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BEFORE THE
Federal Communications Commission
WASHINGTON, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of	)	
	)	
Improving Public Safety Communications in the 800 MHz Band	)	**WT Docket No. 02-55**
	)	
Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels	)	

TO: The Commission

COMMENTS OF CONSUMERS ENERGY COMPANY

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TABLE OF CONTENTS

I. INTRODUCTION 2

A. Background 2

B. Consumers's Interest in the Proceeding 3

II. THE SCOPE AND EXTENT OF THE INTERFERENCE PROBLEM MUST BE DEFINITIVELY DETERMINED 5

III. THE FCC SHOULD BUILD ON EXISTING RULES AND PROCEDURES CONCERNING INTERFERENCE RESOLUTION IN ADDRESSING THE PROBLEM NEXTEL HAS RAISED 6

A. Consumers has Found Case-by-Case Application of Technical Measures to be Effective and the FCC Should Foster the Use of Such Measures as a Solution to Public Safety Interference 6

B. A Market-Based Approach Can Be Adopted To Resolve Instances Of Harmful Interference To Public Safety Systems 7

1. Public Safety Interference-Reducing Rules Should Be Crafted Based on General Principles That Will Minimize the Burdens on All Parties 7

2. The Commission Should Adopt a Market-Based Solution 13

IV. REALIGNMENT WOULD HAVE EXTRAORDINARY COSTS FOR INCUMBENTS 19

A. Realignment Would Impose a Tremendous Cost on 800 MHz Licensees 19

B. Realignment Would Be Particularly Disruptive to Utilities 20

C. Utilities' Critical Operations Must be Protected 21

D. If adopted, Realignment Must Account for and Protect Incumbent Licensees in the Canadian Border 24

V. CONCLUSION 25

EXECUTIVE SUMMARY

While Consumers Energy Company supports the goal of reducing interference to Public Safety licensees, it is concerned that the Commission may base its decision on a limited amount of anecdotal evidence. In this regard, there appears to be significant question as to whether realigning the 800 MHz band would actually remedy the interference problems of Public Safety licensees. Given the potential impact of this proceeding, the nature and scope of the problem should be extensively investigated and documented before any costs are imposed on uninvolved licensees.

Instead of adopting sweeping changes based on a small amount of information, the Commission should build on its existing rules and procedures concerning interference. Consumers has found that a case-by-case application of technical measures can be effective in eliminating interference. Therefore, Consumers believes that the Commission should adopt a market-based solution that will: (1) protect Public Safety licensees from harmful interference; (2) permit flexibility to accommodate disparate radio systems in the 800 MHz band; and (3) minimize, if not eliminate, the cost to those 800 MHz licensees that are not interfering with Public Safety licensees.

Under this approach, the Commission could adopt rules to define harmful interference and clarify the rights and responsibilities of each party. In addition, the rules would allow the parties to resolve interference complaints through a variety of approaches. The Commission should not prescribe any particular solution to situations involving interference but, instead, should allow the involved parties to independently analyze and resolve each case of interference based upon the particular circumstances. By adopting a market-based approach, the Commission will reduce interference to Public Safety licensees

while placing the cost on the cost-causer[s] and minimizing the cost to other licensees in the 800 MHz band.

The realignment plans that have been proposed are inappropriate because their effectiveness is in doubt and other options are available. The plans also fail to account for Canadian Border Region licensees, such as Consumers, that depend on the current border allocation. These licensees would face intolerable disruption if they were not able to maintain existing operational status.

Furthermore, the proposals to realign the 800 MHz band would have extraordinary consequences for all licensees currently using that band. If any of the realignment plans are adopted, especially the Nextel plan, it could cost incumbent 800 MHz licensees billions of dollars to relocate.

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COMMENTS OF CONSUMERS ENERGY COMPANY

Pursuant to Section 1.415 of the Federal Communications Commission's (hereinafter "FCC's" or "Commission's") Rules, Consumers Energy Company ("Consumers"), by and through its undersigned counsel, hereby submits these Comments in the above-captioned matter.[1] As discussed in these Comments, Consumers agrees with the Commission that Public Safety licensees should not be subject to harmful interference and supports solutions that are designed to minimize service disruption and cost to all potentially-affected parties.

[1] *In the Matter of Improving Public Safety Communications in the 800 MHz Band; Consolidating the 900 MHz Industrial/Land Transportation and Business Pool Channels*, WT Docket No. 02-55, *Notice of Proposed Rulemaking* (March 15, 2002) ("*NPRM*"). The *NPRM* was published in the Federal Register on April 5, 2002, 67 Fed. Reg.16351.

