

Buy natural gas futures at the current level of ₹212

Akhil Nallamuthu

bl. research bureau

Natural gas futures (continuous contract) on the Multi Commodity Exchange (MCX) has been ruling in a range over the past several weeks. The contract has largely been oscillating between ₹207 and ₹227 in the recent weeks.

COMMODITY

CALL.

We expect the contract to rebound from the current level of ₹212. Or probably, it might fall to ₹207 from here and then see an up move. In such a case, the natural gas futures might rise back to the range top of ₹227.

If the bulls get stronger possibly leading to the breakout of ₹227, the upswing can extend to ₹240.

On the other hand, rather than a bounce, if the contract



breaks below the support at ₹207, natural gas might slip below the ₹200-mark and fall to ₹190.

Nevertheless, as it stands, the support at ₹207 holds true, keeping the chances high for a rally.

TRADE STRATEGY

One can buy natural gas futures at the current level of ₹212 and add more longs if the price dips to ₹207. Place initial stop-loss at ₹200. When the contract recovers as expected and moves above ₹220, tighten the stop-loss to ₹212. Liquidate the longs at ₹227.

E20 target for ethanol blending at risk amid rice ban

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NEW DELHI: The Union government's decision to stop the sale of surplus state-owned rice for ethanol-making, mainly to bolster food security, could impact India's ambitious push to achieve 20% ethanol blending with petrol by 2025-26, a target known as E20, analysts and distilleries have said.

Prime Minister Narendra Modi had on June 5, 2021 announced advancing the target year for 20% ethanol-blending by five years to 2025-26. The blending programme aims to reduce India's costly oil imports and enhance farmers' income.

India is the third-largest oil consumer in the world after the US and China and its annual

crude oil import bill is well over \$100 billion, which weighs heavily on the government's finances. Mixing of petrol with ethanol, which is made from molasses, a by-product of sugar, will help to lessen the amount of oil India imports. Ethanol is also produced from rice and maize.

To reach the E20 target, the Union government had mandated the sale of surplus grains held by the state-owned Food Corporation of India (FCI) at a subsidized rate of Rs 20 per kg.

Several grain-based distilleries that make ethanol for oil-marketing companies under contracts are shuttering after FCI informed a week ago them that surplus rice would not be diverted for fuel production, said Abinash Verma, a promoter of the Eastern India Biofuels Private Ltd. which makes ethanol.



Mixing of petrol with ethanol will help to lessen the amount of oil India imports. REUTERS

According to India's fuel-blending programme for the E20 target, 5.5 billion litres of ethanol are to come from sugarcane and rest 4.6 billion litres from grains, totalling 10.1 billion litres of ethanol required to meet the target.

India has some 100 grain-based ethanol-making distilleries, while many sugarcane-based distilleries also have capabilities to use grains to make the organic alcohol compound.

On July 20, India, the world's largest rice exporter, banned overseas shipments of all grades of rice other than the premium basmati variety. The step came amid widespread torrential rains in July, which has delayed sowing of summer crops, and after Russia pulled out of the Black Sea grain deal, sparking global food security concerns.

Verma of Eastern India Biofuels Pvt Ltd said if a viable option was not made available quickly, lack of FCI rice would "adversely affect" the fuel-blending programme.

"Securing domestic food security is the first priority of the gov-

ernment," an official said, requesting anonymity, adding: "The government has enough grain stocks to meet all needs."

FCI still had surplus and should shed some of it and could consider increasing the sale price because making ethanol from broken rice and maize — two other sources — are unviable, another distiller said, requesting anonymity.

The government currently holds nearly 40 million tonnes of rice, almost three times the buffer stock norms of 13.5 million tonne as on July 1. To be sure, the government's own stocks of grains are at their lowest in nearly five years due to increasing weather shocks to crops. The El Nino weather pattern this year, which could roil crops, still persists and remains a global worry.

