

September 2023 | VOLUME 1

InfraInsights

Blueprints for Tomorrow

How L&T helped ISRO put together Chandrayaan-3

On 23rd August 2023, India once again proved the potential it holds. It became the first country to achieve a soft landing on the Lunar South Pole. We are currently celebrating the victory of ISRO, but less do we know about the unsung heroes who played a major role in this achievement.

India's largest construction company L&T has built key components of Chandrayaan-3. The launch vehicle's critical booster segments – the head-end segment, the middle segment, and the nozzle bucket flange were manufactured at L&T's factories in Powai. Similarly, L&T's hi-tech aerospace manufacturing plant at Coimbatore provided components such as ground and flight umbilical plates.

L&T expects more opportunities to come up in the space industry. The government decided to open up the Indian space industry to private sector players three years ago. Besides Chandrayaan-3, L&T has also been involved in the production of other ISRO missions such as Chandrayaan-1 and 2, Gaganyaan and Mangalyaan.

InfraShorts

India's crude oil production **increased 2.1 percent to 2.5 million metric tonnes (MMT)** in July 2023 as compared to the previous year, according to data released by the Oil Ministry on August 21.



Social life at GIFT City

To infuse social life in GIFT City, the authorities are scouting for investors in Dubai to help build an entertainment zone on the banks of the Sabarmati River in Gandhinagar.

There have been constant complaints that there are no entertainment zones, and no social life in GIFT City; youngsters do not want to come. So, the government has taken cognizance of this fact and they are in the process of releasing EOI (Expression of Interest) for developing an entertainment zone of the level that we see abroad. GIFT is also going to have a riverfront just like Ahmedabad which will add to the value of the infrastructure there.



BDO partners in line for windfall after \$1.3bn debt deal with Apollo Global Management

Senior partners at the accounting firm BDO USA are in line for a big windfall after the \$1.3bn debt deal with Apollo Global Management. The private capital group is to provide money in debt financing for an employee-owned vehicle.



Global oil demand hits record, may move higher, IEA says

Demand for oil reached a record of 103 million barrels a day in June driven by better than expected economic growth in OECD countries, strong summer air travel, and surging oil consumption in China, particularly for petrochemical production, the IEA said in its monthly oil report.



Net zero spotlight: Scotland seeks renewable investment solutions

Scotland is planning to become net zero by 2045 by finding solutions for stalled pumped storage capacity, attracting offshore wind investment and addressing its oil and gas legacy. UK PM also announced two large carbon capture storage projects at the same time as UK is expected to become net zero by 2050.

DB Power buys back stake from global infrastructure for ₹400 cr

DB Power Ltd, an affiliate of Dainik Bhaskar Group, has reportedly reacquired Global Infrastructure Partners' (GIP) stake in its thermal power venture for about ₹400 crore. The move allowed GIP to exit its investment. The repurchase was funded internally using DB Power's earnings. According to insiders who are knowledgeable about the situation, GIP's decision to divest prompted the buyback. This development comes in the wake of Adani Power's recent withdrawal from its intended acquisition of DB Power, with reasons for the termination undisclosed. Adani had initially agreed in August 2022 to buy DB Power for ₹7,017 crore, combining equity and debt. In the



financial year 2021-22, DB Power had an operating income of ₹3,377 crore, an increase from ₹2,823 crore the preceding year. The company declared profits of ₹591 crore and ₹312 crore for

FY22 and FY21, respectively. After Adani Power's acquisition announcement fell through, DB Power's strong performance in the nine months leading up to December 2022 was fueled by unexpectedly high power demand and strong short-term market sales, leading to significant cash accumulation. During this period, the company's Earnings Before Interest, Tax, Depreciation, and Amortization (EBITDA) totaled ₹1,091 crore, a decrease from ₹1,504 crore in the fiscal year 2022. The company anticipates that steady power demand and efficient cost management will uphold its vigorous operational performance in the medium term.