I. INTRODUCTION

A. Background

In the *NPRM*, the Commission indicates that some Public Safety licensees have been subject in recent years to interference to their 800 MHz land mobile radio systems.[2] In an effort to identify the scope and causes of interference to Public Safety licensees in the 800 MHz band, the Commission earlier organized the Commercial/Public Safety Interference Task Force. The task force, comprised of representatives of Public Safety licensees, cellular carriers, Nextel, and Motorola, conducted a survey to determine the scope of the interference problem. The survey responses, numbering 36, generally indicated that Public Safety users have experienced higher than expected levels of interference in the immediate vicinity (*e.g.*, within 1,000-4,000 feet) of certain cell sites at which Nextel and/or cellular carriers have 800 MHz transmitting equipment.[3] In addition, the task force published a "*Best Practices Guide*" in December of 2000 to provide a broad overview of practices that can be used to identify and alleviate interference.[4]

On November 21, 2001, Nextel Communications, Inc. filed a proposal with the Commission, which Nextel claimed would reduce interference to 800 MHz Public Safety radio systems. Specifically, Nextel proposed that the Commission: (1) assign it 10 MHz of additional spectrum in the 2.1 GHz band for its own operations; (2) remove Business and Industrial/Land Transportation ("I/LT") licensees from the 800 MHz band; (3) realign the 800 MHz channel

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[2] *NPRM* at ¶ 14.

[3] Special Assignment Technical Report; 800 MHz Interference Survey Response, Public Safety Wireless Network (November 2000) (*Special Assignment Technical Report*).

[4] Avoiding Interference Between Public Safety Wireless Communications Systems and Commercial Wireless Communications Systems at 800 MHz – A Best Practices Guide (December, 2000) ("*Best Practices Guide*").

plan; (4) reallocate additional spectrum for Public Safety licensees in the 800 MHz band; and (5) require all non-Public Safety users of the 800 MHz band, including Business and I/LT licensees, who are not interfering with Public Safety licensees to pay Public Safety's relocation costs. In its proposal, Nextel admitted that it was responsible for many of the interference problems.[5]

To address the anecdotal information regarding Public Safety interference, the Commission issued this *NPRM* to explore how to resolve interference to Public Safety licensees. Consumers supports the Commission's goal of eliminating the cause(s) of interference. The Commission must, however, ensure that any modifications to the current 800 MHz band do not adversely affect utilities. Consumers and other utilities rely on their private land mobile radio systems to support critical utility operations that affect virtually every resident and business in their operating territory. Furthermore, these operations often involve assistance or coordination with Public Safety entities.

B. Consumers's Interest in the Proceeding

Consumers, the principal subsidiary of CMS Energy, is Michigan's largest electric and natural gas utility and one of the nation's largest combination utilities. Consumers provides electric and natural gas service to more than 6 million of the state's 9.5 million residents in all 68 counties of Michigan's Lower Peninsula. Consumers is the fifth-largest combined gas and electric utility in the United States with annual operating revenue exceeding $3.8 billion.

Consumers has the responsibility of providing service to hospitals and other critical facilities throughout its service territory, while simultaneously ensuring the safety of its crews

[5] Promoting Public Safety Communications -- Realigning the 800 MHz Land Mobile Radio Band to Rectify Commercial Mobile Radio - Public Safety Interference and Allocate Additional Spectrum to Meet Critical Public Safety Needs at 9 (Nov. 21, 2001) ("*Nextel White Paper*").

working on high voltage electrical lines, natural gas lines with pressures up to 600 pounds-per-square-inch, and other potentially dangerous equipment. Consumer's radio communication system is essential in this regard.

Consumers has the complex task of providing energy to its customers under challenging circumstances. In particular, Consumers must be able to provide service during the severe winter weather in Michigan. Even during the summer, however, there can be widespread electrical outages due to the weather. To facilitate its internal communications and the monitoring of its power generation and distribution system, Consumers operates an extensive private land mobile radio system licensed in the I/LT Radio Service. The system uses 129 discrete frequency pairs in the 800 MHz band, including 52 in Border Region 3 and 42 in Border Region 7. In addition, Consumers has constructed 60 control stations and over 70 base stations in order to operate its 800 MHz system. Consumers has also licensed 3,500 mobile units for use in the system. Consumers uses its land mobile system to coordinate safe and efficient control, monitoring and repair of its generation, transmission and distribution facilities, including communications with work crews responding to service requests, power outages, and related troubles. The radio system provides a radio communication link with thousands of field employees on a daily basis. With both voice and data capabilities, this private radio system allows field employees to respond to customer needs and to communicate with each other while coordinating inherently hazardous work.

Based on the importance of Consumers's 800 MHz spectrum to its utility operations and on its substantial investment in its system, Consumers has a very strong interest in matters affecting the 800 MHz band. As set forth below, Consumers has had success in resolving interference issues through cooperative implementation of technical changes to low-site digital

SMR facilities. Consumers believes that such approaches, as well as coordination of frequency use in specific cases, can be extremely effective in addressing interference. Based on its experience with these approaches, Consumers believes that the FCC should adopt an approach that promotes their use rather than a band realignment.

