



Cairn Oil & Gas aims to source up to 70MW of renewable energy by 2030. ISTOCKPHOTO

Cairn Oil & Gas aims for net zero by 2030

Cairn Oil & Gas, part of the Vedanta Group, on Monday said it has set 2030 as the target date for becoming net-zero through a mix of planting trees and using renewable energy across businesses. "For achieving a low-carbon trajectory to reduce its environmental impact, Cairn is implementing diverse initiatives to decarbonize its operations while expanding its energy portfolio," the company said in a statement.

These include sourcing up to 70MW of renewable energy by 2030, with a renewable power delivery agreement for 25MW set to commence in the current fiscal.

Also, solar rooftop will be installed across operational sites in Rajasthan and Gujarat.

"Significant progress in flare gas reduction has seen a 60% decrease in potential gas flaring intensity over the past four years," Cairn said, adding that it already is a net water-positive company and is recycling more than 96% of produced water through reinjection. The company said it has undertaken a feasibility study on 'waste to power' project to utilize lean gas, CO₂-rich gas, solid waste and other industrial waste, to generate power through pressurized oxy combustor technology. **PTI**



Cairn Oil & Gas targets net zero by 2030

'Cairn is implementing diverse initiatives to decarbonise its operations while expanding its energy portfolio,' a company statement said

NEW DELHI: Cairn Oil & Gas, part of Vedanta Group, on Monday said it has set 2030 as target date for becoming net zero through a mix of planting trees and using renewable energy across businesses.

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on 'waste to power' project to utilise lean gas, CO₂ rich gas, solid waste and other industrial waste, to generate power through pressurized oxy combustor technology. The resulting CO₂ gas can then be further utilised for enhanced oil recovery.

Other initiatives include bottling and cascading of gas for CNG players, gas transportation from satellite fields to terminal through pipeline, optimising recycled gas compressors, installation of ejector to reduced flaring in terminals and employing digital twin technol-

ogy for comprehensive asset management.

"As part of a multi-pronged strategy, Cairn's focused ESG roadmap covers carbon emission reduction, leverage renewable energy sources, leveraging nature-based carbon solutions and adopting innovations such as waste to energy, carbon capture utilisation and storage (CCUS) among others. With this, Cairn has fast-tracked its vision of attaining net zero carbon by 2030," it said.

Cairn plans to plant 2 million trees by 2030. PTI



Cairn Oil and Gas to become net zero by 2030

Our Bureau
New Delhi

Cairn Oil and Gas said on Monday that it is set to become a Net Zero Carbon emitter by 2030, through pioneering Environmental, Social and Corporate Governance (ESG) leadership across the exploration and production (EandP) value chain.

As part of a multi-pronged strategy, Cairn's focused ESG roadmap covers carbon emission reduction, leverage renewable energy sources, leveraging nature-based carbon solutions and adopting innovations such as waste to energy, carbon capture utilisation and storage (CCUS) among others. With this, Cairn has fast-tracked its vision of attaining Net Zero Carbon by 2030, the company, part of the Vedanta Group, said.



Cairn Oil and Gas Deputy CEO Steve Moore said "Cairn, as the largest private oil and gas producer in India, is proud to lead the charge towards a greener future by making a positive impact on the environment and communities we operate in. Our decarbonisation and environmental initiatives are aligned with the vision to become carbon neutral by 2030 through innovation and technology, coupled with our dedicated efforts."

Cairn is committed to enhancing its operational per-

formance in synergy with climate change mitigation and further plans to minimise emissions through process optimisation, improved reliability, and low-carbon technologies. The multi-pronged long-term strategy to become Net Zero Carbon by 2030 is backed by a meticulous plan exploring new opportunities.

This year's theme of World Environment Day centres on land restoration, halting desertification and building drought resilience. Cairn's biodiversity conservation initiatives and nature restoration activities are spread across its operational areas in Rajasthan, Andhra Pradesh and Gujarat. The company plans to plant 2 million trees by 2030.

To achieve a low-carbon trajectory to reduce its environmental impact, Cairn is implementing diverse initiatives to decarbonise its operations

while expanding its energy portfolio.

The company has planned to source up to 70 megawatt (MW) of renewable energy by 2030, with a renewable power delivery agreement for 25 MW set to commence in FY25. It has also installed solar rooftops across Rajasthan and Gujarat operational sites.



Capacity utilisation by gas-based power plants in April at 4-year high

Rishi Ranjan Kala

New Delhi

The plant load factor (PLF), or capacity utilisation, of gas-based power plants rose to 21.4 per cent in April 2024, a four-year high for the month, as the government mandated such plants to run at optimum capacity to meet India's rising electricity consumption.

Gas-based power plants have an installed capacity of 24.8 gigawatts (GW) and account for around 2-3 per cent of India's total power generation. They produced 3.7 billion units (BU) in April 2024. For comparison, coal-based power plants reported a PLF of 76.79 per cent in April.

