

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

In the Matter of)
)
Eastern Illini Electric Cooperative) WT Docket No. 99-87
)
Request for Extension of)
Narrowbanding Deadline -)
Data Operation)
)
Implementation of Sections 309(j) and 337 of)
the Communications Act of 1934, as Amended)

To: Chief, Wireless Telecommunications Bureau

**REQUEST FOR EXTENSION OF
NARROWBANDING DEADLINE**

Eastern Illini Electric Cooperative (“EIEC” or the “Company”), by its attorneys and in accordance with Section 1.925¹ of the Federal Communications Commission (“FCC” or the “Commission”) rules, respectfully requests an extension of 21 months, through September 30, 2014, for the Company to replace its data load control radio switch system with one that meets or is not subject to the FCC’s narrowbanding requirement.² As detailed herein, the Company satisfies the criteria established by the FCC as relevant in assessing narrowband waiver requests.³ The relief requested will not undermine the Commission’s objectives in adopting a

¹ 47 C.F.R. § 1.925.

² See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Second Report and Order and Second Further Notice of Proposed Rulemaking*, WT Docket No. 99-87, RM-9332, 18 FCC Rcd 3034 (2003); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Third Memorandum Opinion and Order, Third Further Notice of Proposed Rule Making and Order*, WT Docket No. 99-87, RM-9332, 19 FCC Rcd 25045 (2004); Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Order*, WT Docket No. 99-87, RM-9332, 25 FCC Rcd 8861 (2010); *see also* 47 C.F.R. §§ 90.203(j), 90.209(b).

³ See Wireless Telecommunication Bureau, Public Safety and Homeland Security Bureau, and Office of Engineering and Technology Provide Reminder of January 1, 2013 Deadline for Transition to Narrowband Operations in the 150-174 MHz and 421-512 MHz Bands and Guidance for Submission of Requests for Waiver and Other Matters,

mandatory narrowbanding deadline for the bands in question or adversely affect the operations of other licensees.

I BACKGROUND

EIEC is a non-profit, member-owned, rural, electric cooperative. It was formed in 1987 by the union of two existing electric cooperatives, each of which had served its community since 1938. The Company's territory covers approximately 5,000 square miles over parts of 11 lightly populated counties in east central Illinois. A map of the territory is attached as Exhibit A. EIEC has 4,523 miles of power lines with a density of only 3.03 members per mile.

EIEC's land mobile system uses VHF and UHF channels to transmit both voice and data under FCC call sign WNKP742. The primary use is for voice operations on a 24/7 basis. The voice portion of the system is used for communications with personnel in the field, for truck-to-truck communications, and for the after-hours dispatch center. The data component operates on 173.300 MHz and is used exclusively for the Company's load control radio switch system as detailed more fully below. The voice portion of the system has been modified to meet the FCC's narrowbanding requirement. EIEC has recently learned that the data facilities cannot be narrowbanded and still serve their intended purpose. It is this part of the Company's system for which waiver relief is requested.

II GRANT OF THIS REQUEST WOULD BE CONSISTENT WITH THE FCC'S WAIVER REQUIREMENTS AND WITH THE PUBLIC INTEREST.

FCC Rule Section 1.925 sets out alternative standards for justifying waiver relief. A request may be granted if (i) the underlying purpose of the rule(s) would not be served or would

Public Notice, 26 FCC Rcd 9647 (2011) ("NB Waiver Guidance PN"); *see also* Wireless Telecommunications Bureau and Public Safety and Homeland Security Bureau Provide Supplemental Guidance for Licensees in the 150-174 MHz and 421-512 MHz Bands Seeking Waiver of the January 1, 2013 Narrowbanding Deadline, *Public Notice*, 27 FCC Rcd 1936 (2012).

be frustrated by application in the particular instance, and a grant would be in the public interest; or (ii) in light of unique or unusual circumstances, application of the rule(s) would be inequitable, unduly burdensome, or contrary to the public interest, or the applicant has no reasonable alternative.⁴ In addition to the Commission's general waiver standard, the FCC has provided specific guidance for licensees seeking waivers of the January 1, 2013 narrowbanding deadline. For the reasons detailed below, EIEC meets both standards with regard to the waiver requested herein.

