



**ONGC News as on 27 March 2024 (Print)**

## Day trading guide

### 22095 » Nifty 50 Futures

S1	S2	R1	R2	COMMENT
22000	21800	22150	22240	Short now and on a rally to 22000. Place stop-loss at 22150.

### ₹1426 » HDFC Bank

S1	S2	R1	R2	COMMENT
1400	1380	1430	1450	Short the stock as it fell below a support; stop-loss at 1450.

### ₹1492 » Infosys

S1	S2	R1	R2	COMMENT
1490	1450	1500	1525	Sell the stock below 1490; place the stop-loss at 1515.

### ₹427 » ITC

S1	S2	R1	R2	COMMENT
420	412	430	435	Go short as the stock is near a resistance; stop-loss at 435.

### ₹265 » ONGC

S1	S2	R1	R2	COMMENT
262	258	268	272	Initiate short as there is a resistance; stop-loss at 270.

### ₹2884 » Reliance Ind.

S1	S2	R1	R2	COMMENT
2860	2835	2900	2920	Short-term trend appears weak; short with stop-loss at 2920.

### ₹740 » SBI

S1	S2	R1	R2	COMMENT
732	722	745	750	Go short as the stock is near a resistance; stop-loss at 750.

### ₹3877 » TCS

S1	S2	R1	R2	COMMENT
3825	3775	3940	3980	Short now and on a rise to 3920; keep stop-loss at 3980.

S1, S2: Support 1 & 2; R1, R2: Resistance 1 & 2.

Publication : The Times of India	Editions : New Delhi
Date : 27 March 2024	Page : 20

# Climate activist Wangchuk ends fast after 21 days, Ladakh statehood stir to continue

In the last three years since Ladakh and J&K became separate Union Territories, some Ladakhis have become restive about broken promises, reports **Himanshi Dhawan**. Educationist and climate activist **Sonam Wangchuk** completed his 21-day hunger strike on Tuesday, sleeping in the open despite temperatures being at a biting -10 degrees Celsius. Last week, Ladakhi students held protests in Delhi, Pune and Nagpur. Despite assurances of dialogue from Centre, there have been multiple protests in parts of Ladakh

## Why are Ladakhis on the streets?

J&K and Ladakh were declared two separate UTs following the abrogation of Article 370 in August 2019. Soon after the euphoria of having an identity separate from J&K had died, Ladakhi people realised that creation of a UT left them without a legislature, depriving them of autonomy in governance. There are also concerns of adequate representation in govt jobs and land rights. In addition, Kargil, which is predominantly Sunni Muslim, was unhappy to be lumped with Buddhist-dominated Leh.

A deeper panic has set in at the blistering pace of 'development' projects that have been announced in the last two years. The Centre has cleared seven hydro-electric projects in the Indus basin and its tributaries while also commissioning ONGC to set up a geothermal energy power plant at Puga Valley and a hydrogen unit by NTPC. This has raised concerns among locals of large-scale clearance of forest land.

## What are they demanding?

Ladakhis believe their interests will only be protected if they have full statehood. They have also demanded tribal area status under the Sixth Schedule of Article 244 of the Constitution that will provide for establishing autonomous district councils (ADC) in Ladakh and Kargil. ADCs will have the power to impose taxes and make laws in areas such as village administration and forest management, while staying off industrial and mining giants in this ecologically-sen-

## LADAKH IN A SNAPSHOTS



### Ethnic composition



### Economy |

Tourism, exports pashmina

### Language |

Ladakhi, though various dialects like Balti prevail

Sonam Wangchuk during the 21st day of his 'climate fast' in Leh on Tuesday

sitive region.

## What is the govt's stand?

Ladakh's demands received a fillip in Sept 2019 when National Commission for Scheduled Tribes (NCST) recommended 'tribal area' status for Ladakh under the Sixth Schedule. It felt this would help in "democratic devolution of powers, preservation and promotion of the region's distinct culture, protect agrarian rights and enhance transfer of funds for the speedy development of Ladakh". It reasoned that over 97% of the population is categorised as Scheduled Tribes and requires these protections. However, the ministry of home affairs did not accept this, and the administration continued to be run under the supervision of the lieutenant governor. Between Jan and Feb 2023, the Leh Apex Body (LAB) and Kargil Democratic Alliance (KDA) that includes political representatives from both regions started a series of protests called 'Leh Chalo'.

