

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)
)
Review of the Commission's Rules Governing the) WT Docket No. 17-200
896-901/935-940 MHz Band)
)

To: The Commission

REPLY COMMENTS OF NEXTERA ENERGY, INC.

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NextEra Energy, Inc. ("NextEra"),¹ by its counsel, hereby submits its reply to initial comments on the Notice of Proposed Rulemaking ("NPRM") in the above-captioned proceeding,² which addresses the 896-901/935-940 MHz band ("900 MHz band") currently authorized exclusively for narrowband wireless services.

I. INTRODUCTION AND SUMMARY.

NextEra continues to oppose any mandatory reconfiguration of the 900 MHz band to insert a 3/3 megahertz broadband segment -- forcing incumbent narrowband licensees to squeeze their existing, critical operations into two small segments on either side of the LTE broadband segment. The broadband reconfiguration proposal is particularly troubling because it would not include bandwidth separation between the broadband and narrowband segments (*i.e.*, a guard band) to protect incumbent narrowband operations from interference. Many other commenters

¹ NextEra is the parent company of Florida Power & Light Company ("FPL"), one of the largest electric utilities in the United States serving approximately 5 million customer accounts in Florida, which holds numerous FCC licenses in the 900 MHz band. NextEra also owns Gulf Power Company, which serves more than 460,000 customers in eight counties throughout northwest Florida.

² *Review of the Commission's Rules Governing the 896-901/935-940 MHz Band*, Notice of Proposed Rulemaking, FCC 19-18 (Mar. 14, 2019) ("NPRM").

also express serious concerns about the disruption and interference that would result, including FirstEnergy Corp. (“FirstEnergy”), Lower Colorado River Authority (“LCRA”), the Department of Water and Power of the City of Los Angeles (“LADWP”), Duke Energy Corporation (“Duke Energy”), JVCKENWOOD USA Corporation (“JVCKENWOOD”), and the Critical Infrastructure Coalition (“CIC”). If a broadband segment is going to be introduced into the 900 MHz band, the decision should be made by the incumbent operators on a truly voluntary, market-by-market basis. Incumbents in each market should be permitted to decide whether to relocate based on their individualized circumstances rather than because of a regulatory mandate.

The main proponent of inserting a broadband segment, pdvWireless (“PDV”) (now rebranded as Anterix), apparently believes that it is enough to provide generalized platitudes about the potential advantages of broadband without addressing in any detail the disruption that would be caused to narrowband incumbents. Specifically, PDV ignores the serious concerns raised in earlier phases of the proceeding:

- Although NextEra and others repeatedly have explained that the lack of a guard band between broadband LTE and remaining site-based narrowband 900 MHz operations raises major interference concerns, PDV’s initial comments ignore the issue, as did the NPRM. This issue must be addressed.
- NextEra has submitted two reports addressing the technical problems raised by the proposed reconfiguration, including that the bifurcation of the narrowband allocation into two segments on either side of the LTE broadband segment. That configuration effectively maximizes potential LTE interference to site-based narrowband operations, exacerbating the adverse effects of compacting narrowband users into significantly less spectrum.³ PDV has not attempted to rebut a single point in either report.

³ Gillespie, Prudhon & Associates, Inc., 900 MHz NOI Proposed Rebanding Engineering Report, GP&A Project No. 3646 (“GP&A Report”), and Dan Ericson, Harris Corporation, *A Study of Issues: Concerning a Proposed Broadband Allocation within the 900 MHz Land Mobile Radio Band and Its Potential Impact on the Florida Power & Light Network* (“Harris Report”), attached to letter from Bryan N. Tramont & Timothy J. Cooney, Counsel to NextEra Energy, Inc., to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-200 (filed Sept. 21, 2018).

- NextEra submitted a cost-benefit analysis (“Brattle Group CBA”) demonstrating that, even under assumptions most favorable to PDV, the costs of reconfiguration in FPL’s markets significantly outweigh the potential benefits.⁴ Although the Brattle Group CBA preceded the FCC’s current proposal, its analysis also applies to the NPRM; yet PDV has not even acknowledged it. As the economic impact of mandatory reconfiguration of the 900 MHz band would exceed \$100 million, the FCC needs to conduct its own CBA if it is to adopt any form of mandatory reconfiguration.