Pan-India electricity consumption rose almost 10 per cent year-on-year (y-o-y) to 153.77 BU during April 2024 witnessing a peak demand of 224 GW that was successfully met. Power deficit stood at 0.1 per cent.

The Power Ministry invoked Section 11 of the Electricity Act for gas-based units mandating them to run at optimum capacity during April-June 2024. Sources said such plants will continue to generate higher PLFs during the peak demand season.

The capacity utilisation by gas-based power plants dur-

Gas-based power generation in India during April

April	PLF (%)	Power generation (MU)	Gas consumed/supplied (MSCMD)
2024	21.4	3720.34	27.27
2023	14.2	2438.18	18.52
2022	15.4	2660.45	20.18
2021	21.5	3727.03	27.56
2020	27.6	4858.01	33.26
2019	24.3	4176.06	30.20

MSCMD: Million Standard Cubic Meters Per Day MU: Million Units PLF: Plant Load Factor
Source: Power Ministry

ing April 2024 was almost equal to that reported in April 2021 at 21.5 per cent. Prior to April 2024, such units reported a record PLF of 27.6 per cent in April 2020.

However, the PLFs are still below pre-pandemic levels. In April 2019, gas-based plants reported a PLF of 24.3 per cent producing 4.18 BU energy.

The world's fourth largest LNG importer consumed 27.27 million standard cubic meters per day (MSCMD) natural gas in April 2024.

OTHER FACTORS

In FY24, the PLF of gas-based plants rose to 14.8 per cent from 11.5 per cent in FY23. They produced 31.30 BU against a target of 32 BU, cumulatively consuming 235.78 MSCMD natural gas. India's peak power demand in 2023 rose to a record 240 gigawatts

(GW) in September 2023.

Softening LNG prices and higher requirement of gas by the industrial and power sectors also pushed up the trade on gas exchanges.

For instance, Indian Gas Exchange (IGX) traded 2.47 million British thermal units (mBtu), or roughly 62 million standard cubic meters (MSCM), gas volume in April 2024, which was higher by 123 per cent month-on-month (m-o-m) and 38 per cent y-o-y.

Higher trade volumes were due to price corrections in the international market and lower price of imported LNG as compared to HPHT/Ceiling gas price. A total of 74 trades were executed in April with 22 trades (maximum) executed in daily contracts, followed by 19 in fortnightly and 18 in monthly contracts.

GIXI (Gas Index of India)

for April 2024 was ₹754 or \$9 per mBtu, lower by 6 per cent from March 2024. Henry Hub reported a price of around \$1.6 per mBtu, while TTF was at around \$9.2 and the West India Marker (WIM) at \$9.7 per mBtu.

GAS SHINES

Recently, India Ratings & Research (Ind-Ra) projected that gas-based power plants generation could improve intermittently during peak power demand in FY25, led by the stabilisation of gas prices.

International Energy Agency projects India's gas demand to grow 7 per cent y-o-y in 2024 calendar year, while Gas Exporting Countries Forum (GCEF) predicts usage to grow at 6 per cent y-o-y. Higher gas consumption for power generation is among the reasons fuelling the growth.

On May 30, India's peak power demand met during the day rose to a record 250 GW as intense heat waves parched lands across north, northwestern and central India resulting in a higher requirement for cooling. On May 29, the demand had hit 246 GW.

This is higher than the government's projection of 235 GW in April and 240 GW in June 2024.

Climate change challenge

Funds mobilised are inadequate

The increasing frequency of extreme weather events and the intensity of heat waves in much of India is a reminder of rapid shifts in climate and its potential consequences for a country like India. While India is investing to increase the share of renewable energy in its energy mix, the problem of climate change cannot be addressed by individual developing countries. Notably, developed countries have committed themselves to providing financial support to developing ones. In this context, a new report by the Organisation for Economic Co-operation and Development highlights that after years of failing to meet climate-finance commitments, developed countries were able to mobilise \$115.9 billion for developing countries, exceeding the annual \$100 billion goal for the first time in 2022, two years later than the original target year of 2020. Predictably, the delay in fulfilling the pledge generated resentment and doubt among developing nations regarding future climate-funding promises. Surpassing the target is, therefore, being hailed as a small but significant step towards empowering developing countries to adopt adaptation and mitigation measures to counter climate change globally.

At the Copenhagen Climate Change Conference in 2009, the developed countries committed themselves to mobilising \$100 billion per year by 2020. Further, while signing the Paris Agreement in 2015, the countries agreed to collectively mobilise \$100 billion through 2025, before setting a new collective quantified goal (NCQG) to replace the existing goal of \$100 billion per year. The NCQG will hopefully be adopted this year at the Conference of Parties (COP29) in Azerbaijan. Currently, public climate finance (bilateral and multilateral) accounted for nearly 80 per cent of the amount raised in 2022. Private climate finance grew recently but it remains far lower than public sources. About 60 per cent of climate finance is directed towards mitigation, especially in energy and transport sectors. The amount raised for adaptation finance is significantly less.

