

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

In the Matter of)	
)	
Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended)	WT Docket No. 99-87
)	
Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies)	RM-9332
)	
Establishment of Public Service Radio Pool in the Private Mobile Frequencies Below 800 MHz)	RM-9405
)	

COMMENTS OF UTC

United Telecom Council

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Summary

UTC, on behalf of the nation's electric, gas and water utilities, and natural gas pipelines, urges the FCC to implement faithfully the provisions of the Balanced Budget Act of 1997 (97 BBA). The 97 BBA provides important limitations on the use of spectrum auctions, including the obligation to avoid mutual exclusivity through engineering, licensing and other methods. Congress confirmed and highlighted this obligation in the 97 BBA, as well as in recent correspondence to the FCC. The obvious emphasis placed by Congress on the obligation to avoid mutual exclusivity demonstrates that the FCC must first determine whether mutual exclusivity can be avoided before it can decide to use auctions. The 97 BBA also specifically exempts utilities and pipelines from auctions as “public safety radio services.”

UTC does not believe that the BBA was intended to expand eligibility for traditional “public safety” spectrum, but to protect additional types of services that are closely related to these traditional public safety providers. Therefore, UTC is not seeking new utility or pipeline access to existing public safety spectrum allocations. Instead, UTC urges the FCC to consider establishing three (3) categories of service in all existing and future private bands:

- (1) Public Safety, including traditional emergency response agencies such as police and fire.
- (2) Public Service, including other “exempt” services such as utilities, pipelines and railroads.
- (3) Industrial/Business, including services that do not fall within the “public safety radio services” definition.

UTC strongly opposes the reclassification as “auctionable” of existing bands of spectrum that utilities and pipelines use for communications systems that protect and promote the safety of life, health or property. Such a policy would be directly contrary to the intent of Congress and to reasonable statutory interpretation. The BBA, by providing that utility and pipeline communications systems would be exempt from auctions, clearly envisioned that additional licenses would be available for these services.

UTC supports the FCC proposal to establish a presumption that government entities be eligible for exempt spectrum so long as these entities are using this spectrum to protect the safety of life, health or property. Similarly, UTC urges the FCC not to require additional eligibility demonstrations, such as governmental authorizations, for non-governmental entities that are deemed eligible for exempt spectrum. UTC also strongly opposes any restriction that would prevent the use of exempt spectrum for both public safety and internal business communications. Such a restriction is contrary to the clear intent of Congress and would result in all public safety entities having to carry two sets of radios: one to be used in the event of an emergency and the other radio for non-critical communications. This absurd result is clearly contrary to the public interest.

UTC believes that instances of mutual exclusivity in applications filed by services that are exempt from auctions will be very rare given both the nature of many exempt systems and the FCC’s statutory obligation to avoid mutual exclusivity in licensing. In the event that mutually exclusive applications are filed for exempt spectrum, UTC believes that

alternative dispute resolution techniques, such as private negotiation and/or arbitration, should be used to encourage the resolution of mutual exclusivity without involvement by the FCC.

UTC urges the FCC not to introduce geographic licensing or auctions into the private mobile or microwave bands. No pre-determined geographic license would be able to satisfy adequately the varied needs of private users such as utilities and pipelines. Pre-determined geographic licenses would require utilities and pipelines to seek more spectrum than they actually need, contrary to sound spectrum management and efficiency. In addition, many private bands are already so congested that geographic licensing would be infeasible, including the private land mobile bands below 512 MHz, the 800 and 900 MHz private bands as well as the 928/952/956 MHz multiple address system (MAS) bands. UTC recommends that the FCC not introduce geographic licensing and auctions in private spectrum bands, including specifically the 25-50 MHz, 150-174 MHz, 450-512 MHz, 800 MHz I/LT and Business Radio, 900 MHz I/LT and Business Radio and private operational fixed microwave bands.

While UTC strongly believes that the FCC should not introduce auctions in the private spectrum bands, if auctions are introduced in these bands, UTC urges the FCC to:

- (1) provide a uniform set of guidelines for the protection or relocation of incumbents based on the established rules for the relocation of 2 GHz microwave systems; and
- (2) permit

incumbent licensees to expand or modify their systems prior to the introduction of auctions, and permit reasonable system modifications after auctions.

UTC strongly supports the creation of a third pool as proposed in the joint petition filed last August by UTC, the American Petroleum Institute and the Association of American Railroads. This pool will protect existing users from new instances of interference and protect access to spectrum by CII.

UTC supports a phased-in approach to narrowbanding in the private land mobile bands below 512 MHz, but strongly opposes mandatory narrowbanding in the bands above 512 MHz. UTC urges that any narrowbanding plan follow certain basic principles: (1) narrowbanding deadlines must provide an adequate period for the amortization of equipment costs; (2) those bearing the burden of narrowbanding should be given the opportunity to accrue the benefits; and (3) the introduction of narrowbanding in the private land mobile bands should be viewed as a spectrum management tool to ease overcrowding in these bands and promote greater shared use of the spectrum, not as a way to introduce auctions and geographic licensing into overcrowded bands.

UTC reminds that the FCC that it has a public interest obligation to ensure that licenses are available to all segments of the private industry and recommends that the FCC craft its auction rules to ensure that a wide variety of applicants can participate effectively in auctions. UTC therefore recommends that the FCC: (1) adopt eligibility requirements that

specify which types of users, based on the purpose for which the spectrum may be used, may bid for particular licenses and which exclude commercial applicants from bidding for private spectrum; (2) provide limitations on the amount of spectrum or the size of the license area to ensure that private users, which generally require smaller license areas and less spectrum, can effectively participate in auctions; and (3) take into account the amount of spectrum and geographic area occupied by incumbents in determining the appropriate size and amount of spectrum for new licenses to be auctioned.

UTC opposes the FCC's proposal to license band Managers, noting that this concept is untried and could be disastrous for those entities that require access to spectrum to meet critical internal operational needs. As an alternative, UTC recommends that the FCC seek to further privatize its licensing functions by providing additional responsibilities to frequency advisory committees.

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Comments of UTC

Pursuant to Section 1.405 of the Federal Communications Commission's (FCC) Rules, the United Telecom Council (UTC), hereby submits its comments in response to the *Notice of Proposed Rulemaking (NPRM)* in the above referenced proceeding. UTC strongly urges the FCC to recognize clear statutory obligations to continue to avoid mutual exclusivity in licensing and to exempt from auctions those radio systems used by utilities and pipelines to protect and promote public safety. UTC also urges the FCC to avoid imposing unnecessary restrictions on the use of exempt spectrum. UTC supports the establishment of a three-pool approach to radio licensing in private bands to ensure continued access by Public Safety, Public Service and Industrial/Business users. Finally, UTC urges the FCC to establish reasonable rules for participation in auctions to ensure that all types of services have access to spectrum.

I. Introduction

UTC is the national representative on communications matters for the nation's electric, gas, water and steam utilities, and natural gas pipelines. 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. All UTC members depend on reliable communications systems in carrying out their important public service obligations, and many operate private wireless systems in the bands below 512 MHz, as well as at 800 and 900 MHz . UTC's members also depend on private operational fixed microwave facilities licensed under Part 101. UTC serves as an authorized frequency advisory committee for the private land mobile radio (PLMR) bands below 512 MHz, and has been designated as the primary coordinator for the radio channels formerly allocated to the Power Radio Service. UTC's members rely on their PLMR systems to provide a variety of critical services, including communications with emergency dispatch and restoration crews, and use private microwave to perform functions critical to the safe provision of essential public services.

UTC continues to play an active role in the development of FCC regulations that protect important private operations and promote the development of innovative and spectrally efficient technologies. UTC also played a key role in the development of the statutory language regarding the appropriate scope of the FCC's spectrum auctioning authority. On behalf of its approximately 1,000 member organizations, UTC is pleased

therefore to have this opportunity to offer its comments on the implementation of the spectrum-related provisions of the Balanced Budget Act of 1997 (97 BBA).

II. Background and Overview

The 97 BBA substantially changed the way in which the FCC can resolve mutually exclusive applications for many types of radio services. Whereas previous FCC auctioning authority had been limited to those applications involving subscriber-based services, the new authority permits, and in fact, requires the FCC to use auctions for a variety of services if mutual exclusivity cannot be avoided.

However, the 97 BBA did not provide for unfettered use of this licensing tool. The 97 BBA imposed several important limitations on the FCC's use of spectrum auctions. First, the auctioning authority is limited to those instances in which mutually exclusive applications are received.¹ Second, the expansion of auctioning authority to particular services must still be considered in light of the FCC's obligation to consider the public interest in promulgating regulations; the FCC's expanded authority does not supercede the FCC's general obligation to regulate in the public interest.² Finally, certain services have been specifically exempted from auctions, including "public safety radio services."³

¹ 47 U.S.C. §309(j)(1).

