



India's Renewable Energy Vision: IREDA

For Prelims: [Paris Agreement](#), India's Renewable Energy Vision: IREDA, [World Bank \(WB\)](#), [Climate Change](#).

For Mains: India's Renewable Energy Vision: IREDA, Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

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Why in News?

Recently, the [Indian Renewable Energy Development Agency \(IREDA\)](#) addressed an international webinar organised by the [World Bank \(WB\)](#), shedding light on **India's Renewable Energy** landscape and its ambitious targets to combat [Climate Change](#) while ensuring energy security.

What are the Key Highlights of the IREDA's Address at Webinar?

▪ Huge Invests to Meet Climate Goals:

- India's [Nationally Determined Contributions \(NDCs\)](#), or its self-defined climate pledges under the [Paris Agreement](#), **for 2030** would require Rs 30 lakh crore of investments.
 - According to India's NDC goals, India pledges to reduce emissions intensity of its [GDP \(Gross Domestic Product\)](#) by 45% by 2030, from 2005 level and achieve about **50% cumulative electric power** installed capacity **from non-fossil fuel**-based energy resources by 2030.
- The investment is required in **manufacturing and capacity build-up for solar power**, electrolysers, wind and battery space, power transmission, [Green Hydrogen](#), hydro power and waste-to-energy sectors.

▪ Elevation of Rooftop Solar Sector:

- IREDA highlighted the significance of the "[PM Surya Ghar Muft Bijli Yojana](#)," a rooftop solar scheme.
- This visionary project, backed by an investment exceeding Rs. 75,000 crores, aims to solarize 1 crore households by providing up to 300 units of free electricity every month.
 - The scheme not only provides substantial benefits but also fosters awareness about renewable energy, contributing to India's ambitious goal of achieving [Net-Zero emissions by 2070](#) and Energy Independence by 2047.

▪ Increase in Energy Demand:

- India's energy demand would increase significantly **due to the ambitious plans of the government** for the country and maximum energy demand would be met through renewable sources.
- Approximately 90% of this **demand is expected to be met through renewable sources**.
 - Until sufficient energy storage for renewable energy is achieved, thermal energy will also be developed alongside.

What is IREDA?

- IREDA is a [mini ratna company](#) under the Ministry of New and Renewable Energy (MNRE).
- It was set up in 1987 as a specialised [non-banking finance agency](#) for the renewable energy sector.
- IREDA plays a key role in renewable energy project financing which gives confidence to the financial institutions/banks to lend in the sector.

What are the Government Initiatives Related to Renewable Energy?

- [Renewable Purchase Obligations \(RPO\)](#)
- [PM-KUSUM scheme](#)
- [PLI scheme for Solar PV manufacturing](#)
- [Allowing up to 100% FDI under the automatic route for renewable energy.](#)
- [Atal Jyoti Yojana](#)
- [International Solar Alliance](#)
- [One Sun, One World, One Grid \(OSOWOG\)](#)
- [National Solar Mission](#)
- [Suryamitra Skill Development Programme](#)
- [Pradhan Mantri Suryodaya Yojana](#)
- 'Must-run' status for RE Assets:
 - A 'must run' status means that the concerned power plant has to **supply electricity to the grid under all conditions.**

Read more: [IEA Report Electricity 2024](#), [Indian Oil Market Outlook to 2030: IEA](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Prelims

Q. With reference to solar power production in India, consider the following statements: (2018)

1. India is the third largest in the world in the manufacture of silicon wafers used in photovoltaic units.
2. The solar power tariffs are determined by the Solar Energy Corporation of India.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: (d)

Exp:

- Silicon wafers are thin slices of semiconductor, such as a crystalline Silicon (c-Si), used for the fabrication of integrated circuits and, in photovoltaics, to manufacture solar cells. China is by far the world's largest producer of Silicon, followed by Russia, the United States, and Brazil. India does not figure among the top five producers of Silicon and Silicon wafers. Hence, statement 1 is not correct.
- Solar tariffs are determined by the Central Electricity Regulatory Commission and not by Solar

Energy Corporation of India. Hence, statement 2 is not correct.

- Therefore, option (d) is the correct answer.

Q2. 'Net metering' is sometimes seen in the news in the context of promoting the (2016)

- (a) production and use of solar energy by the households/consumers
- (b) use of piped natural gas in the kitchens of households
- (c) installation of CNG kits in motor cars
- (d) installation of water meters in urban households

Ans: (a)

Mains

Q. India has immense potential of solar energy though there are regional variations in its developments. Elaborate. **(2020)**

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