



# Monthly Policy Brief

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# 01 Draft National Deep Tech Start-up Policy (NDTSP)

Open for public feedback till 15th September 2023

Draft National Deep Tech Start-up Policy (NDTSP) was released by the Office of the Principal Scientific Advisor to the Government of India. The draft was prepared under the guidance of NDTSP Consortium and the working group after receiving inputs from 200+ stakeholders. The draft has been placed for public consultation and feedback, and the same can be submitted by 15th Sep 2023.

### The policy aims:

- To drive innovation, economic growth, and societal development by utilising advanced research-based deep-tech inventions.
- To support deep tech start-ups and secure India's financial future, progress towards a knowledge-driven economy, and bolster productivity.
- To unleash the power of technological growth in all sectors, catalyse multiplier effects and create new industries for enhancing India's capability and global competitiveness.

The draft NDTSP suggests necessary and relevant policy changes under the following nine themes:

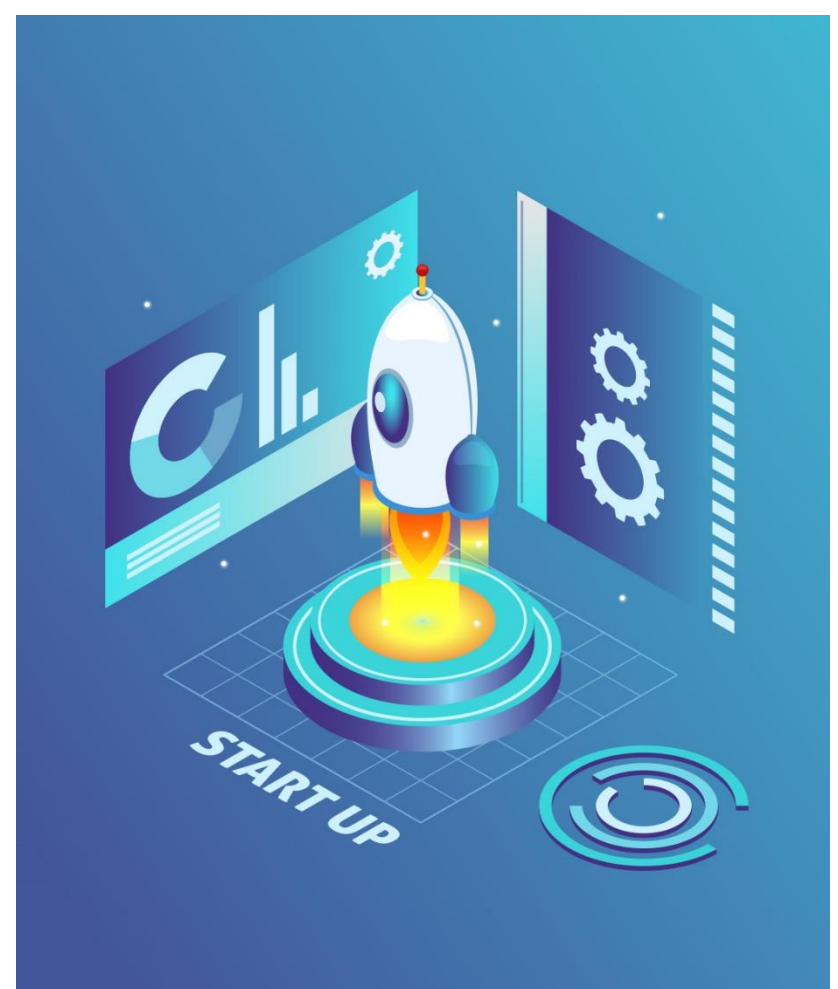
- Nurturing Research, Development & Innovation
- Strengthening the Intellectual Property Regime
- Facilitating Access to Funding
- Enabling Shared Infrastructure and Resource Sharing
- Creating Conducive Regulations, Standards, and Certifications
- Attracting Human Resources & Initiating Capacity Building
- Promoting Procurement & Adoption
- Ensuring Policy & Program Interlinkages
- Sustaining Deep Tech Start-ups

### Our Take - Why is this Important?

Deep Tech has the potential to be a game-changer in enabling significant impact and value across a wide gamut of industries and value chains. Deep Tech start-ups in spaces such as AI, IOT, Robotics, Computer Vision, Nano Technology, etc. already show tremendous potential. Deep Tech will impact our future.

