



NEWS

FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET, N.W.
WASHINGTON, D.C. 20554

News media information 202 / 254-7674
Recorded listing of releases and texts
202 / 632-0002

1787

This is an unofficial announcement of Commission action. Release of the full text of a Commission order constitutes official action. See MCI v. FCC, 515 F 2d 385 (D.C. Circ. 1975)

Report No. 17318

ACTION IN DOCKET CASE

January 14, 1983

WIDER USE OF TOROIDAL TRANSFORMERS PROPOSED FOR AM DIRECTIONAL ANTENNA MONITORING (MM DOCKET NO. 83-16)

The Commission has proposed to allow less restricted use of toroidal transformers in systems for monitoring the current delivered to the array of towers used by AM radio stations operating with directional antennas.

The rule change was proposed by the Association of Federal Communications Consulting Engineers. A toroidal transformer is one of special construction which can measure the current feeding a transmitting tower and minimize any signal pick-up from other towers in a directional array.

In 1973 and 1976 the Commission adopted rules establishing standards for AM directional antenna monitoring systems and a schedule for their installation. Due to reservations about current transformers at the time, their use was restricted. As a result most systems use small "open loop" antennas mounted on the sides of antenna towers to sample the current and transmit measurements to the monitor.

Where conditions make their use feasible, toroidal transformers are regarded as equal to or better than open loops in accuracy and reliability. They are installed in the comparatively protected environment of the antenna tuning house at the base of each tower and are easier to install and maintain.

The Commission proposed to permit use of toroidal transformers with higher towers and self-supporting towers but, because of persistent doubts about their suitability in certain conditions of tower design and height, to maintain a limit of permissible tower height relative to wave length (130 degrees in electrical height). Toroidal transformer use also was proposed under certain conditions for the "folded unipole" type of antenna, an antenna designed for increased efficiency.

The FCC proposed to require a licensee to certify the stability of a monitoring system using transformers after meeting required tolerances for a continuous 30-day period. That would avoid a requirement for a special showing of stability which would have to be reviewed and analyzed by the FCC staff. It asked for comment on the suitability of the proposed procedure and testing period.

Acting on a petition by Charles P. Crossno, a broadcast consulting engineer, the Commission also proposed to allow use of impedance-matched radio frequency relays to switch sampling current signals from different antenna towers, to reduce the length of coaxial cable otherwise required, and requested comment.

Action by the Commission January 13, 1983, by Notice of Proposed Rulemaking (FCC 83-12). Commissioners Fowler (Chairman), Quello, Fogarty, Jones, Dawson, Rivera and Sharp.

For further information contact John Reiser or James McNally, (202) 632-9660.