Fears of Russia's supply cut aid record lifting of Urals by Indian refiners

IMPEDING FLOW. Russia limits exports to shore up prices, meet rising domestic demand

Rishi Ranjan Kala
New Delhi

India's import of Ural crude oil hit a new high in July as Indian refiners, particularly State-run oil marketing companies (OMCs), stocked up on the grade fearing supply disruptions during August and September as Russia limits exports to shore up prices and meet domestic demand.

According to energy intelligence firm Vortexa, Indian refiners imported around 1.6 million barrels per day (mb/d) of the medium sour grade last month, higher by 18 per cent compared with June and 14 per cent higher than the record in May 2023.

India's preference for Russia's largest export grade, Ural, can be gauged from the fact that its imports are close to the combined shipments by the other three top suppliers — Iraq, Saudi Arabia and the UAE — at 1.67 mb/d.

India's imports of Russian crude oil by grade
(Barrels per day -- b/d)

	April 2023	May 2023	June 2023	July 2023
Urals	12,09,000	13,98,000	13,56,000	15,99,000
ESPO	1,75,000	1,70,000	1,10,000	24,000
Sokol	24,000	2,09,000	1,56,000	140,000
Varandey	79,000	1,26,000	1,18,000	32,000
Arco	1,23,000	0	0	0
Novy Port	31,000	0	31,000	65,000
Siberian Light	60,000	26,000	51,000	59,000

Source: Vortexa

State-run OMCs accounted for 63 per cent, or 1.21 mb/d, of the total crude oil imported by India from the erstwhile Soviet Union during July at 1.92 mb/d with private refiners accounting for the remaining cargoes.

INDIAN REFINERS

Vortexa data shows that Indian refiners majorly cut down on premium light sweet grades such as ESPO, Varandey and Sokol (marginal decline) in July 2023. Besides, the import of other light sweet crude, Novy Port doubled, while that of the lighter grade Siberian

Light was higher marginally.

"With Russia ramping up its refinery runs post maintenance to meet domestic demand and cutting crude production, the country's crude exports have evidently fallen. Russian crude exports in July are down nearly 650,000 b/d versus the peak seen in April/May," Vortexa's Head of APAC Analysis, Serena Huang told *businessline*.

Crude exports could retreat further if Russia continues to raise its domestic refinery runs in August, she anticipated.

Earlier this year, Russia an-

nounced a cut of 500,000 barrels per day (b/d) from February 2023 levels till end-2023. Subsequently, in July it announced another cut of 500,000 b/d for August. Urals, Russia's flagship export grade, will account for most of the cuts.

QUEST FOR URALS

A State-run OMC official said competition for Ural is expected to continue. Russian supply disruptions, especially for Urals, are expected for the next two months at least. Higher volumes by refiners is to make



up for the lag in the coming months.

"Indian refiners will continue to lap up any available Urals. Current discount is around \$2-3 per barrel against Brent, which is still a good proposition. Even if the price cap is breached, India and Russia will find avenues to continue trading. What needs to be seen is the global price rally as Brent is again at \$85 level," the official explained.

Vortexa's Huang pointed out "With reduced Russian crude exports, we could either see lower supplies to India or volumes to India holding up at the expense of China's share. The outcome will ultimately be determined by price and politics."

Another private refinery official said with the summer season in Russia, the country's demand for fuel has risen and refiners are back online post maintenance. Hence lower volumes of Urals are available for trade.



Food as fuel isn't a plan that can take us very far

The adoption of ethanol-blended petrol could help lower carbon emissions and crude oil imports but dreams of vehicle refills at ₹15 per litre will stumble on the challenge of scale