However, most of the support is in the form of loans, not grants and equity investment. This is against the concept of climate justice. As climate finance continues to be predominantly delivered as loans, a large share of which is non-concessionary, it adds to debt pressures across regions and income groups. Among the developing countries, lower-middle-income countries remain the main beneficiaries, followed by upper-middle-income countries. Besides, unfortunately, \$100 billion a year is not enough compared to the support developing countries need to achieve climate goals in accordance with the Paris Agreement. In the United Nations Framework Convention on Climate Change's recent analysis of financing needs, developing countries require about \$6 trillion by 2030 to meet less than half their existing Nationally Determined Contributions, rendering the \$100 billion target highly insufficient.

Clearly, the target was not needs-based. Rather, it acted as a political commitment that recognised developed countries' responsibility to provide financial support to developing countries. Finance for fossil-fuel projects also continues unabated at more than \$1 trillion annually to companies supporting new development projects, questioning the effectiveness of climate finance. While the NCQG promises to channel greater funds toward urgently needed climate action, countries must first reach a consensus on some of these foundational questions, from the dollar amount of the goal to the share of contribution by each country to tackling non-green projects.



Corrigendum

A June 3 story on the Petroleum and Natural Gas Regulatory Board (PNGRB) had an incorrect headline. It should have read: PNGRB withdraws notices to declare 54 city gas networks as common carriers. The error is regretted.

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CPSEs' capex tops ₹50K cr in April

PRASANTA SAHU
New Delhi, June 3

CAPITAL EXPENDITURES OF central public sector enterprises (CPSEs) rose 6.5% on-year to ₹50,206 crore in April, reflecting the government's thrust on an investment-led economic growth even amid the general elections.

The Railway Board invested ₹26,641 crore in projects in April, 10% more than in the year-ago month. The railways has been investing heavily in capacity improvement such as doubling and quadrupling of tracks, electrification, and introduction of high-speed trains.

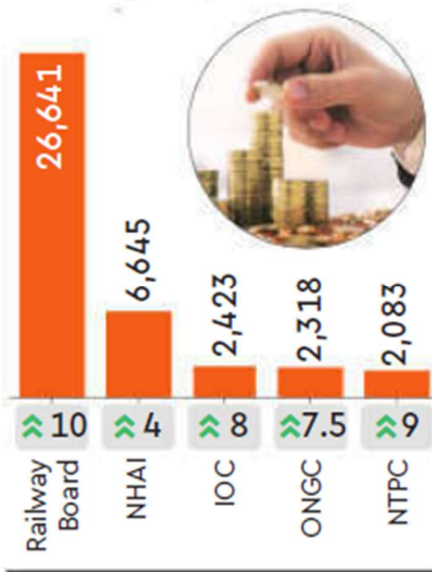
The National Highways Authority of India's capital expenditure (capex) rose 4% annually to ₹6,645 crore in April. The Centre's large capex push through the railways and the NHAI also aids efforts to create more jobs.

Fuel retailer-cum-refiner Indian Oil Corporation achieved a capex of ₹2,423 crore in April, an increase of 8% year-on-year (y-o-y). Capex of ONGC, the top state-run player in oil and gas exploration, rose 7.5% to ₹2,318 crore in April. Power generation major NTPC invested ₹2,083 crore in April, up 9% y-o-y, and Coal India ₹1,073 crore, up 7% y-o-y.

Thanks to a 9% growth in gross fixed capital formation led by public capex, India's GDP grew by 8.2% in

TOP PUBLIC SECTOR INVESTORS

April 2024, ₹ crore
 ↗ Change on year (%)



FY24, exceeding the expectations of both domestic and multilateral institutions. The CPSEs achieved 109% of their combined capital expenditure target for FY24 by investing ₹8.05 trillion, an all-time high. They have set a combined target of investing ₹7.8 trillion in FY25.

Buoyed by a rising economy and demand aided by various government initiatives, infrastructure and allied firms are hiking their capital expenditure for FY25.

Further output cut by Opec+ may not affect India supply

Import from Russia at 10-mth high in May as discounts continue

SUBHAYAN CHAKRABORTY
New Delhi, 3 June

India's oil supply is unlikely to be affected by the decision of Opec+ — comprising members of the Organization of the Petroleum Exporting Countries and other leading producers — to extend output cuts, according to officials at the Ministry of Petroleum and Natural Gas. This is due to the emerging lower global industrial demand outlook and the ongoing discounts on Russian crude. Opec+ members on Sunday agreed to extend two sets of voluntary production cuts. The grouping extended total production cuts of 5.86 million barrels per day (bpd), or 5.7 per cent of global oil demand.

This includes a headline production cut of 3.66 million bpd by a year until the end of 2025. It will also extend the 2.2 million bpd production cut currently being implemented by eight countries, including Saudi Arabia and Russia, by an additional three months until the end of September. This output cut was set to end by June, but would now be phased out over a year from October 2024 to September 2025.

