

An oil spill in an ignored wetland

Northern Chennai is subjected to deeply unfair environmental standards

STATE OF PLAY

Geetha Srimathi

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On December 3-4, Cyclone Michaung, which lingered 100 km off the coast of Chennai for about 16 hours, brought heavy rainfall to the city. It forced the Tamil Nadu government to not only deal with the problem of heavy flooding, but also turn its attention to the wetlands of the heavily industrialised Ennore-Manali region in the northern part of the city where oil had spilled over from the premises of a public sector refinery.

Even as oil from the Chennai Petroleum Corporation Limited (CPCL) refinery flooded houses and entered the Buckingham Canal and the Kosasthalaiyar river, which empties into the Bay of Bengal, at Ennore, the Tamil Nadu Pollution Control Board underplayed the extent of the ecological disaster. Since the spill occurred in inland waters, the Indian Coast Guard could confirm that the oil had entered the sea only through an aerial assessment.

The State government began to act only eight days after the spillage and after it was nudged by the National Green Tribunal (NGT). The government's 20-member oil spill crisis management committee, headed by the Chief Secretary, inspected the mouth of the river, or Ennore Creek, and directed the CPCL to compensate for the damages caused to the environment and the fisher folk, and ramp up remediation.

The initial work was not only delayed but also haphazard. Without an approved standard operating procedure in place and for reasons that are



unclear, the Tamil Nadu State Disaster Management Authority and district authorities, who, as per the draft 'Tamil Nadu State Oil Disaster Contingency Plan', are the nodal agency and the on-scene commander, respectively, took a back seat.

The Department of Environment, Climate Change and Forests set up a coordination centre at Ennore. Along with the CPCL, the Department deployed one oil skimmer and 200 fishermen with their boats from the hamlets of Ennore to remove the oil. As of December 16, 300 additional workers from four sea-cleaning agencies were brought in along with a fleet of machinery comprising five gully suckers, four skimmers, poclains and tippers. Over 50 tonnes of oil-laden sludge have been removed from Kosasthalaiyar so far.

The Department has said that remediation is expected to be completed by December 19. However, it would be unwise to rush the clean up as, in addition to the 11-kilometre stretch from the CPCL plant to Ennore Creek, oil has spread further south till the Kasimedu harbour and up north to the Pulicat backwaters, a fishing ground and also a biodiversity hotspot for thousands of migratory birds.

State government officials and the CPCL said that the incident was "unprecedented" and that they were "caught

unawares". However, in 2017, two cargo ships carrying oil collided near Kamaraj Port in Ennore, significantly affecting the fisherfolk and their livelihoods. Besides, there are 17 highly polluting industries in Manali of which nine are petrochemical, and the residents of the region have been flagging pollution concerns for years.

The Ennore backwaters, where the British once held the Madras Boat Club's annual regatta, is now an ignored wetland. Fly ash from the leaky pipelines of the Tamil Nadu Generation and Distribution Corporation (TANGEDCO), and hot water, used as coolant, from the State-owned thermal power plants have together affected the biodiversity of the region.

In 2017, the NGT ordered TANGEDCO to fix the pipes and remove fly ash from the Ennore Creek. Six years on, no substantial work has been done in this regard. The wetland is still choked with ash, a fine particulate by-product of coal combustion that is known to be carcinogenic.

In 2022, the NGT directed the State to notify under the Tamil Nadu Wetland Mission the full extent of the portion of the Ennore wetlands that have not been encroached on, to protect them from further abuse. It also directed the Environment Department to study the wetlands as per the 1996 Coastal Zone Management Plan and develop a plan to restore the fragile creek ecosystem and the wetland complex of Ennore.

The reluctance of the State government to regulate industries in the Ennore-Manali region and restore the Ennore Creek despite court orders reflects how northern Chennai is subjected to deeply unfair environmental standards.

OPINION 9

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An uneasy climate alliance

It looks like the global energy transition will depend on how well policymakers can cooperate and influence legacy sectors

ILLUSTRATION: AJAY MOHANTY



The 28th edition of the Conference of Parties to the United Nations Framework Convention on Climate Change — COP28 — ended in Dubai last week. For many climate activists, it was a failure, with the action promised in the final communiqué far less than what is the minimum necessary to bend the curve of carbon emissions down towards the zone that would keep the world below 1.5 or even two degrees of global warming. This failure, many believe, was pre-ordained — giving COP28 to a major fossil fuel exporter like the United Arab Emirates, which then chose a president for the conference who was also the head of a national oil company, was hardly likely to lead to more urgent action on greening the world economy.

It is certainly true that this COP saw more than its share of deal-making, and fossil fuel representatives were very visible indeed — as they were, incidentally, in last year's COP at Sharm-el-Sheikh in Egypt. That said, the broader criticism is largely unfair and may also miss the bigger picture.

In fact, some insight into the future path of climate action can come from a closer look at the biography of the COP28 president, Sultan al-Jaber. Yes, he now runs the Abu Dhabi National Oil Company and has since 2016 — in spite of himself being from one of the smaller emirates in the UAE and not Abu Dhabi. But he began his career by founding and running Masdar, the UAE's renewable energy company. Masdar essentially ploughs back some of the earnings from the Emirates' fossil fuel sales into renewable energy investments.

The fact is that, absent large transfers from rich-country exchequers that were always unlikely and now look politically impossible, investment into newer, greener technologies is likely to be financed by the earnings of legacy industries. The energy transition will require, for one, the redirection of the profits earned by current energy companies (as well as their managerial and entrepreneurial energy, if any). Consider, for example, how the Union government is

going about the energy transition in India. It has promised ₹30,000 crore budgetary support to the state-controlled oil companies for their decarbonisation programme; but this is more likely compensation for their politically-mandated under-recoveries on the sale of petrol and diesel. The point of the budgetary support is to ensure, however, that the legacy oil companies continue to devote internal resources to the energy transition within the country. A related approach is visible in the implementation of India's green hydrogen mission: officials have set a capacity target for the state-controlled oil and gas companies, of 230 kilotonnes of green hydrogen by 2024-25.

This logic extends beyond the energy sector to various carbon-intensive sectors from steel to cement. Reducing emissions in these sectors will require the cooperation of the companies that currently dominate those sectors — mainly because decarbonisation will have to be paid for from their own earnings. Naturally, tightened regulation will be the spark for these efforts. But profit has its own motive, and unless a compelling financial argument is visible to the managements and owners of companies in these sectors, they will not just resist, evade, or ignore decarbonisation efforts but also refuse to offer up their profits in the service of innovating and implementing low-carbon alternatives.