² 47 U.S.C. §303.

³ 47 U.S.C. §309(j)(2)(A).

The FCC's rules implementing the 97 BBA's spectrum auctioning provisions must take into account the reasons for the expansion of the auction authority as well as the reasons for the restrictions on this authority. Competitive bidding is simply a spectrum management tool. It is a means to an end, a way to attain the goals of efficiency in the use and licensing of spectrum. However, it is not a goal in and of itself, nor is it the only tool that can be used to attain these goals. The FCC must continue to regulate "as public interest, necessity and convenience requires," and cannot base its decision as to the use of auctions for a particular band on the potential receipt of revenue. Section 309(j)(7)(A) of the Communications Act of 1934 (Communications Act) states that the "Commission may not base a finding of public interest, convenience, and necessity on the expectation of Federal revenues from the use of a system of competitive bidding..."⁴

UTC supports the FCC's efforts to undertake a comprehensive review of its licensing processes in light of the BBA provisions. The FCC must ensure that its spectrum policies are coherent and uniform; however, the FCC must not simply promulgate rigid regulations for the sake of consistency. The regulations must accommodate the myriad of incumbent users and systems, as well as take into account the expectations of these users based on previous FCC regulations and policies. UTC has raised the issue of the appropriate role of the BBA's spectrum auctioning authority in numerous proceedings and

⁴ 47 U.S.C. §309(j)(7)(A).

hereby incorporates its comments in these proceedings by reference.⁵ UTC also encourages the FCC to continue its efforts to delve into the impact of the BBA in specific spectrum bands, particularly the 900 MAS bands, and promulgate rules in these other proceedings without delay.⁶

UTC is concurrently filing comments in this proceeding jointly with other representatives of the Critical Infrastructure Industries (CII). These Joint Comments, filed by UTC, the Association of American Railroads (AAR) and the American Petroleum Institute (API), address issues related to the “public safety radio services” exemption from auctions as well as the UTC/AAR/API proposal to establish a new Public Service Pool in the bands below 512 MHz. UTC’s individual comments are intended to supplement these Joint Comments, as well as to address issues not addressed in the Joint Comments.

III. The Appropriate Use of Spectrum Auctions by the FCC

A. Obligation to Avoid Mutual Exclusivity in Licensing

In the *NPRM*, the FCC raises a number of important issues relating to the appropriate use of spectrum auctions in the post-BBA regulatory environment. One of the most important of these issues surrounds the “scope and content” of the FCC’s statutory

⁵ See e.g., UTC’s Comments and Reply Comments on Petition for Rulemaking to Establish a Public Service Pool, RM-9405 (filed December 23, 1998); Petition for Rulemaking to Establish a Public Service Pool, RM-9405; Joint Supplemental Comments, WT Docket 97-81 (filed October 30, 1998).

⁶ In the Matter of Amendment of the Commission’s Rules Regarding Multiple Address Systems, WT Docket No. 97-81.

obligation to avoid mutual exclusivity.⁷ The FCC seeks comment on whether its analysis of this obligation should change in light of the BBA's spectrum auction provisions. UTC strongly urges the FCC to reconsider its previous analysis and to recognize that this obligation is a precondition to the use of auctions. The FCC must determine that it cannot avoid mutual exclusivity before delving into the thorny issues surrounding the application of auctions to particular bands or services.

The FCC notes that, prior to the 97 BBA, it interpreted its statutory responsibility under Section 309(j)(6)(E) as imposing the obligation to avoid mutual exclusivity only when it would further the public interest goals of Section 309(j)(3).⁸ Thus, the FCC treated this obligation no differently than its other public interest obligations.⁹ UTC believes that this interpretation is contrary to the intent of Congress as expressed in the 97 BBA. As the FCC notes, Congress "retained and highlighted" the FCC's obligation under Section 309(j)(6)(E) in the 97 BBA.¹⁰ The FCC's spectrum auctioning authority was amended by the BBA to include the condition that auctions could be used if and only if mutual exclusivity existed consistent with the FCC's established obligation to avoid mutual exclusivity. Moreover, in report language accompanying the BBA, Congress explained that

⁷ *NPRM* at ¶23.

⁸ *NPRM* at ¶61. Section 309(j)(6) reads:

Nothing in this subsection, or in the use of competitive bidding, shall be construed to relieve the Commission of the obligation in the public interest to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings.

⁹ While the US Court of Appeals generally upheld the FCC's authority to ignore the obligation to avoid mutual exclusivity in some circumstances, this decision was issued prior to the enactment of the 97 BBA. See *DIRECTTV, Inc. v. FCC*, 110 F. 3d 816 (DC Cir. 1997). In the 1997 BBA, Congress went to great lengths to highlight this obligation in light of concerns regarding the FCC's interpretation of this provision.

it was "particularly concerned that the Commission might interpret its expanded competitive bidding authority in a manner that minimizes its obligations" to avoid mutual exclusivity and thus overlook ways to accomplish this goal.¹¹

In December of 1998, Congress again reminded the FCC of this statutory obligation to avoid mutual exclusivity and of its reasons for confirming this obligation in the BBA. In a letter to Chairman Kennard, six (6) congressional leaders noted that Congress "did not engage in an idle act" when it confirmed the FCC's responsibility to avoid mutual exclusivity in licensing.¹² Instead, Congress was "concerned that the Commission was ignoring its obligations under Section 309(j)(6)(E)."¹³

The obvious emphasis placed by Congress on the obligation to avoid mutual exclusivity demonstrates that the FCC must first determine whether mutual exclusivity can be avoided, and should not continue simply to weigh this as one of the public interest objectives of Section 309(j)(3).¹⁴ If Congress had intended this to be simply one of the public interest objectives, it would not have included a specific reference to this obligation in Section 309(j)(1). Indeed, the language of Section 309(j)(1) clearly demonstrates that the obligation to avoid mutual exclusivity, unlike the public interest obligations of 309(j)(3), is a condition precedent to the use of auctions: "If, consistent with the obligations in

¹⁰ *NPRM* at ¶60.

¹¹ See HR Conf Rep. No. 105-217, 105th Cong. 1st Sess at p. 572 (1997).

¹² Letter to Chairman Kennard from Senators John Breaux, Slade Gorton, Spencer Abraham and Thomas Daschle, and Representatives Billy Tauzin and John Dingell. (December 22, 1998) at p. 2.

¹³ *Id.*

¹⁴ *NPRM* at ¶64.

paragraph (6)(E), mutually exclusive applications are accepted...” The other public interest obligations are not conditions precedent, but rather, factors that must be considered once the decision has been made to use auctions.

B. The Scope of the Spectrum Auction Exemption

In the event that mutual exclusivity cannot be avoided through licensing or engineering solutions, the FCC must consider whether any of the spectrum auction exemptions apply. Among the statutory exemptions provided in the BBA is one for "public safety radio services." This term is defined to include "private internal radio services used by State and local governments and non-government entities and including emergency road services provided by not-for-profit organizations, that – (1) are used to protect the safety of life, health, or property; and (ii) are not made commercially available to the public."¹⁵ While the FCC recognizes the application of this exemption to its statutory auctioning authority, the FCC raises a number of issues pertaining to the scope of this exemption. UTC urges the FCC faithfully to carry out the clear intent of Congress in drafting these provisions.

As noted in the CII Joint Comments in this proceeding, Congress was clear in the BBA that the “public safety radio services” definition includes internal utility, pipeline and railroad communications systems. Congress further clarified this definition in the Conference Committee report that accompanied this legislation.

¹⁵ P.L. 105-33, Section 3002(a)(2) amending Section 309(j)(2) of the Communications Act.

[T]he exemption from competitive bidding authority for “public safety radio services” includes “private internal radio services” used by **utilities, railroads, metropolitan transit systems, pipelines, private ambulances, and volunteer fire departments.** Though private in nature, the services offered by these entities protect the safety of life, health, or property and are not made commercially available to the public.¹⁶

Utilities and pipelines were included in this exemption in recognition of the important services they provide to the public as well as the critical role that radio communications plays in the provision of these services. Reliability of the communications network is essential to the continued safe operation of the electric grid and, as additional suppliers and users of electric power are brought on line through deregulation in this industry, the communications networks that tie the grid together will become even more critical. In addition, mobile radio is used by utilities to dispatch crews and materials, and to coordinate service restoration during and following emergency situations, such as downed power lines or damaged gas mains. Mobile radio is also used for nuclear plant security and emergency response capabilities and hydraulic dam flood warning sirens and alarms.

