

# At 17.80 mt, crude oil imports plunge to 12-month low in Sept

**DRIVERS.** Refinery maintenance, lower consumption during monsoon tamp down demand

**Rishi Ranjan Kala**  
New Delhi

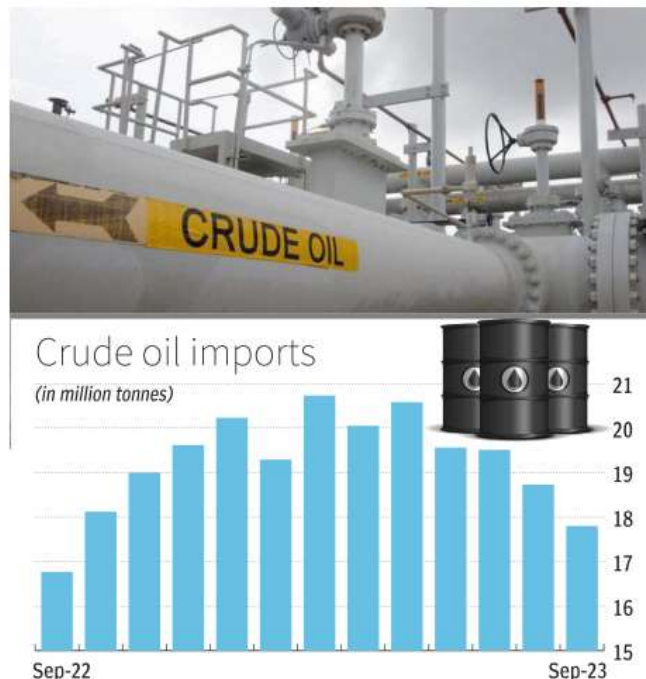
The import of crude oil by India, the world's third-largest importer, hit a 12-month low of 17.80 million tonnes (mt) in September this year largely on account of lower requirement due to autumn refinery maintenance and lower consumption during monsoon.

According to the Petroleum Planning and Analysis Cell (PPAC), crude oil imports on a provisional basis declined by 5 per cent m-o-m, but were higher by 6 per cent on an annual basis.

Prior to this, the lowest cargoes were received in September 2022 at 16.77 mt.

## CARGOES OF BASRAH

According to Vortexa, India bought around 4.196 million barrels per day (mb/d) of crude oil, which is the lowest in FY24. The decline was partly compensated by lifting more cargoes of Iraq's Basrah, which is also a medium sour grade similar to Urals and preferred by Indian re-



Source: Petroleum Planning & Analysis Cell (PPAC)

finers. Russia accounted for 38 per cent of total imports.

OPEC in its monthly oil market report had said that India's crude imports are expected to be lower in September, as the monsoon season curbs domestic needs, before picking up in

October as the start of the festival season improves domestic demand.

Imports were also impacted due to rising prices of medium sour grades Urals (Russia) and Arab Light (Saudi Arabia). Voluntary production cuts by Saudi Ar-

abia and Russia, the world's top two crude oil exporters, forced India to procure more cargoes from Iraq. Besides, discounts on Russian crude have also come down.

As per JM Financial, Russia's share of India's crude imports remained strong at around 38 per cent in August 2023, though slightly lower from around 40 per cent in May-July (but significantly higher vs around 20 per cent in December 2022 and one-two per cent pre-Ukraine invasion).

## RUSSIAN CRUDE

However, as per CMIE, discount on Russian crude to India continues to be lower at around \$4-5 per barrel in May-August 2023 vs \$6-10 earlier; this seems to be due to decline in availability of Russian oil in spot markets partly driven by its pledge to cut oil exports by 0.3 mb/d till end-December 2023, it added.

India procures Russian crude oil from spot markets, whereas Middle Eastern crude is largely through term contracts.

## Clean the air

India needs a plan to address pollution

Delhi remains one of the most polluted megacities in the world despite its vast foliage and canopy cover. With rapid economic expansion, population growth, and a surging number of vehicles, its air quality has been deteriorating and becomes practically toxic in winter. There has been much debate over the sources of the problem and how they can be addressed. A recent research paper titled “Decadal growth in emission load of major air pollutants in Delhi”, published in the *Earth System Science Data*, presented a detailed study of all major and minor sources of pollution in the city for eight major pollutants. It found no evidence of a decline in pollution levels between 2010 and 2020. In fact, according to the paper, 39 per cent of the increase in the emission load can be attributed to the transport sector, while 36 per cent was due to pollution-intensive activities in the industrial sector.

