

## **NEWS ITEMS ON CAG/ AUDIT REPORTS**

### **1. After Two Failed Attempts, IAF Revives Bid for Six Mid-Air Refuellers (*swarajyamag.com*) Aug 30, 2023**

After facing failures in the last two attempts over the past two decades, the Indian Air Force (IAF) is once again preparing to restart the process of acquiring six mid-air refuellers.

According to a report by The Indian Express, the request for proposal (RFP) to purchase six mid-air refuelling aircraft, is expected to be issued within the next six months.

This marks the IAF's third effort since 2007 to procure these tankers, with two prior tenders being discontinued due to pricing disputes.

In both of the earlier attempts, the Airbus A330 multi-role tanker transport (MRTT) was chosen by the IAF instead of the Ilyushin Il-78 MKI.

However, in both instances, the process was halted due to budgetary constraints.

However, according to the IE report, this time the IAF aims to buy six 'pre-owned' or 'used' aircraft, which can subsequently be converted into mid-air refuellers.

These aircrafts are intended to serve for 25 to 30 years.

"Several global companies will phase out their older aircraft models in the coming three to four years as they transition to advanced aircraft with new engines. There will be a sufficient number of pre-owned aircraft available in the market that can be transformed into tankers," the report stated.

The IAF is actively seeking an Indian maintenance partner for the tankers.

Apart from the these six refuellers, IAF is also looking to lease another mid-air refueller for training purposes, and a process regarding this has already been initiated.

Once integrated into service, the refuellers will fill a critical capability gap within the IAF's inventory.

Serving as a vital strategic asset and force multiplier, these tankers will extend the airborne endurance of fighter aircraft.

"The deliveries of the tankers might take around two to three years to commence. Meanwhile, the leased tanker will be utilized for immediate training requirements of the force," the official stated, adding that it (the leased aircraft) cannot, however, be deployed for operational purposes.

Presently, the IAF operates a fleet of six Russian Ilyushin-78 tankers procured in 2003-04. They provides limited refuelling support to the Navy's MiG-29K fighter jets, as well.

However, only three to four of them are typically operational at any given time.

Maintenance and serviceability concerns were highlighted in an August 2017 report by the Comptroller and Auditor General (CAG), which evaluated their operations from 2010 to 2016. The tankers were purchased at Rs 132 crore per aircraft in 2003-2004. <https://swarajyamag.com/defence/after-two-failed-attempts-iaf-revives-bid-for-six-pre-owned-mid-air-refuellers>

## **2. India's home-grown Hypersonic Wind Tunnel, Uncharted path to innovation** (*see positive.in*) Aug 31 2023

India's recent accomplishment of Chandrayaan-3's successful lunar touchdown has placed the nation in an elite league, joining the US, China, and Russia with the capability for soft moon landings. Additionally, India proudly stands as the fourth nation worldwide, after the established leaders, to possess a home-grown Hypersonic Wind Tunnel (HWT) capability.

### **Pioneering Technology with Potential**

The Hypersonic Wind Tunnel, conceived by the Defence Research and Development Laboratory (DRDL) and constructed at a cost of Rs 400 crore, is an embodiment of cutting-edge research and innovation. This remarkable facility has the potential to revolutionize the development of hypersonic missiles and re-entry vehicles, crucial for advanced military technology and space exploration.

### **A Positive Outlook with Challenges**

While the HWT represents India's commitment to pushing the boundaries of scientific progress, it has encountered a limited uptake for testing hypersonic technology. The recent CAG audit report highlights that, although commissioned in October 2019, the number of tests conducted over the following three years accounts for only 33% of the estimated total. However, this serves as a testament to the facility's capability, as initial estimates were on the higher side.

### **A World of Possibilities**

The HWT, stationed in Hyderabad, holds immense potential for advancing research in aerodynamics and propelling India's space endeavors. With the capacity to simulate conditions from Mach No 5 to 12, it provides a crucial platform for understanding extreme heat, pressure, and flight control—critical aspects of hypersonic technology.

### **Driving Innovation and Cost Efficiency**

One promising aspect lies in the HWT's potential to significantly reduce satellite launch costs. As India remains a key player in the satellite launch industry, this innovation could pave the way for even greater efficiency and cost-effectiveness in space missions.

### **Navigating Challenges and Progress**

The path to hypersonic technology is rife with challenges, including managing extreme conditions and maintaining control over flight trajectories. Despite obstacles, the HWT serves as a testament to India's strides in developing cutting-edge military and space technology.

### Future Endeavors

Although the HWT project faced delays due to prioritization issues, its immense potential remains undiminished. The focus now rests on harnessing this advanced facility's capabilities and collaborating with stakeholders to further propel India's standing as a leader in futuristic technological advancements. <https://seepositive.in/article/5911/indias-hypersonic-wind-tunnel>

### **3. House panel slams road ministry over ‘sub-contracting & poor management’** (*newindianexpress.com*) Aug 31 2023

A panel of parliamentarians has questioned the provision of subcontracting allowed by the Ministry of Road Transport and Highways (MoRTH) and the National Highways Authority of India (NHAI). Taking note of ‘poor contract management’ resulting in avoidable expenditures and delays, the panel has further suggested that the ministries to assign ‘contract managers’ for effective and transparent management of work awarded to the contractors.

The 31-member parliamentary standing committee on transport, tourism and culture, in its 354th report submitted to both Houses of Parliament earlier this month, further has recommended the ministry to look into the issue on priority. “The committee also desires to be apprised of the reasons as to why the Ministry/NHAI allows contractors to hire or lease out to sub-contractors for carrying out specific work instead of splitting the project into smaller parts so that contractors with limited wherewithal could also bid for the same and legitimately get awarded on merit as principal contractor for the assigned work,” the panel stated.

The committee, headed by Rajya Sabha MP V Vijayasai Reddy of YSR Congress, said that the ministries should assign competent contract managers who have the necessary skills and expertise to effectively manage contracts. “These managers should have a strong understanding of contract law, project management and negotiation skills. Imparting them adequate skill training will enable them to fulfill their responsibilities,” it suggested, while referring to the observation of the Comptroller and Auditor General (CAG), which also flagged off the delays in the finalisation of the negotiated rates and grant of extensions despite poor progress by the contractor.

Making a strong pitch for arrangements to ensure timely completion of projects, the panel said the ministry might develop a transparent and efficient payment management system to minimise disputes.

“Emphasis should be laid on establishing clear protocols for verifying contractor invoices, approving payments, and addressing any payment disputes promptly. Timely and accurate payments can help maintain the contractor’s motivation, besides ensuring timely completion of the project,” the committee noted in its report.

It has also proposed provisions of incentives or penalties depending on the performance of the contractors.

