



BPCL, ONGC explore setting up a refinery

New Delhi: Bharat Petroleum Corp and explorer Oil and Natural Gas Corp are jointly exploring setting up a refinery, two sources familiar with the matter said. The talks are at a very nascent stage, the sources, who did not want to be named because they are not authorised to speak to media, said. BPCL plans to increase its integrated refining and petrochemical capacities within the next five to seven years to meet growing energy demand, its chairman told shareholders last week. REUTERS

Crude oil imports from Russia fall on lower supplies

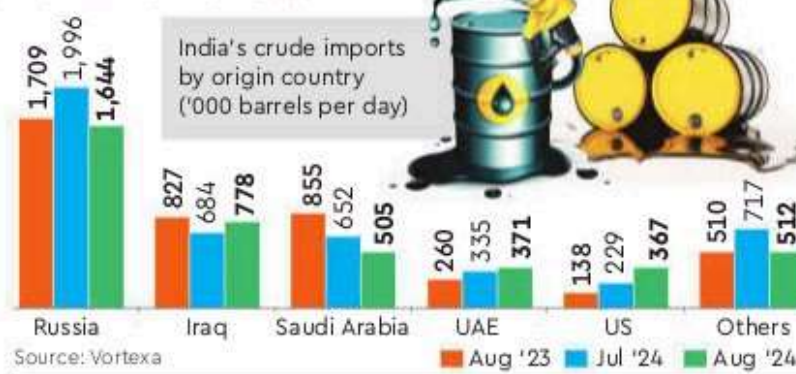
ARUNIMA BHARADWAJ
New Delhi, September 3

INDIA'S IMPORT OF Russian crude oil fell 17% in August to 1.64 million barrels per day against 1.99 million barrels per day imported in July, data from Vortexa showed. The decline in Russian crude oil imports can be attributed to lower supplies from the country and lower demand as many domestic refineries went under planned maintenance.

In August, Indian refiners imported more crude oil from Iraq and the United States. Russia remained the top supplier last month but lost its share in the country's crude import basket to 39% from 43% registered in July.

Imports from Iraq rose by 14% on month to 778,262 barrels per day in August, accounting for 19% of the country's total crude oil

FUEL FOR GROWTH



imports. In July, imports from Iraq accounted for 15% of the country's total imported crude oil volume. Imports from the US increased by as much as 60% to 367,119 barrels per day in August from 229,893 barrels per day in July. The share of US crude in India oil imports

increased to 9% sequentially, the highest so far this year, as Indian refiners are seeking some lighter grades to counterbalance the density of heavier grades from Russia.

"India's imports of Russian crude have fallen by 17% month-on-month partly likely due to lower sup-

plies from Russia as well as several domestic refineries shutting for planned maintenance," said Serena Huang, head of APAC analysis at Vortexa. India imported a total of 4.17 million barrels per day of crude oil in August, down from 4.61 million barrels in July, the data showed.

Going ahead, analysts expect Russian crude oil supplies to resume sharply and remain robust towards the beginning of the fourth quarter of the fiscal due to anticipated increase in demand.

"Indian refiners' imports of Russian and Middle Eastern crude will likely remain robust going forward, especially entering Q4 where seasonal domestic demand is expected to pick up," Huang said.

According to the data, India's private refiners bought 1.64 million barrels of crude oil per day in August while public downstream compa-

nies imported 2.53 million barrels.

The country's dependency on crude imports during the first four months of the current fiscal rose to 88.3%, up from 87.8% in the April-July period of FY24, as the domestic production remained stagnant, as per data from the petroleum planning and analysis cell (PPAC).

Upstream companies produced 9.7 million tonne of crude oil in April-July, marginally down from 9.8 million tonne in the same period last fiscal. Despite the government's efforts to boost production and reduce dependency on imports, the production has remained stagnant in the past 10 years. India's crude imports rose to 81.6 million tonne in April-July from 79.7 million in the year-ago period, according to PPAC data. Crude oil import bill during the period increased by around 17% on year to \$49 billion from \$41.9 billion.

● A GREENER FUTURE

NATIONS MUST WORK AS ONE ON RENEWABLE ENERGY, ENERGY EFFICIENCY, & ENERGY STORAGE

Joining hands on energy triad

SOLAR ENERGY IS the best way for the world to meet its current and future energy needs, and understandably assumes great importance in the energy pathways of most countries. However, it isn't enough to merely ramp up renewable energy (RE) generation; it must be complemented by the implementation of energy storage systems and energy efficiency measures. It is a jigsaw that needs to be pieced together through the collective efforts of all nations.