As a licensee of significant spectrum in Regions 3 and 7, Consumers is particularly concerned over the proposals for realignment, none of which address the use of frequencies in the Border Region near Canada. Much of Consumers's service territory is in northern Michigan within Border Regions 3 and 7 and Consumers's ability to provide service in this area would be compromised if it does not maintain its current operational status.

This proceeding will affect not only the reliability and efficacy of all Public Safety radio systems, but will make or break those systems used by America's utility industry. Consumers urges the FCC to adopt an effective approach that imposes the least cost to licensees in the 800 MHz band.

II. THE SCOPE AND EXTENT OF THE INTERFERENCE PROBLEM MUST BE DEFINITIVELY DETERMINED

As a utility engaged in the management of critical infrastructure, Consumers recognizes the extraordinary importance of the functions carried out by the Public Safety community and the necessity for reliable land mobile communications to support those functions. However, there appears to be only limited documentation of the scope of the Public Safety interference problem. Specifically, the Commercial/Public Safety Interference Task Force published a summary consisting of 36 responses by Public Safety entities.[6] Consumers understands that, as of the weekending May 3, 2002, the responses numbered approximately 90. As such, there is

[6] *Special Assignment Technical Report.*

insufficient evidence that the problem identified is of such a magnitude that it would justify sweeping changes affecting uninvolved parties. Given the potential impact of this proceeding, the nature and scope of the problem should be extensively investigated and documented before any costs are imposed on uninvolved licensees.

III. THE FCC SHOULD BUILD ON EXISTING RULES AND PROCEDURES CONCERNING INTERFERENCE RESOLUTION IN ADDRESSING THE PROBLEM NEXTEL HAS RAISED

A. Consumers has Found Case-by-Case Application of Technical Measures to be Effective and the FCC Should Foster the Use of Such Measures as a Solution to Public Safety Interference

In the NPRM, the FCC has set forth proposals for realignment of the 800 MHz band that purport to resolve the problem. As the FCC notes, however, there appears to be a significant question as to whether a realignment that leaves Public Safety in the 800 MHz band along with low-site digital systems would be effective at all in remedying interference.[7] Furthermore, as discussed more fully below, realignment would impose extraordinary cost and disruption on all users of the 800 MHz band. Consumers believes that realignment is unnecessary because existing rules, with some further changes discussed below, can be extremely effective in resolving interference problems at a low cost relative to wholesale band realignment.

Consumers has had significant experience in resolving interference issues involving the low-site SMR configuration. In each instance, the application of technical modifications, such as installation of adequate filtration, proved successful in remedying the problem. Consumers believes that such measures, along with responsible system operation, frequency coordination and cooperation between licensees can be effective in resolving the instances of interference that

[7] *NPRM* at 27.

have given rise to this proceeding. Furthermore, unlike the band realignments proposed by Nextel and others, these measures are already available and in use. Because they affect only the parties involved in an interference situation, and limit costs to the interfering party, the FCC should take steps to foster the application of these measures on a case-by-case basis.

B. A Market-Based Approach Can Be Adopted To Resolve Instances Of Harmful Interference To Public Safety Systems

Like a number of other 800 MHz licensees, Consumers believes that a market-based solution can be readily crafted that will: (1) protect Public Safety licensees from harmful interference; (2) permit flexibility to accommodate disparate radio systems in the 800 MHz band; and (3) minimize, if not eliminate, the cost to those 800 MHz licensees that are not interfering with Public Safety licensees. The current proceeding has been initiated to resolve allegations of interference between Nextel's low-site digital transmitters and existing Public Safety systems. Therefore, it is important that the Commission address how to minimize interference to Public Safety licensees rather than focusing on issues related to additional allocations for Public Safety or Nextel's entitlement to additional spectrum. These other issues are likely to delay resolution of the more critical interference issues that have been raised by the Public Safety community. Consumers therefore urges the Commission to adopt a well-measured response to the problem at hand.

1. Public Safety Interference-Reducing Rules Should Be Crafted Based on General Principles That Will Minimize the Burdens on All Parties

Consumers believes that any rules that are adopted to resolve Public Safety interference should: (1) define harmful interference and the events that would trigger a resolution procedure; (2) clarify the rights and responsibilities of each party; (3) avoid limiting or mandating possible

remedies; (4) minimize involvement by the Commission; and (5) avoid impacting licensees not directly involved in the interference problem. Each of these principles is discussed herein.

a. Harmful Interference and the Triggering Events Should Be Based on the Commission's Current Regulations

For purposes of determining if a conflict exists between stations licensed under Part 90, the Commission should use its current definition of harmful interference. "Harmful interference" is defined as "any emission, radiation, or induction, which specifically degrades, obstructs, or interrupts the service provided by such stations."[8] This is a functional definition that is not dependent on any arbitrary signal levels or carrier/interference ratios and can be used to resolve interference disputes between Public Safety licensees and commercial providers.

b. The Rights and Responsibilities of Each Party Should Be Clearly Enumerated

In the 800 MHz band, resolution of interference problems is the responsibility of the specific licensees causing and receiving the interference. Under Section 90.173 of the Commission's rules, "all applicants and licensees shall cooperate in the selection and use of frequencies in order to reduce interference" through mutually satisfactory arrangements.[9] If the licensees are unable to reach an agreement, however, the Commission "may impose restrictions[,] including specifying the transmitter power, antenna height, or area or hours of

[8] 47 C.F. R. §90.7 (2001).

