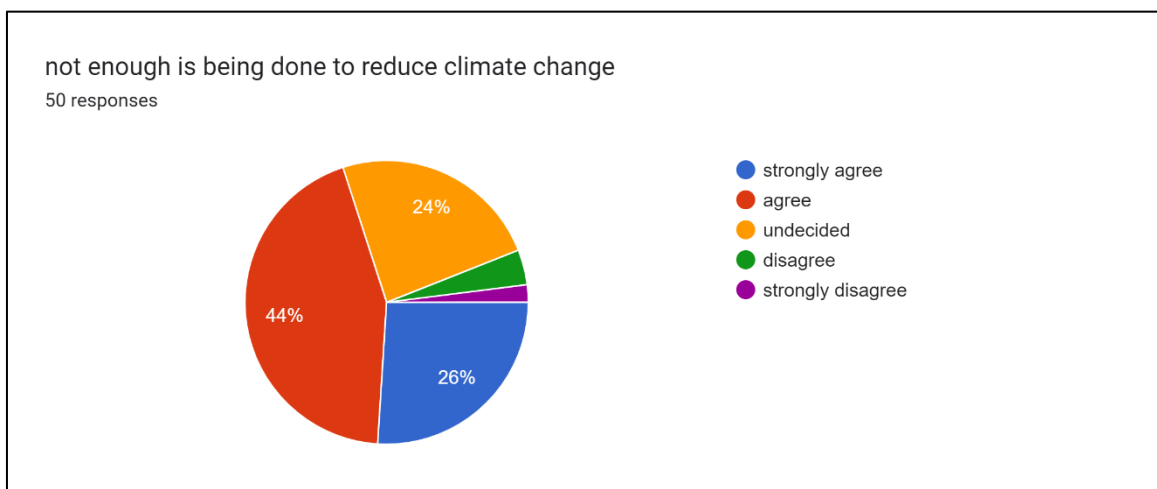
From the chart below, we find that 36% participants agree that coal is more environmentally friendly than gas while 16% disagree that coal is more environmentally friendly than gas.



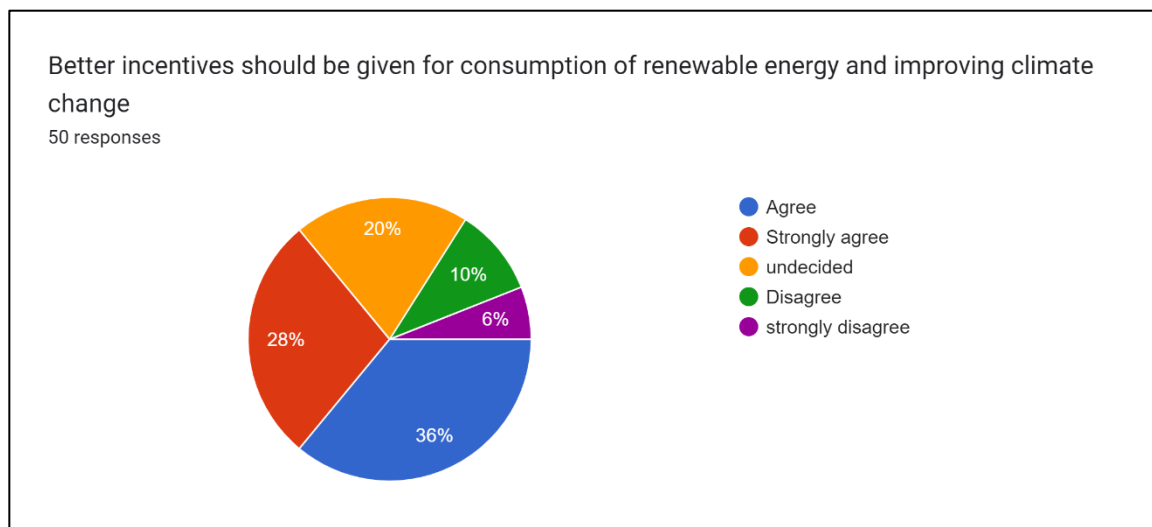
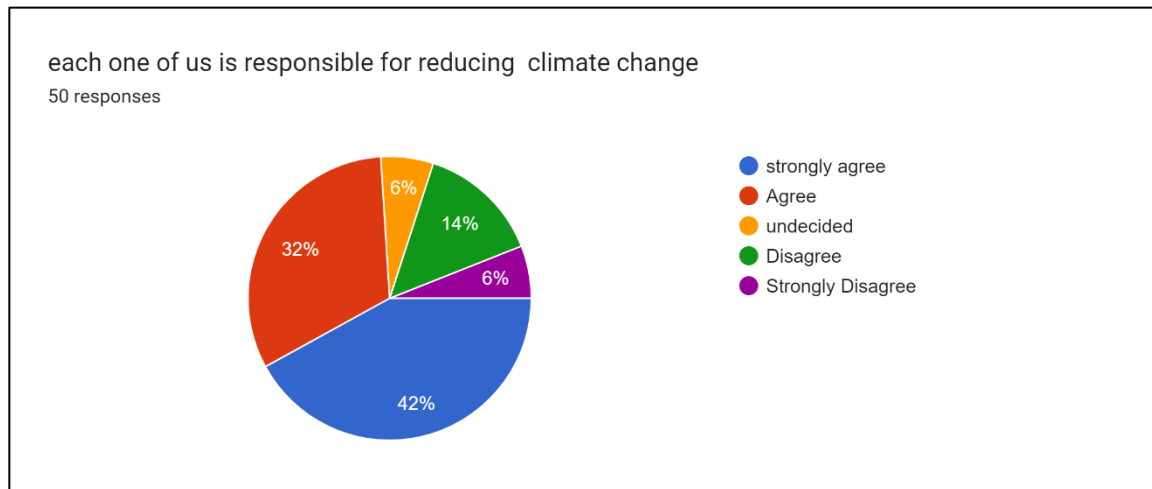
From the chart below, we find that 28% participants agree renewable energy resources is unlimited while 12% disagree that renewable energy resources is unlimited.