EIEC completed the narrowbanding of its voice operations earlier in 2012. A new radio system had been installed in 2007 and was able to be converted to the required narrowband emission with relative ease. The Company understood that the data capability could be modified to narrowband as well, since the equipment manual stated that it was narrowband-ready. However, when EIEC's technicians set the repeaters' data transmission to a 12.5 kHz emission, they proved incapable of opening the switches needed for the Company's load control program used to manage electricity demand, and thereby conserve energy during periods of peak usage. This failure cannot be overcome by increasing the power levels of the repeaters or by adding repeaters to the system since even switches located in close proximity to the tower sites could not be opened. EIEC can only assume that there is a fundamental technical incompatibility between narrowbanded transmitters and the switch receivers that were designed for wideband 25 kHz operation. Resolving this unexpected situation to meet the FCC's narrowbanding deadline would require the Company to replace approximately 4,200 switches, a solution that would be extraordinarily costly, particularly for a non-profit, member-owned cooperative. While EIEC recognizes that it will need to convert to narrowband capability or find an alternative approach

⁴ 47 C.F.R. § 1.925(b).

for meeting its load management function as promptly as possible, for the reasons described below, it requests an extension until September 30, 2014 to do so.

While the Company's voice capabilities are used extensively, the data side of the system has very limited use in terms of spectrum capacity consumption, but significant implications for energy conservation. Approximately 4,200 of EIEC's member/users have agreed to allow themselves to be disconnected from the electric grid on peak interrupt days to reduce demand on the grid. During these periods, water heaters are shut off and air conditioners are cycled on and off in fifteen-minute increments. This load management is accomplished by sending transmissions on 173.300 MHz from the three repeaters identified as Locs. 2, 3 and 4 on EIEC's license to receivers located at each of the residences and businesses that participate in the program.

The number of peak demand periods during which wideband data transmissions would be sent during the 21-month extension requested herein cannot be predicted with certainty. However, there were only 11 such days in 2008, 10 days in 2009, 12 days in 2010, six days in 2011, and five days in 2012. Typically, these transmissions are sent between 2 PM and 8 PM when temperatures are highest. They consist of a tone that is a two-second burst with a total time per repeater of approximately 30 seconds per hour on the hour. Thus, assuming load control was maintained during the typical six-hour period, the approximate time consumed by these transmissions on 173.300 MHz was 1,980 seconds in 2008, 1,800 seconds in 2009, 2,160 seconds in 2010, 1,080 seconds in 2011, and 900 seconds in 2012, or substantially less than one hour of airtime usage per year. A temporary continuation of these *de minimis* wideband data transmissions on a frequency that the Company also uses for narrowband voice communications

will have no discernible impact on the FCC's rebanding objectives or on the availability of spectrum for other licensees.

Indeed, the FCC's ULS database identifies only five co-channel licensees in the entire State of Illinois and three in Indiana. The lower adjacent channel, 173.2875 MHz, has 10 licensees in Illinois and six in Indiana, while the upper adjacent channel, 173.3125 MHz, has nine licensees in Illinois and two in Indiana. None of these co-channel or adjacent channel facilities are located within the Company's service area. Only three operate in any proximity to EIEC's territory and all operate on adjacent channels. The City of Charleston, IL (KJU218) and the Village of Lovington, IL (WQLS279) both are authorized on 173.2875 MHz, while Jasper County, IL (WQAX929) is authorized for 173.3125 MHz. Given the Company's extremely infrequent data transmissions and the fact that its voice operations on 173.300 MHz already have been narrowbanded, allowing EIEC to continue transmitting data in wideband mode for the limited purpose described above for 21 months while an appropriate alternative is identified would not adversely impact other licensees and would permit the Company to find a cost- and efficiency-effective solution. EIEC requests a 21-month extension to ensure that it will have a working data system through the hottest months of 2014.

A waiver of the deadline would be appropriate under Section 1.925(b)(3)(i) since the underlying purpose of the rebanding requirement, to make additional capacity available for other users, would not be advanced by its strict application, and allowing continued operation would serve the public interest in managing and conserving energy resources. A waiver also would be consistent with Section 1.925(b)(3)(ii), as enforcement of the deadline would be unduly burdensome and contrary to the public interest in light of EIEC's highly unusual, likely unique, situation for which there is no immediately available alternative.