Many countries, such as the USA, UK, Canada, and Germany, have taken the lead in supporting their start-up ecosystem in this space through enabling policies and programs.

The step taken by the Government of India in releasing the draft National Deep Tech Start-up Policy (NDTSP) is a step in the right direction. Care should be taken to look at the feedback and input received from stakeholders and then release the final policy in a time-bound manner. The dedicated focus of the Government of India in committing dedicated resources and grants would definitely aid the Deep tech industry and create multiple tech powerhouses over the next 5-10 years. However, the essence of the policy would finally be in the implementation, and the Government would need to drive the same with razor-sharp focus and intent. For example, aspects like creating a Fund of Funds (FoF) may be a time-consuming measure. Hence, Government may look at tweaks in the policy to enable using an existing FoF, such as the fund of fund for start-ups to accelerate the implementation of the policy. It is a welcome and much-needed policy in the Deep Tech space.



## 02 Department of Telecommunications launches Bharat 6G Alliance

Innovation and Collaboration in Next-generation Wireless Technology



The Department of Telecommunications (DoT), in June 2023, announced the formation of a Bharat 6G Alliance (B6GA) to drive indigenous development, innovation and collaboration in next-generation 6G wireless technology, unveiling its official website (<https://bharat6galliance.com>).

B6GA is a dynamic and collaborative platform involving public and private companies, educational institutions, research organizations, and standards development bodies.

The primary objective of B6GA is to:

- Understand the business and development use cases of 6G tech, drive efficient consensus on requirements, promote impactful R&D, and drive innovation.
- Create a platform for collaboration between Indian startups, companies, and manufacturing firms for 6G tech development within India.

- Collaborate with global 6G Alliances for international cooperation and knowledge sharing.
- Deploy 6G technology to enhance India's capabilities by 2030.
- Enable Indian telecom products and services across domestic and global markets, establishing India as a 6G tech leader.
- Expedite creation of standards-related patents within India, actively contributing to international standardization organizations such as 3GPP, ITU, and TSDSI.
- Enable India as a leading global supplier of affordable 5G, 6G, and future telecom solutions.

A grant of 240.51 crores was allocated under the Telecom Technology Development Fund (TTDF) to support the advancement of 6G technology for two projects:

- 6G THz Testbed with Orbital Angular Momentum (OAM) & Multiplexing, a consortium involving SAMEER, IIT Madras, IIT Guwahati, and IIT Patna.
- Advanced Optical Communication Test Bed, a consortium involving IIT Madras, IIT Delhi, IIIT Delhi, Signalchip Innovations, Signaltron Systems Pvt Ltd, Sasmos het Technologies Ltd, SFO Technologies Pvt. Ltd, ERNET India, Quanfluence Private Ltd, Sterlite Technologies Limited, Nav tech, and Tejas network.

Furthermore, under the Digital Communication Innovation Square (DCIS):

- A grant of Rs. 48 crore was allotted to 66 Startups and MSMEs.
- 75 Innovators were recognized by the Department of Telecommunications (DoT) for their significant contributions to the field.