Transport and industries are the two dominant sources of pollution in the city. Unsurprisingly, all traffic junctions experience high emission loads. The paper also highlights some of the emerging sectors contributing immensely to worsening air quality. These include construction, the burning of municipal solid waste (MSW), the use of incense sticks and mosquito coils in residences and small commercial establishments. Since 2010, their relative contribution has increased substantially. Currently, Delhi has three waste-to-energy (WTE) plants, but they process only 22 per cent of the MSW generated annually. Neighbouring states worsen the situation by inefficiently managing crop residue, allowing brick kilns to operate, and letting polluting vehicles ply. The only silver lining is that the emission load from windblown road dust and cooking has decreased due to improvements in the conditions of paved roads and penetration of liquefied petroleum gas (LPG) in slums, respectively. The permanent closure of thermal power plants within the city limits has also helped.

India needs policy resolve to address the issue. Since public pressure on such issues is still limited, environmental concerns are often ignored. In recent years, the government has turned to various piecemeal solutions, such as the odd-even scheme, vehicle-scrapping policy, and installing anti-smog guns. But they have been of little use. Recently, the Commission for Air Quality Management announced that starting from November 1, only electric, compressed natural gas, and BS-VI diesel-compliant buses will be allowed to ply between Delhi and other states of the National Capital Region (NCR). Expanding the Delhi Metro and developing high-speed railways in the NCR region like the RapidX network will help but may not be enough. There is an immediate need for an integrated public transport system that also takes care of the needs of cyclists and pedestrians.

Moreover, policies in Delhi alone cannot tackle the problem. Since the NCR is a landlocked region, the city needs an air-quality governance system for the entire airshed region, that is, the Indo-Gangetic plains, along with a proper crop-residue management system. Besides, since the problem is not limited to Delhi, and other large cities, such as Mumbai, are also witnessing poor air quality, India can no longer afford to ignore it. Poor air quality and an increase in respiratory diseases will also have direct economic implications. Sources of pollution are now well known and India needs a plan to deal with the menace.



## Crude oil steadies as West Asian war worries douse demand fears

Reuters

Crude oil benchmark Brent held above \$88 on Wednesday as concerns about war escalating in West Asia offset demand worries stemming from gloomy economic prospects in Europe.

Brent crude futures were up 11 cents to \$88.18 a barrel at 0948 GMT, while US West Texas Intermediate crude futures slipped 5 cents to \$83.69 a barrel.

Meanwhile, the US and Saudi Arabia leaders on Tuesday discussed efforts to prevent the conflict from widening to potentially include major oil producer Iran.

Growth indicators from industrial output data to PMI and sentiment readings in recent weeks are all suggesting that the euro zone's economy is now either stagnating or even shrinking as weak external demand, consumer caution and high interest rates take their toll.

### CHINA BOOST

However, on the bright side, crude prices could find some support as the top parliament body in China, the world's biggest oil importer, approved a bill to issue 1 trillion yuan (\$137 billion) in sovereign bonds and allow local governments to issue new debt from their 2024 quota to boost the economy.

But demand for crude oil in China could be limited as Beijing put a ceiling for its oil refining capacity at 1 billion tonnes by 2025 to streamline its vast oil processing sector and curb carbon emissions.

Falling crude oil stockpiles in the US, the world's biggest oil consumer, are also supportive of prices. US inventories declined unexpectedly by about 2.7 million barrels in the week ended on Oct. 20, according to market sources citing American Petroleum Institute figures on Tuesday.





## **IOC Making 'Reference' Fuel for Auto Testing**

**New Delhi:** IOC has begun producing specialised 'reference' petrol and diesel, which are used for testing automobiles, for the first time in India, sources said.

The fuels, which have higher specifications, are critical for calibrating and testing by automobile manufacturers and testing agencies.  
**PTI**

## IOC starts producing 'reference' fuel for testing automobiles

PTI / New Delhi

Indian Oil Corporation (IOC) has begun producing specialised 'reference' petrol and diesel, which are used for testing automobiles, for the first time in India, sources said.

These fuels, which have higher specifications, are critical for calibrating and testing by automobile manufacturers and testing agencies like the International Centre for Automotive Technology (ICAT) and the Automotive Research Association of India.

