



India Energy Security Scenarios 2047 V3.0

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Why in News?

[NITI Aayog](#) unveiled the latest version of the [India Energy Security Scenarios \(IESS\) 2047 V3.0](#), an open-source tool designed to evaluate the integrated impact of **various green energy policies** of the Government of India.

- The **baseline for the tool has been set at 2020** and is continually calibrated up to 2022, ensuring the accuracy of its predictions.
- NITI Aayog also released the **India Climate Energy Dashboard (ICED) 3.0**.

Note:

- ICED is the **country's one-stop platform for near real-time data** on the energy sector, climate, and related economic datasets based on government published sources.

What are the Key Features and Functionality of IESS 2047 V3.0?

- **Comprehensive Scope:** This tool assesses the **demand and supply of energy in the country**, considering policies related to alternative energy resources like [Green Hydrogen Mission](#), Renewable Purchase Obligations, [PM-KUSUM](#), Offshore wind strategy, among others.
- **Environmental Impact Analysis:** By analyzing **emissions, cost, land, and water requirements up to 2047**, IESS 2047 aims to steer India towards a **sustainable and net-zero energy future**.
- **Open-Source and User-Friendly:** The tool is **open-source, easily downloadable, and user-friendly**, encouraging accessibility and engagement from researchers, think tanks, and the public.
 - IESS 2047 allows users to generate personalized pathways, tailored to specific factors like **industry, services, agriculture, population, urbanization, and end-use energy demand**.
- **Reducing External Dependency:** By providing reliable estimates of the country's energy needs, IESS 2047 helps reduce India's reliance on external agencies.

India's Panchamrit Goal:

- Reach 500 gigawatts (GW) of [non-fossil energy](#) capacity by 2030.
- Meet 50% of India's energy requirement from [renewable energy \(RE\)](#) sources by 2030.
- Reduce the carbon intensity of the economy by 45% below 2005 levels by 2030.
- Reduce total projected carbon emissions by 1 billion tonnes by 2030.
- Achieve the target of net-zero emissions by 2070.

What are the Initiatives Shaping India's Energy Transition?

- [Faster Adoption and Manufacturing of \(Hybrid &\) Electric Vehicles \(FAME\)](#)
- [Pradhan Mantri Sahaj Bijli Har Ghar Yojana \(SAUBHAGYA\)](#)
- [Green Energy Corridor \(GEC\)](#)
- [National Solar Mission \(NSM\)](#)
- [National Biofuels Policy and SATAT](#)
- [Small Hydro Power \(SHP\)](#)
- [International Solar Alliance \(ISA\)](#)

UPSC Civil Services Examination, Previous Year Question (PYQ)

Q. With reference to the Indian Renewable Energy Development Agency Limited (IREDA), which of the following statements is/are correct? (2015)

1. It is a Public Limited Government Company.
2. It is a Non-Banking Financial Company.

Select the correct answer using the code given below:

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

Ans: (c)