While critical infrastructure industry (“CII”) entities need new broadband spectrum for their operations, the small amount of broadband service proposed for the 900 MHz band would not offset the disruption that would be caused by rebanding, the reduction of available channels for future narrowband growth, and the likelihood of the neighboring broadband provider causing harmful interference to the users in the compressed narrowband segments. Simply put, the record does not support reconfiguration of the 900 MHz band, except on a market-by-market basis through a truly voluntary process in which narrowband incumbents are assured both protection from harmful interference and comparable facilities, if relocated.

If some form of mandatory relocation process is adopted – which it should not be – “complex systems” should be excluded. The threshold for complex system exclusion should apply to systems with 25 or more sites and systems that support public safety communications, as well as communications for nuclear power stations.

⁴ See Coleman Bazelon, The Brattle Group, *The Economics of the 900 MHz Rebanding Proposal: A Cost-Benefit Analysis* (“Brattle Group CBA”), attached to letter from Bryan N. Tramont & Timothy J. Cooney, Counsel to NextEra Energy, Inc. to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-200 (filed Sept. 14, 2018).

II. THE RECORD DEMONSTRATES THAT MANDATORY RECONFIGURATION IN CONGESTED MARKETS WOULD ADVERSELY AFFECT NARROWBAND OPERATIONS, RESULT IN INCREASED HARMFUL INTERFERENCE, AND DEPRIVE NARROWBAND OPERATORS OF CAPACITY FOR GROWTH.

It is well established that, in adopting rules, a federal agency must “examine the relevant data and articulate a satisfactory explanation for its action including a ‘rational connection between the facts found and the choice made.’”⁵ To date the Commission has not done so.

The initial comments on the NPRM provide ample documentation for how mandatory reconfiguration would disrupt ongoing and future narrowband operations.⁶ For example, FirstEnergy Corp. explains that the NPRM’s proposed 900 MHz band plan will cause harmful interference to narrowband Land Mobile Radio (“LMR”) service.⁷ FirstEnergy has “severe reservations” that the proposed reconfiguration “will have a lasting harmful impact on critical LMR system used to ... provide reliable electric power and especially to support emergency restoration services.”⁸ It provides detail on how the interference to public safety 800 MHz systems was caused by two major factors, out-of-band emissions and in-band receiver overload, which also will affect any 900 MHz reconfiguration.⁹

The Critical Infrastructure Coalition raises similar concerns¹⁰ and explains that “it is imperative that the Commission refrain from adopting changes that would disrupt critical

⁵ *Motor Vehicle Mfrs. Ass'n of U.S. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983).

⁶ Similar concerns were previously raised in response to the Notice of Inquiry in this proceeding.

⁷ Comments of FirstEnergy, WT Docket No. 17-200, at 3-4 (May 31, 2019).

⁸ *Id.* at 1.

⁹ *Id.* at 3.

¹⁰ Comments of the Critical Infrastructure Coalition, WT Docket No. 17-200, at 4-6 (June 3, 2019) (“CIC Comments”).

infrastructure communications in the band or in adjacent spectrum without the voluntary consent of incumbent licensees.”¹¹

LADWP states that “[a]ny realignment of the band risks significant disruption to the important functions [of narrowband incumbents]”¹² and that the “3/3 MHz realignment plan . . . would effectively prevent growth of narrowband operations in many markets.”¹³

LCRA states that its existing narrowband system would not fit within the proposed 2/2 MHz narrowband allocation and would suffer harmful interference if forced to relocate to the compressed narrowband segments.¹⁴ LCRA independently reviewed the Harris Report submitted by NextEra and concurred with its findings that the proposed reconfiguration “would challenge the ability of many incumbents to re-use 900 MHz narrowband channels, would result in reduced coverage for existing narrowband systems due to the closer spacing of transmitter carriers and interference caused by LTE sites, and would limit the potential growth of incumbent systems.”¹⁵ LCRA concluded:

Because LCRA would be receiving interference from a wideband system, which is much different than localized narrowband interference, there would be no way for LCRA to tune away or filter the channel interference. Traditionally, interference to a B/ILT system from narrowband operations can often be tuned away or filtered. However, interference from wideband operations, combined with the lack of a guard band, will result in a far more degraded experience for LCRA’s system and will render the newly consolidated 2/2 MHz narrowband segments unusable for LCRA and its public safety users. The interference would be

¹¹ *Id.* at 3.