India has done extremely well in building up its solar energy capacity over the past decade. The installed solar power capacity is more than 87 gigawatt (Gw), almost 58% of the total installed RE capacity. However, energy storage hasn't kept pace with RE development, and this poses challenges with respect to grid flexibility and stability. Energy efficiency has been picking up, but largely through government-led programmes implemented by and for civic infrastructure; adoption by the private sector has lagged in comparison. India's inbound investments in RE, meanwhile, continue to be a small percentage of the global total.

The Union Budget in July placed strong emphasis on strengthening the growth of India's RE ecosystem. It announced a rooftop solar scheme, a policy for promoting pumped storage projects, and measures aimed at incentivising domestic manufacture of solar panels, cells, and other components. The Budget also announced financial support to micro, small, and medium enterprises for shifting to clean energy and implementing energy efficiency measures.

This momentum must be enhanced further in the years ahead. There is a long way to go in meeting the stated target of 500 Gw of RE by 2030. Widespread deployment and adoption of solar energy has many prerequisites and entails certain challenges that India — and all other nations working towards a clean energy transition — must address with urgency.

AJAY MATHUR

Director general, International Solar Alliance



Intermittency of solar power and energy storage

Solar power generation, by the very nature of its source, is intermittent, and this can adversely impact the stability of the power grid. It is necessary to manage this intermittency and minimise voltage and frequency fluctuations to safely integrate solar energy into the grid with other sources, necessitating energy storage systems. Solar energy, combined with battery storage, can be a very viable choice for electrification, especially in places that are far away from the grid. The National Electricity Plan 2023 of the Central Electricity Authority projects India's energy storage capacity requirement to grow exponentially to 82.37 Gwhours by 2026-27 and a further fivefold by 2031-32. There is a need to strengthen R&D and increase investments in energy storage technologies to drive down costs further.

Complementing energy generation with storage

To limit global temperature rise, it is essential to treble renewable power generation capacity and double the current levels of energy efficiency by 2030. The good thing about energy efficiency is that it can be adopted across industries and verticals.

In the building sector, it can be achieved through deep retrofiting, advanced insulation, high-efficiency windows, smart energy management systems, and near-zero energy standards for

new constructions. In the industrial sector, energy efficiency can be enhanced with high-efficiency boilers, artificial intelligence-driven analytics, smart sensors for real-time monitoring, and state-of-the-art processes. The transportation sector can look to electric vehicles, extensive charging infrastructure, stringent fuel efficiency standards, and enhanced public transport systems. The power sector, meanwhile, can optimise electricity distribution and reduce losses via greater smart grid deployment.

A combination of RE and energy efficiency can potentially reduce global energy demand by up to 25% by 2030. Furthermore, it can create millions of jobs — a big plus point for a country like India that is trying to maintain a balance between its development goals and environmental commitments.

Policy interventions

Policy has a huge influence on how any industry grows and develops. On the energy efficiency front, the solar industry will benefit from the implementation of strict energy performance standards for solar infrastructure, vehicles, and appliances. Germany's Energiewende policy, which promotes the integration of RE and energy efficiency, has led to significant reductions in the country's greenhouse gas emissions.

There must be financial incentives — such as tax credits, subsidies, and grants — for those who develop energy-efficient

technologies as well as for those who adopt them. Adoption can also be accelerated by public awareness campaigns that educate people and businesses about the best practices and benefits of energy efficiency.

On the financial front, it is estimated that annual clean energy investments must increase to \$4.5 trillion by 2030, with a majority of it being used to increase RE capacity and improve energy efficiency, and with a comparatively smaller share allocated for energy storage technologies and industrial equipment upgrades. Today, emerging economies receive only a fraction of the resources needed to meet their energy requirements sustainably. Policies that encourage collaborations with international financial organisations, development institutions, and national governments can help in attracting the necessary investments and financial support.

International collaboration

Most of the technologies that we need for the solar revolution already exist; what we need is greater international cooperation, knowledge-sharing, and innovative approaches to widen their reach and maximise their impact. RE, energy efficiency, and storage technologies will complement and strengthen each other, but not all nations have the knowledge or the resources to bring the trio together on their own; it is the collective responsibility of the world to make it happen.

We need concerted efforts from governments, businesses, and international organisations to conceptualise, develop, and build a global solar ecosystem that is supported and enhanced by robust policies, finances, and technology-based solutions. India is one of the world's largest economies, and a leading voice of the Global South. The onus is on all — businesses, investors, research institutions, and governments — to turn ambition into action and walk the talk of a sustainable pathway to development.





OIL and IGGL sign hook-up agreement

Oil India Limited and Indra Dhanus Gas Grid Limited signed the hook-up agreements for connecting OIL's natural gas fields of upper Assam with the Duliajan Feeder Line of the North-East Gas Grid and also for evacuation of natural gas to be produced from OIL's DSF block in Tripura through IGGL's 12" NB x 86 km Agartala- Tulamura natural gas pipeline. This agreement marks a step forward in OIL's shared vision of enhancing the energy infrastructure in the Northeast region and also OIL's commitment towards a gas-based economy.



