

Speeding up for energy independence

Oil Gas & Power World Expo 2023, the 11th edition of 'International Integrated Energy Tradeshaw' brings together the stakeholders of energy industry on a common platform during the three days of industrial meet in Mumbai

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As the Indian economy gears up to emerge as a global growth epicenter, the country will witness a substantial growth in per capita consumption which will necessitate India to fast pace its efforts towards energy sufficiency. In the next two to three decades, the Indian subcontinent will be a major demand centre for energy. According to IEA, the growth in India's energy demand will rise at more than three per cent annually from 2021 to 2030 in the stated policy scenario (STEPS), fueled by urbanisation and industrialisation as it will become world's most populous country by 2025.

India's prime minister announced 2070 to achieve Net Zero and in COP 27 shared Low Carbon Development's long-term strategy. According to a recent study, India's



Photos: iStock

energy import bill stands at USD 160 billion and the country accounts for almost 60 per cent of CO2 emissions in the Global South. Going forward, the journey for energy producers in India to meet an increasing energy

appetite will be emission intensive coupled with tough challenges to meet net zero targets. This will require the stakeholders to come together to arrive at doable and viable propositions and ensure fast

track execution.

Oil Gas & Power World Expo 2023, the 11th edition of 'International Integrated Energy Tradeshaw' brings together the stakeholders of energy industry on a common platform during the three days of industrial meet in Mumbai. Energy industry is the backbone of industrial and economic development, and it is critical for this sector to prepare for the black swan events and reduce vulnerability by choosing right energy sources mix to reduce vulnerabilities to external shocks. In today's day and time, it is vital for the energy producers to work together in the same direction than in silos to achieve balance in energy mix. The industry meet has been curated under the guidance of eminent leaders who have led the central advisory boards (CAB) which include R K Srivastava, former director - Exploration; Pankaj Kumar, director - Offshore, ONGC; P K Goswami, director - Operations, Oil India Ltd; S K Moitra, former director - Onshore, ONGC, M V Iyer, director - Business Development, GAIL India Ltd; Rajeev Mathur, director, HCG Group; Sukla Mistry, director - Refineries, IndianOil; Sanjay Khanna,



director - Refineries, BPCL; U K Bhattacharya, director - Projects, NTPC Ltd; A K Jha, former chairman and managing director, NTPC Ltd; D S Nanaware, director - Pipelines, IndianOil; K L Batra, advisor



Chugoku Paints; and Jayant Singh, vice chairman, Inland Waterways Authority Of India.

Suresh Prabhu, former Union Minister, Government of India; and Dr Anil Kakodkar, chancellor of Homi Bhabha National Institute and chairman of Rajiv Gandhi Science & Technology Commission and former chairman of Atomic Energy

Commission will be the chief guests for inauguration of the event on March 1, 2023.

More than 6000 visitors from India and overseas will attend the tradeshaw to experience display of the latest equipment and technology solutions by over 175 exhibitors for applications across up, mid, and downstream of hydrocarbons, power generation, transmission, and distribution industries. Concurrent conferences on E&P, natural gas and LNG, refining and petrochemicals, power, corrosion mitigation, and inland waterways will provide an opportunity to personally meet to network and engage with c-suite executives, technology, and subject matter experts from focused industry groups to build business partnerships during the integrated energy industry tradeshaw in India. More than 400 students from institutes across India will attend the Student Outreach Program (SOP) and learn from the leaders of energy industry in Icon Lectures.

OPEC raises forecast for China-led oil demand growth

Reuters

London

OPEC has raised its 2023 forecast for global oil demand growth in its first upward revision for months, citing China's relaxation of Covid-19 restrictions and slightly stronger prospects for the world economy.

Global oil demand will rise this year by 2.32 million barrels per day (bpd), the Organization of the Petroleum Exporting Countries (OPEC) said on Tuesday in a monthly report. The projection was 100,000 bpd higher than last month's forecast.

"Key to oil demand growth in 2023 will be the return of China from its mandated mobility restrictions and the effect this will have on the country, the region and the world," OPEC

said in the report. "Concern hovers around the depth and pace of the country's economic recovery and the consequent impact on oil demand."

OPEC was upbeat on prospects for the global economy, nudging up its forecast for 2023 growth. But it also said that a relative slowdown remained evident, citing high inflation and expectations of further increases to interest rates.

OUTPUT DOWN

The report also showed that OPEC's crude oil production fell in January after the wider OPEC+ alliance pledged output cuts to support the market. Output declined in Saudi Arabia, Iraq and Iran, offsetting increases elsewhere.

OPEC said its crude oil output in January fell by 49,000 bpd to 28.88 million bpd.

OMCs post profits but may not revert to daily pricing

Rajeev Jayaswal

rajeev.jayaswal@htlive.com

NEW DELHI: State-run fuel retailers Indian Oil Corporation, Bharat Petroleum Corporation and Hindustan Petroleum Corporation have stopped losing money on sales of petrol and diesel, but may not immediately revert to daily pricing of the two auto fuels because of economic and political compulsions, three people aware of the matter said.

Although international oil prices have softened significantly since their June 2022 peak, these companies do not consider it an appropriate time to restore the daily-pricing mechanism because crude oil prices are volatile, retail inflation is high, and assembly elections are due in crucial states such as Tripura and Karnataka, they added, requesting anonymity.

"The fuel price situation has improved significantly as compared to mid-2022. On average OMCs (oil marketing companies) now have positive margins. That is why the Budget has also reduced LPG [liquefied petroleum gas or cooking gas] subsidy for 2023-24. Petrol and diesel are deregulated products and oil companies are free to adjust their retail prices accordingly. There is no provision in the Budget to help oil PSUs for their losses on petrol and diesel," one of the three, a senior government official, said.

