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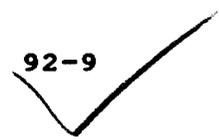
WASHINGTON, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)

Redevelopment of Spectrum to)
Encourage Innovation in the Use)
of New Telecommunications)
Technologies)

) ET Docket No. 92-9
)
) RM-7981
) RM-8004



To: The Commission

COMMENTS
OF
COMMONWEALTH EDISON COMPANY

Carole C. Harris
Rick D. Rhodes

Keller and Heckman
1001 G Street
Suite 500 West
Washington, D.C. 20001
(202) 434-4100

Dated: January 13, 1993

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SUMMARY

Incumbent licensees operating microwave systems in the 2 GHz range will be significantly affected by the Commission's decision to reallocate this spectrum for co-primary use by emerging new technologies. For this reason, Commonwealth Edison Company (CECo) strongly urges the Commission to adopt a transition plan that will ensure that incumbent users forced to relocate from current frequency assignments can do so without disruption to vital communication systems. For this reason, CECo supports a minimum of a five year voluntary period during which new technology service providers and incumbent licensees could freely negotiate the migration to new facilities. The Commission should encourage market-based mechanisms in which parties can negotiate the best resolution of these issues. This will minimize the need for regulatory oversight and generally smooth the transition process.

Furthermore, the systems which many incumbent licensees operate are technologically complex in that they tie together many inter-related company functions. The process of replacing discreet links within these systems will be time consuming and a five year transition to new facilities

is a reasonable time period in which this migration can be accomplished.

CECo agrees that new technology service providers must be required to provide comparable alternate facilities when seeking to displace 2 GHz microwave users. Comparability will be different for different users, but in most case will encompass comparable bandwidth, availability, reliability and performance. An incumbent licensee must never be forced to compromise its current level of reliability merely because the new technology service provider disagrees on whether or not the incumbent licensee needs that level of reliability. Incumbents must, as dictated by their unique telecommunications needs, be allowed to choose replacement spectrum or a replacement medium alternative and not be required to use common carrier facilities. Nor should displaced incumbent microwave licensees involuntarily be forced to relocate until comparable facilities are available and sufficient time allowed to make technical adjustments necessary to ensure a seamless hand-off. While CECo favors encouraging voluntary negotiations, once the involuntary relocation period begins, displaced licensees must have reasonable assurance that they will not be forced to leave current spectrum assignments until replacement facilities are in operation and tested. The one-year period thereafter

to allow licensees to determine whether or not the new facilities are adequate should provide reasonable assurance that any subsequent problems can be redressed.

CECo is vitally concerned that incumbent licensees have control over the replacement process. The Commission should not dictate that new technology service providers actually perform the activities required to install replacement facilities. Allowing incumbents to control this process will go far to ensure that they are satisfied with the replacement facilities and will help minimize disputes. Should disputes arise, CECo supports the use of arbitration and/or mediation to resolve these issues. Finally, CECo supports giving immediate access to government spectrum in the 1710-1850 MHz and 2220-2290 MHz federal government bands since these frequencies will provide the long haul propagation characteristics that will be necessary to accommodate some of the currently used 2 GHz links that cannot be adequately replaced by alternative media or higher range microwave spectrum.

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To: The Commission

COMMENTS
OF THE
COMMONWEALTH EDISON COMPANY

Commonwealth Edison Company ("CECo"), by its attorney, hereby respectfully submits these comments in response to the First Report and Order and Third Notice of Proposed Rule Making adopted by the Commission on September 17, 1992 in the above-styled proceeding.^{1/}

I. PRELIMINARY STATEMENT

1. CECo is one of the nation's major utility companies and the largest in Illinois. The Company's operating territory encompasses the northern fifth of the State of Illinois (over 11,000 square miles), including

^{1/} First Report and Order and Third Notice of Proposed Rule Making ("Order"), ET Docket No. 92-9, 7 FCC Rcd. 6886 (1992).

proceeding to reallocate spectrum in the 2 GHz band for use by "emerging technologies" and since CECO has a vital interest in continued relatively interference-free use of 2 GHz spectrum, CECO is extremely concerned about the outcome of this proceeding. CECO is especially concerned with the proposed "transition period" by which current POFS licensees would be required to share spectrum with PCS and other emerging technology entrants.

