The Goal of an Energy-Secure South Asia

What is the issue?

While universal coverage can catalyse the South Asia's economic growth, energy trade must be linked to peace building.

What is the status of energy security in South Asia?

> *The IEA defines energy security as the uninterrupted availability of energy sources at an affordable price.*

- South Asia has almost a fourth of the global population and the electricity generation in South Asia has risen exponentially, from 340 terawatt hours (TWh) in 1990 to 1,500 TWh in 2015.
- **Coverage**- Bangladesh has achieved 100% electrification recently while Bhutan, the Maldives, and Sri Lanka accomplished this in 2019.
- India has achieved 94.4% of electrification.
- **Cost**- Bhutan has the cheapest electricity price in South Asia (0.036 dollar per kWh) while India has the highest (0.08 dollar per kWh.)
- **Transition to renewable**- India is trying to make a transition to renewable energy to provide for 40% of total consumption, while Pakistan is still struggling to reduce power shortage.
- **Electricity policies**- The objective of electricity policies of South Asian countries is to supply reliable and quality electricity in an efficient manner, at reasonable rates and to protect consumer interests.
- **Sources**- Geographical differences between these countries call for a different approach depending on resources.
    - India relies heavily on coal (accounting for nearly 55% of its electricity production)
    - Nepal relies hydropower
    - Bangladesh relies on natural gas
    - Sri Lanka leans on oil

What is the need for electrification?

> *A 0.46% increase in energy consumption leads to a 1% increase in GDP per capita.*

- Electrification helps in improving lifestyle
- The generation of power plays an essential role in the economic growth of the country.
- It adds to the aggregate economy by improving the nation's GDP.
- More electricity leads to increased investment and economic activities within and outside the country, which is a more feasible option than foreign direct investment.

    - For example, 50.3% of Bangladesh's GDP comes from industrial and agricultural sectors which cannot function efficiently without electricity.

What role does energy play in SDG?

- **SDG 1**- Energy sector employs more people that helps in achieving the SDG 1 -no poverty.
- **SDG 3**- People are able to access tech-based health solutions (SDG 3- ensures healthy lives and promote well-being for all at all ages).
- **SDG 4**- Energy access helps online education through affordable Internet (SDG 4- ensures inclusive and equitable quality education and promote lifelong learning opportunities for all).
- **SDG 5** (To achieve gender equality and empower all women and girls)- Solar power-driven electrification in rural Bangladesh engages more than 1,00,000 female solar entrepreneurs aiding in achieving SDG 5.
- **SDG 7-** Sustainable Development Goal 7 is about ensuring access to affordable, reliable, sustainable and modern energy for all by 2030.
- **SDG 9**- Access to electricity improves infrastructure - SDG 9 (to build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation).

What efforts were taken to promote green energy?

- **India's efforts**- India leads South Asia in adapting to renewable power, with its annual demand for power increasing by 6%.
- India's pledge to move 40% of total energy produced to renewable energy is also a big step.
- Prime Minister Narendra Modi in his 'net zero by 2070' pledge at COP26 in Glasgow asserted India's target to increase the capacity of renewable energy from 450GW to 500GW by 2030.
- The first-ever Clean Development Mechanism (CDM) benefits such as poverty reduction, energy efficiency and improved quality of life were realised when there was India-Bhutan hydro trade in 2010.
- India also hosts the International Solar Alliance.
- **Bangladesh's scheme**- The rural places that are unreachable with traditional grid-based electricity have 45% of their power needs met through a rooftop solar panel programme.

Is there any regional energy trade agreements?

- **Bilateral and multilateral energy trade agreements**
    - India-Nepal petroleum pipeline deal
    - India-Bhutan hydroelectric joint venture
    - Myanmar-Bangladesh-India gas pipeline
    - Bangladesh-Bhutan-India-Nepal (BBIN) sub-regional framework for energy cooperation
    - Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline
- The South Asian Association for Regional Cooperation (SAARC) prepared the regional energy cooperation framework in 2014.
- **Energy trade-** India exports to Bangladesh, almost 25% of the daily energy demand, with a significant amount from the Kokrajhar power plant in Assam.
- Bhutan exports 70% of its own hydropowered electricity to India while Nepal not only sells its surplus hydroelectricity to India but also exports fossil fuel to India.

What is the need now?

- Resilient energy frameworks are needed such as

    - Better building-design practices
    - Climate-proof infrastructure
    - A flexible monitory framework
    - An integrated resource plan that supports renewable energy innovation
- The private sector investment is crucial for energy security in the region.
- Public-private partnership can be a forerunner in meeting the energy transition challenges for the South Asian region.

References

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