discussed more fully below, the FCC should not entertain the possibility of realignment unless it is definitively shown that this avenue would adequately remedy interference to Public Safety users and not cause massive disruptions to other critical incumbents in the 800 MHz band.

To the extent that this showing is made, the use of realignment should be circumscribed so that it does not unnecessarily affect parties, particularly utility licensees, which are neither causing nor suffering significantly from the problem of interference. In this regard, the FCC should not reallocate I/LT, Business or General Category spectrum absent a compelling showing that this represents the best means of addressing Public Safety interference in light of the associated costs and consequences. If the FCC does pursue such reallocation, incumbents must be given replacement spectrum and it should be solely at the expense of the cost-causer, which at this point, appears to be primarily Nextel.

B. Realignment Would be Severely Disruptive to Both Incumbent and New Users of 800 MHz Band

A realignment of the spectrum at 800 MHz would have extraordinary consequences for the licensees currently using that band.

1. Realignment Would Burden 800 MHz Users Generally

Nextel's plan would completely relocate I/LT and Business users out of the 800 MHz band with the result that new equipment would be required to establish operations in the new replacement band, rendering hundreds of millions of dollars worth of equipment useless. In addition, licensees would be required to undertake costly, labor-intensive modification to their systems and purchase new equipment, the availability of which is unclear with regard to the 700

MHz band. A relocation to 900 MHz would likely require the construction of numerous additional sites to account for the differing propagation characteristics of that band. Even with an in-band relocation, the costs and disruption would be significant, as most users would have to modify each of their transmitter sites and draw in from the field their vehicular and portable units to retune them.

2. The Proposals Advocated by Nextel and Others Would Result in Extraordinary Hardship for Utilities

In comparison to most I/LT and Business licensees, the above considerations would be greatly magnified for utilities. The hard-dollar financial implications of such a change for a utility with an extensive wide-area system would be extraordinary. Utilities operate extensive systems throughout their service territory and require the construction of a large number of sites and the acquisition and use of large numbers of vehicular and portable units. SCANA has licensed 63 base stations throughout its system and these are used by approximately 10,000 mobile units. Utilities of SCANA's size must license significant amounts of spectrum, and are likely the largest users of any class of Business and I/LT licensees in the 800 MHz band.

In response to the NPRM, SCANA has evaluated the potential costs that would be incurred in connection with its system in the event that the various proposals are adopted. Based on this evaluation, SCANA projects that it would cost some $61,000,000 to purchase the new equipment that would be required by an out-of-band relocation. In addition, SCANA estimates that a total of 337,000 man hours would have to be devoted to ordering, installing, tuning and testing this equipment. SCANA believes it would require approximately five years to carry out this process.

As the suppliers of electricity and other energy products and services to the public, utilities have a unique role in the functioning of modern society. Virtually every aspect of modern life depends upon the ability of utilities to carry out their functions in a safe and efficient manner. The FCC is well aware of the vital role that land mobile communications plays in utility functions. Congress has long recognized this as well:

> In managing spectrum, the FCC . . . first should attempt to meet the requirements of those radio users which render important services to large groups of the American public, such as governmental entities and utilities, rather than the requirements of those users which would render benefits to relatively small groups.[43]

More recently, Congress has taken specific steps to protect utilities from the disruption, cost and uncertainty associated with the auction of spectrum. The 1997 Balanced Budget Act amended Section 309(j) of the Communications Act to require the Commission to award mutually exclusive applications for initial licenses or permits using competitive bidding procedures, except with regard to three discrete exemptions, one of which is pertinent to this discussion.[44] Specifically, the Balanced Budget Act amended Section 309(j)(2) of the Communication Act to read, in relevant part:

> (2) EXEMPTIONS—The competitive bidding authority granted by this subsection shall not apply to licenses or construction permits issued by the Commission—
>
> > (A) for public safety radio services, *including 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—

[43] S. Rep. No. 191, 97th Cong., 2d Sess. (1982), reprinted in 1982 U.S.C.C.A.N. 2237, 2250.

[44] Balanced Budget Act, § 3001 *et seq.*, Pub. L. No. 105-33, Title III, 111 Stat. 251, 258 (1997).

(i) are used to protect the safety of life, health, or property; and

(ii) are not made commercially available to the public; [45]

The House Conference Report to the 1997 Budget Act stated that "the 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."[46] Thus, Congress clearly recognizes that utilities must have access to spectrum to promote public safety.

The importance of utilities to national security is well established. For example, the 2001 Department of Commerce Appropriations Act required NTIA to report to Congress on the current and future use of spectrum by energy, water, and railroad service providers to protect and maintain the Nation's critical infrastructure.[47] In its Report, NTIA concluded that utilities provide essential public services and are vital components of the Nation's critical infrastructure. Any "system disruptions that are not quickly restored pose potential threats not only to public safety, but also to the Nation's economic security."[48] By way of example, the NTIA Report cautioned that a disruption in a power generating station's control computer could be "just as

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[45] 47 U.S.C. § 309(j)(2) (emphasis added).