The simplest and most theoretically elegant answer to this problem might be to impose stringent regulation and let the market create newer, greener alternatives to legacy companies. Creative destruction would almost certainly give us the best possible outcome if our object is the building of an efficient low-carbon economy. It would also save us the trouble of dealing with companies and investors that have a clear stake in preserving the status quo if at all possible.

Unfortunately, however, we may be out of time to implement this first-best option. Most climate scientists agree that major investments and capacity additions will be needed in the next few years to

make a credible difference before 2030 — without which averting catastrophic warming above the two-degree benchmark would become impossible. It is deeply unlikely that regulations could be devised, passed, and implemented, which in turn causes an entire new set of corporate entities to arise in time to meet this deadline.

So there is no alternative to co-operating with legacy players in legacy industries. This can still work as long as we have a very clear view of their own incentives and how they can be shaped by policy shifts.

At COP28, at least, the presence of the fossil-fuel industry did not prevent the final communiqué from advocating, for the first time, a transition away from fossil fuels. Building a global consensus on this statement seemed impossible a few years ago; it is worth noting that, prior to the Glasgow COP two years ago, fossil fuels were not even mentioned in the final drafts. The final hours of COP28 saw considerable drama about this promised transition: the Saudis and Iraqis in particular refused to play ball until right at the end. Reuters even reported that the Secretary General of the Organisation of Petroleum Exporting Countries, or OPEC, Haitham al-Ghais from Kuwait, had sent a letter urging its members and those of OPEC-plus (which includes the Russian Federation) to oppose any deal at COP28 that singled out fossil fuels rather than emissions in general before their hands were forced by Western delegates and those from small island states. It is easy to imagine, however, that if this COP had been held elsewhere, in a country that the Saudis saw as less sympathetic to their concerns than the UAE, they would have refused to budge at all. At a COP in which the United States refused to budge on finance — and other countries refused to budge on their various vital concerns from biofuels to coal — it is noteworthy that it is the oil exporters that eventually gave in.

For developing nations, the targeting of specific sectors for action, such as coal or oil in energy, has historically been a red line. This is partly because they feel it takes some of the attention off overall emissions — which are higher in the developed world — and partly because they also prioritise a stable transition and energy security. This red line has now been breached. Is this because the participation of legacy companies and sectors provides comfort in the stability of the energy transition?

Next year's COP, to be held in the city of Baku in Azerbaijan — which is highly dependent upon oil and gas exports — is going to test this thesis even more stringently. The Emirates at least seemed committed to playing a balancing role between various factions at COP. Will the Azeris — who are closer to Russia than many other oil and gas exporters — be equally careful? Whether or not compromise can be extended and deepened next year, and turned into actual action in terms of private investment, will depend on whether participants left over from the fossil fuel era are let into the room, and on whether then they are willing to take a constructive stance.

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POLICY RULES

MIHIR S SHARMA

Call for fuel price cut gets shriller as global crude dips below \$80/bbl

Our Bureau

New Delhi

The demand to slash retail prices of petrol and diesel has gained momentum as international crude oil prices dipped below \$80 per barrel last week, stabilising in the \$76-77 range. The clamour for a cut in prices has become stronger given the impressive performance of oil marketing companies (OMCs) from April to September 2023 and with retail inflation in November 2023 staying within the RBI's comfort zone.

A senior government official said a price cut could take place by January 2024.

"There was discussion on fuel price revision during the Budget (vote on account) consultation process of Ministries, but at that point, oil prices were volatile at round \$81-82 per barrel. Now, they have fallen to below \$80, which is within the OMCs' comfort level. The price cut could be more for petrol as the margin gain is higher, and can be utilised to partially compensate for losses on diesel," the official said.

It is not immediately clear whether there will be a cut in excise duty like in November 2021 and May 2022, or the



government will resume the daily fuel price revision exercise, which has been suspended since April 6, 2022.

'MARKET STILL VOLATILE'

"There is a case for price cut considering inflation is down, global prices are in the \$76-77 range and OMCs are in a more comfortable position financially than in H1 FY23. However, there is considerable volatility in the market due to uncertainty over global demand. If prices sustain even at \$80 into the new year, it will further support the price cut narrative," the official explained.

Marketing margins of OMCs would be impacted if Brent sustains at \$85 per barrel, the source said.

Trade sources said that OPEC+ will aim to keep prices in the \$80 per barrel range, which is the fiscal breakeven price for Saudi Ar-

abia, the No 1 exporter.

According to a JM Financial report, at spot Brent price and actual product cracks, OMCs' gross auto-fuel marketing margin has risen to ₹6.4 per litre (vs historical margin of ₹3.5 a litre) and gross auto-fuel integrated margin has gone up to ₹15.2 per litre (vs historical margin of ₹11.4).

Similarly, Prabhudas Liladher expects OMCs — Indian Oil Corporation, Bharat Petroleum Corporation and Hindustan Petroleum Corporation — to witness a strong Q3 FY24 on the back of improvement in gross marketing margins (GMMs) on petrol and diesel.

OMCs' GMMs on petrol and diesel in Q2 FY24 stood at ₹7.6 per litre and ₹1 a litre, respectively. Gross margins on diesel, which were negative in August-October 2023, turned positive in November.

"GMM on petrol stands at ₹8.2 a litre in Q3 till date, while there is a gross marketing loss of ₹0.6 a litre on diesel. In the week ended November 28, GMMs on petrol and diesel stood at ₹9.7 a litre and ₹4.7, respectively. However, sustainability of higher-than-normalised GMMs is questionable in light of the upcoming elections," the brokerage added.

CRUDE DOWN OVER 20% FROM SEPT

Falling Prices of Oil Will Add Extra Zip to Rally in EM Assets

Bloomberg

Emerging-market bonds and currencies have powered ahead this month on optimism over the Federal Reserve's pivot to interest-rate cuts. Falling oil prices are set to deliver a further boost.

Brent crude's slide of more than 20% from its September peak suggests inflation is set to slow even further in developing nations in coming months, which will provide another reason to buy their bonds. Emerging-market currencies are also poised to gain as finances of net-oil importers improve.

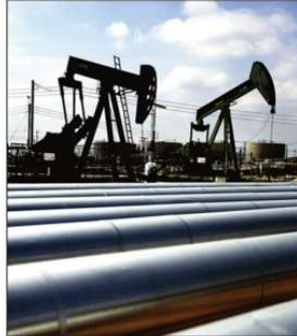
"Oil is always going to be an important piece for emerging markets' inflation or disinflation," said Manpreet Gill, chief investment officer for Africa, Middle East and Europe at Standard Chartered in Dubai. When there's disinflation, local-currency bonds are the place to look because one gets more direct exposure to local rates and the currency, he said. A Bloomberg index of emerging-market local-currency debt has returned 5.6% this quarter, while an MSCI gauge of developing-nation currencies has advanced 3.4%, both on course for the best quarterly performance in a year.

