

**Before the
Federal Communications Commission
Washington, DC 20554**

In the Matter of:)	
)	
Implementing Public Safety Broadband)	PS Docket No. 12-94
Provisions of the Middle Class Tax Relief and)	
Job Creation Act of 2012)	
)	
Implementing a Nationwide, Broadband,)	PS Docket No. 06-229
Interoperable Public Safety Network in the 700)	
MHz Band)	
)	
Service Rules for the 698-746, 747-762 and)	WT Docket No. 06-150
777-792 MHz Bands)	

**COMMENTS OF
THE NATIONAL PUBLIC SAFETY TELECOMMUNICATIONS COUNCIL**

The National Public Safety Telecommunications Council (NPSTC) submits these Comments in response to the Commission’s Public Notice inviting input on FirstNet’s proposal regarding relocation of incumbent operations from the 758-769/788-799 MHz spectrum band (Band 14).¹ As addressed in these comments, NPSTC supports setting a deadline for incumbent relocation. The appropriate deadline is dependent on when adequate funding actually will be made available to incumbents and the amount of time thereafter required for incumbents to relocate their systems, while maintaining reliable operations.

¹ Public Safety and Homeland Security Bureau Seek Comment on FirstNet’s Incumbent Relocation Proposal PS Docket 12-94, PS Docket 06-229, WT Docket No. 06-150. DA 15-1253, Released November 5, 2015.

The National Public Safety Telecommunications Council

The National Public Safety Telecommunications Council is a federation of public safety organizations whose mission is to improve public safety communications and interoperability through collaborative leadership. NPSTC pursues the role of resource and advocate for public safety organizations in the United States on matters relating to public safety telecommunications. NPSTC has promoted implementation of the Public Safety Wireless Advisory Committee (PSWAC) and the 700 MHz Public Safety National Coordination Committee (NCC) recommendations. NPSTC explores technologies and public policy involving public safety telecommunications, analyzes the ramifications of particular issues and submits comments to governmental bodies with the objective of furthering public safety telecommunications worldwide. NPSTC serves as a standing forum for the exchange of ideas and information for effective public safety telecommunications.

The following 16 organizations serve on NPSTC's Governing Board:

- American Association of State Highway and Transportation Officials
- American Radio Relay League
- Association of Fish and Wildlife Agencies
- Association of Public-Safety Communications Officials-International²
- Forestry Conservation Communications Association
- International Association of Chiefs of Police
- International Association of Emergency Managers
- International Association of Fire Chiefs
- International Municipal Signal Association
- National Association of State Chief Information Officers
- National Association of State Emergency Medical Services Officials
- National Association of State Foresters
- National Association of State Technology Directors
- National Council of Statewide Interoperability Coordinators
- National Emergency Number Association
- National Sheriffs' Association

² APCO International dissented with the views expressed in these NPSTC comments.

Several federal agencies are liaison members of NPSTC. These include the Department of Homeland Security (the Federal Emergency Management Agency, the Office of Emergency Communications, the Office for Interoperability and Compatibility, and the SAFECOM Program); Department of Commerce (National Telecommunications and Information Administration); Department of the Interior; and the Department of Justice (National Institute of Justice, Communications Technology Program). Also, Public Safety Europe is a liaison member. NPSTC has relationships with associate members: the Canadian Interoperability Technology Interest Group (CITIG) and the Utilities Telecom Council (UTC), and affiliate members: the Alliance for Telecommunications Industry Solutions (ATIS), Open Mobile Alliance (OMA), Telecommunications Industry Association (TIA), and TETRA Critical Communications Association (TCCA).

Background

Some public safety narrowband 700 MHz systems occupy a portion of what is now 700 MHz public safety broadband spectrum. The public safety narrowband licensees to which this applies were early adopters of 700 MHz narrowband systems that deployed based on the rules in effect at the time, prior to the Commission's reconfiguration of the 700 MHz bandplan. In 2007, the Commission reconfigured the 700 MHz bandplan to consolidate and relocate the narrowband public safety spectrum and designate spectrum for public safety broadband operations. A number of public safety narrowband licensees obtained waivers to continue operating under the former bandplan, pending further action by the Commission to address relocation to comply with the revised bandplan, including provisions for cost reimbursement.

In 2013, NPSTC recommended that relocation costs for narrowband 700 MHz systems operating in the public safety broadband spectrum be considered an eligible expense for broadband deployment funds Congress has provided to FirstNet.³ FirstNet recently submitted an ex parte letter to the Commission which stated:

On August 17, 2015, FirstNet's Board approved its FY 2016 budget authorizing funds for a relocation assistance program and passed a resolution directing that FirstNet establish and implement a spectrum relocation assistance grant program. With the continued assistance of the Commission and the cooperation of Band 14 public safety incumbents, the relocation assistance grant program will allow Band 14 spectrum to be cleared for the deployment and operation of the NPSBN, while ensuring that the public safety entities operating communications systems on Band 14 have an appropriate lead time, as well as assistance funds, to facilitate the relocation of their public safety operations.

