Dynamic Spectrum Alliance Limited
http://www.dynamicspectrumalliance.org

August 14, 2025

Shri. Alam Singh Negi
Under Secretary to the Government of India
Department of Telecommunications
Ministry of Communications, Government of India

Re: Consultation on Draft National Telecom Policy (NTP) 2025

Dear Sir,

The Dynamic Spectrum Alliance[1] (DSA) welcomes the Department of Telecommunications (DoT) initiative to develop the National Telecom Policy 2025 (NTP-2025) and supports its vision to create a digitally empowered society and knowledge economy. The NTP-2025's missions ranging from universal connectivity and trusted networks to sustainable development are aligned with the DSA's objectives of maximizing spectrum availability, lowering barriers to broadband deployment, and fostering innovation through dynamic sharing frameworks.

Unlocking the entire 6 GHz band (5925–7125 MHz) for license-exempt Wi-Fi will enable wider channels (up to 320 MHz), multi-gigabit speeds, and ultra-low latency critical for emerging applications such as AR/VR for education and training, advanced manufacturing automation, smart healthcare, and connected public services.

Furthermore, enabling standard-power operations in the 6 GHz band under Automated Frequency Coordination (AFC) will allow high-capacity indoor and outdoor deployments, especially in rural and semi-urban areas where greater coverage per access point is essential for cost-effective rollouts. This will complement PM-WANI and public Wi-Fi initiatives, expanding affordable broadband access while maintaining coexistence with incumbent services.

These measures will position India as a global leader in high-performance, sustainable digital connectivity, ensuring that every household, enterprise, and community benefits from the

[1] The DSA is a global, cross-industry, not for profit organization advocating for laws, regulations, and economic best practices that will lead to more efficient utilization of spectrum, fostering innovation and affordable connectivity for all. Our membership spans multinationals, small-and medium-sized enterprises, as well as academic, research and other organizations from around the world all working to create innovative solutions that will benefit consumers and businesses alike by making spectrum abundant through dynamic spectrum sharing. A full list of DSA members is available on the DSA's website at https://www.dynamicspectrumalliance.org/members

opportunities of the digital economy. Next-generation Wi-Fi will further support inclusive growth, strengthen innovation leadership, and drive measurable improvements in quality of life.

Sincerely,

Dr. Martha Suárez
President
Dynamic Spectrum Alliance

Mission 1: Universal and meaningful connectivity

NTP-2025 rightly targets 100% 4G and 90% 5G population coverage, 10 crore fixed broadband households, top-20 ICT ranking, and 1 million public Wi-Fi hotspots, with strategies spanning BharatNet fiberization, hybrid access (mobile, FWA, FTTH, satellite, Wi-Fi, HAPS), GIS-based planning, community Wi-Fi, and PM-WANI tariff affordability. To meet QoE-focused service levels and affordability thresholds, unlicensed spectrum and open access Wi-Fi must be scaled.

Today, a significant amount of broadband traffic is already carried over Wi-Fi, yet India's unlicensed spectrum allocation is limited to the congested 2.4 GHz and partially available 5 GHz bands. This congestion leads to reduced speeds, higher latency, and inconsistent user experience, especially in high-density urban areas and public Wi-Fi deployments under the PM-WANI framework.

The DSA strongly recommends making the entire 5925–7125 MHz band license-exempt for Wireless Access Systems/Radio Local Area Networks (WAS/RLAN), enabling the deployment of Wi-Fi 6E and Wi-Fi 7 with access to contiguous 160 MHz and 320 MHz channels. This would harmonize India with leading economies such as the United States, Korea and Canada, allowing device makers to leverage global economies of scale and reduce consumer equipment costs.

Furthermore, enabling standard power operations in the 6 GHz band via AFC will extend Wi-Fi coverage beyond indoor spaces to rural schools, health centers, and community hubs, supporting outdoor broadband access without harmful interference to incumbents.