For decades, India relied on imports to meet the demand for these specialised fuels.

But now, IOC has indigenously developed products that will replace imports, en-

suring a reliable supply at a much lower cost for vehicle manufacturers and testing agencies, sources said.

Fuel retailers like IOC sell petrol and diesel of primarily two kinds - regular and premium, through their fuel station network. The biggest difference between the normal and premium fuel lies in the octane number. The regular fuel boasts an octane number of 87, but premium fuel has an octane number of 91 or even more.

The octane number is nothing but a unit to measure the ignition quality of petrol.

However, for vehicle testing purposes, the fuel has to be of a higher grade than regular or premium petrol and diesel.

# IOC starts producing specialised fuels for testing automobiles

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These reference fuels are used for emission testing of vehicles equipped with spark ignition engines.

Sources said since the volume requirements for such fuels were traditionally not very

high, refineries did not produce them. All the requirements of 'reference' for vehicle testing were imported.

IOC in line with the government's objective of becoming Aatmanirbhar, or self-reliant, has started producing the fuel at its refineries.

The fuel, they said, is likely to be unveiled for the first time at a function on Thursday. The event is likely to feature Oil Minister Hardeep Singh Puri.

Besides IOC, Bharat Petroleum Corporation and Hindustan Petroleum Corporation Ltd (HPCL) are the other two dominant fuel retailers in the country. Between them, the three state-owned firms control roughly 90 per cent of the market.



# IOC starts producing 'reference' petrol, diesel for testing automobiles

PTI ■ NEW DELHI

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# Natural gas futures: Buy on breakout at ₹278

**Akhil Nallamuthu**

bl. research bureau

Natural gas futures on the Multi Commodity Exchange (MCX) have been on a decline for the past two weeks. The continuous contract began the decline after facing resistance at ₹285.

## COMMODITY

### CALL.

However, since the beginning of this week, the contract has moved up gradually. The continuous contract has found support between ₹235 and ₹240. It closed at ₹245.2 on Monday.

Since the nearest contract i.e., October series, expires on October 26 – Thursday, for the purpose of further analysis, we shall consider November series.

November futures of natural gas on the MCX, which closed at ₹274.8 on Monday, is trading at a premium to the October series. The November contract bounced off the support at



₹270 early this week. The contract faces resistance at ₹278. If this barrier is breached, the contract could rally to ₹286, a potential resistance. Just above this is another hurdle at ₹290.

On the other hand, if the support at ₹270 is breached, we could see a quick fall towards ₹250. But at this juncture, this looks less likely.

### TRADE STRATEGY

Buy November futures of natural gas if it decisively breaks out of ₹278. Target and stop-loss for this trade can be at ₹290 and ₹273, respectively.



# Soon, a Wagon R powered by cow dung!

VIKRAM CHAUDHARY  
Tokyo, October 25

**THE FIRST CAR** in India powered by cow dung is expected to be a Maruti Suzuki Wagon R. On Wednesday, at the Japan Mobility Show in Tokyo, Maruti Suzuki's parent company Suzuki Motor Corporation displayed a Wagon R that runs on the compressed biomethane gas (CBG), which is generated from biogas.

While biogas can be produced from multiple sources – mostly organic waste – in India, an untapped potential is cow dung.

Last year, Suzuki had signed a memorandum of understanding with the National Dairy Development Board (NDDB) to start a biogas demonstration project that, among other things, could accelerate the carbon neutrality in India.

Cow dung contains methane that has 28 times larger greenhouse effect than that of carbon dioxide. This methane gets emitted into the atmosphere. Suzuki and the NDDB had said the project will aim at suppressing atmospheric emission of methane and refining fuel for automobiles from methane contained in cow dung.



Maruti Suzuki's parent company Suzuki Motor Corporation displayed a Wagon R that runs on the compressed biomethane gas at the Japan Mobility Show, in Tokyo on Wednesday

"Carbon dioxide in the atmosphere is taken into pasture by photosynthesis, and that pasture becomes food for cows. Methane included in cow dung – egested from cows – is emitted into the atmosphere. By collecting cow dung and refining fuel for automobiles through artificially generating biogas, methane emitted into

the atmosphere can be suppressed. As this fuel derives from carbon dioxide emitted into the atmosphere, this is a carbon-neutral fuel," Suzuki had said in a statement last year.