¹² Comments of LADWP, WT Docket No. 17-200, at 3 (June 3, 2019) (“LADWP Comments”).

¹³ *Id.* at 9.

¹⁴ Comments of LCRA, WT Docket No. 17-200, at 3 (June 3, 2019) (“LCRA Comments”).

¹⁵ *Id.* at 3-4.

constant and could not be averted through tuning. The reconfigured 900 MHz band would lead to increased interference, unreliability and reduced system coverage for LCRA's narrowband system.¹⁶

LCRA explains that “[w]ithout a guard band between the narrowband and broadband segments, the Commission’s proposed band plan would essentially require that the narrowband segments be used as a guard band for the broadband segment.”¹⁷ To mitigate the threat of harmful interference to narrowband incumbents, LCRA proposes that any new broadband segment be located at the lower segment of the band beginning at 896 MHz, with a guard band between the broadband and narrowband segments.¹⁸ NextEra supports LCRA’s proposal to the extent that a market voluntarily chooses to implement a broadband segment.

Although Duke Energy expresses support for an allocation of sub-one GHz spectrum for a private broadband LTE network, it explains that reconfiguration of the 900 MHz band as proposed in the NPRM “would be very disruptive to Duke Energy’s business operation and likely would significantly affect its ability to deliver energy to its customers in a safe and reliable manner.”¹⁹ Duke Energy further states “[w]ithout undertaking a significant design effort to design a potential frequency plan for all current narrowband users in which they are all relocated together into the 1.5 and .5 MHz narrowband segments, it is impossible to state the magnitude and extent to which this co-channel and cross channel interference will occur.”²⁰

¹⁶ *Id.* at 5.

¹⁷ *Id.* at 22.

¹⁸ *Id.*

¹⁹ Comments of Duke Energy, WT Docket No. 17-200, at 6 (June 3, 2019).

²⁰ *Id.* at 11-12.

Similarly, Oncor Electric Delivery Company LLC (“Oncor”) states that “the Commission may need to change its interference protection rules to ensure that the construction of cellularized broadband networks does not result in harmful interference to existing high-site/high-powered networks operated by incumbent licensees.”²¹ Sensus USA Inc. notes that it previously submitted extensive technical studies concluding that out-of-band emissions (“OOBE”) would result in a far greater level of interference than suggested by proponents of reconfiguration.²²

JVCKENWOOD USA Corporation, a major manufacturer and developer of communications equipment, notes that the NPRM “has not enunciated a workable interference prevention plan; it provides no guard subbands to protect relocated narrowband licensees from broadband interference; it proposes no specific geographic separation distances between broadband base stations and narrowband incumbents; the narrowband residual segments are configured so as to protect adjacent band users but not narrowband incumbents.”²³ It also explains how broadband reconfiguration would preclude narrowband incumbents from expanding their operations and how the 900 MHz band has had no reasonable chance to mature as a narrowband allocation since 2004 due to its use to accommodate displacements during the 800 MHz rebanding process and the Commission’s various freezes on new narrowband applications.²⁴

²¹ Comments of Oncor, WT Docket No. 17-200, at iii (June 3, 2019) (“Oncor Comments”).

²² Comments of Sensus USA Inc., WT Docket No. 17-200, at 8 (June 3, 2019).

²³ Comments of JVCKENWOOD, WT Docket No. 17-200, at 19 (June 3, 2019).

²⁴ *Id.* at 2, 5-7.

The Utilities Technology Council (“UTC”), which generally supports the Commission’s proposals to realign the band, explains that the NPRM “fails to recognize the need for a guard band to protect systems within the proposed narrowband segment of the band.”²⁵

The technical concerns about the lack of a guard band between narrowband and broadband operations within the 900 MHz band and the deleterious effects of compacting incumbent site-based licensees are not new issues. The GP&A Report (re-submitted by NextEra with its initial comments) explains that in the 700 MHz and 800 MHz bands, where LTE has been implemented, the adjacent narrowband users have been provided a guard band of approximately 1 MHz from the edges of the LTE signal,²⁶ but the NPRM proposes none here nor addresses why none is needed. It is not reasoned decision-making to ignore substantive issues in the record.²⁷ Unless the FCC terminates this proceeding without action or adopts a proposal by which reconfiguration by the incumbents in each market is truly voluntary, the FCC must address the technical issues raised by the commenters to assess whether mandatory reconfiguration of the 900 MHz band will serve the public interest.