"The latest announcement is a continuation of existing production cuts. It is not expected to change the crude oil supplies to India," an official said.

Officials noted that temporary fluctuations in oil prices due to soaring logistics costs and piracy risks may have a greater impact on Indian oil supplies. "We are monitoring the situation in the Red Sea and the Persian Gulf. Repeated escalation in geopolitical risk since 2022 has disrupted maritime trade routes in the region. Imports for India have not been majorly affected so far, but the situation remains dynamic,"



From non-Opec nations

Import source	FY24 (\$ bn)	FY24 % share
Russia	46.48	33.23
United States	5.02	
Angola	2.81	
Malaysia	2.71	
South Korea	2.36	
Other non-Opec nations	11.28	
Total	70.66	

From Opec nations

Import source	FY24 (\$ bn)	FY24 % share
Iraq	28.94	20.69
Saudi Arabia	22.08	
United Arab Emirates	8.95	
Kuwait	4.3	
Nigeria	3.4	
Other Opec nations*	1.52	
Total	69.19	

Note: *Algeria, Congo, Libya, Venezuela; Source: Commerce dept

another official said.

Concerns over declining global demand for oil have kept producing nations worried. While Opec had predicted oil demand rising in the final months of 2024, the pace of demand growth has been uncertain. China's crude throughput fell 3.3 per cent to 14.36 million bpd (58.79 million tonnes) in April, marking the first monthly year-on-year decline since August 2022, according to Chinese government data.

"Discounts on Russian oil had

shrunk in mid-2023 but had recovered in later months. There is no indication that discounts may drastically reduce downwards under the current circumstances," said an official with a state-owned refinery. As of May, the share of Russian crude in India's imports remained at 40.9 per cent, slightly less than its historic high of 42 per cent, according to estimates made by global trade intelligence platform Kpler. Imports rose to a 10-month high. This is expected to rise further.

HPCL ने ग्रीन हाइड्रोजन उत्पादन की तरफ बढ़ाया कदम

रिसर्च सेंटर में विकसित किया अत्याधुनिक इलेक्ट्रोलाइजर

■ मुंबई, नवभारत न्यूज नेटवर्क. महारत्न उपक्रम हिन्दुस्तान पेट्रोलियम कॉर्पोरेशन लिमिटेड (एचपीसीएल) ने ग्रीन हाइड्रोजन (जीएच₂) उत्पादन के लिए अपने एचपी हरित अनुसंधान एवं विकास केंद्र, बेंगलुरु में भारत का पहला सॉलिड ऑक्साइड आधारित इलेक्ट्रोलाइजर (एसओई) आरंभ कर दिया है. यह अत्यधिक कुशल प्रायोगिक स्तर का इलेक्ट्रोलाइजर है जो 99.99% शुद्धता के साथ ग्रीन हाइड्रोजन का उत्पादन कर सकता है तथा ग्रीन हाइड्रोजन और इससे संबंधित उत्पाद बनाने के लिए इस तकनीक के मूल्यांकन में यह



एक महत्वपूर्ण कदम है. एचपीसीएल के निदेशक ए. भरतन ने बताया कि यह अपनी तरह की पहली एसओई प्रणाली है जो कैप्टिव सौर और पवन ऊर्जा संयंत्र से उत्पन्न बिजली का उपयोग करके हरित हाइड्रोजन बनाती है, जिसमें 20 किलोवाट सॉलिड ऑक्साइड इलेक्ट्रोलाइजर स्टैक का उपयोग किया जाता है. आरंभ किए गए इस एसओईसी की खास बात यह है कि इलेक्ट्रोड/इलेक्ट्रोलाइट्स के लिए दुर्लभ सामग्रियों की आवश्यकता नहीं होती है. यह प्रणाली हाइड्रोजन बनाने के अन्य तरीकों की तुलना में लगभग 20 से 30% कम ऊर्जा का उपयोग करती है.

Mobilising climate finance: Imperative of carbon pricing

INDIA NEEDS LARGE financing to meet the climate goals set out in its nationally determined contributions document. Various estimates for India have placed climate finance requirements at \$160-288 billion (₹12.6-22.63 trillion) per year till 2030. India would need to raise a large part of it on its own. India received less than \$8 billion in 2023 for climate finance from official external sources (largely multilateral development banks).

The governments (Centre and states) will have a key role to play in providing climate finance. However, there is hardly any fiscal space at the general government level with the debt-GDP ratio soaring from 70.4% in 2018-19 to 82% in 2023-24 (due to the large pandemic related expenditure). The government tax-GDP ratio has not shown any significant improvement, ranging in a narrow range between 16% and 17.5% in last 12 years. So there is a need to explore all other options to raise resources.