Budget 2023-24 proposed a



State-run OMCs have not changed pump prices of petrol and diesel since April 6, 2022, when they were last raised.

HT

₹2,257.09 crore LPG subsidy, 61% lower than ₹5,812.50 crore Budget Estimate (BE) for 2022-23, which was later raised to ₹9,170.50 in the revised budget (RE) of FY23. Apart from that, the government gave a one-time grant of ₹22,000 crore to state-run oil marketing companies (OMCs) for their revenue losses on the sale of cooking gas in RE of FY23.

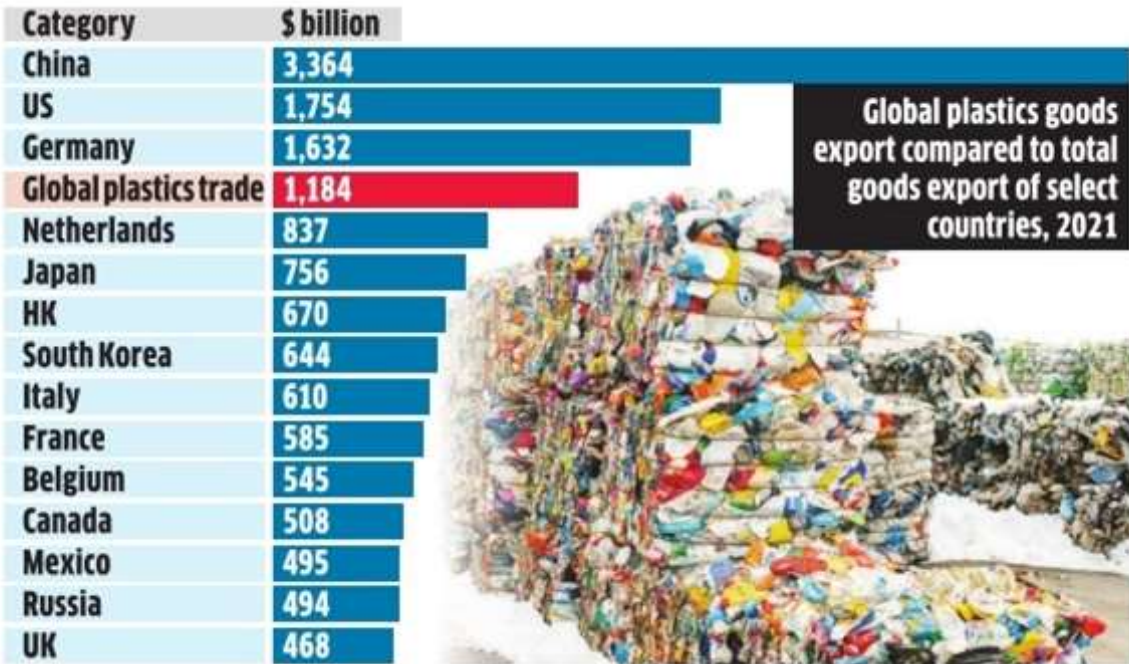
State-run OMCs have not changed pump prices of petrol and diesel since April 6, 2022, when they were last raised to ₹105.41 per litre and ₹96.67 a litre respectively in Delhi. In May 2022 the Central government steeply reduced excise duty on petrol and diesel for the second time (the first reduction took place in November 2021; total central excise reduction was ₹13 a litre and ₹16 on the two fuels, respectively) to calm raising inflation. This was also followed by cuts in value-added

taxes by several states. Consequently, petrol and diesel rates came down to ₹96.72 per litre and ₹89.62, respectively, in Delhi on May 22, 2022. Fuel rates vary across the country due to local levies. Email queries sent to the ministry of petroleum and three OMCs – IOC, BPCL and HPCL – elicited no response. Despite fuel prices being deregulated, the government plays a significant role in deciding what they should be.

"On average, OMCs are barely getting some margin on fuels. They are not in a position to exercise their pricing freedom because inflation that came down in November [5.9%] and December [5.7%], again spiked in January. Besides, there are elections in several states. We are keeping our fingers crossed that international oil prices do not surge again," a second person, an executive at an OMC said.

Plastics Trade

Reducing plastics in world trade is key to tackling pollution, protecting oceans and fighting climate change. Global export of plastics or goods made from plastic has more than doubled in value since 2005 to reach nearly \$1.2 trillion in 2021. In volume terms, plastics export totals 369 million tonnes, up from 218 mt 2005. Comparing global plastics trade's value to that of goods export, only three countries – China, the US and Germany – export more than \$1.2 trillion worth of goods. So, if all the world's plastics export came from one country, say 'plastics nation', it would be the world's fourth-largest exporter without trading any other goods...



For green industrial policy, a rules-based system is key

It is less bad than we feared a couple of months ago," International Monetary Fund managing director, Kristalina Georgieva, said about the global economy at the closing session of the World Economic Forum's annual meeting in Davos. "But less bad doesn't quite yet mean good." One of the not so good issues was the growing murmur of discontent in the European Union (EU) and the United States (US) over green subsidies.

This is not merely of bilateral concern. The push for these new subsidies, and a clutch of green industrial policies and incentives, will shape trade and investment patterns in clean tech industries, and impact prospects for emerging economies to tap into the technology-driven productivity boost offered by the energy transition.

Three concerns are paramount.

First, there is talk of a subsidies war. Former US treasury secretary Larry Summers thought a subsidy war over green technologies is a good thing. When correcting for market failures (such as not costing the impact of pollution from dirty fuels), subsidies play an important role in triggering markets for clean tech.

