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## EDITORIAL ANALYSIS

# Waste to Wealth, Stalled: Why SATAT Has Not Delivered on Compressed Biogas

 THE HINDU

15 July 2026 ·

ECONOMY

GS3

CURATED &amp; WRITTEN BY

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# Waste to Wealth, Stalled: Why SATAT Has Not Delivered on Compressed Biogas

The Hindu

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Source: ujjyari.com — researched, fact-checked &amp; UPSC-mapped

✔ Every fact web-verified against primary sources (<https://ujjyari.com/how-we-verify/>)

## THE LIFT LINE

A scheme that set out to build five thousand biogas plants and turn crop waste and cattle dung into transport fuel has, years later, commissioned barely a hundred, and the gap between that ambition and that arithmetic is the real story of why India's cleanest, most local energy source still struggles to leave the drawing board.

## WHY THIS EDITORIAL MATTERS FOR YOUR EXAM

The **SATAT initiative** (<https://ujjyari.com/schemes/satat-initiative/>), Sustainable Alternative Towards Affordable Transportation, launched in October 2018, set the goal of establishing 5,000 compressed biogas plants producing 15 million tonnes of CBG a year. Yet progress has badly lagged, with roughly 100-odd plants commissioned against the target as of 2025, even as more than a thousand letters of intent were issued. Compressed biogas offers a rare combination of benefits, substituting fossil-fuel imports, converting agricultural and municipal waste into energy, cutting stubble burning, and advancing the circular economy. The question the shortfall raises is why a scheme with such aligned incentives has underperformed, and what policy shift, notably the new blending obligation, can unlock it. This is the applied economy analysis UPSC prizes.

**GS Paper 3:** Infrastructure and energy, mobilisation of resources, and issues of environment and sustainable development (<https://ujjyari.com/terms/sustainable-development/>).

For **Prelims**, hold the specifics: SATAT, launched in 2018 by the petroleum ministry with oil marketing companies as offtakers; compressed biogas, produced by purifying biogas from waste; the Compressed Biogas Blending Obligation, CBO, which makes CBG blending in CNG and PNG mandatory in phases from FY 2025-26; the National Bioenergy Programme of the Ministry of New and Renewable Energy, which provides central financial assistance; and India's net-zero-by-2070 target and its energy-diversification goals. For **Mains**,

argue that a scheme's headline incentives are not enough if **feedstock** (<https://ujiyari.com/vocab/feedstock/>) **supply**, **project financing**, and **assured offtake** are not simultaneously solved, since an **energy value chain** fails at its weakest link.

## BACKGROUND AND CONTEXT

India imports a large share of its crude oil and natural gas, so any domestic, renewable substitute strengthens both **energy security** (<https://ujiyari.com/terms/energy-security/>) and the trade balance. Compressed biogas fits this need. It is made by capturing and purifying the methane released when organic waste, crop residue, cattle dung, and municipal solid waste, decomposes, yielding a fuel chemically similar to CNG. It also tackles two problems at once, the disposal of waste and the burning of stubble that pollutes north India each winter.

SATAT was designed to harness this. Oil marketing companies would offer long-term offtake at assured prices, entrepreneurs would build plants, and the country would gain clean fuel and rural income. On paper the incentives aligned. In practice, the number of commissioned plants remained a small fraction of the target, revealing that the value chain had bottlenecks the scheme's price signal alone could not clear.

## THE CORE ARGUMENT / ISSUE

### The feedstock problem

A biogas plant needs a steady, affordable supply of organic feedstock, yet aggregating crop residue and dung across dispersed farms is logistically hard and seasonally variable. Without a reliable feedstock chain, plants run below capacity and economics suffer.