[46] House Conf. Rep. No. 105-217, 105th Cong., 1st Sess., at 572 (1997) reprinted in 1997 U.S.C.C.A.N. 176, 192.

[47] *See* Federal Funding, Fiscal Year 2001, Pub. L. No. 106-553, 114 Stat. 2762, 2762A-73 (2000).

[48] Marshall W. Ross and Jeng F. Mao, Current and Future Spectrum Use by the Energy, Water, and Railroad Industries, Response to Title II of the Department of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations Act, 2001 Public Law 106-553, U.S. Department of Commerce, National Telecommunications and Information Administration, (Jan. 30, 2002), at 3-3 ("*NTIA Report*").

devastating" to the Nation's economy as the September 11, 2001 terrorist attacks.[49] Furthermore, the President's Commission on Critical Infrastructure Protection was established because certain critical infrastructures, such as electrical power systems, are "so vital that their incapacity or destruction would have a debilitating impact."[50] Our Nation's "economic prosperity, and quality of life have long depended on the essential services" that utilities provide.[51] For its part, SCANA has increased security at a number of facilities, in response to the events of September 11, 2001, including the Lake Murray Dam and SCANA's nuclear generating facility. These facilities have extraordinary public safety considerations. The Lake Murray Dam, for example, is located above a major population center and must be closely monitored at all times. SCANA's nuclear power plant and South Carolina's additional three nuclear power plants give rise to similar requirements. In addition, the events of September 11, 2001 have increased the urgency of coordination with and among the Public Safety and other entities that share SCANA's system.

In light of these factors, the FCC should be particularly circumspect in connection with any measures that might impose unnecessary costs or disruption on utilities' communications systems.

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[49] *Id.*

[50] Exec. Order No. 13010, 61 Fed. Reg. 37347 (July 17, 1996).

[51] President's Commission on Critical Infrastructure Protections, Critical Foundations - Protecting America's Infrastructures at ix (October 1997).

C. The Reallocation Proposals Outlined in the NPRM Are Inappropriate Measures to Remedy Public Safety Interference

Three proposals were outlined in the NPRM: one from Nextel, one from the National Association of Manufacturers, and one by the FCC itself. As explained herein, none of these reallocation proposals would provide sufficient public benefit to justify the tremendous disruption and expense that would be caused.

1. The Nextel Proposal is Inherently Flawed

Under the Nextel Plan, the FCC would relocate most of the incumbent licensees in the 800 MHz band, allocating 20 MHz of contiguous spectrum at the lower end of the 800 MHz band for Public Safety licensees, placing Digital SMR systems at the upper portion of the band, and moving Business, I/LT, and analog SMR completely out of the band. Although Nextel would relinquish its spectrum in the 700 MHz Guard Band and the 900 MHz band as replacement spectrum for these displaced Business, I/LT, and analog SMR licensees, Nextel would receive 10 MHz of spectrum in the current MSS allocation at 2 GHz. While Nextel offered to contribute up to $500 million for the relocation of Public Safety licensees, all other displaced licensees would have to relocate at their own expense.

Nextel recognizes that its Plan suffers from several significant shortcomings with respect to the expense of relocation and the lack of replacement spectrum. To remedy these problems, it proposes to allow incumbent Business, I/LT, and non-cellular SMR licensees to remain on the 800 MHz band as long as they operate on a secondary basis. This means effectively that utility operations would be subject to interference from primary users and would be subject to being shut down if they cause interference. This alternative is unacceptable for incumbent licensees in

Critical Infrastructure Industries, such as electric utilities, because of the sensitive nature of their operations.[52] Utility operations would be inconsistent with relocated Public Safety operations and secondary status would effectively constitute an immediate eviction from the 800 MHz band.

a. Nextel's Proposed Realignment Would Be Inconsistent with the FCC's Policies on Band Reallocations

There is no recent FCC precedent that would support Nextel's concept of an unfunded, wholesale and mandatory relocation of an entire class of users to a new spectrum band. Significantly, in the Emerging Technologies proceeding cited by Nextel in the White Paper, the FCC recognized the need for a different approach to spectrum allocations than the "band clearing" method applied in the 1970s.[53] The FCC noted that spectrum was much more heavily used than was the case in the 1970s and, as a result, the FCC concluded that any plan for the use of the congested spectrum between 1.85 and 2.2 GHz would have to include "specific provisions for minimizing impact on existing services."

