BEFORE THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, D.C.

In the Matter of	)	
	)	
Operation of Small Unmanned Aircraft Systems Over People	)	Docket No. FAA-2018-1087
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COMMENTS OF THE AMERICAN PUBLIC POWER ASSOCIATION, EDISON ELECTRIC INSTITUTE, AND NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

The American Public Power Association ("APPA"), Edison Electric Institute ("EEI"), and National Rural Electric Cooperative Association ("NRECA") welcome the opportunity to submit comments on the Federal Aviation Administration's ("FAA") *Operation of Small Unmanned Aircraft Over People Proposed Rule* ("Proposed Rule").[1] Collectively, our organizations represent the needs and interests of the electric utility industry that provides electric power to almost every home, business, and building in the nation. Small Unmanned Aircraft Systems ("UAS") continue to play an important role in our members' ability to ensure the safety, security, and reliability of the nation's electric grid. We appreciate the FAA's continuing efforts to more fully integrate small UAS into the National Airspace System and look forward to working with the FAA to create a regulatory landscape which will allow this technology to reach its full potential while ensuring public safety.

[1] Operations of Small Unmanned Aircraft Systems Over People, 84 FR 3856 (Feb. 13, 2019) (Docket No. FAA-2018-1087) ("Proposed Rule").

Our comments below explain the importance of electric power reliability, the role small UAS currently play in meeting this demand, and how changes to the current regulations can enable more useful deployment of UAS technology. We have identified areas of concern with the Proposed Rule and offer clarifications and amendments to accommodate the unique demands of the electric power utility sector. We hope the FAA will consider and incorporate these suggestions into the final rule.

I. Background

APPA is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. It represents public power before the federal government to protect the interests of the more than 49 million people that public power utilities serve, and the 93,000 people they employ. Approximately 70 percent of APPA's members serve communities with less than 10,000 residents.

EEI is the national association of U.S. investor-owned electric companies, with international affiliates and industry associates worldwide. Investor-owned electric companies provide electricity for 220 million Americans, operate in all 50 states and the District of Columbia, and directly and indirectly employ more than seven million people in communities across the United States. EEI's members invest more than $100 billion each year to build a smarter energy infrastructure and to transition to even cleaner generation resources.

NRECA is the national service organization for nearly 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states. Electric cooperatives own and maintain 2.6 million miles or approximately 42 percent of the nation's electric distribution lines, covering 56 percent of the U.S landmass.

Collectively, our organizations cover the spectrum of electric utilities responsible for providing safe, secure, and reliable electricity to nearly every American. Doing so requires more than 85,000 power plants, nearly 200,000 miles of high voltage transmission lines and hundreds of thousands of miles of overhead and below-ground distribution lines. Carrying out this responsibility is a matter of great importance to the economy,[2] to national security,[3] and to public health, safety, and welfare.[4]

UAS Role in Electric Power Reliability

Providing safe, reliable, and efficient electric power to the public is a key national priority and responsibility of the electric industry. In recognition of that fact, the electric industry is subject to mandatory and enforceable reliability standards, set by the North American Electric Reliability Corporation ("NERC"), making this sector one of only two critical sectors (the second being nuclear power) to have such mandatory and enforceable standards. The electric industry takes numerous steps to ensure reliability, including routinely inspecting and repairing electric power equipment such as substations, transformers, conductors, towers, poles, equipment, and pole attachments. The ability to quickly inspect and identify areas of damage

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2 Kristina Hamachi LaCommare & Joseph H. Eto, Ernest Orlando Lawrence Berkeley National Laboratory, "Understanding the Cost of Power Interruptions to U.S. Electricity Customers" (Sept. 2004)(developing an economic model which estimated that power outages cost the U.S economy about $80 billion annually).

3 Defense Science Board, Office of the Undersecretary of the Defense, "Report of the Defense Science Board Task Force on DoD Energy Strategy" 20 (Feb. 2008) (stating that certain defense-related activities that "must function 24/7" are wholly dependent on continued power to the buildings and equipment involved.