The bulk of recent gains in developing-nation assets has been due to optimism the Fed is finished raising rates. Traders moved to price in as much as six quarter-point cuts from the US central bank next year following a dovish shift in tone at the Fed's December 12-13 meeting. That saw the dollar tumble, and risk assets rally.

INFLATION 'PEAKED'

Falling oil prices may spur further gains in EM assets by adding to downward pressure on inflation. Consumer-price-index data across developing nations as a whole have been undershooting economists' forecasts since December 2002, based on a Citibank surprise index.

"It's clear that emerging-market inflation peaked last year, and oil disinflation has led to a continuation of the deceleration," said Jennifer Taylor, head of emerging-market debt at State Street Global Advisors in London. While slowing inflation has convinced traders to bet on rate cuts from the Fed and other major central banks next year, policymakers in a number of emerging-market economies have already started easing. Brazil,



FILE PHOTO

Chile and Peru have collectively cut their benchmark rates by more than 500 basis points in 2023. The high volatility in market pricing for global rates means 2024 may still be far from plain sailing for emerging-market bonds. Disinflation will continue to be interesting to markets, but at some point investors will start focusing on growth dynamics once more, said Kieran Curtis, director of investment at Abridn in London.

"There will be some countries where I think investors will start to question when the central bank needs to move from tight to stimulative," he said. There are "others where we're looking at a move back from tight to neutral, and some where we're not really looking at a move away from tight policy," he said.

'USUAL SUSPECTS'

Some of the major beneficiaries of lower crude prices will be net oil importers, including many nations in Asia.

"Currencies from the usual suspects such as India, Philippines, Korea and Thailand may stand to gain the most from the oil-price pullback given their net import reliance on crude," said Vishnu Varathan, Asia head of economics and strategy at Mizuho Bank in Singapore. Thailand and India may even leverage further on downstream petrochemical profitability as crude input costs decline, he said.

Declining crude prices are also set to boost emerging-market currencies due to the fact the US has become a net oil exporter since the Covid pandemic, according to Bank of America.

"Higher commodity prices are now associated with weaker EM FX, and stronger dollar, the opposite of what happened in 2010-2019," strategists at the bank including David Hauner in London wrote in a research note this month.

Fossil fuels and the rapid retreat of glaciers



BIJU
DHARMAPALAN

There is link between fossil fuel emissions and global warming that has serious consequences for the Himalayan region

The recently concluded Conference of Parties (COP28) took a major decisive step to end to the fossil fuel era for the survival of humanity. Interestingly this landmark decision was taken from the land of the powerful oil-producer group Organization of the Petroleum Exporting Countries (OPEC). Nations struck a historic deal in Dubai to work towards the transition of the global economy away from fossil fuels. Addressing a meeting with mountain countries at COP28, the U.N. Secretary-General Antonio Guterres emphasised the need to protect the Himalayan glaciers.

The significance of Himalayan glaciers: The Himalaya-Hindu-Kush and Tibetan Plateau, known collectively as the Third Pole (TP), hold the Earth's largest ice mass outside the polar regions. In contrast to the Arctic and Antarctic areas, the TP is positioned at a mid-latitude location and is near heavily populated and industrialised regions, spanning across five countries (India, Nepal, Bhutan, China, and Pakistan). It is estimated that



around 240 million people depend on glaciers and ten major rivers originating in the Himalayas. These rivers include the Indus, Ganga, and Brahmaputra. Glacier-fed rivers are vital to the livelihoods of another billion people who live downstream of these rivers in eight different nations, including India. Burned peaks of the Himalayas exhibit a high albedo. Albedo refers to the reflective properties of a surface, indicating the percentage of incoming solar radiation that is reflected into space. Snow and ice have high albedo values because they are highly reflective, meaning they reflect a significant portion of the sunlight that hits them. In the case of the Himalayas, the snow-covered peaks contribute to a high albedo, especially at higher elevations where snow cover is more persistent. Changes in snow cover due to climate

change can alter this effect, potentially influencing local temperatures and weather patterns.

The burning of fossil fuels, such as coal, oil, and natural gas, is a major contributor to climate change, and it has direct implications for the Himalayan glaciers. The increased tourist influx to Himalayan regions, including the glaciers beyond their threshold limit, has enhanced fossil fuel emissions. The burning of fossil fuels releases greenhouse gases, including carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), into the atmosphere. These gases trap heat, creating a "greenhouse effect." The combustion of fossil fuels produces black carbon, a particulate matter that can settle on snow and ice. It is emitted into the atmosphere due to incomplete combustion of fossil fuels in motor vehicles and aircraft exhausts, bio-fuel and biomass. Black carbon reduces the reflective properties of snow and ice, absorbing more sunlight and emitting infrared radiation that increases the temperature. So, when there is an increase in black carbon in the high

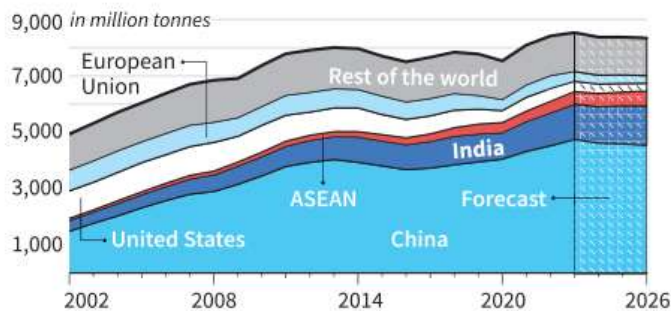
Himalayas, it will contribute to the faster melting of Himalayan glaciers. The rising temperatures cause glaciers to retreat, and the rate of melting exceeds the accumulation of new ice and snow. Glacier retreat contributes to changes in river flow patterns, affecting water availability downstream. As the glacier retreats a moraine-dammed lake forms and meltwater fills the space between the proglacial moraine and the retreating glacier. As the volume of the glacial lake grows, so does the pressure on the dam containing it. Fragmentation of the source glacier, landslides and other processes can trigger displacement waves in the lake, compromising the stability of the dam and resulting in a Glacial Lake Outburst Flood (GLOF). GLOFs pose significant threats to downstream communities. Preserving the Himalayas is crucial for the welfare of the region's diverse ecosystems and local communities.

(The writer is an adjunct faculty at the National Institute of Advanced Studies, Bengaluru, views are personal)

Global coal demand likely to decline 2.3% by 2026: IEA

Coal consumption

Global coal consumption is expected to remain over 8 billion tonnes through 2026. The chart shows the appetite for the fuel



Jacob Koshy
NEW DELHI

Despite production of coal reaching a record this year, global demand is expected to decline by 2026, a report by the International Energy Agency (IEA) says. While the decline is expected to be due to a shift towards renewable energy and plateauing demand in China, India will remain the “driving force” for the fuel until that year.