"By setting up such a business model and deploying it throughout India, we believe we can contribute not only towards achieving carbon

neutrality, but also revitalising rural communities, creating new jobs, recycling waste, improving energy self-sufficiency, and creating a recycling-oriented society," the automobile major said.

While Suzuki didn't confirm whether the Wagon R will be the first car to be powered by cow dung, it has been testing this technology on the Wagon R – India's top-selling car.

"The Wagon R displayed at the Japan Mobility Show 2023 is powered by CBG, generated from biogas. The car uses the existing internal combustion engine technology and utilises India's abundant biomass resources (cow dung, etc). Such technologies can help India achieve its carbon-neutrality goal of 2070," a Suzuki spokesperson told FE. "The residue from biogas can theoretically be used as organic fertiliser, contributing to the organic fertiliser promotion policy by the government."

Globally, China, France, the UK and some Scandinavian countries have supported the transition to biogas through a combination of tax exemptions, investment subsidies and incentives for biogas injection into the natural gas grid.





बिनय सिन्हा



# तेल भंडार की खोज पर संभावनाएं अपार

**भारत कई दशकों से अपने तेल भंडार का पता लगाने में विफल रहा है, लेकिन अब एक तेल आयातक से निर्यातक बनने की राह तैयार की जा रही है। बता रहे हैं अजय कुमार**

यूरोपीय संघ और चीन के बाद भारत कच्चे तेल का दुनिया का तीसरा सबसे बड़ा आयातक है। भारत के उपभोग में तेल आयात का हिस्सा वर्ष 2022-23 में बढ़कर 87.3 प्रतिशत हो गया, जो भारत के कुल आयात का 23.6 प्रतिशत है।

तेल एवं गैस आयात से न केवल विदेशी मुद्रा भंडार कम होता है बल्कि इससे रणनीतिक स्तर पर असुरक्षा की स्थिति बनती है और यह इराक युद्ध, ईरान पर लगाए गए प्रतिबंध और मौजूदा रूस-यूक्रेन संघर्ष जैसे भू-राजनीतिक संकट से भी जाहिर होता है। इस वजह से भारत को रूस के तेल के लिए चीनी युआन में भुगतान करने को कहा जा रहा है।

बड़े तेल भंडार पर नियंत्रण से किसी एक देश की स्थिति अन्य देशों के मुकाबले बेहतर हो सकती है विशेष रूप से उन देशों की जो तेल आयात पर बहुत अधिक निर्भर हैं। तेल भंडार से समृद्ध देश, उत्पादन की मात्रा, कीमतों में नियंत्रण करने के साथ ही इस तक पहुंच में प्रतिबंध लगाकर अन्य तेल आयातक देशों के मुकाबले फायदा उठा सकते हैं।

तेल के लिए भारत की अन्य देशों पर

निर्भरता इसलिए है कि यहां सीमित स्तर पर तेल क्षेत्र की खोज की गई है। हालांकि भारत ने अपतटीय क्षेत्रों में तेल खोज के संदर्भ में अपेक्षाकृत अधिक सफलता देखी है, जैसे कि 1970 के दशक में बंबई हाई और बेसिन तेल क्षेत्रों की खोज की गई और बाद में 2000 के दशक में कृष्णा-गोदावरी बेसिन और खंभात की खाड़ी में तेल उत्पादन का पैमाना, हिंद महासागर के अन्य हिस्सों या सऊदी अरब, पश्चिम में कतर और ओमान और पूर्व में मलेशिया, इंडोनेशिया और वियतनाम जैसे देशों की तुलना में मामूली बना हुआ है।

वर्ष 2022 में, बांग्लादेश को बंगाल की खाड़ी में खरबों घन फुट गैस भंडार मिला और यह भंडार एक सदी तक की अपनी जरूरतें पूरी करने के लिए पर्याप्त था। केन्या और सोमालिया के तट से एक लाख वर्ग किलोमीटर के दायरे में एक विशाल तेल भंडार की खोज की गई थी। भारत का करीब 23.6 लाख वर्ग किलोमीटर के विशाल क्षेत्र वाला विशेष आर्थिक क्षेत्र (ईईजेड), समान भू-स्तर साझा करता है और इसमें अब तक खोजे गए तेल भंडार की तुलना में बहुत अधिक भंडार मिलने की संभावना है।

