Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
FCC Public Notice Seeking Comment on	)	GN Docket No. 26-74
Unleashing American Drone Dominance	)	WT Docket No. 22-323
	)	WT Docket No. 24-629
	)	

COMMENTS OF THE EDISON ELECTRIC INSTITUTE, AMERICAN PUBLIC POWER ASSOCIATION, LARGE PUBLIC POWER COUNCIL AND NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

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SUMMARY

The Edison Electric Institute (EEI), American Public Power Association (APPA), Large Public Power Council (LPPC), and the National Rural Electric Cooperative Association (NRECA) (collectively, the Associations) submit these comments in response to the Federal Communications Commission's Public Notice seeking comment on actions to "Unleash American Drone Dominance." Electric utilities strongly support the Commission's goal of accelerating domestic unmanned aircraft system (UAS) leadership and agree that safe, scalable drone deployment is critical to economic competitiveness, infrastructure resilience, and national security.

Electric utilities are among the most advanced and consequential users of UAS in the United States. Utilities already deploy drones for safety-critical missions including transmission and distribution inspection, wildfire mitigation, vegetation management, storm response, infrastructure security, and grid restoration. These missions directly support public safety, reliability, and resilience, particularly in rural, remote, and disaster-affected areas. Unlike speculative or short-term commercial use cases, utility UAS deployments are integrated into long-term infrastructure planning and operations, making utilities stable anchor customers capable of supporting sustained domestic manufacturing, workforce development, and secure supply chains.

However, utilities cannot transition from pilot deployments to infrastructure-scale operations without reliable, predictable communications supported by appropriate spectrum access and regulatory certainty. As the Commission has recognized, advanced UAS operations, particularly beyond visual line of sight (BVLOS), require aviation-grade reliability, strong interference protection, and clear authorization frameworks. No single spectrum band can satisfy all operational needs across the diverse geographies in which utilities operate. Scalable utility UAS deployment therefore depends on a layered, multi-band communications architecture in which different spectrum resources play complementary roles.

The Associations strongly support continued implementation of the Commission's framework for UAS command-and-control (CNPC) operations in the 5030-5091 MHz (5 GHz) band. This band is essential for providing aviation-grade reliability and interference protection for safety-critical, BVLOS operations. To move from an interim, transaction-heavy access model to a scalable deployment framework, the Commission should accelerate approval of Dynamic Frequency Management System (DFMS) administrators, establish pilots focused on infrastructure-scale use cases, provide clear reliability and performance expectations, and enable deployment frameworks suitable for wide-area, repeatable utility operations. DFMS must be designed to support long-range, multi-site missions across large service territories, including prioritized access during emergencies.

At the same time, utilities' operational needs cannot be met through mid-band spectrum alone. The Associations urge the Commission to permit UAS CNPC operations in the 450 MHz band as part of a broader, flexible-use utility broadband framework. The propagation

characteristics of lower-frequency spectrum make the 450 MHz band uniquely well suited for long-range BVLOS operations in rural, remote, and disaster-affected environments that characterize much of the electric grid. Authorizing UAS use in this band would complement the Commission's 5 GHz framework and strengthen resilience through multi-band redundancy.

The Commission should also clarify that UAS operations may be conducted over flexible-use licensed spectrum supporting private, utility-operated LTE and emerging 5G networks. These enterprise-controlled networks are engineered for high reliability, known devices, and managed interference environments, distinguishing them from public commercial mobile networks historically subject to airborne use concerns. Regulatory clarity in this area would allow utilities to leverage existing authorized infrastructure, accelerate deployment, and support a layered communications architecture aligned with longstanding Commission policy on private wireless networks for critical infrastructure.

In addition, the Associations urge the Commission to modernize experimental licensing frameworks to better accommodate infrastructure-scale deployments, clarify regulatory pathways for counter-UAS and infrastructure protection measures, and establish a centralized FCC "one-stop shop" for UAS regulatory guidance tailored to non-traditional operators such as utilities.