[9] 47 C.F.R. § 90.173(b) (2001). The *Best Practices Guide* also counsels commercial licensees and Public Safety agencies to collaborate and share responsibility for avoiding interference. *Best Practices Guide* at 11.

operation of the stations concerned."[10] Section 90.403(e) contains a similar rule on interference mitigation, requiring all licensees to "take reasonable precautions to avoid causing harmful interference."[11] As a last resort, the Commission noted that it may relocate the interfering licensee.[12]

Thus, in the 800 MHz band, the interfering party has the primary responsibility to prevent the occurrence of harmful interference. If interference does occur, however, the Commission's rules set forth the steps to be taken to mitigate the interference. First, the affected licensees must negotiate to try to reach a mutual agreement. Second, the Commission can impose technical restrictions on the licensees. As a last resort, the Commission will relocate the offending licensee. Neither Section 90.173(b) nor Section 90.403(e) requires third-party licensees to participate in interference mitigation. Similarly, in this instance Consumers believes that the Commission should only consider relocating licensees as a last resort.

Nextel's status as the primary source of interference in the 800 MHz band is well documented in reports by Public Safety agencies as well as anecdotal evidence. For example, in its Project 39 Interim Report, the Association of Public-Safety Communications Officials-International ("APCO") found that thirty of the forty-five Public Safety agencies reporting 800

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[10] *Id.* In some instances under Part 90, the FCC has announced that it would employ a "first-in-time" principle by which the last licensee to commence operations would have to resolve any interference. *In re Amendment of Parts 2, 22, and 90 of the Commission's Rules to Allocate Spectrum in the 928-941 MHz and to Establish Other Rules, Policies, and Procedures for One-Way Paging Stations in the Domestic Public Land Mobile Service and the Private Land Mobile Radio Services*, GEN Docket No. 80-183, RM-2365, RM-3047, RM-3068, *Second Report and Order*, 91 F.C.C.2d 1214, 1223 ¶ 32 (1982).

[11] *Id.* § 90.403(e).

[12] *See In re Application of American Television of Utah, Inc. Salt Lake City, Utah; For a Television Construction Permit*, File No. BPCT-790822KE, *Memorandum Opinion and Order*, 1984 FCC LEXIS 1530, *5 (1984) ("Generally, channel changes are used as a last resort where there is, or a petitioner has established a reasonable likelihood of interference, and where all efforts to filter out such interference fails.").

MHz interference cited Nextel as the culprit.[13] Also, a survey by the Portland Oregonian found that Public Safety operators in twenty-one states complained that Nextel caused substantial interference to their systems and that operators in five other states suspected that Nextel was their interference source.[14] In Phoenix, for example, the city's deputy information technology director stated that Nextel's "towers make our system look like Swiss cheese."[15] Twenty-six of twenty-eight states responding to the Oregonian's survey, pinpointed Nextel as the actual or potential source of the harmful interference.[16] The Chief of the Wireless Bureau has also stated that Nextel was the likely cause of the interference to Public Safety licensees in the 800 MHz band.[17] Any rules that are adopted in this proceeding should be focused on the parties causing and receiving the interference.

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[13] *See* APCO, Project 39: Interference to Public Safety 800 MHz Radio Systems, Interim Report to the FCC (Dec. 24, 2001), *available at* http://www.apco911.org/afc/project_39/interim_report.pdf.

[14] Nextel even conceded that it caused interference in Arizona, California, Colorado, Florida, Louisiana, Maryland, New Jersey, New York, North Carolina, Ohio, Oregon, and Washington. *See* Emily Tsao and Ryan Frank, *Emergency Calls Crowded Out the Stage for Problem*, OREGONIAN (Portland), Aug. 5, 2001.

[15] See Ryan Frank and Emily Tsao, *Nextel Frees Police Airwaves: The Company Reduces Cell-Phone Interference that Blocked Fire and Police Radios in Portland, But Other Cities Still Face Problems*, OREGONIAN (Portland), Jan. 6, 2002, at B01.

[16] Since the date of this survey, more than six months ago, new interference problems involving Nextel have arisen, including several complaints from New Jersey Public Safety agencies. *See* Jacob Quinn Sanders, *Upgrade Near for Emergency Radio System; Montco Will Vote Next Week. Cell-Phone Signals Have Been Hampering Some Transmissions*, PHILA. INQUIRER, Mar. 15, 2002.

