
LOCAL TOWER SITING PREEMPTION: FCC RADIO FREQUENCY GUIDELINES ARE SOLUTION FOR REMOVING BARRIERS TO PCS EXPANSION

Jeneba Jalloh

"Today, it is no secret the old classifications [of specialized wireless markets] are blurring as all of you enter one another's businesses and explore new frontiers. Today's new frontier is [Personal Communication Services]"¹

Consumer demand for wireless cellular services² has outgrown the available radio spectrum³ used for the transmission of cellular signals.⁴ Fortunately, new technologies such as Personal Communications Services ("PCS") have greatly expanded the capacity of the spectrum.⁵ PCS are a broad scope of technology characterized by small lightweight wireless telephone handsets, personal digital assistants and other communication devices.⁶ PCS allow "users to send and receive voice, data and video communications to and from any location."⁷ The increasing availability of PCS is freeing business and residential consumers from

the constraints of wired telecommunications networks⁸ and overcrowded cellular systems⁹ while making available a broad range of new services and technologies.¹⁰

Although PCS offer advantages in service, performance and quality, one potential drawback is that a PCS network requires four times the number of antennas and towers to transmit signals¹¹ in order to meet the same coverage as cellular services.¹² Moving an antenna just a few feet can affect a PCS network ability to provide even coverage throughout the service area.¹³

Traditionally, local zoning boards exercised authority¹⁴ over the siting of these antennas and towers. After obtaining a permit, companies seeking to introduce wireless services to a community would then erect the towers at various authorized

¹ Commissioner Rachele Chong, Remarks to the Personal Communication Industry Association 1995 Conference in Orlando, FL, at 4 (Sept. 21, 1995).

² Cellular technology divides service areas into sections called cells. A cell may cover an area with a radius between two and twelve miles. Steven J. Bell, *Online Without the Line*, Online, Sept. 1991, at 16.

³ Radio signals transmitted by cellular signals are tiny FM radio stations that can operate on hundreds of different channels. With so many users even hundreds of channels may not be enough. *Id.*

⁴ David A. Irwin, TELECOMMUNICATIONS REGULATORY MONITOR, 1986 at 3-27.

⁵ PCS uses digital technology which allows wireless companies to triple the capacity of their networks by allowing multiple users to use a single channel or signal. See Bell, *supra* note 2, at 16.

⁶ See generally *In re* Amendment of the Commission's Rules to Establish New Personal Communications Services, *Notice of Proposed Rule Making and Tentative Decision*, 7 FCC Rcd. 5676 (1992) [hereinafter *NPRM*].

⁷ See generally Charles H. Kennedy, An Introduction to US Telecommunications Law (1994); see also Jennifer P. Brovey, Comment, *Personal Communications Services: Crossing the Line from Regulation to Implementation*, 2 COMM'LAW CONCEPTUS 67, 68 (1994) (quoting *In re* Amendment of the Commission's Rules to Establish New Personal Communica-

tion Services, *Second Report and Order*, 8 FCC Rcd. 7700, paras. 17-18 (1993)). PCS is a family of advanced wireless services characterized by small, hand-held telephones capable of being used at public stations throughout metropolitan areas. *Id.*

⁸ See *In re* Amendment of the Commission's Rules to Establish New Personal Communications Services, *Second Report and Order*, 8 FCC Rcd. 7700, para. 4 (1993) [hereinafter *Report & Order*].

⁹ See generally Bell, *supra* note 2.

¹⁰ *Report & Order*, *supra* note 6, para. 1. While advances in technology have greatly expanded the capacity of the spectrum, demand for the spectrum space has increased at an even faster rate. William K. Jones, USE AND REGULATION OF THE RADIO SPECTRUM: REPORT ON A CONFERENCE (1968), reprinted in TELECOMM. LAW AND POLICY 40 (Thomas G. Krattenmaker ed., 1994).

¹¹ PCS do not transmit signals over long wavelengths, but instead in shorter wavelength. PCS providers must install an antenna network capable of relaying signals much shorter in wavelength. *Id.* See Andrew Kupfer, *Phones That Will Work Anywhere*, FORTUNE, Aug. 24, 1992, at 100.

¹² *Id.*

¹³ *Id.*

¹⁴ See *Panelists Say Education, Not Legislation, Will End Fights For Tower Sites*, PCS WEEK, Apr. 3, 1996, at 4 [hereinafter *Education*].

locations in accordance with local restrictions and limitations.¹⁵ The recent explosive growth of PCS and the subsequent increase in the number of erected towers have concerned many community activists who fear that towers emit Radio Frequency (RF) emissions at hazardous levels.¹⁶ Local zoning boards, answering community concerns, have used their powers to enforce regulatory measures such as requiring safe zones for falling debris from towers¹⁷ and setting RF emission standards.¹⁸ These standards, however, varied with each jurisdiction and summarily imposed financial and time burdens on PCS and other wireless services companies.¹⁹ The wireless industry has long argued that strict state and local laws have impeded them from entering many new markets.²⁰ Fortunately for the industry and especially PCS providers, the Federal Communications Commission ("FCC" or "Commission") continuously seeks to encourage new technology.²¹ More recently, the Commission expressed interest in encouraging the expansion and competition of PCS technology.²² The Commission is looking to PCS to create new markets and to provide competition in many already competitive segments of the telecommunications industry.²³ To help facilitate the Commission's goal of limiting barriers to PCS expansion and tower siting, Congress conferred substantial new regulatory authority on the Commission with the inclusion of Section 704(b) into the 1996 Telecommunications Act ("1996 Act").²⁴ Section 704(b) seeks to counter local barriers to PCS market entry based on environmental concerns.²⁵ The new law has widespread implications for local zoning boards. It authorizes the

Commission to preempt local governments from denying tower site licenses to wireless companies on environmental and health grounds if the wireless facilities comply with the FCC's RF emissions guidelines.²⁶ On August 1, 1996, the Commission released its RF emissions standards as mandated by Section 704(b).²⁷ Rachele Chong stated that she believed "local jurisdictions should rely on the FCC to ensure compliance with RF standards."²⁸ Responding to its interest in expanding mobile services like PCS,²⁹ the Commission which once faithfully granted health and safety preemption exemptions to local governments,³⁰ is now doing everything possible to remove barriers to tower siting.³¹ It is still not clear whether local zoning authorities' denial of PCS tower siting constitutes barriers to PCS expansion.³² Nevertheless, by removing this power to deny from local boards jurisdiction, the Commission is also eliminating a very large hurdle to PCS expansion and market competition.