## Starring role by Wangchuk of '3 Idiots' fame

The protests might have remained contained but for

Wangchuk who shot to international fame after the Bollywood film '3 Idiots' starring Aamir Khan credited his innovative teaching philosophy. The Ramon Magsaysay winner sat on his first climate fast on Jan 26 last year to amplify Ladakhi demands. He created videos and garnered support across the country and the world. He started his second climate fast on March 7, consuming only water and salt. He has been making emotive arguments, including protection of the region's sensitive glaciers from excessive industrialisation and previous govts' sympathetic reactions to the peoples' movements.

Incidentally, Wangchuk's father sat on a fast for indigenous people's rights in 1984 and broke it on the 16th day when then PM Indira Gandhi flew down to Ladakh to assure him that the concerns would be addressed.

Wangchuk's 21-day fast is inspired by Mahatma Gandhi's fasts (in 1933, and again in 1943). Speaking on the last day of his fast he said, "India is the mother of democracy.

We citizens have a very special power. We are kingmakers. We can compel the govt to change their ways or change the govt if that doesn't work. So let us use our ballot power very carefully this time."

## What is the status now?

In Dec 2023, the Centre set up a high-powered committee to allay concerns and two meetings were held but not much headway has been made since. There has been reluctance on the part of govt to give in to demands for autonomy and statehood, keeping in view the strategic importance of the region. Recent clashes with Chinese troops in Galwan Valley have made the situation even more sensitive. In the last meeting after March 4 a statement made by MHA said that govt was committed to providing necessary Constitutional safeguards to Ladakh. Home minister Amit Shah assured representatives of KDA and LAB that the consultative mechanism will continue to engage on issues such as measures to protect the region's unique culture and language, protection of land and employment, inclusive development and employment generation, and examine constitutional safeguards for positive outcomes. This however left the two bodies dissatisfied.

Though Wangchuk's fast has ended, the protests are likely to be continued by others. Both sides have dug in their heels. However, with national security at stake, the Centre cannot afford to ignore or be dismissive of a restive Ladakh.

Publication : Financial Express	Editions : New Delhi
Date :27 March 2024	Page : 3

## GAIL plans first green hydrogen project in April

MOHI NARAYAN  
New Delhi, March 26

**STATE-RUN NATURAL GAS COMPANY**  
GAIL (India) plans to commission its first green hydrogen project in central India in April, three company sources said. The 10-MW proton exchange membrane electrolyser for the green-hydrogen producing unit at the Vijapur complex in

**The unit in Madhya Pradesh is expected to produce about 4.3 tonne of hydrogen per day and would use green power**

Madhya Pradesh has been imported from Canada, they added.

“Once the initial hiccups are sorted at the commissioning stage, we expect to start producing in a month’s time,” one of the

sources said. The unit is expected to produce about 4.3 tonne of hydrogen per day, with a purity of about 99.9999% by volume, and would use renewable power. India aims to reach 5 MT of annual green hydrogen production capacity by 2030.

The company’s communication office did not respond to a Reuters request for comment. — REUTERS



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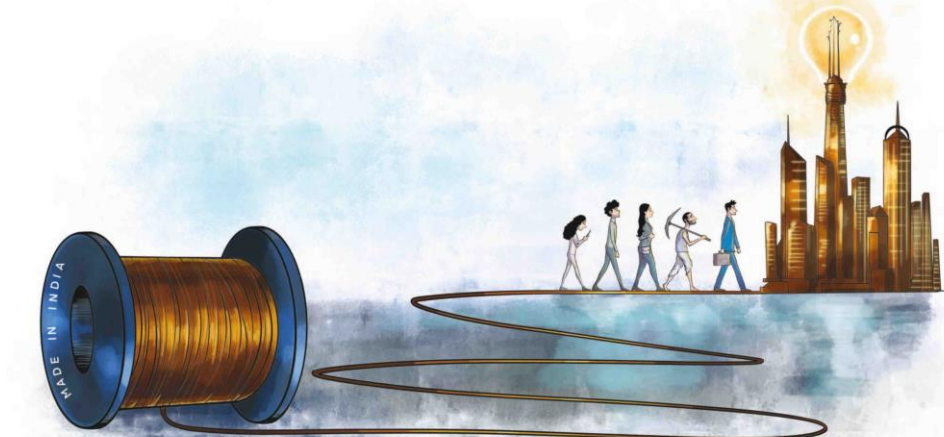