“The committee suggests that the ministry should incorporate performance incentives and penalties into the contract terms. Incentives can motivate contractors to contribute significantly to the project, exceeding expectations, while penalties can lead to poor

performance or non-compliance,” the panel said.  
<https://www.newindianexpress.com/nation/2023/aug/31/house-panel-slams-road-ministry-over-sub-contracting-poor-management-2610264.html>

#### **4. Gati Shakti framework could unsnarl India's infrastructure bottlenecks (*business-standard.com*) Aug 31 2023**

Many infrastructure development projects in India have faced implementation challenges, leading to significant cost and time overruns. According to data published by the Ministry of Statistics and Programme Implementation (Mospi), as of July 2023, of a total of 1,646 central infrastructure projects costing Rs 150 crore and above, 809 were running behind their original schedules, with an average delay of over 37 months. Further, there is an anticipated cost overrun of 19 per cent at aggregate level with anticipated project cost of Rs 28.6 trillion versus original estimated cost of Rs 23.9 trillion.

A key reason for the time and cost overrun was that various government departments and ministries work in silos with low inter ministerial/inter-departmental coordination and high bureaucratic entanglements. This also leads to inefficient utilisation of resources. The PM Gati Shakti National Master Plan (PMGS-NMP) framework, launched in October 2021, aims to plug this by taking multiple ministries on board and improving coordination. This will improve the pace and efficiency of infrastructure development and support economic growth through seamless multimodal connectivity and logistics efficiency. PMGS-NMP is an integrated approach for infrastructure development in India with a focus on providing multimodal connectivity infrastructure to various economic zones. This framework has representation from 27 central ministries with an objective to break the silos and improve coordination.

The scope of PMGS-NMP primarily covers projects across seven infrastructure segments (also referred to as seven engines — Railways, Roads, Ports, Waterways, Airports, Mass Transport, Logistics Infrastructure) and includes projects developed by both central and state governments. The projects pertaining to these seven engines in the National Infrastructure Pipeline (NIP) will be aligned with the PM Gati Shakti framework. It will cover the infrastructure schemes of various ministries and state governments like Bharatmala (highways), SagarMala (ports), inland waterways, dry/land ports, UDAN, and economic zones, etc, to improve connectivity. All the existing and proposed economic zones, along with planned interventions, have been mapped to a single platform. The PMGS-NMP will help in improving the efficiency of the transportation network in India by removing gaps for seamless connectivity.

The PMGS-NMP will add to the potential opportunities for infrastructure and construction entities. The projects identified under the NIP have increased from an initial value of Rs 111 trillion (6,835 projects) to the current estimate of over Rs 156 trillion (9,217 projects). Apart from the ongoing projects and regular project additions under the NIP, 85 projects worth Rs 5.39 trillion have been approved under PMGS till July 2023 to be included in NIP. Further, projects that have been languishing due to various issues in the past are also likely to be resolved by better cooperation among various ministries through Gati Shakti. In the first year of PMGS (till October 2022), 1,380 projects were monitored by PMG with over 1,300 issues resolved. The PM Gati

Shakti framework points to ramping up capacity in planning, design, financing, and implementation management by taking technical support from the Capacity Building Commission, the central ministries, state governments, and their infra-agencies.

While PMGS will reduce the execution bottlenecks and improve the preparedness of the project owners before the contracts are awarded for execution, the operational and financial capabilities of agencies and contractors executing these projects will also be critical in ensuring their timely implementation and the effectiveness of PMGS initiative. A recent audit report by CAG, which covered a sample of projects under Bharatmala Pariyojana during the 2017-18 to 2020-21 period, drew attention to projects being awarded to less qualified contractors, which had a bearing on the execution.

With the increasing scale of projects under implementation, the contractor's financial ability could become a bottleneck as sizeable resources (equipment, manpower, and bank guarantee limits) are required to ramp-up execution; the capability-building measures under the framework could address this challenge. The CAG report also highlighted that the detailed project reports (DPRs) prepared by consultants were not appraised with due diligence by the competent authority before the projects were approved. Many a time, the authorities know that actual implementation/ project awards may happen several years after the DPR preparation date and, therefore, DPRs/consultants do not attract the kind of scrutiny that implementing agencies do. The scrutiny of DPRs by authorities should be a key focus area — a neatly-laid DPR makes the project execution smooth and reduces the scope for disputes later. The selection of DPR agencies should be solely based on the quality of work done and the deviations noticed in the past. While these are not high-value contracts, a good DPR saves significant time and cost.

The Gati Shakti framework, if implemented according to plan, has the potential to immensely help the government achieve its objective of reducing the logistics cost by 4-5 per cent, from about 13-14 per cent of the GDP currently to about 9 per cent of it in the next 3-5 years (the logistics cost in other developed economies ranges between 8 and 11 per cent, according to a Niti Aayog report).

## BUILDING BLOCKS

Plan under PM Gati Shakti

<p><b>ROADS – NATIONAL HIGHWAYS (NH)</b></p> <ul style="list-style-type: none"> <li>• 200,000 km of NH network by 2024–25</li> <li>• 5,590 km of 4/6-lane NH along the coastal areas to be completed by 2024–25</li> <li>• All state capitals in the Northeast to be connected with either four-lane NH or two alternate alignments of two-lane configurations each by 2024–25</li> </ul>	<p><b>RAILWAYS</b></p> <ul style="list-style-type: none"> <li>• Completion of critical projects by 2024–25, leading to decongestion by 51%</li> <li>• Western and Eastern Dedicated Freight Corridors (DFCs) to be completed</li> <li>• Cargo handled by the Railways targeted to increase to 1,600 million tonnes in 2024–25 from 1,210 million tonnes in 2020</li> </ul>	
<p><b>AIRPORTS</b></p> <ul style="list-style-type: none"> <li>• 109 airports including existing 51 airstrips, 18 greenfield airports, 12 water aerodromes and 28 heliports to be developed by 2024–25</li> </ul>	<p><b>PORTS</b></p> <ul style="list-style-type: none"> <li>• Increase in cargo capacity at the ports to 1,759 mtpa by 2024–25 from 1,282 mtpa in 2020</li> </ul>	<p><b>NATIONAL WATERWAYS (NW)</b></p> <ul style="list-style-type: none"> <li>• Cargo movement on all NW will be 95 mt by 2024–25 from 74 mt in 2020. Cargo movement on the Ganga to be increased from 9 MMT to 29 mt by 2024–25</li> </ul>
<p><b>LOGISTICS INFRASTRUCTURE</b></p> <ul style="list-style-type: none"> <li>• 11 industrial corridors comprising 32 nodes/projects to be developed in four phases by 2024–25. Ninety textile clusters/mega textile parks, 109 pharma and medical device clusters, 38 electronic manufacturing clusters, 2 defence corridors, 197 mega food parks and agro-processing centres, and 202 fishing clusters to be developed by 2024–25</li> </ul>		

Source: Press Information Bureau, ICRA Research

[https://www.business-standard.com/economy/news/gati-shakti-framework-could-unsnarl-india-s-infrastructure-bottlenecks-123083100016\\_1.html](https://www.business-standard.com/economy/news/gati-shakti-framework-could-unsnarl-india-s-infrastructure-bottlenecks-123083100016_1.html)

### 5. **CPR says its operations have come to a ‘grinding halt’, has not paid salaries since March** (*scroll.in*) 31 Aug 2023

The Centre for Policy Research on Tuesday told the Delhi High Court that it has not been able to pay salaries to its employees since its Foreign Contribution Regulation Act license was suspended by the government in March, PTI reported.

