

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of )  
 )  
Creation of Interstitial 12.5 kHz Channels in the ) WP Docket No. 15-32  
800 MHz Band Between 809-817/854-862 MHz ) RM-11572

**COMMENTS OF ENTERGY SERVICES, INC.**

Entergy Services, Inc. (“Entergy”) submits these comments in response to the Notice of Proposed Rulemaking (“*NPRM*”) issued by the Commission on February 9, 2015 in the above-referenced proceedings.<sup>1/</sup> The *NPRM*, in response to a Petition for Rulemaking filed by the Enterprise Wireless Alliance (“EWA”), seeks comment on proposals to introduce 319 new full-power, interstitial 12.5 kilohertz “offset” channels in the 809-817/854-862 MHz band (the “800 MHz Mid-Band”). Entergy applauds the FCC’s efforts to increase the utility of the 800 MHz band. However, the proposed rules may not provide the relief needed by existing licensees, and instead may limit those licensees’ ability to modify their systems in the future, including by unnecessarily locking in today’s technologies. The FCC should therefore adjust its proposed rules in a manner that will both provide immediate relief to, but also preserve long-term flexibility for, existing licensees.

**I. INTRODUCTION**

Entergy is a wholly owned subsidiary of Entergy Corporation, an integrated energy company engaged primarily in electric power production and retail distribution operations.

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<sup>1/</sup> See *Creation of Interstitial 12.5 kHz Channels in the 800 MHz Band Between 809-817/854-862 MHz*, Notice of Proposed Rulemaking, WP Docket No. 15-32, RM-11572, FCC 15-17 (rel. Feb. 9, 2015) (“*NPRM*”); *Public Safety and Homeland Security Bureau and Wireless Telecommunications Bureau Announce Comment and Reply Comment Dates for the Notice of Proposed Rulemaking Seeking Comment on Creation of Interstitial 12.5 kHz Channels in the 800 MHz Band Between 809-817/854-862 MHz*, Public Notice, DA 15-370 (rel. Mar. 25, 2015).

Through its subsidiaries, Entergy Corporation owns and operates power plants with approximately 30,000 megawatts of electric generating capacity, including nearly 10,000 megawatts of nuclear power, making it one of the nation's leading nuclear generators. Entergy delivers electricity to 2.8 million utility customers in Arkansas, Louisiana, Mississippi, and Texas and has approximately 13,000 employees, with revenues of more than \$12 billion annually. Entergy is a significant user of 800 MHz spectrum today for its operations, with over 170 sites, supporting employee communications, security, and emergency functions for public utility systems as well as nuclear power plant operations.

The environment for exclusive use spectrum in general, and 800 MHz spectrum in particular, is constrained. As the Commission has recognized, since the initial allocation of the 800 MHz band, the demand for 800 MHz band spectrum by a variety of entities has increased substantially.<sup>2/</sup> As utility operations have become more automated, the communications networks that support them have become increasingly sophisticated, raising the importance of 800 MHz spectrum to control and manage critical system components. Utilities like Entergy require spectrum to support their core operations, such as voice and data networks that provide critical safety communications, as well as advanced automated systems like wireless metering networks and fixed-service control systems that protect electric "grids."<sup>3/</sup> Because of these needs, Entergy supports the FCC's efforts to use the 800 MHz band more intensely. However, to ensure that the FCC's proposed rules best effectuate this goal and provide licensees the greatest flexibility to use the 800 MHz band in the future, Entergy is pleased to have the opportunity to submit the following comments that recommend changes to the Commission's proposals.

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<sup>2/</sup> See *NPRM* ¶ 3.

<sup>3/</sup> See Comments of the Utilities Telecom Council, RM-11572, at 2 (filed Nov. 9, 2009).