From the chart below, we find that 44% participants agree not enough is being done to reduce climate change while 4% disagree that not enough is being done to reduce climate change.

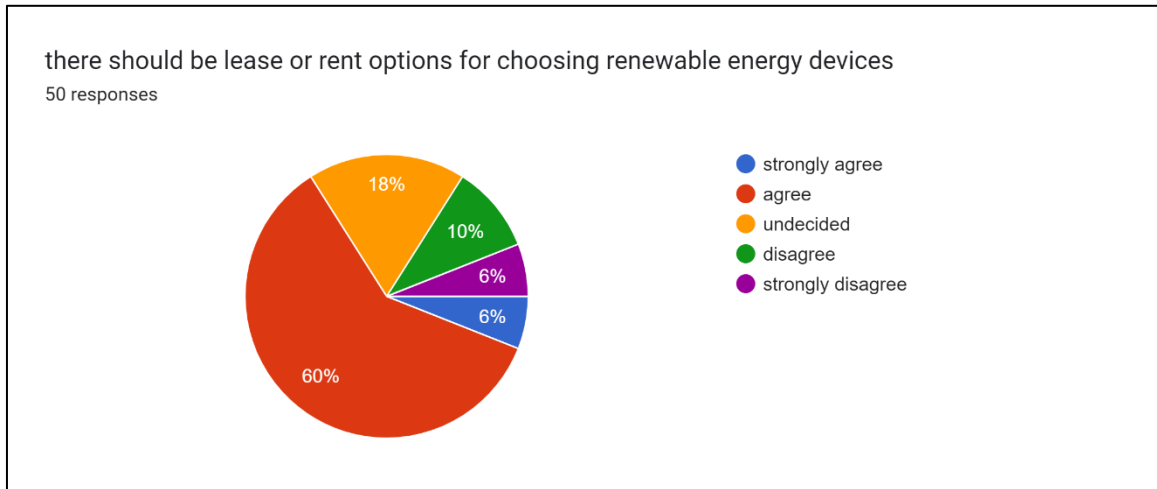


From the chart below, we find that 42% participants agree each one of us is responsible for reducing climate change while 14% disagree that each one of us is responsible for reducing climate change.