The report, released on December 15, sees the global demand for coal rising by 1.4% in 2023, surpassing 8.5 billion tonnes for the first time. This increase, however, masks stark differences among regions. While demand in the European Union and United States is expected to drop by 20% each, it is expected

to rise by 8% in India and 5% in China in 2023 due to demand for electricity and diminished generation of hydroelectric power.

The IEA’s expectations of a decline in coal demand is premised also on a change in global climate. The current El Nino conditions, usually linked with a drier monsoon in Asia, are expected to turn to La Nina, which is generally linked to better rainfall, between 2024 and 2026. This will presumably translate to greater hydroelectric power output.

Moreover, a steep upward trend in low-cost solar photovoltaic deployment is expected to aid renewable power generation.

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‘Global coal demand likely to decline by 2026’

“Further to that, nuclear generation is set to see moderate increases, especially in China, India, and the European Union. Against this background, coal-fired generation is likely to be pushed into a downward trajectory from 2024,” the report says.

Currently, a little over half the world’s coal demand comes from China. With a major expansion of renewable energy expected, coal demand in the country is expected to fall in 2024 and plateau in 2026. Overall, this will result in a 2.3% fall in global coal demand by 2026.

Global demand to remain well

Coal, the most important energy source for electricity generation, steel-making, and cement production, is also the largest source of carbon dioxide (CO₂) emissions from human activity. Despite forecasts of a fall, global consumption is expected to remain well over 8 billion tonnes through 2026, the market report says.

“We have seen declines in global coal demand a few times, but they were brief and caused by extraordinary events such as the collapse of the Soviet Union or the COVID-19 crisis, Keisuke Sadamori, IEA Director of Energy Markets and Security, said in a statement.

“This time appears different, as the decline is more structural, driven by the formidable and sustained expansion of clean energy technologies,” he added

Turning point

“A turning point for coal is clearly on the horizon – though the pace at which renewables expand in key Asian economies will dictate what happens next, and much greater efforts are needed to meet international climate targets.”

Reducing use of ‘unabated’ coal, or coal-burning without technologies to capture carbon, is among the explicit agreements of countries signatory to the United Nations Framework Convention on Climate Change, the world’s biggest influencer of climate policy.

To have a chance at keeping temperatures from rising beyond 1.5 degrees Celsius by the end of the century, coal emissions must decline nearly 95% between 2020 and 2050.

China, India, and Indonesia – the three largest coal producers globally – are expected to break output records in 2023, pushing global production to a new high in 2023. These three countries now account for more than 70% of the world’s coal production.

● TRANSFORMATION OF TRANSPORTATION

How to decarbonise the Indian transport sector

COP28 discussions are over. Now is the time for action. Here's how we can green our transportation sector



JAGJEET SAREEN & ANURAG YADAV

THE ANNUAL Conference of the Parties (COP) to the UNFCCC is crucial to turn our climate commitments into concrete actions, and the recent 28th session (COP28) was no different. The world is grappling with a 1.1-degree C increase in temperatures compared to pre-industrial levels, and we must limit temperature rise to 1.5-degree C. According to the UN's *State of Climate Action, 2023* report, to achieve this goal, greenhouse gas (GHG) emissions need to peak no later than 2025, and decline by an average of 43% by 2030 and 60% by 2035, relative to 2019 levels.

Transportation is responsible for 15% of GHG emissions. After industry, it's the second-fastest-growing source of GHG emissions globally. In India, emissions from transport have tripled since 1990.

Reports from Delhi have highlighted alarming AQI, with some areas reaching an unprecedented 999, equivalent to smoking 45 cigarettes a day. According to Dalberg's analysis, air pollution costs Indian businesses \$95 billion, which is equivalent to 3% of India's GDP, every year. These challenges make it imperative to find cleaner transportation solutions.

The growing electric vehicle market is a testament to the positive impact of supportive policies. Despite challenges, only one out of the 42 indicators assessed by the UN's report is on track to achieve its 2030 target, which is the share of EVs in light-duty vehicle sales.

To drive a holistic green transition in India's transport sector, three strategies can be employed.

CNG and biofuels

Firstly, accelerate transition at a molecular level. There are two key components of this — compressed natural gas (CNG) and biofuels. CNG, which produces up to 20% less GHG emissions than traditional fuels, penetrates only 10% of the Indian transportation sector. Although it's estimated to rise to 20% by 2027, the focus needs to be

on commercial road vehicles, which constitute 30% of emissions of the total transport industry, where CNG penetration is going down due to rising operation costs.

The other component, biofuels, is gaining traction. Biofuels have lower emissions intensity than fossil fuels and can play a crucial role in decarbonising transport — even in hard-to-abate sectors like aviation. For example, 20% ethanol blend can significantly reduce GHG emissions, up to 50% for a two-wheeler. India has made progress by achieving 10% ethanol blend in June, with plans to increase to 20% blend by 2025. The government launched Global Biofuels Alliance on the margins of the G20 Summit to scale up production and use of biofuels globally. Innovations such as green hydrogen for transportation (e.g., in aviation) also hold promise for a greener future.



IMAGING BY SHYAM KUMAR PRASAD

GET GOING

■ CNG produces up to 20% less GHG emissions than traditional fuels

■ Biofuels can help decarbonise transport — even in aviation

■ EVs can never go fully green unless the source of electricity is not green

■ In the NCR, ridership of buses has decreased by 50% in the past five years. We need to curb this

EV value chain

Secondly, decarbonise the entire EV industry value chain, which involves electrifying beyond light-duty road vehicles and accelerating the energy transition of India. Investing in public transport

to go green is crucial for reducing carbon footprint. This involves greening the transportation infrastructure (e.g., adopting a low-carbon

strategy for trains, and electrifying buses). Steps have been taken — the electric bus penetration, at less than 10%, is estimated to reach 70% by 2030. The pooled procurement plan of 10,000 electric buses can serve as a good economic model to shift public transport to go green. The government's target of 70% penetration in commercial vehicles by 2030, net-zero targets of railways, and increased demand for electric two- and three-wheelers show promise.

Unfortunately, EVs can never go fully green unless the source of electricity, with renewables right now covering less than 50% of capacity, is not fully green. India needs to be a rapid scale-up for both grid-based and decentralised renewable energy as well as innovations in technologies such as battery storage and charging infrastructure in order to truly achieve a green transition via EVs.

Multi-modal transport

Thirdly, focus on prioritising the multi-modal transportation system, especially in urban India.