II. COMMENTS

A. The Commission Must Establish a Transition Period Adequate to Accommodate Complex Migration Planning Activities

4. The Commission's decision to permit co-equal sharing of the 2 GHz band with PCS operations holds the potential to create significant harmful interference to existing Private Operational-Fixed Service ("POFS") operations such as those now conducted by CECO. Accordingly, it is incumbent upon the Commission to take every possible measure to ensure that the transition from POFS to new technology operations in the band occurs with a minimum of harmful impact on incumbent licensees and the public safety. While CECO applauds the Commission's attempt to establish a transition framework which will ease the

burden of migration upon POFS licensees, CECo respectfully seeks clear assurance that the transition plan will take into account and accommodate the complexities and difficulties of the proposed migration of POFS licensees from their current spectrum assignments.

5. The Commission is well aware that many of the presently authorized fixed microwave systems, including CECo's, are technologically complex and span great geographic distances. It is likely that the specific spectrum needs of new technology licensees could create the loss of "pieces" of numerous large systems since specific "links" in those systems may have to be replaced. Accordingly, it will take considerable time and engineering effort to evaluate the most feasible and effective means to replace critical microwave links within existing systems with alternative spectrum and/or technologies. Establishing even a single link or rerouting and reconfiguring an existing system has, in the experience of CECo, required

lengthy planning cycles in order to ensure a "seamless handoff" of the critical communications carried over these facilities.^{2/}

6. Normal problems encountered with system reconfiguration will be considerably heightened by the instant proceeding, since the availability of adequate long-haul microwave replacement spectrum will be diminished by the 2 GHz reallocation. Accordingly, the Commission must make certain that the proposed transition will provide sufficient time to permit existing POFS licensees to work with new technology proponents to ensure that the transition proceeds without creating potentially hazardous lapses of telecommunications services for incumbent licensees.

7. CECO is convinced that a minimum five-year transition period, during which only voluntary negotiations between new technology proponents and incumbent licensees may occur, is necessary to ensure that the long-range planning for migration from present assignments may be performed adequately. CECO further submits that the minimum five-year "purely voluntary" transition period must be

^{2/} Commonwealth has found over time, that due to the complexities of planning, funding, construction, and testing of POFS system facilities, an implementation schedule of up to 18-24 months is not uncommon.

applied uniformly. CECo is concerned with the Commission's concept that, should it adopt a "lengthy transition period" for those "geographic areas where there may be little or no spectrum available", such a process will frustrate the introduction of new services and a shorter transition period of three years should apply.^{3/} In those geographic areas where 2 GHz spectrum is scarce, it will be even more difficult for incumbent licensees to find adequate replacement transmission capability since the possibility of spectrum assignments in other bands clearly will be diminished. Accordingly, incumbent licensees in those locations must be given, at a minimum, a transition period equal to that provided other incumbents.

8. CECo questions why the commencement date of the transition period must begin upon the effective date of the Commission's final decision in the related Further Notice of Proposed Rule Making in this proceeding.^{4/} It is unlikely that significant deployment of new technology systems will commence immediately, since it is uncertain precisely when new technologies will be licensed and whether new technology licensees will enjoy sufficient commercial success to make

^{3/} Order, ¶ 28.

^{4/} Order, ¶ 24.

such systems viable in the near term. Accordingly, CECO believes that the commencement date of the transition period should be deferred until the Commission begins granting authorizations to construct new technology systems. Until such time as at least one new technology proponent demonstrates to the Commission the showing necessary to obtain operational and/or construction authorization, there is no need to begin a transition and relocation process.

9. Furthermore, it is highly unlikely that any potential new technology service provider would enter into serious negotiations until it is certain that it will receive a license to operate in a particular geographic area. Beginning any voluntary transition before this point will, without justification, shorten the time when actual market negotiations will take place. CECO therefore urges the Commission to begin the transition period for each affected frequency band with the date on which the first actual full-term new technology authorization in that frequency band is granted.

10. CECO enthusiastically agrees that no incumbent licensee must face a sudden or unexpected demand for involuntary relocation and supports the concept that there be a minimum time period for voluntary negotiations after

the grant of a license for an emerging technology service provider. Since CECo has recommended that the Commission not start the clock on the voluntary negotiation period until the grant of a license to an emerging technology service provider, the issue of an unexpectedly short transition period should not arise if the Commission adopts CECo's proposal. The Commission appears concerned with the fact that it has proposed to start the clock on the voluntary period at the conclusion of the rule making on the re-channelization plan for the bands above 3 GHz. As discussed, this approach has the effect of artificially shortening the amount of time in which voluntary negotiations may occur. Realistically, few, if any, potential new technology licensees are likely to expend resources to relocate incumbent 2 GHz licensees before they know whether they will be awarded an operating license in a particular area. Therefore, no real market for 2 GHz frequencies will develop until there are new technology licensees with a significant need for additional spectrum and concomitant interest in relocating existing microwave users. Consequently, CECo submits that the Commission should simply begin the transition period upon the actual issuance of licenses to new technology service providers. This will alleviate the problem of any sudden or unexpected requests for involuntary relocation.