III. THE FCC MUST CONDUCT A COST-BENEFIT ANALYSIS IF IT GOES AHEAD WITH MANDATORY RECONFIGURATION.

In response to a woefully simplistic cost-benefit analysis (“CBA”) from PDV,²⁸ NextEra submitted the Brattle Group CBA in which the authors described how the PDV report did not

²⁵ Comments of the UTC, WT Docket No. 17-200, at 13 (June 3, 2019) (“UTC Comments”).

²⁶ GP&A Report at 9.

²⁷ In adopting rules, the Commission must ensure that there is a “rational connection between the facts found and the choice made.” *State Farm*, 463 U.S. at 43.

²⁸ Harold Furchtgott-Roth, Utilicom Advisors Inc., *A Cost Benefit Analysis of Proposals to Restructure the 900 MHz Band* (Oct. 2017), attached to letter from Elizabeth R. Sachs, Counsel, PDV, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 17-200 (Nov. 9, 2017).

provide a structured or complete CBA to satisfy the guidelines of Office of Management and Budget (“OMB”) Circular A-4.²⁹ The Brattle Group conducted its CBA in accordance with the OMB guidelines and demonstrated that in FPL’s markets the costs of reconfiguration significantly exceed the benefits. To date, PDV has not even acknowledged the Brattle Group CBA, much less tried to rebut the Brattle Group findings.

Regardless of whether PDV addresses the Brattle Group CBA, the FCC under its own internal guidelines must conduct an appropriate economic analysis before adopting any mandatory reconfiguration proposal.³⁰ The Commission may not presume without evidence or analysis that a 3/3 megahertz broadband segment provides greater benefits than CII providers’ existing narrowband systems. As LADWP has stated, “[n]arrowband operations not only provide significant value to operators, as they have for decades, but continue to drive investment in communications technologies and services, as well. . . . nor is broadband inherently preferable to narrowband operations in all circumstances.”³¹

The FCC’s declared economic threshold of \$100 million in economic impact to trigger a cost benefit analysis is easily satisfied in this case.³² The Association of American Railroads previously has stated that the costs of relocating railroad operations in the 900 MHz band are

²⁹ For the convenience of the Commission, NextEra resubmitted the Brattle Group CBA with its June 3, 2019 initial comments. *See* Comments of NextEra, WT Docket No. 17-200 (June 3, 2019) (“NextEra Comments”).

³⁰ *Establishment of the Office of Economics and Analytics*, Order, 33 FCC Rcd 1539, 1548 (2019) (“OEA Order”) (Statement of Chairman Ajit Pai).

³¹ LADWP Comments at 3, 6.

³² OEA Order, 33 FCC Rcd at 1548 (The FCC will “now conduct a rigorous cost-benefit analysis for rulemakings estimated to have over \$100 million of economic impact”).

estimated at \$100 million.³³ In a prior phase of this proceeding, the Edison Electric Institute estimated that transitioning Advanced Metering Infrastructure and Distribution Supervisory Control and Data Acquisition systems could cost between \$30 and \$50 million per electric company.³⁴ In addition, the Brattle Group CBA found that the direct costs to FPL alone in its service territory are “\$98 million, with additional external costs between \$506 million and \$1 billion if FPL could not replicate the disaster recovery efficiencies of its existing 900 MHz network.”³⁵ Additionally, LCRA explained that it has invested hundreds of millions of dollars over several decades to achieve the reliability levels required for its communications system, including tens of millions of dollars directly in its 900 MHz hardware.³⁶ LADWP estimates that it has invested on average \$1.5 million per year over a sixteen year time period (\$24 million).³⁷ The impacts on other large users such as Duke Energy and Oncor would further push up the estimated costs that must be balanced against the benefits. All these costs militate in favor of the FCC conducting its own rigorous CBA before adopting any requirements for mandatory reconfiguration.