[17] *See* Allyson Vaughan, *FCC Tackles 800 MHz Interference Problems*, WIRELESS WEEK, Mar. 18, 2002 at 4 (citing Tom Sugrue, Chief of the Wireless Bureau, as agreeing that the cause of the interference is "more on the Nextel side").

c. Rules Should Not Attempt to Limit or Mandate Possible Remedies

It is not necessary or advisable for the Commission to prescribe particular solutions to situations involving interference as there are a variety of approaches that will have differing utility depending upon the circumstances. Consumers has found that well considered frequency coordination and responsible system operation have served the industry well. Since the Nextel/Public Safety problem was first reported in 1998, significant effort has been expended to find technical solutions to resolve this problem. The *Best Practices Guide* and Motorola's "Interference Technical Appendix (Issue 1.41)" contain numerous technical solutions that may minimize, or even eliminate interference so that Public Safety communications are not compromised.[18] It has also been Consumers's experience that implementing technical solutions can eliminate interference. Previously, the installation of an autotune combiner at low-site digital SMR facilities eliminated interference to one of Consumers's stations. As demonstrated by Consumer's experience, technological solutions can be used in a targeted fashion to eliminate harmful interference at a relatively low cost. Therefore, the Commission's rules should not mandate or prohibit any particular interference-reducing measures.

d. Resolution of Public Safety Interference Complaints Should Minimize Commission Involvement

A framework for resolving interference complaints should also, to the extent possible, minimize Commission involvement. A market-based solution should create the opportunities

[18] Motorola, Interference Technical Appendix, Issue 1.41 44 (Feb. 2002), *available at* http://www.motorola.com/cgiss/docs/Interference_Technical_Appendix.pdf [hereinafter *Interference Technical Appendix*].

and incentives for parties to eliminate harmful interference, with recourse to the Commission only in the most egregious situations.

e. Licensees Not Directly Involved in the Interference Problem Should Not be Affected

Nextel claims that "[i]ncident-by-incident, after-the-fact interference remediation will inevitably fail to protect fully [Public Safety personnel] and fail to keep pace with the evolving communications needs of both Public Safety and commercial communications providers."[19] Nextel also contends that relying on technical solutions would result in an "ongoing burden" and "spectral constraints" on commercial carriers.[20] Nextel, however, fails to describe either the alleged burden or the constraints in any detail. Nextel is also ambiguous on whether technical approaches will be effective. Nextel represents that it has considered a variety of alternatives to reallocation as a means of resolving interference.[21] With regard to these alternatives, Nextel concludes:

> None of these alternatives effectively achieves the essential public interest objective of correcting the fundamental cause of CMRS - Public Safety interference at 800 MHz *while making a significant amount of near-term spectrum available for enhanced and expanded Public Safety communications networks.*[22]

On its face, this provision reveals that Nextel rejected the use of alternatives to reallocation because they do not provide Public Safety licensees with additional spectrum. As previously discussed, the Commission should not let the issue of allocating additional spectrum to Public Safety influence how to eliminate Public Safety interference.

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[19] *Nextel White Paper* at 23.

[20] *Id.* at 24.

[21] *Id.* at 30-31.

[22] *Id.*, at 31.

Additionally, resolution of Public Safety interference does not require disruption to other 800 MHz band licensees. The Commission should adopt rules that limit their impact to those entities that are causing or experiencing interference.

2. The Commission Should Adopt a Market-Based Solution

Applying the foregoing principles to the types of interference Nextel is causing to Public Safety licensees in the 800 MHz band, Consumers, along with other commentors, recommends adopting the following market-based approach. Specifically, the Commission should: (1) create a national database for all 800 MHz digital system licensees; (2) clarify the responsibility of interfering licensee(s) to eliminate interference to Public Safety systems; (3) establish timeframes to ensure prompt resolution; (4) allow parties to use a range of options to resolve interference issues; and (5) adopt procedures for third-party arbitration.

a. A National Database for All 800 MHz Digital System Licensees Should Be Created

One of the challenges facing an entity experiencing interference is identifying the potential source(s) of the interference. This is particularly problematic with respect to systems such as Nextel's, because individual transmitter sites may not be individually licensed and therefore cannot be identified in the Commission's licensing database.

It appears that the primary indicator of an interference potential is a high field strength in the immediate vicinity of a digital transmitter. Such high field strengths are typically associated with digital transmitter sites that have relatively low antennas and multiple transmit frequencies. Therefore, one means of helping to identify potential interference sources would be to create a national database of 800 MHz digital system licensees. Digital 800 MHz licensees would be

required to submit, subject to penalty, the locations of all transmit locations with antenna heights less than 200 feet above ground level ("AGL").[23] Because this database would not be used for frequency coordination, *per se*, the only fields that would be required in the database would be (1) licensee name; (2) licensee contact information; and (3) geographic coordinates of the antenna structure. Further, to ensure that the database would only be used for purposes of interference resolution, it could be hosted by a neutral third party.