ONGC has held talks with Bharat Petroleum Corp. Ltd to set up the unit in the city of Prayagraj. REUTERS

ONGC may set up refinery in UP

The largest crude explorer is looking at a 9-million-tonne-a-year project in Uttar Pradesh that could cost more than ₹70,000 crore, according to the four people familiar with the matter, who declined to be identified as the talks are not public.

Oil and Natural Gas Corp. (ONGC) has held talks with Bharat Petroleum Corp. Ltd (BPCL) to set up the unit in the city of Prayagraj as the state-owned refiner holds a parcel of land there, they said.

India's is one of the world's fastest-growing major economies, with surging crude and petrochemicals consumption, even as renewable-energy capacity gets built out.

As it's common in the country for big-ticket infrastructure and commercial projects to face delays given the slow process of land acquisition, the potential access to BPCL's holdings may prove to be beneficial. **BLOOMBERG**



ONGC mulls ₹70,000-cr UP refinery, in talks with BPCL

RAKESH SHARMA
September 3

OIL AND NATURAL Gas (ONGC) is considering setting up a multibillion dollar refinery and petrochemical project in Uttar Pradesh to bolster its business as fuel demand expands.

India's largest crude explorer is looking at a 9-million-tonne-a-year project in UP that could cost more than ₹70,000 crore, according to the four people familiar with the matter, who declined to be identified. ONGC has held talks with Bharat Petroleum (BPCL) to set up the unit in Prayagraj as the state-owned refiner holds a parcel of land there, they said.

India's is one of the world's fastest-growing major economies, with surging crude and petrochemicals consumption, even as renewable energy capacity gets built out. Since big-ticket infrastructure and commercial projects usually face delays, given the slow process of land acquisition, the potential access to BPCL's holdings may prove to be an advantage.

BPCL itself has been considering setting up a refining and petrochemical unit, either in Andhra Pradesh or Uttar Pradesh, two of the people said. The company, which has hired a US-based consultant for a siting study, favours Andhra Pradesh as the state has promised incentives, they said.

Spokespeople at BPCL and ONGC didn't immediately reply to emails seeking comment.

—BLOOMBERG

Path to 50% non-fossil fuel power generation

IN RECENT YEARS, there has been a rising frequency of extreme climate events, including intense heatwaves, cold spells, excessive rainfall, and cloudbursts. 2023 was the hottest year on record, and India saw extreme weather on 318 of the 365 days. The recent landslides in Kerala, flash floods, and extremely high temperature across India underscore the huge human and economic losses from climate change.

In this context, to match the fast economic growth and rising electricity consumption (average 8% year-on-year), India has to rapidly change its power generation mix to a larger share of clean and renewable energy (RE), in an effort to adhere to sustainable development goals. Between 2015 and 2024, India added 175 gigawatt (Gw) power generation capacity, with 65% coming from renewables. The goal to generate 50% of all power from non-fossil sources by 2030 underlines India's commitment to energy security through sustainable means.

This strategy is based on a strong policy framework and reforms. The government aims to diversify the energy mix by focusing on renewable sources like solar, wind, hydroelectric along with pumped hydro and small modular nuclear reactors (SMRs). As of July, with ~87 Gw solar, 47 Gw wind, and 47 Gw hydroelectric, non-fossil fuel sources accounted for 44% of India's total installed electricity generation capacity. Tata Power supports this transition with its installed clean capacity of 6.1 Gw, pipeline of 5.3 Gw, and a goal to achieve 70% clean energy portfolio by 2030.

RE from solar and wind is intermittent and requires storage technologies like pumped hydro and electric battery for round-the-clock supply. The recent Union and state Budgets highlighted policy support for these technologies. Multiple companies including Tata Power are working towards realising this. The Union Budget also mentioned developing SMRs for base load applications via public-private partnerships.

This aligns with the acceptance of nuclear energy, witnessed during COP28.

India's RE goal relies on public-private synergy. Government policies, including subsidies, performance-linked incentive, and tax incentives, have created a favourable environment for private investment, with \$60 billion for clean energy in 2023, up nearly 40% from the 2016-20 average. Independent power producers, start-ups, and corporations drive innovation and job creation. Public sector entities like the Solar Energy Corporation of India are partnering private players to co-finance and execute RE projects, enhancing resource utilisation and risk-sharing.

Cross-border collaborative efforts, aligned with strategic investments, is setting the ground for India to lead global energy transition. Tata Power, with its origins in hydro power, is expanding clean energy availability through collaborative projects in Bhutan.

Green bonds, foreign direct investments, and climate finance are crucial for supporting India's clean energy projects. India has advanced cooperation with countries and global institutions for technology transfer and capacity building in RE. In 2023, global investment in clean energy reached a record \$1.77 trillion, up 17% from 2022.