The think tank said that its activities have come to a “grinding halt” and 83 employees have left the organisation.

Under the provisions of the law, non-profit organisations operating in India can receive foreign funds only after they are registered under the FCRA. The suspension of the licence makes nonprofits in the country ineligible to get fresh donations from abroad or use the existing foreign donations without the home ministry’s clearance.

Founded in 1973, the Centre for Policy Research describes itself as a “non-partisan, independent institution dedicated to conducting research that contributes to high-quality scholarship, better policies, and a more robust public discourse about the issues that impact life in India”.

In March, while suspending its license, the government had said that the action was taken based on the findings submitted by the Income Tax department, which suggested that certain FCRA provisions were not followed by the think tank.

Subsequently, the Centre for Policy Research challenged the order before the Delhi High Court and also submitted an application to the authorities seeking release of 25% of its frozen funds for paying salaries to its employees.

In May, the Delhi High Court stayed proceedings of the Income Tax department against the think tank, saying that the case required examination.

On Tuesday, a single bench of Justice Subramonium Prasad issued a notice to the Centre and asked it to make a decision by September 5 on the organisation's application seeking release of 25% of its funds, reported Live Law.

The judge noted that three months have passed since the think tank gave certain clarifications to the authorities but no order has been passed on its request.

Senior Advocate Arvind Datar, representing the Centre for Policy Research, argued that the order suspending the FCRA licence was passed without any investigation.

“This is extremely sad,” Datar said. “It is not an ordinary NGO. This is India's number one think tank. We come under the CAG [Comptroller and Auditor General of India] audit and the Home Ministry audit. The Home Ministry completed its audit in February 2022. The CAG audit was completed in April 2022. All allegations in the show cause notice are of the year 2018, 2019 etc. Everything has been examined by CAG. Nothing wrong [had been] found.”

The counsel representing the Centre said that due procedure is being followed and that the exercise is being carried out diligently by the government.

The court listed the matter for next hearing on September 5. <https://scroll.in/latest/1055150/cpr-says-its-operations-have-come-to-a-grinding-halt-has-not-paid-salaries-since-march>

## **6. लैंड ऑडिट के लिए ISRO से ली जाएगी सैटलाइट इमेज:नोएडा में 45 लाख वर्गमीटर पर है अवैध कब्जा, CAG की रिपोर्ट में खुलासा** (*bhaskar.com*) 31 Aug 2023

नोएडा 203 वर्ग किमी में बसा हुआ है। सीएजी की रिपोर्ट के अनुसार इसके करीब 45 लाख वर्गमीटर जमीन पर अवैध कब्जा है। प्राधिकरण अब लैंड ऑडिट कराएगा। इसमें इसरो की मदद ली जाएगी। इसरो से मास्टर प्लान 2031 की सैटलाइट इमेज ली जाएगी। जिससे ये देखा जाएगा कि मास्टर प्लान-2031 के अनुसार किस-किस अधिसूचित जमीन पर योजनाओं का निर्माण होना है और वहां अवैध कब्जा है।

वास्तविक स्थिति के लिए ड्रोन सर्वे कराया जाएगा। इस पूरे कार्य के लिए एक सलाहकार कंपनी का चयन किया जाएगा। जिससे एग्रीमेंट किया जाएगा। ये कंपनी ही प्राधिकरण का लैंड ऑडिट करेगी। प्राधिकरण सीईओ लोकेश एम ने बताया कि लैंड ऑडिट से लैंड बैंक और अवैध निर्माण की पूरी जानकारी मिलेगी। इसकी रिपोर्ट तैयार की जाएगी।

सीएजी की रिपोर्ट में जिस जमीन पर अवैध कब्जा है इसकी कीमत करीब 16 हजार करोड़ रुपए ज्यादा है। इसमें औद्योगिक, कॉमर्शियल, आवासीय, संस्थागत की जमीन है। जिसमें इस समय निवेश किया जा रहा है। बता दे प्राधिकरण ने इस बार ग्राउंड ब्रेकिंग सेरेमनी (जी बीसी) में करीब 85 हजार करोड़ का ग्राउंड तैयार किया है। ऐसे में जरूरी है कि समय से इन निवेशकों को जमीन आवंटित हो और ये अपना प्लॉट यहां लगा सके। इससे रोजगार भी बढ़ेगा। बहरहाल प्राधिकरण जल्द ही इसरो से सैटलाइट इमेज मांगेगा इसके लिए पत्र जारी किया जाएगा। इससे पहले भी मास्टर प्लान बनाने के लिए सैटलाइट इमेज की आवश्यकता पड़ती रही है।

नक्शों के विपरीत बनाया तो एनफोर्समेंट सेल रोकेगी इसके अलावा नोएडा में नक्शों के विपरीत निर्माण कार्य किया गया तो इसकी रोकने की जिम्मेदारी एनफोर्समेंट सेल की होगी। इस सेल में 20 जूनियर इंजीनियरों होंगे। इनकी नियुक्ति आउटसोर्सिंग से की जाएगी। प्राधिकरण की बोर्ड ने इसे पहले ही अप्रूव कर दिया है। जिनका काम सिर्फ ये देखना होगा कि नोएडा में स्वीकृत नक्शे के अनुसार निर्माण हो रहा है या नहीं। इनकी ड्यूटी होगी कि वे साइट पर जाएं और निरीक्षण करें। इस कदम का उद्देश्य स्वीकृत योजनाओं का उल्लंघन करके निवासियों और डेवलपर्स द्वारा किए गए अवैध निर्माण पर अंकुश लगाना है।

सीएजी की रिपोर्ट के अनुसार अवैध कब्जा

सर्किल	अवैध कब्जा (वर्गमीटर)	रुपए
वर्क सर्किल-1	97,500	3529500000
वर्क सर्किल-2	71,808	2599449600
वर्क सर्किल-3	2,27,849	8248133800
वर्क सर्किल-4	43,950	1590990000
वर्क सर्किल-5	3,29,821	11939520200
वर्क सर्किल-6	3,46,466	12542069200
वर्क सर्किल-7	95,840	3469408000
वर्क सर्किल-8	4,61,169	166944317800
वर्क सर्किल-9	10,47,901	37934016200
वर्क सर्किल-10	18,04,160	65310592000

