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Day: M T W T F S

"Renewable energy is an expensive hoax."

Brainstorming:



Date: _____

Day:

M	T	W	T	F	S
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Outline:

1. Introduction:

1.1. Hook

1.2. Background

1.3. Thesis statement (renewable energy is not a hoax but a necessary, evolving, and increasingly affordable solution).

2. Concept of Renewable Energy.

2.1. Definition.

2.2. Types.

2.3. Rationale behind global shift

3. Myth of "Excessive Cost"

3.1. Declining costs of solar and wind

3.2. Comparison with fossil fuel imports bills.

3.3. Long-term economic benefits.

Date: _____

Day: M T W T F S

4. Economic Advantages:

- 4.1. Reduction in fuel imports
- 4.2. Job creation and local industries.
- 4.3. Price stability.

5. Reliability and Technological progress:

- 5.1. Advance in storage technology.
- 5.2. Smart grids and hybrid systems.
- 5.3. Improved efficiency over time.

6. Environmental and Health Benefits:

- 6.1. Reduced carbon emission.
- 6.2. Enhanced air quality
- 6.3. Climate resilience.

7. Pakistan case:

- 7.1. Energy insecurity and reliance on imports
- 7.2. Solar etc potential.
- 7.3. Successful initiatives.
- 7.4. Role in reducing circular debt.

Date: _____

Day:

M	T	W	T	F	S
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8. Addressing criticism:

8.1. Intermittency as a manageable issue.

8.2. Environmental costs vs fossil fuel damage.

8.3. Need for policy reform, not rejection.

9. Way Forward:

9.1. Integrated energy mix

9.2. Policy consistency and local manufacturing.

9.3. Investment in storage and grid modernization.

10. Conclusion:

10.1. Summary of arguments.

10.2. Clear rejection of "Hoax".

10.3. Renewables as a strategic necessity for Pakistan's sustainable future.

Date: _____

Day:

M	T	W	T	F	S
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The Essay:

Energy is the backbone of modern life, and without it no country can grow or progress. Today, the world is facing serious problems such as rising energy demand, climate change, and high fuel prices, which have forced nations to rethink their energy choices. In this situation, some people claim that renewable energy is an expensive hoax, but this view ignores many important facts. For decades, countries have depended on fossil fuels like oil, gas, and coal, but these sources are limited, costly to import, and also harmful to the environment. Renewable energy sources such as solar, wind, and

6

Date: _____

Day:

M	T	W	T	F	S
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Hydropower offers a cleaner and more sustainable alternative. Although renewable projects may require high initial investment, their long-term benefits outweigh these costs. Once installed, renewable energy systems produce electricity at a low operating cost and reduce dependence on imported fuels. Moreover, the cost of renewable technology has decreased significantly due to technological progress. For developing countries like Pakistan, renewable energy is especially important because it helps reduce the import bill, improve energy security, and provide electricity to remote areas. Problems such as power interruption and poor planning are often blamed on renewable energy, but in reality these issues arise from weak policies and outdated infrastructure.

Date: _____

Day: M T W T F S

Therefore, calling renewable energy a hoax is misleading. Instead, it should be seen as a practical and necessary solution for meeting future energy needs while protecting the environment and supporting sustainable development.

Renewable energy means energy that comes from natural sources which do not finish and can be used again and again. These sources include solar energy from the sun, wind energy from air movement, hydropower from flowing water, and biomass energy from plant and waste material. Unlike oil, gas, and coal, renewable energy does not run out and causes less damage to the environment. Because of rising fuel prices, climate change, and pollution, many countries are

shifting toward renewable energy. Solar energy is widely used in sunny countries, while energy is useful in coastal and windy areas. Hydropower has long been a reliable source of electricity through dams and rivers. Biomass is also important as it uses agricultural waste to produce power. In Pakistan, several renewable energy projects are already working. The Quaid-e-Azam Solar Park in Bahawalpur is one of the largest solar power projects in the country. Wind power projects in Jhimpur and Gharo areas of Sindh are also producing electricity. Hydropower plants like Tarbela Dam and Neelum-Jhelum project play a major role in clean energy production. Sugar mills in Pakistan use bagasse to generate biomass energy. These

Date: _____

Day:

M	T	W	T	F	S
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examples show that renewable energy is practical and necessary for Pakistan's future.

Many people think renewable energy is too expensive, but this is not true. In reality the cost of renewable power has fallen greatly worldwide and in Pakistan. A global report shows that about **91%** of new renewable energy projects are cheaper than fossil fuel power such as gas or coal because the technology has improved and cost have come down a lot. In Pakistan, solar energy has grown fast as more people install rooftop panels and use clean electricity at lower prices. For example, bids for new solar projects in Balochistan reached a low tariff of around **Rs. 11.2** per unit,

which is much cheaper than some fossil fuel plants. Also, Pakistan's share of non-fossil fuels in the energy mix increased by about 49% in recent years.