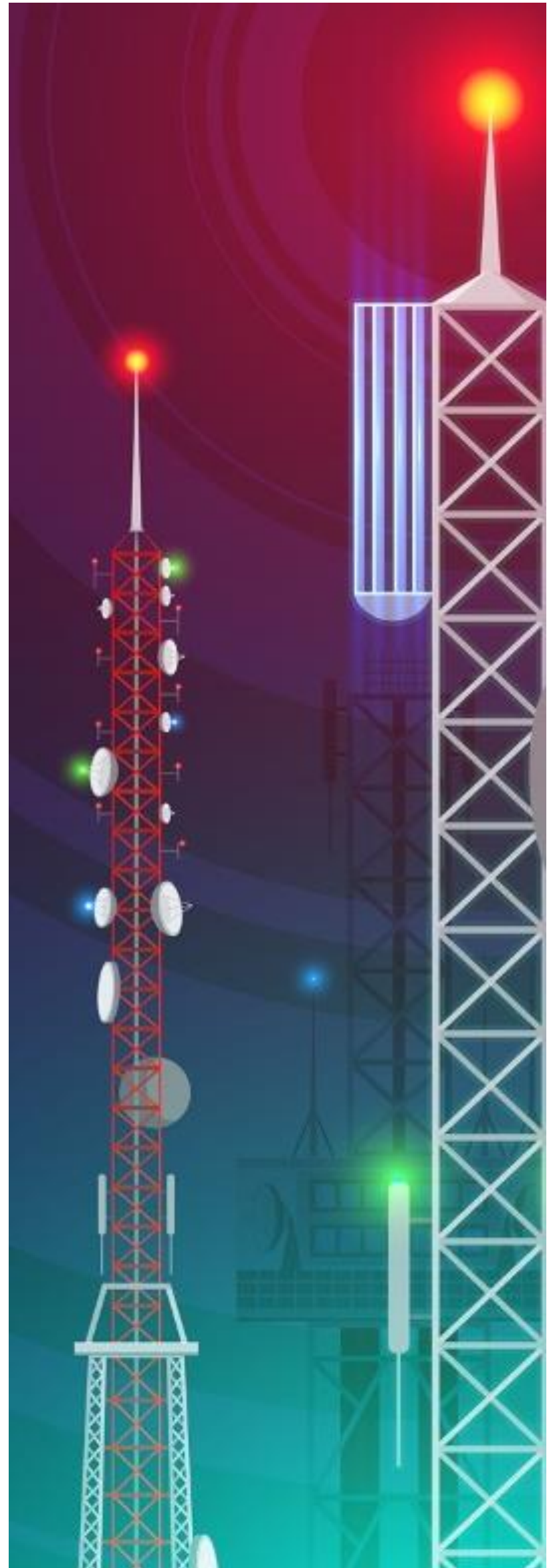
## 02 Department of Telecommunications launches Bharat 6G Alliance (contd.)

### Innovation and Collaboration in Next-generation Wireless Technology

#### Our Take - Why is this Important?

The proposed 6G communication network is expected to advance emerging services and its uses beyond the scope of 5G, placing India as one of the few nations developing their capabilities in this field. 6G is expected to offer even higher data speeds, lower latency, enhanced connectivity, and the ability to support a wide range of advanced applications and services.

However, India currently faces the challenge of developing end-to-end supply chain capabilities, providing a conducive environment for R&D and regulation which will play a key role in driving the progress of 6G development. While specific technical details of 6G are still being researched and developed, the B6GA alliance and their multi-stakeholder taskforces are expected to provide a platform for newer players to shape India's perspective and steer the evolution of 6G technology advancement within the country. The path to 6G operationalization is expected to be a collaborative effort, and the B6GA is a step in the right direction and a future-looking initiative by the Government of India.



03

# Leveraging Artificial Intelligence and Big Data in Telecommunications Sector

National Digital Communications Policy 2018 (NDCP) was formulated with a vision to lay out a framework to strengthen India’s long-term competitiveness in the sector and serve the needs of our aspiring nation. Provision no. 2.2 (g) of NDCP mentions “Leveraging Artificial Intelligence and Big Data in a synchronized and effective manner to enhance the overall quality of service, spectrum management, network security and reliability”. Hence, the Department of Telecom sought recommendations from the Telecom Regulatory Authority of India (TRAI). Through a consultation paper, TRAI published recommendations and risks of using AI and BD in the telecommunications industry. Following are the key areas where use cases for AI and BD have been recommended:

- **Quality of Service** - Using AI for improved network planning, monitoring & maintenance
- **Spectrum Management** – Dynamic spectrum allocation, load balancing, demand prediction and channel estimations
- **Network Security** – Threat/Fraud detection, adaptive security, threat hunting and fault prediction
- **Enhanced Customer Experience** – Personalized offers for customers, virtual assistants, choosing the best tariff plan for a customer
- **Churn prediction** – Leveraging Machine Learning to identify likely churners and understand the events causing churn.
- **Access to Data/Insights** – Using big data to create intelligent data insights which may be useful for industries in other sectors. E.g. using mobility data of the customers to predict the traffic flow in each area.

