

GS III : Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

1. ENERGY – A KEY DRIVER OF SOCIO-ECONOMIC GROWTH

Context:

- India is the **sixth largest economy** in the world and is poised to become the **second largest economy by 2030**.
- It is also the third largest consumer of energy in the world, with **energy demand set to double by 2040**, India needs a robust and healthy energy sector.

Why energy access is important?

- Energy access enables the fruits of economic growth to trickle down to the bottom of the people. There is also empirical evidence which links energy consumption to rise in the Human Development Index, showcasing energy's role in influencing human well-being.

Challenges in the energy sector:

- More than **one-quarter of our population**, the vast majority of whom live in rural areas, still **lack an electricity connection**. Less than half of all households in the poorest income group have sporadic supply.
- Another key issue is the per unit cost of power, that determines whether it is affordable for households that need it most. Government launched **Saubhagya scheme targeting universal electrification and covered more than 99% of rural households** to address accessibility and affordability of energy security.
- On the distribution side, major deterrent has been the poor financial and operational health of state discoms affecting their performance. The government announced **UDAY scheme** to spark a **financial revival of discoms**, which would revitalize the entire sector.

- While focusing on energy security, equally important is to ensure that a bulk of it is generated sustainably, to help India honour its global commitments related to cutting down on carbon emissions. Government looking to achieve **the target of 175 GW of renewable energy by 2022.**

Energy and commerce and industry:

- Energy access is essential to create income-generating opportunities and satisfy the huge number of job seekers. In the manufacturing sector, it enables capital investments which exponentially increase operational capacity and output.
- In India, where a large part of the population is engaged in agriculture, energy access helps to improve the farmer income through better irrigation, mechanized ploughing and harvesting and by ensuring a wider market for their output.

Energy and women empowerment:

- As in other parts of the world, women in India also have to bear the brunt of **energy poverty**. Energy access has the potential to positively influence women's health, education, finance, and access to information, especially in rural areas.
- Government introduced **Ujjwala Yojana** – under which 7 crore households benefitted with access to clean cooking gas replacing firewood and coal. This ensures the smoke free healthy lifestyle; reduce drudgery and more time to pursue alternate livelihoods opportunities.
- **Off-grid solutions and decentralized Renewable Energy systems** have enabled women to get trained in installing, operating and maintaining these units, provide income which enhanced self-esteem and social standings.
- Energy access can catalyze a more gender equal society, where women are well-integrated into the economic mainstream, thus resulting in holistic and inclusive growth.

- **Lack of energy access results in high dropout ratio** and who did go to school had to hurry back home before it got dark for security reasons. Today, solar energy powered schools in rural India gives the opportunity to pursue quality modern education (ICT enabled), turn digitally literate and brighten their career prospects.
- Further, children can now return home in the safety of solar powered street lights and continue to study at their homes which are now electrified.

Energy and Health:

- Energy is essential for water extraction, water treatment and water distribution. Sporadic access to energy can lead to vaccine spoilage, interruptions in the use of medical and diagnostic devices and lack of lighting and communications can be extremely detrimental in the provision of emergency services.
- Decentralized, clean energy solutions enhance the efficiency of primary health services, accelerate the growth of tech enabled services like telemedicine and mobile health applications and bring quality healthcare to the doorstep of the common man.

Conclusion:

- No country has traversed its development journey without providing access to energy in line with people's need and requirements.
- **UN SDG 7 pertaining to Access to Clean and Affordable Energy**, has undeniable positive spill-over's in the achievements of other SDGs, including those pertaining to gender equality, poverty elimination, clean water and sanitation and most importantly environment sustainability.