On 5 July, Union road transport minister Nitin Gadkari spoke of ₹15 per litre as a potential price of petrol, a fraction of what refills cost in India. At a poll rally, he said the government wanted farmers to not only be “*anna daata*” (food givers), but also “*urjadaata*” (energy providers) as cultivators of crops from which ethanol can be squeezed for biofuels to run vehicles. If an average of “60% ethanol and 40% electricity” was taken, he reportedly said, then petrol would sell for ₹15 per litre, to everyone's benefit. What exactly yielded this figure has been a subject of speculation. Earlier this year, India launched E20 fuel—petrol blended with 20% alcohol; a network of filling stations for it is expected to cover the country by 2025. The ‘bio’ input of E20 may seem low, but it is a step up from the E10 blend that has lately been in use after a gradual ascent from lower levels over the past decade. If all goes by the Centre's plan, vehicles will be adapted for efficient E20 use. Biofuels emit cleaner exhaust when burnt for energy and as a bonus could also lighten our oil import bill, but the constraint on the project is ethanol supply from distilleries that mostly use crops like sugarcane. The official feedstock list has been diversified to include surplus rice, maize and other damaged food-grain. Biofuel conversion has been slow. In 2021-22, our production of ethanol-doped petrol was put at nearly 4.4 billion litres. This is not a figure to sniff at, but still only a plop in the country's huge pool of petrol consumption.

As an input, ethanol also has the liquor industry's thirst to satisfy, but biofuels are now expected to slurp up larger volumes as we go along. A June 2021 roadmap published by Niti

Aayog had forecast ethanol demand for petrol blending in a range of 7.2-9.2 billion litres in 2025, though it set a target of over 10 billion litres. In late 2022, the Centre claimed that production capacity for the purpose had reached nearly 9.5 million litres, some 65% of it from molasses and the rest from grains. If so, this suggests near-term E20 comfort. The Niti Aayog report had projected a need of 6 million tonnes of sugarcane and 16.5 million tonnes of grains per annum in 2025, which it said stated efforts should be able to secure. This marks a gear shift in policy from an earlier time, when our biofuel emphasis was on using crops like millets that can grow on arid land and do not divert food harvests. While the acreage of crops that serve as feedstock has indeed been expanding, this is too slow a process. This means we cannot expand biofuel capacity much without the diversion of land, water and inputs like fertilizer from food cultivation. Sugarcane and rice both need large volumes of water, another scarce resource. So, is this the best way to allocate resources? There's no easy answer. Market signals could in theory have helped settle doubts in terms of economic optimization, but reforms that could make our farms more responsive to market prices have not been done. We are left with a top-directed central plan for ‘food as fuel,’ as it were.

The vast reliance of biofuels on farms means blending cannot be scaled up beyond a point. So long as fossil fuels are in use, blends may also face resistance from vehicle owners who must calibrate engines for blended fuel. As with EVs, a subsidy is the usual bait for switch-overs. Yet, no matter how the path is eased, biofuels will likely remain a side-show. As for ₹15 petrol refills, the math remains a mystery.

HPCL back in black as petrol, diesel price freeze helps regains mkt margin

PTI / New Delhi

Hindustan Petroleum Corporation Ltd (HPCL) on Wednesday reported swinging back to profit in the June quarter as the freeze on petrol and diesel prices revised helped the marketing margin turn positive.

Net profit of Rs 6,203.90 crore in April-June (the first quarter of current fiscal 2023-24) compared with Rs 10,196.94 crore of loss in the same period a year back, according to a company's stock exchange filing.

The profit was over 92 per cent higher than Rs 3,222.62 crore net profit in the preceding quarter.



Last year, HPCL and other government-owned fuel retailers -- Indian Oil Corporation (IOC) and Bharat Petroleum Corporation Ltd (BPCL) -- froze retail petrol and diesel prices to cushion domestic consumers from rising international oil rates.

That freeze led to the three retailers suffering heavy losses in not just the April-June 2022 peri-

od but also in the subsequent quarter. Margins on petrol and diesel turned positive following softening of international oil prices in the June quarter, but rates were not revised, and the companies recouped losses they incurred last year.

IOC, last month, reported a net profit of Rs 13,750.44 crore and BPCL booked Rs 10,644 crore earnings in the June quarter.

The fall in oil prices meant that revenue from operations for HPCL fell 2 per cent to Rs 1.18 lakh crore. The company earned USD 7.44 on turning every barrel of crude oil into fuel during the quarter ended June 30.

HPCL back in black with ₹6,765 cr profit

SUBHAYAN CHAKRABORTY

New Delhi, 2 August

Hindustan Petroleum Corporation (HPCL) is back in the black with a robust ₹6,765-crore net profit during the first quarter (April-June) of FY24.