Three Indian cities feature in the top-10 congested metro areas of the world. While the ownership of private vehicles is increasing, the usage of public transportation is going down. In the national capital, bus ridership decreased by 50% in the past five years. To curb this, India needs to create strong incentives for people to use public transportation as well as non-motorised modes of transport such as cycling and walking that can significantly decrease emissions per unit of distance travelled. By incorporating smart city planning with dedicated road infrastructure (e.g., dedicated cycle and bus lanes) in urban areas, we can encourage more people to use these modes of transport and reduce our carbon footprint.

Amidst the COP agenda, which places significant emphasis on gradual elimination of fossil fuels, burgeoning economies such as India find themselves at a pivotal juncture. It is imperative for India to proactively undertake an aggressive strategy, steering a robust course to decarbonise the transport sector. The transformation of transportation not only holds the promise of curbing emissions on a broader scale, propelling India closer to a net-zero status, but also heralds positive economic ramifications for the nation.

Jagjeet Sareen is principal, Dalberg Advisors, and co-lead of its Global Climate Practice. Anurag Yadav is a senior consultant, Dalberg Advisors



RIL's new energy business piques analysts' interest

AMRITHA PILLAY

Mumbai, 17 December

Every decade or so, Reliance Industries Ltd (RIL) sets on a new growth strategy, nudging the markets to value its stock price for newer businesses. For the company's latest energy initiative to expand its green energy and storage portfolio, some analysts are beginning to suggest a closer look at some of its segments.

In his address to shareholders in the company's FY22 annual report, billionaire Mukesh Ambani, chairman and managing director of the company, said: "The green energy value holds great promise to outshine all our existing growth engines in just 5-7 years".

The company has marked an investment of ₹75,000 crore towards its new energy plans, which include solar energy value chain, green hydrogen, energy storage and other similar businesses.

Of this, the solar modules business appears to be shaping up sooner than the other segments. Brokerage firm Jefferies in a December 5 note said: "Don't ignore the renewable equipment business."

Analysts with Nuvama in an October 28 report noted, that their channel checks suggest RIL is inching closer to commissioning the first

tranche of 5 gigawatt (Gw) module manufacturing capacity in the first quarter of the next financial year. Both brokerage firms suggest the new energy business merits further consideration.

Jefferies in its note said, "We see little value being imputed to renewables in CMP (Current Market Price)", noting they assign an underlying value of \$18 billion to RIL's solar business and \$11 billion to the green hydrogen business.

Nuvama has built a \$12.3 billion base value for RIL's new energy business in its SOTP (sum of the parts) calculation. Of this, the analysts said they value RIL's modules business at \$6 billion. In their October 28 report, they noted, "RIL's venture in new energy shall unleash the next leg of growth and potentially re-rate its valuation, besides aiding its conventional business."

Morgan Stanley has assigned a \$20 billion enterprise value in the SOTP calculation to RIL's overall enterprise value for the target price. The brokerage firm, in its November 20 report, lists new energy as one of the catalysts that can surprise and drive outperformance in 2024. "NewEnergy/Chemicals/Digital monetisation to surprise and are not priced in the stock," it said.

THE NEW ENERGY PLAN

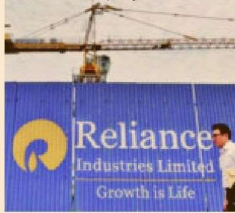
Five gigafactories:

Electrolyser, solar-photovoltaic, power electronics, fuel-cell, and advanced energy storage

Investment:

₹75,000 cr

Source: Company disclosures



Russian oil discounts for India set to rise

Rituraj Baruah &
Vaageesh Thirumalai

NEW DELHI

Discounts on Russian oil purchased by Indian refiners are likely to increase going ahead with a fall in global demand and India looking at further diversifying its supplies.

People in the know of the developments said that currently the discounts are in the range of \$4-6 per barrel and may reach \$10-12 per barrel soon.

"A dip in global demand has forced exporting countries to sweeten their offers and with a fall in oil prices Russia also would try to cater more to India, which has been a major procurer of its supplies in the past two years," said an industry stakeholder requesting anonymity.

Further, a recent dip in import from Russia is expected to boost discounts on supplies from the country. Data from Platts (part of S&P Global Commodity Insights) showed that Russian crude exports to India hit the lowest level of 2023 in November at 1.3 million barrels.

Pulkit Agarwal, head of India content, S&P Global Commodity Insights said the price of



Russia has emerged as the largest supplier of oil to India since its invasion of Ukraine in February 2022. BLOOMBERG

delivered Russian Urals crude at Indian ports as assessed by Platts remains at a discount level of below \$5/barrel to Dated Brent.

Prashant Vashisht, senior vice-president and co-group head—corporate Ratings, ICRA said: "The discount on Russian crude currently is around \$5-6 per barrel. In September, India saved around \$429 million in total with purchase of 5.8 million tonnes of Russian crude."

Russia has emerged as the largest supplier of oil to India

since its invasion of Ukraine in February 2022 amid western sanctions on Russia. Data from the commerce ministry showed that supplies from Russia comprised 33.4% of the total oil imports by

India in September. In November, the share declined to 30.9%, showed the Platts data.

The global slowdown has also made other major suppliers like West Asian

countries sweeten their offers. Reuters recently reported that Saudi Arabia has cut the price of the Arab light crude to be supplied to Asian countries

Currently, the discounts are in the range of \$4-6 per barrel and may reach \$10-12 per barrel soon

in January for the first time in seven months, with a 50 cent a barrel reduction to \$3.50. Iraq also has been offering competitive discounts to India in the past one year.

Debashish Mishra, chief growth officer, Deloitte South Asia, said: "Oil prices have moderated of late primarily due to global demand slowdown, lesser than anticipated fall in temperatures during the winters in northern hemisphere, US not replenishing its strategic reserve at the rate that market was expecting and a lack of unwillingness among several Opec+ members for a further supply cut has resulted in this negative bias in oil prices." He added that low demand may further push suppliers to offer better discounts.

A recent S&P Global Commodity Insights report noted that after years of turbulence, global markets are still striving to find sustainable balance between energy supply and demand. Queries mailed to the petroleum and natural gas ministry, Indian Oil Corporation Ltd, Hindustan Petroleum Corporation Ltd, Bharat Petroleum Corporation Ltd remained unanswered till press time.

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Tonnes of waste oil still flowing into Ennore

The floods from Cyclone Michaung had triggered an oil leak in the Chennai Petroleum Corporation Limited (CPCL)

SV KRISHNA CHAITANYA @ Chennai

THE Chennai Petroleum Corporation Limited (CPCL) and Tamil Nadu Pollution Control Board missed the deadline set by the southern bench of the National Green Tribunal to complete the oil spill clean-up by Sunday, as tonnes of thick waste oil continue to flow in the water bodies in Ennore and eventually drain into sea. The NGT is scheduled to hear the case again on Monday.