Electric utilities represent one of the largest, most immediate, and most scalable opportunities to advance secure, domestically produced UAS deployment nationwide. By prioritizing reliable spectrum access, scalable licensing frameworks, and policies aligned with real-world infrastructure operations, the Commission can meaningfully accelerate American drone leadership while strengthening grid resilience, public safety, and national security.

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The Edison Electric Institute (EEI), American Public Power Association (APPA), Large Public Power Council (LPPC), and the National Rural Electric Cooperative Association (NRECA) (collectively, "the Associations") respectfully submit these comments in response to the Federal Communications Commission's Public Notice seeking input on actions the Commission can take to "Unleash American Drone Dominance."[1] The Commission's initiative appropriately recognizes that unmanned aircraft systems (UAS) are becoming essential tools for economic competitiveness, infrastructure resilience, and national security.

I. Introduction & Summary

A. Background on Trade Associations

EEI is the trade association representing U.S. investor-owned electric companies. EEI's member companies provide safe, reliable, and affordable electricity to more than 250 million Americans in all 50 states and the District of Columbia, while supporting over seven million jobs in communities across the country. EEI's members plan, build, operate, and maintain the critical

[1] FCC Public Notice, Unleashing American Drone Dominance, DA 26-314, GN Docket No. 26-74, WT Docket Nos. 22-323, and 24-629 (Apr. 1, 2026) (Public Notice or PN).

infrastructure that underpins the nation's economy and security, including millions of miles of transmission and distribution lines, thousands of substations, and diverse generation assets.

APPA is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. Public power utilities are in every state except Hawaii. They collectively serve over 54 million people in 49 states and five U.S. territories, and account for 15 percent of all sales of electric energy (kilowatt-hours) to end-use consumers. LPPC is an association of 29 of the nation's largest municipal and state-owned utilities, representing the larger, asset-owning members of the public power community and approximately 90 percent of the transmission assets owned by public power. LPPC members are also members of APPA.

APPA and LPPC are load-serving entities, with the primary goal of providing the communities they serve with safe, reliable electric service at the lowest reasonable cost, consistent with good environmental stewardship. This orientation aligns the interests of the utilities with the long-term interests of the residents and businesses in their communities.

NRECA is the trade association representing 900 not-for-profit electric cooperatives, which serve 42 million Americans. From growing exurban regions to farming communities to remote mountain towns, cooperatives keep the lights on over half of the American landscape – areas that are primarily residential and sparsely populated. Safety, affordability, and reliability are our primary concerns.

B. Summary

America's electric utilities operate and maintain millions of miles of transmission and distribution lines that keep communities safe, healthy, and productive. Electric utilities

represent one of the largest, fastest, and most scalable opportunities to deploy secure, domestically produced UAS. Utilities already deploy drones for safety-critical missions such as infrastructure inspection, wildfire mitigation, storm response, vegetation management, security monitoring, and grid restoration. Expanding these deployments directly supports the Commission's stated objectives of accelerating American drone leadership while strengthening national resilience.

Unlike short-term or speculative commercial use cases, utilities deploy technology on decades-long infrastructure planning horizons. As a result, utilities represent stable anchor customers capable of supporting sustained domestic manufacturing investment and workforce development. Enabling utilities to scale UAS deployment therefore supports both the operational goals of the Public Notice and broader domestic supply-chain objectives.

However, utilities cannot transition from pilot deployments to infrastructure-scale operations without scalable communications supported by appropriate spectrum policy and regulatory certainty. As the Commission has recognized, spectrum access and regulatory certainty are foundational to enabling advanced UAS operations, particularly beyond visual line of sight (BVLOS).[2]

While licensed aviation-grade spectrum is essential to ensure the reliability and interference protection required for safety-critical UAS command-and-control, no single frequency band can meet all operational needs across the diverse geographies in which electric

[2] *In the Matter of Spectrum Rules and Policies for the Operation of Unmanned Aircraft Systems*, Report and Order, FCC 24-91, WT Docket No. 22-323, 39 FCC Rcd. 10005, at ¶ 1-4 (2024) ("5 GHz Order").

utilities operate. Scalable UAS deployment therefore depends on a layered, multi-band communications architecture in which different bands play complementary roles, consistent with longstanding Commission spectrum policy for critical infrastructure networks.

