

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Sections 90.20(d)(34) and 90.265	)	PS Docket No. 13-229
of the Commission's Rules to Facilitate the Use	)	
of Vehicular Repeater Units	)	RM- 11635

**REPLY COMMENTS OF THE UTILITIES TELECOM COUNCIL**

Pursuant to Section 1.405 of the Commission’s Rules, the Utilities Telecom Council (“UTC”) hereby files its reply comments in response to the Commission’s Public Notice in the above-referenced matter.<sup>1</sup> The comments on the record underscore why the Commission should not permit the use of the six telemetry channels at 173.2375, 173.2625, 173.2875, 173.3125, 173.3375, and 173.3625 MHz for voice operations by vehicular repeater systems (VRS). First, the use of the channels for VRS will undoubtedly lead to interference and congestion to existing utility SCADA systems that ensure the safety and reliability of electric, gas and water systems. Second, access to the six telemetry channels is not necessary; other alternatives exist. Third, instead of the 173 MHz telemetry channels, the Commission should be promoting the use of the 700 MHz narrowband spectrum for VRS, which will in turn promote the development of a nationwide standardized home for VRS with greater interoperability for first responders.

In addition to UTC<sup>2</sup>, comments by Northeast Utilities Service Company explain that there is a shortage of channels for data communications, and that these six telemetry channels are “among a small group of channels that will be needed by utilities to enable smart grid

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<sup>1</sup> Amendment of Sections 90.20(d)(34) and 90.265 of the Commission's Rules to Facilitate the Use of Vehicular Repeater Units, *Order and Notice of Proposed Rulemaking*, PS Docket No. 13-229, RM-11635, 28 FCC Rcd. 13544 (2013)(NPRM).

<sup>2</sup> See Comments of UTC in RM-11635 (filed Nov. 4, 2011) and Reply Comments of UTC in RM-11635 (filed Nov. 18, 2011). See also Comments of UTC in PS Docket No. 13-229 (filed Dec. 30, 2013).

communications.”<sup>3</sup> This is particularly true as utilities deploy packet radio technologies, which will require the use of data channels.<sup>4</sup> In the meantime, using other frequencies for both voice and data is problematic, including congestion and interference.<sup>5</sup> Finally, the use of these high-band VHF frequencies provides favorable propagation that will avoid “numerous relay points and a corresponding reduction in system reliability that would be created at higher frequencies in the company’s hilly, heavily treed terrain.”<sup>6</sup>

The potential for interference and congestion from the use of telemetry channels by VRS has been recognized by NTIA.<sup>7</sup> NTIA opposed the use of Federal telemetry channels due to concerns that such use would interfere with communications by the U.S. Forest Service, particularly during emergencies such as forest fires. This is all the more striking, given the claims by VRS proponents that such use would *help* public safety fight fires. As NTIA explained, any benefits from VRS would be outweighed by the potential of interference both to and from U.S Forest Service communications. Thus, NTIA’s opposition to the use of Federal

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<sup>3</sup> See Comments of Northeast Utilities Service Company in PS Docket No. 13-229 at 1 (filed Dec. 30, 2013).

<sup>4</sup> *Id.* at 2 (explaining that “packet radios do not have voice capability, and cannot be used on voice channels without a waiver.”)

<sup>5</sup> *Id.* at 1 (reporting that “[one of Northeast Utilities’ operating companies, WMECo] has a few tower sites that become busied out when events on the distribution system create a high demand and another NUSCO affiliate, Public Service Company of New Hampshire, has suffered from data interfering with voice and vice versa over shared conventional channels.”).