This Comment examines the development of the FCC's preemptive authority over local zoning authorities leading to Section 704(b). Part I explores the history of the Commission's statutory and case law which have authorized the FCC's preemptory powers. Part II discusses the history of the FCC's environmental regulations as it relates to health and safety concerns over electromagnetic radiation and RF emissions. Part III surveys the current climate of those groups impacted by Section 704(b): local communities, local zoning authorities and wireless companies. Part IV analyzes the affected interests of these groups with the enforcement of the new stan-

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ H.R. REP. NO. 104-458, at 208 (1996), reprinted in 1996 U.S.C.A.N. 124, 222 [hereinafter *Conference*].

¹⁹ *Education*, *supra* note 14, at 4.

²⁰ Andrew Sachs, *The Coming Wireless Invasion*, PLANNING, May 1995, at 21.

²¹ 47 U.S.C. § 157(a) (1994). "It shall be the policy of the United States to encourage the provision of new technologies and services to the public." *Id.* (emphasis added)

²² *NPRM*, *supra* note 5, para. 3. The Commission allocated spectrum for emerging technologies, including PCS. *Id.*

²³ *Id.* para. 2.

²⁴ Telecommunications Act of 1996, Pub. L. No. 104-104, § 704(b), 110 Stat. 56. Section 704(b) of the Telecommunications Act of 1996 requires that "[w]ithin 180 days after the enactment of this Act, the Commission shall complete action in ET Docket 93-62 to prescribe and make effective, rules re-

garding the environmental effects of radio frequency emissions." *Id.*

²⁵ *Conference*, *supra* note 17, at 222.

²⁶ *In re Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation*, *Report and Order*, 3 Comm. Reg. (P&F) 1092, at 203, Appendix C (1996) [hereinafter *Guidelines*]; see 47 C.F.R. § 1.1307(b) (1996).

²⁷ *Id.*

²⁸ Commissioner Rachele Chong, Remarks to the Personal Communications Industry Association 1996 Conference in San Francisco, California, at 7 (Sept. 19, 1996).

²⁹ *NPRM*, *supra* note 5, at 5678.

³⁰ Anthony Crowell, *Local Government and the Telecommunications Act of 1996*, PUBLIC MGMT., June 1996, at 6. If a local government can demonstrate that the regulation is needed for health or safety, but not aesthetic, reasons, it may petition the FCC to validate the ordinance. *Id.*

³¹ *Id.*

³² *Id.* at 7.

dards. This comment concludes that because the Commission will utilize the preemptory authority granted by Section 704(b) to quell barriers to PCS expansion and tower siting, the affected groups should anticipate working cooperatively, collocating towers and educating each other to narrow the gap between their respective polarized views of preemption.

I. FCC PREEMPTION: AN HISTORIC OVERVIEW

A. Statutory Authority to Regulate Radio Frequency Spectrum

The Supremacy Clause of the Constitution³³ grants the federal government the authority to act within its enumerated power to preempt state laws to the extent it is believed that such action is necessary to achieve its purposes. Case law has summarily upheld this notion.³⁴ The federal government first involved itself in controlling the

airwaves when it passed the Radio Act of 1927 ("Radio Act").³⁵ With the passage of the Radio Act, the government expressed its intention to preempt local authorities by declaring ownership of the entire spectrum.³⁶ The government argued that the scarcity of the spectrum required strict regulation of who could use the airwaves.³⁷

The Communications Act of 1934 ("1934 Act")³⁸ replaced the Radio Act as the cornerstone of telecommunications law. The 1934 Act created the Commission³⁹ and expressly granted it powers to regulate interstate communications by wire or radio.⁴⁰ States, however, still maintained control over intrastate common carrier communications.⁴¹ Over the decades, the Commission executed its preemptory command over local boards in various areas of regulation including amateur or ham radio,⁴² construction of broadcast stations,⁴³ direct broadcast satellites,⁴⁴ technical cable signals,⁴⁵ and satellite receive-only anten-

³³ "The laws of the United States which shall be made in Pursuance thereof . . . shall be the Supreme law of the land." U.S. CONST. art. VI, § cl. 2.

³⁴ Louisiana Public Service Comm'n v. FCC, 476 U.S. 355, 368 (1986). The Court stated:

"Preemption occurs when Congress in enacting a federal statute expresses a clear intent to preempt state law, Jones v. Rath Packing Co., 430 U.S. 519, 525 (1977), when there is an outright or actual conflict between federal and state law, e.g., Free v. Bland, 369 U.S. 663, 669 (1962), where compliance with both federal and state law is in effect physically impossible, Florida Lime & Avocado Growers, Inc. v. Paul, 373 U.S. 132, 142-43 (1963), where there is implicit in federal law a barrier to state regulation, Shaw v. Delta Air Lines, Inc., 463 U.S. 85, 94 (1983), where Congress has legislated comprehensively, thus occupying an entire field of regulation and leaving no room for the States to supplement federal law, Rice v. Santa Fe Elevator, 331 U.S. 218, 230 (1947), or where the state law stands as an obstacle to the accomplishments and execution of the full objectives of Congress. Hines v. Davidowitz, 312 U.S. 52, 67 (1941)."

Id.

³⁵ 34. Radio Act of 1927, Pub. L. No. 69-632, 44 Stat. 1162.

³⁶ *Id.* at § 1. "There could be no private ownership of the airwaves; they were public and use could only occur with the government's permission." *Id.* See Krattenmaker, *supra* note 9, at 8.

³⁷ See generally Krattenmaker, *supra* note 9.

³⁸ Communications Act of 1934, Pub. L. No. 73-415, 48 Stat. 1064 (codified at 47 U.S.C. § 151).

