Before the
Federal Communications Commission
Washington, D.C. 20554

In the matter of	)	
	)	
Modification of Parts 2 and 15 of the Commission's Rules for unlicensed devices and equipment approval.	)))	ET Docket No. 03-201
	)	

To: The Commission

COMMENTS OF WE ENERGIES

We Energies,[1] pursuant to 47 C.F.R. § 1.415 of the Federal Communications Commission's ("FCC" or "Commission") rules, hereby submits these comments in response to the Commission's Further Notice of Proposed Rulemaking in the above-referenced proceeding.[2] We Energies supports the adoption of a spectrum etiquette for unlicensed devices operating in the 902-928 MHz ("915 MHz") band. We Energies believes that a spectrum etiquette is essential to assure the continued viability of automated meter reading ("AMR") and other critical applications for utility providers that already use this band.

With over $110 Million invested in its AMR system, We Energies is keenly aware of the potential impact that interference from other unlicensed users of the 915 MHz band can have on the effectiveness of AMR. We Energies is therefore particularly sensitive to the need to protect the viability of the band through responsible spectrum management policies. To date, We

[1] We Energies is the trade name of Wisconsin Electric Power Company and Wisconsin Gas LLC, the principal utility subsidiaries of Wisconsin Energy Corporation. With a service area encompassing over 23,400 square miles in Wisconsin and Michigan and gas and electric lines stretching over 59,000 miles, We Energies has implemented of a wireless AMR system that is currently used to monitor customer usage, as well as billing, power outage management, and theft detection. The system is expandable to provide other advanced functions critical to the efficiency of We Energies' provision of electricity and gas. We Energies system relies, in part, on unlicensed wireless devices housed in its utility meters which transmit in the 915 MHz band, serving its base of over 2 million customers.

[2] *See Modification of Parts 2 and 15 of the Commission's Rules for Unlicensed Devices and Equipment Approval*, Memorandum Opinion and Order and Further Notice of Proposed

(continued on next page)

Energies has encountered several circumstances within its service territory where other devices were either actually interfering or being proposed for implementation in a fashion that was almost certain to create interference. In most cases, We Energies has been able to resolve the interference incidents it has experienced. In almost every case, the source of the potential interference was a device using digital modulation at maximum power. We Energies is extremely concerned that if these types of devices proliferate in the 915 MHz band, incidents of interference will increase and become increasingly difficult to resolve. We Energies thus urges the Commission to adopt a spectrum etiquette that will better allow all types of unlicensed devices providing a variety of publicly beneficial uses to share the 915 MHz band.

I. WE ENERGIES HAS FIRST-HAND EXPERIENCE WITH UNRESOLVED INTERFERENCE IN THE 915 MHZ BAND.

To serve a significant number of its customers, We Energies' AMR system utilizes, in part, an unlicensed wireless device that operates in the 915 MHz band, transmitting at low power from the utility meter to provide accurate, timely meter readings. We Energies is required by state law to provide real (and not estimated) meter readings for use in billing its customers on a periodic basis.[3] The AMR system allows We Energies to accomplish this task without the expense of dispatching a service technician door-to-door to physically read meters, reducing costs that would be passed on to consumers. We Energies integrates data provided by its AMR system for use in outage management applications as well as its fraud detection activities. Because of its success with AMR, We Energies has plans to expand its system to serve an even greater percentage of its customers in the near future.

We Energies AMR system was first deployed in December 2001, generally without any recorded instances where interference from other Part 15 products was creating an insurmountable problem with obtaining real time data from its meters. However, We Energies has experienced an increasing number of interference incidents in the past few years, which provides concern for how the FCC's regulatory policies are being implemented in the 902-928 MHz band. For example, in January, 2003, We Energies unexpectedly encountered interference

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Rulemaking, FCC 07-117, ET Docket No. 03-201 (rel. June 22, 2007)(hereinafter "*Part 15 FNPRM*").

to its AMR system in one of the many communities it serves. We Energies was able to isolate the source of this interference to a local wireless internet service provider's ("WISP") installation of a Motorola Canopy system. This interference disrupted operations to approximately 2,000 customers within a one mile radius of the WISP site. We Energies worked cooperatively with the WISP to change the center frequency of the WISP's device to allow for co-existence. Although the parties were able to resolve this particular incident, We Energies recognizes that the technical solution was dependent on this WISP's cooperation and could not be replicated if another service provider using similar equipment elects to offer service in the same area in other parts of the 915 MHz band. In other words, without a spectrum etiquette codified in the FCC's rules, a solution that allows co-existence among unlicensed users not only may become more difficult to negotiate but, in fact, may become technically infeasible.

In another small community where We Energies had deployed a wireless AMR system, We Energies also lost its ability to communicate with several hundred customer meters. After investigation, We Energies was able to determine that the source of the interference emanated from a WISP that had installed a Canopy antenna on a local roof top. Except for the fact that the WISP had failed to follow the appropriate permitting requirements and was forced to shut down, We Energies may not have been able to resolve this incident.

In still another case, We Energies has found it impossible to receive AMR information from customer meters located within a one-half mile radius of a certain building where a Canopy system was deployed to relay video surveillance of a nearby parking lot. Despite its best efforts, We Energies has not been able to resolve this interference cooperatively and has been required, at significant expense, to dispatch service technicians to read meters in the affected neighborhood.

In light of these problems, We Energies has tested its AMR-equipped meters in the presence of certain digital devices. The results of those tests has demonstrated to We Energies that digitally modulated devices that operate with virtually no quiet time and a very high power level will overwhelm the lower power We Energies AMR receiving devices, regardless of which set of frequencies the digital modulated device utilizes within the 915 MHz band, essentially

[3] *See* WIS. ADMIN. CODE PSC §§ 113.0405, 113.0406, 134.12, 134.13.

denying the We Energies devices the use of the 915 MHz band over large geographic areas within its service territory.

II. WE ENERGIES SUPPORTS PRACTICES THAT FACILITATE THE COOPERATIVE SHARING OF THE 915 MHZ BAND.

Unlicensed devices and applications like AMR have led to productivity gains and improvements for American energy consumers. To build on this history of success, it is vital that unlicensed users of the 915 MHz band respect reasonable spectrum usage practices so that a single user or coordinated group of users are not allowed to exclude all others users of the band. As discussed above, We Energies has experienced instances where devices that operate at the maximum authorized by FCC rules will completely overwhelm and shut-out AMR applications, while still complying with current FCC regulations. As more digitally modulated devices that transmit at maximum power without a meaningful silent time are deployed on high towers or buildings, instances of irresolvable interference will undoubtedly increase.

We Energies urges the Commission to act before more such devices proliferate. In particular, We Energies supports the spectrum etiquette proposed in the Commission's Part 15 FNPRM as this particular protocol will protect We Energies' unlicensed operations by allowing sufficient time for its AMR signal to be successfully read between the higher power transmissions of other unlicensed users.

Respectfully Submitted

WE ENERGIES

/s/

Kenneth J. Vlasek
Operations Manager, Metering
We Energies
231 W. Michigan St.
Milwaukee, WI 53203
(414) 221-3299

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