EU reaches 90% gas storage target ahead of winter



The EU has reached its target of filling gas storage facilities to 90% of capacity roughly 2½ months ahead of the November 1 deadline, according to the latest figures released by Gas Infrastructure Europe. Aimed at optimizing EU preparation for the coming winter, the gas storage regulation of June 2022 set a binding EU target of 90% filling storage facilities by 1 November each year, with interim targets for EU countries. Gas storage is key for the security of supply in Europe as it covers up to one-third of the EU's gas demand in winter. The figures published show that gas storage levels have reached 1024 TWh or 90.12% of storage capacity (equivalent to just over 93 billion cubic meters (bcm) of natural gas).

What India should do to bridge the skilled manpower shortage in infra?

India's ambition to become the world's third-largest economy by 2027-28 hinges on robust infrastructure development spanning transportation, real estate, and energy sectors. Economist Arvind Panagariya advocates balanced growth across domains. However, achieving a \$5 trillion economy by 2025 necessitates strategic planning and a skilled workforce. The infrastructure sector is projected to grow at an 8.2% CAGR by 2027, with significant allocations in the 2022-23 Union Budget. The challenge lies in the scarcity of skilled labor to keep up with rapid development and technological



adoption. Digitalization will reshape job landscapes, favoring roles blending digital and non-cognitive skills, leading to employment opportunities in the sector. Question

arises about India's capacity to sustain development momentum, given its extensive networks.

While resources are allocated for projects, the lack of trained professionals in design, risk management, and project execution is concerning.

Collaboration of government, academia, and corporates is key. Skills must match industry demands, encompassing both traditional and digital fields. Upskilling, vocational education, innovation, and involving experts are vital to closing the skills gap, boosting the economy, and elevating India's global position.

ONGC to invest Rs 1 lakh crore to scale up low-carbon energy



Oil and Natural Gas Corporation (ONGC) is investing Rs 1 lakh crore by the end of this decade in low-carbon energy opportunities, including renewables and green hydrogen as it looks to transform into a low-carbon energy player. It has detailed a roadmap to scale up its low-carbon energy portfolio significantly.

The company supports India's ambitious goals, actively contributing to the nation's target of cutting 1 billion tonnes of carbon emissions and decreasing carbon intensity by 45% by 2030 through diverse decarbonization initiatives, leading to substantial emission reductions.

Integrating sustainability into core operations cut Scope-1 and Scope-2 emissions by 17% in 5 years. ONGC reduced its emissions by 2.66% in FY23. The firm is working towards green initiatives and reducing its Scope 1 and Scope 2 emissions to zero by 2038. ONGC, India's largest government-run corporation, produces 70% of the nation's oil and gas. It's the biggest public sector commercial entity in India.

TVS & Zomato tie up for last mile delivery with e-Scooter

TVS Motor Company has announced a strategic association with the food ordering and delivery platform Zomato. As part of this partnership, TVS will deploy more than 10,000 electric scooters over the course of two years. These vehicles will be used for last-mile delivery, enabling Zomato to reduce its carbon footprint. TVS would ensure that delivery partners onboarded on Zomato have access to charging stations within their radius and receive smooth digital integration to ensure ease of delivery, the company said in a statement. Zomato is committed to 100% EV adoption by 2030 and is the first food ordering and delivery platform to join Climate Group's EV100 campaign.

Adani prepared to go solo on the green hydrogen project

Adani Group is pursuing to invest \$50b in green hydrogen in India, independently after the suspension of partnership plans with Total Energies.

Adani's primary green hydrogen endeavor is a \$5 billion integrated facility with wind turbines, solar modules, and renewable energy generation capacity. With a \$300 million investment, Adani is ready for hydrogen business within the current fiscal year, to scale up in the following years. The project's ultimate aim is to contribute to India's target of producing five million tonnes of green hydrogen annually by 2030, catering to both domestic demand and the international export market.

Kerala to promote Green Hydrogen and Ammonia

The government of Kerala has received proposals from two companies to set up green hydrogen and green ammonia production plants. The plants will use renewable energy to produce green hydrogen and ammonia. Green hydrogen and ammonia are clean and sustainable fuels that can be used to power vehicles, generate electricity, and produce fertilizer. The estimated investment is 30,000 crore. The state government has also announced a Rs 200-crore scheme for setting up green hydrogen hubs at Kochi and Trivandrum. The development of these plants is a major step forward for Kerala in its efforts to become a clean energy leader.