³⁹ See generally 47 U.S.C. § 154 (1994).

⁴⁰ 47 U.S.C. § 151 (1994). Section 1 of the 1934 Act grants the FCC "interstate and foreign commerce in wire and radio communication." *Id.*; see also Capital Cities Cable, Inc. v. Crisp, 467 U.S. 691, 700 (1984).

⁴¹ 47 U.S.C. §§ 152(a), 152(b) (1988). The 1934 Act restricted FCC's authority over intrastate services. *Id.*; see also Public Utils. Comm. of Cal. v. FCC, 75 F.3d 1350 (9th Cir. 1996); but see North Carolina Utilities Comm. v. FCC, 552 F.2d 1036, 1046 (1977). The Act does not deny the FCC jurisdiction with respect to intrastate facilities; it excludes matters which are solely intrastate facilities from FCC jurisdiction. *Id.*

⁴² *In re* Preemption of State and Local Regulations Pertaining to Amateur Radio Facilities, *Memorandum Opinion and Order*, 101 F.C.C.2d 952, para. 25 (1985). The Commission balanced the interest between those asserting the right to receive signals and those who believe communities have a right to regulate land use in the public interest. *Id.*; see James R. Hobson and Jeffery O. Moreno, *Preemption of Local Regulation of Radio Antennas: A Post-Deerfield Policy for the FCC*, 46 FED. COMM. L.J. 433 (1994).

⁴³ *In re* Application of Cherry & Webb Broadcasting Co., *Memorandum Opinion & Order*, 22 F.C.C. 1082, 1125 n.30 (1956). But see Kroeger v. Stahl, 248 F.2d 121 (3d Cir. 1957) (holding that this chapter does not preclude states from exercising their police powers in use of land and buildings on theory of interference with interstate commerce, in absence of actual or implied regulations to the contrary).

⁴⁴ *In re* Application of WSAV, Inc., *Memorandum Opinion and Order*, 19 F.C.C. 736, 769-70 (Jan. 26, 1955); see also *In re* Fresno Cable TV Co., *Memorandum Opinion and Order*, 64 F.C.C.2d 670, 681 n.20 (1977).

⁴⁵ *In re* Amendment of Part 76 of the Commission's Rules and Regulations Relative to the Advisability of Federal Preemption of Cable Television Technical Preemption of Cable Television Technical Standards or the Imposition of a Moratorium on Non-Federal Standards, *Report and Order*, 49 F.C.C.2d 470, 477, 480 (1974). The Commission held that there is a "compelling need for national uniformity in cable television technical standards" which would require it to preempt the field of signal quality regulation in order to "bring

nas.⁴⁶ Because the Commission exerted control over these services which are seemingly intrastate in nature, debate subsequently arose as to the extent of the Commission's preemptory powers.

B. FCC's Intrastate Preemption Authority

Section 302(d) of the 1934 Act states explicitly that the Commission's subject matter jurisdiction includes "all instrumentalities, facilities, apparatus and services . . . incidental to [interstate] transmission" by wire.⁴⁷ Case history firmly supports the Commission's view that when facilities used for interstate and local communications overlap, state regulation must give way to federal regulation.⁴⁸ For example, in the past, the FCC freely asserted jurisdiction in cases involving the attachment of recording special mouthpieces to telephones,⁴⁹ the interconnection of radio base stations and telephone lines⁵⁰ and the attachment of recording devices to telephones.⁵¹ Local and state governments arguing that police powers were violated by the Commission's preemption of intrastate regulation sought judicial review to clarify the extent of the Commission's intrastate authority.⁵²

The best clarification of the Commission's preemptory authority was offered by the Supreme Court of the United States in *Louisiana Public Service Commission v. FCC*.⁵³ The Court held that the FCC may preempt state regulation of an intrastate

matter only when (1) the matter has interstate aspects as well and when it is not possible to separate the interstate and the intrastate components of the asserted FCC regulation;⁵⁴ (2) FCC preemption is necessary to protect a valid federal regulatory objective;⁵⁵ and (3) state regulation would negate the exercise by the FCC of its own lawful authority because regulation of the interstate aspects of the matter cannot be unbundled.⁵⁶ Though this case provided some clarification to the scope of the Commission's authority, jurisdiction issues regarding where to turn for judicial remedy remained a major concern of local bodies.

C. The Proper Jurisdiction for Preemption Disputes

The Commission, intent on not becoming a national zoning board, promulgated Section 25.104⁵⁷ of its rules, expressly requiring potential claimants to exhaust all judicial remedies of state and federal courts before appealing to the FCC.⁵⁸ Presumably the Commission envisioned itself as a forum of last resort if local relief was wrongly denied.⁵⁹ The Second Circuit, in *Deerfield v. FCC*,⁶⁰ disallowed the Commission's attempt to become such a forum, holding that the FCC could not place itself in the position of reviewing the decision of a federal court.⁶¹ The decision in *Deerfield* signaled to the FCC that in order to make com-

into uniformity the myriad standards now being developed by numerous jurisdictions." *Id.*; see also 47 C.F.R. §§ 76.601, 76.605 (1996).

⁴⁶ 47 CFR § 25.104 (1996). FCC preempted any local regulation that discriminated against satellite receive-only antennas unless the locality could state a "reasonable and clearly defined health, safety, or aesthetic objective: and do not operate to impose unreasonable limitations on . . . or to impose costs." *Id.* See, e.g., NY. Preemption of Local Zoning or Other Regulation of Receive-Only Satellite Earth Stations, *Order*, 51 Fed.Reg. 55519 (1986), *Reconsideration Order*, 2 FCC Rcd 202 (1987).

⁴⁷ See, *North Carolina Utilities Comm. v. FCC*, 552 F.2d 1036, 1046 (1977).

⁴⁸ *Id.* at 1049.

⁴⁹ *Hush-A-Phone v. U.S.*, 238 F.2d 266 (1956).

⁵⁰ *In re Use of the Carterphone Device in Message Toll Telephone Service*, *Decision*, 13 F.C.C.2d 420 (1968).

