PIONEER, Delhi, 15.7.2025
Page No. 4, Size:(24.90)cms X (17.49)cms.

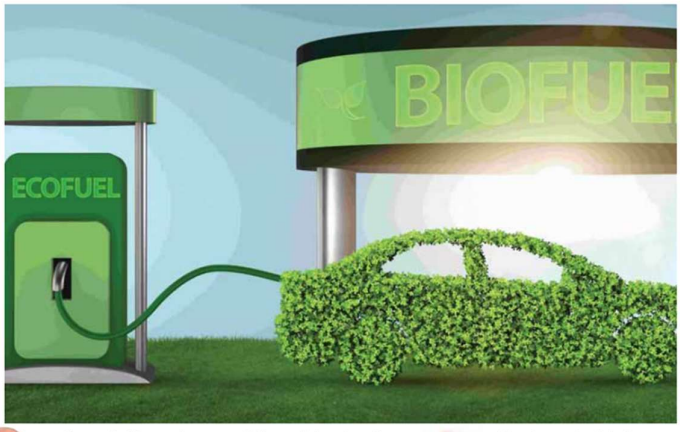
Biofuels in India: Opportunities and Challenges

India produces more than 25 million tonnes of used cooking oil and agricultural residue every year, much of which is either wasted or contributes to environmental pollution. While the pollution due to burning of the "Parali" — rice straw or stubble left behind after harvesting the rice crops mainly in northern states of Punjab and Haryana has been in news for the last few years, the water pollution due to the used oil is still to get the desired national focus.

For *Parali*, the state is providing the incentive to farmers as well as encouraging the other fuel (Coal) burning companies as cement plant, power plants, brick kiln and others who use coal based boilers to utilise *Parali* based bio fuel — pellets and bricks. A number of small and medium companies are setting up units to produce the *Parali* based pellets and bricks, looking at Government mandates to large companies thereby creating a ready market and addressing the last mile supply chain issues by appropriate incentive for collection from farmers. The Recent notification by Government mandating all brick kilns in Punjab and Haryana to utilise *Parali* based bio fuel only will go a long way in addressing the concerns of pollution caused by the burning of *Parali* by farmers by promoting the alternative avenues.

Today, India faces the challenge of balancing food security with its growing biofuel ambitions. Diverting edible crops like sugarcane, maize, or edible oils to biofuel production risks driving up food inflation and threatening nutritional security. Recognising this, India's 2018 biofuel policy amendment prohibits using food crops for fuel, instead focusing on non-edible oils and waste-based inputs.

This shift opens up opportunities for second-generation (2G) biofuels derived from used cooking oil, acid oil, press-mud, and agricultural waste. These sources allow biofuel production to scale sustainably without impacting the food basket, supporting both energy goals and the nation's commitment to safeguarding food availability and affordability.



DINESH KUMAR TYAGI

Bio-diesel potential in India

India's annual diesel consumption exceeds 100 million tonnes, so even a modest 5 per cent biodiesel blending mandate creates a market opportunity of over 5 million tonnes per year, valued at more than USD 4-5 billion. The country's rapidly expanding aviation sector also stands to benefit from Sustainable Aviation Fuel (SAF) mandates, particularly for international flights under ICAO/CORSIA guidelines, unlocking an export market worth over USD 2 billion in the next decade.

Additionally, biofuel adoption offers significant carbon credit potential; each tonne of biofuel used can displace about 2.5 tonnes of CO_2, translating to an extra USD 200-300 million annually through carbon monetisation at current voluntary market rates.

By converting this untapped resource into fuel through organised collection and bio-conversion networks, the country can significantly reduce waste while creating new economic opportunities. This approach not only lessens the waste burden in both urban and rural areas but also enhances rural livelihoods, supports informal sector incomes, and encourages local entrepreneurship. The Government's SATAT scheme, which targets the establishment of 5,000 compressed biogas plants, underscores India's commitment to integrating circular economy principles and transforming waste into a valuable energy resource.

India imports over 80 per cent of its crude oil, with dependency reaching a record 90.6 per cent in May 2025, due to rising consumption and declining domestic production. This heavy reliance exposes the country to global oil price shocks and geopolitical risks, making energy security a strategic priority. Biofuels present a domestic alternative that can help reduce this vulnerability, strengthen energy sovereignty, and lower the nation's annual fossil fuel import bill, which hovers around USD 100 billion.