Accordingly, the Associations urge the Commission to prioritize policies that enable utilities and other critical infrastructure operators to deploy UAS safely and at scale. Specifically, the Associations recommend that the Commission:

- Accelerate implementation of the 5030–5091 MHz band and Dynamic Frequency Management Systems (DFMS).
- Prioritize critical infrastructure access to protected UAS spectrum.
- Clarify and expand use of flexible-use licensed spectrum for UAS operations.
- Improve reliability and availability of spectrum for BVLOS deployments and long-range operations.
- Streamline and modernize experimental licensing pathways.
- Clarify regulatory frameworks supporting infrastructure protection and counter-UAS capabilities.
- Establish a centralized Federal Communications Commission (FCC or Commission) "one-stop shop" UAS resource for non-traditional operators.

II. Electric Utilities Are Core Contributors to "American Drone Dominance"

Electric utilities operate and maintain critical infrastructure across geographically diverse and often challenging environments, including remote terrain, dense urban areas, coastal regions, extreme weather conditions, and wildfire-prone locations.[3] Drones are already indispensable to utilities for a variety of safety, maintenance, and recovery functions. Some

[3] This infrastructure includes high-voltage transmission lines, distribution systems, substations, generation facilities, and communications networks.

utilities use drones to string wires; map infrastructure and future projects; identify maintenance needs; and apply herbicides.

Importantly, drones are critical for utilities facing natural disasters. During hurricanes and severe storms, utilities deploy drones to conduct rapid aerial assessments, identify hazards, and prioritize restoration. These deployments significantly reduce outage duration by improving situational awareness and enabling more efficient crew deployment. In wildfire-prone regions, utilities also use drones for vegetation management operations, early detection, and infrastructure monitoring, which help reduce wildfire risks and protect communities. These deployments also support grid resilience and reliability.

Because utilities operate nationwide and make long-term infrastructure investments, they represent stable, large-scale customers for domestically manufactured drones and related communications technologies. Enabling utilities to scale UAS deployment therefore supports development of a resilient domestic drone ecosystem while advancing public safety and reliability goals.

III. Reliable Spectrum Is Essential for Infrastructure Scale UAS Operations

Unlicensed spectrum plays an important role in supporting certain UAS operations, but unlicensed spectrum cannot provide the reliability required for safety-critical infrastructure operations.

Many utilities operate in congested environments where unlicensed spectrum may experience interference or degradation. These limitations are particularly acute during emergencies, when communications networks are stressed and reliable drone operations are

most critical. Loss of command-and-control connectivity during storm response or wildfire mitigation operations could delay restoration and increase risks to field personnel.

For these reasons, licensed spectrum, protected access mechanisms, and priority communications capabilities are essential to support infrastructure-scale UAS deployments that involve BVLOS operations, long-range flights, and emergency response. Although licensed spectrum provides the predictability and protection required for safety-critical operations, the propagation characteristics of individual bands vary significantly. As a result, the reliability benefits of licensed access must be paired with spectrum choices appropriate to mission length, geography, and infrastructure density.

References in these comments to nationwide or multi-state deployment frameworks relate to regulatory authorization and operational coordination needs; EEI does not suggest that any single frequency band will provide continuous geographic coverage across all environments.

In the same vein, the Associations do not suggest that licensed spectrum is necessary for all UAS uses. Rather, we underscore that safety-critical, infrastructure-scale operations require communications characteristics that cannot be consistently assured through unlicensed or opportunistic means alone.

