

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

In the Matter of)
)
Realignment of the 896-901/935-940 MHz) RM-11738
Band to Create a Private Enterprise Broadband)
Allocation)

To: Chief, Wireless Telecommunications Bureau

**REPLY COMMENTS OF
SOUTHERN COMPANY SERVICES, INC.
ON SUPPLEMENT TO PETITION FOR RULEMAKING**

Southern Company Services, Inc. (“Southern”), on behalf of itself and its affiliates, hereby submits its reply to the comments that were filed on June 29, 2015, in response to the Bureau’s May 13, 2015, Public Notice inviting further comment on a supplement to the above-referenced Petition for Rulemaking filed by the Enterprise Wireless Alliance (“EWA”) and Pacific DataVision, Inc. (“PDV”) (collectively referred to herein as the “Petitioners”).¹

I. There Continues to be Overwhelming Opposition to Petitioners’ Proposal

With one notable exception, all of the commenting parties – representing the licensees and users of hundreds of radio systems serving millions of end point devices in the affected frequency bands – were in agreement with Southern that the Petitioners have not demonstrated

¹ Wireless Telecommunications Bureau Seeks Comment on Supplement to Enterprise Wireless Alliance and Pacific DataVision, Inc., Petition for Rulemaking Regarding Realignment of 900 MHz Spectrum, *Public Notice*, 28 FCC Rcd 14424 (WTB 2015). Unless indicated otherwise, all references to Comments herein are to the comments filed on June 29, 2015, in this proceeding.

how a “Private Enterprise Broadband” (“PEBB”) system could be operated without significant potential for harmful interference to licensees in adjacent frequency bands. Aside from PDV’s technology partner, Motorola, none of the commenting parties sees any need to open a rulemaking on this proposal.² Moreover, the comments overwhelmingly demonstrate that, as proposed by Petitioners, PEBB systems are far more likely to cause harm to Critical Infrastructure Industries (CII) than to offer them any superseding public interest benefit.

The commercial interests of just three parties – PDV, EWA, and Motorola – must be weighed against the public interest as expressed by virtually every other commenter in the proceeding. The Petitioners argue that a massive and disruptive realignment of the Part 90 private land mobile radio band, together with the increased potential for harmful interference to other CII radio systems, is justified by the mere opportunity for CII to negotiate commercial arrangements with PDV for broadband service, which PDV is free to provide or not in its commercial discretion. By contrast, virtually every other commenter has expressed concern with the serious potential for harmful interference from PEBB systems to other radio systems, and they have expressed little to no interest in whether PDV or any other carrier enters the market to offer commercial broadband service. The public interest calculus in this proceeding does not come close to the situation at 800 MHz, for which the Commission ordered rebanding as a means of preventing Sprint Nextel from causing further interference to Public Safety radio systems.

² Although not disclosed by either PDV or Motorola in this proceeding, PDV has reported to the Securities and Exchange Commission (“SEC”) that Motorola has leased spectrum from PDV for an upfront lease payment of \$7.5 million and other considerations. Motorola holds a significant financial interest in PDV, and it has agreed to supply radio equipment, sales, and operational support for PDV’s commercial radio services. See, *e.g.*, SEC Form 10-K of Pacific DataVision, Inc., filed June 10, 2015, at 8.

II. Petitioners Have Not Addressed Incumbent Licensees' Reasonable Concerns About Interference

Southern concurs with the interference analysis presented by Sensus USA Inc. in its comments, and urges the Commission to give it careful consideration.³ Southern agrees with Sensus that the assumptions used in the Petitioners' interference model resulted in an "optimistic" view of the potential for co-existence between PEBB systems and FlexNet AMI systems in the adjacent NPCS band. Just as the Petitioners were able to present an "optimistic" case on successful co-existence, the technical consultants to Sensus were able to alter certain of the assumptions in the interference model to present a "challenging" interference case that predicts a massive potential for interference from PEBB systems into FlexNet systems. The technical consultants to Sensus also included a "moderate" case interference analysis using operating conditions that are far more likely to occur in the real world than suggested by PDV's "optimistic" case.

PDV's optimistic case and the Sensus challenging case represent extremes because they are modeled on extreme assumptions. Neither of them would be appropriate as baselines for the setting of technical standards for PEBB systems. The PDV analysis seriously underestimates the potential for interference to FlexNet AMI systems, and technical limitations for PEBB systems based on that analysis would expose FlexNet operations to massively disruptive interference. Conversely, technical limitations based on the challenging case analysis would provide maximum interference protection to FlexNet systems, but at a cost that would probably not be commensurate with this extreme level of protection. Southern therefore commends for the

³ Southern has worked closely with Sensus in evaluating the potential for PEBB systems, as they are currently understood, to cause harmful interference to Southern's Advanced Meter Infrastructure ("AMI") system using the Sensus FlexNet technology.