## Our Take - Why is this Important?

Industries across the spectrum shall extensively use AI and Big Data to enhance and personalize the customer experience in the subsequent years. The telecom sector shall, however, see the adoption of such technologies in areas which go much beyond enhancing customer experience, including:

- Generation of new revenue streams for TSPs through data monetization and PaaS/SaaS services
- Improved network optimization and increased resource sharing among TSPs to manage the ever-growing numbers and demands of Indian consumers.
- Increased IoT adoption (with the advent of 5G) shall help generate big data for better asset monitoring and operational efficiencies.

While AI and Big Data would open a plethora of opportunities for the telecom sector, the adoption of such emerging tech would bring its own sets of challenges:

- With a lack of regulations and a robust legal framework around AI in the country, it would be challenging to create a level playing field for TSPs versus the non-licensed entities for data monetization.
- With the recently notified Data Protection Act, clarity of compliance in terms of usage of personal data shall take time to percolate among the entities storing such data, including TSPs
- AI or Big Data is not a core telecom service but an ICT-based solution; hence would take time to customize to adapt to various issues the telecom industry faces today.



## 04 Parliament Approves the National Dental Commission Bill, 2023

### To Enhance Dental Education and Healthcare Quality

The enactment of the National Dental Commission Bill 2023 will herald a revolutionary regulatory paradigm by establishing the National Dental Commission (NDC), thereby supplanting the prevailing Dental Council of India (DCI) and annulling the Dentists Bill, 1948. The Act envisions a comprehensive dental education and professional sphere transformation to align it with global standards.