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# HOW COPPER CAN ELECTRIFY INDIA'S GROWTH DREAMS

The industrial metal's economic importance has risen in recent years because of the shift to renewable energy and EVs



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With a short lifespan of 22 years, Sterlite Copper survived closure many times. The Vedanta group's copper smelter—a factory where the metal is extracted by subjecting the ore to high temperature—began operations at Thoothukudi in southern Tamil Nadu in 1996. It was first shut down in 2010 by the Madras High Court for floating pollution norms. But it got a stay from the Supreme Court and continued operations.

In 2015, the Tamil Nadu government closed the plant again following a gas leak. The Supreme Court fined the company 100 crore for not adhering to pollution norms but allowed the plant to operate upon fulfilling various conditions. Again, in May 2018, the plant was permanently shut by the Tamil Nadu government for repeatedly violating pollution norms. The Madras High Court upheld the state government's order in August 2020. The beleaguered copper smelter almost got another lease of life when the first bench of the Supreme Court, under chief justice D.Y. Chandrachud, on 14 February this year, suggested the setting up of a bipartisan committee to look at ways to restart the plant. It was hearing a special leave petition filed by Vedanta Ltd against the closure. "Health of the people has to be protected but at the same time, the facility should not be lost either. India should not lose an asset," chief justice Chandrachud had observed.

It appeared as though the Sterlite smelter would once again rise from the ashes. Its position as an asset of national significance—contributing to 36% of India's refined copper production (600,000 tonnes) had saved it more than once before. A score appeared likely.

Consider this: In 2017-18, when the Sterlite plant was functioning, India exported 220,000 tonnes of refined copper. After the closure, India became a net importer. In 2022-23, it imported about 262,000 tonnes of refined copper. This is set to increase significantly in 2023-24. In the first nine months, imports had already crossed 300,000 tonnes.

"The copper business is enjoying some very good demand. The electrification sector is quite strong. Copper is going to be the good going forward," said Satish Pai, managing director of Hindalco Industries Ltd, during the company's earnings call in February.

Hindalco is one of India's biggest metals manufacturing company and its copper division, Brita Copper, operates one of the largest single-location copper smelters in the world. With the closure of Sterlite Copper, Hindalco is the only major refined copper producer in the country today, with a capacity of about 500,000 tonnes.

The public sector Hindustan Copper produces another 60,000 tonnes. The

repeated nature and severity of the breaches of the pollution norms by the company superseded the apex court's thoughts on national priorities. And with that, India's efforts to attain self-sufficiency in refined copper production just got harder.

## THE SITUATION TODAY

Copper is a critical metal, and its consumption is closely associated with economic growth. Its importance has risen in recent years with the focus shifting to renewable energy, electric vehicles (EVs)—electric cars use four times more copper than those powered by petrol or diesel—and related infrastructure development. According to Government of India data, the country's per capita copper consumption, at 0.6kg, pales in comparison with the world average of 3.2kg. If India has to become a developed nation by 2047, it needs to secure its copper supply. India's copper consumption has been rising sharply. In 2022-23, it stood at 586,000 tonnes, growing 23% over the previous year. In the first nine months of this year, demand has already touched 632,000 tonnes. "This demand is primarily driven by the government infrastructure spending," said Piyush Ruparelia, vice-president and co-group head—corporate ratings, at Icria, a rating agency.

The central government's capex, which was just 14.12 trillion in 2020-21, amounting to 2.1% of GDP, has risen to 110 trillion in 2023-24 (3.4% of GDP). The government has also been pushing affordable housing through programmes such as the Pradhan Mantri Awas Yojana (PMAY). Buildings and construction account for 22% of copper demand. Added to this is demand from the consumer durables and automotive sector. Icria expects consumption in 2023-24 and 2024-25 to grow by 18%.