मास्टर प्लान 2031 के अनुसार क्या है लैंड यूज

श्रेणी	क्षेत्रफल
आवासीय	5722 हेक्टेयर
औद्योगिक	2807 हेक्टेयर
यातायात	1942 हेक्टेयर
मनोरंजन / ग्रीनरी	2433 हेक्टेयर
अन्य	2376 हेक्टेयर

नोएडा में बसे सेक्टरों में निर्माण

नोएडा में बसे सेक्टरों में निर्माण

इन गांवों में हुए अवैध कब्जे

सरकारी जमीन पर, सर्फाबाद गढ़ी चौखंडी, छिजारसी, ममूरा, बरौला, भंगेल, सलारपुर, चौड़ा, गिझौड़, हरौला, नयाबांस, बख्तावरपुर, नंगली-वाजितपुर आदि गांवों में बड़ी संख्या में कब्जे हो रहे हैं। इसके अलावा 4 से 5 हजार हेक्टेयर में यमुना व हिंडन के डूब क्षेत्र की जमीन पर कब्जा है। तेजी से यहां कॉलोनियां काटी जा रही हैं। हिंडन नदी में छिजारसी से लेकर ग्रेटर नोएडा के सफीपुर तक डूब



क्षेत्र की करीब 90% तक जमीन पर कब्जा हो चुका है। <https://www.bhaskar.com/local/uttar-pradesh/gautambudh-nagar/news/satellite-images-will-be-taken-from-isro-for-land-audit-illegal-encroachment-on-45-lakh-sqm-in-cag-report-master-plan-2031-will-be-matched-131766674.html>

## 7. भारतमाला परियोजना: नियमों की अनदेखी कर अडाणी के नेतृत्व वाले कंसोर्टियम और भाजपा को चंदा देने वाली कंपनियों को मिले ठेके (newslaundry.com) Aug 30, 2023

केंद्र सरकार की भारतमाला परियोजना के पहले चरण में जिन कंपनियों को सड़क निर्माण परियोजनाएं दी गईं, उनमें अडाणी ट्रांसपोर्ट के नेतृत्व वाले कम से कम एक कंसोर्टियम, कथित तौर पर भाजपा से संबंधित एक फर्म और भाजपा को चंदा देने वाली चार कंपनियां शामिल हैं. नियंत्रक एवं महालेखा परीक्षक (कैग) की एक हालिया रिपोर्ट में इन सभी कंपनियों को ठेका देने की प्रक्रिया में अनियमितताएं पाई गईं.

उदाहरण के लिए, अडाणी ट्रांसपोर्ट के नेतृत्व वाला कंसोर्टियम है सूर्यपिट खम्मम रोड प्राइवेट लिमिटेड. इसे हाइब्रिड एन्युटी मॉडल (इस मॉडल के तहत, भारतीय राष्ट्रीय राजमार्ग प्राधिकरण कुल परियोजना का 40% भुगतान करता है. शेष 60% राशि की व्यवस्था डेवलपर को करनी होती है) के तहत तेलंगाना में सूर्यपिट और खम्मम के बीच राष्ट्रीय राजमार्ग को चार लेन करने की परियोजना दी गई थी. लेकिन यह कंपनी राजमार्ग क्षेत्र में निर्माण कार्य का अनुभव होने की अपेक्षित शर्त पूरा नहीं करती.

दूसरा मामला है, पीएनआर इन्फोटेक का, जो भाजपा नेता नवीन जैन द्वारा प्रमोटेड इंफ्रास्ट्रक्चर कंपनी है. पीएनआर इन्फोटेक को अगस्त 2019 में लखनऊ रिंग रोड के पैकेज 1 का ठेका दिया गया था, जो अनुमानित लागत से 17.44 प्रतिशत अधिक लागत पर दिया गया था. कंपनी ने जो बोली लगाई थी वह संशोधित अनुमान से भी 2.02 प्रतिशत अधिक थी. उस समय जैन आगरा के मेयर थे.

इसी तरह, कैग रिपोर्ट में चार कंपनियों- आईआरबी इंफ्रास्ट्रक्चर डेवलपर्स, जे कुमार इंफ्राप्रोजेक्ट्स, लार्सन एंड टुब्रो और एमकेसी इंफ्रास्ट्रक्चर लिमिटेड- के संबंध में अनियमितताएं दर्ज की गईं हैं. इन कंपनियों ने 2013 से 2021 के बीच भाजपा को 77 करोड़ रुपए का चंदा दिया था.

हमारी पड़ताल में हमें निम्न बातें पता चलीं.

अडाणी ट्रांसपोर्ट कंसोर्टियम

कैग रिपोर्ट के मुताबिक, सूर्यपिट खम्मम रोड प्राइवेट लिमिटेड के प्रमुख सदस्य ने "किसी अन्य कंपनी" का अनुभव प्रमाणपत्र जमा किया था. इस "अन्य कंपनी" ने हाइवे निर्माण क्षेत्र में काम ही नहीं किया था, इसने बिजली क्षेत्र में काम किया था.

इसके अतिरिक्त, रिपोर्ट में कहा गया है कि प्रमुख सदस्य की कुल संपत्ति पर जारी किया गया चार्टर्ड अकाउंटेंट प्रमाणपत्र - जो 304.33 करोड़ रुपए होना आवश्यक था- किसी तीसरे पक्ष के नाम पर था.

अडाणी फर्म के पास कंसोर्टियम में 74 प्रतिशत की बड़ी हिस्सेदारी थी, लेकिन उसके पास "प्रस्ताव हेतु अनुरोध (आरएफपी) की शर्त के मुताबिक हाइवे सेक्टर में निर्माण का पांच साल का अनुभव

नहीं था". कंपनी द्वारा दी गई कार्यों की सूची के अनुसार उसने कभी भी "प्रत्यक्ष या अप्रत्यक्ष रूप से" कोई निर्माण कार्य नहीं किया था.

हालांकि, भारतीय राष्ट्रीय राजमार्ग प्राधिकरण ने मार्च 2019 में "बिना कोई कारण बताए बोलीदाता को तकनीकी रूप से योग्य घोषित कर दिया" और बोली में दी गई 1,566.30 करोड़ रुपए की लागत पर परियोजना स्वीकृत कर दी. हाइब्रिड एन्युटी मॉडल के तहत, एनएचएआई ने परियोजना के कुल व्यय का 40 प्रतिशत भुगतान किया. शेष 60 प्रतिशत की व्यवस्था डेवलपर द्वारा की जानी थी, जिसने आमतौर पर परियोजना की लागत का लगभग 20-25 प्रतिशत फाइनेंस किया और शेष राशि के लिए कर्ज लिया.

न्यूज़लॉन्ड्री ने कैग रिपोर्ट में लगे आरोपों के बारे में पूछने के लिए अडाणी समूह के प्रवक्ता से संपर्क किया. उन्होंने कहा, "हम ऐसे किसी भी सुझाव को दृढ़तापूर्वक खारिज करते हैं कि अडाणी समूह और उसके व्यवसायों ने नियमों और क्षेत्र के अकाउंटिंग मानकों के अनुरूप काम नहीं किया है."