11. In the case of any allocations made for unlicensed services, the Commission must establish a separate regulatory approach which will ensure that existing 2 GHz microwave users forced from present spectrum assignments will be fairly compensated. CECo believes the Commission should establish a one (1) year minimum transition period during which any licensee operating in the band proposed for unlicensed operations would have an opportunity to relocate to other spectrum. Manufacturers intending to market equipment for use in these bands should contribute to an escrow fund which would be used to compensate users' relocation costs. During this one-year transition period, the Commission should not authorize any equipment to operate on an unlicensed basis (such as the proposed data PCS in the band 1910-1930 MHz). This would ensure that existing licensees could vacate the band in an orderly manner without risk of hazardous interference to critical communication systems. Further, such a plan would enable the Commission to establish an equitable compensation mechanism funded by the manufacturers who wish to market the equipment which will use this spectrum on an unlicensed basis.

12. In the case of data PCS, CECo believes that the Commission should establish a baseline figure for average

replacement costs (e.g., \$100,000 per station). The Commission could then determine the total number of potential stations that would need to be replaced and each manufacturer requesting equipment certification would pay an equal pro rata share of the total estimated cost of relocating all microwave stations licensed in the reallocated frequency band. The baseline replacement cost figure would not be equated to a maximum amount that a licensee could recover as actual replacement cost for each "link", rather it would simply be a figure used for purposes of funding the escrow account. Licensees could then submit their actual replacement cost figures and be compensated for these costs from the fund. Should additional funds be required (for example in the case where the average replacement costs exceed \$100,000 per station) manufacturers should be obligated to contribute additional funds to meet any shortfall.

B. The Involuntary Relocation Mechanism Must Ensure Incumbent Licensees of Minimal Service Disruptions and Adequate Compensation for Migration Costs

13. CECo generally agrees with the Commission's plan that would not permit new technology proponents that initiate involuntary relocation proceedings to access an existing licensee's spectrum until finalization of all

activities necessary to implement the incumbent's replacement facilities, including adequate testing and analysis of the efficacy of those facilities. In this regard, CECo strongly supports the Commission's proposal that all existing fixed microwave licensees will retain co-primary status in the 2 GHz band until such time as they are either voluntarily or involuntarily relocated to new frequency bands or transmission media. As has been documented extensively throughout these proceedings, the microwave facilities now licensed in the 2 GHz band serve critical operational needs. Incumbent users forced to abandon these facilities must be adequately compensated, and they must be able to ensure that any replacement facilities are adequate and that overall system reliability levels are not compromised.

14. With regard to replacement costs, CECo agrees that the emerging technology service provider must guarantee the payment of all relocation costs including engineering, equipment, site acquisition and preparation costs, construction and equipment testing, and application preparation and FCC filing fees, as well as any additional costs that the relocated microwave licensee may incur as a result of operation in a different fixed microwave band or migration to other telecommunications media. In addition,

the Commission must ensure that the costs of all activities necessary for implementing the new facilities, such as frequency coordination and cost analysis of the complete relocation procedure, are assumed by the emerging technology service provider. This also includes identifying and obtaining, on an incumbent's behalf, new microwave frequency assignments or other facilities where applicable. Further, compensated costs must include the expenditure of time by personnel of the displaced licensees who, by necessity, must be involved in the relocation activities.

