Environment & Ecology · GS - III

Explain the purpose of the Green Grid Initiative launched at World Leaders Summit of the COP26 UN Climate Change Conference in Glasgow in November, 2021. When was this idea first floated in the International Solar Alliance (ISA)?

EXAM YEAR	PAPER	SUBJECT
2021	GS - III	Environment & Ecology

MARKS	WORD LIMIT
10	~150 words

Answer Hint

One Sun One World One Grid, Green Grids Initiative, International Solar Alliance, India and United Kingdom, transnational electricity interconnections, renewable energy integration, energy access, climate mitigation, COP26, ISA Assembly 2018

Model Answer

Introduction

The Green Grids Initiative–One Sun One World One Grid (GGI–OSOWOG) seeks to connect electricity grids across countries and regions to facilitate the large-scale use of renewable energy.

Purpose of the Initiative

- **Round-the-clock renewable power:** Solar power generated in one region can be transmitted to another where sunlight is unavailable.
- **Efficient energy utilisation:** Cross-border interconnections can balance differences in demand, time zones and renewable generation.
- **Lower carbon emissions:** Greater integration of solar and other renewable sources can reduce dependence on fossil fuels.

- **Energy security:** Countries can diversify electricity supplies and reduce exposure to domestic generation shortages.
- **Universal energy access:** Regional cooperation can support affordable and reliable electricity, particularly in developing countries.
- **International cooperation:** The initiative promotes technical collaboration, investment, grid planning and coordinated energy infrastructure.

At COP26 in November 2021, India and the United Kingdom advanced the Green Grids Initiative in support of the broader OSOWOG vision.

When Was the Idea First Floated?

India first presented the One Sun One World One Grid concept at the **first Assembly of the International Solar Alliance in October 2018**.

Challenges

Financing, transmission infrastructure, differences in grid standards, geopolitical tensions and cross-border electricity regulations remain important obstacles.

Conclusion

The initiative offers a pathway towards a connected, cleaner and more resilient global energy system, provided technical cooperation is accompanied by effective governance and equitable financing.

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