Drinking water companies rely on radio systems to protect the nation's water supplies. Water companies use supervisory control and data acquisition (SCADA) systems to prevent the loss of system integrity from sources such as pump failures and aging infrastructure. Moreover, water companies rely on radio systems to: (1) increase source water protection by monitoring water quality through use of remote data acquisition systems; (2) improve remote treatment management systems; (3) increase distribution

¹⁶ H. Rpt. 105-49, *Congressional Record*, p. H6173 (June 29, 1997) (emphasis added).

system operational control; and (4) enhance system efficiency. Water company radio systems are essential to protect the public from both acute pathogenic and chemical risks and to reduce chronic lifetime health risks.

Private communications systems are used by pipelines to ensure the safe transmission of natural gas and are essential to provide communications in normal areas of operation and in particularly challenging work environments, such as offshore drilling rigs and production platforms, storage tank farms, below-ground facilities and areas with difficult terrain. Reliable two-way communications protect natural gas company personnel as they perform daily tasks that need to be coordinated around production, transportation and processing systems.

The exemption from auctions for utilities, and other CII, is also appropriate in light of the nature of their use of radio communications. Unlike many other industries, as regulated public service entities, utilities and pipelines are under specific public safety obligations that compel them to operate internal communications networks. Statutes, regulations and standards requiring communications by utilities and pipelines include:

- Under the Pipeline Safety Act, emergency response plans for gas pipelines must include reliable communications with fire, police and other public safety officials. Internal communications systems are essential to satisfying this requirement.
- The Federal Emergency Management Agency (FEMA) requires reliable primary and backup means of communications between a nuclear facility and the utility's near-site emergency operations facilities, state and local emergency operations centers, radiological monitoring teams and the Nuclear Regulatory Commission. Reliability of

these communications systems must be demonstrated under emergency conditions that would overwhelm public or third party systems.

- The North American Electric Reliability Council (NERC) standards also require “reliable and secure telecommunications networks” and the use of exclusive communications channels between the systems and control centers of adjacent electric systems. NERC standards are mandatory for most, if not all, electric utilities.
- The Federal Energy Regulatory Commission (FERC) has adopted regulations requiring utilities to open their transmission systems to access by other wholesale power providers, a requirement that will require effective operational controls to maintain system reliability. Similarly, state legislatures and regulators in many states are also looking at ways to open utility distribution systems to access by wholesale and retail competitive service providers, which will introduce new complexities into system control.

Based on the clear intent of Congress and the regulated nature of the utility and pipeline industries, the FCC must not simply “exempt” these services from auctions, but must modify its licensing rules to give this exemption some practical effect. For instance, the FCC must not apply the exemption only to those bands of spectrum for which utilities and pipelines do not have access. While UTC agrees with the FCC’s proposal to exempt spectrum allocated for use by traditional public safety agencies,¹⁷ UTC also urges the FCC to provide access to, and to continue to allocate spectrum for, those exempt services that are not eligible for these bands.

UTC does not believe that the BBA was intended to expand eligibility for traditional “public safety” spectrum, but to protect additional types of services that are closely related to these traditional public safety providers. Therefore, UTC is not seeking new utility or

¹⁷ *NPRM* at ¶¶27-29.

pipeline access to existing public safety spectrum allocations. Instead, these entities urge the FCC to consider establishing three (3) categories of service in all existing and future private bands:

- (1) Public Safety, including traditional emergency response agencies such as police and fire.
- (2) Public Service, including other “exempt” services such as utilities, pipelines and railroads.
- (3) Industrial/Business, including services that do not fall within the “public safety radio services” definition.

As explained more fully in Section IV below, this classification has already been proposed by the CII for the private land mobile bands below 512 MHz. A three-pool structure will ensure that all “public safety radio services” continue to have access to spectrum without having to bid at auction, will protect traditional public safety spectrum and will eliminate difficult licensing issues surrounding the mingling of exempt and non-exempt services in the same band.

UTC strongly opposes the reclassification as “auctionable” of existing bands of spectrum that utilities and pipelines use for communications systems that protect and promote the safety of life, health or property. Such a policy would be directly contrary to the intent of Congress and to reasonable statutory interpretation. The FCC must do more than simply “grandfather” existing utility and pipeline systems. The BBA, by providing that utility and pipeline communications systems would be exempt from auctions, clearly envisioned that additional licenses would be available for these services. Congress did not intend for the FCC to be able to circumvent the provisions of BBA by simply reclassifying

all private bands as “non-public safety radio service” spectrum. The plain meaning of the statute indicates that there would continue to be spectrum for all “exempt” services.

1. Private Internal Radio Services, Not Made Available to the Public

The FCC also seeks comment on how it should interpret other provisions of the “public safety radio services” definition that will help determine the appropriate scope of the exemption. The FCC, for instance, asks how it should interpret the phrase “private internal radio services” and the restriction that public safety radio services not be made available to the public.¹⁸ In UTC’s view, these two provisions should be interpreted similarly. UTC does not believe that Congress intended these two provisions to have distinct meanings but to emphasize strongly that exempt spectrum must be used to meet internal, non-commercial needs. UTC therefore recommends that the FCC interpret the non-commercial proviso to have the same meaning as “private internal radio services.”

UTC also agrees with the FCC that both these terms should be interpreted in accordance with existing FCC rules and policies.¹⁹ UTC therefore supports the definition of a private internal radio services as one “in which the licensee does not receive compensation, and all messages are transmitted between fixed operating positions located on premises controlled by the licensee and the associated fixed or mobile stations or other

¹⁸ *NPRM* at ¶¶31-33, ¶¶45-51.

¹⁹ *NPRM* at ¶32.

transmitting or receiving devices of the licensee.”²⁰ UTC strongly supports including within this definition licensees that operate systems on a not-for-profit basis and under a cost-sharing arrangement, on a cooperative basis or as a multiple licensed system. Numerous utilities operate these not-for-profit shared systems to meet critical internal needs in a cost-effective manner. As utilities seek new ways to reduce costs and as spectrum becomes more scarce, more of these systems are likely to be deployed.²¹ The FCC should therefore encourage spectrum efficiency by including these types of systems within the exemption as private, noncommercial systems.²²

²⁰ *NPRM* at ¶32.

²¹ As described more fully in the CII Joint Comments, certain members of Congress emphasized their support for systems that are shared among exempt services during the deliberations on the 97 BBA. Senator McCain, Chairman of the Senate Commerce Committee, and Senator Bryan emphasized the need for interoperability between public safety and public service entities during deliberations on the Balance Budget Act of 1997.

Sen. Bryan: I rise in support of the proposal to ensure that sufficient radio spectrum is made available for public safety and maintenance of the Nation’s critical infrastructure, such as pipeline, railroad, and electric, gas and water utility services... I hope the FCC will promote the development of shared public safety/public service radio systems...

Sen. McCain: I would also like to offer my support for the allocation of new spectrum for use by public safety and public services organizations and would urge the FCC to adopt rules that would facilitate, if not promote, the development of shared radio systems by such entities.²¹ *Congressional Record* at p. S6325 (June 25, 1997).

²² However, UTC opposes permitting for-profit “private” systems to be eligible for exempt spectrum. Unlike not-for-profit systems developed to meet the internal needs of utilities and other licensees, for-profit systems are similarly situated to commercial communications carriers and are using spectrum not as a tool to meet public safety needs but as a product to be resold.

2. Showing of Eligibility

The FCC seeks comment on two issues pertaining to eligibility for exempt “public safety radio services” spectrum. In the *NPRM*: (1) the FCC proposes all state and local government entities be presumed eligible for licensing in the auction-exempt public safety radio services without a further showing of eligibility;²³ and (2) the FCC requests comment on whether non-government entities should be required to obtain written governmental approval of their exempt public safety radio service licenses.²⁴ UTC urges the FCC to adopt a uniform policy regarding these issues and permit licensing by both government and non-government entities without further showings of eligibility.

UTC supports the FCC proposal to establish a presumption that government entities be eligible for exempt spectrum so long as these entities are using this spectrum to protect the safety of life, health or property. This presumption is consistent with the FCC’s established rules for the 700 MHz public safety spectrum, which provide no additional eligibility demonstrations for these entities.²⁵ Similarly, UTC urges the FCC not to require additional eligibility demonstrations, such as governmental authorizations, for non-governmental entities that are deemed eligible for exempt spectrum. As the FCC notes, unlike the BBA provisions regarding eligibility to the 700 MHz public safety spectrum, the

²³ *NPRM* at ¶36.

²⁴ *NPRM* at ¶37.

²⁵ See The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements through the Year 2010, WT Docket No. 96-86, *First Report and Order and Third Notice of Proposed Rulemaking* (released September 29, 1998).