The FCC ultimately adopted rules concerning the relocation of incumbents from the 2 GHz band that provided for compensated relocation by the Emerging Technology cost-causer or up to 10 years of primary status before the incumbents would be reduced to secondary status.[54] Thus, the FCC has previously rejected the wholesale band clearing that Nextel's proposal would

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[52] The sad irony in this proposal is that the interference-causing entity – Nextel – would be given primary status, and licensees that are not even involved in the problem would be relegated to secondary status.

[53] In the Matter of Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, *Notice of Proposed Rulemaking*, 7 FCC Rcd 1542, 1543 (1992).

[54] *See, e.g.*, 47 C.F.R. §§ 101.69 through 101.81.

establish in light of contemporary spectrum use patterns; the FCC should not now employ such an approach as a means to provide unique benefits to a single entity.

The FCC's current policy is to minimize disruption in proceedings involving the relocation of incumbent licensees,[55] the grandfathering of existing operations,[56] and the relaxation of technical and operational restrictions.[57] In particular, when deciding whether to relocate licensees, the FCC historically attempts to limit disruption to the greatest extent possible.

The FCC often conducts an in-depth study of the band at issue before proposing a relocation in order to determine if such drastic action would cause excessive disruption for existing licensees. For example, to find spectrum suitable for third generation wireless services, the FCC examined several different bands, issuing an *Interim Report* in November 2000 and a

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[55] *See* In re Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 95-18, *Second Report and Order and Second Memorandum Opinion and Order*, 15 FCC Rcd 12315, 12352 ¶ 109 (2000) ("consider[ing] it essential that the [relocation] process not disrupt the communications services provided by the existing 2 GHz fixed microwave operations") ("*MSS Second Report and Order*").

[56] *See* In re Amendment of the Commission's Rules with regard to the 3650-3700 MHz Government Transfer Band; The 4.9 GHz Band Transferred from Federal Government Use, ET Docket No. 98-237, RM-9411, WT Docket No. 00-32, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd 20488, 20500 ¶ 25 (2000).

[57] *See* In re Amendment of the Commission's Rules Concerning Maritime Communications; Petition for Rule Making Filed by Regionet Wireless License, LLC; PR Docket No. 92-257, RM-9664, *Fourth Report and Order and Third Further Notice of Proposed Rule Making*, 15 FCC Rcd 22585, 22615 ¶ 62 (2000) ("We tentatively conclude that disrupting incumbent operations and imposing transition costs in order to simplify Commission procedures would not be in the public interest . . . ."); In re Amendment of the Commission's Rules Regarding Multiple Address Systems, WT Docket No. 97-81, *Report and Order*, 15 FCC Rcd 11956, 11967 ¶ 26 (2000) ("limiting [the 928/956 MHz] bands to a particular type of service could unnecessarily disrupt incumbent operations").

Final Report in March 2001.[58] After reviewing the 2500-2690 MHz band, the FCC discarded any plan to relocate incumbent licensees either within the band or to replacement spectrum.[59] While the FCC found that a partial reallocation would "cause severe disruptions to ITFS/MMDS incumbents if they were forced to vacate a segment of the band," it noted that relocating incumbents to another band would likely impose even greater problems.[60] Thus, to minimize disruption to incumbent licensees, the FCC adopted the less intrusive option of adding a mobile allocation to the band.[61]

The FCC also rejected mandatory relocation procedures in the 3650-3700 MHz Fixed Satellite Service ("FSS") band because the licensees could employ technical restrictions to avoid interference problems.[62] Because of the cost and disruption that relocation would impose on the incumbent licensees, the FCC grandfathered these operations and permitted licensees to

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[58] *See* Office of Engineering and Technology, *et al.*, Spectrum Study of the 2500-2690 MHz Band: The Potential for Accommodating Third Generation Wireless Systems, ET Docket No. 00-258, *Final Report* (rel. Mar. 2001); Office of Engineering and Technology, *et al.*, Spectrum Study of the 2500-2690 MHz Band: The Potential for Accommodating Third Generation Wireless Systems, ET Docket No. 00-232, *Interim Report*, 15 FCC Rcd 22310 (2000).

[59] *See* In re Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, including Third Generation Wireless Systems; Amendment of the U.S. Table of Frequency Allocations to Designate the 2500-2520/2670-2690 MHz Frequency Bands for the Mobile-Satellite Service, ET Docket No. 00-258, RM-9911, *First Report and Order and Memorandum Opinion and Order*, 16 FCC Rcd 17222 ¶ 11, 28 (2001) ("*2500-2690 MHz First Report and Order*").

[60] *See id.* at ¶ 28.