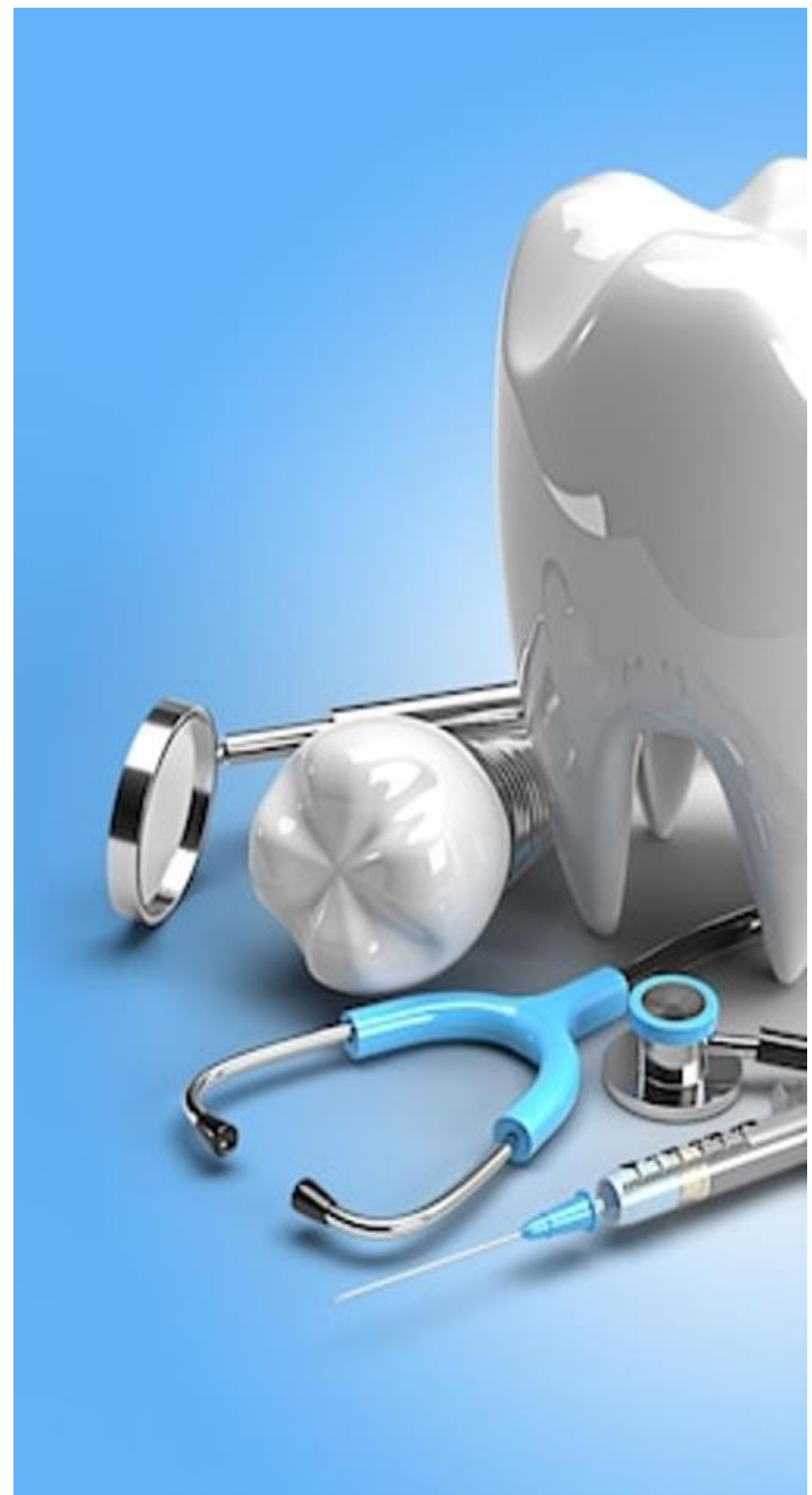
The announcement introduces a Bill to repeal the Dentists Act of 1948, replacing it with the National Dental Commission (NDC). This change is designed to enhance the affordability of dental education and ensure widespread access to quality oral healthcare services. The NDC's responsibilities include drafting policies, maintaining standards in dental education and the profession, and regulating fees for 50% of seats in private dental colleges. The NDC's composition is similar to the National Medical Commission (NMC), consisting of a chairperson, eight ex officio members, and 24 part-time members appointed by the central government. Members from institutions like NMC, health ministry, and AIIMS will serve as ex-officio members, while others will be chosen from state nominees. The NDC will require members to disclose their assets, liabilities, and engagements. Additionally, the Bill introduces the formation of a Dental Advisory Council, which will advise the NDC on equitable access to dental education and a uniform examination system. The Bill also introduces the possibility of an exit test for dentists, akin to the proposed National Exit Test for MBBS graduates.

#### Our Take - Why is this Important?

The Act envisions a comprehensive transformation of the dental education and profession landscape to align it with global standards.

Timely and prudent, the introduction of the NDC by the Prime Minister is a step towards enhancing transparency within the system and elevating the quality of dental

education. With 50 per cent of seats being offered at government-regulated fees, the move seeks to make dental education affordable, ensuring accessibility for every citizen. The Act embraces transparency, accountability, and professionalism, serving as a shield for public interests. Through fostering accessible oral healthcare and bolstering the global employability of Indian dental practitioners, the Commission is poised to elevate dental care standards domestically and internationally.



## 05 Rajasthan Platform-Based Gig Workers (Registration and Welfare) Bill 2023

### Rajasthan becomes the first Indian state to extend social security coverage to gig workers

The gig economy's rise has revolutionised how businesses operate, reshaping organizational structures across industries. Gig workers have become integral to vital sectors like delivery services, education technology, software development, digital marketing, transportation, online retail, and logistics.