Unlike centralised petroleum refineries, biofuel production can be decentralised and regionalised, promoting equitable energy access and enhancing resilience against supply disruptions or disasters.

By diversifying its energy matrix with biofuels alongside solar and hydrogen, India can build a more integrated, low-carbon, and robust energy system, reducing its exposure to external shocks and supporting long-term sustainability.

SUMAN BOSE

Challenges in producing bio diesel from used oil

FSSAI mandates that Food business operators in India must not reuse the cooking oil beyond a total polar compound limit of 25 per cent — used generally for not more than three times. After this oil is to be discarded.

India consumes about 27 billion litres of cooking oil annually, and out of this 1.4 billion litres of used oil can be collected and processed to make biodiesel.

Presently the enforcement of the FSSAI guidelines for reuse of cooking oil is very weak. There is a complete lack of awareness amongst shopkeepers and the grass-root enforcement agency hardly show any interest in regulatory compliance.

Today, the used oil by large hotel/restaurant is taken by agents, who then sell it to the small vendors or mix with other oil and sell to householdsmainly the poor families.

Such an arrangement is not only defeating the very purpose of the FSSAI regulation but also affecting the health of such person who are eating products made out of such used oil and these are largely the poor families. Enforcement of the FSSAI regulation is therefore critical for the emergence of the sector promoting production of bio diesel from used oil.

Issues in collection of used oil

The other challenge is lack of infrastructure for collection of the used oil from the various food establishment and households. In some cases the used oil especially in case of household is thrown in the drain further lending into the river and other water bodies.

This affects the biodiversity of the water bodies to a great extant. The used oil from the food outlet along the River Ganga does affect the biodiversity of the revered River. Similar is the case with other rivers and rivulets in India.

An organised collection process supported by awareness, enforcement and incentive is necessary for a long term and sustainable solution to meet the challenges of pollution and other health hazard caused by used oil and enabling exploration of the potential for conversion to bio diesel.

National Bio fuel policy 2018, proposes for 5 per cent blending of diesel with biodiesel by 2030. This will require the production of 500 crore liters of biodiesel annually. Setting up collection units and thereby supporting a large manufacturing unit around major municipality, area alongwith hotel chains can result in promoting sustainable units for biodiesel.

Indian Institute of Petroleum research (CSIR-IIP) has developed a mobile unit which can produce biodiesel based on availability of 20 litres of used oil every day. Such initiatives can promote small scale units in all the areas — highways, towns and eateries near Ganga or other such rivers.

This will support in creating a large number of employment opportunities at the local level and redefine the food delivery outlets in terms of following the FSSAI guidelines on use of oil.

If organised properly through the active involvement of local traders association, NGO/ civil society organisation and the district administration, this can become a Movement "Andolan" of unique type involving each household and safeguarding the health and well being of every citizen in the country.

Future potential and interventions required

India's biofuel sector benefits from subsidies under the SATAT scheme and oil marketing company blending mandates, which support biodiesel and ethanol pricing.

However, challenges remain, including the absence of incentives for collecting inputs like used cooking oil and acid oil, uneven GST treatment, and delayed payments to suppliers.

Addressing these issues requires introducing feedstock-linked incentives for collectors, creating carbon credit bundling platforms for MSME biofuel producers, and fast-tracking approvals from State Pollution Control Boards and SEZs. Immediate action should focus on building a national collection grid for UCO and acid oil through public-private-NGO collaboration, mandating sustainable aviation fuel usage in select flight corridors, and enforcing transparency in blending compliance among oil marketing companies with real-time tracking.

These steps, combined with existing capital subsidies, tax benefits, and low-interest loans, will help unlock the full economic and environmental potential of India's waste-to-fuel sector.

(Dinesh Kumar Tyagi is retired IAS officer; Suman Bose is President and Co Founder – GreenSource Energy Pte Ltd (Singapore) and Co Founder of GoFar Advisory & Investments Pte Ltd)

ASSAM TRIBUNE, Guwahati, 15.7.2025
Page No. 11, Size:(23.68)cms X (18.88)cms.

