Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of
Amendment of Parts 73 and 74 of the Commission’s Rules to Establish Rules for Digital Low Power Television and Television Translator Stations
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions
Amendment of Part 15 of the Commission’s Rules to Eliminate the Analog Tuner Requirement

MB Docket No. 03-185
GN Docket No. 12-268
ET Docket No. 14-175

To: The Commission

COMMENTS OF
NATIONAL PUBLIC RADIO, INC.

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Summary

NPR supports the Commission's efforts to facilitate the digital television ("DTV") transition of the remaining analog low power television ("LPTV") and television translator stations, while minimizing the disruption that might otherwise occur because of the broadcast television auction and repacking process. Such measures as delaying the September 1, 2015 transition date, waiving the deadlines for outstanding construction permits, authorizing LPTV and television translator sharing arrangements, and establishing a digital-to-digital replacement translator service are all appropriately targeted to achieving the stated objectives for this proceeding and the DTV transition generally.

The Commission's proposal to authorize LPTV Channel 6 stations to operate as analog FM radio stations, on the other hand, is misguided. The proposal is unrelated to the purpose of this proceeding and of the DTV transition generally, it is premature and potentially irrelevant, it conflicts with the Communications Act and Commission rules, and it raises significant technical and communications policy issues. NPR therefore urges the Commission to address the proposal, if at all, in a separate proceeding more broadly focused on the use of the relevant (82-88 MHz) spectrum following the auction and repacking process.

In such a proceeding, the Commission should consider licensing traditional FM radio stations rather than LPTV analog FM radio stations to use the spectrum in areas unserved by DTV stations. Compared to authorizing a single LPTV station to use a 6 MHz channel to offer a single analog FM radio service, the Commission could license many more FM radio stations to use the same amount of spectrum to offer a multiplicity of such services. Such an alternative would result in a more efficient use of spectrum, promote the diversification of broadcast station ownership, respond to the continuing demand for FM radio stations, and better serve the public interest.
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Introduction

Pursuant to Section 1.415 of the Commission’s rules, 47 C.F.R. § 1.415, National Public Radio, Inc. ("NPR") hereby submits its Comments in response to the Commission’s Third Notice of Proposed Rulemaking in the above-captioned matter.¹

NPR is a non-profit membership corporation that produces and distributes noncommercial educational ("NCE") programming through more than 1,000 public radio stations nationwide. In addition to broadcasting award winning NPR programming, including All Things Considered® and Morning Edition®, NPR Member stations are themselves significant program producers and community institutions. NPR also operates the Public Radio

Satellite System ("PRSS"), provides a variety of digital services to its Members, and represents their collective interests in public policy matters.

I. NPR Supports The Proposed Measures Directed To Facilitating The Transition Of The Remaining Analog LPTV and Television Translator Stations To Digital Television

Much of the *Third Notice* appropriately focuses on fine-tuning the transition of the remaining analog low power television ("LPTV") and television translator stations to digital television service ("DTV"). While most LPTV and television translator stations have completed the transition,\(^2\) circumstances have changed for those that have not. Specifically, since the Commission set the September 1, 2015 deadline for the digital conversion of these services in 2011,\(^3\) Congress has authorized and the Commission is now implementing a comprehensive broadcast television spectrum auction process, including the eventual “repacking” of the broadcast television bands to accommodate demand for wireless broadband spectrum.\(^4\) As “secondary” services, television translator and LPTV stations must accept interference from primary stations and they must not cause interference to primary stations.\(^5\) As a result, individual licensees could now be forced to complete the DTV conversion and then have to relocate or rebuild their stations following the auction and repacking process because that

\(^2\) “As of the release date of this Third Notice, approximately 56% of LPTV and 80% of TV translator stations have completed their transition to digital." *Third Notice*, 29 FCC Rcd. at 12539.


\(^4\) *See Third Notice*, 29 FCC Rcd. at 12539.