15. While CECo agrees with the Commission that the emerging technology service provider must compensate incumbent licensees for building a new microwave system (or alternative facilities), and for testing of such systems and/or alternative facilities for service comparability to the existing 2 GHz system, CECo does not believe that the Commission should dictate exactly how the parties may agree to accomplish this task. CECo prefers that its own personnel, or contractors selected exclusively by CECo, must be used in order to meet internal quality assurance requirements. CECo must have control over the implementation of the replacement facilities. CECo personnel and contractors have extensive experience in microwave engineering and construction, and have established

company standards and practices for implementing these systems. Furthermore, CECo personnel must be able to closely control and supervise anyone who will have access to CECo facilities for any purpose. Accordingly, the Commission must ensure that incumbents will be able to follow normal company procedures for implementation of any replacement facilities. It would be totally unacceptable for the Commission to allow new technology service providers, who have little or no experience with CECo's microwave system or communication requirements, to have any unnecessary involvement in the actual engineering and construction of the replacement facilities. Incumbent licensees such as CECo should be permitted to follow normal intra-company procedures in engineering, vendor selection, and implementation. This will considerably streamline the process and will be beneficial both to the emerging technology service provider and the incumbent licensee. Using this procedure should help ensure that the replacement facilities will be acceptable to the incumbent licensee when finally installed and activated.

16. While CECo generally agrees with the Commission's proposed transition plan, CECo seeks assurance that any replacement frequencies or technologies will offer adequate interoperability and provide full interface capability with

the remainder of CECo's telecommunication system even when only a "partial migration" from a single (or small number of) link(s) in a multi-link system is mandated. Further, CECo seeks assurances that such "partial system buyouts" would be adequately compensated by new technology licensees. For example, any costs associated with ensuring that a displaced POFS system's integrity is maintained must also be the responsibility of the new technology service provider. Because additional costs may be involved in successfully integrating a hybrid system (e.g. adding a 6 GHz path to a 2 GHz network), these costs must also be the responsibility of the new technology service provider. Moreover, the ultimate choice of whether a new frequency or alternative media technology will be employed to replace the existing link(s) must remain solely in the hands of the displaced incumbent licensee since that licensee is in the best position to fully evaluate its telecommunications needs.

C. Comparable Alternate Facilities Must Be Guaranteed to Displaced 2 GHz Licensees

17. CECo agrees that "comparable alternate facilities" must be provided for purposes of establishing whether the requirement of providing adequate replacement facilities has been met. CECo again suggests that the incumbent licensee

have the option of deciding on the equipment vendor, and employment of engineering and/or construction services, whether these be provided in-house or under contract. However, CECo believes that some general parameters of comparability can be established.

18. CECo believes that the concept of comparability must, at a minimum, include comparable bandwidth, availability, reliability and performance. An incumbent licensee must never be forced to compromise its current level of reliability merely because the new technology service provider disagrees on whether or not the incumbent licensee needs that level of reliability. The incumbent licensee must be able to maintain, at a minimum, the current level of quality and reliability on its communications system, particularly when a new technology service provider may only be purchasing discrete links within a complicated long distance microwave system such as that operated by CECo. Furthermore, incumbent licensees must never be required to use common carrier facilities as a replacement for 2 GHz microwave links unless such a replacement is specifically chosen by the given displaced incumbent.

19. Issues of comparability are more complex when a replacement medium other than spectrum is chosen. For

example, if fiber optic should be selected to replace microwave in a particular instance, the cost of maintaining the physical security of the system must be taken into account since fiber is vulnerable to breakage at any point, whereas a microwave network is vulnerable generally only at transmitter locations. CECo believes that disputes as to comparability will be minimized when the incumbent licensee chooses the alternate facilities and directs the process from initial engineering to final construction and testing. However, in the event that disputes do arise, mediation should be available to help the parties resolve such disagreements. In the event that mediation fails to bring about a solution within a reasonable time frame, the Commission should establish a mechanism to provide final resolution of such disputes. CECo suggests that the Commission explore the possibility of using third party arbitration as a part of the dispute resolution process.^{5/}

20. CECo agrees with the Commission's proposal that incumbent POFS licensees displaced involuntarily should not be forced to relocate until comparable facilities are available and sufficient time is made available to make any technical adjustments necessary to ensure a seamless

^{5/} See Section D, infra.

handoff. Therefore, in every case a new technology provider should be required to file as part of its FCC application for use of 2 GHz spectrum, a statement from any effected incumbent licensee confirming that the seamless handoff has taken place. Further, CECo agrees that if the 2 GHz incumbent can demonstrate within one year after moving to new frequencies or facilities that those facilities are not comparable in service to the previously employed 2 GHz microwave link, the new technology proponent must remedy those deficiencies or pay the cost of relocating the POFS licensee back to the former frequency assignment.