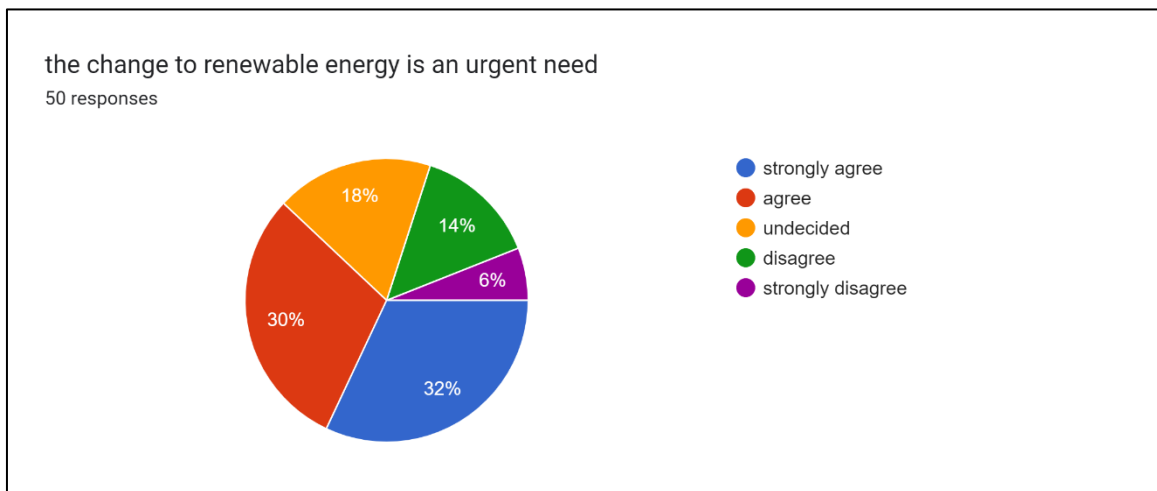
From the chart below, we find that 28% participants are of the opinion that better incentives should be given for consumption of renewable energy and improving climate change while 4% disagree that Better incentives should be given for consumption of renewable energy and improving climate change



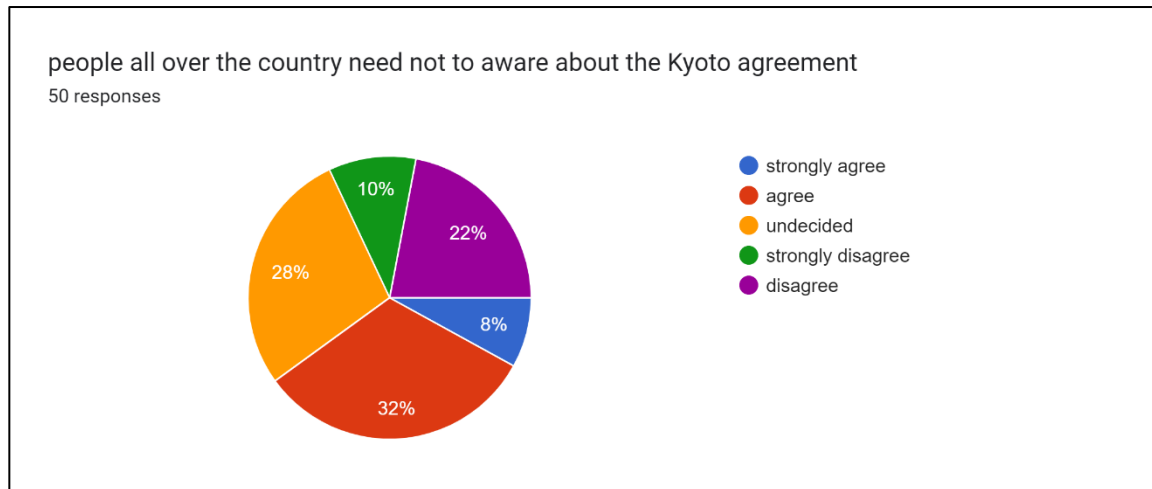


From the chart below, we find that 60% participants there should be lease or rent options for choosing renewable energy devices while 10% disagree that there should be lease or rent options for choosing renewable energy devices

From the chart below, we find that 30% participants agree to the change to renewable energy is an urgent need while 14% disagree the change to renewable energy is an urgent need.



From the chart below, we find that 32% participants believe people all over the country are unaware about the Kyoto agreement while 10% disagree the people all over the country need not to be aware of the Kyoto agreement.



## CONCLUSION

Based on the facts above, it is possible to conclude that attitudes towards the use of renewable energy in substitution of fossil fuels should be fostered.

For decades, fossil fuels such as coal and natural gas have been our primary source of energy. However, the process of extracting fossil fuels from the earth and bringing them into our homes causes pollution and harms ecosystems. As a result, more and more people must turn to cleaner, renewable energy sources. These include green energy, clean energy, and sustainable energy, all of which contribute to a future free of fossil fuels. As a result, it is imperative that a favourable attitude towards the utilisation of renewable resources be instilled at all levels of education. Overall, a favourable attitude towards the usage of green energy can be compared to a brick in the construction of a skyscraper. It is a critical step towards saving our mother earth and moving nations towards sustainable development.

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