In order to establish basic responsibilities for interference resolution, the Commission's rules could require that any licensee of a digital 800 MHz system with a low-site transmitter (*i.e.*, less than 200 feet AGL) and located within one mile of the location at which interference is experienced would have an obligation to eliminate that interference or demonstrate that it is not causing the interference. In this manner, a Public Safety licensee could more readily identify potential interference sources, and would have the right to compel the cooperation of these licensees in resolving the situation.

b. The FCC Should Clarify the Responsibilities of Interfering Licensee(s)

Once the potential sources of interference to a Public Safety system are identified, the Commission's rules should provide that a licensee that is determined to be causing harmful interference to a Public Safety system *shall* be required to take steps to eliminate the interference. At the same time, the Public Safety licensee *shall* have a corresponding obligation to cooperate with the interferor in implementing the most cost-effective solution to resolve the problem. Such a corresponding obligation is necessary to eliminate the potential for an

[23] An alternative approach would be to develop a database of sites at which a calculated or measured field strength exceeds certain levels within a fixed distance from the antenna structure.

interference case to be used as an opportunity for Public Safety licensees to "upgrade" their system. Any solution should be limited to what is necessary to resolve the interference.

c. Timeframes to Ensure Prompt Resolution Should be Established

Interference to a Public Safety radio system should also be corrected promptly. To ensure prompt resolution of interference cases, Consumers recommends that the Commission establish specific timeframes within which parties must respond. For example, to ensure prompt initiation of discussions, the rules could provide for a Public Safety licensee to provide written notice to any suspected interfering party, which describes the nature of the interference and the location where the interference is received. Within ten days, the interferor would be required to respond and to identify personnel who will be responsible for working with the Public Safety licensee to analyze the situation and, if necessary, to implement corrective measures. In emergency situations where severe interference poses an immediate threat to safety, a digital system licensee should have a duty to respond immediately and assist in identifying and resolving the interference as quickly as possible.

Further, to ensure that the parties work promptly toward a solution, the rules should provide that either party may initiate binding arbitration, as described below, if an agreement is not reached within 60 days after the Public Safety licensee's written notice of interference. To the extent the parties are working cooperatively toward a solution, arbitration would not be necessary. However, the availability of this option will give both parties a right to seek a final resolution of the issue if the voluntary negotiations are not proceeding at a suitable pace.

However, this approach to identifying potential interference sources would be difficult to administer and enforce.

d. Parties Should be Allowed to Use a Range of Options to Resolve Interference Issues

As noted above, a number of different techniques have been identified to resolve Public Safety interference at 800 MHz. Moreover, as more experience is gained in analyzing these cases, additional solutions will undoubtedly be found. Therefore, the rules should not arbitrarily limit the types of solutions that parties may employ in resolving these cases, but should allow a range of options.

For example, parties should be free to install new or modified equipment at the site of the interference-causing transmitter or in the Public Safety complainant's radio system. Parties should be free to alter signal ratios. Possible approaches could include reducing the interfering signal in the interference area or increasing the Public Safety signal in the area (such as through an increase in transmitter power or installation of a narrowband signal booster). As a last resort, the interfering licensee must terminate operation on the offending frequencies.

To the extent a change of frequency would mitigate the interference, the parties should be permitted to enter a voluntary agreement providing for relocation of the Public Safety licensee's radio system to other frequencies in the 800 MHz band or another band.[24] Voluntary frequency swaps with non-Public Safety licensees should also be permitted to resolve Public Safety interference disputes. However, it should also be made clear that these licensees, who are not party to the interference dispute, are under no obligation to negotiate or to engage in arbitration.

[24] Voluntary relocation to Public Safety allocations at 700 MHz would appear to be an ideal solution.

e. Procedures for Third-Party Arbitration Should be Adopted

If voluntary negotiations fail, Consumers believes that alternative dispute resolution procedures, such as arbitration, could be used to resolve any interference disputes efficiently. The Commission has previously found that the use of alternative dispute resolution procedures "help resolve disputes in a timely fashion" if negotiations between the parties fail.[25] The Commission has even adopted a policy statement, which "supports and encourages the use of alternative dispute resolution procedures in its administrative proceedings."[26] Congress has also strongly supported the use of alternative dispute resolution procedures to resolve administrative proceedings.[27]

The Commission has previously used arbitration to resolve disputes concerning the price of home run wiring[28] and a competitive local exchange carrier's requests for interconnection, services, and network elements.[29] Similarly, in this case, the Commission could prescribe arbitration to resolve disputes concerning harmful interference.

Arbitration is an efficient and effective method for resolving disputes without overburdening the Commission's resources. Procedural rules could be tailored to promote quick

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[25] *In the Matter of Part 90 of the Commission's Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band; Implementation of Sections 3(n) and 332 of the Communications Act -- Regulatory Treatment of Mobile Services; Implementation of Sections 309(j) and 332 of the Communications Act -- Competitive Bidding*, PR Docket No. 93-144; GN Docket No. 93-252; PP Docket No. 93-253; RM-8117; RM-8030; RM-8029, *Second Report and Order*, 12 FCC Rcd 19080,19125 (1997).

