

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION**

Amendment of Parts 1, 2, 15, 74, 78, 87, 90,)	
and 97 of the Commission’s Rules Regarding)	
Implementation of the Final Acts of the World)	ET Docket No. 12-338
Radiocommunication Conference)	
(Geneva, 2007) (WRC-07), Other Allocation)	
Issues, and Related Rule Updates)	

COMMENTS OF ENTERGY SERVICES, INC.

Pursuant to Sections 1.415 and 1.419 of the Federal Communication Commission’s (the “Commission”) rules, 47 C.F.R. §§ 1.415 and 1.419 (2012), Entergy Services, Inc. (“Entergy”), on behalf of the Entergy Operating Companies,¹ submits these comments in response to the Notice of Proposed Rulemaking (“NOPR”) issued by the Commission in the above-referenced proceeding, dated November 19, 2012.² The NOPR proposes to amend Parts 1, 2, 74, 87, 90, and 97 of the Commission’s rules to implement allocation decisions from the World Radiocommunication Conference (Geneva, 2007) (WRC-07).

Entergy recommends that the Commission reject the proposal to allocate the 135.7 to 137.8 kHz band for usage by amateur radio operators because of the risk that decision would pose to the reliable operation of electric transmission systems throughout the U.S.

I. BACKGROUND

In the NOPR the Commission proposes to amend various parts of the Commission’s rules to implement allocation decisions from the World Radiocommunication Conference (Geneva, 2007) (WRC-07) concerning portions of the radio frequency spectrum between 108 MHz and

¹ The Entergy Operating Companies are Entergy Arkansas, Inc., Entergy Gulf States Louisiana, LLC, Entergy Louisiana, LLC, Entergy Mississippi, Inc., Entergy New Orleans, Inc., and Entergy Texas, Inc.
² *In re Amendment of Parts 1, 2, 15, 74, 78, 87, 90, and 97 of the Commission’s Rules Regarding Implementation of the Final Acts of the World Radiocommunication Conference (Geneva, 2007) (WRC-07), Other Allocation Issues, and Related Rule Updates*, Notice of Proposed Rulemaking and Order, ET Docket No. 12-338, issued Nov. 19, 2012 (“NOPR”).

20.2 GHz, and to update certain rules in this frequency range.³ As relevant here, the Commission specifically proposed to “[a]llocate the 135.7-137.8 kHz band to the amateur radio service on a secondary basis, subject to the protection of power line carrier [(“PLC”)] operations.”⁴ In the NOPR, the Commission is reexamining its 2002 decision not to undertake this reallocation due to potential PLC interference.⁵ The Commission requested that interested members of the public comment on whether this frequency band should be allocated to the amateur service on a secondary basis, subject to certain restrictions.

The Entergy Operating Companies own and operate generation, transmission, and distribution facilities in four states—Arkansas, Louisiana, Mississippi, and Texas. Entergy uses PLC systems to protect various transmission lines throughout its systems against faults.

II. COMMENTS

In ET Docket No. 02-98 the Commission previously decided not to allocate the 135.7–137.8 kHz band to amateur service on a secondary basis because of the harmful interference with existing PLC systems operated by electric utilities. The Commission should reach the same decision in this proceeding because of the significant possibility of interference that continues to exist and the risk of harm to the bulk-electric system that interference will bring.

The high voltage electrical power system could be subject to false protective signaling from amateur radio operation if the Commission adopts the NOPR proposal to reallocate this spectrum. Presently, procedures exist to prevent frequency interference between unlicensed PLC systems and other licensed facilities, such as navigation beacons. This is accomplished by knowing the fixed location of the PLC communications path and its proximity to any known licensed beacon. With this information, PLC operations can be designed to avoid interference.

³ NOPR ¶ 1.

⁴ NOPR ¶ 3.

⁵ NOPR ¶ 15-16.

This would not be possible under the Commission’s proposal because amateur radio operators using the reallocated spectrum may not necessarily operate at a permanent, fixed location, making it difficult for utilities with PLC systems to ascertain if an interference condition may exist that it needs to address. As a result, transmission protection systems may not operate correctly. These systems could unnecessarily trip a transmission line out of service without cause, jeopardizing system reliability. Because of the unpredictable nature of the amateur radio interference, this could occur during high load periods, potentially causing broad system impacts.

Protection system misoperations, such as those caused by PLC interference created by radio operations, have serious reliability implications for the electric system. As the North American Electric Reliability Corporation has explained, “[a] misoperation—a false operation of a protection system or a failure of the protection system to operate when needed—can result in equipment damage, personnel hazards, and wide area disturbances or unnecessary customer outages.”⁶

Thus, the purported benefits from allocating this frequency band to the amateur service on a secondary basis are outweighed by the threat to the reliability of the bulk electric system, which is a necessary support for the U.S. economy.

Entergy urges the Commission to consider the following explanations from FCC 02-136 (May 15, 2002), which remain true today and explain the nature of the interference and the cost-effectiveness of PLC systems for utilities:

- ¶ 17: Explaining the Institute of Electric and Electronic Engineers Relay Communications Subcommittee’s concerns that amateur radio operations could interfere with PLC operations. As indicated by the Subcommittee, such interference could result in the tripping of unfaulted lines.

⁶ North American Electric Reliability Corp., Protection System Maintenance: A Technical Reference at 1 (Sept. 13, 2007), available at: http://www.nerc.com/docs/pc/spctf/Relay_Maintenance_Tech_Ref_approved_by_PC.pdf.

- ¶ 18: Explaining the Subcommittee’s position that the separation distances necessary to protect PLC operations are larger than American Radio Relay League, Inc. had suggested.
- ¶ 19: Explaining the Subcommittee’s position that retrofitting PLCs to use fiber and thereby avoid the possibility of interference remains expensive and is not cost-effective, especially because PLC remains the only viable means for protecting certain lines.
- ¶ 20: Explaining that amateur radio licensees may have difficulty calculating effective isotropic radiated power, thereby increasing the likelihood of interference with PLC systems.

The Commission should consider that PLC systems for electric system protection have been a traditional, cost-effective approach for electric utilities for over 50 years. Entergy would need to retrofit up to thirteen existing PLC systems if the proposal to permit amateur radio operation in the 135.7 to 137.8 Khz bands is adopted.

III. CONCLUSION

Entergy Corporation strongly urges the Commission to dismiss the proposal to permit amateur radio operations in the low frequency band where PLC systems are presently operating. Entergy requests that the Commission continue its current policy regarding these frequencies to protect the reliable operation of the nation’s electric system.

Respectfully submitted,

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February 22, 2013