BBA “public safety radio services” exemption provides for no such demonstration. Congress was well aware of the terms of Section 337(f)(1) and failed to provide this restriction in Section 309(j)(2), explaining that the definition of “public safety radio services” in Section 309(j)(2) was “much broader” than the definition of “public safety service” in Section 337(f)(1).²⁶ There can be no doubt, therefore, that the absence of this restriction was intentional. If Congress considered and rejected such a restriction in Section 309(j)(2), the FCC must not supercede the judgement of Congress. Moreover, such a verification request would unduly complicate the ability of utilities and other exempt users to secure access to spectrum -- a result that could not have been intended by Congress.

3. Restrictions on Use

The FCC also seeks comment on what provisions should be established to ensure that licensees continue to use “exempt” spectrum in accordance with the terms of Section 309(j)(2).²⁷ While acknowledging at several points in the *NPRM* that this exemption is much broader than the definition of “public safety services” in Section 337(f)(1),²⁸ the FCC appears to ignore this fact in its discussion of potential use restrictions. Instead, the FCC turns the analysis on its ear. Noting that Section 337(f)(1) includes a restriction requiring that the 700 MHz “public safety spectrum” be used for services “the sole or principal purpose” of which is to protect public safety, the FCC asks whether the absence of this

²⁶ See Conference Report at p. 572.

²⁷ *NPRM* at ¶43.

²⁸ See *NPRM* at ¶21, ¶28, ¶36, ¶37.

restriction in Section 309(j)(2) somehow means that exempt “public safety radio services” spectrum must only be used to protect public safety.²⁹

UTC fails to see how the FCC could reasonably pose this question. Congress has clearly explained, and the FCC has acknowledged, that the “public safety radio service” exemption is much broader than the definition of “public safety services” found in Section 337 (f)(1). Congress also failed to include restrictive language in Section 309(j)(2), even though such language was included in Section 337(f)(1). The clear intent of Congress was, therefore, that this restriction was not to be included.

Reading this restriction in Section 309(j)(2) would not only frustrate the intent of Congress, but would also have an absurd result. All “public safety radio services,” including traditional public safety agencies, make use of radio spectrum for a combination of business- and public safety-related communications. Utilities and pipelines use this spectrum to protect public safety, for instance by communicating with crews repairing downed electric lines, but they also use these same systems for routine business communications. It is the availability of the spectrum in times of emergency and the public safety/public welfare nature of utility and pipeline services that is determinative of the public safety nature of the communications. Requiring that exempt spectrum be used only for public safety purposes would have the effect of requiring each police, fire, utility, pipeline and railroad employee to carry two sets of radios: one to be used in the event of an

²⁹ *NPRM* at ¶44.

emergency and the other radio for non-critical communications. This absurd result is clearly contrary to the public interest.³⁰

UTC also reminds the FCC that the 97 BBA's expanded spectrum auctioning authority is specifically limited to "initial licenses or permits."³¹ Therefore, UTC strongly urges the FCC to avoid adopting regulations that would have the effect of applying use restrictions on existing licensees. Incumbent licenses have relied on the existing FCC regulations in deploying their systems, investing billions of dollars in the construction and operation of private communications systems. This investment must not be put in jeopardy through the application of new restriction on the use of existing systems.

4. Resolving Mutually Exclusive Applications Among Exempt Services

The 97 BBA generally eliminated the FCC's authority to resolve instances of mutual exclusivity through the use of lotteries. In light of the absence of this authority, the FCC asks how it should resolve mutual exclusivity with respect to spectrum that is exempt from competitive bidding.³² As explained more fully in the Joint Comments of the CII, UTC believes that instances of mutual exclusivity in applications filed by services that are exempt from auctions will be very rare given both the nature of many exempt systems, which operate on a site-by-site basis subject to coordination on a first-come, first-served basis, and

³⁰ Moreover, given the clear intent of Congress to protect public safety through the "public safety radio services" exemption, there can be no doubt that Congress did not intend to increase the costs and burdens of maintaining duplicative communications systems on public safety entities.

³¹ 47 U.S.C. §309(j)(1).

³² *NPRM* at ¶ 52.

the FCC's statutory obligation to avoid mutual exclusivity in licensing. In the event that mutually exclusive applications are filed for exempt spectrum, UTC believes that private negotiations can serve to resolve the competing claims of the licensees. UTC therefore reiterates its support for the use of private alternative dispute resolution techniques, such as private negotiation and/or arbitration, to encourage the resolution of mutual exclusivity without involvement by the FCC.

UTC, as part of the joint comments with other representatives of the CII, recommends that the FCC provide applicants who file mutually exclusive applications with a specified time period (e.g., 60 or 90 days) to resolve the conflict through private negotiation. Through negotiation, the parties could devise engineering solutions and/or coordination procedures that would enable them to share the desired spectrum. If no resolution is reached by the end of the negotiation period, the applicants could be provided with the option of using expedited ADR procedures such as binding arbitration, mediation or other ADR techniques.³³ Frequency coordinators or other industry groups could be specifically authorized to work with the applicants to develop a list of ADR resources, and to establish model guidelines for the resolution of complaints. If these procedures prove unsuccessful, the requested frequencies would be deemed unavailable for licensing by any party for a period of at least 90 days. Such a measure would encourage the applicants to reach a mutually agreeable solution to the conflict.

³³ The FCC has already endorsed the use of ADR to resolve disputes. See 47 C.F.R. §1.18.

C. Auctions Should Not Be Introduced in Private Radio Spectrum

In the *NPRM*, the FCC seeks comment on not only what types of services are statutorily exempt from auctions but also what bands should be excluded from auctions for public interest reasons. The FCC asks whether the introduction of geographic-based licensing in private bands currently licensed on a site-by-site basis would “speed the assignment of new channels and facilitate the build-out of wide-area systems” or “whether the public interest would be served by retaining the current licensing scheme rather than adopting geographic licensing and competitive bidding.”³⁴ UTC strongly urges the FCC not to introduce geographic licensing or auctions into the private mobile or microwave bands.

Geographic licensing is not appropriate to meet the specific needs of many private users. Private users differ tremendously with regard to spectrum needs, even within individual industries. Utilities, for instance, vary greatly in size. Some of UTC’s smallest members require communications coverage over an area of only several square miles, while some of its largest members operate service territories that comprise several states. Pipelines also have unique needs, occupying relatively narrow ribbons of land across numerous states. No pre-determined geographic license would be able to satisfy adequately the needs of these types of users. Pre-determined geographic licenses would require utilities and pipelines to seek more spectrum than they actually need, contrary to sound spectrum management and efficiency. Site-by-site licensing, on the other hand, encourages spectrum

³⁴ *NPRM* at ¶67, ¶68.

efficiency by allowing a private user to tailor its communications system to its individual coverage requirements and enhancing the licensee's ability to avoid co-channel interference within its own operations.

Site-by-site licensing has also resulted in the speedy assignment of licenses to users. The FCC-authorized frequency advisory committees have been successful in meeting the needs of private users for licenses in a timely fashion. Moreover, the FCC's universal licensing system (ULS) will further streamline the licensing process, speeding up the assignment process and reducing the administrative burdens on users and the FCC. In fact, the most significant licensing delays have occurred not as a result of the licensing process but due to FCC proposed rule changes.³⁵

In addition, many private bands are already so congested that geographic licensing would be infeasible, including the private land mobile bands below 512 MHz, the 800 and 900 MHz private bands as well as the 928/952/956 MHz multiple address system (MAS) bands. UTC strongly objects to the FCC's suggestion that requiring existing private users to relocate to other spectrum or to implement narrowband technologies could be one way to make geographic licensing feasible.³⁶ UTC believes that this approach directly contradicts the FCC's statutory obligation to avoid mutual exclusivity. Moreover, freeing up spectrum for geographic licensing by relocating incumbents ignores the spectrally

³⁵ It is interesting to note that many of these delays have resulted in the FCC's promulgation of proposed rules that have as one of their goals the speedy issuance of licenses.

³⁶ *NPRM* at ¶71.

efficient nature of site-by-site licensing for many private users, such as utilities and pipelines, whose service territories do not conform to the uniform geographic boundaries used for auctions. Finally, relocating incumbents is impractical in private bands, especially given the number of displaced systems that would need to be relocated, and the very limited amount of spectrum available today for licensing private wireless systems.³⁷

For these reasons, UTC recommends that the FCC not introduce geographic licensing and auctions in private spectrum bands, including specifically:

- 25-50 MHz band;
- 150-174 MHz band;
- 450-512 MHz band;
- 800 MHz I/LT and Business Radio Bands;
- 900 MHz I/LT and Business Radio Bands; and
- private operational fixed microwave bands.³⁸

D. To the Extent that Auctions are Introduced in Private Bands, the FCC Should Take Steps to Protect Incumbent Operations

While UTC strongly believes that the FCC should not introduce auctions in the private spectrum bands for the reasons outlined above, if auctions are introduced the FCC must enact protections for incumbent operations. In particular, UTC urges the FCC to: (1) provide a uniform set of guidelines for the protection or relocation of incumbents based on

³⁷ While the relocation of incumbents has worked in the past in some bands (for instance, the 2 GHz emerging technology band), recent experience has shown its limitations. In the 800 MHz band, Nextel has encountered difficulties in finding adequate replacement spectrum to fulfill its relocation obligations. There is also a great deal of concern among 2 GHz microwave users that adequate replacement spectrum will not be available for systems that are relocated from the upper 2 GHz band.

the established rules for the relocation of 2 GHz microwave systems; and (2) permit incumbent licensees to expand or modify their systems prior to the introduction of auctions, and permit reasonable system modifications after auctions.