[61] *See id.* at ¶ 26-27 (reasoning that it could introduce mobile uses in this band without causing harmful interference, while "permitting mobile use of the band by new service providers would pose a very high risk of disrupting important fixed operations")

[62] *See* In re Amendment of the Commission's Rules with regard to the 3650-3700 MHz Government Transfer Band; The 4.9 GHz Band Transferred from Federal Government Use, ET

negotiate for voluntary relocation.[63] Thus, the FCC implemented a less disruptive, market-driven relocation plan instead of a mandatory relocation.

Even in situations where the FCC ultimately decides to relocate incumbent licensees, it is careful to avoid unnecessary disruption. In the 2 GHz MSS relocation proceeding, the FCC concluded that it was "essential not to disrupt fixed microwave services" in those bands.[64] Although the FCC adopted relocation rules for this band, it requires MSS licensees and incumbent licensees to share the 2165-2200 MHz band whenever sharing is technically feasible.[65] MSS licensees have no obligation to relocate incumbent licensees unless and until the incumbent licensee causes harmful interference to, or receives harmful interference from, MSS operations.[66] If potential or actual interference exists, however, the FCC requires incumbent licensees to participate in *frequency coordination* before it will compel MSS licensees to relocate

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Docket No. 98-237, RM-9411, WT Docket No. 00-32, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd 20488, 20500 ¶ 25 (2000).

[63] *See id.*

[64] *See MSS Second Report and Order*, 15 FCC Rcd at 12341 ¶ 78; In re Redevelopment of Spectrum to Encourage Innovation in the Use of New Telecommunications Technologies, ET Docket No. 92-9, RM-7981, RM-8004, *Third Report and Order and Memorandum Opinion and Order*, 8 FCC Rcd 6589, 6594, 6597 ¶ 13, 21 (1993); *see also,* Amendment to the Commission's Rules Regarding a Plan for Sharing the Costs of Microwave Relocation, WT Docket No. 95-157, RM-8643, *First Report and Order and Further Notice of Proposed Rule Making*, 11 FCC Rcd 8825, 8924 (1996) (Separate Statement of Chairman Reed Hundt) (supporting the "expediting [of] the relocation of fixed microwave incumbents *without causing any disruption or harm to incumbent operations*").

[65] *See MSS Second Report and Order*, 15 FCC Rcd at 12341 ¶ 78; In the Matter of Amendment of Section 2.106 of the Commission's Rules to Allocate Spectrum at 2 GHz for Use by the Mobile-Satellite Service, ET Docket No. 85-18, *First Report and Order and Further Notice of Proposed Rulemaking*, 12 FCC Rcd 7388, 7406-07 ¶ 42 (1997) ("*MSS First Report and Order*").

[66] *See MSS Second Report and Order*, 15 FCC Rcd at 12341 ¶ 78.

the incumbent licensee's system.[67] Thus, no relocation will occur until (1) an analysis based on the technical service bulletin identifies the potential existence of interference, and (2) the parties complete frequency coordination.[68] Thus, instead of adopting rules requiring the relocation of all licensees in the band, it limited relocation to instances in which actual or potential interference rendered shared use of the spectrum band impossible.

Nextel has proposed a plan that would relocate not merely a minimal number of affected licensees, but would require almost every licensee on the band to move. In addition to disrupting every licensee in the band, the Nextel Proposal would also grant the primary source of interference -- Nextel itself -- the easiest means of relocating by allowing it to retune its equipment to another part of the 800 MHz band.

b. Nextel's Proposal Would Require Unjustified Expense

The Nextel proposal is also inappropriate because it would impose substantial expense on incumbent licensees. Although Nextel offered up to $500 million to relocate the Public Safety licensees, it is doubtful whether these funds would even begin to cover all of Public Safety's relocation costs. In addition, Nextel has not offered to reimburse any of the enormous expense of relocating the displaced Business, I/LT, and non-cellular SMR incumbent licensees, which, as detailed above, would be enormous.

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[67] *See MSS Second Report and Order*, 15 FCC Rcd at 12341 ¶ 78.

[68] *See id.*

(1) A Licensee Would be Entitled to Just Compensation for the Regulatory Taking of Its Property

It has been recognized that an FCC license is only a property right in a limited sense, which is subject to use restrictions by the agency.[69] The proposed wholesale eviction of B/ILT licensees from the 800 MHz band, however, is not merely a restriction placed upon the license. It is a targeted and specific restriction on the *equipment* itself, which was purchased and is being lawfully used pursuant to that license. Regulating the B/ILT licensees out of the 800 MHz band will render their equipment virtually useless with little or no salvage value. When the government, by regulation, so completely destroys the beneficial use of property that it is, in effect, idled, compensation is owed under the Fifth Amendment.[70]

A taking may occur through physical invasion or regulation.[71] In the context of land use regulation, the Supreme Court has recognized that if the regulation destroys all economically viable use of the land or if the owner has been called upon "to leave his property economically idle," there is a compensable taking *per se*.[72] If the destruction is less than complete, the court engages in an essentially ad hoc factual inquiry that includes analysis of three factors: 1) the extent to which the governmental action interferes with distinct, investment backed expectations; 2) the character of the governmental action; 3) the extent of economic impact on the claimant.[73]

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[69] *Sanders Brothers Radio Station v. FCC*, 309 U.S. 470 (1940).