These facts show that renewable energy is not a hoax or expensive, but a smart and affordable choice for Pakistan's future.

Renewable energy brings many economic benefits to Pakistan. First, it reduces fuel imports because solar, wind, and hydropower do not need expensive oil or gas from other countries. This helps save money and strengthen the economy. Second, it creates jobs in local industries, like installing solar panels, building wind turbines, and maintaining plants. Many young

Date: _____

Day:

M	T	W	T	F	S
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people can find work in these new sectors. Finally, renewable energy provides price stability in the long run. Unlike fossil fuels, which often rise in price, energy from the sun, wind, and ~~water~~ water stays cheap and reliable. For example, solar plants in Balochistan now produce electricity at low tariffs, helping households and businesses save money.

Renewable energy is becoming more reliable because of new technology. Battery storage can save extra electricity for use when the sun does not shine or the wind does not blow. Smart grids help manage energy better, sending power where it is needed most. Hybrid systems, which combine solar, wind, and hydropower, ensure

Date: _____

Day:

M	T	W	T	F	S
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constant supply. Over time, efficiency is improving, meaning solar panels and wind turbines produce more energy with less cost. These advances make renewable energy a safe and dependable choice.

Renewable energy helps the environment and human health.

Using solar, wind, and hydropower reduces carbon emissions, which causes global warming. Cleaner energy also improves air quality by cutting smoke and harmful gases from coal or oil plants. This leads to fewer health problems like asthma and lung diseases.

In Pakistan, cities like Lahore and Karachi can benefit a lot if more renewable energy is used. It also helps the country become stronger against climate change and extreme weather.

Date: _____

Day:

M	T	W	T	F	S
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Renewable energy in Pakistan is becoming more important and cost-effective. Pakistan's renewable capacity almost doubled from 2867 MW to 5680 MW in one year as solar, wind, and hydropower projects grew fast. By 2025, clean energy made up over 46% of Pakistan's electricity mix, like gas and coal. The government aims for 60% electricity from renewables by 2030, showing long-term planning. For example many homes and factories now use solar panels to save money and avoid frequent blackouts. These facts show renewable energy in Pakistan is worth investing in, not a hoax.

Some people say renewable energy is unreliable because the sun does not always shine or

as the wind does not always blow. This problem is manageable with battery storage, hybrid systems, and smart grids. Environmental costs of building solar panels or wind turbines are much lower than the damage caused by coal or oil plants, which pollute air and water. In Pakistan, policies now support renewable projects, like, **Net Metering** for rooftop solar, and wind farms in Sindh provide steady electricity. Instead of rejecting renewable energy, Pakistan needs better rules and investment to make it safer, cheaper, and more reliable for everyone.

The way forward for renewable energy in Pakistan requires planning and strong policies. First, an integrated energy mix is needed, combining solar,

Date: _____

Day:

M	T	W	T	F	S
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wind, hydropower, and natural gas, so the country has reliable ~~re~~ electricity even when one source is low. Second, policy consistency is very important. Frequent changes in rules make investors hesitant. Promoting local manufacturing of solar panels and wind turbines can reduce costs and create jobs. Third, Pakistan must invest in energy storage and modern smart grids. Batteries and hybrid systems can store extra energy for use at night or during low wind periods. Smart grids help deliver electricity efficiently to homes, factories, and hospitals. For example, rooftop solar projects in Karachi and wind farms in Sindh show that with ~~power~~ proper planning, renewable energy can provide.

Date: _____

Day:

M	T	W	T	F	S
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cheap, stable, and clean electricity. By following these steps, Pakistan can meet its growing energy needs while protecting the environment.

In conclusion, the idea that renewable energy is an expensive hoax is not true. Throughout this essay, we have shown that solar, wind, and hydropower are becoming cheaper, more reliable, and better for the environment than fossil fuels. Renewable energy reduces Pakistan's dependence on costly fuel imports, creates jobs, and improves air quality. Pakistan has already increased its clean energy share to nearly half of the total electricity, and support for local manufacturing, renewable energy can meet future demand. Rather than rejecting it

Date: _____

Day:

M	T	W	T	F	S
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as a hoax, Pakistan should embrace renewables as a strategic tool for economic stability, energy security, and climate resilience.

Renewable energy is not only affordable but essential for a sustainable, healthier, and prosperous future for all Pakistanis.