प्रवक्ता ने कहा कि तकनीकी क्षमता के संबंध में आरएफपी की शर्त "कंसोर्टियम के अन्य सदस्य" द्वारा पूरी की गई थी और उसने "अपने सहयोगी- अडानी एंटरप्राइजेज के निवल मूल्य (नेट वर्थ) को लेकर" न्यूनतम निवल मूल्य की आवश्यकता को पूरा किया.

बीजेपी नेता से जुड़ी कंपनी

7 मार्च, 2019 को, लखनऊ रिंग रोड के पैकेज 1 के लिए निविदाएं जारी की गईं. इस परियोजना की अनुमानित लागत 904.31 करोड़ रुपए थी. लेकिन आश्चर्यजनक रूप से, पीएनसी इन्फोटेक को 1,062 करोड़ रुपए में ठेका दे दिया गया- जो मूल अनुमान से 17.44 प्रतिशत अधिक था.

एनएचएआई का मूल अनुमान 2016-17 की निर्धारित दरों पर आधारित था. परियोजना की अनुमानित लागत को बाद में 2019 की दरों के आधार पर संशोधित किया गया लेकिन फिर भी, जैसा कि कैग रिपोर्ट में बताया गया है, जैन की कंपनी की बोली संशोधित अनुमान से 2.02 प्रतिशत अधिक थी.

आईआरबी इंफ्रास्ट्रक्चर ने भाजपा को दिया 65 करोड़ रुपए का चंदा

आईआरबी इंफ्रास्ट्रक्चर डेवलपर्स को 68 प्रतिशत कम प्रीमियम पर हापुड बाईपास-मुरादाबाद राजमार्ग परियोजना के लिए एनएचएआई का टेंडर दिया गया. इस कंपनी ने 2013 से भाजपा को लगभग 65 करोड़ रुपए का चंदा दिया है. कैग की रिपोर्ट के मुताबिक, एनएचएआई ने विस्तृत परियोजना रिपोर्ट सलाहकार द्वारा यातायात पूर्वानुमान और होलसेल प्राइस इंडेक्स का हवाला देते हुए अपने फैसले को सही ठहराया.

इस बीच, आईआरबी इंफ्रास्ट्रक्चर की वेबसाइट ने कहा कि परियोजना की लागत 3,345 करोड़ रुपये थी. कैग रिपोर्ट में कहा गया है: "(लागत को लेकर) एनएचएआई की धारणा में यह बदलाव परियोजना के लिए बोली लगाए जाने की नीयत तारीख के एक सप्ताह पहले हुआ. एनएचएआई ने बिना किसी उचित कारण के और दोबारा टेंडर जारी किए बिना, अपने अनुमान में त्रुटि स्वीकार कर ली."

गौरतलब है कि एनएचएआई ने यह टेंडर टोल के आधार पर खोला था, जिसे बीओटी मोड के रूप में जाना जाता है, जिसके तहत निजी कंपनी अनुबंधित अवधि के दौरान फ़ैसिलिटी की डिजाइन, निर्माण, और संचालन के लिए जिम्मेदार होती है और उससे राजस्व अर्जित कर सकती है. अंततः फ़ैसिलिटी सरकार को वापस कर देते हैं.

आईआरबी इंफ्रास्ट्रक्चर ने 2020-21 में भाजपा को 20 करोड़ रुपए का चंदा दिया, जबकि इससे जुड़ी तीन कंपनियों ने 2013 से 2021 के बीच भाजपा को करीब 45 करोड़ रुपए का चंदा दिया।

जे कुमार इंफ्राप्रोजेक्ट्स ने भाजपा को दिया 6.46 करोड़ रुपए का चंदा

दिसंबर 2018 में जे कुमार इंफ्राप्रोजेक्ट्स को द्वारका एक्सप्रेसवे पैकेज 1 के लिए 1,349 करोड़ रुपए का ठेका मिला। कैग रिपोर्ट में कहा गया है कि प्रस्ताव हेतु अनुरोध की शर्त को पूरा करने में विफल रहने के बावजूद कंपनी को कॉन्ट्रैक्ट दिया गया। प्रस्ताव में आवश्यक था कि टेंडर पाने वाले बोलीदाता ने "सिंगल या ट्विन ट्यूबों वाली कम से कम एक गहरी या उथली सुरंग" का निर्माण किया हो।

2013 से 2018 के बीच जे कुमार इंफ्राप्रोजेक्ट्स ने भाजपा को करीब 6.46 करोड़ रुपये का चंदा दिया। इसने भाजपा को 2017-18 में 5.25 करोड़ रुपए, 2015-16 में 1 करोड़ रुपए और 2013-14 में 21 लाख रुपए दिए।

कंपनी के स्वतंत्र निदेशकों में पूर्व आईएस अधिकारी राघव चंद्रा शामिल हैं, जो 2015 और 2016 के बीच एनएचएआई के अध्यक्ष रह चुके हैं। चंद्रा जीआर इंफ्राप्रोजेक्ट की सहायक कंपनी जीआर हाईवेज़ इन्वेस्टमेंट मैनेजर के अतिरिक्त निदेशक और अडाणी समूह के बिजनेस पार्टनर वेलस्पन एंटरप्राइज के एक स्वतंत्र निदेशक भी हैं। अडाणी समूह और वेलस्पन एंटरप्राइजेज का अडाणी वेलस्पन एक्सप्लोरेशन नामक एक गैस एक्सप्लोरेशन संयुक्त उद्यम भी है।

जे कुमार इंफ्राप्रोजेक्ट के मिचिंगन इंजीनियर्स के साथ भी व्यावसायिक संबंध हैं, जिसके पास वेलस्पन एंटरप्राइज की 50.10 प्रतिशत हिस्सेदारी है।

गौरतलब है कि जे कुमार इंफ्राप्रोजेक्ट को 2015 के एक सड़क घोटाले के सिलसिले में 2016 में बृहन्मुंबई महानगरपालिका द्वारा ब्लैकलिस्ट किया गया था। 2021 में यह फिर सुर्खियों में रही जब मुंबई में इसके द्वारा बनाया जा रहा एक फ्लाईओवर ढह गया। उस समय, विपक्ष ने कंपनी को परियोजना का टेंडर देने के लिए महाराष्ट्र की भाजपा सरकार की कड़ी आलोचना की थी।

एमकेसी इंफ्रास्ट्रक्चर और लार्सन एंड टुब्रो द्वारा डोनेशन

कैग रिपोर्ट ने एनएचएआई द्वारा दिल्ली-वडोदरा एक्सप्रेसवे के पैकेज 17 से 25 का ठेका जियांगव्सी कंस्ट्रक्शन इंजीनियरिंग कॉरपोरेशन, एमकेसी इंफ्रास्ट्रक्चर, जीआर इंफ्राप्रोजेक्ट्स, लार्सन एंड टुब्रो और जीएचवी इंडिया के संयुक्त उद्यम को देने में विसंगतियों को उजागर किया।