<sup>6</sup> *Id.*

<sup>7</sup> See Letter from Karl Nebbia, Associate Administrator, Office of Spectrum Management, NTIA to Julius Knapp, Chief of the Office of Engineering and Technology, FCC in RM-11635 at 2 (filed Apr. 9, 2013)(explaining that “The proposal by Pyramid creates the potential for conflicts in spectrum use where public safety is at stake. We recognize that the use of these frequencies by state and local agencies would be on a secondary basis to federal usage. However, we do not believe that public safety services should be placed at risk by creating potential conflicts with other safety operations, even where those operations occur on a secondary basis. Neither federal nor non-federal firefighters will want to face interference or other spectrum management coordination conflicts during an operation.”). See also NPRM at ¶ 19 (stating that “NTIA opposes even secondary status for VRS users because VRS public safety services should not be placed at risk by creating conflicts with primary Federal safety operations, and neither group will want to face interference or other coordination conflicts during an operation. Based on NTIA’s recommendation, we decline to include the nine Federal channels in our rulemaking proceeding.”)

telemetry channels not only underscores and validates UTC's concerns about interference and congestion on the 173 MHz telemetry channels, but also undermines and draws into question the VRS proponents' claims about the public interest benefits of using these channels for VRS.

VRS proponents have offered no technical information to address the concerns about the potential for congestion and interference on the 173 MHz frequencies – despite the reality that interference could threaten public safety voice communications, as well as utility data communications.<sup>8</sup> This reflects a certain reckless abandon on the part of the manufacturers and a certain myopia on the part of the public safety entities that support this proposal. They focus on the potential for interference to VRS in the 150-159 MHz band as a justification to access the 173 MHz telemetry channels but they fail to consider the potential for interference to VRS on the 173 MHz telemetry channels, as well.

At the same time, the VRS proponents offer scant technical information to support their claim that they lack alternatives to the 173 MHz telemetry channels. As UTC and other parties have commented, the VRS proponents have not sufficiently demonstrated that the 150-159 MHz band couldn't be used for VRS, either by implementing improved filtering or by using additional channels that have opened up after mandatory narrow banding became effective last year.<sup>9</sup>

Finally, they have not adequately explained why channels in other bands, such as the 700 MHz

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<sup>8</sup> In addition, it should be noted that public safety eligibles use 173-174 MHz telemetry channels for control of fire sirens, traffic control devices, and other similar applications. Utilities use 173-174 MHz telemetry channels for nuclear warning sirens and for distribution SCADA.

<sup>9</sup> See Comments of UTC in PS Docket No. 13-229 at 14 (filed Dec. 31, 2013)(explaining that “VRS manufacturers could implement surface acoustic wave (SAW) filters, or other filter technology, for mobile repeater use.”) See also Comments of the Forestry Conservation Communications Association, Inc.(FCCA) in RM-11635 at 3 (filed Nov. 4, 2011)(explaining that “filter technology is not sufficient justification” for Pyramid’s proposed relief, and that “if the equipment operated with a lesser frequency spread, many more channels would automatically become available, as potentially every channel specified in Section 90.20 could be considered.” See also Comments of the International Municipal Signal Association and the International Association of Fire Chiefs in RM-11635 at 5 (filed Nov. 4, 2011) (explaining that expanding the use of the 170 MHz band frequencies as Pyramid suggests would increase the possibility of interference, and rejecting Pyramid’s claims that coordination and interference would not be problematic.)

or 800 MHz bands would not be suitable. At best, their argument is that these other bands would be inconvenient and more expensive, but that does not demonstrate that they are not alternatives. They can't, because these other bands are actually being used today for VRS.<sup>10</sup>

Instead of providing a short-term solution for VRS that would create congestion and interference problems on the 173 MHz channels, the Commission should provide a long-term solution for VRS by encouraging the migration of VRS onto the 700 MHz narrowband channels. That would provide a nationwide interoperable standardized technology solution that would support growth for VRS systems and new market entry by other VRS manufacturers, which in turn would promote competition and economies of scale and ultimately reduce costs for public safety. The NPSTC has filed comments on the record which implicitly state that this is the direction that public safety is heading anyway.<sup>11</sup> Why open up the 173 MHz telemetry channels to VRS, when that will only provide a short-term fix for VRS and would likely result in stranded investment by public safety when they migrate to the 700 MHz narrowband channels later? It makes no sense to send public safety down a dead-end that will only hinder interoperability between VRS users in the process.