**D. Mediation and Arbitration are Preferred for
Dispute Resolution**

21. If a sufficient voluntary transition period is allowed and incumbents are assured control of the replacement process, disputes will be minimized. However, CECo supports employment of alternative dispute resolution methods for solving arguments that may arise over involuntary relocation and/or comparability of service. Provided that any dispute resolution method employed includes review by decision makers with demonstrated competence to pass on such issues, and that the burden of proof concerning "actual comparability" falls on the new

technology service provider, reasonable assurance would exist that disputes can be fairly resolved. CECO believes that the use of an actual " negotiated rule making" for determining definitions of comparability will be of limited value. While CECO believes that there will be objective parameters by which comparability can be determined, the factors most important in each licensee's system will vary widely by system. A licensee that is being forced to accept substitute facilities must be satisfied that the replacement facilities are comparable and will provide service equal to that which it is able to obtain on the existing 2 GHz system. Placing the acquisition of equipment and system engineering and construction in the hands of the existing licensee will contribute to ensuring that the licensee is satisfied that the new facilities being acquired are comparable to those being lost. As long as the license is assured that it will not have to abandon its current system until the replacement facilities have been adequately tested, and given the fact that licensees will have a one-year grace period in which to evaluate the performance of the system, there should be adequate safeguards for the licensee and the new technology service provider to come to terms on the adequacy of comparable facilities. Accordingly, with the availability of mediation for a set period, followed by legitimate arbitration service

availability to resolve what CECO believes will be limited instances of actual dispute, the FCC should not have to engage in a rule making or extensive adjudicatory activities to further refine the definition of comparability.

E. CECO Supports the Commission's Efforts to Make Spectrum from the Federal Government 2 GHz Band Available to Displaced Incumbent POFS Licensees

22. CECO agrees with the Commission that spectrum in the 1710-1850 MHz and 2220-2290 MHz federal government bands provides the long range propagation characteristics necessary to accommodate POFS links which cannot adequately be replaced by alternative media or higher-range microwave spectrum. CECO is pleased that tentative discussions have taken place between the Commission and the National Telecommunications and Information Administration (NTIA) to assist in evaluating the feasibility of reaccommodation of displaced users in the federal government 2 GHz band.^{6/} Nonetheless, NTIA clearly has expressed reservations concerning use of the federal 2 GHz bands to accommodate displaced POFS licensees.^{7/} CECO is therefore concerned

^{6/} Order, ¶ 36.

^{7/} See: "Federal Spectrum Usage of the 1710-1850 MHz and 2200-2290 MHz NTIA Report 92-285, (March 1992). See also: Letter of May 4, 1992, from Thomas J. Sugrue, Acting Assistant
(continued...)

that, while legitimately seeking to protect federal government 2 GHz operations, NTIA may inadvertently erect barriers which will preclude POFS licensees from access to otherwise unused government spectrum.

23. CECo notes that, in recent appropriation legislation for NTIA, Congress stipulated that NTIA must adopt procedures by which unused federal government spectrum could be accessed by private users.^{8/} Moreover, the legislation requires that NTIA develop a procedure that permits private parties to make applications for access to government spectrum including a public review mechanism by which NTIA would expeditiously grant or deny such applications. CECo urges the Commission to continue as well as to expand its efforts with NTIA to aggressively and promptly implement the congressionally-mandated application procedures to facilitate access to government spectrum by displaced POFS licensees.

^{7/}(...continued)
Secretary for Communications and Information, U.S. Dept. of Commerce, to Alfred C. Sikes, FCC Chairman.

^{8/} Telecommunications Authorization Act of 1992, Pub. L. No. 102-538, 106 Stat. 3533 (1992).

F. The Commission Must Ensure that the Operation of Emerging Technology Systems Does Not Create Objectionable Interference to Incumbent POFs Licensees

24. The Commission has noted that the new technologies which ultimately may be accommodated in the reallocated 2 GHz spectrum have not fully been identified. The Commission has further asserted that no present need exists to identify specific services which will be authorized to operate in the spectrum being reallocated prior to making the general reallocation. The Commission has also observed that while POFs/PCS interference criteria are currently being developed in the Docket No. 90-314 proceeding, interference criteria for future sharing between incumbents and developing technologies should not be developed until technical configurations of new technologies may be further determined.^{9/}

25. CECO is concerned that the Commission's position will enhance the possibility of future objectionable interference to existing POFs operations. While CECO understands that it is difficult to accurately project those specific new technologies which will be located in a particular spectrum range, CECO urges the Commission to take

^{9/} Notice, ¶ 29.