The combined approach of full-band license-exempt access and standard power via AFC will directly support the mission's goals by closing the digital divide, fostering inclusive growth, and ensuring that every citizen whether in dense cities or remote villages has access to fast, affordable, and reliable broadband.

Mission 2: Innovation

Including license-exempt mid-band access and dynamic sharing in innovation frameworks will spur device, chipset, and application ecosystems while supporting Make in India manufacturing. Building future-ready networks in India requires a balanced spectrum strategy that integrates both licensed and license-exempt resources to deliver high-capacity, low-latency, and resilient connectivity. While 5G and upcoming 6G mobile networks will play a critical role, Wi-Fi with powered by license-exempt spectrum will remain the dominant last-meter access technology for homes, enterprises, and public spaces.

Wi-Fi 6E and Wi-Fi 7 can deliver multi-gigabit speeds with the deterministic performance needed for advanced applications like AR/VR, industrial IoT, and telemedicine.

A future-ready network strategy should also encourage dynamic spectrum sharing frameworks, to maximize spectrum utilization efficiency. By integrating full-band license-exempt 6 GHz spectrum into the national policy, India can accelerate the rollout of high-performance wireless infrastructure, enable seamless 5G–Wi-Fi convergence, and position itself as a leader in the global digital economy.

Mission 3: Domestic manufacturing

Targets for output growth, import substitution, a Telecom Manufacturing Zone, lab ecosystems, and skills are aligned with value addition and export competitiveness. Wi-Fi 6E/7 and dynamic spectrum devices are high-volume segments that can anchor design-led manufacturing and test/cert capabilities.

India's ambition to become a global leader in telecom equipment manufacturing can be significantly advanced by enabling a strong, predictable, and harmonized spectrum policy that aligns with international markets. For wireless equipment manufacturers, scale and interoperability are key drivers of competitiveness.

By adopting full 6 GHz band license-exempt access, India can ensure that domestic manufacturers produce devices such as Wi-Fi 6E and Wi-Fi 7 routers, access points, smartphones, and IoT modules that are fully compatible with the largest and fastest-growing global markets in the United States, Canada, the European Union, and Latin America. This policy alignment reduces per-unit production costs, opens export opportunities, and stimulates local R&D in advanced radio technologies.

In addition, enabling standard power operations in the 6 GHz band via AFC will create a market for high-performance enterprise-grade Wi-Fi equipment, industrial IoT gateways, and outdoor connectivity solutions. Domestic firms can then compete in global tenders for smart city infrastructure, industrial automation, and campus networking, sectors where India's manufacturing capacity and software expertise provide a unique advantage. The development of dynamic spectrum management platforms integrating spectrum sensing, geolocation databases, and AFC can also become a domestic exportable technology, fostering a homegrown industry in spectrum management tools.

By coupling a forward-looking spectrum policy with targeted incentives for R&D, component localization, and export facilitation, India can use the 6 GHz opportunity not only to meet domestic

connectivity needs but also to position itself as a global manufacturing and innovation hub for next-generation wireless technologies.

Mission 4: Secure and trusted network

A secure and trusted telecommunications ecosystem is not solely dependent on equipment sourcing and cybersecurity protocols; it also relies on resilient and transparent spectrum management. By adopting full-band 6 GHz license-exempt access alongside AFC enabled standard power operations, India can enable a connectivity infrastructure that is both high-performance and inherently secure. License-exempt spectrum allows for greater diversity of suppliers and equipment types, reducing the risk of overdependence on any single vendor or proprietary standard. This promotes a multi-vendor environment where enterprises, public agencies, and critical sectors can select from globally vetted and interoperable devices, lowering supply chain security risks.

Security in shared spectrum environments can be further enhanced through automated coordination mechanisms like AFC, which maintain real-time control over device operations while protecting incumbent services. This creates an auditable and transparent framework that ensures compliance with regulatory rules, minimizes unauthorized spectrum usage, and supports the detection of interference patterns that could indicate malicious activity. The adoption of Wi-Fi 7 in secure enterprise, industrial, and government networks also brings advanced encryption, improved authentication, and traffic segmentation features, which align with India's objectives to safeguard sensitive data and critical infrastructure.