One possible source of revenue could be carbon pricing (carbon taxes and emission trading system or ETS), which has been gaining traction in many other countries. It has become all the more necessary due to the European Union's (EU) cross-border tax mechanism (CBAM) that will become effective from January 1, 2026. The EU-CBAM is ostensibly a tool designed to mitigate the risk of carbon leakage (relocation of production facilities in countries with less stringent carbon emission norms) by imposing a carbon price on six products (cement, iron and steel, aluminium, fertilisers, electricity, and hydrogen) entering EU markets based on their embedded emissions. In India, the impact will be felt largely on its exports of iron and steel (28.3% of its total steel exports go to the EU) and aluminium (27.2%) for their carbon emissions as they largely rely on coal-fired power plants for energy requirements. In the absence of a carbon pricing mechanism at home, carbon tariffs will be required to be paid to the EU, estimated at over €1 billion (for direct emissions) a year. What is worrying is that a similar mechanism is being considered by other countries such as the US, the UK, Japan, Canada, and Australia.

What is the potential revenue that the government could raise, should it decide to introduce carbon pricing? Let's first focus on select fossil fuels which

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are already taxed. Average taxes (based on Delhi, Mumbai, Kolkata, and Chennai) constituted 70% of the base price on motor spirit (MS) and 54% on high-speed diesel (HSD) in 2023. These taxes are a significant source of revenue (15.1% of the central government in the form of excise duties in 2022-23 and 7.8% of state governments in the form of VAT).

MS and HSD contribute 16% of carbon emissions in India. Fuel taxes,

when converted into effective carbon taxes, are estimated at around ₹18,000/tCO₂ (total carbon dioxide) for MS in 2023 and ₹12,000/tCO₂ for HSD. Effective carbon taxes on MS in India in euro terms work out to €216/tCO₂, close to/higher than taxes levied on MS in Spain (€223/tCO₂), Austria (€213/tCO₂), New Zealand (€207/tCO₂) and Norway (€189/tCO₂). Effective carbon taxes on HSD in India work to €143/tCO₂, higher than in Switzerland (€142/tCO₂), South Korea (€139/tCO₂) and France (€133/tCO₂). These countries have much higher level of per capita income than India.

Of other fossil fuels, coal alone accounts for 70% of India's carbon emissions. However, India taxes coal very little at ₹400 per tonne (by way of GST compensation cess). Other carbon-emitting products are: light diesel, fuel oil, naphtha domestic LPG, kerosene, aviation turbine fuel (ATF) and natural gas (with a share of 16% in carbon emissions). All these products are under the GST regime, other than ATF and natural gas, which attract excise duty and VAT.

A key consideration for introducing carbon pricing would be the effective carbon rates which will help raise revenue and also achieve carbon neutrality. The EU has estimated that €120 per tonne of CO₂ will decarbonise the economy by mid-century. Such estimates are not available for India. But effective carbon taxes in the EU could still be an important guide, though €120/tCO₂ would appear to be on the higher side, especially because India has committed to achieve carbon neutrality by 2070. Assuming carbon taxes equivalent to €90/tCO₂ on coal alone, India could generate around ₹8 trillion (4.2% of GDP). An additional revenue of over ₹1.5 trillion (0.8% of GDP) could be generated from petroleum products, other than MS and HSD that are heavily taxed.

Carbon pricing on LPG and kerosene may hurt vulnerable sections. However, they are better protected by direct benefit transfers. Carbon pricing could also impinge on the competitiveness of Indian industry. However, with the introduction of EU-CBAM and similar taxes by other countries expected, there will be no escaping from carbon pricing in India.

Carbon pricing can be an effective tool not only for raising resources over the medium term for mitigation and adaptation, but also for decarbonising the Indian economy in a relatively more predictable manner.



Opec+ plan to restore output spurs debate on oil trajectory

Opec+ set out a timetable for gradually unwinding some of its oil production cuts, sparking a debate about whether the market will be able to absorb those extra barrels.

An agreement reached in Riyadh on Sunday exceeded expectations in some ways, extending so-called "voluntary" output curbs from key members including Saudi Arabia and Russia well into next year. However, it also begins rolling back those supply reductions in October, earlier than some Opec-watchers had assumed.

Reaction to the deal was mixed, with some analysts highlighting the stability and predictability stemming from the long extension of the cuts, but others expressing doubts about whether Opec+ really will be able to follow through with production increases next year as rival supply surges.

"The decision to provide taper forward guidance will likely please officials in Washington" who want to see a moderate oil price, RBC's head of Global Commodity Strategy Helima Croft said in a note.

BLOOMBERG



Opec+ to begin rolling back the supply reductions in October. **BLOOMBERG**



Refined Russian Petro Goods Imports Rise 14% in May

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New Delhi: India's import of refined products from Russia increased by 14% sequentially in May, while that of crude remained flat.

Import of refined products increased to 164 thousand barrels per day (TBD) in May from 144 TBD in April on higher imports of naphtha, which more than tripled to 77 TBD, according to ener-

gy cargo tracker Vortexa.

Fuel oil and naphtha are the key refined products that India imports from Russia, said Serena Huang, an analyst at Vortexa.