Commission’s consideration the “moderate” case analysis. Southern worked closely with Sensus and its technical consultants to delineate equipment and operating assumptions that most closely conform to what would most likely be encountered in real-world interactions between a 900 MHz LTE system and a nearby FlexNet AMI system. Southern believes the assumptions used in the moderate case analysis are very reasonable, and that technical limitations for PEBB systems based on these parameters would permit coexistence with only infrequent need for the PEBB licensee to mitigate actual interference caused to a FlexNet system.

In addition to Southern and Sensus, every party that filed comments on the Petitioners’ Supplement (including Motorola) raised concerns with the interference potential from PEBB systems. Similar to Southern and Sensus, the Sensus Partners and Advisors Network (“SPAN”) and PECO Energy objected to the Petitioners’ analysis of potential interference into FlexNet systems.⁴ PECO Energy pointed out that, as a CII entity, it requires the highest level of protection because interference could reduce the safety and security of its operations.⁵ Southern agrees with PECO that the Petitioners should conduct testing in multiple operating environments and submit the results of such testing into the record of this proceeding.⁶

A large number of other CII entities – the same entities to which PDV claims it will market its PEBB service – expressed concern about interference to Part 90 PLMR systems that would operate in the remaining 2 MHz of Part 90 spectrum immediately below the Petitioners’

⁴ It is important to note that SPAN includes 66 electric, gas and water utilities operating Sensus FlexNet systems throughout the United States.

⁵ Comments of PECO Energy at 4.

⁶ *Id.* at 5.

requested allocation for PEBB systems.⁷ Even Motorola, a technology partner with PDV, expressed concern that PDV’s proposal for a PEBB allocation does not adequately protect narrowband land mobile systems.⁸

Like Sensus, some of these commenters question whether PDV is proposing to offer service to fixed remotes, such as for CII supervisory control and data acquisition (“SCADA”) service.⁹ Knowing whether PDV plans to offer service to fixed remotes is important to understanding the interference potential from PEBB systems. Some commenters have noted that the Petitioners’ suggested rules and technical standards do not specify maximum ERP levels for fixed remotes, and that the power levels the Petitioners have suggested for mobiles and portables appear to be lower than what are typically used in IP-based fixed operations in other frequency bands.¹⁰ Eversource Energy questions whether the low power levels proposed for mobiles and portables would preclude their use in rural SCADA systems because too many base station radios would be required to communicate with a relatively small number of end point devices.¹¹ Thus, there is confusion as to what services the Petitioners are proposing to offer, and whether

⁷ Comments of the Ad Hoc Refiners Group at 4 and n.9; American Petroleum Institute (“API”) at 8-9; Association of American Railroads (“AAR”) at 1-2; Duke Energy Corporation at 5-6; Eversource Energy at 3; Lower Colorado River Authority (“LCRA”) at 5-7; NextEra Energy, Inc. at 2-4; Salt River Project at 6; and the Utilities Telecom Council at 9-10.

⁸ Comments of Motorola Solutions, Inc. at 3.

⁹ SCADA systems are fixed communications networks used to remotely monitor and control critical components of a utility distribution or transmission system.

¹⁰ Comments of Ad Hoc Refiners Group at 7; and API at 4.

¹¹ Comments of Eversource Energy at 2-3. (“Particularly in rural areas where these [endpoint] devices may be miles apart and circuits continue for multiple towns, too many base station radios would be required to serve only a few devices. . . .Eversource is concerned that the benefits of Petitioners’ proposal would be seen largely in urban areas to the detriment of rural users.”)

the Petitioners adequately addressed the operating characteristics of those services in their interference analyses.

III. Repurposing of the 900 MHz Band for Commercial Broadband is not Comparable to 800 MHz Rebanding

A number of commenters correctly pointed out that the rules for a repurposed 900 MHz land mobile band should not be based strictly on what was adopted for the 800 MHz band during rebanding.¹² The 800 MHz proceeding was intended to resolve interference to Public Safety radio systems from Sprint Nextel's commercial operations, but the current proceeding has the potential to allow harmful interference to CII radio systems just to accommodate the competitive desires of a new commercial provider. Technical rules for 800 MHz were premised on the creation of a guard band between Sprint Nextel's commercial ESMR system and Public Safety systems, but in this proceeding the Petitioners have specifically rejected the notion of guard bands at 900 MHz because they would reduce the already limited 900 MHz spectrum on which they could offer commercial broadband service.