\(^5\) *See Second Report and Order*, 26 FCC Rcd. at 10751.
process will not be completed until after the current September 1, 2015 LPTV and television translator digital conversion deadline.

NPR applauds the Commission’s efforts to implement the broadcast television auction and repacking process with as little disruption to broadcast television service as possible given the competing interests involved and the complexity of the undertaking. Such measures as suspending the September 1, 2015 deadline and the construction deadlines specified in outstanding digital LPTV and translator television construction permits are appropriately designed to avoid unnecessary expense and effort, while preserving existing broadcast television service.6 In addition, such measures as permitting channel sharing between LPTV and television translator stations and establishing a new digital-to-digital replacement translator service all further the DTV transition, accommodate the auction and repacking process, and seek to minimize disruption.7 NPR therefore supports those proposed measures.

II. The Commission’s Proposal To Allow Certain LPTV Stations To Operate As Analog FM Radio Stations Is Unrelated To The Purpose Of This Proceeding, Raises Significant Legal, Technical and Policy Issues, And Should Be Taken Up, If At All, In A Separate Proceeding Devoted To The Use Of The 82-88 MHz Spectrum Following The Broadcast Television Auction and Repacking Process

In contrast to the proposals aimed at facilitating the DTV transition of the remaining analog LPTV and television translator stations, a proposal to authorize LPTV stations to utilize the 82-88 MHz spectrum to offer analog FM radio services is flawed in numerous respects. First, it is unrelated to the stated purpose of this proceeding -- to facilitate the final conversion of LPTV and TV translator stations to digital service.8 Second, it is contrary to the Commission’s

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6 See Third Notice, 29 FCC Rcd. at 12539, 12542.

7 See id. at 12542-12552.

8 Id. at 12537 (“Through this proceeding, we seek comment on measures to facilitate the final conversion of LPTV and TV translator stations to digital service and consider additional
broader DTV policy objective of an “expedited and successful transition for all digital services, so that the public will be able to enjoy the benefits of digital broadcast television technology.”

Third, it is a premature and potentially irrelevant proposal because the Commission cannot know how much of the 82-88 MHz spectrum will be utilized by full power television stations, TV translator stations, and LPTV stations actually desirous of offering DTV services until after the broadcast television spectrum auction and repacking process. Fourth, the Third Notice provides no explanation for why the Commission is offering the proposal at this time, in this proceeding, and as part of the DTV transition.

Finally, while the Third Notice poses a number of questions concerning the propriety of the proposal under the Commission’s rules, it fails to address many technical and communications policy questions the proposal also raises. Those matters are addressed below.

A. The Communications Act And the Commission’s Rules Do Not Permit The Proposed LPTV Analog FM Radio Service

In presenting the proposal, the Third Notice asks whether the Commission’s rules can be read to permit LPTV to offer analog FM radio services as a DTV ancillary or supplementary service. As a threshold matter, context is critical. While the DTV rules generally authorize ancillary or supplementary service of various kinds, the rules were expressly adopted for purposes of establishing a digital television service. The promise of digital television long

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9 See id. at 12540 (emphasis added).

10 Instead, the Third Notice simply requests comment on the proposal. See id. at 12554.

11 Id. at 12554-55.

12 See 47 C.F.R. §§73.624, 74.790.
touted by the Commission should amount to more than an LPTV station masquerading as an analog FM radio station.\textsuperscript{13}