कुछ असत्यापित रिपोर्ट के मुताबिक बंगाल की खाड़ी में 30 अरब टन तेल (बीटीओई), इराक के भंडार का 2.5 गुना और सऊदी अरब के लगभग बराबर है। अगर मोटे अनुमानों पर गौर करें तो इसके अनुसार, भारत के ईईजेड में अब तक नहीं खोजे गए तेल संसाधन 7.4 बीटीओई से अधिक है, जो 50 से अधिक वर्षों तक की जरूरतों को पूरा करने के लिए पर्याप्त है। हालांकि भारत इन तेल-गैस भंडारों का पता लगाने में अब तक विफल रहा है और उसने लगातार तेल आयात पर जोर दिया है जिससे गंभीर सवाल खड़े होते हैं।

तेल की खोज के संभावित क्षेत्रों के नजदीक जुड़े बड़े क्षेत्रों का आवंटन जरूरी हो जाता है। यह भूवैज्ञानिकों को भूवैज्ञानिक संरचनाओं को समझने, संभावित तेल जाल और उसके भंडार स्थल की पहचान करने में मददगार होता है। इसके साथ ही यह भूकंपीय सर्वेक्षणों का उपयोग करके सतहों की अधिक सटीक तस्वीरें लेने और संभावित तेल भंडार की कनेक्टिविटी और सीमा को बेहतर ढंग से समझने में कारगर होता है। इसके अलावा महत्वपूर्ण बात यह भी है कि आर्थिक रूप से व्यावहारिक और

तकनीकी रूप से बेहतर खोज के लिए ऐसे तेल भंडार क्षेत्र के आसपास एक बड़े क्षेत्र के आवंटन की आवश्यकता होती है।

हालांकि, यह भारतीय ईईजेड में संभव नहीं हो पाया है क्योंकि लगभग 42 प्रतिशत ईईजेड, यानी 10 लाख वर्ग किलोमीटर से अधिक क्षेत्र को विभिन्न सरकारी एजेंसियों द्वारा 'नो गो जोन' क्षेत्र घोषित किया गया है। यह ऐसा क्षेत्र है जहां किसी भी तरह की गतिविधि की अनुमति नहीं है। नो-गो जोन किसी एक क्षेत्र तक ही सीमित नहीं हैं, बल्कि ये बिखरे हुए क्षेत्र हैं जो ईईजेड से जुड़े अधिकांश नजदीकी क्षेत्रों में बाधाकारी साबित होते हैं। हालांकि विभिन्न सुरक्षा कारणों से ऐसे क्षेत्रों की जरूरत थी जहां कोई गतिविधि न हो।

रक्षा अनुसंधान एवं विकास संगठन (डीआरडीओ) ने मिसाइल परीक्षण के लिए एक सुरक्षा क्षेत्र तय किया है, वहीं भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने भी उपग्रह प्रक्षेपण के मलबे के लिए सुरक्षित क्षेत्र तय किए हैं। इसके अलावा रक्षा तैयारी को ध्यान में रखते हुए नौसेना भी विशेष रूप से पानी के नीचे ऐसे क्षेत्र तैयार करता है। हालांकि ये कारण निर्विवाद रूप से महत्वपूर्ण रहे हैं लेकिन भारतीय अर्थव्यवस्था को इसकी एक बड़ी आर्थिक कीमत चुकानी पड़ी।

वर्ष 2022 के मध्य में हालात बदलने शुरू हुए। तकनीकी प्रगति और उन्नत रडार और सेंसर के चलते चीजों पर निगाह रखना पहले से बेहतर हुआ और भौगोलिक सूचना प्रणाली तथा उपग्रह नेविगेशन तंत्र ने सटीक स्थान की ट्रैकिंग करने के साथ ही सूचना साझेदारी का दायरा भी बढ़ाया। इसके साथ ही नई तकनीक ने जागरूकता में भी काफी सुधार किया। इसके चलते ही नो-गो जोन की आवश्यकता पर भी दोबारा विचार करने की प्रेरणा मिली।

