BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In the Matter of	)	
	)	
Review of the Spectrum Sharing Plan	)	ET Docket No. 02-364
Among Non-Geostationary Satellite	)	
Orbit Mobile Satellite Service Systems	)	
In the 1.6/2.4 GHz Bands	)	

To: The Federal Communications Commission

COMMENTS
OF THE
AMERICAN PETROLEUM INSTITUTE
AND THE
UNITED TELECOM COUNCIL

The American Petroleum Institute ("API"), by its attorneys, and the United Telecom Council ("UTC") (together, "API/UTC") are pleased to submit these Comments to the Federal Communications Commission ("FCC" or "Commission") in response to the Notice of Proposed Rule Making ("NPRM") released in the above-captioned proceeding on February 10, 2003.[1] In particular, these Comments respond to the Commission's inquiry regarding the potential reallocation to other uses of returned Big LEO spectrum in the 2483.5-2492.5 MHz and 2498-2500 MHz bands.[2]

I. PRELIMINARY STATEMENT

1. API is a national trade association representing approximately 400 companies involved in all phases of the petroleum and natural gas industries, including the exploration,

[1] 68 Fed. Reg. 33666 (June 5, 2003).

[2] See NPRM at ¶ 272.

production, refining, marketing and transportation of petroleum, petroleum products and natural gas. The API Telecommunications Committee is one of the standing committees of the organization's General Committee on Information Management & Technology. The Telecommunications Committee evaluates and develops responses to state and federal proposals affecting telecommunications facilities used in the petroleum and natural gas industries.

2. UTC is an international trade association representing the telecommunications interests of hundreds of electric, gas, water and steam utilities and natural gas pipelines. UTC's core members provide public safety- and public service-related services throughout the United States and its possessions, across Canada and in South America and Europe. UTC's members range in size from large combination electric-gas-water utilities that serve millions of customers, to smaller, rural electric cooperatives and water districts that serve only a few thousand customers each.

3. API's Telecommunications Committee is supported and sustained by companies that are authorized by the Commission to operate telecommunications systems in various of the licensed radio services. For instance, API's members utilize facilities in the Private Land Mobile Radio Services ("PLMRS"), licensed under Part 90 of the FCC's rules, to support the search for and production of oil and natural gas, to ensure the safe pipeline transmission of natural gas, crude oil and refined petroleum products, to process and refine these energy sources and to facilitate their ultimate delivery to industrial, commercial and residential customers. Many API member companies also utilize facilities authorized in the Private Operational-Fixed Microwave Services ("POFS") pursuant to Part 101 to serve a variety of vital telecommunications functions (*e.g.*, 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). Additionally, some API member companies operate ship and private coast radio facilities (authorized under Part 80) and aviation radio facilities (governed by Part 87).

4. As a supplement to the aforementioned licensed radio systems, many API member companies operate unlicensed "spread spectrum" systems in the 902-928 MHz, 2.4 GHz and 5.8 GHz bands for both point-to-point and point-to-multipoint communications systems. These systems (like the licensed systems discussed above) are used for a variety of voice, as well as data, services for monitoring and control functions that help petroleum and natural gas companies conduct their day-to-day operations in a safe and efficient manner.

5. Similarly, UTC's member entities depend on reliable and secure communications to assist them in carrying out their internal system operations and obligations to provide water and power service to the public. These companies operate mission-critical voice and data communications systems in the PLMRS, and SCADA and other telemetry operations in the Multiple Address Service ("MAS"), Fixed Microwave Service and others. Such radio systems provide routine and emergency voice and data communications for repair and restoration of power, as well as control and monitoring of the nation's power, water and pipeline distribution systems. These systems utilize allocations in the frequency bands below 50 MHz, 150-174 MHz, 450-470 MHz, 470-512 MHz, 800 MHz, 900 MHz and 2.4 GHz bands. Microwave systems can be located on various bands between 900 MHz and 19 GHz or higher. Some UTC member companies use unlicensed spread spectrum in the 2.4 GHz and 5 GHz bands for data functions. However, due to the heavy and varied use of the bands, unlicensed spectrum generally is not appropriate for emergency communications or other functions where 100%

reliability or system control is needed.

6. Telemetry services are the communications backbone for utility remote monitoring and control, and PLMR services are the network nerve-endings for voice dispatch and data applications for routine maintenance and emergency restoration. "Any failure in their ability to communicate by radio could have severe consequences on the public welfare."[3] Therefore, network reliability and integrity must be maintained to the highest standards for the safety of utility work crews and the public that relies on the services that they help deliver.