Moreover, the proposal is at odds with the underlying rationale for allowing ancillary or supplementary services -- to promote the efficient use of spectrum and to enhance the use of existing spectrum\textsuperscript{14} -- which, in turn, is based on the Commission’s basic statutory responsibility to manage the radio-frequency spectrum in the public interest.\textsuperscript{15} An LPTV analog FM radio service is neither an enhanced nor an efficient use of spectrum. Analog FM radio services have been in existence for a century,\textsuperscript{16} and the handful of LPTV stations currently offering such services, like television stations generally, each use a 6 MHz channel, while traditional FM radio stations use 200 kHz channels, or 1/30th as much spectrum. Based on the current operations of analog LPTV stations offering FM radio services, moreover, the FM radio service is the primary spectrum use, not an ancillary or supplementary one,\textsuperscript{17} and there is no technical path for these

\begin{itemize}
\item \textsuperscript{13} See, e.g., \textit{In The Matter Of Advanced Television Systems And Their Impact Upon The Existing Television Broadcast Service, Fifth Report and Order}, 12 FCC Rcd. 12809 at 12811 (1997) (“Digital technology holds great promise. It allows delivery of brilliant, high-definition, multiple digital-quality programs, and ancillary and supplementary services such as data transfer.”)

\item \textsuperscript{14} \textit{In The Matter Of Advanced Television Systems And Their Impact Upon The Existing Television Broadcast Service, Fifth Report and Order}, 12 FCC Rcd. 12809, at 12823 (1997).

\item \textsuperscript{15} Under the Communications Act, the Commission is generally charged with regulating the radio-frequency spectrum, among other things, to achieve the effective and efficient use of the spectrum. 47 U.C.S. §§ 151, 303(g).

\item \textsuperscript{16} What is now WHA(AM), Madison, WI, which is licensed to NPR Member Wisconsin Public Radio, was established in 1917 as one of the country’s first radio stations. See Witherspoon and Kovitz, The History of Public Broadcasting at 4 (1987).

\item \textsuperscript{17} \textit{See Third Notice}, 29 FCC Rcd. at ¶ 47. See also \url{www.chicagotribune.com/business/ct-post-game-format-1207-biz-20141205-story.html} (“Its analog video signal, available over the air and on Comcast Channel 877, features an animated traffic display, which makes for less than scintillating viewing but satisfies its requirement to be a TV station.”).
\end{itemize}
LPTV analog FM radio services to convert to HD Radio operation like other radio stations.\(^{18}\) As addressed below,\(^{19}\) the service these stations could offer is also technically compromised.

Nor is the use of the 82-88 MHz spectrum for analog FM radio service "consistent with the technology or method designated by the Commission for the provision of advanced television services" as required under the Communications Act for ancillary or supplementary services.\(^{20}\) As correctly reasoned by the Commission's Video Division in dismissing a prior "hybrid" LPTV DTV/analog FM radio proposal,\(^{21}\) the application failed to comply with various Commission rules, including Section 73.682(d), which provides that digital broadcast television signals must comply with the standards for such transmissions set forth by the Advanced Television Systems Committee.\(^{22}\) The relevant ATSC DTV standard as designated by the Commission makes no provision for hybrid DTV/analog FM radio transmissions.\(^{23}\)

Under the current Commission rules, moreover, a DTV licensee offering ancillary services that are analogous to other services subject to regulation by the Commission must also comply with the regulations governing such analogous services.\(^{24}\) The *Third Notice* notes a few of the relevant rules, but, absent a compelling justification to the contrary, every rule governing

\(^{18}\) *Third Notice*, 29 FCC Rcd. at 12555 n.120.

\(^{19}\) *See* Section II.B, *infra*.


\(^{21}\) *See Third Notice*, 29 FCC Rcd. at 2554 n. 111 (*citing* Letter to Venture Technologies Group, LLC from Hossein Hashemzadeh, Deputy Chief of Video Division, File No. BMPDVL-20120113AEE, Aug. 2, 2012)).

\(^{22}\) 47 C.F.R. § 73.682(d).


\(^{24}\) 47 C.F.R. § 73.624(c).
over-the-air FM radio broadcast service should apply to an LPTV station offering an analog FM audio service for reception by FM radio receivers. The Commission has previously permitted ancillary or supplementary services but only subject to compliance with the same rules that apply to the analogous service.