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rest of the demand is met through imports of the refined copper, copper concentrate and value-added products.

The copper ore is converted into a copper concentrate which is then smelted into refined copper. The refined copper can then be used to make value-added products such as copper rods and wires. As per government data, in 2022-23, copper imports rose by about 20% in value terms to 127,131 crore from 121,985 crore the year before. This will change soon.

## ADANI SMELTER

Domestic supply of refined copper is set to rise as the Adani group's 500,000-tonne copper smelter at Mundra in Gujarat is set to begin operations soon. "This plant will go a long way in reducing import of refined copper," said Ruparelia. How quickly that will happen would depend a lot on stabilization of production. It could take up to a year to reach full capacity, he added.

When copper from the new facility starts flowing, domestic copper prices may ease a bit. "I do expect competition when other people come in. We may see some pressure on copper prices," Hindalco's Pai said in the earnings call. The Adani group did not respond to Mint's queries on the project.

## LESSONS FROM CHINA

According to the International Copper Study Group, global copper consumption rose by 5% to 27 million tonnes in 2023, against production of 27m. China accounted for 68% of the world's copper consumption in 2023, at 18.5m, registering a 9% increase over the previous year. Its own production of refined copper stood at 13m, while imports accounted for the rest.

Copper consumption in the US was flat while it contracted in Europe. Global demand grew marginally, thanks to strong consumption in China. That came as a surprise as the Chinese economy as a whole is facing massive headwinds. Industrial output is down as both domestic and export demand have fallen. The country's property sector is in the doldrums. Demand for copper came primarily from EV and renewable energy.

"Of the 13.5 million electric cars sold globally in 2023, 8.5 million were in China. EVs account for 40% of all car sales there," Sumleek Daga, founder & chief executive officer (CEO), Begnas Consulting, a metal price risk management advisory firm, said.

The EV sector alone consumed in excess of a million tonnes of copper in the last year.

The other big driver of demand was the renewables sector. Realizing that a sharp increase in the sale of EVs will call for enhanced electricity demand, China has

been ramping up its renewable energy capacity. In 2023 alone, it added renewable capacity of 169 gigawatts (GW), mostly in western China, where land was available and cheap. Long transmission lines were laid to evacuate the electricity generated to meet the demand on the east coast.

"There is a lesson for us to learn from China," said Daga. Anticipating demand for copper from its EV and renewable energy drive, policy makers there caused creation of smelting capacity. In 2023, the country added 2m—four times India's capacity—in just one year.

That's not all. "China's smelting capacity will increase by 20% in 2024 and 10% in 2025, if one looks at the pipeline of smelting projects," he said. They are well prepared and it is high time India starts planning similarly, he added.

## THE WAY FORWARD

India has ambitious growth plans. The country wants to lift its economy from the current level of \$3.6 trillion to \$30 trillion by 2047. That would require economic growth of 8% per annum or more every year. To meet the demands that emanate from such growth, it needs to invest heavily in building infrastructure. Industries will have to expand to meet increased consumption. As the per capita income of Indians grows, so will demand for housing, consumer durables and so on.

Experts say the Centre needs to widen prospecting for copper reserves and work with the private sector to the strategic supply deals with countries that have large ore deposits.

## WHAT

The consumption of copper is closely associated with economic growth. While India's copper consumption has been rising sharply, the domestic supply will open short.

## AND

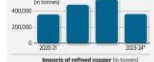
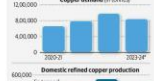
India's per capita copper consumption, at 0.6kg, is well below the global average of 3.2kg. India needs to secure its copper supply to become a developed nation by 2047.

## NOW

Experts say the Centre needs to widen prospecting for copper reserves and work with the private sector to the strategic supply deals with countries that have large ore deposits.

## RIISING DEPENDENCE

As copper demand rises, so does India's imports



\* Nine months (April-December 23). Source: Icria

India's bigger problem is copper ore. According to the ministry of mines, government of India, copper ore production in the country is estimated at 1m, which is equivalent to just 4% of the country's refined copper consumption. State-owned Hindustan Copper is the only producer of copper ore in the country. Hindalco imports copper concentrate and converts it into refined copper.