[70] *American Pelagic Fishing Co. v. United States*, 49 Fed. Cl. 36, 46 (2001).

[71] *Multi-channel TV Cable Co. v. Charlottesville Quality Cable Corp.*, 65 F.3d 1113, 1123 (4th Cir. 1995).

[72] *Lucas v. South Carolina Coast Council*, 505 U.S. 1003, 1019 (1992); *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104 (1978).

[73] *Penn Cent.*, 438 U.S. at 124.

This three-part analysis also applies in the context of personality, such as the wireless equipment that would be at issue here.[74]

The mere fact that an industry or activity is heavily regulated does not mean that an investor can never form a reasonable expectation of a return on an investment.[75] Moreover, having established a particular regulatory scheme with specific parameters and history, the Fifth Amendment limits the actions that the government can take in regard to that regulatory scheme without compensating those who have reasonably relied upon that scheme.[76]

The character of the governmental action has been cast in terms of whether the government physically appropriates the property or comes close to doing so.[77] Two other factors are also relevant: 1) whether the action is retroactive in effect and if so, the degree of retroactivity; and 2) whether the action is targeted to a particular individual.[78]

Reallocation would effectively revoke the licenses currently held in the 800 MHz band and prohibit future uses by the current incumbents. The proposal targets B/ILT users and utilities in particular for relocation, even though those being forced to move are not responsible for the alleged problem. Action that is retroactive and targeted to a specific group supports the finding of a taking.[79]

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[74] *Eastern Enterprises v. Apfel*, 524 U.S. 498 (1998); *Andrus v. Allard*, 444 U.S. 51 (1979).

[75] *American Pelagic Fishing*, 49 Fed. Cl. at 50.

[76] *American Pelagic Fishing*, 49 Fed. Cl. at 50.

[77] *American Pelagic Fishing,* 49 Fed. Cl. at 50; *Penn Cent.*, 438 U.S. at 124.

[78] *American Pelagic Fishing*, 49 Fed. Cl. at 50; *Eastern Enterprises*, 542 U.S. at 532-37.

[79] *American Pelagic Fishing*, 49 Fed. Cl. at 51 ("Without [any] evidence of responsibility [for the alleged problem], retroactively making the regulatory scheme unavailable to the plaintiff has no support. This retroactivity favors finding a taking.").

As set forth above, SCANA has invested approximately $51,000,000 in its 800 MHz land mobile system in reliance upon the regulatory framework that has been in place for many years. Most of the equipment purchased and used in the system is not compatible with the use outside of the 800 MHz band and, as a result, would be rendered obsolete by Nextel's proposal. SCANA submits that, when considered in the aggregate across all 800 MHz I/LT and Business licensees, this factor would result in hundreds of millions of dollars of lost value, for which compensation would be owed under the Fifth Amendment.

(2) Nextel's Realignment Plan Does Not Ensure that All Affected Licensees Will be Compensated

The FCC has avoided relocation where possible and, where is was not, has provided for compensation to relocated parties. To the extent that the FCC implements a realignment to remedy Public Safety interference, it must provide for full compensation to incumbents that are not contributing to the problem. Furthermore, any reallocation in this context must require the party causing relocation to reimburse the affected parties. Specifically, the relocation of I/LT and Business entities out of, or within, the 800 MHz band should be conditioned upon the payment of relocation costs in advance by the cost causing entity.

The once-strong telecommunications industry is now subject to severe financial difficulties. Unforeseen bankruptcy and financial difficulties of bidders in the recent PCS auctions also left a large tab unpaid, and left valuable spectrum lying fallow. Mergers have also continued to be a prevalent force. Accordingly, any mandatory reallocation plan must guarantee funding to *all* licensees being evicted in order to guard against an unforeseen bankruptcy, merger

or other financial change. Funds must be placed in escrow *prior* to relocation or otherwise guaranteed, and replenished as necessary to ensure payment to all displaced licensees.

c. Nextel's Proposal Does Not Assure Comparable Replacement Spectrum for Relocated I/LT and Business Licensees

Under the Nextel Plan, incumbent Business, I/LT, and non-cellular SMR licensees face the added problem of the unavailability of spectrum in the 700 MHz and 900 MHz bands. While the Nextel Plan proposes to house some displaced 800 MHz licensees on Nextel's spectrum in these bands, it provides no evidence that it could offer adequate replacement spectrum for all displaced incumbent licensees.