A threshold issue in any economic analysis is whether all narrowband incumbents can be accommodated in the re-banding process. The DVA Consulting report that PDV submitted earlier in the proceeding indicates that the answer is “no”; eight of the top-25 markets do not

³³ Comments of the Association of American Railroads, WT Docket No. 17-200, at 7 (Oct. 2, 2017).

³⁴ Comments of the Edison Electric Institute, WT Docket No. 17-200, at 15 (Oct. 2, 2017).

³⁵ Brattle Group CBA at 3.

³⁶ LCRA Comments at 8.

³⁷ LADWP Comments at 3.

have enough channels available to relocate incumbents.³⁸ These markets include Miami, which is within FPL’s service area, where the listed shortfall is 113 channels. The costs of forcing narrowband incumbents out of the 900 MHz band without available replacement spectrum being identified need to be addressed before any mandatory reconfiguration proposal is adopted.

Further, in conducting this analysis, the FCC also should take into account that the benefits of reconfiguration will inure primarily to a spectrum speculator, PDV, which has not demonstrated a track record of service in the 900 MHz band. As stated by Southern California Edison, “[s]ome SMR licensees have recently (in the past 5 years) purchased deeply discounted licenses in the secondary market with no apparent intent to actually put the licensed spectrum to immediate use.”³⁹ The Hawaiian Electric Companies concur, stating that the Commission should seriously consider the consequences of creating a windfall for a third-party whose business model is unabashedly based on simply monetizing the resulting spectrum realignment after acquiring heavily discounted licenses in the secondary market.⁴⁰

In any event, because the Commission’s \$100M threshold for conducting a CBA has been met in this proceeding, it needs to gather data and prepare its own CBA before it adopts any rules that would result in harm to or mandatory relocation of incumbents.

³⁸ Dominick Arcuri, DVA Consulting, LLC, *Analysis of the Proposed Petition for Realignment of the 900 MHz Band under FCC Part 90*, at 6-7 (Dec. 7, 2015), Attachment 2 to Comments of Enterprise Wireless Alliance & PDV, WT Docket No. 17-200 (Oct. 2, 2017) .

³⁹ Initial Comments of Southern California Edison at 16.

⁴⁰ Initial Comments of the Hawaiian Electric Companies at 2, 6.

IV. MANY COMMENTERS OPPOSE MANDATORY RELOCATION.

The NPRM “reiterate[s] that this proposal is intended to rely on purely voluntary mechanisms for realigning the 900 MHz band.”⁴¹ Yet the NPRM also proposes options for mandatory reconfiguration. As NextEra previously explained, the concepts of a voluntary, market-driven process on the one hand and mandatory reconfiguration on the other are inherently contradictory.⁴² Market-driven processes are intended to discover which services create more value in a given market: existing narrowband services or a small 3/3 megahertz broadband service that must provide compensation to adversely affected incumbents. The proposed backstop of mandatory relocation totally eviscerates this value-based analysis based on free market conditions.

In addition to NextEra, a significant number of other commenters oppose mandatory relocation of narrowband incumbents. LADWP states that it “strongly opposes any framework under which the Commission, or any applicant, will compel repacking, relocation, or other action by an incumbent.”⁴³ The joint filing of the National Association of Manufacturers and MRFAC, Inc. states that mandatory relocation should not be required because there is simply not enough spectrum in many markets to ensure that an incumbent forced to relocate would not suffer significant operational disruption.⁴⁴ Motorola Solutions similarly supports a market-driven

⁴¹ NPRM ¶ 37.

⁴² NextEra Comments at 16.

⁴³ LADWP Comments at 7.