50 pc non-fossil fuel power

India achieves generation capacity 5 years ahead of target

NEW DELHI, July 14: India has achieved 50 per cent non-fossil fuel-based power generation capacity of 242.8 GW out of the total 484.8 GW installed capacity, five years ahead of its 2030 target, Union New & Renewable Energy Minister Pralhad Joshi said on Monday.

This assumes significance in view of India's commitment at international fora to increased non-fossil fuel-based power generation in the country. India has set an ambitious target of having 500 GW of renewable energy-based electricity generation by 2030.

"Under the visionary leadership of Hon'ble Prime Minister Shri @narendrmodi ji, a major climate commitment has been fulfilled. India's total installed power capacity now stands at 484.8 GW, with 242.8 GW coming from non-fossil fuel sources – a powerful testament to our green progress. This is not just a milestone – it's a giant stride towards a greener, cleaner Bharat by 2047," Joshi said on X.

"Historic Green Leap for India! India achieves 50 per cent on non-fossil fuel capacity – 5 years ahead of its 2030 target."

Achieving 50 per cent non-fossil fuel capacity five years ahead of the 2030 target is a proud moment for every Indian, he stated, adding that Modi's leadership continues to drive Bharat's green transformation, paving the path towards a self-reliant and sustainable future. – PTI

ASSAM TRIBUNE, Guwahati, 15.7.2025
Page No. 15, Size:(24.21)cms X (23.52)cms.

OIL-AITA Super Series Tennis Tournament

Main draw begins

SPORTS REPORTER

GUWAHATI, July 14: The main draw matches of the boys' and girls' Under-12 and U-14 categories in the OIL-AITA Super Series Tennis Tournament got underway on Monday at the All Assam Tennis Association (AATA) complex in Chachal, Guwahati.

The tournament was formally inaugurated in a brief function by Ramanuj Dutta, chief general manager of Oil India Limited, the title sponsor of the event.

However, proceedings on the opening day were briefly disrupted due to sudden rainfall in the afternoon, which forced a stoppage of matches for over two hours. At the time of filing this report, the remaining singles matches of the day were still in progress.

The tournament is being held under the aegis of the All India Tennis Association.

Players being introduced to Ramanuj Dutta, chief general manager of OIL India Limited, during the opening ceremony of the OIL-AITA Super Series Tennis Tournament in Guwahati on Monday. – AT Photo

TIMES OF INDIA, Delhi, 15.7.2025
Page No. 15, Size:(14.95)cms X (26.42)cms.

Minister meets energy leaders at OPEC seminar

During his participation at the 9th OPEC International Seminar held in Vienna, Hardeep Singh Puri, Minister of Petroleum and Natural Gas, held a series of important bilateral and business meetings aimed at deepening India's energy partnerships and supporting the country's growing energy needs. Puri met His

Excellency Tareq Sulaiman Al-Roumi, Kuwaiti Minister of Oil and Chairman of Kuwait Petroleum Corporation, where both sides discussed ways to further strengthen the existing association. In a separate meeting, Puri met His Excellency Sen. Heineken

Lokpobiri, Nigerian Minister of State for Petroleum Resources. Additionally, Puri held a brief meeting with Wael Sawan, CEO of Shell, to discuss potential collaborations in light of India's ambitious exploration and production (E&P) plans.

SENTINEL, Guwahati, 15.7.2025
Page No. 12, Size:(9.35)cms X (4.48)cms.

OIL-AITA Super Series begins

Our Sports Reporter
GUWAHATI, July 14: The OIL-AITA Super Series Tennis tournament got under way on Monday at the All Assam Tennis Association complex in Guwahati. The event features competitions in both boys' and girls' categories in U-12 and U-14 age groups.

The opening ceremony was graced by Ramanuj Dutta, Chief General Manager of OIL India Limited and the secretary of the All Assam Tennis Association Ankush Dutta. In his brief address, Ramanuj Dutta encouraged the young players to stay focused on the game, emphasizing that it would help them to gain valuable experience.

Nearly 150 players from across the country are participating in the tournament, which will conclude on July 18. Rain interruptions disrupted several matches on the opening day, prompting organizers to revise the schedule.

Ramanuj Dutta, Chief General Manager of OIL India Limited, being introduced to the players during the opening ceremony.