In August 2022, the US Congress passed the Inflation Reduction Act (IRA), which includes \$369 billion of federal investment in climate to promote green industries such as renewables, nuclear and clean hydrogen. The EU's Fit for 55 programme plans a Social Climate Fund worth €72 billion to support citizens and small businesses to move to clean energy. In December, the European Parliament provisionally agreed on the final text for the Carbon Border Adjustment Mechanism (CBAM), which will impose tariffs on imports from countries deemed as not acting aggressively on climate.

For proponents, these moves signal seriousness about climate action, putting taxpayer money to good use. But they also reek of protectionism. Will revenues from carbon tariffs subsidise EU industries or be returned to developing countries to assist their green transition? The French finance minister argued, "I'm not talking protectionism but about defending economic interests." In defending economic interests, the US is ahead. "The US has some of the best solar and wind sites. With the IRA, the US wins," said an American clean energy entrepreneur with Italian roots. A European oil and gas chief executive bemoaned that while Europe was applying the stick, the US was giving carrots.

India has instituted its own subsidies (\$2.4 billion for green hydrogen; \$3 billion for solar photovoltaic manufacturing). If richer countries use their taxpayer money to reduce costs, everyone benefits. But the quid pro quo must be open and transparent markets. Instead, there is a danger that the subsidies war will tip into a wider trade war, with disputes at the World Trade Organization and restrictions on imports. Trade disputes and uncertainties over industrial policy could stymie investments in clean tech sectors. Growing pressure on renewable energy supply chains, and disruptions in critical minerals embedded in them, would raise costs and increase inefficiencies without rules to ensure regular supply and better governance. What

may begin as a mere bilateral trade disruption could disrupt climate policy and climate action worldwide majorly.

Two, a standards war could begin. Non-tariff barriers have long been a tool of industrial policy. One of the biggest threats is to the development of a global green hydrogen economy. Currently, there are no common standards for what constitutes green hydrogen, its transportation and storage. If market access is sealed off by rival standards, then it becomes a double whammy for emerging economies — having neither the financial resources to subsidise new technologies nor the ability to export renewable energy derivatives such as green hydrogen.

Consequently, a third concern arises: Rising distrust in climate negotiations. At Davos, a senior energy executive from Southeast Asia complained that IRA or CBAM are northern perspectives. Georgieva noted that the EU or US plans would not work for emerging economies, "unless technology transfer is part of [their] plans". But this columnist's analysis of three dozen climate and clean energy initiatives over the past decade found no evidence of large-scale clean tech transfer.

There are three ways to counteract these concerns: Dialogue, definitions, and co-development. In Davos, 50-plus trade ministers launched a Coalition of Trade Ministers on Climate to identify how trade can contribute to climate action while supporting diffusion and access to green technologies. As part of the dialogue, developing countries and emerging economies should ask how they can maintain and enhance their competitiveness in future value chains.

Another approach is to define standards for emerging clean tech that do not lock emerging economies out of new markets. India's G20 presidency is an ideal forum to establish rules and standards for green hydrogen.

Finally, India must promote innovation at home and technology co-development with partners. This would involve pooling financial, human and technical resources, jointly owning intellectual property, commercialising technologies, and leveraging procurement policies, among others. Strategic industrial policy need not come at the cost of building resilient and reliable supply chains among like-minded countries.

For 30 years after the Cold War ended, we witnessed the globalisation of goods, services, and ideas. As the energy transition gains momentum, there is now a risk of increasing weaponisation of energy, resources and minerals, emerging islands of regulation, and mercantilist control over new technologies. Correction of one kind of market failure should not result in the distortion of competitive markets. The outcome would be suboptimal and iniquitous. India's sustainable industrial future depends on applying rules for all, rather than a free for all dash to tech monopolies.

Arunabha Ghosh is CEO, Council on Energy, Environment and Water. He sits on the Steering Committee of the World Economic Forum's Climate Trade Zero initiative. The views expressed are personal.

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ONGC Q3 profit rises 26% to ₹11,045 crore

Press Trust of India
New Delhi

State-owned Oil and Natural Gas Corporation (ONGC) reported a 26 per cent jump in its third quarter net profit on the back of a rise in oil and natural gas prices.

Net profit of ₹11,044.73 crore in October-December compared with ₹8,763.72 crore in the same period a year back, according to a company's stock exchange filing.

The profit was, however, lower than the ₹12,825.99 crore earnings in the immediately preceding quarter of July-September. The rise in profitability was helped by higher realisation on crude oil and gas the firm produces and sells. This offset the con-



STEPPING UP OUTPUT. The rise in profitability was helped by higher realisation on crude oil and gas

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OIL, GAS PRICES

ONGC earned \$87.13 for every barrel of crude oil it produced and sold in the third quarter of the current fiscal, up from \$75.73 a barrel realisation in the year-ago

period. Prices of natural gas rose to \$8.57 per million British thermal unit from \$2.90.

The firm produced 5.39 million tonnes of crude oil in October-December, down from 5.45 million tonnes a year back.

Gas output fell nearly 4

per cent to 5.35 billion cubic metres. For the nine months ended December 31, 2022, profit after tax recorded growth of 24 per cent to ₹39,076.57 crore from ₹31,446.20 crore in the year-ago period.

The firm had reported ₹40,305.74 crore net profit in the full 2021-22 fiscal year.

The turnover increased by 35.5 per cent during Q3 FY23 to ₹38,583.29 crore.

DIVIDEND PAYOUT

The Board of ONGC has declared a second interim dividend of ₹4 per share. This is in addition to the first interim dividend of ₹6.75 per share declared earlier.

The total dividend payout in the second interim dividend would be ₹5,032 crore.