इसके अलावा, यह तर्क दिया गया था कि मिसाइल परीक्षण और उपग्रह प्रक्षेपण असामान्य और योजनाबद्ध घटनाक्रम हैं जिससे तेल की खोज करने वाले जहाज भी तालमेल बिठा सकते हैं। पोत सुरक्षा के लिए नोटम/नवेरा प्रोटोकॉल का पालन करने और तेल खोजी पोतों तथा डीआरडीओ और इसरो के बीच समन्वय के लिए एक समझौते पर सहमति हुई। इसके अलावा इस बात पर भी सहमति बनी कि किसी अप्रत्याशित दुर्घटना की स्थिति में सरकारी एजेंसियों को पर्याप्त बीमा कवर के जरिये क्षतिपूर्ति की भरपाई

की जाएगी।

इस समीक्षा के परिणामस्वरूप, ईईजेड के 99 प्रतिशत हिस्से में खोजी गतिविधियों की अनुमति देने का फैसला किया गया। वर्ष 2015 में विभिन्न एजेंसियों और विभिन्न मंत्रालयों से संबंधित मुद्दों को हल करने के लिए एक सलाहकार तंत्र, सचिवों के क्षेत्रवार समूह का गठन किया गया था ताकि इन मुद्दों को उच्च अधिकारियों तक ले जाने की आवश्यकता नहीं पड़े। समूह ने बाकी मामले से निपटने के लिए रक्षा सचिव की अध्यक्षता में एक समिति भी बनाई।

समझौते के बाद पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय (एमओपी ऍंड एनजी) ने एक नया नक्शा पेश किया जो तेल की खोज के लिए भारतीय ईईजेड को मुक्त करता है। नया नक्शा, भारत की आजादी के 75 साल पूरे होने के उपलक्ष्य में 15 अगस्त, 2022 को पेश किया गया था। तब से काफी तेजी से प्रगति हुई है।

सितंबर 2022 में पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय ने एक परिचालन मसौदा जारी किया। जून 2023 तक उसने भारतीय ईईजेड का पहला व्यापक भूकंपीय सर्वेक्षण पूरा किया। पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय ने बड़े अपतटीय तेल ब्लॉकों का पता लगाने के वास्ते कंपनियों को आकर्षित करने के लिए बोली लगाने की प्रक्रिया शुरू की जो अब तक की सबसे बड़ी बोली प्रक्रिया है। वर्ष 2025 तक 5 लाख वर्ग किलोमीटर को कवर करने का लक्ष्य है। पहली बोली से पहले की बैठक, जुलाई 2023 में टेक्सस के ह्यूस्टन में आयोजित की गई थी।

भारत विशेषतौर पर अपनी हरित नवीकरणीय ऊर्जा की योजनाओं के जरिये खपत से अधिक तेल एवं गैस का उत्पादन करने की कोशिश में है। अगर 2050 तक शुद्ध शून्य उत्सर्जन का वैश्विक लक्ष्य पूरा नहीं होता है तब अगले 30 से 50 वर्षों में जैव ईंधन की मांग में अच्छी-खासी कमी देखी जा सकती है। ऐसे में भारत अपने भंडार का लाभ उठाते हुए तेल एवं गैस का निर्यात कर सकता है। यह इस खेल में बदलाव का एक अहम कारक होगा। भारत कई दशकों से अपने तेल भंडार का पता लगाने में विफल रहा। ऐसे में अवसर गंवाने पर अफसोस जताने का कोई मतलब नहीं है। अमृत काल का यह शुरुआती दौर भारत के लिए तेल सुरक्षा और नए रणनीतिक विकल्पों की उम्मीद देता है।

(लेखक पूर्व रक्षा सचिव और आईआईटी कानपुर में विजिटिंग प्रोफेसर हैं)

## देश में ही परीक्षण ईंधन तैयार किया

नई दिल्ली, एजेंसी। इंडियन ऑयल कॉर्पोरेशन ने भारत में पहली बार विशेषीकृत रेफरेंस पेट्रोल, डीजल का उत्पादन शुरू किया है। 'रेफरेंस' पेट्रोल, डीजल का उपयोग वाहन परीक्षण में किया जाता है।

उच्च विशिष्टता वाला ये ईंधन वाहन विनिर्माताओं और इंटरनेशनल सेंटर फॉर ऑटोमोटिव टेक्नोलॉजी और ऑटोमोटिव रिसर्च एसोसिएशन ऑफ इंडिया जैसी परीक्षण एजेंसियों के परीक्षण के लिए काफी महत्वपूर्ण है। भारत दशकों से इस विशेष ईंधन के लिए आयात पर निर्भर रहा है। लेकिन अब, देश के पास स्वदेशी रूप से विकसित उत्पाद है।