4 Mary Casey-Lockyet et alia, "Deaths Associated with Hurricane Sandy-October-November 2012" Morbidity and Mortality Weekly Report (May 24, 2013) Vol. 62 No. 20 (indicating that at least 6 deaths in the aftermath of Hurricane Sandy were indirectly related to "burn/electric current" and that several factors, including power outages led to "challenging, and sometimes deadly, conditions for residents."); and G. Brooke Anderson & Michelle L. Bell "Lights Out: Impact of the August 2003 Power Outage on Mortality in New York" Toxicology, Vol. 23, No. 2 (2012) (finding 90 deaths directly attributable to the August 2003 power outage in the city of New York).

and degradation is even more critical following a storm, natural disaster, or other power outage where a rapid response is necessary to minimize hazards to life, economic harm, and threats to national security.

Working on, and around, electric power equipment is hazardous, costly, and time consuming.[5] The hazards that exist during routine inspections are significantly compounded when the equipment has been damaged or the surrounding terrain has been made more dangerous by storms or other events. Historically, the electric industry primarily conducted inspections and damage assessments visually using personnel, either working from the ground, a bucket truck, or in a manned aircraft. This visual assessment must be completed before electric utilities can deploy restoration workers and request additional support from other utilities.

UAS technology also gives utilities the ability to conduct these same inspections without putting utility personnel in dangerous proximity to power equipment.[6] Additionally, the technology has the potential to provide utilities with better information than visual inspection[7] on a faster timeline[8] and at a lower cost.[9] The evidence is compelling:

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5 U.S Dept. of Labor, Occupational Safety & Health Administration, "Safety and Health Topics: Electrical" (last visited March 29, 2019).

6 Andrew Shelley & Heather Andrews, "Economic Benefits to New Zealand from Beyond Line-of-Sight Operation of UAVs" 43 (Feb. 10, 2015) (reporting globally in 2014 three crashes resulting in five fatalities for helicopters conducing electric power line inspections).

7 Wesley J. Oliphant, ReliaPOLE Inspection Service Co., "To Drone or Not to Drone?" Presentation at NESC Summit (2015) (citing data from an Electric Power Research Institute study comparing the accuracy of different inspection methods. Aerial patrols found 0.4 percent of defects, ground patrols found 17.1 percent of defects, a climbing patrol found 29.3 percent of defects, and a detailed aerial patrol using high-resolution cameras found 47.6 percent of defects).

8 Chuang Deng, et al. "Unmanned Aerial Vehicles for Power Line Inspection: A Cooperative Way in Platforms and Communications", Journal of Communications Vol. 9, No. 9 (Sept. 2014) (finding UAS inspection could accomplish in a matter of hours an inspection that would take manned crews weeks to complete).

9 AUVSI "Are UAS More Cost Effective than Manned Flights?" (Oct. 24, 2013) (https://www.auvsi.org/are-uas-more-cost-effective-manned-flights).

- With the use of a UAS equipped with an infrared camera, "what used to take three days takes two hours instead."[10]

- UAS inspections of solar facilities "take less than 10 minutes per MW and save, on average $1200/MW in costs" over traditional inspections.[11]

- UAS inspections of wind turbines "reduce man-hours and turbine downtime for maintenance checks by over 75 percent."[12]

In responding to outages caused by storm damage or natural disasters[13] the electric industry uses UAS to map their systems prior to a storm in order to more quickly identify storm related damage,[14] inspect equipment that is hard to reach as a result of flooding and other storm damage,[15] and even assist in the labor necessary to restore power.[16] As our nation faces increasingly volatile weather, UAS technology enables utilities to prepare better prior to a storm[17] and respond more efficiently to an outage.[18]

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10 Jason Reagan, Drone Life, "Inspection Drones Illuminate Duke Energy's World" (Mar. 12, 2018), https://dronelife.com/2018/03/12/inspection-drones-illuminate-duke-energys-world/.

11 Measure, "The Case for Drones in Energy" at 15, available at: https://www.measure.com/hubfs/whitepapers/The-Business-Case-for-Drones-in-Energy-Operations.pdf (last visited April 2, 2019).

12 *Id.*

13 Katie Flash, InterDrone, "2017: The Year of Natural Disasters and Putting Drones to Work" (Dec. 27, 2017) (https://www.interdrone.com/news/emergency-services/2017-the-year-of-natural-disasters-and-putting-drones-to-work/).

14 Jack Stewart, WIRED, "As Hurricane Florence Looms, Drone Pilots Prepare for Recovery" (Sep. 13, 2018) (https://www.wired.com/story/hurricane-florence-drone-recovery/).