Ultimately and fundamentally, the Commission should decline to allow VRS operations on the 173 MHz telemetry channels because the risk of interference and congestion to mission critical systems that are used to protect the safety and reliability of electric, gas and water utility operations (as well as the risk of interference to public safety voice communications, if VRS operations on these channels was authorized) outweighs the marginal short-term benefits and the

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<sup>10</sup> See "Extending the ARMER Network Through Digital Vehicular Repeaters" available at <http://www.togpartners.com/interop/handouts/2B%20ARMER%20Network.pdf> (describing how DVRs are available for operation in spectrum bands at 136-174MHz, 380-430MHz, 450-470MHz, 470-512MHz, 764-806MHz, 806-869MHz and describing the tradeoffs for cross-band and in-band operations)

<sup>11</sup> Comments of the National Public Safety Telecommunications Council in PS Docket No. 13-229 (filed Dec. 31, 2014).

needs that VRS proponents claim.<sup>12</sup> Even if these claims were substantiated, which the VRS proponents have failed to do, the risk of interference is significant and cannot be adequately mitigated.

By their very nature, VRS operations are mobile and could cause interference wherever and whenever they are used during an emergency.<sup>13</sup> It is precisely during emergencies, when utilities rely on their telemetry systems the most to maintain the safety and reliability of their operations. Utilities need to be able to know when their services have been affected by an emergency, such as a storm or hurricane, and they need to be able to respond by communicating with SCADA systems to restore power and water and isolate faults from becoming catastrophic. In addition, they need to be able to expand these telemetry systems to provide greater visibility and control into their electric, gas and water distribution systems, as they deploy smart grid and other advanced capabilities deeper into their networks. They cannot afford to risk interference that would leave them blind and helpless to prevent an accident from occurring, and they cannot be stuck in an exclusion zone with no place to expand.<sup>14</sup> Instead, UTC reiterates its request that the Commission should make the six telemetry channels co-primary with adjacent channel land

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<sup>12</sup> As the Commission is well aware, data communications do not listen before transmitting and would cause interference to voice communications that are co-channel. Conversely, the telemetry communications would be subject to extended periods of interference from voice communications, which would be higher power if the Commission were to grant the Commonwealth of Virginia's request to increase the maximum power for mobiles and portables to 5 watts. *See* NPRM at ¶29 (stating that "the current ERP limit for mobile stations is 2 watts; the Commonwealth seeks 5 watts for both VRS and portable radios," explaining that "the Commonwealth contends public safety needs 'dedicated frequencies of equal transmitter power to that of a VHF portable, to create a balanced network.'")

<sup>13</sup> *See* Reply Comments of UTC in RM-11635 at 1-2 (warning that "[m]aking these frequencies available for VRS will likely lead to interference with mission critical data communications, and this interference will be difficult if not impossible to mitigate against due to the temporary fixed and itinerant nature of VRS operations.")

<sup>14</sup> *See* NPRM at ¶ 23 (inviting comment on whether frequency coordination, exclusion zones or alternative frequency coordination procedures could minimize the potential for harmful interference from mobile operations, if the channels were made available for VRS public safety use.). *See also* Comments of UTC in PS Docket No. 13-229 at 10 (filed Dec. 31, 2013)(explaining that an exclusion zone would not likely prevent interference because of the mobile nature of VRS operations, and the exclusion zone would effectively freeze in place incumbent utility SCADA systems from being able to expand their coverage and capacity).

mobile operations – and should not remain secondary – now that the narrowband deadline has passed.<sup>15</sup> For all of these reasons, it should be clear to the Commission that providing access to the 173 MHz telemetry channels for VRS is not in the public interest. Therefore, UTC respectfully requests that the Commission decline to allow VRS on the 173 MHz telemetry channels, as proposed in this rulemaking.

### **CONCLUSION**

In conclusion, UTC appreciates the opportunity to provide these reply comments in response to the Commission’s NPRM and opposes the Petition for Rule Making by Pyramid. UTC urges the Commission to deny the Petition and not allow voice operations on 173.2375, 173.2625, 173.2875, 173.3125, 173.3375 and 173.3625 MHz frequencies.

Respectfully submitted,

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<sup>15</sup> See Comments of UTC in PS Docket No. 13-229 at 12 (filed Dec. 31, 2013). As many utilities and CII rely on these telemetry channels to support mission critical operations, it is important that they become primary and protected against adjacent channel interference. UTC supports this rule change, as suggested by the Commission in the NPRM.