As noted by NextEra Energy, the Petitioners' suggested rules would unfairly shift the burden for resolving interference to incumbents.¹³ This is not only inconsistent with Commission precedent, it is unsound as a matter of spectrum policy and contrary to the public interest. Even Motorola points out that PDV would be a new entrant at 900 MHz so the Commission could adopt a more stringent standard than it could for 800 MHz.¹⁴

¹² Comments of Duke Energy at 3-4; Harris Corporation at Section V; LCRA at 5; Motorola at 2-3; and NextEra Energy at 5.

¹³ Comments of NextEra Energy at 3.

¹⁴ Comments of Motorola at 3.

IV. There is no Need to Rush These Concepts to Rulemaking

Many commenters reasonably question why the Petitioners have such a sense of urgency in pressing the Commission to initiate a rulemaking on these concepts. It is not apparent that any CII entities or any other enterprise wireless users are anxious for another wireless provider to convert the limited remaining private wireless spectrum to commercial use.¹⁵ To the contrary, CII entities have consistently expressed the need for additional spectrum that can be used in private, internal communications systems, and they are united in their belief that the Petitioners' proposed reconfiguration of the 900 MHz band will cause harmful interference to incumbent CII communications systems. It is also not apparent that Petitioners will be any better able to address the interference concerns in the context a rulemaking proceeding than they have been so far in this proceeding.

In any event, PDV has publicly announced plans to offer commercial dispatch service on narrowband 900 MHz channels for at least the next several years, if not longer.¹⁶ Therefore, one has to question when PDV believes it will be in a position to (1) transition its new dispatch customers to other bands or technologies, and (2) undertake the band-clearing process Petitioners have proposed.¹⁷ There is simply no reason for the Commission to rush these concepts –

¹⁵ Comments of Duke Energy at 3 (there are no exigent circumstances like at 800 MHz where public safety was receiving interference); Eversource Energy at 1 (the FCC should not become too invested in the details of the Petitioners' plan and lose sight of whether the plan as a whole benefits the public)

¹⁶ PDV Press Release, "pdvWireless Officially Launches DispatchPlus in Houston," released June 22, 2015 (available at <http://www.pdvwireless.com/news/press-releases>; last visited July 13, 2015).

¹⁷ PDV's filings with the SEC indicate that Motorola plans to offer land mobile radio service to customers on spectrum leased from PDV at least through 2020, and perhaps until 2025. See SEC Form 10-K of Pacific DataVision, Inc., filed June 10, 2015, at 8.

described as “half-baked and self-serving” by one commenter¹⁸ – into a rulemaking proceeding when Petitioners have not only failed to propose adequate interference protections, but have most recently proposed OOB limits that are even less stringent than in its earlier filings.¹⁹ This does not evidence a good faith attempt to address the serious interference concerns that have been raised by the same CII entities PDV states it would like to serve.

V. Conclusion

Comments filed in response to the Petitioners’ supplement of May 13, 2015, are almost unanimous in pointing out that the Petitioners have not addressed the serious potential for interference to CII communications systems. The Petitioners have had many months to develop these plans and to work with the incumbent user community to see if there is even a reasonable possibility, let alone a likelihood, that broadband systems could be deployed in the 900 MHz land mobile band without harmful interference to adjacent band systems. Instead of proposing specific measures to prevent most interference, Petitioners have proposed only minimal technical standards with an uncertain obligation to mitigate actual interference after-the-fact. This is unacceptable.

There are no overriding external considerations, like interference to Public Safety at 800 MHz, that would compel the Commission to initiate a rulemaking proceeding at this time. The risks to CII communications, which are needed to monitor, control, and restore electric, gas and water utility service, are too great. In any event, PDV has announced that it will be using the 900 MHz spectrum it purchased from Sprint Nextel for a commercial dispatch service, at least for the foreseeable future. Thus, to the extent Petitioners still believe that broadband could be deployed

¹⁸ Comments of M2M Spectrum Networks, Inc. at 2.

¹⁹ Comments of AAR at 3 (Petitioners have made the OOB limits 18 dB less stringent than in their earlier proposal, “allowing 63 times more power in the adjacent bands.”)

at 900 MHz, they have ample time to develop specific technical standards and criteria without the need for the Commission to first open a rulemaking.

Southern urges the Commission to focus on the issues the Petitioners have not been able to answer in their petition, in their *ex parte* presentations, or in their May 3, 2015, supplemental filing. Although the Commission would be justified in dismissing the Petition for Rulemaking as lacking a reasonable technical foundation, at most the Commission should issue a Notice of Inquiry on the significant interference issues that have been raised.

WHEREFORE, THE PREMISES CONSIDERED, Southern Company Services, Inc. respectfully requests that the Commission take action on this matter consistent with the views expressed herein.

Respectfully submitted,

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