15 Dusty Weis, Association of Equipment Manufacturers, "Hurricane Responses Demonstrates Growing Role of Drones in Utility Industry" (Nov. 30, 2017). (https://www.aem.org/news/november-2017/hurricane-responses-demonstrate-growing-role-of-drones-in-utility-industry/).

16 Jessica Wells, Duke Energy, "Duke Energy uses drones to restore power in Puerto Rico" (Feb. 15, 2018) (https://illumination.duke-energy.com/articles/duke-energy-uses-drones-to-restore-power-in-puerto-rico).

17 Reed Karaim, Rural Electric Magazine, "Predictive Maintenance. Sophisticated vegetation-management systems help co-ops battle storm outages" (July 18, 2018) https://www.cooperative.com/remagazine/articles/Pages/predictive-maintenance-vegetation-management-storm-outages.aspx.

18 John Lowery, Rural Electric Magazine, "The Era of the UAS. Drone use gets boost from 2017 hurricane recovery efforts" (Jan. 2, 2018) https://www.cooperative.com/remagazine/articles/Pages/electric-co-ops-drone-uas.aspx.

The introduction of the Part 107 regulations has allowed more utilities to integrate UAS operations. However, the nature of utility UAS operations requires flexibility to realize maximum benefits. Small UAS must be able to inspect diverse structures, from tall wind turbines, to miles long transmission lines across varied and potentially remote terrain, to substations and distribution lines which may be in more urban environments. In response to storms and other outage events, UAS are needed at all times during the day to respond to these emergent situations. As a result, electric industry UAS operations are likely to occur in proximity to people, roadways, and buildings, and they may occur at night. As discussed in more detail below, flexibility must be retained for UAS technology to reach its potential for utility operations.

II. Discussion

The FAA proposes to amend Part 107 to enable routine small UAS operations over people and at night. The FAA states that the Proposed Rule is based on the experience it has gained since publishing Part 107 and represents the next step in the "incremental approach" to integrating UAS into the National Airspace System to meet the demands for "increased operational flexibility."[19] APPA, EEI, and NRECA share the FAA's desire to further integrate small UAS operations and appreciate the recognition that operational flexibility must be maintained in order for this technology to reach its potential. Our organizations offer the comments below to assist the FAA in crafting a final rule that will continue the FAA's forward momentum.

[19] 84 FR at 3857.

A. Operations at Night

APPA, EEI, and NRECA support the Proposed Rule's proposal to allow routine nighttime operations.[20] As discussed above, UAS have demonstrated the ability to more efficiently and accurately identify damage over traditional methods in certain operational circumstances. In the event of an outage, this can result in a more rapid restoration of service. Given that outages can happen at any time of the day or night, the ability to conduct UAS operations at night without a waiver is a significant benefit to electric utilities.[21] Nighttime operations are also critical when responding to storms or natural disasters. Operating small UAS at night along with helicopters and/or small UAS during the day will effectively cut patrol time in half by allowing around the clock operations yielding critical information to the storm centers to make better informed decisions on restoration work planning. UAS operations additionally have the potential to deliver valuable data that is not available via helicopter inspection. The ultimate result will be a quicker and more efficient restoration and better information to electric customers. Most importantly, using small UAS in these instances would also improve safety for personnel by allowing utilities to conduct these inspections without putting a person near potentially dangerous conditions or high voltage facilities.[22]

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20 84 FR at 3867-3869.

21 Betsy Lillian, Unmanned Aerial, "ND Drone Company OK'd for Night Flying; Utility Signs Up Right Away" (Nov. 16, 2016), https://unmanned-aerial.com/n-d-drone-company-okd-for-night-flying-utility-signs-up-right-away.

22 Isaac Bruns, Electric Light & Power, "Puget Sound Energy Innovates with Drones to Save Time and Money" (Oct. 9, 2018), https://www.elp.com/Electric-Light-Power-Newsletter/articles/2018/10/puget-sound-energy-innovates-with-drones-to-save-time-and-money.html (Discussing the utility of UAS when conditions were treacherous "The beauty of using drones was that we just flew down that corridor, and we could pretty much pick up everything we needed and get out of there without ever putting anybody on a road with downed trees, close to a mudslide, near a train track, or on the edge of a river or rocky peak.)