Chile and Peru account for 40% of global copper ore output. China has a 9% share followed by the US (7%). India's established copper ore reserves are low. "It is high time India invests in prospecting for copper ore," said Daga. Without access to ore, there is no self-sufficiency or control over prices.

His words are already ringing true. In the last fortnight, international copper prices have shot up from around \$8,300 per tonne to \$9,066 before dropping to \$8,900 levels due to the acute shortage of ore after the closure of a mine in Panama.

"This has reduced capacity utilization at the smelters. Competition for those who have reduced the smelting margins from \$90 per tonne levels to \$30," said Icria's Ruparelia. Many smelters across the world are shutting down operations as the process of smelting is unviable at the moment.

The government of India has taken the first step to find more reserves. The Mines and Minerals (Development and Regulation) Act, 2002, has introduced an exploration license that encourages private sector participation in prospecting for 30 critical minerals, including copper ore. This move is expected to bring in advanced technology, expertise and capital to prospect for copper ore.

The ministry of mines expects availability of ore to increase from 4m to 12.2m by 2028-29.

Experts also said that the government and the private sector must work together to explore the strategic supply. That will come with countries that have large ore deposits. They point out that China has already signed deals in Africa. Many of these countries have also opened up to the benefit their economy gets by adding value to the ore locally rather than just exporting it. This calls for a different approach. India, Inc. should look at investing in ore processing facilities in the nations and shipping the concentrate feed smelters in India, said experts.

The writing on the wall is clear. If India wants to expand its economy rapidly, it needs to move quickly to fix its copper supply. History is replete with such examples: Europe in the 1700s, the US in the 1900s, Japan in the 1960s and China in the 2000s ensured self-sufficiency in copper as their economies grew at a rapid pace. India cannot become a developed nation any other way.

## BIGGER PROBLEM

The self-sufficiency, he clarified, is not just in refined copper, but in any other way.

# Sterlite Power, GIC to Form \$1-b JV for Transmission Projects

Cos to deploy \$500 m each in SPV that will initially own under-construction projects of SPTL

Kalpana.Pathak  
@timesgroup.com

**Mumbai:** Vedanta Group's privately held power transmission arm Sterlite Power Transmission (SPTL) and Singapore's sovereign wealth fund GIC are coming together to set up a \$1 billion joint venture platform in the power transmission sector, according to sources aware of the development.

GIC will deploy \$500 million in the joint venture for a 49% stake while Sterlite Power will deploy a similar amount for a 51% stake. An announcement is likely shortly.

ET was the first to report in its October 25, 2023 edition that the two sides were in talks.

"GIC is coming into a special purpose vehicle which will own all the under-construction projects of SPTL. Initially, it will have five projects. And then as we go along, we'll keep adding more and more projects," said Pratik Agarwal, managing director, SPTL. He declined to comment on the financial details of the transactions.

## Set for More Power

The platform will invest about **\$1 b** of additional equity to take the **AUM** to over **₹30,000 cr**

**Sterlite Power** will transfer four assets with a cumulative project cost of about **₹7,500 cr** into this JV

The four assets are operational in **Rajasthan(2), Assam and Kashmir**

VJAY P

Sources said the platform will invest about \$1 billion of additional equity in the future to take the assets under management to over ₹30,000 crore.

Sterlite Power would be transferring four assets with a cumulative project cost of about ₹7,500 crore into this JV, pursuant to the closure of the deal. These four assets are operational in Rajasthan(2), Assam and Kashmir. These transmission corridors will be designed to evacuate more than 1000 to 2000 MW of power. Agarwal added that the transmis-



sion sector has the most robust pipeline compared to other sectors in the country, including renewables.

India is targeting to reduce the carbon intensity of the economy by over 45% by the end of this decade and also achieve 50% of its cumulative electric power from renewables by 2030. To achieve these goals, India's national transmission grid needs to be significantly upgraded to support the widespread adoption of renewable energy.

"The total investment in transmis-

sion expected in the next seven years is about ₹2.5 lakh crores. And as of now, we are sitting on close to ₹1.6 lakh crores of approved projects. The sector has only around four to six players. This is a very large opportunity that requires deep pockets and hence this transaction with GIC is very timely," Agarwal added.