न्यूज़लॉन्ड्री ने पाया कि लार्सन एंड टुब्रो ने 2014-15 में भाजपा को 5 करोड़ रुपए का चंदा दिया था और एमकेसी इंफ्रास्ट्रक्चर लिमिटेड ने 2018 से 2020 के बीच 75 लाख रुपए का चंदा दिया था।

कैग रिपोर्ट में कहा गया है कि दिल्ली-वडोदरा एक्सप्रेसवे की अनुमानित सिविल कॉस्ट 32,839 करोड़ रुपए थी, जबकि पूर्व-निर्माण लागत 11,209.21 करोड़ रुपए थी- दोनों को 31 परियोजनाओं में विभाजित किया गया था। जिन आठ परियोजनाओं में अनियमितताएं पाई गईं, वह मई 2019 से जून 2020 के बीच आवंटित की गई थीं। यह देखा गया कि इन परियोजनाओं के लिए बोलियां गलत अनुमानों के आधार पर आमंत्रित की गईं, जिससे 'प्रस्ताव हेतु अनुरोध की निष्पक्ष शर्तें' कमजोर हुईं, जिन पर बोलियां आमंत्रित की जा सकती थीं और उनका विश्लेषण किया जा सकता था।

एनएचएआई ने "दरों की पुरानी अनुसूची के आधार पर सिविल कॉस्ट का गलत अनुमान" लगाया, जबकि निविदाएं आमंत्रित करने के लिए नोटिस जारी होने से पहले ही संशोधित दरें उपलब्ध थीं.

इन आठ परियोजनाओं में से पांच को जीआर इंफ्राप्रोजेक्ट ने पूरा किया था, एक को जीएचवी इंडिया इंफ्रास्ट्रक्चर ने, एक को एल एंड टी ने और दो को एमकेसी इंफ्रास्ट्रक्चर ने.

पिछले साल जून में बिहार के किशनगंज में निर्माणाधीन पुल ढहने के बाद जीआर इंफ्राप्रोजेक्ट लोगों की नजर में आई. जब इसके कर्मचारियों पर सड़क परियोजना के बिल पास करने के लिए एनएचएआई अधिकारियों को कथित रूप से रिश्वत देने का आरोप लगा, तो सीबीआई ने इसके कार्यालयों पर भी छापे भी मारे थे.

पिछले साल एनएचएआई रिश्वत मामले में आरोपी जीएचवी इंडिया इंफ्रास्ट्रक्चर भी सवालों के घेरे में है.

'फर्जी दस्तावेज़, अंतिम डीपीआर से पहले जारी किए गए टेंडर'

कैग रिपोर्ट में एनएचएआई द्वारा केआरसी इंफ्राप्रोजेक्ट्स को ग्वालियर-शिवपुरी राजमार्ग के चार किलोमीटर लंबे हिस्से के लिए दिए गए कॉन्ट्रैक्ट पर भी सवाल उठाए गए हैं. 18.39 करोड़ रुपए का यह ठेका 2018 में दिया गया था.

इस बीच, लखनऊ रिंग रोड पैकेज 3बी के लिए बोली में फर्जी दस्तावेज देने के सबूत होने के बावजूद एनएचएआई ने बोलीदाता को कॉन्ट्रैक्ट दिया.

चूड़ाचांदपुर-तुइवई परियोजना पैकेज 2बी में, आवश्यक बिडिंग क्षमता को पूरा करने में विफल रहने के बावजूद बोलीदाता को कॉन्ट्रैक्ट मिला. "बोलीदाता की बिडिंग क्षमता 101.48 करोड़ रुपए थी, जबकि परियोजना के लिए 240.01 करोड़ रुपए की क्षमता आवश्यक थी. इसके बावजूद, बिडिंग की निर्धारित प्रक्रिया का स्पष्ट उल्लंघन करते हुए संबंधित ठेकेदार को काम सौंप दिया गया," कैग रिपोर्ट में कहा गया है.

इसमें कहा गया है कि चूड़ाचांदपुर-तुइवई और चित्तूर-मल्लावरम परियोजनाओं में विस्तृत परियोजना रिपोर्ट को अंतिम रूप देने से पहले निविदाएं आमंत्रित करने के नोटिस जारी किए गए थे, जिसके परिणामस्वरूप परियोजना के विनिर्देशों और काम के दायरे को लेकर स्पष्टता कम हुई.

लखनऊ रिंग रोड पैकेज 3बी, चूड़ाचांदपुर-तुइवई पैकेज-2बी और चित्तूर-मल्लावरम परियोजनाओं के लिए ठेका पाने वाली कंपनियों के बारे में कोई विवरण उपलब्ध नहीं था.

न्यूज़लॉन्ड्री ने इस संबंध में एक आरटीआई दायर किया है और कंपनियों को प्रश्नावली भी भेजी है. यदि वह जवाब देते हैं तो यह रिपोर्ट अपडेट कर दी जाएगी.

<https://hindi.newsland.com/2023/08/30/bharatmala-project-adani-led-consortium-bjp-donors-firms-get-tenders-bypassing-norms>

## **STATES NEWS ITEMS**

### **8. Haryana assembly committee recommends probe into grant of forest NOC to developer (*hindustantimes.com*) Aug 30, 2023**

The committee on public accounts of the Haryana Vidhan Sabha has recommended a thorough inquiry by the state forest department into the genuineness of a December 11, 2006, letter by which a no-objection certificate (NOC) was issued in favour of a developer, Godavari Shilpkala, certifying that the khasra numbers of the developer's land in Faridabad were not covered under provisions of the Punjab Land Preservation Act (PLPA).

However, a compliance audit by the comptroller and auditor general (CAG), which compared the khasra numbers of the developer's land, the PLPA notification of August 18, 1992, and the khasra numbers mentioned in the NOC revealed that whole stretch of 3.93 acres allotted by the MCF (on which Pinnacle Tower was constructed) was covered under the PLPA notified area.

The NOC, according to the CAG report, was a part of the trail of illegalities that started with the allotment of 3.93 acres to the developer by the municipal corporation Faridabad (MCF) in the PLPA-notified area; abetted through sanction of building plans for commercial office space in contravention to the change of land use agreement; facilitation through issuing of forest NOC on PLPA-notified area by an officer not authorised to do so and culminated into the illegal execution of conveyance deeds at the offices of the sub-registrars, Faridabad and Badhkal.

'No office record of NOC'

"The range forest officer, Ballabgarh, intimated on January 5, 2022, that an NOC had been despatched on December 11, 2006, to the developer. But no office record of this NOC was in existence in the office. On further scrutiny in the office of the deputy conservator of forests, Faridabad, it was intimated that the range forest officer was not the competent authority to issue such an NOC. Thus, the range forest officer had facilitated non-forestry activities in contravention to the law. The forest department had not initiated any action despite being cognizant of the violations," the audit said.