OPEC forecast

New Delhi: OPEC has raised its 2023 forecast for global oil demand growth in its first upward revision for months, citing China's relaxation of Covid-19 restrictions and slightly stronger prospects for the world economy. Global oil demand will rise this year by 2.32 million barrels per day (bpd), or 2.3%, the Organization of the Petroleum Exporting Countries (OPEC) said.

ONGC Q3 net profit increases 26% on higher oil, gas prices

STATE-OWNED OIL AND Natural Gas Corporation (ONGC) reported a 26% jump in its third quarter net profit on the back of a rise in oil and natural gas prices.

Net profit of ₹11,044.73 crore, or ₹8.78 per share, in October-December compared with ₹8,763.72 crore, or ₹6.97 per share, in the same period a year back, according to a company's stock exchange filing.

The profit was, however, lower than the ₹12,825.99 crore earnings in the immediately preceding quarter of July-September.

The rise in profitability was helped by higher realisation on crude oil and gas the firm produces and sells. This offset the continuing decline in oil and gas production.

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the year-ago period.

Crude oil is refined at refineries to produce fuels such as petrol and diesel.

Prices of natural gas, which is used as fuel to produce electricity, make fertilisers and converted into CNG for use in automobiles, rose to \$8.57 per million British thermal unit from \$2.90.

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For the nine months ended December 31, 2022, profit after tax recorded growth of 24% to ₹39,076.57 crore from ₹31,446.20 crore in the year-ago period.

The firm had reported Rs 40,305.74 crore net profit in the full 2021-22 fiscal year.

—PTI



ONGC's Q3 net profit rises 26% to ₹11,045 cr on high gas prices



Board okays 2nd interim dividend of ₹4 per share with face value of ₹5

SUBHAYAN CHAKRABORTY
New Delhi, 14 February

State-run ONGC's net profit increased 26 per cent year-on-year to ₹11,045 crore in the December quarter (Q3FY23) owing to higher prices of gas under the administered price

mechanism (APM).

Net profit was, however, 13.88 per cent lower than ₹12,826 crore India's largest oil and gas producer reported in the preceding September quarter. Gross revenues rose to ₹38,584 crore during the quarter, marking a 35.5 per cent jump from ₹28,474 crore earned in the year-ago quarter.

ONGC shares closed flat with a marginal gain of 30 paise over its previous close at ₹148.45 on February 14 on the National Stock Exchange. ONGC reported a 195 per cent rise in its gas realisation in the latest quarter.

Under the pricing guidelines issued in 2014, the government has raised domestic natural gas price by 41 per cent to \$8.57 per mmbtu (Million British Thermal Units) for the second half of FY23, against \$6.1 per mmbtu in the first half. The spike in domestic gas price has brought some relief to oil and gas producers that faced the heat of windfall taxes.

The company's gross billing for the crude oil it produced rose 15 per cent to \$87.13 per barrel in the quarter from \$75.73 a barrel in Q3 last year. Net realisation after considering windfall taxes stood at \$84.9 per barrel.

On Tuesday, the board approved a second interim dividend of ₹4 to its shareholders on each equity share of ₹5. The total payout on this account will be ₹5,032 crore. The record date for distribution of dividend has been fixed for February 24. The first dividend paid by the company had been ₹6.75 per share.

ONGC produces over 1.26 million barrels of oil equivalent per day, contributing around 71 per cent of India's domestic production. Its wholly-owned subsidiary ONGC Videsh (OVL) is the biggest Indian multinational, with 35 oil & gas assets in 15 countries.

Share of US in India's crude basket rises to record 14% in Dec

ASIT RANJAN MISHRA
New Delhi, 14 February

India has substantially increased crude oil imports from the US, with the country's share in India's crude basket hitting a record 14.3 per cent in December 2022, commerce ministry data showed.

While Russia remained the top source of crude oil with a share of 21.2 per cent in December 2022, India reduced its dependence on Iraq (16.9 per cent), UAE (6 per cent) and Kuwait (4.2 per cent) to accommodate more crude imports from the US. In December, crude oil imports from the US shot up 93 per cent to 3.9 million tonnes (MT).

Till FY17, India didn't import any crude oil from the US.

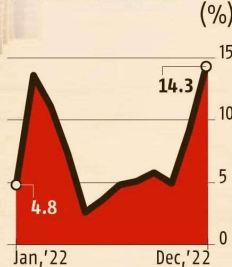
During Trump's presidency, India started buying crude from the US to

REPLACING TRADITIONAL SUPPLIERS



Source: Commerce ministry

SHARE OF CRUDE OIL IMPORTS FROM US (%)



SHARE OF COUNTRIES IN INDIA'S CRUDE OIL IMPORT BASKET (% of total quantity imported)



address Washington's complaint about the trade surplus New Delhi enjoys.

President Trump, who pursued an "America-First" approach, had been

vocal about the perceived high-tariff walls that India put and often called out the country terming it "tariff king."

India continued the high level of

crude oil imports from the US even under the Biden administration.

In FY18, the share of crude imports from the US was just 0.7 per cent for

India. It gained pace quickly, touching 4.8 per cent in FY20 and 9 per cent by FY21. The share of crude imports from the US touched double digits for two consecutive months after Russia invaded Ukraine in February last year but it quickly started dissipating. It touched a low of 2.6 per cent in May, as India ramped up crude oil imports from the sanctions-hit Russia after getting a steep discount.

In August last year, *Business Standard* reported that India slashed crude oil imports from the US (5.4 per cent share) during the April-June quarter of FY23 to 3.4 MT from 4.4 MT during the same period a year ago.

From June onwards, crude oil imports from the US started picking up, touching double digits in December.

India has been under severe pressure

from the Western countries to not buy crude oil from Russia and join the price cap advocated by the G7. However, India has repeatedly defended its right to import cheaper crude oil, citing public interest. In December last year, External Affairs minister S. Jaishankar asserted that New Delhi's procurement was just one-sixth of the European purchase in the last nine months.