The FCC has identified a number of factors it will consider in evaluating narrowband waiver requests.⁵ EIEC provides the following information in response to the factors the Commission has deemed relevant:

- Steps already taken to plan for, initiate, and complete the transition to narrowband operations.

The Company has completed the narrowbanding of its voice system, including on the frequency that also carries its data transmissions. It believed that it would be able to convert its data operations to narrowband as well based on the specifications of its equipment and only recently discovered that narrowbanding would eliminate the data system's functionality.

- System size and complexity.

EIEC operates three repeater stations, two link stations, one base station, two satellite base stations, 41 mobiles and approximately 4,200 data receivers.

- Whether system equipment is narrowband-capable or must be replaced or upgraded.

The data functionality cannot be maintained in narrowband mode. The load control system will need to be replaced if it is to continue operating on a frequency subject to the narrowbanding requirement.

- Whether the licensee plans additional system upgrades or improvements in addition to converting to narrowband operation.

The Company does not anticipate upgrades or improvements associated with replacing its data system except whatever upgrades, if any, are inherent in the replacement of the equipment.

- Funding sources, including whether the licensee's budget requires government approval or a multi-year budget process.

EIEC is a non-profit, member-owned cooperative that must look to those members to fund the replacement of the load control system. The Company has investigated the cost of doing so. At present, the only potential solution it has identified would be to deploy Aclara LTC transponders. The estimated cost of doing so for approximately 4,200 switches is as follows:

- \$150.00 per switch + 1.5hr labor x \$61.00/hr + 40mi @ .70 a mi + \$15.00 material; plus

⁵ NB Waiver Guidance PN at 3.

- \$7,000.00 for software and \$500.00 per year maintenance on software, or \$1.78/yr/switch, for a per switch total of
- \$286.28 x 4,200 switches.

Total of **\$1,202,376.00**

While this may be the solution EIEC will need to adopt, the Aclara LTC H system has only recently completed beta testing and has limited real world deployment. The additional time requested herein will enable the Company to evaluate the performance of this equipment in the field before determining whether it or some other alternative should be funded by the Company's members.

- Whether the licensee's narrowbanding schedule is affected by neighboring systems due to interoperability relationships or other interdependencies.

EIEC has no interoperability or interdependencies associated with other licensees.

- Plans to minimize the negative impact of extended wideband operations on co-channel and adjacent channel operations, including a description of the spectrum environment in the affected area.

As explained above, the frequency in question will be operated by the Company in narrowband mode for its 24/7 voice operations. Only the extremely infrequent data transmissions will continue to operate in wideband mode. EIEC operates in a rural area where spectrum congestion is not a significant issue. Moreover, 173.300 MHz and its two adjacent frequencies are very lightly used throughout the States of Illinois and Indiana. The Company anticipates no adverse impact on co-channel or adjacent channel operations.

- If the licensee plans to migrate to a non-VHF-UHF band (*e.g.*, 700 MHz or 800 MHz), whether it will relinquish VHF/UHF spectrum once it has migrated and the amount of spectrum to be relinquished:

Even if the Company were to migrate its data operation to a band that is not subject to the narrowbanding mandate, it will continue to use 173.300 MHz for narrowband voice operations.

The FCC also has directed waiver applicants to provide a proposed timetable for completing rebanding and to include the following elements:

- What steps in the process have been taken or will be taken prior to January 1, 2013.

As described above, EIEC has completed the narrowbanding of its voice system and has begun to investigate a solution for its load control requirement.

- Anticipated dates of commencement and completion of:
 - Replacement or retuning of mobiles/portables
Narrowbanding has been completed.
 - Infrastructure replacement or retuning
Voice narrowbanding has been completed. A solution for the data operation is being investigated.

III CONCLUSION

EIEC has been diligent in its efforts to meet the FCC's narrowbanding deadline. It has done so with respect to its voice operations, but has encountered an unanticipated and technically insurmountable obstacle to converting its data load management system to narrowband. For the reasons described herein, the Company requests a waiver until September 30, 2014, to identify and implement a solution that is field-tested and financially achievable for a non-profit, member-owned and funded, rural electric cooperative.

Kindly refer any questions or correspondence regarding this matter to the undersigned.