Additionally, allowing nighttime small UAS operations has the potential to allow easier and safer operations beyond the visual line of sight ("BVLOS"). Currently, BVLOS operations are restricted to those who have obtained the appropriate FAA waiver; however, the electric industry has a continuing interest in seeing expanded BVLOS operations. For these operations, the FAA requires multiple mitigation measures to ensure that a BVLOS UAS is still able to detect and avoid manned aircraft. Nighttime operations would occur at a time where crop dusters and sport aircraft are less likely to be present, thereby reducing the risk of any interaction. Furthermore, BVLOS flights at nighttime would present a low risk to any helicopter flying at night because a helicopter would be operating night vision goggles and the anti-collision lighting that would be required on the UAS at night would be very visible to the helicopter.

APPA, EEI, and NRECA support the Proposed Rule's performance-based standard and agree with the proposal to require: (1) anti-collision lighting that is visible for 3 statute miles; and (2) appropriate knowledge testing or recurrent training for the remote pilot in command. We do not recommend that the FAA adopt a specific requirement for the color, type, or location of the required anti-collision lighting.[23] The standard articulated in the Proposed Rule, including the requirement for appropriate remote pilot training, appropriately balances the need for operational flexibility with the need to ensure public safety and national security.

B. Operations Over People

APPA, EEI, and NRECA support the FAA's proposal to allow routine operations over people when such operations can be done with minimal risk. The ability to conduct such operations has the potential to benefit electric utilities in multiple ways. For example, under the current Part 107 regulations, inspecting a substation using a small UAS requires removing all

[23] 84 FR at 3867.

substation employees from the area being inspected to comply with Part 107's prohibition against operations over uninvolved persons. Under the Proposed Rule, a utility could make the business decision to invest in a UAS that complies with the Category 1, 2, or 3 restrictions and conduct that inspection while the employees remain on site and conducting their responsibilities. Similarly, the ability to conduct incidental flights over people is useful because there is no way to entirely prevent a person from entering a right-of-way where an electric industry UAS operation is most likely to occur. Finally, utilities are very interested in the ability to conduct BVLOS operations[24] and the ability to safely operate over people is a necessary element to allowing routine BVLOS operations. APPA, EEI, and NRECA support the FAA's proposal to permit such incidental flight over people, subject to the appropriate restrictions, and generally support the risk-based approach proposed in the Proposed Rule, subject to the following modifications and clarifications.

1. UAS Modifications

The Proposed Rule requires manufacturers to identify all changes or modifications to a small UAS model which could be made while still meeting the restrictions for Category 2 or 3 operations.[25] APPA, EEI, and NRECA applaud the FAA's recognition of the need for

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[24] Black & Veatch "Ameren successfully completes industry-leading 60-mile drone flight over transmission lines, paving the way for safe, efficient aerial infrastructure inspections" (Dec. 3, 2018), https://www.bv.com/news/ameren-successfully-completes-industry-leading-60-mile-drone-flight-over-transmission-lines ("Though BVLOS authorizations remain rare, linear infrastructure inspection requiring BVLOS offer significant promise for improved safety and efficiency over traditional inspection methods"); Xcel Energy , UAS Magazine, "Xcel now operating drones for utility inspections BVLOS" (Sept. 17, 2018), http://www.uasmagazine.com/articles/1920/xcel-now-operating-drones-for-utility-inspections-bvlos (ability to inspect lines BVLOS "greatly enhances the efficiency and cost-effectiveness of using the technology").

[25] 84 FR at 3883, 3885.

operational flexibility and support this proposal as an appropriate balance between operators' needs and public safety with minor clarification.

