Renewable Energy Management Centers (REMCs)

**Syllabus subtopic:** Achievements of Indians in Science & Technology; Indigenization of Technology and Developing New Technology

**Prelims and Mains focus:** about the event; about REMCs

**Context:** Power Minister dedicated to the nation 11 Renewable Energy Management Centres (REMCs) for renewable energy integration. The minister also inaugurated the Northern Region Renewable Energy Management Centre (NR-REMC) at a function in New Delhi.

- During the event the minister also released a Report by POSOCO on “Analysis of Impact of Solar Eclipse – 26th Dec’19 on Indian Power System”. The report covered various areas such as solar generation forecasting, ramp estimation, behavior of PV plants during solar eclipse. The variation in Global Horizontal irradiance during solar eclipse for plants falling in annular and partial eclipse zone have been analysed in the report.

**Background**

The government's target of 175 GW renewable energy (RE) capacity by 2022 poses challenges to grid management due to intermittent and variable nature of RE generation.

**About REMCs**
The REMCs are equipped with artificial intelligence-based RE forecasting and scheduling tools and provide greater visualisation and enhanced situational awareness to the grid operators.

The REMCs are co-located with the State Load Dispatch Centres (SLDCs) in Tamil Nadu, Karnataka, Andhra Pradesh, Maharashtra, Madhya Pradesh, Gujarat and Rajasthan; and in Regional Load Dispatch Centres (RLDCs) at Bengaluru, Mumbai and New Delhi; and at the National Load Dispatch Centre (NLDC) in New Delhi. Presently, 55 GW of renewable power (solar and wind) is being monitored through the eleven REMCs.

The government had approved the implementation of the REMCs as a central scheme and had mandated PowerGrid, a Maharatna CPSE under the Ministry of Power, as the implementing agency.

These REMCs are being managed by the Power System Operation Corporation of India Ltd (POSOCO) at the regional and national level, and at the state level by SLDCs.

**Significance**

The eleven REMCs, place India among a league of few nations, which have state-of-the-art management centers for renewable energy integration.