State-run refiners, who account for about a third of the refined products imported from Russia, brought in 77% more Russian products in May. India's imports of Russian products in May were 30% lower than China's and 70% lower than



Europe's. In the same month, China's import of Russian products was down 37% sequentially to 238 TBD while that of Europe was 12% higher at 548 TBD. Before the start of the Russia-Ukraine war in February 2022, India imported little refined products or crude oil from Russia. But imports of both crude and products rose sharply after Russia invaded Ukraine on February 24.

India is a heavy importer of crude but a net exporter of refined pro-

ducts. It mainly exports diesel, petrol and jet fuel while importing LPG, fuel oil and bitumen.

In May, India imported 1.7 million barrels per day of crude from Russia, 1.5% lower than the volume in April. On the other hand, Russia's share in Indian imports marginally declined to 37.9% in May from 38.1% in April.

"Russian crude remains attractive to Indian refiners, amidst tight Middle East sour crude supplies.

Securing India's energy transition

One of the outgoing government's initiatives that has garnered less attention than it deserves has been its effort to secure critical minerals that are needed for India's energy transition targets. A report in this newspaper last week highlighted India's efforts to sign new agreements or update older ones with a dozen African countries.

Earlier this year, the Indian government signed an agreement with Argentina to acquire five lithium brine blocks for exploration and development in that country. The lithium exploration deal with Argentina is a step towards securing lithium supplies needed for electric vehicle (EV) batteries.

A few months ago, the government made efforts to attract private miners — both domestic as well as global — to take up critical mineral exploration blocks within India. Though the auction for the 20 critical mineral blocks on offer finally needed to be scrapped last month, possibly because of lukewarm interest from bidders, it showed that the government recognised the criticality of securing the critical minerals.

The new government that will take charge shortly will need to continue and accelerate these initiatives. It will also need to make policy tweaks to ensure that we are more successful in our efforts than we have been in the past. In the past half-decade, though the outgoing government recognised the problem of India being too dependent on imports, primarily from China, for critical minerals, the solutions it has tried out have been less successful.

Solar panels and EV batteries need minerals like lithium, cobalt, nickel, cadmium, germanium, niobium, beryllium, vanadium, and many others. Lithium often gets more media attention because Li-ion battery chemistry is dominant in the current generation of EVs, apart from powering all mobile phones and

tablets. The other minerals are required in lower quantities, but each of them is a critical component in the energy transition journey. For almost all of these minerals, we are dependent on imports—specifically, imports from China.

India has been late in grasping that its energy transition goals are vulnerable due to its reliance on supplies from China. It is not the only country that has belatedly come to realise this. Even the US has only just woken up to the fact that it has let China dominate the critical minerals supply chain. China is not the

leader when it comes to proven reserves in most of these critical minerals, but it has spent decades building up relationships with mineral-rich countries in Africa and Latin America. Chinese companies have secured mining rights in mineral-rich but economically poor nations — while the US, Europe, and even Australia have been tardy to move on these opportunities. China has also built huge capacities for the processing and refining of these minerals — which means that almost all these critical mineral ores, from lithium to cobalt

to rare earths — go to China for processing after being mined in different geographies.

For India, becoming independent of China for critical mineral supplies will involve a three-pronged effort. The first involves exploration and geological studies to see if India has reserves of one or more of these critical minerals. In the past, the conventional wisdom was that India lacked these minerals. However, the truth is that simply not enough exploration has taken place till now because the requirement of these minerals was low.

According to reports, the outgoing government asked the Geological Survey of India (GSI) and other agencies to accelerate exploration of India's land mass of 3.2 lakh sq km, and also use new data sources as

well as new technologies. This is much needed because the GSI last year discovered inferred lithium reserves of 5.9 million tonnes in J&K because of fresh exploration. The new government needs to also increase the ambit of minerals being explored — for example, currently White Hydrogen deposits are not being actively explored and yet they may be present within India's geographical borders.

Of course, not all reserves that are discovered can be developed and extracted — some of the reserves may be discovered in ecologically sensitive regions and others may fall in regions that may be considered no-go because of security or other concerns. And then, the government needs to analyse why auctions often do not generate enough interest. Policy changes may be needed to attract big players — with both the Centre and state governments working together on clearances before any auction takes place, and also looking at royalty payments.

Securing mining leases abroad for critical minerals is the second part of the equation. Whether India discovers enough reserves of critical minerals within its geographies or not, having multiple sources of supplies is always better. China and others recognise this. Many European countries, as well as the US, do not want to develop some of their own lithium reserves because of environmental concerns, preferring to source the mineral from Latin America and Australia.

Finally, the new government needs to give strong incentives to start building refining and processing capacities within India for these minerals. There is no point in sourcing raw minerals if they then have to be sent to China or other countries for refining and processing.

Securing critical minerals for India's energy transition is essential — and the new government must ensure that it gives it the attention it deserves.



PROSAIC VIEW

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WELSPUN ENTITY SIGNS ₹3,670-CR ARAMCO DEALS



WELSPUN'S
ASSOCIATE ENTITY
EPIC has signed
multiple agreements
worth about ₹3,670 crore) with
Saudi Arabian Oil Co (Aramco) for
the supply of steel pipes.