⁵¹ *In re Use of Recording Devices*, *Report of the Commission*, 11 F.C.C. 1033 (1947).

⁵² See *Conference*, *supra* note 17.

⁵³ 476 U.S. 355, 375 n4.

⁵⁴ *Public Service Comm'n of Md v. FCC*, 909 F.2d 1510 (1990); see also *Illinois Bell Tel. Co. v. FCC*, 883 F.2d 104, 131-3 (D.C. Cir. 1989); *California v. FCC*, 905 F.2d 1217, 1243

(9th Cir. 1990). The FCC must demonstrate that state regulation would negate valid FCC regulatory goals. *Id.* The FCC bears the burden of demonstrating that the order is narrowly tailored to preempt only such state regulations as would negate valid FCC regulatory goals. *Id.*

⁵⁵ *NARUC v. FCC*, 880 F.2d 422, 431 (DC Cir. 1989).

⁵⁶ *Id.* See also *Public Util. Comm'n of Tex. v. FCC*, 886 F.2d 1325, 1331-33 (D.C. Cir. 1989); *California v. FCC*, 905 F.2d 1217, 1243 (9th Cir. 1990). The FCC bears the burden of justifying its entire preemption order by demonstrating that the order is narrowly tailored to preempt only such state regulations as would negate valid FCC regulatory goals. *Id.*

⁵⁷ 47 C.F.R. § 25.104 (1996).

⁵⁸ *In re Local Zoning or Other Regulation of Receive-only Satellite Earth Station*, *Report and Order*, 59 Rad. Reg.2d (P & F) 1073, para. 39 (1986). [hereinafter *Zoning Report*]; Experts have noted "[H]aving anticipated this problem in its rulemaking, the Commission noted that it did not intend to become a national zoning board reviewing every complaint that comes before it." HOBSON & MORENO, *supra* note 42, at 435.

⁵⁹ See *Zoning Report 1986*, *supra* note 57.

⁶⁰ *Town of Deerfield, New York v. FCC*, 992 F.2d 420 (2d Cir. 1993).

⁶¹ *Id.*

munication available to the general public, without involving the Commission in an extensive nationwide review of local zoning ordinances, it would require a total preemption of all regulations.⁶² That option, however ignored potentially valid health, safety, or aesthetic objectives underlying many local regulations. Of these objectives, the health and safety issues were already factors of the licensing application process.

II. ENVIRONMENTAL REGULATIONS OF RADIO FREQUENCY EMISSIONS

A. Standards Prior to the 1996 Act

The Commission never considered itself an authority on environmental regulations and did not promulgate any such standards prior to 1969. That is the year that the National Environmental Policy Act (NEPA) was passed requiring federal agencies of the government to evaluate the effects of their actions on the quality of the human environment.⁶³ To meet its responsibilities under NEPA, the Commission adopted requirements for evaluating the environmental impact of electromagnetic radiation and RF emissions from televisions, handsets and various antennas.⁶⁴

From 1985 to 1991, the Commission relied on RF exposure guidelines of the American National Standards Institute (ANSI).⁶⁵ The Commission adopted the 1982 ANSI standard for use in evaluating the effects of RF radiation on the environment.⁶⁶ It noted that the ANSI standard was widely accepted and was technically and scientifi-

cally supportable.⁶⁷ To comply with the standards, applicants for certain facilities were required to prepare an Environmental Assessment (EA) if the transmitter facility under consideration might expose the general public or workers to the levels of RF radiation in excess of the 1982 ANSI guidelines.⁶⁸ Examples of such facilities include radio and television broadcast stations and satellite uplink facilities.⁶⁹

In 1992, ANSI replaced its exposure guidelines with those issued in conjunction with the Institute of Electrical and Electronic Engineers (IEEE).⁷⁰ The 1992 standard contained a number of significant differences from the 1982 standard and was more restrictive in the amount of environmental RF exposure permitted.⁷¹ Additionally, the 1992 standard specifies two tiers of exposure criteria, one for "controlled environments"⁷² (usually involving workers) and another more stringent tier for "uncontrolled environments"⁷³ (usually involving the general public).⁷⁴ The 1982 standard on the other hand, specified only one set of criteria regardless of whether the individual exposed was a worker or member of the general public.⁷⁵ The 1992 standard is more restrictive in the evaluation of low-power devices such as hand-held radios and cellular telephones.⁷⁶ The 1992 standard also, for the first time, includes specific restrictions on currents induced in the human body by RF fields.⁷⁷ These restrictions apply to both "induced" currents and "contact" currents related to shock and burn hazards. With the adoption of these new standards intact, the Commission felt it too

⁶² Hobson & Moreno, *supra* note 41, at 455.

⁶³ National Environment Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified at 42 U.S.C. § 4321 (1994)).

⁶⁴ 47 C.F.R. § 1.1301 (1996).

⁶⁵ AM. NAT'L STANDARD INST., American National Standard Safety Levels with Respect to Radio Frequency Electromagnetic Fields, 300 Khz to 100 Ghz 7 (1982).

⁶⁶ *In re* Responsibility of FCC to Consider Biological Effects of Radiofrequency Radiation when Authorizing the Use of Radiofrequency Devices, *Report and Order*, 100 F.C.C.2d 543 (1985).

⁶⁷ "The Commission has successfully used the ANSI standard and feel comfortable with it." Commissioner Rachelle Chong, Remarks to the Cellular Telecommunications Association 11th Convention in Dallas, Texas 9 (Mar. 25, 1996).

⁶⁸ *Guidelines*, *supra* note 24, para. 6.

⁶⁹ *Id.* para. 7. "The Commission has 'categorically excluded' many low-power . . . transmitters and facilities from routine evaluation for RF radiation exposure based on calculations and measurement data indicating that they would not cause exposures in excess of the guidelines under normal and routine conditions of use. *Id.* Examples of currently ex-

cluded transmitters include land mobile, cellular and amateur radio stations. *Id.*

⁷⁰ AM. NAT'L STANDARD INST., *Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3KHz to 300GHz* 9 (1993) [hereinafter ANSI]; *Guidelines*, *supra* note 24, para. 8.