Worse, this paper caught workers in the act of attempting to dump bags of the toxic oil waste in the sensitive mangrove vegetation. Already, a large patch of mangroves in Kosasthaliyar river in Sadayankuppam and in Buckingham Canal flowing adjacent to it are loaded with oil. When this paper visited the spot on Sunday afternoon, there were seven boats carrying 30 personnel removing the oil-soaked water plants from the Buckingham Canal. While a few men were wearing the personnel protective gear, others were working barefoot and without gloves, despite the health hazards.

The workers painstakingly removed close to 30 bags of debris covered in oil, which is a toxic and hazardous waste and must be transported to a Common Hazardous Waste Treatment Storage and Disposal Facility as per the protocol.



Workers cleaning the waterbody polluted by oil spill in Ennore | EXPRESS

All five of my family members had been hospitalised due to acute diarrhoea, vomiting and fever. My two-year-old grandson is suffering a lot. Oil that came with flood waters have destroyed everything. No relief has been provided to us. No official visited us.

K Shobha, Shakthi Ganapathi Nagar resident

However, a person, who seemed to be leading the clean-up drive, directed the workers to dump the bags on the canal bank close to the mangrove vegetation. As soon as he saw this reporter video recording the act, he had the workers load the bags back into the boat. This paper has footage of workers dumping the bags and then reloading them into the boat.

The booms deployed upstream seemed inefficient considering the quantum of oil flowing downstream and into the sea.

At noon, the sun was harsh and the majority of workers were seen in great discomfort,

their bodies covered with toxic oil stains from head to toe. In addition, there was heavy discharge of untreated sewage into the Buckingham Canal at Sadayankuppam even as the clean-up drive is underway.

This paper shared footage of workers dumping hazardous waste on the canal bank with environment secretary Supriya Sahu, who swiftly ensured all the bags were accounted for.

Meanwhile, the clean-up hasn't even started near the mangroves area in the Kosasthaliyar river.

Residents at Satyamurthynagar and Shakthi Ganapathi Nagar, who live close to Bucking-

ham Canal, have endured several nightmares as the flood water carrying oil entered their homes during the recent cyclonic storm Michaung.

K Shobha, a 55-year-old resident of Shakthi Ganapathi Nagar, told this paper all five of her family members had been hospitalised for a week due to acute diarrhoea, vomiting and fever. "My two-year-old grandson suffered a lot. The oil that came with flood waters destroyed everything we had. Despite such a grave situation, there was no relief provided to us. No official visited us."

Meanwhile, The coastline in Pulicat continues to report beaching of tar-like oil balls. This paper visited Korai Kupam, where there is clear presence of oil on the beach.

N Narayanan, president, Tiruvallur Fishermen Cooperative Society, said traces of oil slick were noticed near the Pulicat fish market as well on Saturday, but the tide has washed off contaminants.

"The representatives from 33 villages will be meeting the Tiruvallur collector to give a representation on Monday. There are nearly 3,000 fishing boats here and none have gone fishing as the fish smells of the oil," Narayanan said. The usually bustling fish market in Pulicat wore a deserted look on Sunday.

The fishermen said the water

current is flowing from north to south. "If more oil enters the sea through Ennore bar mouth, the oil slick can reach the beaches of Chennai in the coming days," R Vinod, a Pulicat fisherman said.

A group of women, with whom this paper interacted, said there was oil all over the beach on Saturday and even on Sunday although the intensity had come down. They showed their hands and clothes soaked in oil. These women collect dead shells for a living.

For its part, CPCL, in a press release, claimed that due to unprecedented flooding, the water level in the Buckingham Canal increased causing reverse flow. This appears to have carried some oil from CPCL refinery as well as from other industrial units in Manali area into Buckingham Canal when the flood levels receded.

It also said that an oil slick has since been formed near the Ennore creek but that CPCL has the expertise and capability to deal with this and has taken the lead to remove this oil slick in coordination with state authorities. "There has been no pipeline leak or leakage from tanks in the refinery," it said. CPCL has mobilised four agencies from Chennai, Mumbai and Paradip for clearing the oil spill. Containment booms have been arranged on emergency basis.

US shale surge challenges Opec's tightening grip on oil markets

Bloomberg

feedback@livemint.com

The Organization of Petroleum Exporting Countries (Opec)'s one-time nemesis—US shale—is rearing its head just months after the sector was all but written off as a threat to the cartel's sway over worldwide oil markets.

Drillers from the Permian Basin in West Texas to the Bakken Shale of North Dakota have ramped up oil production well beyond what analysts foresaw, pushing output to a record just as Opec and its allies put the brakes on supplies in a bid to arrest price declines.

This time last year, US government forecasters predicted domestic production would average 12.5 million barrels a day during the current quarter.

In recent days, that estimate was bumped to 13.3 million; the difference is equivalent to adding a new Venezuela to global supplies.

That growth is reverberating around the world, calling into question the Opec+ group's strategy of curbing supplies to prevent the potentially catastrophic price impacts of a glut. It also makes clear that the legions of companies that pump oil from US shale fields still wield enough power to bedevil the cartel's efforts.

"The US clearly played a huge role in the global market in 2023, including pressuring Opec+ to curtail their output," Wood Mackenzie Ltd. analyst Ryan Duman said during an interview.

The Organization of Petroleum Exporting Countries,



Us drillers have ramped up oil production. BLOOMBERG

abetted by its Russian ally, overtly sought to check the influence of North American shale as early as 2014, when the group flooded world markets with crude in a bid to recapture market share from the ascendant US oil sector. The move

aggravated an existing supply glut and triggered a 65% plunge in crude prices that took 14 months to bottom out.

That collapse sent a jolt through the economics of US shale, ending years of breakneck production growth. And although the expansion eventually resumed, it was thrown into reverse by the global pandemic in early 2020. The shale industry emerged from that setback with a resolve to prioritize returning cash to investors instead of chasing production gains.

Meanwhile, in the years since the 2014-2016 selloff, the Opec+ alliance, as it came to be known, worked to enforce supply quotas among member nations as part of a broader strategy of balancing global supply-and-demand to main-

tain robust prices.

That self discipline helped stabilize the market in 2020, and again this year in the face of slowing demand and a glut of oil. But Opec+'s latest cuts announced at the end of November haven't stopped crude from slipping further. And all the while, US shale—plus production in places like Brazil and Guyana—has crept higher. Further action by Opec+ may be needed to shore up the market: Saudi energy minister Prince Abdulaziz bin Salman told *Bloomberg* earlier this month that the group can "absolutely" maintain discipline beyond the first quarter of 2024 if required.

