



Mains Practice Question

Q. “Conventional energy sources are more reliable and should not be abandoned until the alternatives like clean energy have been stringently stress tested.” Discuss. (250 Words)

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Approach

- Introduce by explaining the conventional and nonconventional energy sources.
- Discuss the need for clean energy sources and issues that emerge from their adoption.
- Suggest a way forward.

Introduction

Conventional sources of energy are the natural energy resources which are present in a limited quantity and are being used for a long time. They are exhaustible like Coal, Petroleum etc.

Non-conventional sources of energy are the energy sources which are continuously replenished by natural processes. These cannot be exhausted easily, can be generated constantly so can be used again and again, e.g. solar energy, wind energy, tidal energy, biomass energy and geothermal energy etc. Also called as renewable energy sources.

Body

Advantages of Renewable Energy

- **Sustainable:** Energy generated from renewable sources will be cleaner and greener and more sustainable.
- **Employment opportunities:** Inclusion of a newer technology simply means more employment opportunities for the working population of the country.
- **Market assurance:** From the economy point of view, renewable sources provide the market and revenue assurance which no other resources can provide.
- **Non-exhaustive Source:** The renewable sources of energy like Solar, Wind, Geothermal energy sources are perpetual and non exhaustive in nature.

Issues That Emerge From Green Energy Adoption

- **More Challenges For Poor Countries:** What happens when renewable energy doesn't deliver the goods, and rich economies scramble to buy gas to make up the shortfall?
 - E.g countries such as the UK, Spain and Germany are relying more on natural gas to make up the electricity shortfall which has led to price increase.
 - It will be difficult for the poor countries to be able to afford increased price rise.
- **Installation Cost Issue:** The high initial cost of installation is one of the major hurdles in the development of renewable energy. Although the development of a coal plant requires high investment, it is known that wind and solar power plants also require huge investment.

- In addition to this, storage systems of the generated energy is expensive and represents a real challenge in terms of megawatt production
- Resource Locator: Most renewable energy plants that share their energy with the grid require large areas of space. In most cases, renewable energy sources are dictated by location which can be off-putting to users.
 - Firstly, some renewable energy sources are simply not available in different regions. Secondly, the distance between the renewable energy source and the grid is a major aspect in terms of cost and efficiency.
 - In addition to this, renewable energy sources depend on weather, climate and geographical location, therefore meaning that one type of energy generation is not appropriate for the region.

Importance of Conventional Fuel

- Natural gas is used to produce urea – if gas prices go up, fertiliser also becomes expensive. Expensive fertiliser means more expensive food – that will hurt the poor disproportionately.
 - The impact of expensive fertiliser will be felt some months down the line as expensive fertiliser and reduced harvests push up food prices.
 - India is relatively less affected as the share of natural gas in the country's energy mix is low but will still face problems due to high food prices.
 - The food inflation will come at a time when the ongoing pandemic has disproportionately hurt lower income groups worldwide.
- Crude Oil: In 2007-08, when oil prices were high, there was a push to use “biofuels” led by the US and Europe. Land was diverted to cultivate crops that could be converted to ethanol, leaving less for food crops.
 - The effects of the 2008 food price crisis were felt around the world, especially by the poor. High price of food was one of the proximate causes of political unrest in the Arab world in 2011 — Libya and Syria continue to feel its aftereffects.
- Thus, a blind push to demonise and shut down traditional sources of energy and move to less reliable “clean” energy can have numerous effects.

Way Forward

- Framework to avoid unnecessary delays in policy decision making and implementation.
- Increasing efficiency in extraction, production and uses of conventional energy sources.
- Strong financial measures are required to finance renewable projects, innovative steps like green bonds, institutional loans and clean energy funds, which should not affect the traditional sources (Coal, Natural gas) investment.
- Promotion of research and development in the renewable energy sector, especially in storage technology.
- India needs a Solar Waste Management and Manufacturing Standards Policy.