➤ Eshank Dubey,
MBA IDM, Batch 2023-25,
SCMHRD

Hydrogen - The New Petrol !

The global landscape of energy and transportation is undergoing a transformative shift as concerns about rising petrol prices, dwindling fossil fuel reserves, and environmental sustainability take center stage. While various alternatives such as electric, nuclear, and renewable energies vie for prominence, hydrogen fuel emerges as a particularly promising contender due to its minimal emissions and widespread use in vehicles.

In light of the pressing need to curtail global emissions by half by 2030 to avert severe climate impacts, world leaders are taking ambitious steps towards carbon reduction. Notably, during the 26th Conference of Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in November 2021, India's Prime Minister Narendra Modi committed to achieving net-zero emissions by 2070. India, as part of the Paris Agreement, aims to cut carbon emissions by 50% or 500GW of energy by 2030, emphasizing its dedication to climate-conscious policies.

When comparing the efficiency and practicality of different fuel options, hydrogen fuel cells offer distinct advantages. Electric batteries, exemplified by lithium-ion batteries, consume significant space, occupying 400-600L of fuel space for a range of 400-500km. Notably, hydrogen fuel cells boast an energy-to-weight ratio ten times superior to lithium-ion batteries, rendering the addition of extra hydrogen cells more feasible.

In terms of charging time and capability, hydrogen fuel cells also present compelling advantages. For instance, a Tesla Model S requires half an hour of charging to travel 400km, while a 34-ton Hyundai truck powered by hydrogen can fully charge in just 8 minutes, covering the same distance. This remarkable disparity in charging time makes hydrogen-powered vehicles particularly suitable for applications like heavy-duty trucks and public transport, where efficiency and quick turnaround are critical.

In conclusion, the surge in petrol prices and the need for sustainable energy sources are steering the world towards cleaner alternatives, with hydrogen fuel emerging as a standout option. With its minimal emissions, impressive energy-to-weight ratio, and quick charging capabilities, hydrogen fuel cells promise to transform the transportation sector, helping nations achieve their emission goals, and fostering a more sustainable future.

Union Minister Ashwini Vaishnaw inaugurates India's first 3D-printed post office in Bengaluru

The inauguration ceremony of the 1100 square feet post office was held in Bengaluru's Cambridge Layout near Ulsoor Bazaar. The 3D printing technology is a fast-emerging way of constructing structures. It uses computer-aided design to create three-dimensional objects through a layering method. Inaugurating the brand new post office at the residential Cambridge Layout in the city, Union Minister Ashwini Vaishnaw said the building demonstrated "the spirit of development, the spirit of developing our own technology, the spirit of doing something which was considered impossible in the earlier times." That is the defining feature of these times, the minister said.

India, China ramp up infra on north bank of Pangong Tso lake

Three years after the violent clash between Indian and Chinese forces in Galwan followed by tanks facing each other around the Pangong Tso – a lake spanning eastern Ladakh and western Tibet – there is hectic activity in the area from both sides. While China is rushing to complete a bridge across the Pangong Tso, connecting the north and south banks, India is also building a black-topped road on its side on the north bank. These are among several infrastructure developments initiated on both sides since the standoff, permanently altering the status quo on the ground in eastern Ladakh, even as the two sides await the 19th round of Corps Commander level talks to find a resolution to their dispute in the region.


Rs 1.3 Trillion transactions in FY23 via the National Monetization Pipeline

During the fiscal years 2021-22 and 2022-23, transactions worth approximately Rs 97,000 crore and Rs 1.3 lakh crore were successfully concluded respectively. These transactions were a part of the National Monetization Pipeline (NMP), which was launched in August 2021 to expedite infrastructure development across the nation. The NMP envisions an aggregate monetization potential of Rs 6.0 lakh crore over four years from FY 2022 to FY 2025.



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