



AMERICAN PETROLEUM INSTITUTE

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

In the Matter of )  
 ) GN Docket No. 17-258  
Promoting Investment in the 3550-3700 MHz Band; )

The Telecommunications Subcommittee of the American Petroleum Institute ("API") submits this comment to the reply of the Cellular Telecommunications Industry Association ("CTIA") in response to FCC 17-258, a Notice of Proposed Rulemaking ("NPRM") of Petitions for Rulemaking Regarding the Citizens Broadband Radio Service ("CBRS").

API is a national trade association representing more than 625 companies involved in all phases of the petroleum and natural gas industries, including exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. Among its many activities, API acts on behalf of its members before federal and state regulatory agencies. The API Telecommunications Subcommittee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the oil and gas industries. API is supported and sustained by companies that make use of a wide variety of wireline, wireless and satellite communications services on both a private and commercial basis. All wireless services used by our membership require RF spectrum resources, of both narrowband and broadband varieties.

API members partner in business with CTIA members, as services provided by major telecommunications carriers enable many handset and fixed wireless/machine-to-machine ("M2M") communications that support operations. CTIA member's successful offerings certainly enhance voice and broadband data delivery for API members as well as Critical Infrastructure entities, including Oil & Gas, and Utilities (collectively "CII"). However, telecommunication carriers are estimated to provide less than 20% of all wireless broadband data delivery for API members. Private systems, including 802.11 based and private point-to-point and point-to-multipoint systems provide the remaining. While API cannot speak for all CII participants, the Commission should understand that a majority of data for voice, video, Supervisory Control and Data Acquisition ("SCADA"), and field intranet/internet delivery is provided by satellite or private broadband networks that are engineered for reliable upload and downloads. These exist for several reasons, but a common one is that they are in remote, underserved areas or in dense industrial environments where CTIA member offerings fail to provide reliable or priority services expected from critical infrastructure.

CTIA's vision for CBRS in their response to the Commission can be summarized by their conclusion: "To maximize the 3.5 GHz band's potential for investment and innovation and for new 5G wireless services, the Commission should promptly:

- (1) Extend the PAL license term to a traditional 10-year term with an expectation of renewal
- (2) Re-examine the use of census tract licensing and revise the rules to license PALs on a PEA basis
- (3) Allow partitioning and disaggregation of PALs
- (4) Eliminate the requirement for public disclosure of CBSD registration information
- (5) Revise the OOB limits
- (6) Adopt the targeted proposals to modify the bidding procedures"

While API agrees that a longer license term with an expectation for renewal (albeit we seek 5-years or 10-years, but only with proper performance requirements to be met, unlike the CTIA proposal), the protection of CBSD registration information, and modifications to the bidding procedure to support the licensing of PAL's regardless of the number of bidders in a given census tract area have merit (items 1, 4, and 6 above), API strongly disagrees with CTIA and their unbalanced vision that the FCC will maximize CBRS potential for the common good by adopting items 2, 3, and 5 (collectively "235"). Items 235 are centered around changing the economics and spectrum policy to fit major telecommunication carriers model by PAL licensing of aggregated blocks by Partial Economic Area ("PEA") and suggesting that partitioning and the Spectrum Allocation System ("SAS") will be satisfactory to appease other concerns.

CTIA has not refuted any assertion to the Commission to the possibility that under a PEA scheme, a clear majority of PAL's and as much GAA spectrum as available within the CBRS spectrum would end up aggregated by the major carrier members of CTIA if 235 are adopted. Adding item 1 into the mix without any build-out performance guidance as CTIA has suggested, creates two scenarios:

- 1) In urban area of the PEA, CBRS spectrum would be fully active, carrying consumer data for the PAL and the SAS would have assigned all PAL channels to major telecommunication providers. GAA use would be difficult in that portion of the spectrum and since GAA channels would be aggregated with the PAL channels resulting in the overall noise floor being higher. Given less restrictive OOB limits would aggravate this matter as GAA equipment would be either subject to accept an even higher noise floor (resulting in lower throughput), or the cost of "enterprise-grade" CBRS hardware that provides for greater interference rejection would be higher. In technical terms, the link budget for the GAA user would be challenging at best, if a channel could actually be found that is available.
- 2) In rural areas where the PAL's PEA based licensee was not active, the rules without a performance requirement provide an incentive for the Priority Access License to "sit" on the entire PAL, with renewal expectation. While GAA access would be satisfactory, CII entities that want PAL precedence in a rural part of the PEA would be blocked from having it as all PAL's

would be licensed as part of the PEA. Then at a later date, the PAL licensee could either lease or sell the partitioning of the PEA as an investment at whatever price they feel makes it worthwhile. This is what we have today in the major cellular bands of operation.

As illustrated by this, neither of these situations should be allowed as they go against the spirit of CBRS being a “Citizen’s” band as they seek to monopolize PAL spectrum for their constituents. They do not suggest a balance, but seek to economically and technically steer CBRS to become a “Carrier’s” band.

Second, it is worth mentioning that if CTIA wished to suggest a more balanced approach that would improve the licensing landscape for their larger members without making PAL spectrum economically unviable for CII and others, they may have presented that the Commission consolidate urban census tracts that fall below a minimum area into groups of 2 or more. This would strive to “balance” license area sizes in urban centers as Radio Frequency (RF) challenges may be difficult to manage in very small census tracts, versus a reasonable sized tract found in more suburban or rural areas. What would even be more complete is for the Commission to consider a new licensing paradigm that is a combination of census tracts in urban areas that limit the spectrum valuations while also providing a reasonable size, and using counties (or Parish/District as applicable) in rural areas. This would align with a suggestion by API and ENTELEC that County-based licensing may be an alternative for consideration in rural areas but not in urban areas, as an alternative to purely census tract licensing everywhere.

CTIA’s response points out a desire for some level of global alignment in their introduction, inferring that their response will foster a greater alignment. We urge the Commission to understand that globally, API members do obtain spectrum to support operations, including 3.5 GHz. It is not just for mobile devices and carriers. While there is certainly a benefit in global alignment, that alignment does not have to make the spectrum unobtainable for smaller operations. Enabling CBRS to support private wireless systems, for industrial and business operations that have fixed or mobile topology, including internet, intranet, SCADA, IoT and other applications is clearly a goal that should be enabled by CBRS.

Lastly, CTIA has correctly pointed out on page 3 of its response that Commission wants CBRS policy to “support a variety of different use cases”. However, the CTIA response is not in alignment with that, as API represents several of those other use cases. There is also fundamental disagreement in the implied analogy that auction returns to the Commission are more “guaranteed” with rule changes that promote carrier investment. While carrier’s certainly buy a lot of hardware, we believe that CBRS with rules that promote an alignment more in order with API’s suggestions will create more for the economy than incremental purchases from CTIA’s membership (which will probably happen regardless, as the 3.5 GHz band is part of the 3GPP standards). The Commission should also not lose sight of the fact that Industrial users, including the energy industry, contribute billions of dollars to the economy. Thus, fostering inclusive rules for API member’s is certainly both a vote on use cases as it is for improving the return on resource investment for CBRS spectrum.

We hope that the Commission understands API's stance with respect to the CTIA response and will remain true to CBRS as a "Citizen's" band.

Respectfully submitted,

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