⁷¹ *Guidelines*, *supra* note 24, para. 4.

⁷² ANSI, *supra* note 69, at 13. Controlled environments are defined as "locations where there is exposure that may be incurred by persons who are aware of the potential for exposure as a concomitant of employment . . ." *Id.*

⁷³ *Id.* at 15. Uncontrolled environments are defined as "locations where there is the exposure of individuals who have no knowledge or control of their exposure. The exposures may occur in living quarters or workplaces where there are 'no expectations that the exposure levels may exceed' the allowable amounts prescribed by the guidelines. *Id.*

⁷⁴ *Guidelines*, *supra* note 24, at 4-5

⁷⁵ *Id.* at 5.

⁷⁶ *Id.*

⁷⁷ *Id.*

should amend its rules to suggest compliance with these standards.

B. RF Emissions Standards Pursuant to Section 704(b)

In 1993, the FCC issued a Notice of Proposed Rule Making (Notice) to consider amending and updating the guidelines and methods used by the Commission for reevaluating the environmental effects of RF radiation.⁷⁸ More than 100 parties including telecommunications organizations, federal government agencies, state and local authorities and individuals submitted comments in response to the Notice.⁷⁹ A significant number of parties addressed the issue of Federal preemption of state and local regulations.⁸⁰ At the same time that the comments were being filed, Congress passed the Telecommunications Act of 1996.⁸¹ The comments were used as a guide by the Commission in accordance with the requirements of the 1996 Act prescribing the FCC to make effective rules regarding PCS facilities on the basis of RF environmental effects.⁸²

Consequently, the FCC announced that if a

wireless facility is in compliance with the Commission's August 1996 released regulations for radio frequency emissions,⁸³ environmental concern cannot be the basis upon which the local governments deny the application to build that facility.⁸⁴ Future licensees will be required to operate in compliance with the FCC prescribed RF radiation limits⁸⁵ once a license is granted.⁸⁶ The new RF guidelines will apply to station applications filed after January 1, 1997.⁸⁷ PCS are among the categories of operations subject to the RF emissions regulations⁸⁸ and are subsequently subject to these Radio Frequency exposure requirements which are codified in 47 CFR § 1.1307(b)⁸⁹, § 2.1091⁹⁰ and § 2.1093.⁹¹ As a condition of equipment authorization, mobile and portable PCS transmitters, the Commission will perform measurements to determine the equipment's compliance with RF radiation limits.⁹² As is the case with existing environmental regulation, the burden of compliance with the guidelines rests on current licensees and parties filing applications for new stations and modifications of existing applications.⁹³ The new regulations reflect the latest scientific knowledge⁹⁴ and are supported by fed-

⁷⁸ *Id.* at para. 7.

⁷⁹ *Id.* at para. 11.

⁸⁰ See *NPRM*, *supra* note 6, 8 FCC Rcd. at 2849 (1993).

⁸¹ *Guidelines*, *supra* note 24, para. 11; see also Appendix D of the *NPRM*, *supra* note 6.

⁸² *Id.* para. 166.

⁸³ *Id.* para. 1. "The Commission adopted Maximum Permissible Exposure ("MPE") limits for electric and magnetic field strength and power density for transmitters operating at frequencies from 300 kHz to 100 GHz. These MPE limits are generally based on recommendations of the National Council on Radiation Protection and based on recommendations of the National Council on Radiation Protection and Measurement ("NCRP") as well as the guidelines issued by the ANSI/IEEE. *Id.* The Commission also adopted limits for specific absorption rate ("SAR") for evaluating certain handheld devices such as cellular and PCS telephones, based on ANSI/IEEE and NCRP recommendations." *Id.* at para 62-74; see also Table 1- 3, Appendix B.

⁸⁴ *Guidelines*, *supra* note 24, at 91, Appendix C.

⁸⁵ *Guidelines*, *supra* note 24, at 77, Appendix A. The exposure limits are based on the most conservative of the limits contained in the recommendations of the National Council on Radiation Protection and Measurement (NCRP), and in guidelines issued by the Institute for Electrical and Electronic Engineers, Inc., and subsequently adopted by the American National Standards Institute (ANSI) as an ANSI standard. *Id.*

⁸⁶ *Id.* para. 119. PCS and other services which offer mobile devices are subject to routine environmental evaluation for RF exposure prior to equipment authorization or use if their effective radiated power (ERP) is 1.5 watts or more. *Id.* at 86, Appendix C; see 47 C.F.R. § 2.1091(c) (Table 1)

(1996).

⁸⁷ *Guidelines*, *supra* note 24, para. 112.

⁸⁸ *Id.* para. 90, Appendix C. Other categories of operations include: Transmitters, facilities and operations subject to routine environmental evaluation include Experimental Radio Services, Radio Frequency Devices, Multi-point Distribution Services, Paging and Radiotelephone Service, Cellular Radiotelephone Service, Satellite Communications, Radio Broadcast Services, Auxiliary and Special Broadcast Services and other programs, Stations in Maritime Services, Private Land Mobile Radio Services, Paging Operations, Private Land Mobile Radio Services, Specialized Mobile Radio and Amateur Radio Service. *Id.*; see 47 C.F.R. § 1.1307 (b)(1) Table 1 (1996).

⁸⁹ 47 C.F.R. § 1.1307 Table 1 (1996). The section requires facilities which may have a significant environmental effect to prepare an EA. The section is amended by revising paragraph (b), by removing notes 1, 2 and 3 following paragraph (b), and by adding new paragraphs (b)(1)-(4) and (e). *Id.*

⁹⁰ 47 C.F.R. § 2.1091 Table 1 (1996) (listing the radio-frequency radiation exposure guidelines.)

⁹¹ 47 C.F.R. § 2.1093 Table 1 (1996) (prescribing the radio-frequency radiation exposure guidelines for portable devices.)

⁹² See *Guidelines*, *supra* note 24, at 96, Appendix C.

⁹³ *Id.* para. 115. Determination of compliance with the exposure limits and preparation of an EA is necessary "if the particular facility, operation or transmitter would cause human exposure to levels of radio-frequency radiation in excess" of the Commission limits. 47 C.F.R. § 1.1307(b) (1996).