The electric industry deploys UAS for diverse purposes, each of which may require specialized and differing equipment. For example, utilities deploy UAS equipped with:

- LiDAR[26] to assist with vegetation management to ensure proper tree trimming and clearance levels around transmission and distribution lines to prevent outages;[27]
- Infrared cameras to identify equipment failure in early stages and therefore prevent unscheduled outages or shutdowns,[28]
- Equipment capable of doing actual labor, including clearing dust and debris from solar panels,[29] dropping lines to ensure Occupational Safety and Health Administration ("OSHA") compliance for linemen in the field;[30] and stringing line to assist in the restoration of power. [31]

As technology continues to evolve, UAS used in utility operations are likely to have even more specialized and diverse equipment capable of assisting not only in inspection but also restoration. Given the diversity of potential equipment, it is unreasonable to expect UAS manufacturers to identify each product that could be used in conjunction with a particular UAS model. Therefore, the final rule should require manufacturers to identify permissible modifications in terms of weight, size, and shape, as opposed to specific identification of a make or model of equipment.[32] This performance-based approach will ensure that future technologies

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26 LiDAR refers to "light detection and ranging" which is a surveying method that uses pulsed lasers to measure distances.

27 Betsy Lillian, Unmanned Aerial, "New York Power Authority Investigates LiDAR With Drones" (Jan. 23, 2019), https://unmanned-aerial.com/new-york-power-authority-investigates-lidar-with-drones.

28 Paul Ciampoli, Peter Maloney, "From infrared cameras to drones, public power boost reliability" (Jan. 8, 2019) https://www.publicpower.org/periodical/article/infrared-cameras-drones-public-power-boosts-reliability.

29 Greg Harmon, Carpenters Equipment, "Cleaning Solar Panels with Drones" (April 11, 2016), https://carpentersequip.com/cleaning-solar-panels-with-drones/.

30 Bill Siuru, T&D World, "Drones Help Utilities Meet OSHA Rules" (Dec. 24, 2014), https://www.tdworld.com/field-applications/drones-help-utilities-meet-osha-rules.

31 Jessica Wells, Duke Energy, "Duke Energy uses drones to restore power in Puerto Rico" (Feb. 15, 2018), https://illumination.duke-energy.com/articles/duke-energy-uses-drones-to-restore-power-in-puerto-rico.

32 84 FR at 3885.

that offer increased benefits to the electric industry UAS operators can be accommodated within the established framework developed herein.

2. Manufacturer Accountability

The Proposed Rule requires manufacturers to monitor any small UAS approved for operations over people to ensure its continued compliance.[33] This responsibility would include, among other things, tracking accident reports, monitoring for recurrent issues, updating remote pilot operating instructions, and informing the FAA, UAS owners, and the public of any concerns.[34] APPA, EEI, and NRECA support the need for manufacturer accountability and support the Proposed Rule with one modification.

The Proposed Rule would give manufacturers flexibility in how they notify UAS owners of an issue. These options include, but are not limited to, a notice on the manufacturer's website, electronic notification to all registered owners, or an update to the small UAS software.[35] Given the importance of this information, the FAA should require a more uniform approach to how this type of information is distributed. Otherwise, each UAS manufacturer could adopt a different method, leaving owners with the obligation of tracking which manufacturer uses which method. This is of concern if a manufacturer complies with the obligation by only posting information on its website, which would require a UAS operator to comb through the website searching for alerts prior to each UAS operation. This inefficient use of resources would be avoided by requiring manufacturers to directly contact registered UAS owners by electronic means or UAS software updates. The need to avoid inefficient methods is critical when responding to an outage or other emergency. Electric industry UAS operators require a reliable, predictable way of

33 84 FR at 3886.
34 84 FR at 3886-3887.
35 84 FR at 3887.

receiving information to ensure they can quickly and accurately identify any information that would affect compliance with applicable laws.

3. Distances from People

The Proposed Rule continues Part 107's performance-based approach to determining the appropriate distance from people. APPA, EEI, and NRECA support this decision and agree with the FAA's analysis that experience and available information do not support a finding that adopting a prescriptive stand-off distance would improve public safety beyond the requirements of Part 107 when combined with a new subpart D.[36] Prescriptive minimum distances from people are not appropriate to electric utility operations, which vary widely and range from urban to remote, rural locations.

The FAA has requested comment on whether or not a prescriptive standard exists for a minimum vertical or horizontal distance that could apply equally across a wide variety of operational aircraft which would provide a safety benefit that outweighs the importance of allowing remote pilot flexibility.[37] APPA, EEI, and NRECA do not believe any prescriptive standard exists. Adopting a standardized stand-off distance is poorly fitted to the diverse realities of how small UAS technology is used now by electric utilities and how it could be used in the future. [38]

The electric industry has successfully operated under the Part 107 performance-based rules and those rules properly balance the need for flexibility in our operations with public safety. For example, prior to Part 107, utilities conducting UAS operations did so under Part 333 exemptions. Most of those exemptions included a restriction that operations remain 500 feet

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36 84 FR at 3888.