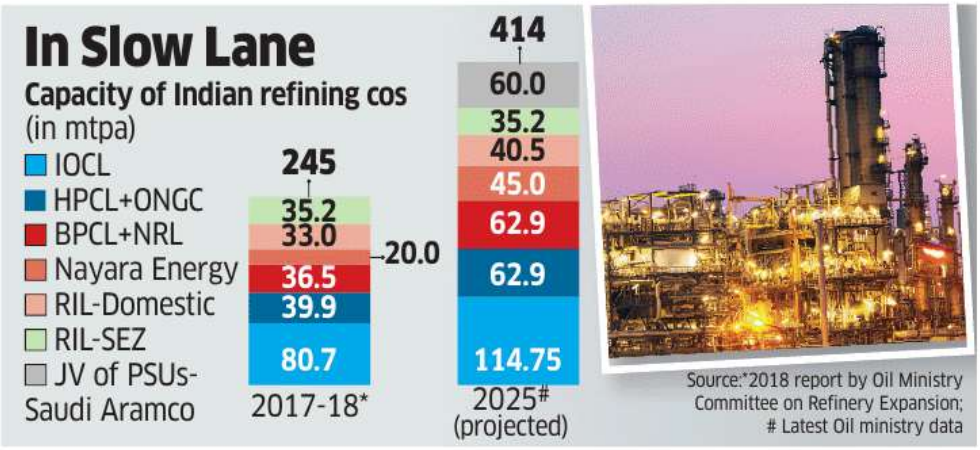
ECONOMIC TIMES, Delhi, 15.7.2025
Page No. 4, Size:(15.12)cms X (14.29)cms.

AGAINST 69% TARGETED EXPANSION...

On Slippery Ground: Refining Capacity Rises Just 5% in 7 Yrs

Climate-related demand uncertainty, land issues, pandemic slowed progress

Sanjeev Choudhary



New Delhi: India has added just 5% to its refining capacity over the past seven years—a sharp contrast to the 69% expansion originally planned by 2025. A mix of climate-related demand uncertainty, land constraints, and the pandemic has slowed progress, further deepening the country's dependence on energy imports.

India's refining capacity was projected to rise from 245 million tonnes per annum (mtpa) in 2017-18 to 414 mtpa by 2025 and 439 mtpa by 2030, according to a 2018 report by an official panel of oil ministry officials and industry executives, which based its projection on "firm plans" by refiners.

The refining capacity, however, has risen to just 258 mtpa, according to oil ministry data. The major misses included the India-Saudi 60 mtpa greenfield joint venture project, Rosneft-backed Nayara Energy's 25 mtpa expansion, Reliance Industries' 7.5 mtpa addition, and Indian Oil's 34 mtpa target.

The BPCL-NRL combined capacity expanded by 2 mtpa, compared to a projected 26.4 mtpa by 2025, while the HPCL-ONGC group achieved an 11 mtpa increase—the largest by any group—against its 23 mtpa target. Some expansion projects, including those by Indian Oil and HPCL, are under construction and expected to come online over the next few years.

Indian Oil, HPCL, BPCL, RIL, and Nayara declined to comment.

Slower expansion, coupled with surging domestic demand, has pushed up India's imports of petroleum products by 43% in seven years to 2024-25, while exports have declined by 3% in volume terms.

B Ashok, former chairman of Indian Oil, says the uncertainty over the impact of energy transition policies, both domestically and globally, has "made decision-makers more circumspect". While acknowledging that refineries are "high capex and high gestation projects", he warned that India needs fast-executed greenfield refinery projects to support its rapidly expanding economy.

HINDU, Delhi, 15.7.2025
Page No. 15, Size:(9.47)cms X (9.15)cms.

PNGRB wants GST on CNG vehicles lowered to 5%

N. Ravi Kumar
HYDERABAD

From pegging GST rate on a par with that of EVs to waiving excise duty on compression of natural gas and on the compressed biogas component in the fuel, the Petroleum and Natural Gas Regulatory Board (PNGRB) is for a clutch of changes to accelerate CNG vehicle usage.

It wants the government to maintain a delta between CNG and petrol prices to keep the interest in the former alive, primarily by tweaking excise duty rates. Reduction in allocation of CNG at administered prices or under the APM remains a concern and could upset the calculations, a document prepared by the oil regulator earlier this year, but made public now showed.