Mission 5: Enhancing Ease of Living and Doing Business

A forward-looking spectrum policy is a critical enabler for improving the ease of living and doing business in India. By recognizing the importance of next generation Wi-Fi in the NTP-2025, India can bring ubiquitous, high-capacity connectivity to homes, enterprises, industrial sites, and public spaces. Wi-Fi already carries the majority of India's fixed broadband traffic, and unlocking the entire 6 GHz band will allow seamless multi-gigabit speeds, ultra-low latency, and reliable performance for next-generation applications.

For citizens, this means faster and more consistent public Wi-Fi in transportation hubs, hospitals, schools and government service centers, reducing digital transaction times, enabling real-time telehealth consultations, and improving access to e-learning resources in both urban and rural areas. For businesses, especially MSMEs and start-ups, enterprise-grade Wi-Fi 7 networks will

provide affordable, high-quality connectivity without the delays and costs associated with licensed spectrum acquisition, allowing rapid deployment of IoT solutions, AR/VR collaboration tools, and cloud-based operations.

Furthermore, license-exempt spectrum supports private network deployments for factories, logistics hubs, and agricultural cooperatives, enabling process automation, robotics, and AI-driven decision making all without being tied to a single mobile operator. This flexibility fosters competition, lowers operational costs, and stimulates innovation in sectors ranging from manufacturing to fintech.

From a policy standpoint, the integration of open spectrum access with digital public infrastructure initiatives such as UPI (Unified Payments Interface), Aadhaar-enabled services, and ONDC (Open Network for Digital Commerce) can dramatically enhance service delivery efficiency, citizen engagement, and business competitiveness.

Mission 6: Sustainable development

The telecom sector's growth trajectory must be reconciled with the urgent need to reduce environmental impact, and spectrum policy can be a powerful lever for this balance. DSA recommends accelerating adoption of energy-efficient technologies such as Wi-Fi 6E and Wi-Fi 7, which deliver lower power consumption per bit through higher spectral efficiency, advanced modulation, and intelligent power-saving features.

Making full use of licence-exempt 6 GHz spectrum for high-capacity Wi-Fi allows significant mobile data offload, reducing the energy intensity of networks and the associated carbon emissions. Pragmatic spectrum-sharing frameworks in mid- and high-frequency bands can minimise duplication of infrastructure, avoiding the embodied emissions of parallel builds while maximising the use of existing assets.

Robust, uncongested 6 GHz Wi-Fi can also underpin telemedicine, e-learning, and remote work, directly cutting travel-related emissions by reducing the need for commuting and in-person service delivery as demonstrated in Toronto, where the municipal smart-city Wi-Fi programme reduced official travel by 15% and measurably lowered the city's carbon footprint.

Coupled with incentives for renewable-powered hotspots, refurbishment and reuse of enterprise-grade access points, and lifecycle-long compatibility to extend device service life, these measures align connectivity expansion with India's climate commitments while sustaining digital inclusion.

Conclusion

The NTP-2025 lays a strong foundation for India's digital future, yet achieving its 2030 ambitions will require bold, forward-looking spectrum reforms. Unlocking the full 6 GHz band for license-exempt use, alongside standard-power operations managed through AFC, can bridge the urban–rural digital divide by delivering gigabit-class Wi-Fi to every community; lower device costs by aligning India's market with global manufacturing ecosystems; and enable transformative applications ranging from AR/VR training and Industry 4.0 robotics to telemedicine and smart city services.

With such reforms, India can position itself as a global leader in affordable, high-performance, and sustainable digital connectivity, ensuring that universal broadband access translates into inclusive economic growth, innovation leadership, and an improved quality of life for all.

The DSA stands ready to work alongside the Government of India, industry, and civil society to put these recommendations into action so that the benefits of the digital economy reach every household and enterprise by 2030.