The Federal Funding Opportunity related to the program is expected to be released in early 2016. For the public safety incumbents currently operating on Band 14, FirstNet anticipates that the program will fund, among other possible relocation costs, necessary frequency coordination, technical assistance, and equipment retuning.⁴

In connection with this action, FirstNet has proposed that the Commission take steps to ensure that no operation be permitted in the Band 14 segment of the 700 MHz band after July 31, 2017 without the express consent of FirstNet. Under FirstNet's proposal, such a deadline would be implemented by having the Commission place a condition on the licenses or other authorizations of incumbents. The FirstNet ex parte letter also proposes that:

In addition or in the alternative to this request, we ask that the Commission consider conditioning any continued operation on Band 14 on the cessation of all operations on Band 14 within 90 days written notice to the Band 14 incumbent(s) from FirstNet that deployment of the NPSBN is to begin in its State.⁵

³ NPSTC Comments, PS Docket No. 12-94, PS Docket No. 06-229 and WT Docket No. 06-150, May 24, 2013 at page 5.

⁴ FirstNet Ex Parte Letter, October 20, 2015 at page 2.

⁵ FirstNet Ex Parte Letter, October 20, 2015 at footnote 5.

On November 5, 2015, the Commission's Public Safety and Homeland Security Bureau issued a Public Notice requesting comments on FirstNet's proposal.

NPSTC Comments

NPSTC applauds FirstNet for budgeting funds to relocate incumbents and for taking steps to establish a relocation grant assistance program. These are extremely important steps in the process needed to relocate incumbent operations and to clear the spectrum for deployment of the National Public Safety Broadband Network (NPSBN).

NPSTC recommends that FirstNet gain full awareness of deployments through detailed discussions with incumbents facing relocation. It is important that public safety operations not be compromised either during the relocation process or after it is completed. While some incumbents have base/mobile operations that may be relocated by a retuning process, NPSTC is also aware that a few of the licensees for which relocation will need to occur face particular challenges as they have substantial numbers of vehicular repeaters operating on the spectrum.

Based on previous preparation work by the Public Safety Spectrum Trust (PSST), the former licensee of the 700 MHz broadband spectrum, NPSTC understands that relocating these vehicular repeaters may involve replacement, not just "retuning" of the repeaters. Also, the design of vehicular repeaters becomes more challenging as the frequency spacing between the vehicular repeater and an associated in-band mobile radio become more closely spaced. Vehicular repeater filtering in deployed units is mostly customized as this frequency spacing is different for each licensee.

The above-referenced dockets include previously-filed information from some incumbents on their vehicular repeater deployments. For example, previous comments submitted by the Commonwealth of Virginia, Department of State Police on May 23, 2013 indicated that at that time,

the Commonwealth had over 3000 digital vehicular repeater units deployed. In those comments, the Commonwealth also indicated that relocating its operations would require the replacement of hardware in these vehicular units, not just retuning. The State of Illinois previously commented about its extensive deployments in band 14 as well.⁶

The scope of the funding, eligible types of expenses and the time required for relocation completion obviously depend on the nature and scope of the incumbent operations to be relocated.⁷ In describing the categories of expenses for which grant funds would be made available, the FirstNet ex parte letter stated “FirstNet anticipates that the program will fund, among other possible relocation costs, necessary frequency coordination, technical assistance, and equipment retuning.” While NPSTC presumes this general description provided in the ex parte letter is not a final determination, it is important to recognize that relocation of some incumbent systems may require the inclusion of hardware replacement, not just equipment retuning. NPSTC previously recommended the following to help ensure an informed relocation process:

A process could be developed under which the narrowband licensees who need to relocate can provide a cost estimate, obtain funding and relocate under an aggressive but reasonable timeframe, given the work required to implement the relocation. Any schedule for relocation implementation should be tied to actual availability of funding and prospective broadband deployment. Public safety licensees and the Commission previously experienced a “false start” in the process and confirmed funding is an essential starting point for actual relocation to begin. Also, the time required for actual relocation could vary with different licensees, depending on their respective deployments, as well as the need for broadband deployment in a particular area.⁸

⁶ Comments submitted in these dockets by the State of Illinois May 22, 2013.

⁷ To NPSTC’s knowledge, FirstNet has not publicly revealed the scope of funding budgeted for the relocation process.

⁸ NPSTC Comments, PS Docket No, 12-94, PS Docket No. 06-229 and WT Docket No. 06-150, May 24, 2013 at page 5.

NPSTC still believes this overall approach is appropriate to help ensure completion of incumbent relocation while maintaining the reliability of public safety operations during and after the relocation transition.

