

**LOK SABHA**  
**UNSTARRED QUESTION No. 1075**  
TO BE ANSWERED ON 5<sup>th</sup> February, 2026

**PERFORMANCE OF 2G ETHANOL PLANTS**

†1075. SHRI LAXMIKANT PAPPU NISHAD:

पेट्रोलियम और प्राकृतिक गैस मंत्री

Will the Minister of PETROLEUM AND NATURAL GAS be pleased to state:

- (a) the approved and actual capital cost and item-wise expenditure details of the 2G ethanol plant established at the Indian Oil Corporation Limited (IOCL) Panipat Refinery based on Praj Industries technology;
- (b) the installed production capacity of the plant, the commercial production start date and year-wise/quarter-wise actual production and capacity utilisation percentage since commissioning of the said plant;
- (c) whether the Government is aware that the production of the Panipat 2G ethanol plant has consistently remained below its design capacity and if so, the technical and operational reasons therefor;
- (d) the details of capacity cost commissioning date and actual production of 2G ethanol plants established by other Public Sector Oil Companies at locations including Bathinda, Odisha, Assam and Haryana, if so, the details thereof, plant-wise; and
- (e) whether any penalties have been imposed on the technology providers or Engineering Procurement and Construction (EPC) contractors for failure to achieve targets despite performance guarantees, if so, the details thereof?

**ANSWER**

पेट्रोलियम और प्राकृतिक गैस मंत्रालय में राज्यमंत्री  
(श्री सुरेश गोपी)

**MINISTER OF STATE IN THE MINISTRY OF PETROLEUM & NATURAL GAS  
(SHRI SURESH GOPI)**

(a) to (c): Government have notified the “Pradhan Mantri JI-VAN (Jaiv Indhan – Vatavaran Anukool fasal awashesh Nivaran) Yojana” 2019, amended in 2024, to provide financial assistance for setting up Advanced Biofuels projects in the country using lignocellulosic biomass and other renewable feedstock.

Under this scheme, the 2G commercial Ethanol Plant set up by Indian Oil Corporation Limited (IOCL) at Panipat (Haryana) commenced commercial production on 11.11.2023. The approved capital cost of the project is Rs. 909 crore ±10%, while the cumulative expenditure incurred by IOCL stands at Rs 984 crore. The plant has installed capacity of 100 Kilo Litre Per Day (KLPD) of ethanol production. The item-wise major package details including expenditure and quarter-wise, year-wise production of the plant are provided at **Annexure-I** and **Annexure-II**, respectively.

The 2G ethanol plant is the first of its kind installed in India. The variability of straw quality in terms of moisture and silica content affects the downstream treatment section and creates associated mechanical issues. IOCL is continuously working in close coordination with technology provider, M/s Praj Industries, to resolve these issues in the plant. In December 2025, plant operated at 62% of its design capacity after carrying out recent modifications during the period November-December, 2025, to address process and mechanical challenges. As experience of ongoing and executed projects is gained, these plants will stabilize.

(d) 2G ethanol Plant of commercial scale of other Public Sector Oil Companies have also been approved under the PM JI-VAN Yojana. These are (i) 185 KLPD bamboo-based 2G ethanol plant at Numaligarh, Assam, by Numaligarh Refinery Limited through its joint venture company, Assam Bio Ethanol Private Limited (ABEPL), inaugurated in September, 2025, (ii) a 100 KLPD paddy-straw-based 2G ethanol plant at Bargarh, Odisha by Bharat Petroleum Corporation Limited (BPCL) and (iii) another 100 KLPD paddy-straw-based 2G ethanol plant at Bathinda, Punjab by Hindustan Petroleum Corporation Limited (HPCL).

(e) Indian Oil Corporation Limited (IOCL) has deducted Rs. 2.84 crore under Price Reduction Schedule (PRS) as per the Contract against various contractors and equipment suppliers of their 2G ethanol Plant at Panipat for delay in delivery and execution. IOCL has also withheld Rs. 5.25 crore of the total license fee of Rs. 10.5 crore payable to the technology provider as successful completion of Performance Guarantee Test Run of the plant has not been met as per the terms of Agreement. In addition, modifications implemented by Licensor costing Rs. 9.44 crore has been done free of cost.

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**ANNEXURE-I****ANNEXURE REFERRED TO IN REPLY OF PART (a) to (c) OF THE LOK SABHA UNSTARRED QUESTION NO. 1075 TO BE ANSWERED ON 05.02.2026 REGARDING “PERFORMANCE OF 2G ETHANOL PLANTS” ASKED BY SHRI LAXMIKANT PAPPU NISHAD.**

Item-wise break up of Expenditure of Panipat 2G Refinery plant:

Category	Total (Rs. Cr.)
Electrical, Instrumentation, Piping	92
Catalyst and chemicals	10
Equipment (Filter Press, Material Handling System, Proprietary equipment, Biomass Handling Equipment etc.	430
Civil, E&I, Mechanical Erection	319
Licensor and Engineering, Procurement & Construction Management (EPCM) Fee	43
Office Equipment & Furniture	1
Roads & Buildings	30
Site Development	6
Statutory Clearance	4
Construction Period Expenses (CPE), Interest During Construction (IDC), Miscellaneous charges	49
<b>Grand Total</b>	<b>984</b>

**ANNEXURE-II****ANNEXURE REFERRED TO IN REPLY OF PART (a) to (c) OF THE LOK SABHA UNSTARRED QUESTION NO. 1075 TO BE ANSWERED ON 05.02.2026 REGARDING “PERFORMANCE OF 2G ETHANOL PLANTS” ASKED BY SHRI LAXMIKANT PAPPU NISHAD.**

Details of quarter-wise and year-wise production of ethanol at IOCL’s 2G Ethanol Plant, Panipat:

<b>Quarter</b>	<b>Quarterly Ethanol Production (in kilo Litre)</b>	<b>Yearly Ethanol Production (in kilo Litre)</b>
October-December, 2023	129.0	685.2
January-March, 2024	556.2	(FY: 2023-24 For 6 months)
April-June, 2024	577.3	2,076.6  (FY:2024-25)
July-September, 2024	430.2	
October-December, 2024	424.0	
January-March, 2025	645.0	
April-June, 2025	642.7	1,393.5
July-September, 2025	176.7	(FY:2025-26 for 9 months)
October-December, 2025	574.0	

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