IV. Accelerating Deployment in the 5030–5091 MHz (5 GHz) Band

The Associations strongly support the Commission's decision to make the 5 GHz band available for UAS control-and-non-payload communications ("CNPC"). As EEI previously explained in WT Docket No. 22-323, with beyond radio-line-of-sight capability enabled by access to licensed networked 5 GHz spectrum, as opposed to relying on unlicensed spectrum, electric

utilities would be able to use UAS capable of flying longer-range flights, allowing utilities to conduct their operations more efficiently for the benefit of their customers and the safety of personnel.[4]

The 5 GHz band plays a critical role in providing aviation-grade reliability and interference protection for UAS command-and-control, particularly for BVLOS operations where safety considerations mirror those of traditional aviation. At the same time, the Commission has long recognized that mid-band spectrum, including frequencies in the 5 GHz range, offers an optimal balance of capacity and coverage when deployed through terrestrial wireless networks.[5] Accordingly, this band should be understood as a high-reliability aviation layer within a broader, multi-band UAS communications architecture, rather than as a standalone wide-area coverage solution. The Associations recognize that implementation of the 5 GHz framework necessarily involves careful engineering tradeoffs among propagation limits, sharing efficiency, and interference protection; as such, they do not seek prescriptive outcomes that would constrain the Commission's technical evaluation of those factors.

The Commission already has taken important steps by adopting rules that recognize the need for aviation-grade spectrum to support advanced UAS operations.[6] While those rules establish a necessary foundation, deployment of UAS in the 5 GHz band has not yet reached its

[4] Comments of the Edison Electric Institute, WT Docket No. 22-323, at 7 (March 9, 2022).
[5] *See, e.g.*, *In the Matter of Expanding Use of the 12.7-13.25 GHz Band for Mobile Broadband or Other Expanded Use*, Notice of Inquiry and Order, FCC-22-80, GN Docket No. 22-352 ¶ 1 (2022); *In the Matter of Revision of Part 15 of the Commission's Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, Report and Order, 29 FCC Rcd. 4127, FCC 14-30, ET Docket No. 13-49, ¶ 2 (2014).
[6] 5 GHz Order, 39 FCC Rcd. 10005 (establishing "a regulatory framework to facilitate access to dedicated spectrum in a portion of the 5030–5091 MHz band to enable safe operations of UAS").

intended potential, particularly for critical infrastructure operators whose missions depend on repeatable, wide-area, and time-sensitive operations.

Utility UAS missions differ fundamentally from short-term or one-off testing. They involve recurring flights over large service territories, rapid redeployment during emergencies, and frequent operational adjustments driven by weather, system conditions, and restoration priorities. The interim framework established by the current rules is a transaction-heavy, case-by-case approach, which introduces uncertainty, delay, and administrative burden, undermining the predictability utilities require to justify long-term investment in UAS platforms, workforce training, and supporting communications infrastructure.

Accordingly, the Associations urge the Commission to take the following steps to move from an interim, case-by-case access model to a scalable deployment framework capable of supporting real-world infrastructure operations:

- **Expedite approval of Dynamic Frequency Management Systems (DFMS) administrators.** DFMS is the central enabling mechanism for scalable use of the 5 GHz band. Without approved administrators, utilities lack a practical means of securing predictable, repeatable access for routine operations and emergency response. Accelerating DFMS approval would replace ad hoc coordination with a system expressly designed to manage prioritization, protection, and coexistence at scale.
- **Establish pilot deployments focused on infrastructure-scale use cases.** Targeted pilots involving electric utilities and other critical infrastructure operators would allow the Commission to evaluate how the 5 GHz framework performs under real-world conditions, including wide-area operations, emergency deployment, and recurring missions. These pilots would generate concrete operational data, inform DFMS implementation, and reduce uncertainty for both regulators and operators.
- **Provide clear reliability and performance expectations.** Utilities require clarity regarding the level of reliability, prioritization, and interference protection they can expect when operating in the band. Clear performance expectations would align FCC and Federal

Aviation Administration (FAA) oversight, inform system design and investment decisions, and ensure that safety-critical CNPC communications are appropriately protected.

- **Enable scalable nationwide deployment frameworks.** Electric utilities operate integrated systems that span states and regions. Access models that rely on narrowly tailored, temporary, or localized authorizations are not well suited to these operations. A scalable framework that supports wide-area, repeatable deployment is essential to enabling UAS use commensurate with utility infrastructure footprints.
- **Develop predictable deployment timelines for nationwide adoption.** Utilities plan infrastructure investments on multi-year and multi-decade horizons. Providing visibility into expected timelines for DFMS implementation and broader access will reduce regulatory uncertainty, support capital planning, and encourage investment in domestically manufactured UAS and communications equipment.