FE BUREAU & AGENCIES

ओपेक की कटौती से नहीं बिगड़ेगी तेल आपूर्ति

शुभायन चक्रवर्ती
नई दिल्ली, 3 जून

ओपेक प्लस देशों द्वारा कच्चे तेल का उत्पादन मौजूदा स्तर पर जारी रखे जाने से भारत की आपूर्ति प्रभावित होने की आशंका नहीं है। पेट्रोलियम एवं प्राकृतिक गैस मंत्रालय के अधिकारियों ने कहा कि वैश्विक औद्योगिक मांग कम रहने और रूस के कच्चे तेल पर छूट जारी रहने की स्थिति में भारत की आपूर्ति प्रभावित नहीं होगी।

रविवार को ओपेक प्लस देशों ने उत्पादन में स्वेच्छिक कटौती की अवाधि आगे बढ़ाने का फैसला किया था। इस समूह ने उत्पादन में कुल 58.6 लाख बैरल प्रतिदिन या तेल की वैश्विक मांग का 5.7 प्रतिशत कटौती जारी रखने की घोषणा की है।

इसमें प्रमुख उत्पादन में 36.6 लाख बैरल प्रतिदिन की कटौती 2025 के अंत तक किया जाना शामिल है। साथ ही सऊदी अरब और रूस सहित 8 देशों द्वारा वर्तमान में लागू की जा रही 22 लाख बैरल प्रतिदिन उत्पादन में कटौती को भी 3 महीने के लिए सितंबर के अंत तक बढ़ा दिया जाएगा। कटौती की यह योजनाएं जून के अंत तक खत्म होने वाली थीं, लेकिन अब इसे अक्टूबर 2024 से सितंबर 2025 के बीच चरणबद्ध तरीके से समाप्त किया जाएगा।

एक अधिकारी ने कहा, 'ताजा घोषणा उत्पादन में मौजूदा कटौती को जारी रखने की है। इससे भारत को कच्चे तेल की आपूर्ति

रूस से सस्ता तेल

■ छूट जारी रहने के कारण रूस से आयात मई में बढ़कर 10 महीने के उच्च स्तर पर

■ मई तक भारत के कुल आयात में रूस के कच्चे तेल की हिस्सेदारी 40.9 प्रतिशत बनी हुई है

■ दुलाई की लागत बढ़ने और जहाजों की लूट के जोखिम से भारत को तेल की आपूर्ति बाधित होने से अस्थायी रूप से तेल के दाम में उतार चढ़ाव संभव

■ ओपेक प्लस की घोषणा के बाद कीमत 80.75 डॉलर के स्तर पर स्थिर



में कोई बदलाव होने की संभावना नहीं है।' अधिकारियों ने कहा कि दुलाई की लागत बढ़ने और जहाजों की लूट के जोखिम से भारत को तेल की आपूर्ति बाधित होने से अस्थायी रूप से तेल के दाम में उतार चढ़ाव हो सकता है।

एक अन्य अधिकारी ने कहा, 'हम लाल सागर और फारस की खाड़ी में स्थिति की निगरानी कर रहे हैं। 2022 से भूराजनीतिक

जोखिम बार बार बढ़ने से इस क्षेत्र में समुद्री व्यापार मार्ग बाधित हुए हैं। अब तक भारत का आयात बहुत ज्यादा प्रभावित नहीं हुआ है, लेकिन स्थिति लगातार गतिशील बनी हुई है।'

कच्चे तेल की वैश्विक मांग में गिरावट की चिंता से तेल उत्पादक देशों की चिंता बढ़ी है। ओपेक ने 2024 के आखिरी महीनों में तेल की मांग बढ़ने का अनुमान

लागाया है, वहीं मांग में वृद्धि को लेकर स्थिति अनिश्चित है। चीन सरकार के आंकड़ों से पता चलता है कि अप्रैल महीने में चीन के कच्चे तेल का उत्पादन 3.3 प्रतिशत घटकर 143.6 लाख बैरल प्रति दिन रह गया, जो अगस्त 2022 के बाद सालाना आधार पर पहली मासिक गिरावट है।

अधिकारियों को उम्मीद है कि कम मांग के कारण कीमतों में कमी रहेगी। अप्रैल की

शुरुआत में कई बार 90 डॉलर प्रति बैरल के पार जाने के बाद ब्रेंट क्रूड अब मई में 81-82 डॉलर के स्तर पर स्थिर हो गया है। ओपेक प्लस की घोषणा के बाद कीमत 80.75 डॉलर के स्तर पर स्थिर है और यह सोमवार को रिपोर्ट लिखे जाने के वक्त 80.8 डॉलर प्रति बैरल थी।

