

AIR Spotlight: Year-End Review of the Ministry of Power

AIR Spotlight is an insightful program featured daily on the All India Radio Newsonair. In this program, many eminent panellists discuss issues of importance which can be quite helpful in [IAS exam](#) preparation.

This article is about the discussion on initiatives and achievements of the Power Ministry over the past one year (2022).

Participants:

1. R K Singh: Union Minister of Power and New and Renewable Energy.
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Capacity Addition to Power Generation

- India has become a power surplus country in the last 5-6 years.
- Since 2015, there has been a total addition of 1,73,000 MW of power.
- The total installed power generation capacity, including from renewable energy sources in the country, is about 408,000 MW.
- This year the peak electricity demand touched 2,15,000 MW. The rising power demand reflects the economic growth in the country post-pandemic.
- India has become a net exporter of electricity - exports electricity to Nepal, Bangladesh and Myanmar.
- The country gets electricity mainly from thermal followed by renewable, hydro and nuclear energy sources.

Power Transmission - One Nation, One Grid, One Frequency

- Sufficient transmission capacity has been planned in the country for evacuation of power from generating stations to the load centres including strengthening of existing transmission systems.
- The Indian Power Grid system is a large network of five regional grids (northern, eastern, western, southern and north-eastern) that includes power generation, transmission lines, towers and consumer distribution lines.
- The electrical grid system comprises the country's high-voltage electricity transmission network connecting power stations and major sub-stations and ensures that electricity generated anywhere in India can be used to meet the demand elsewhere.
- It is one of the largest operating synchronous grids. It is managed by the Ministry of Power's Public Sector Enterprise, the Power Grid Corporation of India (PGCIL).
 - PGCIL was designated as a Maharatna Public Sector Undertaking in 2019.

- The Government of India launched Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in December 2014 for rural electrification works across the country. Electrification in the country is increasing with support from schemes like the [Ujwal DISCOM Assurance Yojana \(UDAY\)](#), and Integrated Power Development Scheme (IPDS).

Environmental Concerns -

Despite India's minimal per capita contribution to the total global greenhouse gas emissions, the country has taken the lead in climate change mitigation.

- At COP21 (Paris Agreement), India pledged to reach 40% of installed power capacity from non-fossil fuels by 2030. Today, 42% of power capacity comes from non-fossil fuels - renewable and nuclear energy. India has achieved its target 9 nine years ahead of time in November 2021.

Unnat Jyoti by Affordable LEDs for ALL (UJALA)

- Unnat Jyoti by Affordable LED for All (UJALA) programme was launched by PM Shri Narendra Modi in January 2015.
- Under the UJALA scheme, LED bulbs, LED Tube lights and energy-efficient fans are being sold to domestic consumers for the replacement of conventional and inefficient variants.
- This has resulted in estimated energy savings of 48.39 billion kWh per year, GHG emission reduction of 39.30 million t CO₂ per year and estimated annual monetary savings of INR 19,332 crore in consumer electricity bills.

Energy Rating Labels -

- Energy rating labels are labels that provide information about an appliance's energy consumption. In India, BEE (Bureau of Energy Efficiency), an initiative of the Ministry of Power, Government of India, regularises these labels. The government is trying to standardise energy consumption levels and help consumers make informed decisions through this star rating.
- More the stars on the label, the more efficient the appliance is. These stars usually range from one, being the least efficient to five, being the most efficient product in its category. This is the quickest way to understand the appliance's power consumption.

Green Hydrogen/Clean energy-

Green Hydrogen as an energy source is seen as the next big thing as its usage would lead to zero emissions.

It is a clean burning molecule, which can decarbonise a range of sectors including iron and steel, chemicals, and transportation. Renewable energy that cannot be stored or used by the grid can be

channelled to produce hydrogen. Green energy helps reduce import dependency on fossil fuels. India has the potential to become a net exporter of green hydrogen due to its cheap renewable energy tariffs.

Read more on the [Green Hydrogen Policy 2022](#) in the linked article.