As noted above, FirstNet has indicated it expects the Federal Funding Opportunity related to the relocation program to be released in early 2016. While not specifically stated in the FirstNet ex parte letter, NPSTC believes this early 2016 date refers to the initiation of the program, i.e., the release of information about the process under which incumbents need to apply for grant funds. Therefore, the timing for incumbent licensees to have actual availability of the funds is not yet known.

NPSTC believes that on its face, the July 31, 2017 deadline for relocation proposed by FirstNet appears to be reasonable. However, it is premature to finalize a deadline for any authorizations to expire until the actual availability of funds for the public safety incumbents currently operating on Band 14 occurs, and reasonable but aggressive timelines are known for the actual work needed to relocate all incumbent licensees.

NPSTC also previously recommended that a portion of the 700 MHz public safety guardband spectrum be made available for narrowband vehicular repeater operations.⁹ To NPSTC's knowledge a Commission decision has not been made regarding such availability.¹⁰ The design of vehicular repeaters becomes more challenging as the frequency spacing between the vehicular repeater and an associated in-band mobile radio become more closely spaced. Providing the option for vehicular

⁹ NPSTC Comments submitted September 4, 2013 at page 5 and 6.

¹⁰ In another proceeding which made six remote control and telemetry VHF channels also available for vehicular repeater operations on a frequency-coordinated basis, the Commission discussed in general vehicular repeater use in bands other than VHF. However, it did not specifically address the previous recommendation in these separate proceedings regarding vehicular repeater use of a portion of the 700 MHz guardband spectrum. See Report and Order, Amendment of Sections 90.20(d) and 90.265 of the Commission's Rules to Facilitate the Use of Vehicular Repeater Units, PS Docket No. 13-229, released August 10, 2015.

repeaters to operate in a portion of the 700 MHz guardband would allow more spacing between the input and output frequencies if needed, compared to containing the operations entirely within the current 700 MHz narrowband spectrum.

NPSTC urges the Commission, in consultation with public safety incumbents and FirstNet, to consider and decide this issue as expeditiously as possible. While FirstNet's license includes the guardband spectrum at 768-769/798-799 MHz, NPSTC believes that design and deployment of vehicular repeaters to use a portion of that spectrum would require Commission adoption of appropriate technical rules for that band segment.

In October, 2014, the Commission released twenty-four 700 MHz reserve channels in the 769-775/799-805 MHz band. In doing so, the Commission stated in its decision:

In the non T-Band areas, up to eight 12.5 kilohertz channels may be dedicated for temporary deployable trunked use and the rest for General Use, **including low-power vehicular repeaters**. (Emphasis added).¹¹

While it might be possible to accommodate incumbent vehicular repeater systems in some areas on a portion of the former 700 MHz reserve channels now allocated for general use, deciding such an approach would need to include input from incumbent licensees, vehicular repeater manufacturers and recommendations from 700 MHz regional planning committees that administer the general use channels.

The statewide nature of some incumbent vehicular repeater operations could make relocation onto some of these former 700 MHz reserve channels more challenging, given the channels also are prioritized for T-Band incumbents that commit to return an equal amount of T-Band channels. For example, those T-Band prioritized cutout areas encompass portions of the Commonwealth of Virginia

¹¹ Report and Order, PS Docket No. 13-87, RM-11433, WT Docket No. 96-86, PS Docket No. 06-229 and RM-11577, released October 24, 2014.

and the State of Illinois, two licensees with extensive 700 MHz band statewide vehicular repeater deployments currently operating in the 700 MHz band spectrum designated for broadband operation. Even in areas outside the T-Band areas, analysis would need to be conducted to determine which specific channels potentially could be made available for 700 MHz band incumbent relocation and technically, whether the specific channels potentially available have the proper frequency input/output spacing to support vehicular repeaters available on the market.

Conclusion

NPSTC applauds FirstNet for budgeting funds to relocate incumbents and for taking steps to establish a relocation grant assistance program. This is consistent with previous NPSTC recommendations. The July 17, 2017 deadline FirstNet has proposed for relocation seems reasonable on its face, however, it is premature to finalize a deadline for any authorizations in Band 14 to expire until the funds for relocation are actually available to the public safety incumbents operating on Band 14 and reasonable but aggressive timelines are known for the actual work needed to relocate all incumbent licensees. Some incumbent licensees have extensive vehicular repeater systems to be relocated, which can present a more challenging relocation scenario. NPSTC also urges the Commission, in consultation with public safety incumbents and FirstNet, to consider and decide whether a portion of the guardband spectrum at 768-769/798-799 should be provided as an option to help support vehicular repeater use, as previously recommended in these proceedings.

Ralph A. Haller, Chairman

A handwritten signature in cursive script, appearing to read "Ralph A. Haller". The signature is written in black ink and is positioned below the typed name.

National Public Safety Telecommunications Council
8191 Southpark Lane, Suite 205
Littleton, Colorado 80120-4641
866-807-4755

December 9, 2015