The public sector oil marketing company (OMC) had registered a loss of ₹8,557.1 crore in the same quarter a year ago.

On a sequential basis, net profit shot up 87 per cent from ₹3,608.3 crore in Q4FY23. The sharp sequential improvement in earnings is driven by further recovery in auto-fuel marketing margins

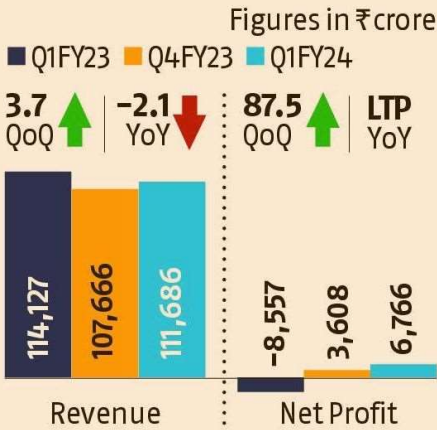
and lower crude costs.

However, income from sale of products remained 2 per cent lower at ₹1.18 trillion, as compared to Q4FY23. This was due to lower gross refining margins (GRM) in the latest quarter.

GRM is the amount that refiners earn from turning every barrel of crude oil into refined fuel products. HPCL said GRM fell to \$7.44 a barrel in Q1FY24 against \$16.69 per barrel in Q1FY23.

Lower GRMs have worried all OMCs as the benchmark Singapore GRM averaged at a lower \$4.1 per barrel in Q1 FY24, down from \$8.2 a barrel in Q4FY23.

NUMBER CRUNCH



Source: Company
Compiled by BS Research Bureau

HPCL reports decadal high quarterly standalone PAT of ₹6,204 crore in June quarter of FY2023-24

MUMBAI: Hindustan Petroleum Corporation Limited (HPCL) has reported Revenue from operations of Rs 1,19,044 crore for the period April-June 2023.

The Company has reported decadal high quarterly standalone Profit after Tax (PAT) of Rs 6,204 crore during Q1 FY24 registering an increase of 192 per cent over Rs 3,223 crore PAT reported during Q4 FY23 (standalone net loss of Rs 10,197 crore during the corresponding period of previous year).

Consolidated PAT during this period was Rs 6,766 crore as compared to consolidated net loss of Rs 8,557 crore during the corresponding period



of previous year.

Average GRMs (Gross of export duty) for Q1 FY24 were \$7.44 per barrel (\$16.69 per barrel during the corresponding period of previous year).

HPCL refineries processed highest ever quarterly crude thru-put of 5.40 Million Metric Tonnes (MMT) during Q1 FY24 (operating at 105.9 per cent) registering a growth of 12.3 per cent over 4.81 MMT

crude processed during the corresponding period of previous year.

Visakhapatnam Refinery functioning at enhanced capacity of 11 MMTPA processed highest ever quarterly crude thru-put of 2.96 MMT (108 per cent of installed capacity).

The period also saw highest ever quarterly production of HSD (2338 TMT) and Lube Oil Base Stock (137.5 TMT) at HPCL refineries.

On the marketing front too, HPCL achieved highest ever Quarterly total sales volume (including exports) of 11.85 MMT (10.70 MMT during corresponding period of previous year) representing

a growth of 10.7 per cent.

In the domestic market, HPCL registered highest ever quarterly sales volume of 11.43 MMT during Q1 FY24 registering a growth of 9.4 per cent as compared to industry growth of 5.5 per cent during this period (10.45 MMT Domestic Sales volume during corresponding period of previous year).

HPCL also registered highest ever quarterly sales volume in Motor Fuels with Petrol sales (2.34 MMT) growing by 9.3 per cent and Diesel sales (5.46 MMT) growing by 10.8 per cent with market share gain of 0.58 per cent & 0.57 per cent respectively.

MPPOST

HPCL Swings to Black with Q1 Net Profit of ₹6,765.5 Cr

Our Bureau

Mumbai: State-run Hindustan Petroleum Corporation Ltd (HPCL) on Wednesday reported a net profit of ₹6,765.5 crore for the first quarter that ended June 30, 2023. HPCL had posted a net loss of ₹8,557 crore in the same period last year as crude oil prices skyrocketed.