No excise duty would translate into lower prices for consumers

Listing the policy interventions required, PNGRB said the transport segment will be a key driver to push up the share of natural gas in India's energy mix to 15% by 2030 from the existing around 6%. Towards this, it wanted GST on CNG vehicles to be reduced, from 28% to the 5% levied on EVs. On changes to excise duty, the regulator said compression of natural gas, which is undertaken to fill more fuel in the tank and consequently increase vehicle range, is considered as deemed manufacturing. No excise duty would translate into lower CNG prices for consumers and consequent benefits to the environment from use of the eco-friendly fuel. On CBG blending, it said the additional excise and VAT that CBG attracts impacts the final price of CNG.

PUNJAB KESARI, Delhi, 15.7.2025
Page No. 8, Size:(16.27)cms X (25.40)cms.

जैव ईंधन के जरिए देश में नई क्रांति ले आए पीएम मोदी

नई दिल्ली, (पंजाब केसरी): केंद्रीय मंत्री हरदीप सिंह पुरी ने सोमवार को जैव ईंधन के माध्यम से भारत में एक नई क्रांति लाने के प्रधानमंत्री नरेंद्र मोदी के प्रयासों की सराहना की, जिसके परिणामस्वरूप नामीबिया ग्लोबल बायोफ्यूल अलायंस (जीबीए) में शामिल हो गया है। केंद्रीय पेट्रोलियम और प्राकृतिक गैस मंत्री ने कहा कि जैव ईंधन एक ऐसी ऊर्जा है जो घरेलू और कृषि अपशिष्ट, अनाज या खराब अनाज से प्राप्त होती है और यह पर्यावरण-अनुकूल, स्वच्छ ईंधन देश के विकास को गति देने का एक सशक्त माध्यम भी है।

केंद्रीय मंत्री ने सोशल मीडिया प्लेटफॉर्म एक्स पर एक पोस्ट में कहा कि नामीबिया जीबीए में शामिल हो गया है। स्वच्छ ऊर्जा की दिशा में भारत की पहल और ग्लोबल बायोफ्यूल अलायंस फैमिली का विस्तार, वसुधैव कुटुम्बकम के मंत्र पर प्रधानमंत्री नरेंद्र मोदी की दूरदर्शिता का एक और प्रमाण है। केंद्रीय मंत्री पुरी ने इस बात पर जोर दिया कि जैव ईंधन के प्रति प्रधानमंत्री के प्रयास देश में व्यापक बदलाव ला रहे हैं और नागरिकों के जीवन में सुधार ला रहे हैं। केंद्रीय मंत्री ने कहा कि प्रधानमंत्री के प्रयासों ने भारत में 'जैव ईंधन के माध्यम से बदलाव की एक नई क्रांति' ला दी है। भारत की विकास यात्रा को गति देने वाला यह हरित ईंधन गाँवों से लेकर शहरों तक लोगों के जीवन को बदल रहा है और बेहतर बना रहा है।

AAJ SAMAJ, Delhi, 15.7.2025
Page No. 11, Size:(8.49)cms X (7.82)cms.