The investment in wireless communications by the utility and pipeline industry is enormous, including billions in equipment costs alone. The FCC must protect the substantial investment in existing private communications systems by establishing equitable guidelines for the relocation of incumbents. In the 97 BBA, Congress noted the importance of taking into account incumbent operations when determining which bands of spectrum to auction. The 97 BBA requires the FCC to “consider the cost of relocating existing uses to other bands of frequencies or other means of communication...” when determining which bands to assign via competitive bidding.³⁹

UTC recommends that the FCC establish uniform guidelines for the relocation of incumbents based on the guidelines initially adopted for the 2 GHz emerging technology band (1850-2200 MHz band). These relocation rules were based on the following principles: (1) the costs of relocating incumbent operations is to be borne by the licensee gaining access to the spectrum; (2) if a new licensee’s operations would interfere with an incumbent’s system, that incumbent must be relocated to “comparable” facilities;” and (3) the parties should have adequate opportunity to negotiate the specific terms of the

³⁸ See 47 C.F.R §101.101.

³⁹ Section 3001 (c)(2)(B) of the 97 BBA.

relocation.⁴⁰ These same basic principles were applied to the relocation of the upper 200 specialized mobile radio channels in the 800 MHz band.⁴¹ These principles would serve to balance the interest of new licensees as well as incumbent systems.

However, relocation guidelines alone would not appropriately protect incumbents. As the guidelines envision that some incumbent operations may be able to share the band with new licensees and need not be relocated, UTC urges that that additional protections be enacted. For instance, incumbents should be permitted to expand or modify their systems to meet internal communications requirements prior to the introduction of auctions, and be allowed to make minor modifications to their systems even after the spectrum is auctioned. Given that once the “green” spectrum is auctioned, the incumbent may not be able to gain access to make necessary modifications or expansions of their systems, UTC believes that it would be inequitable to strand the incumbent’s investment by forbidding reasonable modifications. Utilities and pipelines find it necessary to modify their systems to meet evolving regulatory and consumer needs. Without a way to modify their systems, these entities would be unable to meet these changing needs.⁴²

The FCC must also seek to protect incumbents by avoiding the imposition of licensing freezes in private wireless bands. The FCC seeks comment on two possible

⁴⁰ See 47 CFR §101.69 et seq.

⁴¹ See 47 CFR §90.699.

⁴² The FCC permitted reasonable modifications to systems after auctions were introduced in the 800 MHz band. Incumbent licensees are permitted to add, remove or modify transmitter sites within their original

approaches to prevent speculative licensing activity prior to the adoption of auction rules in bands that were not previously subject to auctions: (1) the temporary suspension of applications for new systems, amendment or modifications; or (2) interim rules providing for shorter time periods for the construction or build-out of systems.⁴³ UTC strongly opposes the first option, noting that licensing freezes have been applied too broadly by the FCC in the past and have adversely affected legitimate uses of the spectrum. For example, the FCC's has recently suspended the acceptance of all applications in the 900 MHz MAS bands.⁴⁴ The FCC adopted this freeze in order to explore uncertainty relating to the introduction of geographic licensing and auctions in these bands. However, as UTC and the other representatives of the CII community noted in their *Emergency Request for Limited Exception to Licensing Freeze*, the freeze is overly broad and affects those entities, such as utilities, pipelines and railroads, that are specifically exempt from auctions.⁴⁵ The freeze of CII applications therefore serves no valid purpose and will only hamper CII efforts to deploy important internal communications systems in furtherance of their public safety obligations.

UTC urges the Commission to avail itself of the second option outlined by in the *NPRM* to prevent speculative licensing, namely that the FCC adopt interim rules specifying shorter build-out and construction time periods. UTC believes that these types of rules will

filed strength contour. 47 C.F.R. §90.693(b). UTC would recommend that similar flexibility for incumbent systems be provided in other bands that will be subject to competitive bidding.

⁴³ *NPRM* at ¶97.

⁴⁴ In the Matter of Amendment of the Commission's Rules Regarding Multiple Address Systems, WT Docket No. 97-81, *Further Notice of Proposed Rulemaking and Order*, ___ FCC Rcd ___ (1999).

sufficiently protect against speculation, while providing continued access to spectrum to meet important private needs.

IV. The FCC Should Create A Public Service Pool

In the *NPRM*, the FCC seeks comment on a *Petition for Rulemaking (CII Petition)* filed by UTC, API and AAR to establish a new Public Service Pool in the private land mobile bands below 512 MHz.⁴⁶ The *CII Petition* attempted to address interference problems stemming from the FCC's decision in 1997 to consolidate the radio service pools in these bands into two broad categories: Public Safety and Industrial/Business. The *CII Petition* proposed that the FCC establish a third pool of frequencies and that this pool include those services that are exempt from auctions, but which are not included in the Public Safety Pool.

As explained more fully in the CII Joint Comments in this proceeding, UTC strongly supports the creation of a third pool as proposed in the *CII Petition*. This pool will protect existing users from new instances of interference⁴⁷ and protect access to spectrum by CII. By protecting the critical communications capabilities of those industries upon which public safety agencies rely in emergency response situations, the new Public Service Pool would

⁴⁵ *Emergency Request for Limited Exception to Application Freeze*, WT Docket No. 97-81 (filed July 23, 1999).

⁴⁶ *NPRM* at ¶41.

⁴⁷ UTC notes that some protection has been provided against interference in the *FCC's Second Memorandum Opinion and Order* in PR Docket No. 92-235 (released April 13, 1999). However, this protection is afforded to CII systems on only a limited number of channels. The creation of the Public Service Pool would extend this protection to any channels that would be reallocated to the new pool.

enhance public safety and the lives of emergency response crews. The CII proposal provides this additional protection for public safety operations without affecting the eligibility for, or use of, channels allocated to the Public Safety Pool.

The problems caused by the licensing of new industrial and CII systems in the same pool include not only interference, but also the potential foreclosure of access to spectrum for CII systems. As more and more industrial systems are licensed, less and less spectrum will be available to meet the public safety-related needs of CII.⁴⁸ There is increasing public and governmental concern over protection of the nation's critical infrastructure against both natural disasters and intentional disruptions, and maintenance of reliable communications for CII entities will be crucial.⁴⁹ Establishing a separate pool will provide a long-term solution to both these problems.

UTC also believes that the proposed reallocation of channels to the new Public Service Pool is reasonable. Under the CII plan, the new Public Service Pool would consist of all channels formerly allocated exclusively to the Power, Petroleum and Railroad Radio Services, as well as an equitable portion of the channels formerly shared by these services with one or more of the other services in the Industrial/Business Pool. The allocation

⁴⁸ As a result of the FCC's liberal rules on the licensing of for-profit private carrier systems on the Industrial/Business channels below 512 MHz, a large number of frequencies are being licensed to these speculative for-profit carriers at the expense of entities needing frequencies to meet internal communications requirements.

⁴⁹ See *Critical Foundations: Protecting America's Infrastructure*, The Report of the President's Commission on Critical Infrastructure Protection (October 1997).

methodology used, as explained more fully in the *CII Petition*, is equitable and allocates no more spectrum to the new pool than is proper based on demonstrated usage.

UTC recommends that this three-pool approach be applied in other bands of spectrum that are currently occupied by exempt and non-exempt services, as well as to all future private wireless allocations. This approach would best satisfy the intent of Congress in drafting the BBA by protecting both traditional public safety and other critical services from auctions, while retaining a distinction between these two pools. A three pool approach is also consistent with the position of the public safety community in the *Final Report* of Public Safety Wireless Advisory Committee (PSWAC), which specifically differentiated between “public safety,” “public service” and others.⁵⁰ In response to the FCC’s plan to consolidate the private land mobile bands below 512 MHz, the PSWAC *Final Report* recommended that:

⁵⁰ 4.3.2.1 **Public Safety:** The public’s right, exercised through Federal, State or Local government as prescribed by law, to protect and preserve life, property, and natural resources and to serve the public welfare.