37 84 FR at 3888-3889.

38 For additional discussion of the concerns with mandatory stand-off distances, see pages 4-7 of the APPA, EEI, NRECA comments in Docket No. FAA-2018-1086.

away from uninvolved persons or property. This restriction prevented utilities from using UAS to inspect many parts of their systems because many transmission and distribution lines, substations, or other equipment fell within this 500-foot stand-off. The flexibility in Part 107's performance-based rules allows for much wider UAS operations to be safely conducted. As a result, the electric industry knows from experience that the adoption of any specific stand-off distance, whether vertical or horizontal, has the potential to negatively impact utility UAS operations.

Implementing a prescriptive stand-off distance from people will greatly decrease the efficiency of UAS operations. For example, depending on the restriction adopted, a utility might be required to vacate a substation, solar farm or wind facility of all employees before being able to conduct inspections to ensure operations do not come too close to a person. Similarly, electric utilities could only inspect transmission and distribution lines after closing off portions of a right of way to ensure no people are present. These restrictions would significantly increase the costs associated with UAS technology likely without providing a measurable increase to public safety. In fact, such restriction could lead to public harm by restricting an electric utility's flexibility to assess the situation and select the safest, most efficient, and most cost-effective method of conducing an inspection[39] or responding to an outage.[40]

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[39] Isaac Bruns, Electric Light & Power, "Puget Sound Energy Innovates with Drones to Save Time and Money" (Oct. 9, 2018), https://www.elp.com/Electric-Light-Power-Newsletter/articles/2018/10/puget-sound-energy-innovates-with-drones-to-save-time-and-money.html (Discussing the utility of UAS when conditions were treacherous "The beauty of using drones was that we just flew down that corridor, and we could pretty much pick up everything we needed and get out of there without ever putting anybody on a road with downed trees, close to a mudslide, near a train track, or on the edge of a river or rocky peak.).

[40] CenterPoint Energy, "CenterPoint Energy to use drones to help expedite damage assessment and response following hurricane or severe weather" (June 1, 2017), https://www.centerpointenergy.com/en-us/corporate/about-us/news/1091 ("Obstacles such as downed trees or flooded roads make it difficult for crews to assess damage following a severe weather event, which in turn can hinder response and restoration time...Using drones in areas that

While APPA, NRECA, and EEI do not support an across-the-board mandatory stand-off distance, we would support the establishment of stand-off distances for non-utility operated UAS near electric infrastructure. UAS operated by inexperienced or careless non-utility pilots have the potential to cause outages, violate federal reliability standards and potentially expose critical energy infrastructure information.[41] These concerns have led our organizations to support Section 2209 of the FAA Extension, Safety, and Security Act of 2016, Public Law 114-190, 114th Congress, which would allow electric utilities to petition the FAA to restrict the operation of UAS in close proximity to energy infrastructure. Creating a stand-off distance from electric infrastructure would protect this infrastructure from UAS interference, whether benign or nefarious, thereby reducing the potential for harm to some of our nation's most critical infrastructure.

4. Prohibition on Operations Over a Moving Vehicle

The Proposed Rule would continue Part 107's prohibition against operating small UAS over moving vehicles claiming the "environment is dynamic" and beyond the control of the remote pilot in control.[42] This across-the-board restriction is unnecessary and should be removed. Instead of prohibiting operations over moving vehicles, the FAA should treat these operations similarly to its proposal to allow flights over people, with proposed reliability and safety restrictions imposed to fairly balance operational flexibility with public safety.

In the context of utility operations, roads intersect many electric utility's transmission and distribution lines, and small UAS operations need to be able to fly over these roads to efficiently

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are inaccessible by foot to capture high-resolution imagery in real time will help us assess damage and deploy the right resources in the right places to restore power.").

41 *See i.e.* Federal Energy Regulatory Commission ("FERC") Critical Energy/Electric Infrastructure Information https://www.ferc.gov/legal/ceii-foia/ceii.asp.