This was after a G7 price cap on Russian crude at \$60 a barrel came into effect.

At a media briefing after holding talks with visiting German foreign minister Annalena Baerbock, Jaishankar noted that Europe can't make choices to prioritise its energy needs. He added that discussions between India and Russia to expand the trade basket started much before the Ukraine conflict.

ओएनजीसी का तीसरी तिमाही का मुनाफा 26 प्र. बढ़कर 11,045 करोड़

वैभव न्यूज ■ नई दिल्ली

तेल और प्राकृतिक गैस की कीमतों में बढ़तेतरी से सार्वजनिक क्षेत्र की ऑयल एंड नैचुरल गैस कॉर्पोरेशन (ओएनजीसी) का चालू वित्त वर्ष की दिसंबर में समाप्त तीसरी तिमाही का शुद्ध लाभ 26 प्रतिशत बढ़ा है। कंपनी ने शेयर बाजारों को भेजी सूचना में कहा कि अक्टूबर-दिसंबर तिमाही में उसे 11,044.73 करोड़ रुपए यानी 8.78 रुपए प्रति शेयर का शुद्ध मुनाफा हुआ है, जबकि साल भर पहले की इसी अवधि में यह 8,763.72 करोड़ रुपए या 6.97 रुपए प्रति शेयर रहा था। हालांकि यह मुनाफा, जुलाई-सितंबर तिमाही के

12,825.99 करोड़ रुपए से कम है। लाभ में वृद्धि का कारण कच्चे तेल और कंपनी द्वारा उत्पादित और बेचे जाने वाले कच्चे तेल और प्राकृतिक गैस से अधिक प्राप्ति का होना है। तीसरी तिमाही में ओएनजीसी को प्रत्येक बैरल कच्चे तेल की बिक्री पर 87.13 डॉलर प्राप्त हुए। एक साल पहले समान अवधि में यह आंकड़ा 75.73 डॉलर प्रति बैरल था। बिजली उत्पादन, उर्वरक उत्पादन और वाहनों में सीएनजी के रूप में इस्तेमाल होने वाली प्राकृतिक गैस का दाम तिमाही के दौरान 8.57 डॉलर प्रति इकाई पर पहुंच गया, जो पिछले साल की समान अवधि में 2.90 डॉलर प्रति इकाई था।

Deflators in the CGD story

Uncertainties over gas supply and the government's focus on EVs put the city gas distribution business under pressure

SHINE JACOB
Chennai, 14 February

One of the less celebrated stories in India is the city gas distribution (CGD), which expanded from just 17 per cent of the population in 2017 to 98 per cent today on the back of conducive government policies and aggressive investment by both private and public sector companies. Over the past year, Russia's invasion of Ukraine plus some policy tweaks by the government could take the wind out of its sails.

The 98 per cent population coverage implies these geographical areas are at various stages of execution and operations, as a majority were awarded in recent years. Several companies are starting work on the areas allocated to them, with industry estimates pegging investments and investment commitments to the tune of around ₹1.5 trillion in the last five years.

CGD networks are an interconnected system of underground pipelines for supplying piped natural gas (PNG) for domestic and industrial purposes and compressed natural gas (CNG) for transportation. Supply disruptions, after the European Union turned to India's traditional Gulf suppliers, have put pressure on prices. India imports around 48 per cent of its gas requirement from countries like Qatar, the United States and United Arab Emirates. Over the past year, prices of domestic CNG in Delhi alone increased by around 40 per cent and domestic PNG rose 50 per cent. At the same time, prices of domestic natural gas, for which CGD is given first priority, also rose 40 per cent.

Apart from hardships for domestic consumers using it for cooking, the rise in CGD prices indirectly has an impact on the government's goal of achieving 15 per cent share of natural gas in the energy basket from around 6 per cent now. For one, the

pace of conversion to CNG has almost halved in some areas.

Several other factors have added to this slowdown. The slowdown in the availability of domestic gas — known as APM gas or gas supplied under the administered price mechanism — is also responsible. Based on government data, out of 1,002 million metric standard cubic metres (MMSCM) of gas consumed by the city gas sector in December, around 15 per cent came from imports.

According to data available with the Petroleum Planning and Analysis Cell, between April and November 2022, the fertiliser industry, which uses natural gas as a feedstock for urea manufacture, accounts for 35 per cent of the total natural gas consumed in India, followed by CGD at 20 per cent and power at 14 per cent.

And, finally, the push for electric vehicles (EVs), with several states adding to central government subsidies, is also a cause of concern.

"The government should ensure that APM gas is available for the sector for at least five to seven years, so that the sector picks up. Benefits that are being extended for EVs should also be extended to CNG. Bringing natural gas under the GST regime should also be considered. Moreover, some sops for the consumers for switching to CNG or CGD is required," said Rahul Chopra, managing director of Haryana City Gas.

Most automobiles converted to CNG because of its competitive advantage over petrol and diesel, which has narrowed to ₹17.16 a litre for petrol and around ₹10 for diesel in Delhi now. "Higher PNG prices may also affect the switch from domestic liquefied petroleum gas (LPG) to PNG, albeit to a lesser extent than CNG. Nonetheless, infrastructure build-out at a large number of CGD GAs (geographical areas) should still support overall volume growth in the sector,"

the Fitch Ratings report said.

This state of affairs is in sharp contrast to the rapid developments between 2017 and 2020. Till 2017, cooking gas networks, the legacy of the now-defunct Oriental Gas Company (it started in 1857 in then Calcutta), covered only 17 per cent of the population after eight rounds of bidding. The first round of bidding took place in 2008.