### The financing and offtake problems

Plants are capital-intensive and lenders view them as novel and risky, so financing is scarce and costly. Even where plants are built, developers have faced uncertainty over pricing and evacuation of gas to the pipeline grid, weakening the assured-offtake promise that was meant to anchor investment.

| BOTTLENECK            | WHY IT STALLS SATAT               | POLICY LEVER                                    |
|-----------------------|-----------------------------------|-------------------------------------------------|
| Feedstock aggregation | Dispersed, seasonal supply        | Supply chains, farmer tie-ups                   |
| Financing             | High capital cost, lender caution | Central financial assistance, viability support |
| Offtake and pricing   | Uncertain demand and evacuation   | Blending obligation (CBO), grid access          |
| Demand                | Voluntary uptake was weak         | Mandatory CBG blending from FY 2025-26          |

## From voluntary to mandatory demand

The decisive recent shift is the Compressed Biogas Blending Obligation, which converts voluntary demand into a legal requirement, blending CBG into CNG and PNG in rising phases. Coupled with excise relief and revised procurement pricing, this attacks the demand-side weakness that earlier undercut the scheme.

### HOW TO THINK ABOUT THIS (ANALYTICAL FRAME)

Treat CBG as a value chain, not a single project, and remember that a chain is only as strong as its weakest link. SATAT correctly created a price signal but under-addressed feedstock logistics, financing, and assured offtake, so investment stalled despite the incentive. The transferable rule for GS3 is that energy transitions succeed only when supply, finance, and demand are solved together, not sequentially. The examiner rewards the candidate who reads the new blending obligation as the missing demand-side anchor, and who argues that pairing guaranteed demand with feedstock aggregation and cheaper finance is what can finally convert SATAT's waste-to-wealth promise into commissioned plants and real import substitution.

### THE DIAGRAM IN WORDS

India imports heavy crude and gas -> CBG offers domestic substitute from waste -> SATAT (2018) targets 5,000 plants, 15 MMT/year -> but only about 100 commissioned by 2025 -> value chain fails at weak links: feedstock aggregation, financing, offtake and pricing -> voluntary demand proved weak -> policy shift: Compressed Biogas Blending Obligation makes blending mandatory from FY 2025-26, plus excise relief and better pricing -> demand anchored -> if paired with feedstock supply chains and cheaper finance -> import substitution, circular economy, and progress toward net zero by 2070

### WAY FORWARD

- 1 **Anchor demand through the blending mandate** (<https://ujiyari.com/vocab/mandate/>). Government should enforce the Compressed Biogas Blending Obligation firmly so that developers have assured, growing demand, the single change most likely to revive investment.
- 2 **Fix the feedstock chain.** Build farmer aggregation models, biomass supply networks, and storage so that plants secure steady, affordable feedstock through the year.
- 3 **Ease financing.** Deploy central financial assistance under the National Bioenergy Programme and viability-gap support, and encourage priority-sector lending, to lower the cost of capital for CBG plants.
- 4 **Guarantee grid access and fair pricing.** Ensure timely pipeline connectivity and [remunerative](https://ujiyari.com/vocab/remunerative/) (<https://ujiyari.com/vocab/remunerative/>), predictable procurement prices, so that the offtake promise that underpins the scheme is credibly honoured.

## PYO LINKAGE AND PRACTICE

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UPSC has asked about renewable energy, energy security, waste-to-energy, and the [circular economy](https://ujiyari.com/terms/circular-economy/) (<https://ujiyari.com/terms/circular-economy/>). This editorial turns a scheme's shortfall into an applied lesson on why energy value chains fail or succeed, which is the depth the examiner rewards over a description of biogas.

**Practice question:** “An energy scheme's incentives matter less than whether supply, finance, and demand are solved together.” Critically examine with reference to the SATAT scheme and India's compressed biogas ambitions. (250 words, 15 marks)

**Sources:** *The Hindu* (<https://www.thehindu.com/>), *Press Information Bureau* (<https://www.pib.gov.in/>), *Ministry of Petroleum and Natural Gas* (<https://mopng.gov.in/>)

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