[26] 47 C.F.R. § 1.18 (2001); *Also See In the Matter of Use of Alternative Dispute Resolution Procedures in Commission Proceedings in which the Commission is a Party*, GC Docket No. 91-119, *Initial Policy Statement and Order*, 6 FCC Rcd 5669 (1997).

[27] *See* Pub. L. 101-552, 104 Stat. 2739 (Nov. 15, 1990), reauthorized under Pub. L. 104-320, 110 Stat. 3870 (Oct. 19, 1996) (codified as amended at 5 U.S.C. §§ 571-583).

[28] 47 C.F.R. § 76.804(a) (2001).

[29] 47 C.F.R. § 51.807 (2001).

resolution by experts with an understanding of the specific issues associated with the resolution of interference. For example, the arbitration rules for the pricing of home run wiring provide that the parties must select an arbitrator within seven days.[30] Similar deadlines in this context could permit interference disputes to be resolved promptly.

Arbitration will also encourage parties to resolve their differences through negotiations. Court cases are often resolved just before the trial begins because the parties are focused on the case and because the parties are uncertain how the case will be decided. Arbitration could provide a similar impetus for parties to settle interference disputes. The prospect of arbitration will also provide an incentive for the parties to explore the circumstances surrounding the cause of interference within a definite period of time. This process is likely to promote settlements, as the parties examine the basis for their claim. To provide an additional opportunity for settlement, the Commission could also provide a period for the parties to negotiate after the arbitration hearing. For example, the arbitrator would not be permitted to issue a decision until a few days after the hearing.[31]

Arbitration will also conserve the resources of both parties because the arbitration procedures can be designed to be faster and more streamlined than the Commission's existing procedures. Indeed, many disputes would likely lend themselves to a review of only the parties' documentation, perhaps supplemented with field tests undertaken or directed by the arbitrator. This is particularly important to Public Safety licensees who often have a very limited budget. In addition, the Commission resources will also be conserved. The Commission can limit its role to implementing regulations that govern the appeal process and the standard of review. Regulations

[30] 47 C.F.R. § 76.804(a)(3) (2001).

[31] *See e.g.* 47 C.F.R. § 51.807(d)(3) (2001) (the arbitrator is not permitted to issue a decision for fifteen days).

can also ensure that the arbitration is conducted efficiently by regulating: (1) how an arbitrator is selected; (2) how the arbitration hearing is conducted; (3) when the decision will be issued; and (4) that parties must participate in good faith or they will be penalized.

IV. REALIGNMENT WOULD HAVE EXTRAORDINARY COSTS FOR INCUMBENTS

Realignment is an inappropriate approach to the problem of Public Safety interference, given that its effectiveness is in doubt and other proven options are available. Furthermore, the proposals to realign the 800 MHz band would have extraordinary consequences for licensees currently using that band.

A. Realignment Would Impose a Tremendous Cost on 800 MHz Licensees

Nextel's plan would completely relocate Business and I/LT users out of the 800 MHz band. As a result, these licensees would need to purchase new equipment to establish operations in the new 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 the 900 MHz band 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 in order to retune them.

B. Realignment Would Be Particularly Disruptive to Utilities

In comparison to most Business and I/LT licensees, the above considerations would be greatly magnified for utilities such as Consumers. The financial implications of such a change for a utility with an extensive wide-area system would be extraordinary. Utilities operate extensive systems that cover their service territories. Utilities also must construct a large number of sites and acquire a large number of vehicular and portable units. Furthermore, the internal resources required in terms of utility man-hours and system downtime would add considerably to the overall cost of both an out-of band and in-band relocation.

Consumers has invested over $60 million in its land mobile communications system and has constructed 67 tower sites and over 100 control stations. In addition, Consumers has licensed 3,500 mobile units. If Consumers has to relocate out of the 800 MHz band, it will have to replace its land mobile radio equipment, which will cost Consumers approximately $25 million. In addition, Consumers will probably need to build an additional 30 tower sites to maintain the existing coverage if the bandwidth of the frequencies is reduced to 12.5 kHz or the propagation characteristics are reduced as a result of relocating to a higher frequency band. Consumers estimates that 30 new tower sites would cost approximately $15 million. If relocated to either the 700 or 900 MHz band, Consumers estimates that it will spend approximately $40 million in relocation costs. Accordingly, realignment involving relocation out of 800 MHz would essentially require Consumers to duplicate the investment in its existing system, lose the value of its current equipment, and sustain an added penalty in adding tower sites to maintain coverage.