4.3.2.1.1 **Public Safety Services:** Those services rendered by or through Federal, State, or Local government entities in support of Public Safety duties.

4.3.2.1.2 **Public Safety Services Provider:** Governmental and public entities or those non-governmental, private organizations, which are properly authorized by the appropriate governmental authority whose primary mission is providing Public Safety services.

4.3.2.1.3 **Public Safety Support Provider:** Governmental and public entities or those non-governmental, private organizations which provide essential public services that are properly authorized by the appropriate governmental authority whose mission is to support Public Safety services. This support may be provided either directly to the public or in support of Public Safety services providers.

4.3.2.2 **Public Services:** Those services provided by non-Public Safety entities that furnish, maintain, and protect the nation’s basic infrastructures which are required to promote the public’s safety and welfare. *Final Report* of the Public Safety Wireless Advisory Committee at p. 44 and Appendix C, Section 3.1 (*PSWAC Final Report*).

If present service pools are consolidated, the subcommittee recommended that three categories be established. These are 1) Public Safety, 2) Public Services, and 3) Business/Commercial, with the Public Safety frequencies identified by service. The services should be ranked according to their relative importance in performing essential Public Safety responsibilities and preserving the nation's infrastructure. Interservice sharing should be authorized only from higher ranked to lower categories, except in shared systems.⁵¹

In light the “public safety radio service” exemption and the support of the CII and public safety communities, UTC strongly urges the FCC to adopt a three-pool approach to existing and future private spectrum allocations.

V. UTC Supports Efforts to Introduce Greater Efficiency in Private Land Mobile Bands Below 512 MHz

The FCC seeks comment in the *NPRM* on a *Petition for Rulemaking* (AMTA *Petition*) filed by the American Mobile Telecommunications Association, Inc. (AMTA)⁵² to require non-Public Safety licensees between 222-896 MHz to transition to 12.5 kHz channels by a date certain or become secondary.⁵³ While UTC supports a phased-in approach to narrowbanding in the private land mobile bands below 512 MHz, UTC has concerns with the proposal as set forth by AMTA. As explained in its comments on the AMTA proposal, UTC supports the establishment of deadlines for narrowbanding in the bands below 512 MHz so long as the deadlines provide sufficient time for the amortization

⁵¹ *PSWAC Final Report* at p. 62 and Appendix E, Sections 4.4.8-4.4.17.

⁵² *AMTA Petition*, RM-9332 (filed June 19, 1998).

⁵³ *NPRM* at ¶71.

of equipment costs.⁵⁴ However, UTC strongly opposes mandatory narrowbanding in the bands above 512 MHz.

UTC was one of the first user groups to embrace a phase-in approach to narrowbanding in the bands below 512 MHz. In 1995, UTC, along with user groups representing 95% of the private land mobile licensees, submitted a consensus plan detailing how narrowbanding could be effectively implemented without disrupting incumbent private land mobile operations. UTC believes that this basic approach, updated to take into account the reliance of licensees on established FCC rules, is still in the public interest. This approach is based on several basic principles.

First, any proposal for mandating the use of narrowband systems in the bands below 512 MHz must provide an adequate period for the amortization of equipment costs, especially for those companies that have deployed new systems based on the FCC's refarming rules. With approximately nineteen million transmitters in this band, the amount of existing investment is staggering.⁵⁵ The cost of replacing these systems with narrowband systems will be even greater. Moreover, for companies such as utilities and pipelines that are heavily regulated, the time required to plan, and in some cases seek approval for, this change-out is significant.

⁵⁴ Comments of UTC, RM-9322 (filed August 31, 1999).

⁵⁵ 1994 Federal Communications Commission Annual Report, p. 121.

Second, those bearing the burden of narrowbanding should be given the opportunity to accrue the benefits. UTC therefore recommends that any user converting to 12.5 kHz technology be given the opportunity to apply for any “new” channels created as part of such a mandatory conversion process so long as it meets any applicable loading criteria. The “new” channels should be allocated to the individual radio service pools for use by eligible entities. Thus, in accordance with the CII’s three-pool plan, the new channels that are created from existing channels should be allocated to the Public Safety, Public Service or Industrial/Business Pool based on the allocation of existing channels to these pools. This allocation will ensure that each pool has access to an equitable number of channels based on demonstrated usage to meet the unique needs of the entities eligible for these pools. Moreover, the allocation would ensure that services using these channels for purely for-profit communications will not gain access to Public Service or Public Safety channels and thereby threaten the ability of these entities to meet critical operational needs.⁵⁶

Third, UTC urges the FCC to recognize that the introduction of narrowbanding in the private land mobile bands is a spectrum management tool that should be used to ease overcrowding in these bands and promote greater shared use of the spectrum. Narrowbanding should not be used as a way to introduce auctions and geographic licensing into overcrowded bands. UTC is concerned that the FCC has raised the issue of narrowbanding as part of its request for “comment on ways in which [the FCC] might

⁵⁶ As UTC demonstrated in its Utilities Spectrum Assessment Taskforce (UAST) Report, utilities and pipelines have growing need for additional spectrum to meet evolving internal applications. A copy of this report is available from UTC’s web site at www.utc.org.

convert existing licensing to geographic licensing.”⁵⁷ UTC believes that this type of analysis runs contrary to the FCC’s obligation to avoid mutual exclusivity. The FCC should not be seeking ways to free up spectrum to make the introduction of auctions possible. Instead, it should be maintain the current shared licensing scheme that continues to demonstrate success in promoting efficiency and innovation.

As narrowbanding is a spectrum management tool, UTC also recommends that it be used only where necessary to ease overcrowding. UTC therefore urges the FCC to implement narrowbanding in phases. UTC recommends that the transition to narrowband equipment occur first in urban areas where spectrum congestion is most severe. “Urban Systems” would be those located within 100 miles of any of the top 60 urban areas listed at Section 90.741.⁵⁸ All other areas would be considered “Rural.” UTC would also recommend that new systems – that is, those that are not functionally integrated with an earlier-installed land mobile radio system -- be required to use narrowband equipment before the change-out of existing systems.⁵⁹ Finally, UTC would not require existing rural system to use narrowband equipment at this time. Absent a showing of need for additional spectrum in rural areas, such a requirement would serve no valid spectrum management purpose and would needlessly impose equipment change-out costs on rural systems. A summary of UTC’s narrowbanding plan is included in the table below.

⁵⁷ *NPRM* at ¶71.

⁵⁸ UTC recommends that, upon request by a petitioning party, other areas of the country may be declared “Urban” if it is demonstrated that this area is subject to increased frequency congestion necessitating early introduction of spectrum efficient technologies.

**UTC PROPOSED TRANSITION PLAN
PRIVATE LAND MOBILE BANDS BELOW 512 MHz**

	2005	2010
MANUFACTURERS	All <u>newly</u> type accepted equipment must be maximum 6.25 kHz or 6.25 kHz compatible	
URBAN SYSTEMS Existing Systems		All urban systems must operate at no more than 12.5 kHz bandwidth to retain primary status.
New Systems	Must operate at no more than 12.5 kHz bandwidth to attain primary status	
RURAL SYSTEMS Existing Systems		
New Systems	Must operate at no more than 12.5 kHz bandwidth to attain primary status.	

Finally, narrowbanding should not apply to the private bands above 512 MHz. UTC strongly opposes the introduction of mandatory narrowbanding of the 800 MHz Industrial/Land Transportation and Business channels as requested in the *AMTA Petition*. As noted in UTC’s comments in response to the *AMTA Petition*, AMTA’s request is premised on faulty reasoning. In particular, AMTA claims that its members have been denied the opportunity to construct additional for-profit radio systems because licensees using their radio systems for internal communications are not driven by economic incentives to implement more spectrally efficient radio systems. AMTA’s claim, however, does not explain how the mandatory narrowbanding of I/LT or Business channels, which cannot be used for for-profit radio systems, could satiate its members’ appetite for new for-profit

⁵⁹ To be considered an “existing system,” the facilities must be in operation prior to the relevant deadline or must be functionally integrated with such a system

channels.⁶⁰ AMTA also fails to explain why a rule change is necessary given that the FCC's rules already permit specialized mobile radio (SMR) systems to implement more efficient technologies in the 800 MHz bands. Additionally, SMR operators already have opportunities to participate in auctions for additional spectrum, something that is not practical or economically justified for private users such as utilities and pipelines.⁶¹

If implemented, this proposal would force utilities, pipelines and other users of 800 MHz channels to make costly and difficult equipment change-outs. These licensees, however, cannot simply become commercial carrier customers, as AMTA seems to believe. Radio systems operated by electric, gas and water utilities and pipelines are typically installed because commercial service providers cannot meet their coverage and service

⁶⁰ By Public Notice, dated July 21, 1999 (DA 99-1431), the FCC invited comment on whether PMRS frequencies in the 800 MHz band should be licensed for CMRS use. Given the significant amount of bandwidth already made available for CMRS use and the extremely limited amount available for PMRS use, UTC urges the FCC to retain the current prohibition on for-profit use of Business and I/LT channels at 800 and 900 MHz. Due to prior FCC policies allowing intercategory sharing in the 800 MHz band, UTC's member companies have experienced difficulties securing channels to operate much needed internal communications systems. It is disingenuous to suggest that CMRS operators will meet utility and pipeline communications needs because, as has been demonstrated time and time again, CMRS systems have not typically provided the coverage, reliability or service features needed by the utility and pipeline industries at reasonable cost. Indeed, UTC is aware of examples of utilities that have attempted to meet internal needs through CMRS systems, only to be forced to re-implement a PMRS solution in light of the inadequacies of the CMRS system. In addition, utilities and pipelines cannot tolerate the potential for precipitous changes to the CMRS system (e.g., conversion from an analog to a digital system) that could cause severe expense and disruption to the utility's on-going business.