GIC did not respond to an email until press time.

GIC will make the investments in multiple tranches. While around \$100 million has already been injected into the JV, around \$100-200 million will be injected in the next quarter and the rest will flow whenever the JV makes capital calls for transmission project tenders and planned capex.

SPTL, the privately held power transmission arm of Vedanta Group, is demerging its business to create pure-play business verticals based on its end-customer base, investor class, and returns.

SPTL—formed through a demerger from Sterlite Technologies in 2016—is 75% owned by Vedanta's Anil Agarwal family with the remaining held by minority shareholders.



## Coal supplied for gasification should be priced lower than that for power sector: NITI Aayog

Abhishek Law  
Rishi Ranjan Kala  
New Delhi

The price of coal supplied for gasification should be kept at a notified price lower than that for coal supplied to the power sector. It can be charged on extraction basis so as to create certainty in the minds of developers of coal gasification projects in the public or private sector, NITI Aayog suggested at a recent meeting called to review the progress of coal gasification projects.

According to those present in the meeting (a copy of the minutes was accessed by *businessline*), NITI Aayog will provide a comfort letter to the Ministry of Coal.

The joint meeting of the steering committee and technical standing group on the Coal Gasification Mission was held under the chairmanship of VK Saraswat, Member, NITI Aayog.

### TOPICS COVERED

The discussions covered technologies, ash content suitability for coal gasification, cost estimates on coal gasification projects, the technology readiness level of pilots, preparation of reports of gasification projects, minimum size of plants, and parameters for tariff-based competitive bidding projects, among others.

The meeting also took up the need for a support letter from the NITI Aayog on the supply of coal for gasification projects at low prices.

According to Amrit Lal Meena, Secretary, Ministry of Coal, the Centre wants more coal to be gasified so that syngas-based chemicals can be manufactured



**THE LARGER PLAN.** The Centre wants more coal to be gasified so that syngas-based chemicals can be manufactured and import substitution takes place. REUTERS

and import substitution takes place.

"The government has taken major policy decisions to promote coal gasification," he had previously told *businessline*.

According to the official, the requirements broadly include land, raw materials, finances, technology and market.

The government has approved a land leasing policy for setting up energy related infrastructure on land belonging to coal mining companies. Anyone setting up a coal gasification unit can look for land and lease it.

On raw materials, if the investor in a coal gasification project is a captive or commercial mine owner, then 50 per cent of the revenue share is incentivised, if it is used for gasification.

"For those who do not have captive or commercial mines, Coal India will offer coal on a long-term basis at subsidised prices (a little higher than the notified price)," Meena said, adding: "it will be through a separate win-

give three months time to seek responses.

"But responses so far are positive, optimistic and forthcoming. RFP will come in FY25," Meena said.

### OTHER DECISIONS

It was also decided at the Steering Committee meeting that all gasification projects, including the fertiliser sector and existing gasification plants, should be treated under the Gasification Mission. They may be made eligible for the same relaxation under the scheme.

"The Ministry of Coal needs to relook the matter for the issuance of a necessary policy directive to promote coal gasification in India," it said.

Also, the minimum size of demonstration projects need to be considered at 100 MT; while discussions also centred around the need "to relook the pricing of lignite in order to reduce the end product price after the coal gasification projects."

"NLCIL needs to review cost estimates in consultation with GAIL/ JSPL for their lignite to gasification project proposed at Neyveli, Cuddalore.

"Accordingly, the decision to re-tender may be taken in order to reduce the end-product price," the minutes of the meeting said.

A committee will also be constituted under the chairmanship of the Department of Science & Technology and representatives from NITI Aayog, Ministry of Coal, Ministry of Steel, IIT-Delhi, IIT-Bombay, CIL, ISC Bengaluru, CIMFR Dhanbad and other industry experts, for an assessment of the tech readiness and maturity of the technology developed through the R&D plants.





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### IOC awaits sanctions relief extension to resume Venezuelan oil purchase

**Reuters**  
New Delhi

Indian Oil Corp will consider resumption of Venezuelan oil purchases if the US continues with a relaxation in sanctions against the OPEC-producer, the company's chairman said.