According to D K Sarraf, former chairman of the Petroleum and Natural Gas Regulatory Board (PNGRB), the game-changer was five years of industry-friendly approach by the government and aggressive investment by the private sector. Compared to previous rounds, which saw bidding for only five to 10 GAs, when the government opted for 86 GAs in the eighth round several questions were raised about whether they would be any more successful than earlier rounds.

But Sarraf, whose term ended as PNGRB chairman in December 2020, recalled that during that round, 400 bids were received — around five bids per GA. In 2023, after the completion of 11 A round of CGD, 295 GAs (91 by the end of the eighth round) covering 88 per cent of India's total geographical area spread over around 630 districts, were covered under the CGD network.

"The major reasons for the rise in demand for CGD both from the corporate and consumer side are certain policy initiatives (like giving top priority to domestic gas). Now, CGD networks are being given the top priority in terms of domestic gas allocation, which includes even deep-water gas. In addition, the finalisation of bids and allocation took less than a month during the rounds since 2017. This compared to even three to four years in previous rounds," Sarraf said.

As a result, the number of CNG stations in India increased from around 1,300 in early 2018 to 4,853 now, while PNG connections also increased from 4.1 million to



FUELLING THE FUTURE

	Jan '17	Jan '18	Jan '19	Jan '20	Jan '21	Jan '22	Nov '22
CNG Stations	1,197	1,326	1,596	1,989	2,713	3,878	4,853
Domestic PNG*	3.53	4.12	4.95	5.95	7.42	8.9	10.06
Commercial PNG	21,833	25,711	27,758	28,740	32,059	34,316	36,106
Industrial PNG	6,687	7,418	8,714	10,023	11,010	13,016	14,348

*million

Source: Fitch Ratings

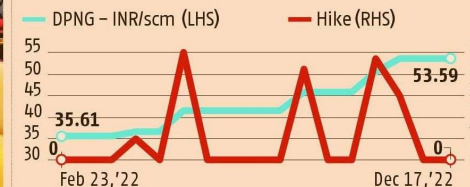
10 million in the same period, a Fitch Ratings report said. Based on the minimum work programme that companies have committed to, this may increase to 17,700 CNG stations and 123 million PNG connections by 2030.

Earlier, the sector was only about public sector units and its joint ventures (JVs); the last few rounds ensured larger participation from the private companies as well. At present, state-run Gujarat Gas is the largest in terms of existing sales, with 27 GAs under

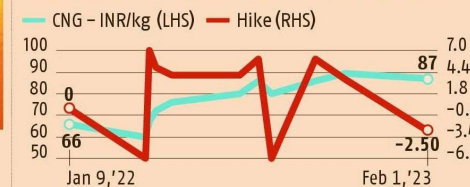
it. Adani Total Gas Limited (ATGL), a joint venture with France's TotalEnergies, has 33 GAs under execution. Another 19 GAs are under execution at ATGL's JV with Indian Oil Corporation (IOC), making the group the largest player in the segment. The other companies include IOC (26 GAs), Bharat Petroleum Corporation (25 GAs) and Megha City Gas (22 GAs), which is a diversified engineering group.

The constraints on gas supply have crimped this growth. "The city gas distri-

DELHI - IGL PRICE HIKE HISTORY



MUMBAI - MGL PRICE HIKE HISTORY



bution sector has continued to witness demand growth, mainly for CNG and PNG (domestic) segments despite an increase in domestic gas prices because it remains competitive vis-à-vis alternative fuels like diesel, motor spirit and LPG though the conversion momentum has slowed down," said Prashant Vasisht, vice-president and co-group head — corporate ratings, ICRA.

But the future of India's transition to this clean fuel will need more than a shrinking price differential to stay on a high.

How J&K's lithium find can be India's white oil moment

SHINE JACOB
Chennai, 14 February

So far, the one claim to fame for the Reasi district of Jammu & Kashmir had been the Salal Hydroelectric Power Station on the Chenab river. It was the first hydropower project in J&K, under the Indus Waters Treaty Regime, completed 35 years ago.

Last week, Reasi sprang into national consciousness again when the Geological Survey of India (GSI) announced the Salal-Haimana area in Reasi could be sitting on 5.99 million tonnes of lithium reserves. The question is, can Reasi now barge into global consciousness by helping India become a force in electric vehicles? That depends on a lot of factors.

In the modern world, as gadgets powered by batteries changed the way we lived, worked, and played, lithium became a much sought-after material as a vital component for their batteries. Now, as electric vehicles promise to change the way we travel, lithium has become more important than ever.

The discovery in Salal Haimana gives India the third largest reserves of lithium after Chile and Australia, sufficient enough to meet the country's lithium ion cell manufacturing needs for the next 50 years, say experts. If the entire 5.99 million tonnes turns out to be extractable, it can support 10 TWh (tera-watt-hour) of lithium ion cell manufacturing. This can be compared to the current demand of lithium ion batteries of 3 gigawatt hour (GWh), which is projected to touch 20 GWh by 2026 and 70 GWh by 2030, according to a report by Arthur D Little.

"India can now push itself as a cell manufacturing hub," said Mahesh Godi, Founder and chief executive officer of Godi India, the first Indian company to get BIS certification to sell lithium-ion cells made with home-grown technology. India has set an EV sales penetration target of 30 per cent for private cars, 70 per cent for commercial cars, 40 per cent for buses, and 80 per cent for two- and three-wheelers by 2030. That makes this discovery critical to India's targets of meeting its climate-related commitments.