The growth of India's power sector hinges on robust support from original equipment manufacturers, other manufacturers and suppliers. With the industry projected to reach \$130 billion by 2030, manufacturing and exports are crucial. Projects like the newly commissioned Tata Power Solar 4.3 Gw Tirunelveli solar module cell manufacturing plant exemplify efforts to build Atmanirbhar Bharat and commitment to becoming an important player in the global supply chain.

To meet targets, we need reliable power supply at affordable rates, with significant investments in storage solutions, clean energy technologies, and power evacuation infrastructure. According to a Moody's estimate, power firms will need to invest \$190-\$215 billion to achieve 500 Gw of clean and RE capacity by 2030. An additional \$150-\$170 billion will be required for expanding and enhancing transmission, distribution, and energy storage systems.

Achieving 50% non-fossil fuel power generation by 2030 is an ambitious goal. Together, we can ensure a resilient and sustainable energy future for our country.



**PRAVEER
SINHA**

Speaker, POWERGEN India and Indian Utility Week 2024, and CEO & MD, Tata Power Company

इंडियन ऑयल के अनुसंधान एवं विकास केन्द्र में हर्षोल्लास से मनाया स्थापना दिवस

वैभव न्यूज ■ फरीदाबाद

इंडियनऑयल कॉर्पोरेशन का स्थापना दिवस फरीदाबाद स्थित इंडियनऑयल के अनुसंधान एवं विकास केन्द्र में हर्षोल्लास से मनाया गया। यह इंडियनऑयल का 65वां स्थापना दिवस समारोह था, जो निदेशक (अनुसंधान एवं विकास) आलोक शर्मा की देखरेख में सर्वो ऑडिटोरियम में मनाया गया। इस अवसर पर अनुसंधान एवं विकास केन्द्र के वरिष्ठ प्रबंधन के लोग भी उपस्थित थे।

कार्यक्रम की शुरुआत इंडियन ऑयल के निगम गान के साथ हुई। जिसके बाद शर्मा ने उपस्थित लोगों को इंडियनऑयल के प्रति समर्पण की शपथ दिलाई। आलोक शर्मा ने 2047 तक इंडियनऑयल के 1 ट्रिलियन डॉलर लक्ष्य को पूरा करने



में अनुसंधान एवं विकास केन्द्र की भूमिका को अहम बताया। उन्होंने यह भी कहा कि हम अनुसंधान के विभिन्न क्षेत्रों में कम खर्चीला और पर्यावरण के लिए सुरक्षित समाधान विकसित करने पर जोर दे रहे हैं। उन्होंने 2जी इथेनॉल, एंजाइम की

मदद से सीओ 2 कैप्चर तकनीक जैसी ऊर्जा के वैकल्पिक क्षेत्रों में अनुसंधान की प्रगति को सराहनीय कहा। हाइड्रोजन के क्षेत्र में कदम बढ़ाते हुए इंडियन ऑयल ने टाटा मोटर्स लिमिटेड से 15 फ्यूल सेल बसें लेकर भारतीय सेना और भारतीय नौसेना को प्रदान किया है। उन्होंने यह भी जानकारी दी कि निगम के पैनल में मौजूद विक्रेताओं के माध्यम से सूर्य नूतन सोलर कुकस्टोव को बाजार तक पहुंचाने की दिशा में काम चल रहा है। इस अवसर पर स्वच्छता पखवाड़ा के विजेता विभागों को पुरस्कार भी दिए गए। साथ ही सबसे अधिक पेटेंट हासिल करने वाले कार्मिकों को अनुसंधान के क्षेत्र में उनकी उपलब्धियों के लिए निदेशक (अनुसंधान एवं विकास) ने सम्मानित किया।



तीन गांवों में पीएनजी गैस कनेक्शन की मांग

बाहरी दिल्ली : दिल्ली पंचायत संघ ने नांगलोई विधानसभा क्षेत्र के अंतर्गत आने वाले नांगलोई जाट, पीरागढ़ी, नांगलोई सईदान गांवों में पीएनजी गैस लाइन के कनेक्शन नहीं देने पर विरोध जताया है। इस मसले पर पंचायत संघ व गांवों के पंचायत प्रमुखों ने बैठक की और 15 दिन के अंदर पीएनजी गैस कनेक्शन देने की मांग रखी। इस संबंध में कोई कार्रवाई नहीं हुई तो तीनों गांव इसका विरोध दर्ज कराएंगे। दिल्ली पंचायत संघ प्रमुख थान सिंह यादव ने कहा की सभी विधानसभा में आने वाले गांवों में पंचायतें होंगी ओर उसमें उनकी मांगों को लेकर सख्त विरोध के साथ निर्णय लिए जाएंगे। (जास)