IOC is scheduled to get a cargo of Venezuelan oil next month, according to LSEG trade flow. "We will consider buying Venezuelan oil if the relief provided now stays and if Venezuelan crude makes commercial sense for us," Shrikant Madhav Vaidya told Reuters.

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### EV giant BYD posts slowest quarterly profit in 2 years

Chinese electric vehicle giant BYD reported an 18.6 per cent rise in fourth-quarter profit on Tuesday, its slowest since the first quarter of 2022, as EV sales lost momentum in the world's biggest auto market amid a brutal price war.

Net profit totalled 8.67 billion yuan (\$1.20 billion) last quarter, with revenue up 15.1 per cent at 180.04 billion yuan, according to BYD's stock market filing. **REUTERS**

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## China set to challenge USEV plans at WTO

REUTERS  
26 March

China has initiated dispute settlement proceedings against the United States at the World Trade Organization to safeguard its interests in the electric vehicle industry, the Chinese mission said on Tuesday and the WTO confirmed.

China said it was contesting "discriminatory subsidies" under the US Inflation Reduction Act that it said resulted in the exclusion of goods from China and other WTO countries.

The wide-ranging law provides billions of dollars in tax credits to help consumers buy electric vehicles and companies produce renewable energy, as President Joe Biden aims to decarbonise the mighty US power sector.

"Under the disguise of responding to climate change, reducing carbon emission and protecting environment, (these subsidies) are in fact contingent upon the purchase and use of goods from the United States, or imported from certain particular regions," the Chinese mission said.

It said it was launching the proceedings "to safeguard the legitimate interests of Chinese electric vehicle industry and to maintain a fair level playing field of competition for the global market".

A WTO official confirmed that

a request from China for dispute consultations on the matter had been received, without providing details.

In Beijing, a spokesperson for China's Ministry of Commerce said it urged Washington to "promptly correct discriminatory industrial policies, and maintain the stability of the global industrial and supply chains for new energy vehicles".



Publication : Financial Express	Editions : New Delhi
Date :27 March 2024	Page : 5

### Adani eyes 45 GW green capacity by 2030

**BILLIONAIRE GAUTAM** Adani's group is building the world's largest renewable energy park in Gujarat, as it eyes a massive 45 GW capacity to generate electricity largely from solar energy.

Speaking at the opening of 'Energy Revolution: The Adani Green Energy Gallery' at the Science Museum in London, Gautam Adani said his group's renewable energy arm, Adani Green Energy, is

leading an energy transition that honours the commitment of taking care of the planet not just for this generation and the next but also for generations to come.

— PTI



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# India to give timeline for oil demand peak, firms watch

The key modelling exercise is being undertaken by the Petroleum Planning & Analysis Cell

Rituraj Baruah  
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NEW DELHI

India is working on a plan for estimating the timeline for peak oil consumption, said two people aware of the development, in a move that could impact the global oil economy architecture.

The modelling exercise undertaken by the Petroleum Planning & Analysis Cell (PPAC), an agency under the union ministry of petroleum & natural gas will also help the world's third largest oil buyer plan for its future refining capacity, said one of the people cited above.

India is a key Asian refining hub, with an installed capacity of about 254 million tonnes per annum (mtpa).

With the fourth largest cumulative refining capacity in the world, the government plans to add around 56.6 mtpa of crude oil refining capacity till 2030, including both brownfield and greenfield expansion.

The exercise will give policymakers an idea of when India is likely to hit the highest anticipated level of consumption, post which the yearly consumption is expected to plateau out and then decline.

"PPAC is working on it. The government's approval would be required for releasing the estimates," said the person mentioned above.

The person said peak oil in India is



The exercise comes at a time of rising concern over climate change and global efforts to curb the use of petroleum products.

BLOOMBERG

**254 mtpa**  
India's installed refining capacity

**56.6 mtpa**  
of crude oil refining capacity to be added by 2030

generally expected to be reached about five to six years after the global consumption peak is hit.

"It would depend on greater penetration of EVs. Oil consumption will continue to grow till EV adoption does not gain pace," said the other person.

Queries mailed to the union ministry of petroleum and natural gas remained unanswered at press time.

The International Energy Agency last year said global oil consumption would reach its peak by 2030. The IEA had said the peak may be followed by "an undulating plateau

lasting for many years".