(1) 700 MHz and 900 MHz Bands are too Uncertain or Limited to Provide Available and Comparable Spectrum for Displaced Incumbent Licensees

In the *NPRM*, the FCC has requested comment on Nextel's suggestion that Business and I/LT licenses should be forced to relocate to the 700 MHz "Guard Bands" or the 900 MHz band. However, the 700 MHz and 900 MHz bands would not provide adequate replacement spectrum for these licensees because the technical restrictions preclude high-quality operations, sufficient spectrum is not available, and the bands are not comparable from an operational standpoint.

The 700 MHz Guard Bands have stringent technical restrictions that differ significantly from the rules governing the 800 MHz band, including a total prohibition on cellular-type architecture. If the FCC were to relocate these licensees to the 700 MHz Guard Band, it could foreclose the potential for these licensees to convert to advanced digital systems. In addition, the 700 MHz Guard Band does not offer sufficient spectrum to accommodate existing services in the

800 MHz band. Although Nextel proposed to relinquish its 700 MHz Guard band spectrum, Nextel lacks spectrum in nine of the fifty-two Major Economic Areas. In addition, the 700 MHz Guard Band is unavailable because Nextel's holdings in the 700 MHz Guard Band could not satisfy the demands of *all* existing incumbent licensees. A broad based relocation is not practical in portions of the country because television broadcasters will occupy the spectrum until at least December 31, 2006.[80] Because equipment is not yet available for the 700 MHz Guard Bands, it is impossible to assess whether incumbent licensees forced to relocate would be able to obtain comparable facilities. In short, the 700 MHz Guard Band is neither available nor necessarily comparable, it does not constitute suitable replacement spectrum for licensees who would be compelled to vacate the 800 MHz band.

The 900 MHz band also fails to provide suitable replacement spectrum for displaced 800 MHz licensees. For example, the 900 MHz band is based on 12.5 kHz channels, whereas channels at 800 MHz are 25 kHz. The equipment used in SCANA's 800 MHz system could not be modified to operate at 900 MHz or to use 12.5 kHz channels. In addition, displaced 800 MHz licensees' operations would suffer in the 900 MHz band because the separation between transmit and receive frequencies is not as large. In the 800 MHz band, the transmit and receive frequencies are separated by 45 MHz, allowing high-quality service over wide areas at low cost. By contrast, to have the same high-quality service in the 900 MHz band, a licensee must

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[80] *See* 47 U.S.C. § 309(j)(14). The FCC must extend the transition date on a market-by-market basis if one or more of the four largest network stations or affiliates have not converted to digital transmissions, digital-to-analog converter technology is not generally available, or 15% or more television households in the market do not receive a digital signal. *See id.* § 309(j)(14)(B); *see also*, In re Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules, WT Docket No. 99-168, *Second Report and Order*, 15 FCC Rcd 5299, 5346-47 ¶ 112-114 (2000) (adopting protection rules for television broadcast services).

purchase more expensive equipment and completely change-out their systems, an extremely wasteful and expensive undertaking. The throughput and reliability of the 900 MHz band is also not comparable to that of the 800 MHz band. Because the 900 MHz band offers only 12.5 kHz channels, an 800 MHz licensee could not transfer the same amount of data as it could in its existing 25 kHz channel in the same amount of time.

The 900 MHz band also does not offer sufficient spectrum to accommodate all of the potentially displaced systems at 800 MHz because Nextel does not possess nationwide 900 MHz spectrum. SCANA notes that 900 MHz spectrum is completely licensed in South Carolina by BellSouth, Santee Cooper and other incumbent utilities. As with the 700 MHz Guard Band, because of Nextel's limited holdings in this band, the FCC should not undertake a wholesale relocation of I/LT and Business Licensees out of the 800 MHz band.

2. NAM and FCC Realignment Plans

SCANA urges the FCC to reject the NAM plan and the FCC's own plan set forth in the NPRM because realignment is a totally unjustified response to the problem of interference to Public Safety entities. As set forth above, there is no indication that realignment is an adequate solution to the interference problems created by Nextel because they impose undue burdens on incumbent licensees that operate Business, I/LT, and non-cellular SMR systems in the 800 MHz band. Furthermore, the NAM and FCC plans have several drawbacks. In particular, these plans would unduly jeopardize incumbents' ability to access replacement spectrum at 800 MHz, without any corresponding benefit.