⁶¹ AMTA's proposal could benefit its members in one indirect way. By increasing regulatory uncertainty surrounding the future licensing of I/LT and Business channels in the 800 MHz band, the introduction of mandatory narrowbanding could undermine private licensees' faith in the FCC's licensing process. If the FCC's 800 MHz rules are so fraught with uncertainty that anyone who invests in such a system, even an entity using the system to protect public safety, can end up losing this investment in a short time, private licensees may seek to implement alternative systems or, if possible, to take service from commercial licensees. Given the lack of alternatives for licensees such as utilities and pipelines to find alternative spectrum or to take commercial service to meet critical needs, AMTA's proposal is more likely simply to increase costs for these licensees and their ratepayers and threaten the ability of these entities to provide critical services.

requirements. Utilities and pipelines have a need to maintain control and reliability of service and to minimize dependence on other critical infrastructure (i.e., public telecommunications networks) in order to promote service restoration following widespread disasters.⁶² Moreover, utility service is not only offered, and pipelines are not only constructed, in areas with populations sufficient to support commercial wireless services. Commercial systems typically cannot support these entities' needs.

The cost of narrowbanding 800 MHz systems is significant and would impose a great deal of hardship on utilities and pipelines. These systems are generally modern, expensive and sophisticated systems. Investment in 800 MHz systems is not a casual business decision or one that can be easily altered once a system has been planned or installed. Examples of the impact that mandatory narrowbanding would have on the utility industry are provided below:

American Electric Power (AEP) is a publicly owned electric utility operating across seven states. AEP operates an enormous 800 MHz trunked two-way dispatch radio system across its large geographic area. Internal crews rely on the numerous benefits of trunking for normal daily work activities, but especially in storm restoration efforts to provide quality, quick restoration of customers' electricity. AEP has been constructing its 800 MHz system for almost seven years. Upon final build-out, the radio system will include over 130 sites, nearly 500 repeaters, and approximately 100 separate frequency pairs. The large infrastructure will accommodate over 7,000 radio users. AEP foresees operating the system for useful life of at least 15 years.

⁶² The quasi-public safety attributes of utilities and pipelines has been acknowledged by the FCC in its refarming proceeding. See Second Report and Order in PR Docket No 92-235, 12 FCC Rcd 14307, 14329-30 (1997), Second Memorandum Opinion and Order in PR Docket No. 92-235, ___ FCC Rcd ___ (1999). The critical nature of utilities and pipelines was also recognized by Congress in the 97 BBA, the President's Commission on Critical Infrastructure Protection and the Public Safety Wireless Advisory Committee.

FirstEnergy (formerly Ohio Edison and Cleveland Electric Illuminating Company) estimates it would cost millions of dollars to convert its wide area 800 MHz system to narrowbanding. In addition, because most of the utility's service territory is in the US/Canada border region, cross-border coordination and channel availability could impose additional constraints on complying with such a narrowbanding requirement.

Arizona Public Service Company (APS) is an investor-owned utility serving more than 750,000 customers throughout most of the state of Arizona. APS employees depend on a reliable, well-designed two-way radio system to implement construction activities, dispatch switching orders, perform emergency repairs, and render other important utility communications for customer support. APS has migrated to the 800 MHz band to overcome problems inherent in the 150 MHz band, including high noise levels and adjacent channel interference in the Phoenix metropolitan area that made two-way radio use impossible and threatened employee safety. APS is in the process of constructing a new statewide 800 MHz trunking system at a cost of approximately \$18 million. APS is licensed for "slow growth" and expects full construction by 2002. The entire system is designed and will be built to use 25 kHz bandwidth. The system will be used for mobile data as well as voice. Dedicated mobile data is currently unable to achieve 19.2 kbps throughout at bandwidths less than 25 kHz. At 12.5 kHz, 9600 kbps is believed to be the highest rate possible with existing technology, and for this reason, APS selected the 800 MHz band over the 900 MHz band, where the maximum bandwidth is only 12.5 kHz

A forced conversion to 12.5 kHz or equivalent technology would have significant financial impact on APS, caused by the replacement of almost new equipment, retrofitting other equipment for the new bandwidth, re-engineering parts of the system to alleviate noise problems, and other difficulties that would only become apparent once the system is reconfigured. APS has elected to make the investment in a private 800 MHz system because, from its recent experience, a commercial system does not provide the reliability needed for electric utility communication users, nor do the new non-APCO 25 digital technologies currently support critical dispatch functions to any significant degree,

Central and South West (CSW) is an investor-owned utility operating in Arkansas, Louisiana, Oklahoma, and Texas, with a service territory of 152,00 square miles. CSW operates a wide-area 800 MHz trunked mobile radio system with 128 sites. Complete system change-out to achieve a narrowbanding requirement is estimated to be in excess of \$30 million. CSW operates the radio system as a corporate resource during disaster recoveries. All radio system users have the same technology, which enables

CSW rapidly to deploy disaster recovery teams. Switching a single area (such as the Tulsa, OK area) to a different technology would drastically affect the company's capabilities to operate safely and efficiently during storm or disaster recovery situations. During the weekend of June 21, 1998, a severe windstorm struck Tulsa, and many residents were without power. Crews from Arkansas and southern and western Oklahoma assisted with service restoration. CSW personnel utilized the radio system to work together safely and efficiently to make repairs during the emergency restoration period.

Consumers Energy Company (CEC) is an investor-owned gas and electric utility serving approximately 1.5 million customers in the state of Michigan. CEC made an investment in private wireless technology because of several factors. First, the state Public Service Commission expected to see improvement in responsiveness to residents' requests for emergency services. The safety of the utility's own field workforce was also paramount. A wide area 800 MHz radio system was therefore installed. Operating efficiencies were gained far beyond pre-project plans. Mobile data offered significant gains in service quality, speed and efficiency of services provided. Narrowband technology will have a negative impact on data throughput, thus negating some of the efficiencies gained from the deployment of the new system.

IF AMTA's proposal is adopted and CEC is forced to make an early change-out of its radio system in the Detroit area, the company will be faced with the decision of whether to (1) change-out the entire radio network to avoid segmenting its workforce field communications systems into non-interoperable units, (2) forego the safety and efficiency of the workforce and only change-out that portion in the Detroit area, or (3) give up primary license status and let a premier radio system die a premature death with no public wireless system available to replace it – a choice no responsible utility could make.

Based on the foregoing, UTC therefore urges the FCC not to introduce narrowbanding in the 800 MHz I/LT or Business bands.

VI. The FCC Should Design Auctions to Permit Participation by a Wide Range of Services and Industries

In the *NPRM*, the FCC seeks comment on whether it should establish eligibility restrictions for participation in auctions in private radio bands.⁶³ While the 97 BBA directs that most applications for private radio systems submitted by utilities and pipelines will be exempt from auctions, UTC acknowledges that some utilities and pipelines may wish to participate in auctions for private spectrum for internal communications systems.⁶⁴ UTC therefore reminds that the FCC that it has a public interest obligation to ensure that licenses are available to all segments of the private industry. UTC recommends that the FCC craft its auction rules to ensure that a wide variety of applicants can participate effectively in auctions.

Market forces are imperfect tools for ensuring that all users get access to needed spectrum and must be supplemented by eligibility restrictions and limitations in the amount of spectrum or size of the license area. The private wireless industry includes a wide variety of users that need spectrum for very different applications. From large private operators that need communications over hundreds of miles to small single-campus operations occupying only a few miles, the need for private spectrum varies greatly. Most of these licensees have not participated in auctions, nor could they successfully compete against large commercial telecommunications carriers. At the same time, these systems may have immediate needs for spectrum that would not be met by the commercial carriers. For instance, a small private user may need communications in an area that would not be built-

⁶³ *NPRM* at ¶¶81-87.

out by a commercial auction winner for some time. Given that the user is small, it is unlikely to sway the commercial carrier to revise its build-out schedule to meet the private user's needs.

