

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)
)
Spectrum Task Force Requests Information)
On Frequency Bands Identified By NTIA As) **WT Docket No. 10-123**
Potential Broadband Spectrum)

**To: The Chief, Office of Engineering and Technology
The Chief, Wireless Telecommunications Bureau**

**COMMENTS
OF THE
AMERICAN PETROLEUM INSTITUTE**

The Telecommunications Subcommittee of the American Petroleum Institute (“API”) submits these Comments in response to the Commission’s Public Notice seeking information on bands identified by the National Telecommunications and Information Administration (“NTIA”) for accommodating wireless broadband.¹ API is particularly encouraged that the 3550-3650 MHz band has been identified for “fast track” review to identify suitability for non-Federal use and suggests below rules to maximize the use of the band when it is released in the next few years.

I. Background

API is a national trade association representing approximately 400 companies involved in all phases of the petroleum and natural gas industries, including the exploration, production, refining, marketing and transportation of petroleum, petroleum products and natural gas. The

¹ Spectrum Task Force Requests Information On Frequency Bands Identified By NTIA As Potential Broadband Spectrum, Public Notice, ET Docket No. 10-12, DA 11-444 (Rel. Mar. 8, 2011) (“Public Notice”). The Public Notice requested Comments by April 22, 2011, but did not establish a timeframe for Reply Comments. API requests that if the Commission cannot accept these Comments after April 22, 2011, it treat them as a written ex parte.

API Telecommunications Subcommittee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the petroleum and natural gas industries.

API member companies utilize a variety of communications systems authorized by the FCC to meet private, internal communications requirements, including Private Land Mobile Radio Services (“PLMRS”) pursuant to Part 90, Private Operational-Fixed Microwave Services (“POFS”) pursuant to Part 101, and license exempt spread spectrum systems in the 902-928 MHz, 2.4 GHz and 5.8 GHz bands under Part 15 of the Commission’s Rules. These systems serve a variety of vital telecommunications functions, including communications with remote oil and gas exploration and production sites for voice and data applications, communications with refineries, the extension of circuits to remote pipeline pump and compressor stations, and supervisory control and data acquisition systems (“SCADA”) that remotely monitor and control oil and gas wells and pipelines and allow petroleum and natural gas companies to conduct their day-to-day operations in a safe and efficient manner.

Increasingly, API member companies are utilizing the Commission’s “hybrid” licensed/unlicensed 3650-3700 MHz (“3.65 GHz”) band for higher speed point-to-multipoint mission critical IP-based applications such as voice, data, and SCADA necessary to support, monitor, control and secure the nation’s pipeline and plant infrastructure. Due to the importance of such systems, API was an active participant in the Commission’s rule making proceeding regarding the use of the 3.65 GHz band. Once the 3.65 GHz band was introduced in November 2007, an API member company was the first entity licensed by the Commission to operate in the band.

II. The Commission Should Adopt Site-Based Coordination Procedures for the 3550-3650 MHz band.

The 3.65 GHz band is the only site-based licensed band available for higher speed point-to-multipoint private internal communications. For that the reason, the band increasingly has become an important option for the oil and natural gas industry. That said, API believes that the licensing rules for the 3.65 GHz band provide a sound model but should be improved upon before being applied to the 3550-3650 MHz band.

Key elements of the Commission's 3.65 GHz band rules include the registration of new stations in a common database; a requirement that 3650 MHz band equipment employ a "contention-based" protocol; and the obligation of licensees to mutually resolve interference problems (without any "first-in" rights of priority).

Most notably, however, there are no coordination standards for entry into the 3.65 GHz band. This serves to decrease efficient use of 3.65 GHz band spectrum and increases the likelihood of interference complaints.² The potential for interference in unlicensed bands is substantial and unpredictable and the actual distance that can be covered often is far less than what the equipment specifications suggest can be accomplished.

By contrast, licensed, coordinated operations are capable of operating at higher power levels and of transmitting over greater distances without causing or receiving harmful interference.