Revenue from the sale of products marginally declined to ₹1.18 lakh crore in Q1, as against ₹1.21 lakh crore in the same period last year. The company's ebitda in the quarter stood at ₹10,945 crore.

Average gross refining margin (GRM) was \$7.44 per barrel in the quarter,

against \$16.69 in the corresponding quarter of the previous year. The decline in refining margin was observed primarily because of a significant drop in diesel and ATF spreads.

In Q1FY24, market sales (domestic) of the company stood at 11.43 million metric tonnes (MMT) as against 10.45 MMT in the first quarter of last year.

HPCL's pipeline throughput was at 6.49 MMT in Q1FY24 from 5.79 MMT in the year-ago period.

On Wednesday, shares of HPCL closed at ₹276.35, down 3.07% on the BSE. Benchmark Sensex ended 1.02% lower.



India, Sri Lanka to begin talks on petroleum pipeline project

Shashank Mattoo

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NEW DELHI

New Delhi and Colombo are set to begin technical discussions that could pave the way for a multi-product petroleum pipeline between the two South Asian nations, Mint has learnt.

The project, which was announced during President Ranil Wickremesinghe's visit to India in July, is expected to help Sri Lanka improve its energy security at an affordable cost.

Among other things, the meetings are expected to touch on the physical alignment of the petroleum pipeline. A proposal, currently under discussion, is for the pipeline to run from Nagapattinam in Tamil Nadu to Jaffna in Northeast Sri Lanka. However, these proposals are understood to be at a preliminary stage. The aim of the pipeline will be to improve Sri Lanka's energy security at an affordable cost.

The talks follow the 2022 economic crisis that left the island-nation facing crippling shortages of energy. Wide-



The project was announced during President Ranil Wickremesinghe's visit to India recently.

AP

spread power cuts and fuel shortages fuelled public discontent, which led to the fall of President Gotabaya Rajapaksa's government, paving the way for Wickremesinghe.

Sri Lanka is among a number of South Asian neighbours with which India is attempting to build energy connectivity. In 2019, India and Nepal inaugurated the Motihari-Amlekhgunj pipeline, which runs for 69 km between India's Motihari and Nepal's Amlekhgunj.

The pipeline, built with

Indian assistance and led by Indian Oil Corporation, has a capacity of 2 million tonnes per annum.

India and Bangladesh inaugurated a 'friendship pipeline' this year for transporting high-speed diesel. To be sure, the project, announced in 2015, is just the second cross-border energy pipeline in the region.

India has also made other efforts to provide energy security to neighbouring countries through the provision of cross-border power supply. This will see India and Sri Lanka try to link their power grids in an effort to create a more robust energy trade market in South Asia. *Mint* had reported on this development in January.

"India today has a very robust power grid running from North to South and East to West of the country. In the future we would like to see the grid connected to neighbouring countries including Myanmar, Sri Lanka, and then expand that connection to South-east Asian countries, to emerge as a unified market," said Ajay Tewari, Additional Secretary, Ministry of Power in December 2022.

‘It’s no doomsday for lubricants, robust growth likely till 2040s’

Alisha Sachdev

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NEW DELHI

Lubricants brand Castrol, a wholly-owned subsidiary of BP plc, expects strong and sustained business growth for its engine oils well into the 2040s, despite the gradual rise and mainstreaming of emerging vehicle technologies like electrification and hydrogen.

That said, BP is also exploring inorganic growth opportunities to expand beyond traditional lubricants, into new categories like auto care products and thermal management fluids for electric vehicle (EV) batteries.

EV fluids constitute a small fraction of Castrol’s revenues due to the limited penetration of EVs. Additionally, EVs need 60-70% of the expenses compared to a comparable internal combustion engine (ICE) vehicle. To capitalize on the potential of this segment, it is working on developing new product categories, supported by the investments by parent, BP at a global scale, Sandeep Sangwan, Castrol’s managing director, and Deepesh Baxi, its chief financial officer, told Mint.