Taken together, these steps will move the 5 GHz framework from a promising but largely unused construct to a practical, operationally viable foundation for advanced UAS deployment. Accelerating implementation in this band will support safe BVLOS operations, improve emergency response and grid resilience, and unlock infrastructure-scale use of UAS in furtherance of the Commission's goal of strengthening American drone leadership.

V. Shared Use in the 5 GHz Band with CNPC Priority Uses

The Associations continue to support a shared-use framework for the 5030–5091 MHz band, provided that CNPC remain the highest-priority use and are fully protected from harmful interference.[7] A well-designed shared-use approach can expand access and efficiency in the band while preserving the reliability and safety assurances required for aviation-grade UAS operations.

[7]See Service Rules for the 5030–5091 MHz Band, Notice of Proposed Rulemaking, 37 FCC Rcd 15288, ¶ 26 (2022) (proposing a dynamic spectrum management framework to ensure UAS command-and-control links have "exclusive and protected use" of assigned frequencies); 47 C.F.R. § 2.106 n.5.444 (establishing priority for aeronautical mobile (route) service systems and requiring protection from harmful interference in the 5030–5091 MHz band).

Shared use is appropriate where it reflects the operational realities of safety-critical infrastructure missions and incorporates clear, enforceable protections for CNPC. In particular, shared use frameworks must ensure that:

- Non-Networked Access and Network-Supported Services coexist through band partitioning and coordinated dynamic access, enabling different operational models without forcing critical users into a one-size-fits-all architecture.
- DFMS frameworks provide real-time prioritization and assignment stability, so that CNPC communications are protected for the full duration of a flight and are not subject to unpredictable interruptions that could compromise safety.
- Coordination mechanisms are operationally practical for critical infrastructure users, including during emergency response, recurring missions, and wide-area operations, rather than relying on processes designed primarily for limited or experimental use.[8]

Electric utilities require predictable access, strong interference protection, and high reliability, even in dynamically managed environments. These characteristics are essential for utilities to deploy UAS at scale, justify long-term investment in equipment and training, and safely integrate drones into routine infrastructure operations.

While CNPC must remain the protected core function, the Commission should continue developing the record on whether certain secondary, non-CNPC communications, such as video or sensor data, could be accommodated in future phases without undermining CNPC reliability.[9] Developing this record now, without authorizing immediate use, is consistent with the Commission's phased approach and will enable informed, evidence-based decision-making as UAS operations mature.

[8] 5 GHz Order, at ¶¶ 72–137 (describing DFMS coordination, prioritization, and assignment requirements).
[9] Id., at ¶¶ 25, 32–33 (limiting initial operations to CNPC while deferring broader service questions).

Finally, utilities must be recognized as core stakeholders in any multi-stakeholder process that shapes shared-use and coordination frameworks for the 5 GHz band. As operators responsible for nationally critical infrastructure and safety-of-life missions, utilities bring operational expertise and public-interest perspectives that are directly relevant to ensuring that shared-use policies are workable, scalable, and protective of critical communications.

VI. Dynamic Frequency Management Systems Must Support Infrastructure-Scale Operations Spanning Large Service Territories

DFMS will be the primary mechanism through which the Commission's 5 GHz framework succeeds or fails in practice. For critical infrastructure operators such as electric utilities, DFMS must be designed to support real-world, safety-critical missions, not merely short-duration or localized testing scenarios. Systems that cannot accommodate the operational realities of infrastructure-scale UAS use will not enable meaningful deployment, regardless of their theoretical spectrum efficiency.[10] The Associations' recommendations regarding assignment stability are limited to the duration and safety needs of active missions and are not intended to diminish the spectrum-sharing objectives or dynamic coordination principles that underpin the DFMS model.