## II. COMMENTS

The FCC proposes to establish and license full-power interstitial channels with 12.5 kilohertz bandwidth and center frequencies offset 12.5 kilohertz above and below the center frequencies of the standard 25 kilohertz bandwidth channels in the 800 MHz Mid-Band.<sup>4/</sup> Alternatively, the FCC requests comment on a proposal submitted by the Utilities Telecom Council (“UTC”), which would allow licensees to aggregate current 25 kilohertz frequencies into broader “pipes” that allow for wideband technologies, rather than introduce 12.5 kilohertz interstitial channels.<sup>5/</sup> To protect adjacent-channel incumbents and applicants for new interstitial channels, the FCC seeks comment on a “reciprocal contour analysis” proposal by the Land Mobile Communications Council (“LMCC”), under which the interference contour of an applicant would be prohibited from overlapping with the service contour of any affected incumbent and *vice versa*.<sup>6/</sup> Finally, to the extent it introduces 12.5 kilohertz interstitial channels, the Commission proposes assigning eligibility to each channel based on the category of uses currently permitted in the 800 MHz Mid-Band, resulting in 70 offset channels in the Public Safety pool, 100 offset channels in the Business/Industrial pool, 80 offset channels in the Specialized Mobile Radio pool, and 69 offset channels in the General Category pool.<sup>7/</sup> Entergy respectfully requests that the Commission modify these proposals in order to better address the needs of existing licensees.

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<sup>4/</sup> See *NPRM* ¶¶ 14-17.

<sup>5/</sup> See *id.* ¶ 19.

<sup>6/</sup> See *id.* ¶¶ 22-27.

<sup>7/</sup> See *id.* ¶¶ 28-31.

**A. The Commission’s Proposals Will Disadvantage Current 800 MHz Licensees.**

While Entergy supports efforts to provide additional communications capacity, the FCC’s proposals may actually harm existing licensees’ ability to most effectively use their current 800 MHz networks. *First*, permitting authorization of 12.5 kilohertz-wide interstitial channels between the standard 25 kilohertz-wide channels in the 800 MHz Mid-Band will hamstring existing incumbents’ abilities to modify their operations. Today, existing licensees like Entergy have flexibility to relocate and combine channels when they have the same channel blocks in adjacent areas or adjacent channels in the same geographic area. Even where licensees do not hold the same spectrum in adjacent areas or adjacent channels in the same area, the spectrum landscape is now fixed and predictable because of the maturity of the 800 MHz band, meaning that licensees have been able to rely on sometimes decades-old co-channel relationships when contemplating modification of their own systems.

The Commission’s proposal would change that by creating new licensees on interstitial channels. In the future, if an 800 MHz licensee with a 25 kilohertz-wide channel wishes to relocate a site or frequency to secure better coverage or capacity, it not only would be required to take into consideration co-channel licensees (whose existence would have likely been known for years), but also new adjacent-channel users. These new licensees will necessarily inhibit flexible use of existing channels by limiting relocation and other modification options. Similarly, while the Commission asserts that existing licensees with adjacent channels in the same geographic area can combine channels to take advantage of wideband operations,<sup>8/</sup> that flexibility will be immediately eliminated once the Commission permits interstitial use of 800 MHz spectrum. It is

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<sup>8/</sup> See *id.* ¶ 20.

contrary to the public interest to permit new licensees to freeze the spectrum landscape in a way that permanently disadvantages existing licensees.<sup>9/</sup>

*Second*, in addition to freezing the spectrum landscape to the detriment of existing licensees, history has demonstrated that permitting the licensing of interstitial channels creates potential interference to incumbent licensees, administrative nightmares for the Commission, and the opportunity for insincere licensing mischief. Like the 800 MHz band, the Commission's rules permit exclusive licensing of channels in the 470-512 MHz band.<sup>10/</sup> When the Commission allowed the use of new narrowband channels in that spectrum, on much the same terms as it now proposes to license 800 MHz interstitial channels, it received applications – many for systems that could never actually provide service – that would interfere with and/or otherwise inhibit the flexibility of existing licensees. This resulted in numerous disputes between existing licensees and new applicants, many of which have lasted for years.<sup>11/</sup>