पुरी ने जैव ईंधन क्रांति के लिए पीएम मोदी के प्रयासों की सराहना की

आज समाज नेटवर्क

नई दिल्ली। केंद्रीय मंत्री हरदीप सिंह पुरी ने सोमवार को जैव ईंधन के माध्यम से भारत में एक नई क्रांति लाने के प्रधानमंत्री नरेंद्र मोदी के प्रयासों की सराहना की, जिसके परिणामस्वरूप नामीबिया ग्लोबल बायोफ्यूल अलायंस (जीबीए) में शामिल हो गया है। केंद्रीय पेट्रोलियम और प्राकृतिक गैस मंत्री ने कहा कि जैव ईंधन एक ऐसी ऊर्जा है जो घरेलू और कृषि अपशिष्ट, अनाज या खराब अनाज से प्राप्त होती है और यह पर्यावरण-अनुकूल, स्वच्छ ईंधन देश के विकास को गति देने का एक सशक्त माध्यम भी है। केंद्रीय मंत्री ने सोशल मीडिया प्लेटफॉर्म एक्स पर एक पोस्ट में कहा, "नामीबिया जीबीए में शामिल हो गया है। स्वच्छ ऊर्जा की दिशा में भारत की पहल और ग्लोबल बायोफ्यूल अलायंस फैमिली का विस्तार, वसुधैव कुटुम्बकम के मंत्र पर प्रधानमंत्री नरेंद्र मोदी की दूरदर्शिता का एक और प्रमाण है।" केंद्रीय मंत्री पुरी ने इस बात पर जोर दिया कि जैव ईंधन के प्रति प्रधानमंत्री के प्रयास देश में व्यापक बदलाव ला रहे हैं और नागरिकों के जीवन में सुधार ला रहे हैं। केंद्रीय मंत्री ने कहा, "प्रधानमंत्री मोदी के प्रयासों ने भारत में 'जैव ईंधन के माध्यम से बदलाव की एक नई क्रांति' ला दी है। भारत की विकास यात्रा को गति देने वाला यह हरित ईंधन गाँवों से लेकर शहरों तक लोगों के जीवन को बदल रहा है और बेहतर बना रहा है।" जैव ईंधन न केवल किसानों को आय अर्जित करने में मदद कर रहा है, बल्कि इसके विकास से खासकर ग्रामीण क्षेत्रों में नए रोजगार के अवसर पैदा हो रहे हैं। उन्होंने आगे कहा, "किसानों की आय बढ़ाने के साथ-साथ, यह ईंधन ग्रामीण क्षेत्रों में रोजगार के नए अवसर भी पैदा कर रहा है।" हाल ही में आईएएनएस के साथ बातचीत में केंद्रीय मंत्री पुरी ने कहा कि इस वर्ष बायोफ्यूल ब्लेंडिंग 20 प्रतिशत तक पहुंच गया है, जो 2014 में मात्र 1.4 प्रतिशत था। भारत आज दुनिया में तीसरा सबसे बड़ा जैव ईंधन उत्पादक देश है। आधिकारिक अनुमानों के अनुसार, इथेनॉल ब्लेंडिंग पहलों ने पिछले दस वर्षों में किसानों की आय में सुधार किया है।

VIRAT VAIBHAV, Delhi, 15.7.2025
Page No. 15, Size:(8.12)cms X (12.75)cms.

भारत का कच्चे तेल का आयात 15.49 लाख टन पर स्थिर

एजेंसी ■नई दिल्ली

भारत का वनस्पति तेल आयात जून में पिछले साल के इसी महीने की तुलना में 15.49 लाख टन पर स्थिर रहा है, जबकि कच्चे खाद्य तेलों की खेप में 25 प्रतिशत से अधिक की वृद्धि हुई है। उद्योग निकाय सॉल्वेंट एक्सट्रैक्टर्स एसोसिएशन (एसईए) ने सोमवार को यह जानकारी दी। कच्चे तेल के आयात में यह वृद्धि सरकार द्वारा कच्चे पाम तेल, कच्चे सोयाबीन तेल और कच्चे सूरजमुखी तेल सहित कच्चे खाद्य तेलों पर मूल सीमा शुल्क (बीसीडी) को 31 मई से 20 प्रतिशत से घटाकर 10 प्रतिशत करने के बाद हुई है। जून, 2024 में खाद्य और अखाद्य दोनों प्रकार के वनस्पति तेलों का कुल आयात 15.50 लाख टन रहा था। खाद्य तेल श्रेणी में, कच्चे सूरजमुखी तेलों को छोड़कर, अन्य कच्चे खाद्य तेलों आयात जून, 2025 में 25.64 प्रतिशत बढ़कर 11.51 लाख टन हो गया, जो एक साल पहले जून में 9.16 लाख टन था। हालांकि, कच्चे सूरजमुखी तेल का आयात जून में एक साल पहले की समान अवधि की तुलना में 53.58 प्रतिशत घटकर 2.61 लाख टन रह गया। एसईए के आंकड़ों के अनुसार, जून, 2025 में कच्चे पाम तेल (सीपीओ) का आयात एक साल पहले के 6.37 लाख टन से 23.55 प्रतिशत बढ़कर 7.88 लाख टन हो गया, जबकि कच्चे सोयाबीन तेल का आयात जून, 2024 के 2.75 लाख टन से 30.39 प्रतिशत बढ़कर 3.59 लाख टन हो गया।