The CAG, in its report, on compliance audit of urban development clusters for the year ending March 31, 2021, had observed that the MCF allotted 3.93 acres notified under the PLPA to the developer.

"It was seen in the audit that the Haryana forest department had issued a notification under Section 4 of the PLPA on August 18, 1992. The notification stipulated deemed necessary prohibitions in the revenue estate of Lakkarpur village of Ballabgarh tehsil in Faridabad district for 30 years to save the soil from erosion. The MCF land (3.93 acres) allotted to the developer, on which the Pinnacle Business Tower had been constructed, was part of this PLPA-notified area (preserved and protected with prohibitions of non-forestry activities). Despite being a part of the notified PLPA area, the MCF records do not refer to any consultation or NOC from the forest department before making the allotment," said the CAG report tabled in the assembly in August 2022.

The CAG had asked the state government to consider initiating action against the developer and public servants for violating the PLPA notification and other legal and internal provisions and procedures.

‘Review relaxation of forest guidelines’

The committee on public accounts of the assembly in its 88th report on the CAG’s compliance audit that was tabled in the House on Tuesday, recommended that the forest department should review its decision recommending relaxation of guidelines for consideration of approvals under the Forest Conservation Act, 1980, in favour of Godavari Shilpkala in respect of areas affected after the July 21, 2022, Supreme Court judgment under intimation to the committee.

The apex court had in July 2022 ruled that land protected under Section 4 of the PLPA have all the trappings of forest lands within the meaning of Section 2 of the Forest Conservation Act and the state government cannot permit its use for non-forest activities without the approval of the central government.

The assembly committee headed by Congress MLA Varun Chaudhary also asked the revenue department to inquire as to whether the Pinnacle Business Tower, the office space allegedly sold by the developer in its premises, was registered under the Apartments Act, 1983. The committee has also sought an action taken report at the earliest.

<https://www.hindustantimes.com/cities/chandigarh-news/committee-recommends-thorough-inquiry-into-illegal-land-allotment-and-violations-by-developer-in-haryana-vidhan-sabha-101693388833160.html>

## **SELECTED NEWS ITEMS/ARTICLES FOR READING**

### **9. Look beyond regulation: Sovereign capability in AI is required to develop data sets (*financialexpress.com*) August 31, 2023**

IBM CEO and managing director Arvind Krishna made a very pertinent point this week when he said that the government should look at developing sovereign capability in artificial intelligence (AI) and consider setting up a national AI computing centre. While there have been a lot of talk on the capability of AI and the need to regulate it, the topic of the government developing capabilities in terms of a computing centre has been highlighted perhaps for the first time. The need for government’s participation in AI is mandatory if data-sets and large language models are to be developed for larger, macro purposes. Left on its own, industry will only develop language models for AI for its business needs. This is fine, but their applications will be limited.

AI language models are basically predictive in nature and to develop such models, large sets of data are required. Using the right language models, the government will have the tools to predict, for instance, the nature of monsoons, the health requirement of the citizens over the years, and even the manner in which the economy and the national income would grow. These are not the areas where a private company developing language models would invest. Simply put, the government’s participation in creating AI capability centre will give it the right kind of AI tools for policy making.

For developing AI language models and computing capability, server farms are the basic hardware that are needed. These require substantial investments. To quote Krishna, such an initiative may require a few hundreds of millions of dollars, which is within the government's capacity. The server farms need to be housed in big buildings for which only the government will be able to acquire land in a proper location. Having developed such infrastructure, the government can easily involve private companies to develop large language models for its needs. The benefit for industry will be that it will be able to leverage the data available with the government for its own purposes through such participation.

This was clearly indicated by Tata Sons chairman, N Chandrasekharan at the recent B20 summit, where he pointed out that the new data protection law has created an architecture for making private applications on the internet using public data, while maintaining complete privacy. Since the government has created the infrastructure for securing personal data, the timing is perfect for a public-private partnership to use such data for developing AI language models. The funding part can be handled through various innovative methods the government has recently devised.

The production-linked incentive kind of schemes or the subsidy model offered to companies for design and manufacturing of semiconductors are some of the ways which can be explored and improvised to create such sovereign capabilities. Since the government is in the process of finalising the draft Digital India Act, which will be shortly put up for public consultation, one hopes the issue of developing AI capabilities and the role of the government and industry will be enunciated in it. The Modi government is seen to be quite technology savvy and has been using such tools for better delivery of schemes aimed at the socially disadvantaged. Hopefully, the right initiatives will be taken on AI as well to ensure a constructive government-industry participation in an area which is still nascent but has the potential to grow at a fast rate. <https://www.financialexpress.com/opinion/look-beyond-regulation-sovereign-capability-in-ai-is-required-to-develop-datasets/3228006/>

## **10. Can PRANAM reduce fertiliser subsidy bill?** (*thehindubusinessline.com*) Updated - August 30, 2023

Union Budget 2023–24 launched the PM-PRANAM (PM Programme for Restoration, Awareness, Nourishment and Amelioration of Mother Earth) to promote the balanced use of chemical and alternative fertilisers, generating awareness of regenerative agriculture (RA).

RA is an outcome-based food production system that nurtures and restores soil health, protects the climate and water resources and biodiversity, and enhances farms' productivity and profitability.

Will PRANAM reduce the fertiliser subsidies and boost the RA? Can alternative fertilisers maintain higher productivity and ecological safety?

It is worth noting that the subsidy burden on chemical fertilisers is about ₹2.25-lakh crore for FY 2022-23, which is 39 per cent higher than FY 2021-22's figure (₹1.62-lakh crore).

While the PRANAM scheme has no separate budget, a 50 per cent subsidy savings will be provided to States/UTs. Most of it will likely be used for infrastructure creation and (green) technology innovation. The rest will be paid as incentives to farmers, panchayats, FPOs, and SHGs who can help reduce input costs and generate awareness toward RA adoption.

### Pluses and minuses

The PRANAM scheme may encounter a few challenges amid some opportunities.

## Fertilizer consumption in India ('000 tonnes)

Year	N (Nitrogenous)	P <sub>2</sub> O <sub>5</sub> (Phosphate)	K <sub>2</sub> O (Potash)	Total
2012-13	16,820.90	6,653.40	2,061.80	25,536.10
2013-14	16,750.10	5,633.50	2,098.90	24,482.50
2014-15	16,949.60	6,098.90	2,532.90	25,581.40
2015-16	17,372.30	6,978.80	2,401.50	26,752.60
2016-17	16,735.90	6,705.50	2,508.50	25,949.90
2017-18	16,959.30	6,854.40	2,779.70	26,593.40
2018-19	17,637.80	6,910.20	2,680.30	27,228.30
2019-20	19,101.30	7,662.00	2,607.00	29,370.30
2020-21	20,404.00	8,977.90	3,153.70	32,535.60
2021-22 (P)	19,438.30	7,828.50	2,529.50	29,796.30
<b>CAGR (%)</b>	<b>1.62</b>	<b>1.82</b>	<b>2.30</b>	<b>1.73</b>

Source: Fertilizer Association of India, P-Provisional

Fertiliser consumption (see Table) shows that nitrogenous fertiliser consumption, especially urea, has not declined from 2012-13 until 2021-22 (P). However, the subsidy bill has increased significantly.