At a minimum, any DFMS framework must support the operational realities of infrastructure-scale UAS deployment including:

- **Support for multisite and long-range missions across large service territories.** Utility UAS operations routinely span hundreds of miles of linear infrastructure and may cross multiple operational regions within a single mission. DFMS frameworks must therefore

[10] References to infrastructure-scale or wide-area operations in this context refer to the scope and repeatability of utility missions, rather than assumptions that a single frequency band will provide uniform geographic coverage across all environments.

support continuous, coordinated access across wide geographic areas without fragmented authorizations or disruptive handoffs.

- **Predictable access for planned operations and prioritized availability during emergencies.** Utilities require the ability to secure spectrum access both in advance for routine inspection and maintenance activities and immediately during storms, wildfires, or other emergencies, when communications reliability is most critical.
- **Assignment stability and prioritization sufficient to protect safety-critical CNPC communications**. DFMS coordination must ensure that once a flight is authorized, command-and-control links remain reliable and protected for the duration of the mission, with clear prioritization mechanisms to preserve aviation safety and infrastructure operations.

Importantly, DFMS success should be evaluated based on operational performance, not theoretical coexistence models alone. Utilities must be able to rely on DFMS to deliver predictable access and communications reliability under routine conditions and during emergencies alike. Without these capabilities, DFMS risks becoming another procedural bottleneck rather than the scalable access solution the Commission envisioned.

Designing DFMS to support wide-area, infrastructure-scale operations is essential to realizing the promise of the 5 GHz band for advanced UAS use. At the same time, experience from utility communications planning demonstrates that no single band can meet all operational needs. As utilities expand BVLOS and long-range UAS missions, particularly in rural, remote, and disaster-affected areas, the Commission should also consider how complementary spectrum resources can strengthen resilience and coverage. Accordingly, the 450 MHz band represents an important opportunity to augment the 5 GHz framework and support long-range, infrastructure-scale UAS operations.

VII. The 450 MHz Band Should Be Opened to Support Infrastructure-Scale Utility Operations, Including Long-Range UAS Missions

The Commission should build on its Advanced Air Mobility and critical-infrastructure spectrum work by taking steps to permit UAS command-and-control operations in the 450 MHz band for electric utilities and other critical-infrastructure operators. Access to this band would address operational requirements, particularly long-range and beyond-visual-line-of-sight missions that cannot be fully met through higher-frequency spectrum alone. The Associations do not propose reserving the 450 MHz band for any single application but rather urges the Commission to consider how UAS can be integrated into a broader, flexible-use utility broadband framework that maximizes spectrum efficiency and public-interest value.

Authorizing UAS CNPC operations in the 450 MHz band should be viewed as part of a broader utility communications framework rather than as a standalone or drone-exclusive use. Consistent with the Commission's flexible-use spectrum policies, utilities would derive the greatest public-interest value from access to paired broadband spectrum capable of supporting multiple integrated applications, including UAS operations, grid monitoring and protection, emergency response, and operational communications, over a unified, enterprise-controlled network architecture.

Opening the 450 MHz band for such use would complement, not replace, the Commission's 5 GHz framework. While 5 GHz spectrum can provide highly reliable, aviation-grade command-and-control where line-of-sight conditions and supporting infrastructure are available, the superior propagation characteristics of lower-frequency spectrum such as 450 MHz make it uniquely well suited for long-range, rural, and

disaster-affected environments that characterize much of the electric grid. These attributes, such as wide-area coverage, strong signal penetration, and resilience in challenging terrain, are essential for BVLOS operations supporting transmission inspection, storm response, wildfire mitigation, and infrastructure security across large service territories.

Given these operational realities, a nationwide or wide-area licensing framework in the 450 MHz band aligns closely with the way utilities plan, deploy, and operate communications networks. Utilities manage integrated systems that cross state and regional boundaries. For this reason, fragmented, site-based, or narrowly geographic licensing approaches would introduce unnecessary coordination burdens and coverage gaps, particularly during emergencies. A wide-area framework would facilitate seamless operations across entire service territories and enable rapid deployment when predictability and continuity of communications are most critical.