7. The continued operation of the licensed and unlicensed private radio systems employed by petroleum and natural gas, power and water companies is absolutely essential to protecting lives, health and property, both in support of the day-to-day operations of these companies, as well as during responses to emergency incidents and natural disasters. These systems are integral to the provision of our nation's energy resources and basic quality-of-life services to the public. Due to the critical importance of such systems to the operations of its members, API and UTC have been active participants in all of the Commission's major rule making proceedings that have addressed the use of spectrum in the private (licensed) radio services and the availability of spectrum for unlicensed applications such as spread spectrum devices.

II. COMMENTS

8. The Commission asks in its NPRM whether any returned Big LEO spectrum in the 2483.5-2492.5 MHz and 2498-2500 MHz ("2.4 GHz") bands should be allocated "for site-

[3] See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies; Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz; Petition for Rule Making of The American Mobile Telecommunications Association, *Report & Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd. 22709, 22746 at ¶76 (2001).

based or critical infrastructure licensees."[4] As discussed below, API/UTC believes that there is a strong critical infrastructure industry need for licensed Internet Protocol ("IP") delivery systems (among other potential applications) that could be met in the 2.4 GHz band.

A. API/UTC Supports a Licensed, Site-Based Critical Infrastructure Allocation in the 2.4 GHz Band for IP Delivery Systems and Other Potential Applications

9. API/UTC appreciates the Commission's apparent recognition in its NPRM that critical infrastructure industry ("CII") companies may have special communications needs that warrant separate spectrum allocations. Particularly in today's atmosphere of heightened security concerns, CII entities are confronted with great challenges in ensuring that their operations do not threaten public safety (as a result of acts of sabotage or terrorism, as well as due to accidents or natural disasters); reliable communications systems are critical to this effort. It is important that the Commission's spectrum allocation decisions foster the ability of CII entities to meet their vital communications needs in an optimal and efficient manner. While the 2.4 GHz spectrum at issue in the instant proceeding is not appropriate for interoperable, wide-area voice/data communications, and would not take the place of a vitally needed allocation for such services, it would be of great use to CII entities seeking to move to more advanced technology to control the infrastructure they use to provide basic services efficiently and safely.

10. As API discussed in its recent comments in response to the Commission's Notice of Inquiry regarding unlicensed spectrum,[5] some API member companies have been using unlicensed Internet Protocol ("IP") based telecommunications systems to improve and modernize their SCADA and remote data access systems. The benefits (often safety-related) of such an approach include faster response time, greater monitoring capacity, the ability to have

[4] NPRM at ¶ 272.

[5] See In the Matter of Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band, ET Docket No. 02-380, *Notice of Inquiry* (rel. Dec. 20, 2002).

information available in many locations simultaneously, the ability to make multiple use of a single communications facility, the ability to make use of (and interface to) standard software, the ability to interact effectively with large data houses in the field, and the ability to modify software remotely. Unlicensed Wireless Ethernet Radio equipment (both point- to-point and point-to-multipoint) has been a cost-effective tool to get IP-type connectivity pushed out to many remote locations. Experience has shown, however, that the potential for interference with unlicensed devices is substantial and that the actual distance that can be covered with unlicensed devices is often far less than what the equipment specifications suggest could be accomplished without interference. Perhaps for this reason, many countries have concluded that there is a need for a coordinated/licensed version of wireless IP delivery systems for critical infrastructure companies, private businesses, municipalities and Wireless ISP's to use to reliably deliver IP-based services.

11. API/UTC agrees that critical infrastructure companies have an acute need for interference-protected wireless IP transmission systems. Returned Big LEO spectrum in the 2.4 GHz band could be used to meet this need, as well as other potential CII communications requirements that may be identified. Accordingly, API/UTC urges the Commission to proceed with a CII allocation in the 2.4 GHz band. Because CII entities are exempt from spectrum auctions pursuant to the Balanced Budget Act of 1997,[6] and their operations typically are not suited to geographic-area licensing, API/UTC believes that this spectrum should be assigned on a site-based, first-come, first-served basis. As experienced frequency coordinators, API and UTC look forward to discussing with the Commission possible means of managing and licensing such spectrum efficiently.

[6] See 47 U.S.C. § 309(j)(2)(A).

III. CONCLUSION

12. API/UTC urges the Commission to reallocate for critical infrastructure industry use any returned Big LEO spectrum in the 2.4 GHz band. This spectrum could be used to, among other things, satisfy a currently unmet need for licensed IP delivery services, thereby enhancing the ability of critical infrastructure entities to conduct their operations in a safe and efficient manner.

WHEREFORE, THE PREMISES CONSIDERED, the American Petroleum Institute and the United Telecom Council respectfully submit the foregoing Comments and urge the Federal Communications Commission to act in a manner consistent with the views expressed herein.

Respectfully submitted,

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