⁹⁴ See *Guidelines*, *supra* note 24 para. 168.

eral health and safety agencies such as the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA).⁹⁵ In a joint statement issued in the Report and Order closing out the Section 704(b) proceedings, FCC Commissioners Quello and Chong stated that the research and analysis relating to RF safety and health is ongoing and that the Commission expected changes in that regard.⁹⁶ Consequently, the Commission would be working with the wireless industry to ensure that the guidelines continue to be appropriate and scientifically valid.⁹⁷ While the guidelines supply a basis for limiting RF emissions exposure, the scientific uncertainty about the effects of RF emissions remain a concern of local communities.

III. NIMBY SYNDROME AND OTHER 704(B) REACTIONS

A. Local Communities' Reaction

NIMBYism⁹⁸ (Not-in-my-backyard) refers to the sentiments of citizens preferring to benefit from essential infrastructure like hazardous waste disposal facilities, but not wanting such facilities to be located in their own neighborhoods.⁹⁹ With regard to tower siting, health and environmental concerns are among the list of reasons community groups oppose towers.¹⁰⁰ A national opinion poll by a telecommunication project planning and management firm found that an overwhelming majority of those polled cited health fears as the cause of their opposition to cellular tower in their neighborhoods.¹⁰¹

Community activists opposed to tower siting are vocal in their fight against towers. In one case,

PriCellular Corp., a cellular services company, attempted to replace a 120-foot guywire antenna in Woodstock, N.Y. with a 120-foot self-supporting structure.¹⁰² Though the new tower would occupy equal or even less space than the previous antenna, PriCellular met fierce resistance from the activists of local population, who staged sit-ins and attempted to pressure landowners to nullify PriCellular's site leases.¹⁰³ This type of local opposition to tower siting is a specific example of the NIMBY phenomenon. Community groups, lobby their respective zoning boards which in turn express resistance to the new laws.

B. Reactions of Local Zoning Authorities

The 1996 Act provided municipalities, which were unsure of the ultimate requirements of the Act, with little guidance to its interpretations. Local governing bodies responded differently.¹⁰⁴ Some feigned ignorance of the tower siting provisions of the 1996 Act.¹⁰⁵ Meanwhile, some re-wrote their zoning regulations and still others made no changes to their zoning laws to accommodate the Act.¹⁰⁶

"To protect community aesthetics, as well as guard the public health and safety, local governments have used their zoning powers to regulate towers by requiring setbacks from residential or commercial structures, imposing height restrictions, and requiring safe zones for falling towers or debris from towers."¹⁰⁷

A large number of local governments issued moratoria on facility permits in order to develop land use regulations which balanced community concerns and the needs of service providers.¹⁰⁸ One of the more widely known cases occurred in Medina, Washington, a town of 3,000. The city

⁹⁵ *Id.* para 15.

The new guidelines we are adopting are based on the recommendations of those agencies, and we believe these guidelines represent a consensus view of the federal agencies responsible for matters relating to the public safety and health. For example, see letter from Carol M. Browner, Administrator, US Environmental Protection Agency to Reed E. Hundt, Chairman, FCC, dated July 25, 1996; and letter from Elizabeth D. Jacobson, Ph. D., Deputy Directory for Science, Center for Devices and Radiological Health, Food and Drug Administration, to Richard M. Smith, Chief, Office of Engineering and Technology, FCC dated July 17, 1996. Both letters have been placed into the docket record as *ex parte* filings in this proceeding.

Supra note 3 and accompanying text.

⁹⁶ *Id.* para. 4.

⁹⁷ *Id.*

⁹⁸ See generally Michael Dear, *Understanding and Overcoming the NIMBY Syndrome*, 58 J. OF THE AM. PLAN. ASS'N, June 22, 1996, at 288.

⁹⁹ See, e.g., Michael Wheeler, *Negotiating NIMBYS: Learning From the Failure of the Massachusetts Siting Law*, 11 YALE J. ON REG. 241 (1994).

¹⁰⁰ *Education*, *supra* note 14.

¹⁰¹ Crowell, *supra* note 29, at 6. See, e.g., *Industry Unmoved as FCC Limits RF Exposure, Absorption Rates*, WIRELESS BUS. AND FIN., Aug. 14, 1996, at 5.

¹⁰² See *Education*, *supra* note 14.

¹⁰³ *Id.*

¹⁰⁴ *FCC Wants Less Paper, More Resolutions*, PCS WEEK, May 22, 1996, at 5.

¹⁰⁵ *Id.* at 6.

¹⁰⁶ *Id.*

¹⁰⁷ Crowell, *supra* note 29, at 8.

¹⁰⁸ *Id.*

council ordered a six month moratorium on special use tower siting permits within days of the Telecommunications Act. It sought to buy time to weigh how to address aesthetics issues in the face of PCS operators seeking permission to install antennas.¹⁰⁹ Sprint Spectrum, L.P., a PCS provider which had filed an application prior to the moratorium, became enraged over the delay to its siting permit. It sought judicial review arguing that the moratorium was a barrier to new technologies and was against the policy of the FCC. On May 3, a U.S. District Judge turned down the request of the cellular company seeking a preliminary injunction against Medina's moratorium.¹¹⁰

This significant victory for local boards would be short lived. Though the 1996 Act preserves local government powers to regulate the placement, construction, and modification of wireless/cellular telecommunications towers and facilities, it also places a number of conditions on local governments.¹¹¹ One of them includes a ban on local agencies from imposing moratoria on construction of wireless facilities.¹¹² Sprint Spectrum's complaint in the Medina Case is indicative of the sentiments of many other PCS providers.

C. PCS & Other Wireless Companies' Reactions

Cellular companies and wireless services providers cried foul in response to the local zoning board's slow, almost inactive reply to site assignments. The telecommunications and cable industries have long argued that state and local laws have impeded them from entering many new markets. A spokesperson for Cellular Telecommunications Industry Association said that there is an implied contract that those who bought licenses are going to be able to build out their systems.