The absence of regulation in the gig workforce realm has led to certain challenges accompanying the rapid expansion of this new economy, such as working conditions, inadequate benefits, and the absence of social security provisions, among others. The Rajasthan Platform Based Gig Workers (Registration and Welfare) Bill, passed in the Rajasthan Legislative Assembly in July 2023, comes as positive news for the gig workers of the state and aims to address some of the stated concerns.

#### Salient Features:

- **Platform-Based Gig Workers Welfare Board:** The proposed Board envisages the creation of a central authority responsible for various key functions. These include registering gig workers and aggregators, deducting appropriate cess, implementing a robust monitoring system, safeguarding the welfare of gig workers through the formulation and notification of social security schemes, and fostering collaborations with registered unions representing platform-based gig workers.
- **Registration of gig workers and aggregators:** This entails aggregators submitting a comprehensive database of all their platform-based gig workers to the Board. Subsequently, the Board will use this information to automatically register the gig workers and furnish them with individual, distinctive identification numbers.
- **Platform-Based Gig Workers Social Security Fund and Welfare Fee:** A special fund will cater to the well-being of platform-based gig workers who are duly registered. This fund will receive financial support from multiple channels, including the welfare fees contributed by aggregators, grant-in-aid from the State Government, and other funding sources.

- **Entitlements of platform-based gig workers with registration:** Platform-based gig workers will be granted access to both general and tailored social security schemes, enabling them to voice grievances and actively participate in decisions about their well-being.
- **Establishment of Central Transaction Information and Management System (CTIMS):** The proposed legislation outlines the creation of CTIMS, a comprehensive system aimed at monitoring and tracing platform transactions, including meticulous records of welfare fee collection.
- **Penalties under the Bill:** Aggregators failing to comply with the provisions of this Bill will pay a fine of up to INR 5 lakh for the first contravention and up to INR 50 lakh for subsequent violation.

#### Our Take – Why is this Important ?

The approval of the Bill by the Rajasthan Government reflects a forward-looking step taken by the state. This legislative action may encourage other states to follow suit and implement their regulatory structures for gig workers, considering the dynamic evolution of the gig economy. The Indian gig workforce is expected to expand to 23.5 million workers by the year 2029-30, the NITI Aayog report, 'India's Booming Gig and Platform Economy', revealed. The requirement for similar laws is thus implicit.

While the welfare board's authority and responsibilities concerning collaboration with unions and representation of gig workers and aggregators are commendable, it must carefully navigate the challenge of making decisions that foster industrial peace and harmony without unduly disrupting business operations.

## 06 Guidelines For Resource Adequacy Planning Framework for India

India's rapid economic growth demands a reliable and sufficient supply of electricity. To meet this demand and maintain growth, it is crucial to have a robust resource adequacy planning framework. The recently announced guidelines aim to achieve the following key objectives:

- **Energy for growth:** Timely addition of generation capacity to meet projected demand and maintain necessary reserves.
- **Reliable power supply:** Ensuring DISCOMs tie up sufficient capacity to provide 24x7 reliable power, avoiding load shedding.
- **Optimal cost:** Procuring a judicious mix of long, medium, and short-term contracts to ensure the security of supply at the least cost.
- **Renewable energy targets:** Fulfilling obligations for Renewable Purchase Obligation (RPO) and increasing renewable generation capacity

The Resource Adequacy Plan will assess the required generation capacities on long-term, medium-term, and short-term bases. It will consider factors such as demand growth, contracted capabilities, and power exchange procurement. The plan will optimize generation capacities to minimize system costs while ensuring reliability under different scenarios.

The Central Electricity Authority (CEA) will publish the Long-term National Resource Adequacy Plan (LT-NRAP) to determine the Planning Reserve Margin (PRM) at the national level. The NLDC will publish the one-year look-ahead Short-term National Resource Adequacy Plan (ST-NRAP) to provide demand forecasts, resource availability, and maintenance schedules. Distribution licensees will undertake a Long-term Distribution Licensee Resource Adequacy Plan (LT-DRAP) to meet their own peak and energy requirements.