The discovery also has the potential to change the dynamics of the global lithium



RISING IMPORTS

(In ₹ crore)

	2018-19	2019-20	2020-21	2021-22	2022-23*
Lithium	202	147	173	165	189
Lithium-Ion	8,574	8,819	8,811	13,673	16,077

*April to December

Source: Department of Commerce

CHARGING UP

■ The current demand of lithium ion batteries, around 3 gigawatt hour (GWh), is projected to touch around 20 GWh by 2026 and 70 GWh by 2030

■ Between 2016 and 2021, GSI has carried out surveys on lithium and associated elements in states like Bihar, Chhattisgarh, Himachal Pradesh, Jammu & Kashmir, Jharkhand, Madhya Pradesh, Meghalaya, Karnataka and Rajasthan

■ The finding in J&K is in the G3 stage (initial assessment), in G2 and G1 stages its commercial viability can be assessed

market. A report by the International Energy Agency says more than half of lithium, cobalt and graphite processing and refining capacity is located in China. The fear that India may become a net importer of lithium resources, just as it is of crude oil, may well be dispelled if the Salal Haimana reserves turn into producing assets.

India's lithium ion imports increased by 55 per cent in value terms from ₹8,811 crore in 2020-21 to ₹13,673 crore in 2021-22. Significantly, during April to November of the current financial year, this jumped further to ₹14,239 crore.

"We do not have lithium ion manufacturing plants in India as of now. The current findings are going to be a game changer for India," said Ankit Mittal, co-founder and chief executive officer of energy storage company Sheru.

Between 2016 and 2021, GSI carried out surveys on

lithium and associated elements in states such as Bihar, Chhattisgarh, Himachal Pradesh, Jammu and Kashmir, Jharkhand, Madhya Pradesh, Meghalaya, Karnataka and Rajasthan. In 2021-22, GSI took up five projects on lithium and associated minerals in Arunachal Pradesh, Andhra Pradesh, Chhattisgarh, Jammu and Kashmir and Rajasthan.

Industry experts told *Business Standard* these states appeared to have a good amount of reserves, which could make India one of the largest hubs in the world. On the question of how much of these reserves are realistically recoverable, an industry expert said at present it was in the G3 stage, meaning initial assessment, where the finding was confirmed. Its commercial viability will be proven in the G2 and G1 stages. This could take five to seven years.

If all goes well, India will gain from the rise in global lithium prices. "Lithium Carbonate and Lithium Hydroxide prices increased from less than \$10,000 per tonne in 2020 to more than \$80,000 per tonne in 2022-23. This is a huge pressure on lithium ion cell cost, pushing up the costs of electric vehicles. This discovery can make India a hub of low-cost cell manufacturing and enable faster adoption of electrical vehicles in the country.

"India can now push for a 100 per cent electrification target of transportation by 2035," Godi added.

If that happens, it will herald a new era for India, dispensing with its dependence on oil imports for transport. After all, it's not for nothing that lithium is called white oil.

ONGC's December quarter profit rises 26 pc to ₹11,045 cr



AGENCIES

NEW DELHI, 14 FEBRUARY

State-owned explorer ONGC on Tuesday reported a standalone profit of Rs 11,045 crore for the quarter ending December 30, 2022, recording a growth of 26 per cent over the Rs 8,764 crore profit recorded during the corresponding peri-

od of last year. The Maharatna company's standalone revenue rose by 36 per cent to Rs 38,583 crore from Rs 28,473 crore registered in the year-ago period. The rise in ONGC's revenue and profit was mainly driven by surging APM gas prices, though they were impacted by a rather subdued growth in its oil and gas business volumes.

The Statesman
PEOPLE'S PARLIAMENT, RUNNERS IN SESSION

Wed, 15 February 2023

<https://epaper.thestatesman.com>



Nuclear fuels, petroleum, retail fuelled credit offtake: CARE Ratings



AGENCIES

CHENNAI, 14 FEBRUARY

Driven by retail credit demand, growth in non-banking finance companies (NBFC) and inflation-induced working capital requirement from sectors such as petroleum, coal prod-

ucts and nuclear fuels, and chemicals and chemical products, credit offtake rose by 16.3 per cent for the fortnight ended January 27, said CARE Ratings.

In a research report, CARE Ratings said the credit offtake rose by 16.3 per cent year on

year (y-o-y) for the fortnight ended January 27.

Incremental credit growth has risen by 12.2 per cent so far in FY23. In absolute terms, credit expanded by Rs 14.5 lakh crore from March 2022, the report said. According to CARE Ratings, with a higher base, deposits witnessed a slower growth at 10.5 per cent y-o-y compared to credit growth for the fortnight ended January 27. Deposit rates have already risen and are expected to go up even further due to rising policy rates, intense competition between banks for raising deposits to meet strong credit demand, a widening gap between credit and deposit growth, and lower liquidity in the market, the report notes.

The deposit rates rise with a lag effect and are expected to increase the cost of borrowings for the banks, said the report.



ONGC Q3 net profit jumps 26% on higher oil, gas prices

NEW DELHI: State-owned Oil and Natural Gas Corporation (ONGC) reported a 26 per cent jump in its third quarter net profit on the back of a rise in oil and natural gas prices.

Net profit of Rs 11,045 crore, or Rs 8.78 per share, in October-December compared with Rs 8,764 crore, or Rs 6.97 per share, in the same period a year back, according to a company's stock exchange filing.

The rise in profitability was helped by higher realisation on crude oil and gas the firm produces and sells. This offset the continuing decline in oil and gas production.

ONGC earned \$87.13 for every barrel of crude oil it produced and sold in the third



quarter of the current fiscal, up from \$75.73 a barrel realisation in the year-ago period.

Crude oil is refined at refineries to produce fuels such as petrol and diesel.

Prices of natural gas, which is used as fuel to produce elec-

tricity, make fertilisers and converted into CNG for use in automobiles, rose to \$8.57 per million British thermal unit from \$2.90.