The exercise comes at a time of rising concern over climate change and global efforts to curb the use of petroleum products. Phasing out and eventually ending oil consumption is key to the global target of restricting global warming to 1.5 degrees Celsius above the pre-industrial average by 2030 and achieving net zero carbon emission by 2050.

India has set an ambitious net zero target of 2070. Even as India has its own initiatives to support the shift towards electric mobility and also bring in transition in industries, demand for

petroleum products in the country is projected to remain robust in the coming years. According to the IEA, India will surpass China as the largest driver of global oil consumption by 2027.

"Underpinned by strong economic and demographic growth, the country is on track to post an increase in oil demand of almost 1.2 mb/d (million barrels per day) the forecast period, accounting for more than one-third of the projected 3.2 mb/d global gains," said its 'India Oil Market Outlook 2023' report.

The petroleum product demand, that includes petrol, diesel, liquefied petroleum gas, aviation turbine fuel and naphtha among others, touched a high of 222.3 million tonnes in FY23, and is expected to hit a new record of 232.56 mt this fiscal (FY24). According to estimates by the PPAC, in FY25, it will touch a new high of 238.95 mt.

A timeline from the Indian government would be a major indicator for global oil producers on the likely market scenario that they need to cater to in the coming years as India is the third largest buyer of oil, after the US and China.

Further, the timeline would also be significant as India has been pressing the Organization of the Petroleum Exporting Countries (Opec) to take into consideration the requirements of oil-consuming nations as it continues with its production cuts.

## India's solar power projects expected to generate 600 kilotonnes of waste by 2030: CEEW study

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India, which generated 99 kilotonnes of solar photovoltaic (PV) waste till FY23, is expected to generate around 600 kilotonnes (KT) of additional waste from existing and upcoming solar power projects by 2030.

A recent study by the Council on Energy, Environment and Water (CEEW) reveals that most of this waste will come from Rajasthan, Gujarat, Karnataka, Andhra Pradesh and Tamil Nadu.

### SOLID WASTE

As India expands its renewable capacity to go net-zero, the cumulative waste from its existing and new solar energy capacities, deployed between FY24 and FY30, would fill up 720 Olympic-size swimming pools by the



**TOP STATES.** Rajasthan alone will account for 24 per cent of this waste, followed by Gujarat (16 per cent) and Karnataka (12 per cent) REUTERS

end of this decade. "The waste from India's current installed solar capacity alone will increase to 340 KT by 2030, containing about 10 KT of silicon, 12-18 tonnes of silver and 16 tonnes of cadmium and tellurium — the majority of which are critical minerals for India," CEEW study revealed.

About 67 per cent of this waste is expected to be generated in five states, which are the top States for installed solar capacity. Rajasthan alone will account for 24 per cent of this waste, followed by Gujarat (16 per cent) and Karnataka (12 per cent). Between FY14 and FY30, Rajasthan and Gujarat

will have generated about 4.1 KT and 2.7 KT of waste per annum, respectively. The remaining three states could generate 2.0 to 1.2 KT of waste per annum.

The study found that the rest of the 260 KT of waste will come from new capacity that will be deployed in this decade. This is an opportunity for India to emerge as a leading hub of the circular economy for the solar industry and ensure resilient solar supply chains, it pointed out.

By 2040, the cumulative waste could increase more than eight times, to reach 4,981 KT. Around 74 per cent (3,689 KT) of this will come from existing capacity (until FY23), and the remaining 26 per cent (1,292 KT) from new installations (post-FY23).

This increase is because existing installations will

have reached end-of-life (EoL). As for 2050, all the capacity deployed until 2030 will have reached EoL, generating a cumulative waste of 18,980 KT (about 19000 KT). The annual waste quantum between 2047 and 2050 would decrease as the majority of the installed capacity has already reached EoL and no new capacity additions are assumed post 2030.

The CEEW study emphasised that estimating PV waste is the first step in establishing a circular economy for the solar industry. Efforts from all stakeholders are required to create a comprehensive circular economy ecosystem.

The policy think tank suggested that the Ministry of New and Renewable Energy (MNRE) should create and update a comprehensive database of installed solar capacity.