The FCC's proposal to protect incumbents and applicants for new interstitial channels through a "reciprocal contour analysis" proposal will not decrease the risk of interference

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<sup>9/</sup> See, e.g., *SAMUEL MOSES PR; Application to Operate an Industrial/Business Station in the Private Land Mobile Radio Services (YG) in Montrose, California; Application for Assignment of Industrial/Business Station WPSI886 in the Private Land Mobile Radio Services (YG) in Montrose, California; et al.*, Second Order on Further Reconsideration, 24 FCC Rcd. 8857, ¶ 24 (2009) ("While the Commission has mandated migration to more efficient technology, it did not intend to disadvantage the incumbent licensees still operating on 25 kHz channels.").

<sup>10/</sup> See 47 C.F.R. §§ 90.173, 90.175, 90.313. More recently, the Commission has permitted use of channels below 512 MHz on an exclusive basis if applicants are able to demonstrate lack of co-channel and/or adjacent-channel licensees, as appropriate.

<sup>11/</sup> See, e.g., *NATIONAL SCIENCE AND TECHNOLOGY NETWORK, INC., et al.*, Memorandum Opinion and Order, 25 FCC Rcd. 11384 (2010) (upholding dismissals of applications for 12.5 kilohertz offset channels in the 470-512 MHz band because they did not meet the TSB-88 interference criteria); *NATIONAL SCIENCE AND TECHNOLOGY NETWORK, INC., et al.*, Memorandum Opinion and Order, 25 FCC Rcd. 549 (2010) (affirming a decision that certain private land mobile radio applications did not provide sufficient interference protection to incumbent operations); *NATIONAL SCIENCE AND TECHNOLOGY NETWORK, INC., et al.*, Order on Further Reconsideration and Order of Modification, 28 FCC Rcd. 3222 (2013) (deleting certain frequencies from the licenses of the National Science and Technology Network, Inc. because they did not satisfy the interference protection criteria of TSB-88).

disputes. A contour analysis naturally invites speculation as to whether incumbents will be adequately protected, particularly if new high-power operations are introduced. Indeed, as the FCC itself recognizes, many questions exist regarding LMCC's proposal, including whether the proposed contours need to be revisited and whether the TSB-88 analytical approach is appropriate for the 800 MHz Mid-Band.<sup>12/</sup> Even EWA has admitted that the FCC's approach for the 470-512 MHz band has been "not without a certain amount of controversy and confusion."<sup>13/</sup> The Commission must therefore proceed cautiously in order to avoid creating the same administrative burdens at 800 MHz that it continues to address at, among other bands, 470-512 MHz.

*Third*, the FCC's proposals unnecessarily lock in narrowband technologies. While the Commission does not propose to require a migration to narrowband technology for incumbent licensees, the creation of interstitial channels will favor a narrowband platform in the future. As noted above, the Commission asserts that there is nothing that prevents licensees today from combining adjacent 800 MHz channels.<sup>14/</sup> However, allowing the creation of interstitial channels will effectively foreclose the creation of wideband channels in the future. This result is not necessarily in the public interest or technology neutral. Narrowband applications may be appropriate for today's dispatch-oriented and narrowband data uses. However, users of the 800 MHz Mid-Band may also require spectrum for wideband technologies, particularly in the future. As UTC correctly points out, utilities currently require wideband technologies to provide cost-effective communications, especially in challenging RF environments, and will need wideband

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<sup>12/</sup> See *NPRM* ¶¶ 25-27.

<sup>13/</sup> Petition for Rulemaking of the Enterprise Wireless Alliance, RM-11572, at 2 (filed Apr. 29, 2009).