⁴⁴ Comments of National Association of Manufacturers and MRFAC, Inc., WT Docket No. 17-200, at 5 (June 3, 2019).

approach where 900 MHz site-based incumbents are not mandated to relocate.⁴⁵ Alliant Energy and Oncor also oppose any mandatory relocation process,⁴⁶ while UTC opposes any approach that would permit a broadband applicant to invoke mandatory relocation just because it holds a certain percentage of the spectrum in a county.⁴⁷

In contrast, PDV's argument in favor of mandatory relocation is based on a red herring hypothetical about the unlikely scenario where a single covered incumbent licensed with a single 12.5 kHz frequency at a single site located 54.5 miles outside New York City refuses to relocate, which could stop a broadband reconfiguration otherwise supported by all other incumbents in the market.⁴⁸ This hypothetical does not support the proposals for mandatory relocation rules for a variety of reasons. First, as UTC notes, it is speculative to assume that holdouts will present a significant problem justifying the need for the Commission to develop a complicated, separate process to force incumbents from their channels.⁴⁹

Second, PDV's hypothetical is unlikely as the FCC already imposed an application freeze in the 900 MHz band to prevent speculators from attempting to gain leverage by acquiring a license in the middle of the proposed broadband segment. The existing incumbents, often providers of critical infrastructure, are not speculators. In contrast to PDV, they are providing valuable services that further the public interest and should be allowed to evaluate whether their

⁴⁵ Comments of Motorola Solutions, Inc., WT Docket No. 17-200, at 4 (June 3, 2019).

⁴⁶ Comments of Alliant Energy, WT Docket No. 17-200, at 2 (June 3, 2019); Oncor Comments at 4-5.

⁴⁷ UTC Comments at 20.

⁴⁸ Comments of PDV, WT Docket No. 17-200, at 14-15 (May 30, 2019) ("PDV Comments").

⁴⁹ UTC Comments at 20.

existing narrowband services are more valuable than a small 3/3 megahertz broadband segment without the threat of mandatory relocation.

Third, even if the PDV scenario were to occur, the Commission has authority under Section 316 of the Communications Act of 1934, as amended, to modify the license of any 900 MHz band incumbent upon a finding that it will promote the public interest, convenience, and necessity.⁵⁰ Such a limited Section 316 proceeding will rarely, if ever, be needed if truly voluntary negotiations are allowed to take place; but it is available if PDV's hypothetical occurs.

Fourth, adopting a mandatory relocation process to address highly speculative concerns will create significant administrative burdens for the Commission. As Oncor explains, each time the Commission has chosen a compulsory reconfiguration process (or a hybrid process with compulsory elements), the resulting reconfiguration has been adversarial, protracted, and far more expensive than projected.⁵¹ For example, the reconfiguration of the 800 MHz band was begun in 2004, was "required" to be completed within three years, but is still not finished today, 15 years later, at a cost that is vastly in excess of original estimates. As late as May 2019 the FCC still was resolving disputes about 800 MHz reimbursement.⁵² If the Commission does not want to "own" and manage the 900 MHz relocation process for years or decades to come, with the associated extensive burdens that will likely replicate the lengthy, cumbersome, and still on-

⁵⁰ See, e.g., *National Science and Technology Network, Inc.*, Order of Modification and Order, 26 FCC Rcd 2067 (WTB 2011); *California Metro Mobile Communications, Inc.*, Memorandum Opinion and Order, 17 FCC Rcd 22974 (2002).

⁵¹ Oncor Comments at 4-5.

⁵² NextEra Comments at 17, citing *Tom D. Phillips and Nextel of Texas, Inc.*, Memorandum Opinion and Order, DA 19-456 (PSPHB May 23, 2019).

going 800 MHz reconfiguration process – all for a small 3/3 megahertz segment whose commercial viability is untested – the Commission needs to avoid any mandates.

V. A CONSENSUS HAS FORMED THAT THE THRESHOLD FOR “COMPLEX SYSTEMS” EXEMPT FROM MANDATORY RELOCATION SHOULD BE NO HIGHER THAN 25 SITES.

If some form of mandatory relocation process is adopted – which it should not be – the commenters consistently agree with the NPRM proposal that “complex systems” should be excluded.⁵³ Even PDV appears to concur. Because PDV’s concurrence is qualified, however, by its novel proposition that “exemption from mandatory relocation” means only that mandatory relocations for complex systems take place on a separate track,⁵⁴ NextEra requests that the Commission clarify that the NPRM proposal to exclude complex systems from mandatory relocation means what it says: the narrowband licensee of a complex system would be under no obligation to relocate at any time, unless it comes to a truly voluntary agreement with the prospective broadband licensee.