The Opec+ 1 million barrels-a-day voluntary output cut won't inspire much confidence as smaller members have little

incentive to abide by its terms and larger ones may not reduce exports due to seasonality.

Part of what makes US crude surge surprising is that companies managed to increase production even as the number of drilling rigs at work fell roughly 20% this year. That productivity gain has confounded many analysts and researchers who have long relied on the so-called rig count as a predictor of future crude output.

Explorers are squeezing crude out of new wells more efficiently because of innovations in everything from electric-pump technology to new strategies for deploying workers while fracking wells to minimize downtime. A key example has been the replacement of the decades-old pumpjack with high-tech underground gear.

Was CoP-28 a cop-out or did the conference achieve something?

Each country should ideally have a fair share of the remaining global carbon budget and adequate access to climate finance



MONTEK SINGH AHLUWALIA

is former deputy chairman, Planning Commission, and currently distinguished fellow at the Centre for Social and Economic Progress.

CoP-28 attracted over 84,000 participants to Dubai, more than twice the previous high at CoP-26. The officials actually engaged in negotiating the final text were far fewer. The others were individuals from NGOs, scientific institutions and think-tanks, philanthropies and the international corporate sector.

The 'climate fest' atmosphere may have helped focus international attention in that week on the very serious threats posed by climate change. Whether it also contributed to solving the problem is another matter. UN resolutions are traditionally littered with clauses "recognizing," "noting" and "reiterating" what earlier statements have said. The UAE Consensus is no exception. The question to ask is whether, after cutting through the clutter, there is forward movement. The answer is mixed.

CoP-28 was truly unique in one respect. It was the first of the "global stocktakes" mandated by the Paris Agreement to take place every five years to record the state of progress on climate action and to serve as a "ratchet" to accelerate action if needed. The UAE Consensus has delivered fully on this score. It recognizes that the world is not on track to meet the target of limiting global warming to "below 2° C and ideally 1.5° C" above pre-industrial levels by 2100. If countries implement only their unconditional pledges, expected global warming will be +2.9° Celsius by the end of this century! If all countries actually took the actions needed to achieve their stated net-zero pledges, global warming would still be around 2.1° Celsius.

Experts have said this for some time, but the Consensus now makes it the official view of all signatory countries. The ratchet mechanism has also been triggered because all countries have been asked to consider committing to stronger steps in the new Nationally Determined Contributions (NDCs) due by 2025.

Much has been made of the fact that phasing out of fossil fuels is mentioned for the first time, albeit in the convoluted form of "transitioning away from fossil fuels in energy systems." This is less of an advance than made out to be, because all countries had, in CoP 26, committed to reach net zero by different years around mid-century. It was known that this could only be done by phasing out fossil fuels very substantially.

CoP-28 can be credited with some other important developments. A group of countries has agreed to treble renewable energy capacity by 2030 and to double the rate of improvement in energy efficiency. The Consensus also called for accelerated action in areas previously agreed, such as reducing non-carbon dioxide emissions, particularly methane by 2030.

The significance of these developments will



only be known when new NDCs are submitted by 2025. This draws attention to the fact that the current system, in which NDCs are set voluntarily, is fundamentally flawed. It has helped galvanize some action thus far, but it will be less helpful in future because it gives individual countries no guidance on what they must do that would be consistent with a just transition.

The basic problem is that the remaining "global carbon budget" (i.e., the additional GHGs that can be added to the atmosphere) is limited. Ideally, the NDCs adopted by a country should be calibrated to its 'fair share' of the remaining carbon budget. CoP meetings have routinely talked of the need for a fair and just transition, consistent with the principle of "common but differentiated responsibilities," but they never discussed how to apply it in practice.

If there were some way we could agree on a fair share for every country in the global carbon budget, countries could be required only to live within this share, while being left free to determine how to do it. Net zero dates would be irrelevant. A country should have the choice of reaching net zero later if it is willing to live within its budget.

It is difficult to see how agreement could be reached on a fair share for each of 198 countries. Can we perhaps reduce the scale of the task by considering whether it can be determined for the G20 countries? This group accounts for 81% of total global emissions and its composition includes fossil-fuel exporters and importers. A solution acceptable to the G20 could provide the basis for fixing shares for all countries and be accepted at a future CoP.

Perhaps the G20 troika, comprising Brazil as its current president and India and South Africa as the previous and next presidents, respectively, could propose setting up an international expert committee to suggest credible ways of distributing the remaining carbon budget among G20 countries. It will not be easy to achieve such an

agreement, but if the G20 can't do it, we will have to reconcile ourselves to moving from one CoP to another with little more than just general exhortations on the need for determined action.

Another dimension for judging the UAE Consensus is what it says about financial assistance to developing countries. The Consensus mentions the historical inequity facing developing countries because developed countries have used up a disproportionate share of the available global carbon budget. Providing adequate financial assistance is obviously one way of correcting this inequity.

Unfortunately, the Consensus has little to offer in this area. It acknowledges that the \$100 billion per year by 2020 promised 14 years ago is yet to be achieved and urges that this commitment be met at the earliest. It also acknowledges contributions and commitments made to various UN climate-related funds, including the new Loss and Damage Fund that was agreed upon in principle a year ago at CoP-27.

However, the amounts involved in these UN funds are small. While they assure some flow of resources to specific areas, we cannot judge whether they actually represent additional resources or only a redistribution from an inadequate total.

The UAE Consensus notes the very large scale of additional investment that developing countries will have to undertake. But it does not offer any indication of the scale of financial assistance to be made available. It only states that the investment needed will have to be financed by a combination of domestic and international sources. The latter in turn will be a mix of private and public international flows.

The details are left to the sixth meeting of the Committee of Parties to the Paris Agreement which will be held in 2025. Developing country negotiators have their work cut out in the run-up to that meeting.

A concluding part focused on climate finance is to follow in early January.