42 84 FR at 3889.

operate. The ability to operate over moving vehicles will be crucial to utilities' ability to take advantage of BVLOS operations to inspect the hundreds of thousands of miles of transmission and distribution lines. For these reasons, the FAA should reconsider the across-the-board restriction on operations over moving vehicles.

5. Waivers

The Proposed Rule expands the list of provisions from which an operator could seek a waiver to include: (1) conducting operations over moving vehicles; (2) conducting operations over people that would not otherwise meet the requirements of this proposed rule; and (3) from the anti-collision lighting requirement for night and civil twilight operations.[43] APPA, EEI, and NRECA support the expansion of the waiver process to include these operations. To the extent that the FAA does not permit operations over moving vehicles in this rulemaking, we hope that the waiver process will allow utilities the opportunity to illustrate the safety of incidental flights across roads as a part of utility UAS operations. To this end, the waiver process could be improved by allowing for more transparency and providing procedural examples of successful applications under these circumstances. Finally, more information about the timeline associated with review and determination of waiver requests, generally, would also assist the electric industry in developing the business case for seeking a waiver.

III. Timing of the Final Rule

The FAA has been clear that it will not finalize the Proposed Rule until it has first finalized its policy concerning remote identification of small UAS.[44] According to the latest publicly available information, the remote identification proposed rulemaking is not expected to be

[43] 84 FR at 3890.
[44] 84 FR at 3856.

released until July 21, 2019, with a comment period ending October 29, 2019.[45] Given this timeline, it seems unlikely the FAA will finalize the remote identification rulemaking until well into 2020. APPA, EEI, and NRECA appreciate the importance of remote identification and the role it plays in ensuring that expanded UAS operations can be conducted safely. However, we express our concern with the continuing delays in when the FAA expects to formally propose the remote identification rulemaking and the resulting delays in the ability for the utility industry to benefit from the advances proposed in the Proposed Rule.

The delays associated with the remote identification rulemaking have impacts beyond the finalization of this Proposed Rule. Remote identification is a necessary element before the any rulemaking which would permit routine BVLOS operation and is therefore of great importance to the electric utility industry. Remote identification is also important for owners of critical infrastructure to identify wayward UAS, whether nefarious or benign in intent. When the FAA eventually releases counter UAS rules and rules for owners of critical infrastructure to petition for "no fly" zones, remote identification is necessary to enforce these rules. As a result, we respectfully request that the FAA expedite the release of the remote identification rulemaking as a necessary step in fulfilling Congress' directive to integrate small UAS into the National Airspace System.

Finally, we request that the FAA additionally expedite the release of a related rulemaking which would establish the criteria and procedures to request UAS flight restrictions near critical infrastructure facilities as required by Section 2209 of Public Law 114-190, the FAA Safety and Security Act of 2016 (130 Stat. 634) and as amended by Section 369 of Public Law 115-254, the

[45] *See* March 2019 Report on DOT Significant Rulemakings, at Item 21, RIN 2120-AL31, available at: https://www.transportation.gov/regulations/report-on-significant-rulemakings (last visited April 2, 2019).

FAA Reauthorization Act of 2018. Currently, this rulemaking is expected to be released on October 29, 2019, with a comment period ending December 29, 2019.[46] Certain portions of the electric grid are so vital to national security, public health and safety, and economic security that they are designated critical energy infrastructure.[47] Unauthorized UAS operations around these and other facilities has the potential to seriously undermine the reliability and security of the national grid. The ability to petition the FAA to restrict UAS operations near certain facilities is of great importance to our industry, and we request that the FAA work to release this rulemaking as expeditiously as possible.

IV. Conclusion

APPA, EEI, and NRECA appreciate the efforts the FAA has taken to incorporate small UAS into the National Airspace System. The electric industry's use of small UAS continues to grow and, under the right regulatory environment, has the potential to increase the reliability and security of the national grid while reducing the risk to the men and women who work diligently to keep the lights on. We support the FAA's proposal to allow routine operations over people and at night as a crucial step towards enabling this technology to reach its full potential, and we request that the FAA work to expeditiously release the remote identification rulemaking to allow this progress to continue. We thank the FAA for considering our comments in this docket and look forward to continuing to work with the FAA on these matters.

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[46] *Id.* at Item 22, RIN 2120-AL33

[47] *See* https://www.ferc.gov/legal/ceii-foia/ceii.asp

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