Distribution licensees must procure resources to meet their resource adequacy requirements. They can contract capacity from renewable sources through competitive bidding processes. The distribution licensee's contracted capacities must be submitted to the appropriate authorities for approval. The procurement process must be completed well in advance of the projected requirement.

### Envisaged Challenges:

- Balancing renewable generation intermittency and ensuring reliability.
- Coordinating procurement among distribution licensees and managing regional imbalances.
- Ensuring compliance with Renewable Purchase Obligation targets.
- Allocating capacity credits for different resource types on a regional basis.
- Considering uncertainties in demand forecasts, maintenance schedules, and interconnection limits.

### Our Take – Why is this Important ?

These guidelines provide a comprehensive framework for resource adequacy planning in India. While challenges exist, including those related to renewable integration and regional coordination, proactive implementation of these guidelines will ensure a reliable and cost-effective power supply for India's continued economic growth.





## 07 Guidelines for Provision of Signages on Expressways and National Highways

In July 2023, the Road Safety Cell of the Ministry of Road Transport and Highways released comprehensive guidelines for providing appropriate signages on expressways and national highways to promote road safety. The guidelines aim to strengthen the government's commitment towards enhancing drivers' safety and fostering a secure driving environment across all roads in the country. The guidelines have been drafted keeping in mind international best practices and road safety standards, with a key focus on improving signage visibility and readability for drivers.

The key objective behind the guidelines was to streamline traffic regulations by standardizing the usage of traffic signages to provide drivers with adequate guidance, warnings, and regulatory traffic information. By classifying road signages into three categories – Mandatory/Regulatory, Cautionary/Warnings, and Informatory/Guide –, the guidelines provide detailed instructions for the design and placement of signages, including appropriate heights and distances, size and dimensions, usage of symbols and lettering, etc.

### Other key highlights of the guidelines are:

- Proposed usage of pictorial depictions to ensure better comprehension and convey essential road safety information effectively.
- Adopting a multilingual approach by promoting the use of English and regional language on the signage
- Promoting lane discipline through comprehensive road markings, encouraging drivers to follow designated lanes to reduce traffic congestion.

These guidelines are set to be implemented in a phased manner, starting with implementation on all upcoming Highways, Expressways and Greenfield Corridors. Highways with high passenger vehicle traffic of more than 20,000 Passenger Car Units (PCUs) will be prioritised for implementation.

### Our Take – Why is this Important ?

Road signages are essential to the road and transportation system, crucial for guiding drivers, promoting road safety, and ensuring smooth traffic flow. As road accidents due to over-speeding, drunken driving, and traffic rules violations continue to rise in India, the guidelines are a welcome step in promoting traffic regulations and safety. However, the implementation comes with its own set of challenges, such as:

- Monitoring the design and placement of signages as per the specifications in the guidelines, along with timely and speedy implementation.
- Developing a mechanism for the timely replacement of old signages with new specifications and the repair and maintenance of the new signages.
- Provision for updating signages in real-time based on changing road conditions, weather, accidents, and traffic congestion.





**PASSION**

for providing solutions to help clients achieve their goals

**RESPECT**

for all and alternate viewpoints

**INTEGRITY**

of thoughts and actions

**MASTERY**

of our chosen subject to drive innovative and insightful solutions

**US**

representing the Primus collective, where each individual matters

**STEWARDSHIP**

for building a better tomorrow

# About Primus Partners

Primus Partners has been set up to partner with clients in 'navigating' India, by experts with decades of experience in doing so for large global firms. Set up on the principle of 'Idea Realization', it brings to bear 'experience in action'. 'Idea Realization'— a unique approach to examine futuristic ideas required for the growth of an organization or a sector or geography, from the perspective of assured on ground implementability. Our core strength comes from our founding partners, who are goal-oriented, with extensive hands-on experience and subject-matter expertise, which is well recognized in the industry. Our core founders form a diverse cohort of leaders from both genders with experience across industries (Public Sector, Healthcare, Transport, Education, etc.), and with varied specialization (engineers, lawyers, tax professionals, management, etc.).



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