आरआईएल की हरित ऊर्जा में बढ़ रही विश्लेषकों की रुचि

अमृता पिल्लै
मुंबई, 17 दिसंबर

लगभग हर दशक में रिलायंस इंडस्ट्रीज (आरआईएल) विकास की रणनीति तैयार कर लेती है और बाजार नए कारोबारों के लिए इसके शेयर का मूल्यांकन करता है। इसके नए ऊर्जा कारोबार के मामले में कुछ विश्लेषक इसकी कुछ श्रेणियों पर करीब से नजर रखने का सुझाव देने लगे हैं।

कंपनी की वित्त वर्ष 22 की वार्षिक रिपोर्ट में शेयरधारकों को अपने संबोधन में कंपनी के चेयरमैन और प्रबंध निदेशक मुकेश अंबानी ने बताया था कि हरित ऊर्जा का मूल्य केवल पांच से सात साल के दौरान ही हमारे सभी विकास इंजनों से आगे निकलने की क्षमता रखता है।

कंपनी ने अपनी नई ऊर्जा योजनाओं के लिए 75,000 करोड़ रुपये का निवेश निर्धारित किया है, जिसमें सौर ऊर्जा मूल्य श्रृंखला, हरित हाइड्रोजन, ऊर्जा भंडारण और अन्य समान कारोबार शामिल हैं।

इसमें से सोलर मॉड्यूल का कारोबार अन्य श्रेणियों की तुलना में तेजी से आकार लेता हुआ दिख रहा है। ब्रोकरेज फर्म जेफरीज ने 5



आरआईएल की नई ऊर्जा योजनाएं

■ 5 विशाल फैक्टरी :

इलेक्ट्रोलाइजर, सौर फोटो वोल्टिक, पावर इलेक्ट्रॉनिक्स, फ्यूल-सेल और उन्नत ऊर्जा भंडारण

■ निवेश : 75,000 करोड़ रु.

स्रोत : कंपनी द्वारा किया गया खुलासा

दिसंबर के एक नोट में कहा है कि नवीकरणीय उपकरण कारोबार को नजरअंदाज न करें।

28 अक्टूबर की रिपोर्ट में नुवामा के विश्लेषकों ने कहा था कि उनकी चैनल जांच से पता चलता है कि आरआईएल अगले वित्त वर्ष की पहली तिमाही में पांच गीगावॉट की मॉड्यूल विनिर्माण क्षमता की पहला हिस्सा शुरू करने के करीब पहुंच रही

है। दोनों ब्रोकरेज फर्मों का सुझाव है कि नई ऊर्जा व्यवसाय पर और विचार करने की जरूरत है। नुवामा ने अपनी एसओटीपी (सम ऑफ द पाटर्स) गणना में आरआईएल के नए ऊर्जा कारोबार के लिए 12.3 अरब डॉलर का आधार मूल्य बनाया है।

विश्लेषकों ने कहा कि इसमें से वे आरआईएल के मॉड्यूल कारोबार का मूल्य छह अरब डॉलर आंकते हैं। उन्होंने 28 अक्टूबर की रिपोर्ट में कहा कि नई ऊर्जा में आरआईएल का उद्यम वृद्धि के अगले चरण को उजागर करेगा और संभावित रूप से इसके पारंपरिक कारोबार को सहायता देने के अलावा इसके मूल्यांकन का फिर से निर्धारण करेगा।

मॉर्गन स्टैनली ने लक्ष्य मूल्य के लिए आरआईएल के संपूर्ण उद्यम मूल्य के वास्ते एसओटीपी गणना में 20 अरब डॉलर का उद्यम मूल्य निर्धारित किया है। ब्रोकरेज फर्म ने 20 नवंबर की अपनी रिपोर्ट में नई ऊर्जा को उन उद्यमों के रूप में सूचीबद्ध किया है, जो साल 2024 में हैरान और बेहतर प्रदर्शन कर सकते हैं। नोमुरा ने 30 अक्टूबर की अपनी एसओटीपी में नए ऊर्जा कारोबार का मूल्य 13 अरब डॉलर आंका है।

सुधार

दिवाली मे आई थी बड़ी गिरावट

दिसंबर के पहले पखवाड़े में डीजल की बिक्री में सुधार

एजेंसी ■ नई दिल्ली

देश में डीजल की खपत में दिसंबर के पहले पखवाड़े में कुछ सुधार आया है। दिवाली के दौरान देश में कुछ ट्रक चालकों के छुट्टी पर जाने की वजह से नवंबर में डीजल की मांग में भारी गिरावट आई थी। सार्वजनिक क्षेत्र की पेट्रोलियम कंपनियों के आंकड़ों से पता चलता है कि दिसंबर के पहले पखवाड़े में डीजल की मांग सुधरी है। हालांकि, यह अब भी एक साल पहले की समान अवधि की तुलना में कम है। देश में डीजल की खपत एक से 15 दिसंबर, 2023 के दौरान 31.5 लाख टन रही। नवंबर के पहले



पखवाड़े के 31.3 टन की की तुलना में यह 0.7 प्रतिशत अधिक है। एक-15 दिसंबर, 2022 में डीजल की खपत 34.3 लाख टन रही थी। यानी एक साल पहले की समान अवधि की तुलना में डीजल की खपत 8.1 प्रतिशत घटी है। उद्योग के

अधिकारियों ने कहा कि नवंबर में बिक्री में गिरावट मुख्य वजह यह थी कि कुछ ट्रक चालक दिवाली पर छुट्टी लेकर अपने घर चले गए थे। डीजल भारत में सबसे अधिक खपत वाला ईंधन है। देश के परिवहन क्षेत्र में कुल ईंधन खपत में डीजल की हिस्सेदारी

40 प्रतिशत है। ट्रांसपोर्ट क्षेत्र की देश की कुल डीजल बिक्री में 70 प्रतिशत हिस्सेदारी है। निजी वाहनों की आवाजाही बढ़ने से दिसंबर के पहले पखवाड़े में सार्वजनिक क्षेत्र की तीन पेट्रोलियम कंपनियों की पेट्रोल की बिक्री 0.7 प्रतिशत बढ़कर 12.2 लाख टन हो गई। अक्टूबर के पहले पखवाड़े में पेट्रोल की मांग सालाना आधार पर नौ प्रतिशत घटी थी और डीजल की बिक्री 3.2 प्रतिशत गिरी थी। हालांकि, नवरात्रिदुर्गा पूजा की शुरुआत ने इस प्रवृत्ति को फलटने में मदद की। नवंबर के पहले पखवाड़े में डीजल की मांग में 12.1 प्रतिशत की गिरावट आई और दूसरे पखवाड़े

में इसमें कुछ सुधार हुआ। एक से 15 दिसंबर के दौरान पेट्रोल की खपत कोविड-प्रभावित-15 दिसंबर, 2021 की तुलना में 9.5 प्रतिशत अधिक और महामारी-पूर्व दिसंबर, 2019 की तुलना में 27.5 प्रतिशत अधिक थी। दिसंबर, 2021 के पहले पखवाड़े की तुलना में डीजल की मांग 9.5 प्रतिशत और-15 दिसंबर, 2019 की तुलना में आठ प्रतिशत अधिक थी। इस साल एक से 15 दिसंबर के दौरान जेट ईंधन की बिक्री सालाना आधार पर 2.6 प्रतिशत बढ़कर 3,09,500 टन हो गई। लेकिन यह दिसंबर, 2019 की तुलना में 8.6 प्रतिशत कम थी।