UTC therefore recommends that the FCC adopt:

- (1) eligibility requirements that specify which types of users, based on the purpose to which the spectrum may be used, may bid for particular licenses and which exclude commercial applicants from bidding for private spectrum; and
- (2) limitations on the amount of spectrum or the size of the license area to ensure that private users, which generally require smaller license areas and less spectrum, can effectively participate in auctions.

UTC also recommends that competitive bidding designs and methodologies take into account the types of services involved, the number of licenses at stake, the number of bidders that are likely to participate and the degree to which interdependence may be important to those likely to bid on a license in a particular band. UTC strongly recommends that incumbent licensees be given an opportunity to participate in auctions. These systems may have a need for spectrum to modify their systems and must not be foreclosed through FCC licensing rules or auction design. UTC therefore recommends the FCC take into account the amount of spectrum and geographic area occupied by incumbents in determining the appropriate size and amount of spectrum for new licenses to be auctioned.

VII. The FCC Should Permit Frequency Coordinators To Serve As Band Managers

⁶⁴ For example, utilities and pipelines have participated in auctions for commercial systems for purposes unrelated to their internal operations. UTC urges the FCC not to enact any impediments to the participation by utilities and pipelines to participate in auctions for commercial or private licenses.

As part of its inquiry into the use of competitive bidding and the appropriate design and methodology of spectrum auctions, the FCC inquires as to the desirability of establishing a new type of FCC authorization called a Band Manager license.⁶⁵ The holder of a Band Manager license would be authorized to sublicense portions of its spectrum to one or more classes of eligible users. The Band Manager would be responsible for ensuring that its users, or sublicensees, comply with the FCC's rules. The FCC's role would be limited to allocating spectrum for private services, establishing the size and scope of the Band Manager licenses, issuing these licenses and establishing rules preventing anti-competitive or discriminatory behavior by Band Manager licensees. While the Band Manager concept could serve as one possible way to privatize the FCC's licensing functions, UTC cannot support the concept as proposed.

This untried concept could be disastrous for those entities that require access to spectrum to meet critical internal operational needs. The potential problems are enormous. For instance, despite FCC attempts to prevent anti-competitive behavior, it may be difficult to identify this behavior. Private contractual licensing arrangements may not be subject to public scrutiny and it may take years before a pattern of anti-competitive behavior would become apparent. Even competition by Band Managers may not adequately address these anti-competitive issues unless there are sufficient numbers of these licensees in bands and sufficient opportunity for FCC and public oversight. It is unrealistic to expect all private radio applicants to make meaningful comparisons between the different Band Managers'

spectrum licensing options (e.g., interference protection and avoidance, dispute resolution, ability to expand sublicensed operations, etc.)

In addition, UTC believes that it is contrary to the BBA to require services that are exempt from auctions to pay what is essentially an indirect “auction fee” through the Band Manager. The FCC cannot circumvent the auction exemption simply by authorizing the Band Manager to recoup his auction fees from exempt services, as this fee would be the functional equivalent of requiring these services to participate in auctions themselves. Therefore, the Band Manager concept must not be applied to existing or future allocations of spectrum to be used for exempt services.

UTC is also concerned that Band Manager licensing will not adequately address the failure of the marketplace to meet the unique needs of CII. Given the need to recoup auction proceeds, the Band Managers may be unwilling to provide adequate protection against interference as this would reduce the number of sublicensees that may be packed onto their spectrum. Moreover, if interference would occur, the result may be protracted legal battles over private contractual agreements, rather than a quick resolution of the problem by the expert government agency.

As an alternative, UTC recommends that the FCC seek to further privatize its licensing functions by providing additional responsibilities to frequency advisory

⁶⁵ *NPRM* at ¶88.

committees. UTC would welcome the ability further to assist licensees in the licensing process. UTC would urge the FCC to allocate new spectrum for private wireless services based on the three categories of services identified by UTC in these comments and in the CII Public Service Pool Petition: (1) public safety; (2) public service; and (3) industrial/business. Within each of these pools, the authorized frequency coordinators could cooperate to sublicense the spectrum, resolve interference complaints (which would be greatly reduced by establishing three pools of similar users) and promote spectrum efficiency. The FCC's licensing role could be reduced while at the same time the needs of individual services could be addressed through the active participation of coordinators who are familiar with the needs of these services.

VIII. User Fees Should Not Be Addressed in this Proceeding

One issue that is raised indirectly by the FCC in the *NPRM* is the issue of user fees. The FCC notes that it has previously sought comment on the implementation of users fees as an alternative or supplement to competitive bidding.⁶⁶ However, the FCC does not specifically request comment in the *NPRM* on whether it should adopt user fees in the *NPRM*. UTC urges the FCC not to consider user fees in this proceeding.

As the FCC notes, it does not currently have authority to impose spectrum user fees.⁶⁷ The FCC's initial proposal regarding user fees, included as part of the *Third Further*

⁶⁶ *NPRM* at ¶76.

⁶⁷ *Id.*

Notice of Proposed Rulemaking in the FCC's refarming docket, was premised on this grant of statutory authority, a grant that never materialized.⁶⁸ In fact, Congress specifically considered and rejected provisions authorizing user fees in 97 BBA. UTC urges the FCC to ignore efforts to expand the scope of this rulemaking to address issues related to statutory authority that does not exist. Only upon the FCC's receipt of this statutory authority would it make sense to address how to implement such fees; indeed, further rulemaking would be required in any event.

Moreover, there is no reason to expand the scope of this already complex rulemaking to delve into an unnecessary issue that cannot be resolved without statutory authority. As the FCC notes in the *NPRM*, the main purpose of this proceeding is to implement Sections 309(j) and 337 of the Communications Act as amended by the 97 BBA.⁶⁹ Neither of these provisions involves the imposition of user fees on licensees, nor is the resolution of issues pertaining to user fees necessary to address any of the issues pertaining to the implementation of expanded auctioning authority. The FCC should keep its attention closely focused on the appropriate implementation of the 97 BBA's spectrum provisions and work to promulgate its rules in an expedited manner.

Conclusion

⁶⁸ See In the Matter of Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Services and Modify the Policies Governing Them, PR Docket No. 92-235, *Third Memorandum Opinion and Order*, __ FCC Rcd ____ (1999).

⁶⁹ *NPRM* at ¶1.

UTC urges the FCC to implement faithfully the provisions of 97 BBA, including the statutory obligation to avoid mutual exclusivity through engineering, licensing and other methods. UTC also urges the FCC to protect access to spectrum by utilities and pipelines and other “public safety radio services” by exempting these entities from spectrum auctions and establishing three (3) categories of radio services in all existing and future private bands: (1) Public Safety, including traditional emergency response agencies such as police and fire; (2) Public Service, including other “exempt” services such as utilities, pipelines and railroads (3) Industrial/Business, including services that do not fall within the “public safety radio services” definition. UTC strongly opposes the reclassification as “auctionable” of existing bands of spectrum that utilities and pipelines use for communications systems that protect and promote the safety of life, health or property.

UTC supports the FCC proposal to establish a presumption that government entities be eligible for exempt spectrum so long as these entities are using this spectrum to protect the safety of life, health or property. UTC urges the FCC not to require additional eligibility demonstrations, such as governmental authorizations, for non-governmental entities that are deemed eligible for exempt spectrum. UTC strongly opposes any restriction that would prevent the use of exempt spectrum for both public safety and internal business communications.

With regard to the licensing of private land mobile radio systems in the bands below 512 MHz, UTC supports the adoption of a Public Service Pool of frequencies for those

entities that are exempt from auctions but which are not included in the Public Safety Pool. UTC also supports a phased-in approach to narrowbanding in the private land mobile bands below 512 MHz, but strongly opposes mandatory narrowbanding in the bands above 512 MHz.

To encourage effective participation by private licensees in auctions, UTC recommends that the FCC adopt reasonable restrictions on the eligibility of bidders for private spectrum and provide limitations on the amount of spectrum or the size of the license area. UTC opposes the FCC's proposal to license band Managers, noting that this concept is untried and could be disastrous for those entities that require access to spectrum to meet critical internal operational needs. As an alternative, UTC recommends that the FCC seek to further privatize its licensing functions by providing additional responsibilities to frequency advisory committees.

WHEREFORE, THE PREMISES CONSIDERED, UTC requests the Federal Communications Commission to take action in accordance with the views expressed above.

Respectfully submitted,

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