Castrol India posted 9.22%



Deepesh Baxi, chief financial officer, Castrol.

rise in net profit in Q2 (April-June) from ₹206.3 crore a year earlier to ₹225.8 crore. Its volumes rose 4% from a year ago and 5% sequentially to 58 million litres in the quarter.

However, despite the recent rise in its stock price, the company’s performance over the broader five-year horizon has been relatively stagnant.

“We have a solid balance sheet. We have zero debt, our return on capital employed is just short of 50%. Our return on sales is 18%, and Ebitda is at

23-25%. We are clearly wanting to use the balance sheet to ensure the growth aspects are reflected. The market can see quite a few initiatives such as our investment in Ki mobility, expansion of workshops,” Baxi added.

“The result of the initiatives will take time to show. There’s a capital framework in place, we are cash-rich, and we are thinking what is the right way to deploy that capital, through dividends, inorganic and organic expansion.”

“Besides, electrification is the right step, and we will play in that space. We are also fully prepared for supplying fluids needed for EVs. We have launched the Castrol On brand, which offers transmission fluid, grease and coolants. EVs do not need engine oil, but we have the products and supply to three of the biggest players in India manufac-

turing electric cars. So, it’s not a doomsday scenario. Lubricants have enough growth opportunities till 2030s-40s. The core business is still very robust,” Sangwan said.

Castrol India posted 9.22% rise in net profit in Q2 (April-June) from ₹206.3 crore a year earlier to ₹225.8 crore

Reliance Jumps 16 Places to 88 on Fortune 500 List

New Delhi: Mukesh Ambani's Reliance Industries has maintained its highest ranking among Indian corporates in the latest Fortune Global 500 list, jumping 16 places to rank at number 88.

Reliance was ranked 104 in 2022.

The company has gained a whopping 67 places in the last two years, rising from number 155 in 2021.

As many as eight Indian companies feature in this year's Fortune Global 500 ranking. State-owned Indian Oil Corporation (IOC) jumped 48 places to 94.

LIC slipped nine places to rank at 107. ONGC (number 158), BPCL (number 233) and SBI (number 235) were the other state-owned firms on the list.

Tata Motors rose 33 places to rank at number 337 and Rajesh Exports jumped 84 spots to number 353.

The ranking of number 88 is the best-ever achieved by Reliance on the Fortune Global 500 ranking list.

It is now the 20th year of Reliance being a part of the Fortune Global 500 list - much longer than any other private sector company in India.



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Fortune Global 500 list ranks companies by total revenues for their respective fiscal years ended on or before March 31, 2023.

Reliance Industries closed FY23 with record-high consolidated revenues of ₹ 9,76,524 crore, up 23.2 per cent, and EBITDA of ₹ 1,54,691 crore, up 23.1 per cent, with each of the O2C, retail and digital services businesses posting all-time high revenues. **PTI**

RIL Gears Up to Produce Green Hydrogen in Two Years

Company is setting up 'dispensation infrastructure' and tying up with OEMs to supply the clean fuel through its Jio-BP outlets

**Kalpana Pathak
& Shally Seth Mohile**

Mumbai: Reliance Industries (RIL) is laying down infrastructure for disbursement of green hydrogen from its proposed plant in Gujarat as it prepares to begin production of the fuel by 2025, three officials aware of the development said. The company, which has received 74,750 hectares of land parcel in Gujarat on a 40-year lease for its green hydrogen project, is tying up with original equipment manufacturers (OEMs) for supply of green hydrogen and laying the groundwork to retail the same through its Jio-BP outlets, they said.

"RIL is setting up a green hydrogen dispensation infrastructure," an industry official said on condition of anonymity. "The company is targeting production of green hydrogen by 2025 and when that happens, it needs a ready infrastructure for offtake of that green hydrogen. There will be more such measures from RIL going for-

ward." RIL did not respond to an email sent on Tuesday till press time on Wednesday.

The Mukesh Ambani-led company is investing \$10 billion in capex for building its new energy ecosystem. Over the past seven months, it has tied up with original equipment manufacturers (OEMs) to supply green hydrogen.