Under the NAM plan, the FCC would create the following contiguous blocks of spectrum for Public Safety, Business/ILT/SMR, and Cellular Architecture Digital SMR licensees: (1)

Public Safety 806-811/851-856 MHz; (2) Business/ILT/SMR 811-816/856-861 MHz; and (3) Cellular Architecture Digital SMR 816-824/861-869 MHz. The FCC proposes to remove the interleaving of Public Safety and SMR channels in the 809.75-816/854.75-861 MHz band to create three contiguous bands: (1) Public Safety 809.75-816/854.75-856.5 MHz; (2) Business and I/LT 811.5-814/856.5-859 MHz; and (3) SMR 814-816/859-861 MHz. Although these plans are less objectionable than the Nextel plan because they only require in-band retuning, as opposed to relocation outside the 800 MHz band, they would have an extraordinary disadvantageous impact on incumbent licensees in the band.

The NAM plan would adversely affect incumbent licensees, such as SCANA, in the 800 MHz band that operate Business and I/LT systems, by limiting their operations to the 811-816/856-861 MHz band, even though they are not an identifiable source of interference. Although the NAM plan would not require the relocation of as many incumbent licensees as the Nextel plan, it is still overly broad because it would require the relocation of all Business and I/LT licensees on General Category Channels or channels at 809.75-811/854.75-856 MHz, potentially affecting thousands of innocent licensees.

The FCC plan would not require *all* Business, I/LT, and SMR licensees to relocate, but it would require relocation by a substantial number of incumbent licensees. This relocation would impose substantial costs on incumbent licensees because of the necessary equipment retuning or replacement. Relocation is a complicated undertaking because it would require the retuning and recoordination of incumbent operations. Retuning efforts would cause numerous practical problems. For example, the equipment used by many incumbent licensees could not be retuned to another part of the 800 MHz band or would require extensive modification in order to operate

on those frequencies. As a result, these licensees would have to replace their equipment, which would require them to bring all of their mobile equipment to the shop for service. In addition, licensees would have to replace, rather than retune, much of the transmission infrastructure. The repeater units are basic narrowband hardware incapable of being retuned. The antennas, combiners, and preselectors are also tuned to a specific part of the 800 MHz band. Licensees could not retune the transmitter finals and receiver front ends and would have to change the associated software programs and support equipment, which run the dispatch systems. Retuning would also require considerable cooperation from all affected parties.

The complicated changes necessitated by the in-band relocation proposed by the NAM and FCC plans would require incumbent licensees to incur tremendous costs. While the cost of retuning or replacing their equipment would be high, a recall of their mobile equipment to implement such a change-out would also cause incumbent licensees to expend several man-hours per radio and disrupt their vital utility operations. Incumbent licensees may also have to renegotiate or modify site leases and management agreements in the event that they are not able to replace this spectrum at the precise locations where they are currently licensed. In-band relocation would also adversely affect the efficiency of operations designed to function at the specific authorized frequencies and could disrupt pending equipment purchases. The potential costs of the NAM and FCC's plan are extraordinary, especially in light of the fact that the incumbent licensees affected by these plans are not the source of interference to the Public Safety licensees.

Neither the NAM plan nor the FCC plan offers details on the funding, cost allocation or logistics associated with such a massive relocation. Furthermore, the FCC plan does not address

assignments in the General Category. Although the FCC plan would require the mandatory relocation of many incumbent licensees, it offers no details about the allocation of costs or the logistics of the transition. The FCC plan is unclear regarding whether it would require SMR systems using cellular architecture to vacate the Business or I/LT frequencies. Finally, the FCC plan does not address its impact on Public Safety systems operating on the NPSPAC channels adjacent to the cellular bands. In the absence of clear, workable provisions to cover these issues these central issues, the NAM plan and FCC plans are not reasonable alternatives to reduce the interference suffered by certain Public Safety licensees in the 800 MHz band.

In exchange for the burden of relocation, and any associated costs it would impose, incumbent Business, ILT, and non-cellular SMR licensees would receive no discernable benefits. The incumbent Business, I/LT, and SMR licensees operate in compliance with the FCC rules and have not received any interference complaints from Public Safety, or any other, licensees. Because the stated goal of this proceeding, and of the proposed mandatory relocation is to reduce interference, it should only involve those entities who cause interference. Thus, any relocation plan that involves the relocation of incumbent licensees who do not cause interference to Public Safety licensees is overly broad.

V. OTHER ISSUES

A. The FCC Should Limit the Scope of This Proceeding to Addressing Interference to Public Safety Licensees

Both the Nextel and NAM proposals would provide additional spectrum to Public Safety users ancillary to resolving the Public Safety interference problem. In the *NPRM*, the FCC has

requested comment on the sufficiency of the spectrum allocated to Public Safety entities.[81] SCANA submits that this issue would be more appropriately addressed in a separate proceeding.