So, promoting PRANAM will help the government reduce subsidy bills and fiscal deficits if it picks up. Nevertheless, the efficacy of alternative fertilisers to enhance crop yield or productivity remains a concern. Thus, a gradual phase-out of subsidies on chemical fertilisers can stimulate alternative or bio-fertiliser adoption. The retention pricing scheme, which safeguards chemical fertiliser (urea) manufacturers, can be phased out to promote alternative fertiliser production. A 12 per cent return on the fertiliser (chemical) firms fixed under the retention scheme will disappear, possibly resulting in a knee-jerk reaction of chemical fertiliser firms for their survival.

On the contrary, farmer fertiliser cooperatives can exploit this as an opportunity since they have been into bio-fertiliser production, although on a small scale, since 2009-10. PRANAM can increase its economies of scale and help the extant distribution network



stock alternative fertilisers. However, the margin on bio-fertiliser sales should be worked out to incentivise sales and distribution networks.

Demonstrating alternative fertilisers on farmer fields is critical, especially after the Sri Lankan food crisis, to showcase higher productivity, and certification of such products can help farmers or their organisations realise a remunerative price.

To this end, Finance Minister Nirmala Sitharaman, in Budget 2023-24, said that 10,000 Bio-Input Resource Centres will be set up over the next three years, creating a national-level distributed micro-fertiliser and pesticide manufacturing network. <https://www.thehindubusinessline.com/opinion/can-pranam-reduce-fertiliser-subsidy-bill/article67252948.ece>

## **11. Three challenges India must overcome for a successful energy transition** (*economictimes.indiatimes.com*) Aug 31, 2023

India today is in a period of unprecedented growth. A cascade of landmark transitions — from physical cash to digital payments, from fossil fuels to renewables, from informal to formal economy, and from underserved to last-mile inclusion — is ushering in a new milieu of development.

The energy transition is the most salient of all transformations, for both its scale and its impact on India's economy and environment. India's astonishing growth in cumulative renewable capacity in the last 8.5 years — from 35 GW in 2014 to 174.53 GW today — has placed it well to take on an even larger goal - 500 GW of installed capacity by 2030.

This 500 GW goal is a stepping-stone to a larger commitment to reduce the carbon intensity of the nation's economy below 45 per cent by the end of the decade, achieve 50 per cent cumulative electric power installed by 2030 from renewables, and achieve net-zero carbon emissions by 2070, towards which it seeks to produce five million tonnes of green hydrogen by 2030.

These goals have multiple reasons. Though energy is the lifeblood of development, it has costs, both financial and environmental. With more renewable energy, India can reduce its energy import dependence, and power more lives with cleaner energy, in the process decoupling emissions from economic growth.

In the medium to long term, India's energy transition will unlock large volumes of investment in green business and technology, putting the nation on track to emerge as a globally competitive hub of green tech manufacturing. In the long term, renewable energy will be a vital component of India's envisioned net-zero future and emerge as a major powerhouse of clean energy exporter in South Asia.

These goals are ambitious. Achieving them requires India to be visionary, and at the same time, realistic about the many challenges that must be overcome.

First, the cost burden of legacy infrastructure. High transmission and distribution (T&D) losses, which have plagued discoms for decades, prevent them from making

decisive investments to support renewable energy, keeping them locked into existing fleet of coal-fired power plants. Further, questions around the costs and frictions associated with coal mining, transportation, livelihoods, and rehabilitation of those affected need to be addressed which make the transition less painful.

Second, the cost of financing the transition. The government's plan to add 50 GW of renewable capacity per year, from FY24 to FY28, will need trillions of dollars. So will the long-term energy transition towards 2070 to fund the energy transition. Access to low-cost financing is imperative for materialization of the ambitious goals for which the nation has made multiple calls for low-cost climate financing at global forums.

Third, grid reliability, which can struggle in the face of a massive increase in sources of infirm power. This is a particularly important challenge because India currently lacks a transition fuel, which is typically natural gas in other countries.

The energy transition, much like any other complex transition, will take time. Policy and regulatory consistency will encourage investors, markets, and other stakeholders to participate and support the transition with greater confidence and alignment.

At the same time, we must treat the 500 GW goal with a sense of optimism. As we have seen in India's renewables journey, large goals have had the effect of mobilising policy and markets. India's previous goal of 175 GW of renewable generation (then considered highly ambitious) led to solar tariff auctions that brought down prices by 90 per cent; demand creation through offtake commitment by enforcing Renewable Purchase Obligations (RPOs) and bankable power purchase agreements; along with waivers for transmission charges, among other incentives.

Further, regulatory side developments, in the form of real-time markets (to help balance supply-power demand across India's grids); the General Network Access (for improved transmission connectivity to solar and wind); and the PLI scheme for solar PV module manufacturing, have brought new efficiencies to how India's power ecosystem generates, transmits, and distributes renewable energy. These must necessarily continue.

The next phase of India's energy transition will also need incentives and regulatory apparatus to both bring new technologies into the market affordably and encourage their deployment. Going ahead, the Government should emphasize R&D to accelerate adoption of renewable energy technologies alongside introducing new commercial frameworks including bids for Pumped Hydro, Battery and other forms of Energy-Storage Systems. Further impetus can come from implementing the envisioned domestic carbon market, and the Electricity Amendment Bill to introduce critical reforms.

The health of discoms, who control the cashflows for the entire value chain, is critical to bringing more and greener energy into the grid. Towards addressing discom issues, it is advisable to strengthen the institutional structures to depoliticize tariff setting, privatise (or at the very least, provide choice to the consumers) distribution, and support the vulnerable sections through direct benefit transfers. This will be essential for improving the financial condition of discoms and strengthening contract enforcement.

The energy transition is a gradual and steady journey, and it needs a sustained policy commitment and continuity to ensure the inflow of investments crucial to realise it.

Perhaps American Academic Steven K Vogel provides the answers in his book 'Markercraft: How Governments Make Markets Work'. He says: "modern-day markets do not arise spontaneously but are crafted by individuals, by firms, and most of all, by governments...". The government's role as policy architect and its regulatory interventions will continue to be crucial to navigate the energy transition through the challenges ahead.

<https://energy.economictimes.indiatimes.com/news/renewable/three-challenges-india-must-overcome-for-a-successful-energy-transition/103231679>