The logistics of a migration are staggering. Utilities would require multiple years to allow adequate funding to rebuild large wide area systems, subject to the approval of the

associated Public Utility Commissions. The added cost, which would be felt by every rate payer in the community, would be similar to the "unexpected and unplanned burden on state and local governments" that are referenced in the *Nextel White Paper*.[32] Furthermore, Consumers has a limited window each year during seasonal radio system traffic lulls to make radio system changes. For a radio system as large as the Consumers system, completely rebuilding the radio system could easily take as long as it did to construct it originally, five years in Consumer's case.

C. Utilities' Critical Operations Must be Protected

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 Commission 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.[33]

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

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[32] *Nextel White Paper* at 39.

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

discussion.[34] 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—
> >
> > > (i) are used to protect the safety of life, health, or property; and
> > >
> > > (ii) are not made commercially available to the public; [35]

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."[36] 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 the National Telecommunications and Information Administration ("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.[37] In its Report, NTIA concluded that utilities provide essential public

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

[35] 47 U.S.C. § 309(j)(2) (emphasis added).

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

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

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."[38] By way of example, the NTIA Report cautioned that a disruption in a power generating station's control computer could be "just as devastating" to the Nation's economy as the September 11, 2001 terrorist attacks.[39] 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."[40] Our Nation's "economic prosperity, and quality of life have long depended on the essential services" that utilities provide.[41]

This is particularly important in light of recent events. In Afghanistan, the United States discovered that terrorists had diagrams of American nuclear power plants and public water facilities.[42] Although no specific plans to attack a utility were discovered, the fact that terrorists had these plans clearly indicates that utilities are an inviting target. If the unthinkable occurred, large segments of the population could be put at risk and the economy could be devastated.[43] In

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[38] 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 Departments 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 at 3-3. (Jan. 30, 2002).

[39] *Id.*

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

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

[42] David Johnston and James Risen, *Seized Afghan Files Show Intent, Not Plans*, N.Y. Times, Feb. 1, 2002 at A13.

[43] A recent column in the Washington Times by Robert Charles, counsel and staff director to the U.S. House National Security Subcommittee from 1995 to 1999, discussed the likelihood of utilities being "the next primary terrorist target" and the potential effects of terrorist attacks on

light of these factors, the Commission should be particularly circumspect of any measures that might impose unnecessary costs or disrupt the utilities' communications systems.

D. If adopted, Realignment Must Account for and Protect Incumbent Licensees in the Canadian Border

Consumers strongly objects to the adoption of a realignment plan affecting its frequencies at 800 MHz. In the event that the FCC does pursue this course, however, it must ensure that licensees in the Canadian Border Region maintain a comparable spectrum allocation with the same ability to maintain a 500 kHz separation between frequencies, as is the case now.

Nextel has failed to address how the relocation will affect licensees located near the Canadian border like Consumers. Furthermore, the use of spectrum in the Canadian Border Region is extremely uncertain at 700 MHz. Specifically, in the FCC rulemaking that established the Guard Bands at 700 MHz, the FCC noted that there were no agreements in place to cover international frequency use other than the existing agreement covering broadcast services.[44] Accordingly, licensees in those bands will be secondary to Canadian broadcast operation and subject to whatever agreements are reached in the future.[45] It is also unclear what 900 MHz spectrum Consumers would be able to use in Region 3 and 7.

The NAM plan is also problematic to Consumers because it does not account for frequency allocations in Border Regions 3 and 7. Currently, there are 85 frequency pairs allocated for Business and 85 for I/LT licensees in Region 3. If the NAM proposal were applied

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utilities. Robert Charles, *Priority Required for Protecting Utilities*, Washington Times, Mar. 4, 2002 at A17.

[44] *In the Matter of 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, 5347 ¶ 115 (2000).

[45] Id.

generally to the Border Regions, Business and I/LT licensees would be allocated *only* twenty channels in Region 3, as most of the frequencies allocated for the Business and I/LT pools under the NAM plan are not available at all in Region 3. If the Commission were to adopt the NAM proposal as is, Consumers's ability to respond to emergencies in Region 3 and 7 would be severely compromised.

Even if sufficient spectrum was allocated in Border Regions 3 and 7, 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. In-band relocation would also adversely affect the efficiency of operations designed to function at the specific authorized frequencies. The FCC should therefore avoid disturbing the Canadian Border Region allocations if possible and, if not, ensure that adequate spectrum is available.

V. CONCLUSION

In conclusion, the Commission should adopt a market-based approach to Public Safety interference that will: (1) protect Public Safety licensees from harmful interference; (2) permit flexibility to accommodate disparate radio systems in the 800 MHz band; and (3) minimize, if not eliminate the cost to those 800 MHz licensees that are not interfering with Public Safety licensees.

Under this approach, the Commission could adopt rules to clarify the rights and responsibilities of each party and allow the parties to resolve interference complaints through a variety of approaches. By adopting a market-based approach, the Commission will reduce

interference to Public Safety licensees while minimizing the cost to other licensees in the 800 MHz band.

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

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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 Consumers Energy Company" was mailed via U.S. Mail, postage prepaid to each of the following:

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