The problem that has given rise to this proceeding, interference to Public Safety radio users at 800 MHz, is serious and in need of rapid resolution. The injection of additional complex issues into this proceeding, whatever their merit, is likely to slow down ultimate resolution of the interference issues. The Public Safety community's need for more spectrum is a complex and broad reaching matter, the resolution of which may require significant time and involve many factors not before the Commission in this proceeding. Addressing Public Safety spectrum needs here has the potential to unduly delay the resolution of the very important issues relating to interference raised by the FCC in this docket. Consequently, SCANA urges the FCC not to use this context to resolve the need for additional allocations for Public Safety, but, instead, to initiate a separate proceeding to address this issue.

B. A Separate Allocation for Critical Infrastructure Industries Is Warranted But Should Be Addressed in a Separate Proceeding

The consideration of a separate allocation to Critical Infrastructure Industries ("CII") would complicate this proceeding by diverting its attention from the immediate goal of resolving interference to Public Safety licensees. While a separate CII allocation is a topic worthy of the FCC's attention in a separate proceeding, it could potentially cause the FCC to wade into issues ancillary to Public Safety interference, delaying the resolution of the interference indefinitely.

The FCC should initiate a separate proceeding to allocate spectrum specifically for CII operations because the 800 MHz and 900 MHz bands have essentially reached capacity.

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[81] *NPRM* at 29.

Because of the congestion in these bands, and the important nature of their communications, CII entities have few available options when they need to acquire additional spectrum. Thus, the FCC should allocate spectrum to meet future CII spectrum needs.

Although the FCC should not complicate this proceeding further by addressing a CII allocation, the FCC should allocate spectrum to CII entities to ensure their interference-free operations. As set forth above several governmental entities, including representatives from the executive and legislative branches, have recognized the importance of protecting the communications of these entities.

Finally, the FCC itself has consistently recognized the importance of utility communications operations, even as it has denied requests for enhanced protection. Particularly in light of the events of September 11th, CII entities warrant such an increase in protection. Thus, the FCC should initiate a separate proceeding to establish a CII allocation in which it may review these issues in greater detail.

C. The Consolidation of the Business and I/LT Pools Would Hinder CII Access to Spectrum

The FCC should deny PCIA's request for a consolidation of the Business and I/LT Pools in the 800 MHz and 900 MHz bands. Consolidation of these Pools is contrary to the public interest because it would hinder CII access to spectrum, thus endangering the efficient operation of their public safety/public service communications systems.

In an analogous situation, the Wireless Telecommunications Bureau froze the filing of applications for inter-category sharing on private mobile radio service frequencies in the 806-

821/851-866 MHz band to stem the rapid depletion of Public Safety frequencies in that band.[82] Under the FCC's rules at that time, an entity that was eligible for the Business or I/LT Pools could obtain a license in the Public Safety category if the channel was vacant and no available channels remained in that entity's category.[83] Because of rule changes affecting another category of licensees, the Wireless Telecommunications Bureau noted that "there has been a dramatic increase in the number of Business and I/LT entities filing applications for inter-category sharing to use Public Safety channels in the 806-821/851-866 MHz bands."[84] To protect the future radio spectrum resources of these Public Safety entities, the Wireless Telecommunications Bureau concluded that it would immediately freeze inter-category sharing of these licenses.[85]

I/LT spectrum at 800 MHz is available to entities that can meet the relatively specific eligibility requirements associated with the I/LT category,[86] which include engaging in activities in support of critical infrastructure. Eligibility for Business Category spectrum, on the other hand, is quite broad, extending to any entities engaged in more routine commercial activities.[87] Consolidation of the Business and I/LT pools would essentially lead to the elimination of the remaining 800 MHz I/LT spectrum, thus denying utilities any flexibility with regard to the expansion or modification of their system. This is the type of harm that the intercategory sharing

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[82] *See* In re Inter-Category Sharing of Private Mobile Radio Frequencies in the 806-821/851-866 MHz Bands, *Order*, 10 FCC Rcd 7350, 7352 ¶ 7 (1995) ("*Inter-Category Freeze Order*").

[83] *See* 47 C.F.R. § 90.621(g)(1) (1994).

[84] *Inter-Category Freeze Order*, 10 FCC Rcd at 7352 ¶ 5.

[85] *See id.* at ¶ 7.

[86] *See* 47 C.F.R. § 90.617(b).

[87] *See* 47 C.F.R. § 90.35(b).

freeze was designed to prevent, and it should not be permitted with regard to this critical spectrum resource.

WHEREFORE, THE PREMISES CONSIDERED, SCANA respectfully requests that the Commission consider these comments and proceed in a manner consistent with the views expressed herein.

Respectfully submitted,

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Dated: May 6, 2002

CERTIFICATE OF SERVICE

I, Christine S. Biso, do hereby certify that on this 6th day of May 2002, a copy of the foregoing "Comments of SCANA Corporation," was sent, via first class mail, postage prepaid, to each of the following:

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