<sup>14/</sup> See *NPRM* ¶ 20.

technologies to support their future communications needs for a variety of smart grid and other applications, such as Supervisory Control and Data Acquisition and Advanced Metering Infrastructure.<sup>15/</sup> The recent plan for the 900 MHz band submitted by EWA and Pacific DataVision, Inc. similarly highlights the need for wideband capabilities.<sup>16/</sup> As their Petition observes, critical infrastructure industry entities need high-quality broadband services to deliver energy to remote areas and to provide essential functions for first responder activities during emergency situations.<sup>17/</sup>

**B. The Commission’s Proposals Can Better Promote the Needs of Existing Licensees.**

Because the FCC’s proposals will allow any *new* licensee to secure use of the interstitial channels so long as it provides the appropriate interference analysis, the FCC’s plan may do little to address the spectrum shortage faced by *existing* licensees and will unnecessarily hamstring current licensees’ ability to modify systems in the future. Rather than adopt a policy that would favor new entrants over incumbents, the Commission should take several steps to protect existing licensees and allow them to meet coverage and capacity requirements. *First*, it should establish a brief window – *i.e.*, up to a year – during which only existing licensees may apply for the use of interstitial channels to which their current operations are adjacent. This will enable incumbent licensees to satisfy their spectrum needs and protect their existing operations by securing the use of narrowband channels – either to increase coverage or capacity needs by using those channels

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<sup>15/</sup> See Comments of the Utilities Telecom Council, RM-11738, at iii and 5 (filed Jan. 12, 2015); *see also* Comments of the Utilities Telecom Council, the Edison Electric Institute and the National Rural Electric Cooperative Association, GN Docket No. 12-354, at 7 (filed Feb. 20, 2013).

<sup>16/</sup> See Petition for Rulemaking of the Enterprise Wireless Alliance and Pacific DataVision, Inc., RM-11738 (filed Nov. 17, 2014).

<sup>17/</sup> See *id.* at 6-10.

in narrowband mode or, if they already hold an authorization for an adjacent channel, by preserving the ability to implement wideband operations.<sup>18/</sup>

*Second*, and because not all licensees will be able to act within the one-year period noted above, the Commission should only license interstitial channels on a secondary basis *vis-à-vis* current licensees for a period of five years. This five-year time frame will provide incumbent licensees with ample opportunity to take the steps noted above to address capacity and coverage requirements. After five years, assuming that incumbents have taken no action that would preclude the interstitials from being licensed consistent with the rules, the interstitial authorizations may become primary. Thus, new licensees willing to cooperate with incumbents during the five-year period to ensure that both can exist in the future should be permitted to seek authorization now for long-term operations.

*Finally*, rather than reserve capacity in the 800 MHz Mid-Band for public safety licensees as the Commission suggests, the FCC should allow all of the interstitial channels to be used for any category of uses currently permitted in the 800 MHz Mid-Band. The Commission has already taken adequate steps in the 800 MHz rebanding process to create robust capacity for public safety entities. Moreover, the establishment of the Nationwide Public Safety Broadband Network pursuant to the Middle Class Tax Relief and Job Creation Act of 2012 will create additional resources for public safety services.<sup>19/</sup> There is simply no need to reserve capacity beyond these laudable initiatives for public safety licensees. By contrast, there has been no

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<sup>18/</sup> In the latter case (where licensees with adjacent channels seek the use of the intervening interstitial channel), the Commission's licensing records should reflect that no "construction" on the interstitial channel itself is required if the licensee will use contiguous spectrum of 50 kilohertz or more within one year of authorization of the interstitial channel. It may be appropriate to require certification in due course that the adjacent channels are being used in wideband mode.

<sup>19/</sup> See Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156, *codified at* 47 U.S.C. § 1401 *et seq.* (2012).

additional capacity created for utilities or similar licensees, many of which provide similar public safety functions. The FCC should ensure that utilities, like public safety entities, have sufficient access to the resources they need and can use 800 MHz spectrum in the manner required by their underlying operations.

### **III. CONCLUSION**

Entergy appreciates the FCC's efforts to promote more robust use of the 800 MHz Mid-Band and to create additional opportunities to access the band. The FCC's proposals, however, can better serve the public interest if they preserve the ability for incumbents to use the spectrum flexibly and to accommodate their future technological and operational needs. Entergy looks forward to working with the Commission as it evaluates future use of this spectrum.

Respectfully submitted,

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