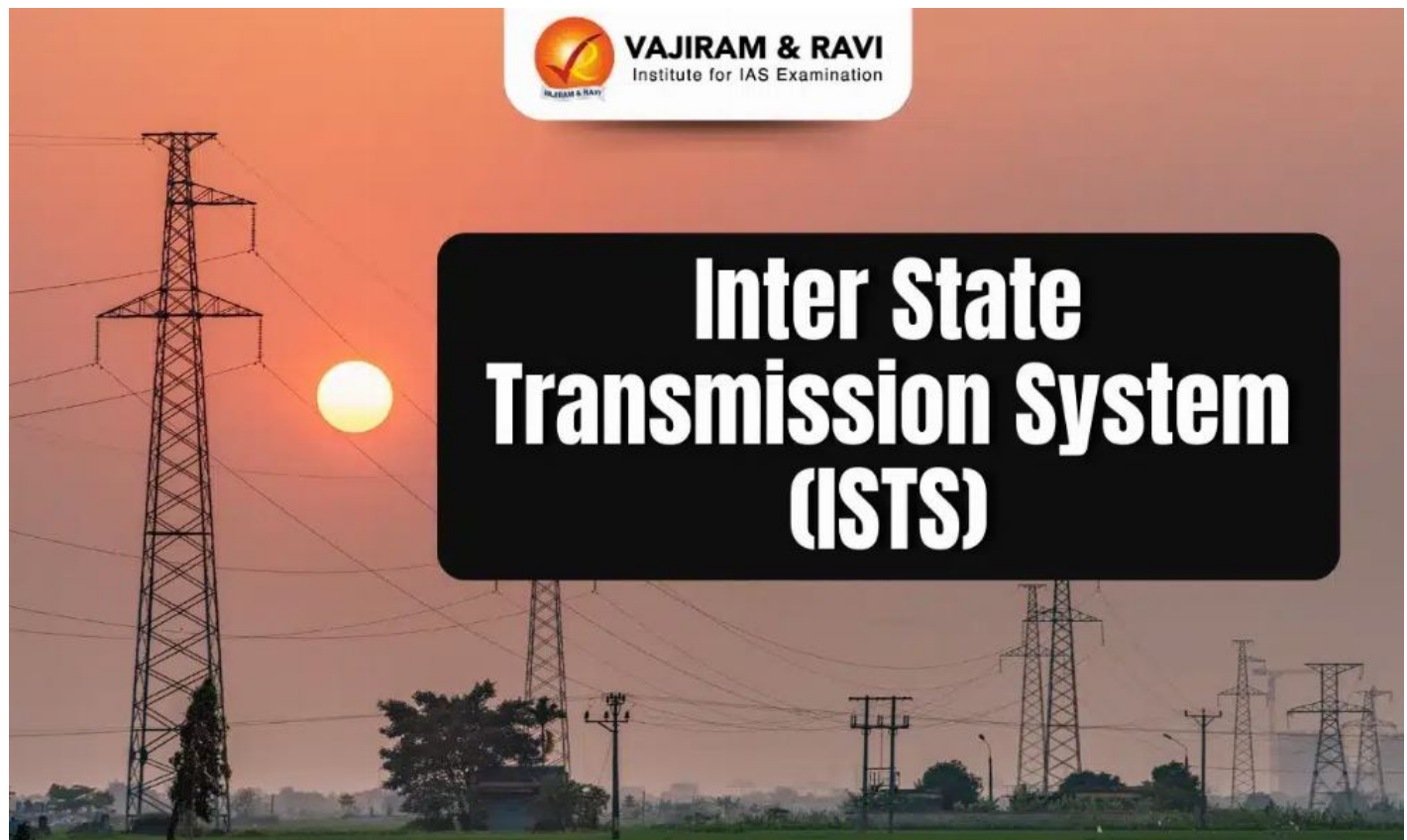


Inter State Transmission System (ISTS)

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Inter State Transmission System Latest News

About 26 gigawatt of renewable energy (RE) projects are expected to be impacted with the end of waiver on inter-State transmission system (ISTS) charges provided for solar and wind projects, according to Crisil Ratings.

About Inter State Transmission System

- It is a **high-voltage power transmission network** that enables **electricity to flow** seamlessly **across state borders** in India.
- It **connects power-rich regions with energy-deficient areas**.
- This ensures a balanced and efficient distribution of electricity.
- It is **managed by the Central Transmission Utility of India Limited (CTUIL)**, a **100% subsidiary of Power Grid Corporation of India Limited (POWERGRID) under the Ministry of Power**.
- ISTS **operates at voltages above 132 kV** and **reduces transmission losses** and **enhances grid stability**.

- This system **allows solar and wind power to be transmitted nationwide** and plays a **crucial role in large-scale ISTS renewable energy projects**.
- ISTS eliminates state-wise transmission restrictions and creates a **unified energy market** where electricity can be supplied based on demand.
- Overcoming geographical constraints, ISTS makes the power sector more reliable and efficient.

Inter State Transmission System Working

- **Power Generation:** Electricity is generated from **various sources**, including solar farms, wind parks, hydro plants, and thermal stations.
- **Grid Connection:** The generated **power** is **transmitted to ISTS substations**, which are high-voltage facilities **managed by the Central Transmission Utility (CTU)**. These substations **step up the voltage** to reduce transmission losses.
- **High-Voltage Transmission:** The electricity is **transported through a network of 132 kV and above transmission lines** that **span multiple states**, ensuring minimal energy loss over long distances.
- **Load Management:** The **Regional Load Dispatch Centers (RLDCs)** and the **National Load Dispatch Center (NLDC) monitor** and regulate electricity flow, ensuring supply matches demand.
- **Distribution to Consumers:** **Power** is **stepped down at state-level substations and supplied** to industries, businesses, and residential areas **via the State Transmission Utility (STU) and local distribution networks**.

Source: **TH**

Source: <https://vajiramandravi.com/current-affairs/inter-state-transmission-system-ists/>

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