Wireless services providers claim that undue regulations hamper competition and result in revenue loss. Nevertheless, a careful look into Sec-

tion 704(b) would reveal a pivotal victory for PCS providers.

IV. ANALYSIS

A. Cellular, PCS and Wireless companies are Winners in Section 704(b) aftermath.

Of all the affected parties, PCS providers will likely benefit the most from the FCC's preemption of tower siting. Now, instead of researching and attempting to comply with the regulation of 38,000 zoning authorities every time they enter a new jurisdiction, PCS companies will need only recognize and comply with one. Additionally, the expensive and timely technical process of testing towers for RF emission compliance and the delays following such site examination will be eliminated.

The FCC seems to think that it can more effectively handle testing and rapid processing of applications than local zoning authorities. However, it is well established, as stated by Chairman Hunt's Chief of Staff Blair Levin, that the Commission staff is burdened with work,¹¹³ especially after the passage of the 1996 Act. It is thus logical to conclude that the administrative burden of conducting periodic testing of sites, and continuously reviewing and keeping abreast of the developments in RF emissions industry, will be heavy on the FCC. It is also not a far-fetched assumption that the FCC knew of this possible burden and the conflicting discourse among effected parties when it adopted the RF Emissions standard. The Commission may be using Section 704(b) as a sure-fire, Congressionally-approved means of quelling opposition to tower siting. Several reasons in the guidelines impute this presumption.

First, the Commission established no specific record-keeping requirements¹¹⁴ related to compliance with the RF exposure guidelines.¹¹⁵ Instead, it asserts a right to request certification as to the truth and accuracy of reporting.¹¹⁶ Secondly, when the FCC conducts routine evaluation,

¹⁰⁹ Sprint Spectrum, LP v. City of Medina, 924 F. Supp. 1036 (1996).

¹¹⁰ *Id.*

¹¹¹ Crowell, *supra* note 29.

¹¹² See generally *Guidelines*, *supra* note 24.

¹¹³ *FCC Wants Less Paper, More Resolutions*, PCS Week, May 22, 1996, at 5.

¹¹⁴ *Guidelines*, *supra* note 24, at 77, Appendix A.

¹¹⁵ *Id.* This has not changed from the rules previously in place regarding compliance with RF exposure guidelines. *Id.*

¹¹⁶ *Id.* "The Commission retained the right to request information supporting the answer an applicant gives on a form." *Id.*

it is likely it will rely on information containing calculations and measurements¹¹⁷ provided by company records.¹¹⁸ The nature of this type of self-reporting allows room for submission of possibly altered or skewed information. A third indication that the RF guidelines will be a pretext for PCS expansion became apparent when the Commission announced in its order that most applicants and licensees will be categorically excluded¹¹⁹ from routine facilities evaluation for RF exposure compliance because they would not cause significant environmental impact.¹²⁰ Categorically excluded licensees are also not required to file EAs.¹²¹ After all PCS licenses have been issued, the Commission expects to receive approximately 1,000 applications per year involving 10,000 sites.¹²² It anticipates that 3,000 sites will not meet the categorical exclusion criteria and will involve a determination of compliance with the RF exposure guidelines.¹²³ The Commission stated in its order that by categorically excluding most applicants from the RF guidelines, the burden on regulatees will be significantly less.¹²⁴

Further evidence of the Commission's intent to use the guidelines to expand PCS are scattered throughout its compliance provisions. The few providers who are not categorically excluded and are subsequently found to have not complied with the requirements of the RF exposure guidelines are required to submit an Environmental Assessment (EA).¹²⁵ However, the Commission pro-

vides a regulatory escape route in its many compliance options.¹²⁶ Providers may meet the options in order to avoid having to file an EA.¹²⁷ For this reason, EA filings with the Commission are rare.¹²⁸ Compliance options are found in a technical bulletin, "designed to minimize the effort and burden required by an applicant to determine compliance with guidelines" prior to submitting an application.¹²⁹ Among the options for compliance announced by the Commission in the order are restricting access to an area of high RF levels, using warning signs or fences to provide notice of potential RF exposure, use of protective shielding or warning devices, reduction of power when people are in high RF areas and, in the case of portable and mobile devices, designing devices to minimize RF absorption in the body of the user.¹³⁰ These aforementioned grounds provide vital insight into the motivations of the Commission towards encouraging PCS expansion.

The FCC is authorized with complete peremptory powers over tower siting regarding environmental concerns and has established minimal compliance requirements. Room for error, however and the chance of non-compliance and violation of RF standards exist. To meet its policy considerations towards expanding new markets and encouraging service competition, the Commission will likely remain flexible and conservative in application of enforcement and compliance.¹³¹ PCS providers will prevail in their efforts to erect

¹¹⁷ *Id.* The Commission provided applicants with guidance on performing calculations or measurements through its OST Bulletin No. 65. *Id.* In many cases, an applicant or licensee can easily use this bulletin to determine compliance through the use of charts, figures and tables, which eliminates the need for keeping detailed analytic report in many cases. *Id.* Manufacturers of equipment who are required to evaluate portable or mobile devices would likely have to perform more detailed analysis and keep on file a specific technical report for review by the Commission if requested. Also, in a few cases involving multiple transmitters at large antenna farms detailed measurement studies may be necessary. Reports of such studies would be retained by an applicant to provide evidence of compliance if required. *Id.*

¹¹⁸ *Id.* Such information would normally be technical in nature and could involve a report of calculations performed or measurements made to determine compliance. The measurements to be calculated are probably contained in company files. *Id.*

¹¹⁹ The category exclusions apply to all radio services except those listed [in the guidelines] and the radio amateur service. *Id.* at 184. All land mobile and public safety two-way systems are categorically excluded. *Id.*

¹²⁰ *Id.* para. at 77, Appendix A. The National Environmental Policy Act, upon which the rules are based, allows

"categorical exclusion" of large classes of actions that generally do not provide an opportunity for causing significant environmental impact, such as would result from human exposure to RF emission in excess of the guidelines. National Environment Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852 (codified at 42 U.S.C. § 4321 (1994)).

¹²¹ 47 C.F.R. § 1.1307 (1996).