Although PDV supports defining complex systems as having 65 or more integrated sites,⁵⁵ the narrowband incumbents that potentially would be affected by mandatory relocation have coalesced around 25 sites as being the more reasonable level of defining complex systems.

⁵³ NPRM ¶ 38.

⁵⁴ PDV Comments at 19; *id.* at 17-18 (“By creating a special, more deliberate path for [complex] systems, the FCC will allow the realignment process to proceed in the rest of the country at a pace dictated by the degree of incumbency and the urgency of broadband requirements in each county.”).

⁵⁵ *Id.* at 17.

For example, LCRA supports the 25-site threshold,⁵⁶ as does CIC,⁵⁷ and NextEra. Similarly, UTC states that the exclusion level for large and complex narrowband systems “should be revised to apply to systems with 25 or more sites.”⁵⁸ UTC also appropriately suggests that the exemption should factor in the nature of the use of these systems, such that utilities that use 900 MHz systems to support public safety communications, as well as communications for nuclear power stations, would not be subject to mandatory relocation.⁵⁹

NextEra supports the recommendations of these parties to lower the threshold for complex systems to no more than 25 sites and to expand the definition of complex systems beyond a strict numerical limit so that public safety and public interest uses alone could justify the classification of a system as complex. The NPRM’s 65-site number for a complex system appears to be arbitrary. FPL submits the following as a real example of how part of its existing system would be substantiated as a large complex system requiring exclusion from mandatory relocation:

- For the geographic area stretching from Miami north to Vero Beach along Florida’s east coast, FPL operates 24 trunked radio sites and four conventional sites on its 900 MHz system serving the following organizations: Power Delivery (Transmission and Distribution), two nuclear plants, Metering, Power Quality, Pipeline, Aviation and IT. FPL is in the process of adding its new subsidiary Florida City Gas to the system. FPL has over 3600 mobile workers operating over this area.
- The system is complex with a network that interconnects the sites to four geographically diverse control switches and over 140 dispatch points integrated into the system to manage field operations. The system has four standalone 900 MHz transmitters for public alert systems in case of an event at one of the nuclear power plants. The alert system is also interconnected to a NOAA transmitter in Miami-Dade County to provide alerts to

⁵⁶ LCRA Comments at 10.

⁵⁷ CIC Comments at 9.

⁵⁸ UTC Comments at 21.

⁵⁹ *Id.*

monitors in schools, day cares and hospitals. The complex system provides communications services vital to electrical service restoration and responding to key public safety matters (pole down incidents, fires where electrical service must be terminated, service to critical facilities – hospitals, police facilities, fire stations); gas distribution service; nuclear power plant security, control room operations, maintenance communications; and critical public alerts re nuclear systems.

- Some of the key services available on the system include emergency notification; encryption of radio transmissions and data security across the interconnecting network; GPS tagging of users to support emergency response and efficient electrical service restoration; interconnection of radio and smartphones to allow for efficient management support of restoration service and benefits for mutual aid; and convergence of telephone and radio communications at the dispatching points to provide quick access from 911 centers.

By defining the complex system exemption as no more than 25 sites, the FCC will increase the likelihood that incumbents may transition parts of their system to deploy broadband in the future. Some utilities may have an interest in continuing narrowband service in certain markets and migrating portions of their systems to broadband in only portions of their service territory. The exemption threshold of 65 sites deters large incumbent narrowband operators from considering a partial migration because they might lose their exemption status. The lower threshold of 25 sites will allow for a better balance to protect critical narrowband systems while encouraging a voluntary market-based transition to broadband in certain markets.

VI. CONCLUSION

Neither the NPRM nor the initial comments have made the case that the public interest would be served by reconfiguring the 900 MHz band on anything but a truly voluntary, market-by-market basis. Even those 900 MHz incumbents that support the availability of broadband for critical infrastructure entities below 1 GHz recognize the disruption that reconfiguration would cause and the potential that incumbents would not be able to replicate their existing networks. The benefits of the small sliver of broadband at issue do not outweigh the costs of a mandatory relocation. For the reasons discussed herein, the Commission should terminate further

consideration of reconfiguring the 900 MHz band, except on a truly voluntary basis whereby critical infrastructure entities would not be required to relocate and would be protected from harmful interference.

Respectfully submitted,

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