The company has around 1,500 retail outlets which it plans to expand to about 5,000

This February, RIL and Ashok Leyland unveiled India's first hydrogen internal combustion engine (H2ICE) technology solution for heavy-duty trucks. Later that month, RIL with Olectra Greentech, a subsidiary of Megha Engineering and Infrastructures (MEIL), unveiled a hydrogen bus. Olectra Greentech aims at commercially launching these buses within a year.

In July, RIL collaborated with Bharat Benz for India's first intercity luxury concept coach powered by hydrogen fuel cell technology.

Clean Move

RIL
\$10b
RIL capex for building a new energy ecosystem

Contracts a fleet of 45,000 trucks every year

TIE-UPS
FEBRUARY: RIL & Ashok Leyland unveiled hydrogen internal combustion engine tech for heavy-duty trucks
RIL with Olectra Greentech rolled out a hydrogen bus

JULY: RIL & BharatBenz engineered intercity luxury concept coach powered by **hydrogen fuel cell tech**



H2ICE is a combustion engine that uses hydrogen or a mixture of hydrogen and diesel fuel. The advantage with this engine is that there is no need to make changes to the power train, or the assembly of every component that thrusts your vehicle into motion. So, the existing power train can be used with minor modifications to convert vehicles to a hydrogen vehicle.

All these vehicles, RIL's partners

said, can travel approximately 400 km on a single hydrogen fill and can facilitate long-distance travel between cities on clean fuel. Hydrogen fill for this range coverage takes just about 15 minutes. These vehicles will undergo extensive trials, validation and safety trials over next 12 months, they said.

Through its association with Ashok Leyland, RIL plans to retrofit the engines for Ashok Leyland's

fleet of trucks before retrofitting the fleet of other service providers.

RIL contracts a fleet of nearly 45,000 trucks every year to move goods for its refining and marketing operations. It wants to power them with green hydrogen.

Green hydrogen is the cleanest form of fuel when produced through renewable sources of energy. RIL aims to produce green hydrogen at \$1 per kilogram by 2030. The current production economics of green hydrogen works out to be around \$8-9 per kilogram as compared to less than \$4 per kilograms for other traditional fuels and feedstocks.

"The domestic use cases for green hydrogen will remain confined to small pilots," said Barnik Chitran Maitra, managing partner, India & South Asia, of consulting firm Arthur D Little. "We expect the producers to sign up with global shipping firms, international transmission system operators, and international power generators which are likely to replace fossil fuel with green hydrogen over the next five years."

RIL also plans to retail green hydrogen through its Jio-BP retail outlets. The company has around 1,500 retail outlets, which it plans to expand to 5,000.

Satyakam Arya, managing director of Daimler India Commercial Vehicles, said the BharatBenz Hydrogen Fuel Cell luxury coach concept that it developed with RIL is the most recent example of conducting an advanced engineering study to decipher the market requirements, product capability and practical challenges, and use the findings in making the product and technology more robust.

"The emerging industry landscape also throws up other challenges — investment in multiple technologies, all at the same time and on many fronts — by OEMs, for development of power trains; by the government, for development of infrastructure and by fleet owners, who would end up having different power trains in their fleet," Arya said, adding that this challenge should not be underestimated, and the enormity of it should be taken seriously.

RIL jumps 16 places, now at number 88 on Fortune Global 500 list

PTI / New Delhi

Billionaire Mukesh Ambani's Reliance Industries has maintained its highest ranking among Indian corporates in the latest Fortune Global 500 list, jumping 16 places to rank at number 88.

Reliance was ranked at number 104 in the 2022 ranking and in the 2023 ranking it is placed at number 88, according to the publication.

The company has gained a whopping 67 places in the last two years from number 155 in 2021.



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(IOC) jumped 48 places to rank at number 94. Life Insurance Corporation of India (LIC) slipped nine places to rank at 107. Oil and Natural Gas Corporation (number 158), Bharat Petroleum Corporation Ltd (number 233), and State Bank of India (number 235) were the other state-owned firms on the list.

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