¹²² *Guidelines, supra* note 29, at 69, Appendix A.

¹²³ *Id.*

¹²⁴ *Id.* para. 86, Appendix C.

¹²⁵ 47 C.F.R. § 1.311 Table 1 (1996).

¹²⁶ For example, "compliance with exposure guidelines for mobile and unlicensed devices can be accomplished by the use of warning labels and by providing users with information concerning minimum separation distances from transmitting structures and proper installations of antennas." 47 C.F.R. § 2.1091(d)(3) Table 1 (1996).

¹²⁷ *Guidelines, supra* note 24, at 78, Appendix A.

¹²⁸ *Id.*

¹²⁹ *Id.* para 162.

¹³⁰ *Id.* para. 95, Appendix C

¹³¹ [The Commission] has incorporated sufficient flexibility in the procedures to make compliance as minimally burdensome as possible. *Id.* para. 90.

more and more towers as they introduce PCS and improved service to new and expanding areas...

B. Keys to Implementation and Problem

Avoidance: Compromise and Education and Collocation

"Compromise." To remedy the inconclusiveness of guidelines, FCC created a Task Force, to address community concerns and ease the implementation of the Act.¹³² Commissioner Chong announced in her 1995 Orlando Speech to PCS providers that the providers should "cooperatively work with local jurisdictions."¹³³

Education is the other key word. In a more recent speech to PCS providers on Sept. 19, 1996, Commissioner Chong suggested that wireless providers "reassure local agencies and local citizens that [their] project meets the national RF standards."¹³⁴ Some communications watchdogs point out what may be a growing trend across the United States. Regional-level government groups are organizing meetings between government officials, consumer groups and wireless industry representatives to educate one another on wireless issues like tower siting.¹³⁵ These meetings allow the industry to clear up misconceptions and ensure that the people are getting the correct information before they decide whether to support a tower in their neighborhood.¹³⁶

Collocation of antennas is another sure method of limiting the number of sites servicing a particular neighborhood. This would decrease the chances of siting application denial. Taking this preventative step will possibly lessen public outcry.¹³⁷ The FCC has, in the past, allowed multiple

transmitter sites and encourages providers to share sites as well as the costs of conducting studies to show RF compliance.¹³⁸ The Commission should thus consider encouraging collocation between private mobile service and other services when allocating PCS spectrum in order to increase interservice sharing opportunities.¹³⁹ This would serve as an incentive for providers to collocate. PCS providers should remember that they are essentially competing for the opening of new markets and understand that it would be advantageous for them to collocate sites with competitors as they seek to enter these markets.¹⁴⁰

As a consequence of adhering to these aforementioned suggestions, much of the dispute among the parties effected by the RF guidelines preemption will be alleviated. These measures will also counter delays of the introduction of quality competitive communications services to more and more communities.

CONCLUSION

With the recent Congressional appointment of preemptory authority through Section 704(b) of the Telecommunications Act of 1996, the Federal Communications Commission was given another source of complete power to regulate interstate communications. The Commission was then charged with balancing the interests of expanding service, quality and technology of wireless communication services such as PCS and the interests of local communities and zoning boards. The Commission did acknowledge the public outcry regarding environmental concerns over the expansive growth of towers. However, in adopting

¹³² *Regarding National Wireless Facilities Siting Policies*, Wireless Telecommunications Bureau Fact Sheet #2, Sept. 7, 1996. The Task Force includes representatives from the Engineering and Technology, Office of General Counsel and Office of Intergovernmental and Legislation Affairs. *Id.* By serving as a resource for collection and dissemination of information relating to facilities siting, the Task Force believes it can make valuable contributions to the preparations needed for the rapid deployment of wireless services. *Id.*

¹³³ Commissioner Rachelle Chong, Remarks to the Personal Communication Industry Association 1995 Conference in Orlando, FL, at 4 (Sept. 21, 1995).

¹³⁴ Commissioner Chong, Remarks to Personal Communications Services Association '96 Conference in San Francisco, CA (Sept. 19, 1996). Chong advised PCS providers to "be proactive in educating and in sharing information with . . . [local] agencies." *Id.*

¹³⁵ *Government Seeks Advice From Wireless Reps on Zoning*,

MOBILE PHONE NEWS, Apr. 22, 1996, at 12.

¹³⁶ *Id.* "The wireless industry [should] get together with local and state government bodies and the FCC to hash out the meaning of the Act." *FCC Wants Less Paper, More Resolutions*, PCS Week, May 22, 1996 at 5. "The best way to spread the message about the benefits to wireless communications in a community is by gaining the public support of those who use it." *Education*, *supra* note 13.

¹³⁷ *Id.*

¹³⁸ Applicants should pool their resources when submitting a study to show compliance with the guidelines. The consultant hired to conduct the study could survey the entire site for compliance and give recommendations to each of the licensees at the site. In this way the cost of compliance is minimized as no one licensee has to pay the entire consulting fee. *Guidelines*, *supra* note 24, at 90, Appendix C.

¹³⁹ *Id.*

¹⁴⁰ *See Education*, *supra* note 13.

and instituting RF emission standards, the Commission will use the guidelines not only to preempt local authorities, but will succeed in signaling to opponents of tower siting that the Commission discounts the validity of public concern as extreme and based on fear and misinformation of the effects of RF emissions. It is clear, based on the limited enforcement and compliance plans noted in the order, that the FCC is concerned with not burdening its licensees nor with blocking PCS technology and expansions. In order to encourage the demands of a growing market, the Commission is keeping regulation flexible.

This leaves local zoning authorities, community activists and cellular companies with the options

of educating one another and compromising. By collocating facilities, wireless service providers can ease the application burdens with local authorities, while appeasing public concern over the number of new facilities being erected. Meanwhile, resistance by the public may be tempered if wireless providers address the public emphasizing accurate information about the safety of towers while highlighting the benefits of wireless communications in a community. If community and wireless providers work together to educate and assess the land requirement and concerns of the public prior to applying for tower sites, polarization and opposition will be minimal and the Commission's goal of encouraging wireless expansion will be achieved.

