



## Energy Poverty

This editorial is based on [“The clock is ticking on the issue of energy poverty”](#) which was published in The Indian Express on 08/07/2022. It talks about energy poverty and related issues.

**For Prelims:** Energy Poverty, World Economic Forum, Income Poverty, Household Air Pollution, Greenhouse gases, G-20, BRICS, Green Energy Corridor (GEC), National Solar Mission (NSM), National Hydrogen Energy Mission (NHEM), International Solar Alliance (ISA)

**For Mains:** Causes of Energy Poverty in India, Measures to Curb Energy Poverty, Related Government Initiatives

The [World Economic Forum](#) defined [Energy Poverty](#) as the **lack of access to sustainable modern energy services and products**. It can be found in all conditions where there is a **lack of adequate, affordable, reliable, quality, safe and environmentally sound energy services** to support development.

Despite the fact **Energy is the Engine of Civilization**, nowadays access to adequate and affordable sources is not equally distributed on the planet. In **South Asia alone, over 1 billion people** are struggling with extremely **limited access to energy**.

[Human development](#) and energy use are **intrinsically linked**. Energy is needed to fulfil basic human needs, like **clean air, health, food and water, education and human rights**, and it is **fundamental to the development of every economic sector but energy costs are sky-high due to [geopolitical tensions](#) across the globe**.

**Energy Scarcity in the Shadow of Plenty**, despite the [Liquefied petroleum gas \(LPG\)](#) and the [Light-emitting diode \(LED\)](#) **revolutions in India**, access to energy is found to be limited among Indian households, especially among the rural households. Let us understand Energy Poverty in the context of India and alternative sources of energy.

### What are the Causes of Energy Poverty in India?

- **Lack of Energy Infrastructure:**
  - Because of the **lack of modern energy infrastructure like power plants, transmission lines, [underground pipelines](#)** to deliver energy resources such as natural gas, petroleum to rural areas leads to energy poverty.
    - They have heavily relied on traditional biomass such as wood fuel, charcoal, burning crop residue and wood pellets.
    - **Nigeria, the largest [oil-producing country](#) in Africa, is second only to India in the number of people living without electricity.**
      - **Without infrastructure** for gathering or delivering natural gas much of the

**natural gas produced in oil fields of Nigeria is flared off.**

- **Lack of Affordability:**
  - Households at lower levels of income and development tend to be at the bottom of the energy ladder, **using fuel that is cheap and locally available but not very clean nor efficient.**
- **Inefficiency of Energy:**
  - **Disproportionately high loss of useful energy during energy conversions** is a prime factor of Energy Poverty.
    - **Energy poverty rates tend to drop by 0.21% when energy efficiency index scores increase by 1 point**, thus showing the **direct effect of [energy efficiency](#) in energy poverty.**
- **Geopolitical Tension:**
  - Geopolitical instability results into disturbance in global energy supply chain,
    - **India's oil import bill soared to 119 billion dollars** in the fiscal year that ended on March 31, 2022 as **energy prices exploded after the [Ukraine conflict](#).**

## **How is Energy Poverty Linked with Income Poverty in India?**

- Energy poverty is regarded as one of the aspects of [income poverty](#).
  - **Provision of energy services like electricity facilitate industrial and agricultural growth in the country.**
  - **Such growth and development enhance the livelihood opportunities** in terms of greater level of employment and entrepreneurial opportunities.
  - This shall further translate into higher income of the households and subsequent reduction in poverty levels.
- The poor households, both urban and rural, spend a larger share of their total expenditure on acquiring energy fuels as compared to households above the poverty line.
  - In view of economic development, it becomes important for the households to have access to clean energy fuels on a regular basis.

## **What are the Impacts of Energy Poverty in India?**

- **Vicious Labyrinth:**
  - **Insufficient energy usually translates into the impossibility to develop agriculture and manufacturing** thus trapping the energy poverty affected population trapped in a vicious circle, **they cannot afford the energy that can drive them out of poverty.**
- **Health Hazard:**
  - Burning of traditional energy fuels such as wood, dung, crop residue causes indoor air pollution which causes considerable damage to human health.
    - It is estimated that **1 of every 4 of the annual global premature deaths caused by [Household Air Pollution \(HAP\)](#) occur in India.**
    - Out of whom **90 percent are women, as they work in close proximity to these fuels in poorly ventilated kitchens.**
- **Energy Crisis:**
  - **Escalation in energy demand**, continued dependence on fossil-based fuels for energy generation and transportation is **not only depleting natural resources**, but is **resulting in a steady increase of [carbon dioxide emissions](#)** which is responsible for **increasing average global temperatures.**
    - **Concentration levels of [greenhouse gases](#)** are rising steadily.