Any future consideration of specific channelization or bandwidth arrangements should proceed incrementally and based on demonstrated operational need, technical compatibility, and the Commission's ongoing spectrum management objectives. Over time, a paired 5×5 MHz broadband channelization would best support these integrated utility operations, allowing UAS communications to function as one component of a secure, resilient, multi-use broadband platform rather than as a separate overlay network. This approach would maximize spectrum efficiency, support long-term investment, and align UAS policy with the Commission's broader treatment of utility and critical-infrastructure communications.

Accordingly, the Associations urge the Commission to permit UAS CNPC operations in the 450 MHz band consistent with aviation safety requirements; to adopt licensing and service rules that support long-range, infrastructure-scale operations by critical-infrastructure operators with large – and, often, multi-state - footprints; to ensure that technical rules reflect modern, data-driven broadband communications needs rather than legacy voice-centric assumptions; and to treat the 450 MHz band as a key component of a broader, multi-band strategy to enable scalable, resilient UAS deployment.

By taking these steps, the Commission can significantly enhance the ability of electric utilities and other critical-infrastructure operators to deploy UAS safely and reliably at scale, further advancing American drone leadership, infrastructure resilience, and public safety.

VIII. Leveraging Flexible-Use Licensed Spectrum

Electric utilities increasingly deploy private LTE and emerging 5G networks designed specifically to support critical infrastructure operations. The Commission has long recognized the public-interest value of such private wireless systems, particularly where they are engineered for high reliability, strong cybersecurity, deterministic performance, and wide-area coverage to support safety-of-life and operational control functions (e.g., 900 MHz band realignment for broadband utility and industrial use; private LTE deployments for critical infrastructure). Utility private networks already underpin mission-critical applications such as grid monitoring, system protection, outage management, and operational communications. The Associations' discussion of private LTE and 5G networks is limited to enterprise-controlled systems with known devices, managed power levels, and engineered coverage footprints, and

does not seek changes to the Commission's treatment of airborne operations over public commercial mobile networks.

Allowing UAS operations over flexible-use licensed spectrum used by these private networks is a natural extension of this established policy framework. Clarifying the permissibility of UAS communications over utility-controlled LTE and 5G networks would enable utilities to leverage existing, Commission-authorized towers and backhaul infrastructure, rather than relying on congested unlicensed bands or pursuing duplicative, single-purpose network deployments. This approach would accelerate UAS deployment, improve reliability for BVLOS and long-range missions, and lower barriers to entry for infrastructure operators seeking to integrate drones into routine operations, consistent with the Commission's broader goal of promoting efficient spectrum use and rapid deployment (as reflected in and flexible-use licensing policies).

The Commission's precedent consistently distinguishes private, enterprise-controlled networks from nationwide public mobile networks, both in terms of interference risk and regulatory treatment (e.g., CBRS Priority Access Licenses and General Authorized Access versus commercial macrocell networks). Utility LTE and 5G systems operate in closed environments with known devices, managed access, and carefully engineered propagation and power controls. These systems do not present the same congestion, device heterogeneity, or uncontrolled usage patterns that have historically driven restrictions on airborne operations in public mobile bands.

Accordingly, the Commission should revisit airborne use restrictions where interference risks can be effectively managed and should expressly distinguish between public mobile networks and private, utility-operated systems. Doing so would be consistent with prior Commission actions recognizing the need for flexible, fit-for-purpose spectrum use by critical infrastructure operators, including proceedings addressing private broadband networks, flexible-use licensing, and utility and industrial communications systems (including the Commission's recent 900 MHz broadband reconfiguration and private LTE policy determinations).

Providing regulatory clarity in this area would reinforce the Commission's longstanding support for private wireless innovation, align UAS communications policy with existing critical-infrastructure spectrum frameworks, and enable utilities to deploy a layered, multi-band communications architecture that integrates aviation-grade spectrum, flexible-use licensed spectrum, and private networks. This approach advances spectrum efficiency and infrastructure resilience while ensuring that safety, interference protection, and public-interest outcomes remain paramount.