The firm produced 5.39 million tonnes of crude oil in October-December, down from 5.45

million tonnes a year back.

Gas output fell nearly 3.8 per cent to 5.356 billion cubic metres. For the nine months ended December 31, 2022, profit after tax recorded growth of 24 per cent to Rs 39,076.57 crore from Rs 31,446.20 crore in the year-ago period.

The firm had reported Rs 40,306 crore net profit in the full 2021-22 fiscal year.

The turnover increased by 35.5 per cent during Q3 FY-23 to Rs 38,584 crore.

The Board of ONGC has declared a second interim dividend of Rs 4 per share (face value of Rs 5). This is in addition to the first interim dividend of Rs 6.75 per share declared earlier. The total dividend payout

in the second interim dividend would be Rs 5,032 crore.

"Uncertainties and constraints across the global supply chain due to the Russia-Ukraine conflict have adversely affected the production of crude oil and gas," a company statement said.

"Significant peaks in energy prices, political stands of different nations in the aforementioned matter have significantly impacted energy productivity, affordability, and cost inflation, besides the lingering aftermath of the restrictive conditions due to the COVID pandemic."

ONGC said it made a total of seven oil and gas discoveries during the current fiscal 2022-23 (April 2022 to March 2023).

MPOST

Green ports are key to Green Hydrogen Mission

India must put in place actionable policy to achieve Hydrogen Mission targets, which will depend on cheaper green hydrogen

As India strives to achieve its net zero emissions target by 2070, green hydrogen is considered a key in decarbonizing the economy, thereby improving the environment. Green hydrogen is produced using renewable electricity by splitting water molecules into hydrogen and oxygen.

Most of the hydrogen used today utilises high carbon sources like hydrogen extracted from coal using a gasification process is brown hydrogen, extracted from natural gas using methane through a steam reforming process is grey hydrogen, and when carbon generated from steam reforming is stored underground through industrial carbon capture it is labeled as blue hydrogen.



CHARU **GROVER SHARMA**



YASHOBANTA **PARIDA**

(Charu Grover Sharma is assistant professor, Indian Institute of Foreign Trade; Yashobanta Parida is assistant professor, FLAME University)

Bringing the shift from grey/blue hydrogen to green hydrogen is the need of the hour. The hydrogen demand in India is eight million tonnes of hydrogen (Mt H₂) in 2022, an increase of seven per cent from 2021 due to recovery in the refinery and steel sector, as they were hit hard due to the 2020 pandemic (International Energy Agency).

The hydrogen demand is expected to grow fourfold by 2050. Currently, over 95 per cent of the current hydrogen demand is fossil fuel-based, and very little is green hydrogen. To meet this growing demand, it is important to shift towards cleaner production, i.e., green hydrogen. This transition Modi's 8 years in power: India story back on track will have a significant cumulative

reduction of 3.6 giga tonnes of CO₂ in India between 2020 to 2050, which can translate into \$246-\$358 billion cumulative net energy savings between 2020 to 2050 (Niti Aayog).

India already announced the National Green Mission in August 2021 to increase green hydrogen use. The mission is followed by the Green Hydrogen Policy to achieve the target of five million tonnes of clean fuel by 2030. India will need around 115 GW of installed renewable power and 50 billion liters of freshwater production to achieve this target.

In Budget 2023, the Government has approved an outlay of Rs 35,000 crore towards green energy and an additional Rs 19,700 crore towards a green hydrogen

mission to reduce dependency on fossil fuel. According to the IRENA 2022 report, more than 1500 green hydrogen projects were globally announced by June 2022. Many private and publicly owned companies in India are investing in green hydrogen projects. Further, India has also signed an agreement with Egypt to invest \$8 billion in the Suez Canal Economic Zone to produce 20000 tons of green hydrogen annually. In 2016, the Government introduced Project Green Ports to make India cleaner and greener. However, till today little progress has been made in this project. The challenge remains in preparing existing ports to reduce fossil-fuel-related activities and increasing the production and handling of

renewables, among which green hydrogen. According to the Maritime India Vision 2030 Report, the Government plans to increase the share of renewable energy from current levels of less than 10 per cent to over 60 per cent by 2030.

The first key challenge in producing green hydrogen is the considerable cost difference between green and grey/blue hydrogen. The production of green hydrogen is two to three times higher than grey/blue hydrogen. Green hydrogen costs are mainly determined by electrolysis and electricity costs. The cost of hydrogen from electrolysis is between \$4.10/kg - \$7/kg depending on various technology choices. The electricity costs of solar and wind are lev- elized. Further, EU Bank will

provide \$1.1 billion to develop green hydrogen hubs in India to reduce the costs of green hydrogen. Thus, it is expected that there will be an increase in fossil fuel costs and a decrease in green hydrogen costs by 2040.

The Government needs to reduce GST to 5 per cent and impose duty waivers to promote green hydrogen adoption in India. The second challenge is the limited amount of renewable energy (wind, solar) and the need for more research and development. The third challenge faced is the need for land available for producing electrolyzers and storing equipment, such as compressors, rectifiers, dryers, cooling water towers, etc., in the port area. The fourth challenge is that hydrogen is high-

ly flammable and volatile, and wide-ranging safety measures are required to prevent leak- ages. The fifth challenge is poorly developed pipeline net- works and poor logistics infra- structure.

The action should be undertaken to develop stan- dards and labels for green hydrogen and hydrogen- embedded products like green steel and green ammonia. The govt needs to explore promot- ing green hydrogen exports through a global hydrogen alliance. The government should formulate the second phase of the national policy, and states should launch their own policy to complement efforts at the national level. A delay in acting could lead to India missing out on an ample opportunity.