GENERAL SCIENCE 14 July 2026

Can Biogas Aid India's Energy Security?

India's high crude oil import dependency highlights the need for alternative energy sources like biogas.

Biogas is a renewable energy source produced from the anaerobic decomposition of organic matter, primarily methane and carbon dioxide.

KEY EXAM POINTS

- **India** imports nearly **85%** of its **crude oil needs**.
- This dependency makes **India** vulnerable to **global energy shocks**.
- **India** has launched several initiatives to promote **compressed biogas**.
- Despite these efforts, progress in the **biogas sector** has been **limited**.
- **Government support** and **incentives** are crucial for boosting the **biogas sector**.

DID YOU KNOW..!?

Biogas is primarily composed of **methane** (**50-75%**) and **carbon dioxide** (25-50%).

The process of producing **biogas** is known as **anaerobic digestion**.

The Sustainable Alternative Towards Affordable Transportation (**SATAT**) initiative promotes **Compressed Biogas** (CBG) production.

The **Gobar-Dhan scheme** aims to convert **cattle dung** and solid waste into bio-gas and **organic manure**.

India aims to achieve **Net-Zero emissions** by **2070**.

The **Ministry of New and Renewable Energy** (**MNRE**) is the nodal ministry for **biogas development** in India.

Tamil Nadu Energy Development Agency (**TEDA**) is the state nodal agency for **renewable energy development** in **Tamil Nadu**.

REVISION FLASHCARD

India imports nearly 85% of its crude oil, promoting biogas for energy security.

Syllabus Relevance: High

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