Clarifying the role of flexible-use licensed spectrum and private utility networks would also complement the Commission's 5 GHz approach by enabling a layered communications architecture in which DFMS-managed aviation spectrum supports protected CNPC needs, while private LTE and 5G networks provide resilient, utility-controlled connectivity for routine operations, redundancy, and extended coverage.

IX. Enhancing Experimental Licensing

Experimental licensing under Part 5 of the Commission's rules plays an important role in facilitating innovation and early-stage testing. However, the current framework is often poorly suited to utilities that are seeking to transition from limited demonstrations to routine, safety-critical operations.[11] Unlike short-term research or prototyping, utility UAS deployments are incremental, operationally integrated, and linked to long-term infrastructure investment cycles. As a result, repeatedly relying on short-term experimental authority can introduce unnecessary regulatory friction and uncertainty without commensurate public-interest benefits.

For utilities, experimental licenses are frequently used not to evaluate speculative technologies, but to validate real-world deployment concepts, integrate UAS into existing operations, and refine procedures that will later be scaled across large service territories. The need for frequent modifications, renewals, and coordination, often for minor operational changes, creates administrative burdens that divert resources and slow deployment, even where operational risk is well understood and effectively managed.

The Associations therefore urge the Commission to modernize its experimental licensing framework to better align with infrastructure-scale use cases by:

- **Offering longer-term licenses for qualified infrastructure operators**, reflecting the fact that utilities operate on multi-year planning horizons and deploy technologies gradually rather than through discrete test events.
- **Streamlining modification and renewal processes**, particularly for changes that do not materially affect interference risk or safety considerations.

[11] 5 GHz Order, at ¶¶ 126–131 (recognizing limitations of current testing and coordination mechanisms).

- **Improving FCC-FAA coordination**, so that operators are not subject to duplicative or inconsistent requirements when transitioning from testing to early operational use.
- **Clarifying pathways beyond experimental authority for proven deployments**, providing regulated entities with a clearer understanding of how successful experimental operations can evolve into routine, authorized service.

In addition, FCC-supported innovation zones and testbeds should explicitly include critical infrastructure operators, not solely universities, startups, or defense contractors. Utilities bring unique operational expertise, safety-of-life considerations, and large-scale deployment perspectives that are essential to developing UAS frameworks that work in real-world infrastructure environments.

Modernizing experimental licensing in this manner would preserve the Commission's commitment to innovation while reducing unnecessary regulatory friction, accelerating deployment of proven technologies, and supporting the public-interest goal of resilient, reliable critical infrastructure operations.

X. Counter-UAS and Infrastructure Protection

Electric infrastructure represents high-value targets for malicious or unauthorized UAS activity. Utilities require clear regulatory frameworks to deploy defensive technologies consistent with applicable law.

The Commission should continue to coordinate with the FAA, Department of War, Department of Homeland Security, Department of Justice, Department of Energy, and/or the

states to clarify permissible defensive measures and communications requirements, avoiding regulatory ambiguity that could deter lawful protection efforts.[12]

XI. One-Stop Shop for UAS Regulatory Information

EEI supports establishment of a centralized FCC UAS "one-stop shop" webpage providing clear, practitioner-focused guidance on spectrum access, equipment authorization, coordination requirements, and interagency processes. The Commission has identified centralized information resources as a means to accelerate deployment and reduce regulatory friction for UAS operators.[13]

XII. Conclusion

Electric utilities are uniquely positioned to accelerate deployment of trusted, secure, and domestically produced UAS technologies nationwide.[14] Enabling utilities and other critical infrastructure operators to scale deployment will advance American drone leadership while strengthening national security, infrastructure resilience, and public safety.

The Associations respectfully urges the Commission to prioritize reliable spectrum access, scalable licensing frameworks, and infrastructure-scale deployment policies consistent with these comments.

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[12] Public Notice at 9 (seeking comment on Counter UAS and interagency coordination).
[13] Id., at 9-10 (seeking comment on creation of centralized UAS/C-UAS information resource).
[14] References in these comments to nationwide or multi-state deployment frameworks describe regulatory authorization and operational coordination needs, not assumptions that any single frequency band will provide continuous geographic coverage across all environments.

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