² In the Commission's proceeding to adopt rules for the 3.65 GHz band, API noted that the maximum amount of both coverage and reliability can be achieved with licensed (as opposed to unlicensed) devices. See In the Matter of Unlicensed Operation in the 3650-3700 additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band Amendment of the Commission's Rules With Regard to the 3650-3700 MHz Government Transfer Band, API Comments (August 11, 2005).

API stated its concern that without the development of coordination standards and guidelines, the operational environment for the 3.65 GHz band would, over time, increasingly resemble an unlicensed scenario, with reduced utility to entities seeking greater reliability over a wider area of coverage.³ This fear has begun to be realized as demonstrated by the recent complaint of Neptuno Networks (“Neptuno”) against World Data PR Inc., which Neptuno argued that the Commission’s 3.65 GHz band rules did not serve to prevent harmful interference to its facilities in Puerto Rico.⁴ API believes that the threat of interference evidenced in the Neptuno complaint is likely to increase as the 3.65 GHz band becomes more congested and ultimately depresses efficient utilization of the 3.65 GHz band that could be addressed through coordination.

Coordination standards also could better address requests to locate base/fixed stations near incumbent, fixed-satellite service users. The current exclusions zones are overbroad and the process of securing consent from disincentivized fixed-satellite service earth station licensees is poorly defined and unreliable. Coordination through uninterested third parties will provide licensees with a readily identifiable path towards deployment.

Such an approach could entail, for example, the development of either interim or long-term coordination procedures, the establishment of a channelization plan for the band, and/or the development of other technical standards aimed at preventing the chaos that often has

³ Id.

⁴ See World Data PR Inc. Applications for Base/Fixed Station Registrations in the 3650-3700 MHz Band under Nationwide, Non-exclusive License Call Sign WQJ1716, Memorandum Opinion and Order, FCC 11-21 (Feb. 23, 2011).

ensued in the unlicensed bands. NTIA indicates that it anticipates a five-year process to open the 3550-3650 MHz band for non-Federal use. Development of coordination standards should be dual-tracked with NTIA's review.

III. The Commission Should Maximize the Use of the 3550-3650 MHz Band in Coastal Regions.

The Commission's Public Notice states that "[u]nder the NTIA proposal, non-Federal users would be prohibited from operating up to as much as 570 km from the U.S. coastline, and additional exclusion zones would be established for ten locations."⁵

NTIA's Fast-Track Report appears to indicate that the purpose of these license exclusion zones along the U.S. coastline is to protect non-Federal base stations from high power U.S. Navy radar systems.⁶

The inability to access the 3550-3650 MHz band in onshore and offshore coastal regions, especially in the Gulf of Mexico, due to blanket exclusion zones would significantly decrease the utility of the band to the oil and natural gas industry. To the extent that the coastal exclusion zones are intended only as a paternalistic measure to protect non-Federal users from interference, API recommends that they be eliminated to allow users the option to deploy in coastal and offshore areas.⁷ Interference resistant systems using filtering, dynamic frequency selection or other technologies may allow use of the 3550-3650 in coastal areas, particularly when offshore

⁵ Public Notice at 3.

⁶ An Assessment of the Near-Term Viability of Accommodating Wireless Broadband Systems in the 1675-1710 MHz, 1755-1780 MHz, 3500-3650 MHz, and 4200-4220 MHz, 4380-4400 MHz Bands, U.S. Department of Commerce ("Fast-Track Report"). The Fast-Track Report notes that the ten inland exclusion zones are intended to protect military operations.

⁷ The Commission must also clarify that offshore use of the 3550-3650 MHz band will be permitted, which is not directly addressed in the Public Notice.

Navy radar systems are not in use. Users should have the option of determining for themselves whether an acceptable level of service can be provided in coastal regions.

III. CONCLUSION

API supports NTIA's and the Commission's efforts to provide access to additional spectrum and urges the Commission to consider rules for the 3550-3650 MHz band consistent with the above comments.

Respectfully submitted,

**THE AMERICAN PETROLEUM
INSTITUTE**

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