बहरहाल अधिकारियों ने कहा कि वैश्विक अर्थव्यवस्था में बढ़ती अनिश्चितता से ओपेक को आगे कदम उठाने को मजबूर होना पड़ सकता है और आगे अगार और कटौती होती है तो इससे आपूर्ति का संतुलन प्रभावित हो सकता है। ओपेक ने 2024 तेल के वैश्विक मांग में वृद्धि का अनुमान लगाया था। मार्च से अब तक इसमें कोई बदलाव नहीं हुआ है और 22 लाख बैरल प्रतिदिन बना हुआ है।

अधिकारियों ने यह भी कहा कि भारत के तेलशोधकों को छूट पर रूस से लगातार तेल मिलते रहने का आश्वासन मिला है।

एक सरकारी रिफाइनरी के अधिकारी ने कहा, 'रूस के तेल पर छूट 2023 के मध्य में कम हो गई थी, लेकिन बाद के महीनों में फिर छूट मिलने लगी। मौजूदा स्थितियों को देखते हुए इस बात के कोई संकेत नहीं हैं, कि छूट में अचानक कोई भारी कमी कर दी जाएगी।' वैश्विक ट्रेड इंटरलिजेंस प्लेटफॉर्म केप्लर के अनुमान के मुताबिक मई तक भारत के कुल आयात में रूस के कच्चे तेल की हिस्सेदारी 40.9 प्रतिशत बनी हुई है, जो 42 प्रतिशत के ऐतिहासिक उच्च स्तर की तुलना में थोड़ा कम है।

ड्रैगन ने रूस को दिखाया असली चेहरा

पाइपलाइन के बदले सस्ती गैस की मांग

■ मास्को, एजेंसियां. यूक्रेन युद्ध में फंसे रूस को चीनी ड्रैगन ने अपना असली चेहरा दिखा दिया है. चीन की सरकार ने रूस की मजबूरी का फायदा उठाते हुए साइबेरिया-2 गैस पाइपलाइन के बदले में सस्ती दर पर गैस की मांग कर डाली. यही नहीं चीन ने यह भी कहा था कि वह बहुत कम गैस खरीदेगा. चीन की इस अनुचित मांग के आगे रूस ने झुकने से इंकार कर दिया जिससे अब यह डील लटक गई है. रूस को उम्मीद थी कि यूरोप के गैस नहीं लेने से जो उसे नुकसान हो रहा है, वह कमी वह चीन से पूरा कर लेंगे लेकिन ऐसा हुआ नहीं. इसी उम्मीद में हाल ही में रूसी राष्ट्रपति व्लादिमीर पुतिन ने पद संभालने के ठीक बाद चीन की यात्रा भी की थी. रूस को उम्मीद थी कि इस डील से उसकी कंपनी गजप्राम को लाइफलाइन मिल जाएगा. यूक्रेन युद्ध के बाद रूस और चीन 'बिना किसी लिमिट' वाली दोस्ती का दावा करते हैं लेकिन इस ड्रैगन की इस नापाक चाल से इस बड़े दावे की पोल खुल गई है. फाइनेंशियल टाइम्स की रिपोर्ट के मुताबिक चीन के इस सख्त रुख से साफ हो गया है कि यूक्रेन युद्ध के बाद अब रूस आर्थिक सहायता के लिए बुरी तरह से चीन पर निर्भर हो गया है. चीन ने धौंस दिखाते हुए रूस से कहा है कि वह उसे लगभग उसी दर पर गैस की सप्लाई करे जिस दर पर वह अपने देश की जनता को गैस बेचते हैं. यही नहीं चीन ने यह भी कहा कि वह केवल थोड़ी मात्रा में ही गैस खरीदेगा. वहीं रूस की योजना है कि इस गैस पाइपलाइन से हर साल 50 बिलियन क्यूबिक मीटर गैस की सप्लाई की जाए.



फायदे उठाने की ताक में

- चीन अगर यह डील रूस के साथ बाजार कीमत पर करता तो रूसी कंपनी गजप्राम की किस्मत बदल जाती जो अभी यूरोप के गैस नहीं खरीदने से बहुत घाटे में चल रही है. रूसी गैस कंपनी को पिछले साल करीब 7 अरब डॉलर का बड़ा घाटा हुआ है जो पिछले करीब दो दशक में सबसे ज्यादा है.
- यूरोपीय देश अब रूस नहीं बल्कि कतर जैसे देशों से गैस खरीद रहे हैं जिससे रूस को घाटा झेलना पड़ रहा है. रूस ने अब भी दावा किया है कि साइबेरिया 2 गैस पाइपलाइन डील निकट भविष्य में हो सकती है.
- पुतिन की पिछले महीने चीन की यात्रा के दौरान गैस डील को लेकर चल रहे गतरिध की वजह से गजप्राम के चीफ बीजिंग नहीं गए थे. इसके बदले में वह ईरान चले गए थे.
- बताया जा रहा है कि शी जिनपिंग के साथ मुलाकात के दौरान पुतिन ने तीन मुख्य अनुरोध किया था. इसमें एक गैस डील भी शामिल था.