Respectfully submitted,

EASTERN ILLINI ELECTRIC COOPERATIVE



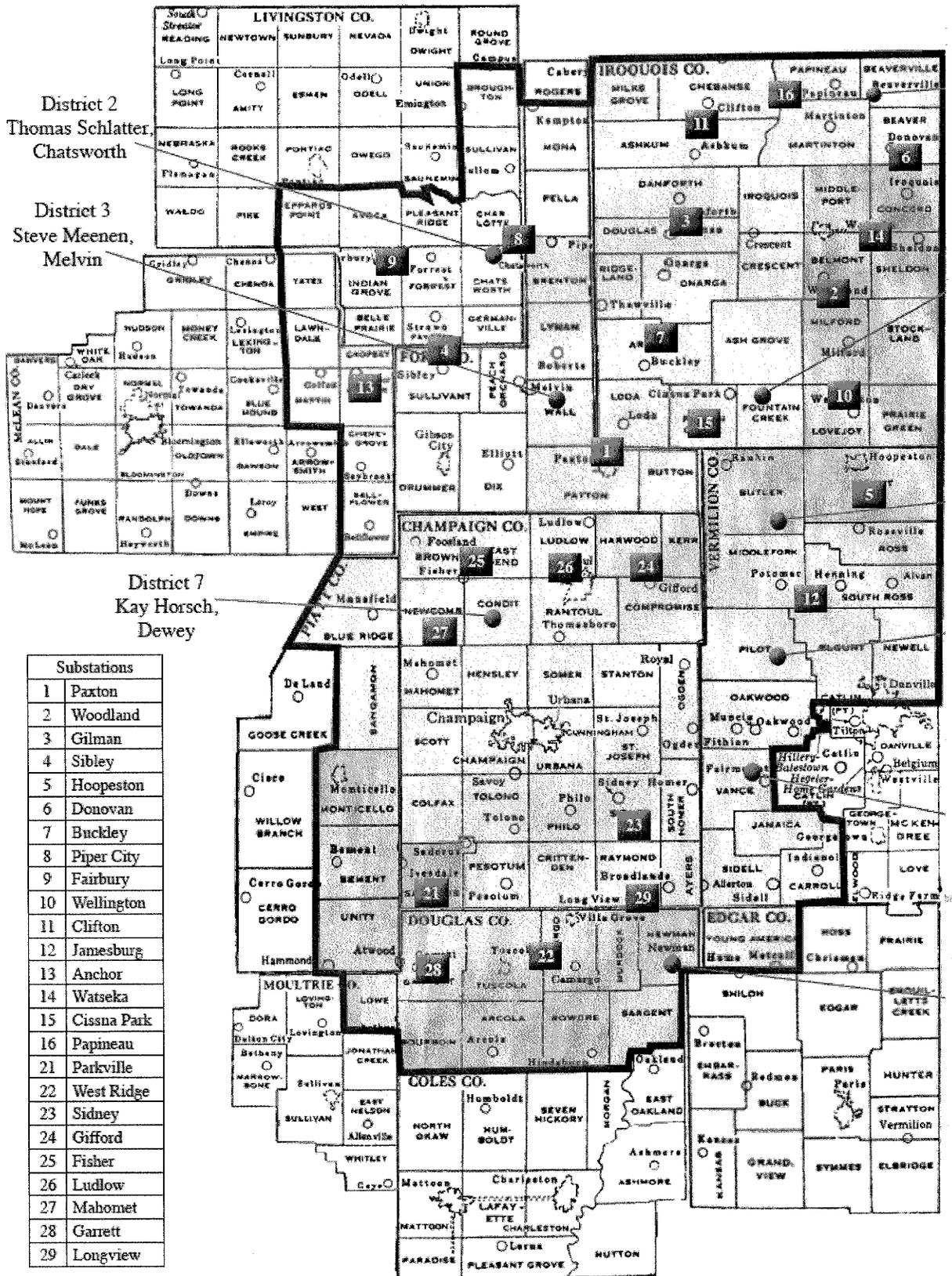
By its attorney:
Elizabeth R. Sachs

Lukas, Nace, Gutierrez & Sachs, LLP
8300 Greensboro Road, Suite 1200
McLean, VA 22102
(703) 584-8676

December 17, 2012

EXHIBIT A

EASTERN ILLINI ELECTRIC COOPERATIVE BOARD DIRECTORATE DISTRICTS



District 2
Thomas Schlatter,
Chatsworth

District 3
Steve Meenen,
Melvin

District 7
Kay Horsch,
Dewey