## **What Measures can be Adopted to Curb Energy Poverty?**

- **Global Intergovernmental Organisation:**
  - Powerful platforms like the **G-20 and the BRICS** need to focus more on energy access, poverty and security. Global intergovernmental organisation should be established **dedicated to just energy transition, energy access and justice and energy and climate.**

- **Creation of Database for Effective Policy Making:**
  - To facilitate policy makers and other relevant stakeholders it is important to collect data of **intra household and collective differences to clearly establish the relationship between energy, income and gender disparity and bridge the energy gap** between different sections of society.
- **Shifting the Focus Towards [Renewable Energy Sources](#):**
  - Energy generated from renewable sources ([solar energy](#), [biogas](#) etc) **will be cleaner, greener and more sustainable.**
    - Projects involving renewable sources can also make a **positive contribution to low-carbon development strategies** and will **generate employment opportunities** for the working population of the country.
- **Robust Institutional Mechanism:**
  - Linkage between different sectors such as the energy sector, manufacturing sector, health sector, and the finance sector is required to provide energy efficient machinery and subsidies to the households in India.
    - There is a need for institutions in different sectors to come together and offer services as bundled packages for alleviating energy poverty.
- **Translating Goals into Implementable Action:**
  - **Awareness Campaign:**
    - Awareness campaigns related to subsidies and tutorials related to advances in technology must be organised at the lowest level to improve awareness towards efficient energy consumption.
  - **Monitoring:**
    - There is a need to set up a monitoring mechanism **to oversee implementation of policies in true spirit.**

## What are the Initiatives Shaping India's Energy Transition?

- **Electrification:**
  - [Pradhan Mantri Sahaj Bijli Har Ghar Yojana \(SAUBHAGYA\)](#)
  - [Green Energy Corridor \(GEC\)](#)
  - [National Smart Grid Mission \(NSGM\) and Smart Meter National Programme](#)
- **Renewable Energy:**
  - [National Solar Mission \(NSM\)](#)
  - [National Biofuels Policy and SATAT](#)
  - [Small Hydro Power \(SHP\)](#)
  - [National Hydrogen Energy Mission \(NHEM\)](#)
  - [Production-Linked Incentive \(PLI\) Scheme](#)
- **Energy Efficiency:**
  - [Unnat Jyoti by Affordable LEDs for All \(UJALA\)](#)
- **Clean Cooking:**
  - [Pradhan Mantri Ujjwala Yojana \(PMUY\)](#)
- **Industrial Decarbonisation:**
  - [Perform, Achieve and Trade \(PAT\)](#)
- **Sustainable Transport:**
  - [Faster Adoption and Manufacturing of \(Hybrid &\) Electric Vehicles \(FAME\)](#)
- **Climate Smart Cities:**
  - [Smart City Mission \(SCM\)](#)
- **Global Initiatives:**
  - [International Solar Alliance \(ISA\)](#)
  - [Clean Energy Ministerial \(CEM\)](#)
  - [Mission Innovation \(MI\)](#)

### ***Drishti Mains Question***

“Energy Poverty is hindering development in India”. Discuss with logical arguments. How far has the clean energy solutions shaped India's Energy Transition?

## UPSC Civil Services Examination, Previous Year Question (PYQ)

**Q. With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct? (2015)**

1. It is a Public Limited Government Company.
2. It is a Non-Banking Financial Company.

**Select the correct answer using the code given below:**

- (a)** 1 only
- (b)** 2 only
- (c)** Both 1 and 2
- (d)** Neither 1 nor 2

**Ans: (c)**

**Exp:**

- Indian Renewable Energy Development Agency Limited (IREDA) is a Mini Ratna (category-I) GoI enterprise under the administrative control of the Ministry of New and Renewable Energy (MNRE).
  - It is a Public Limited Government Company established as a Non-Banking Financial Institution in 1987 engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy. Hence, statements 1 and 2 are correct.
- **Therefore, option (c) is the correct answer.**