To the extent there is a need to accommodate differences among various categories of FM radio services, including low power FM (“LPFM”), full power FM, and FM booster and translator services, as well as AM radio services, those are appropriately addressed in a separate proceeding devoted to the use of the 82-88 MHz spectrum following the auction and repacking process. Among other things, to the extent the Commission decides that certain FM rules should not apply to LPTV analog FM radio services, it should also ask whether such rules should be eliminated for FM radio stations licensed as such. After all, it generally does not matter to a station’s listeners whether the broadcast source is an FM station or an LPTV station operating as one.

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25 Such rules would include emergency alerting, public file obligations, the FM channel allocation rules, and the panoply of statutory and Commission content commands and restrictions.

26 See, e.g., In The Matter Of Digital Audio Broadcasting Systems And Their Impact On The Terrestrial Radio Broadcast Service Second Report And Order; First Order On Reconsideration And Second Further Notice Of Proposed Rulemaking, 22 FCC Rcd. 10344, at 10359 (2007) (“Because these agreements are essentially leasing arrangements, they achieve benefits similar to those achieved through leasing arrangements. The Commission has for many years permitted brokering of FM subcarriers and excess digital television bandwidth.”); In The Matter Of Advanced Television Systems And Their Impact Upon The Existing Television Broadcast Service, Memorandum Opinion and Order on Reconsideration of the Fifth Report and Order, 13 FCC Rcd. 6860, at 6870 (1998) (“The Fifth Report and Order addressed the issue of parity in the treatment of various service providers. We stated that, consistent with Section 336(b)(3), all non-broadcast services provided by digital licensees will be regulated in a manner consistent with analogous services provided by other persons or entities.”)
B. The Proposed LPTV Analog FM Radio Service Raises Significant Technical Issues

Besides conflicting with the Communications Act and the Commission's rules, the proposal raises numerous technical issues. In response to the Third Notice, laboratory tests conducted by Linley Gumm and Charles Rhodes ("Gumm/Rhodes") demonstrate a high probability that an LPTV’s analog FM radio service will interfere with reception of the LPTV’s DTV service.27 “For FM carriers at 87.70 MHz and 87.76 MHz the amplitude of the FM carrier must be strictly limited to prevent perhaps 25% of the DTV receivers from experiencing harmful interference.”28 Even these results likely understate the potential DTV-host interference.

Among other things, the Gumm/Rhodes study tested with 25 kHz peak deviation, which is standard for analog television, but standard FM radio stations modulate with a higher 75 kHz modulation level, and LPTV analog FM radio services already operate with higher modulation to improve signal reception.29

The Gumm/Rhodes study also indicates poor reception of the LPTV analog FM radio signal when the FM carrier’s amplitude is reduced to avoid DTV host interference.30 Even so,

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27 See Comments of Linley Gumm and Charles Rhodes to Section E, “Operation of Analog Radio Services by Digital LPTV Stations as Ancillary or Supplementary Services,” MB Docket No. 03-185, filed Nov. 12, 2014 (“Gumm/Rhodes Comments”).

28 Id. at 13.

29 The tests conducted with an unmodulated FM carrier showed less interference to the DTV receivers than occurred with 25 kHz deviation, and a 75 kHz FM deviation would produce greater interference to DTV reception than what was reported. See Gumm/Rhodes Comments at 8. The “hybrid” LPTV DTV/analog FM radio application referenced above also proposed a 75 kHz deviation. See note 21, supra; Third Notice, 29 FCC Rcd. at 12554 n.111. See also In the Matter of Venture Technologies Group, LLC, Licensee of Class A Television Station KSFV-LP, Facility ID No. 49704, Los Angeles, File No. EB-08-LA--0309, Notice of Violation No. V200932900004 (Nov. 17, 2008) (finding that the effective radiated power of the aural transmitter was 171% of the station's visual transmitter, well above the 22% maximum peak set by the Commission's rules).

30 Gumm/Rhodes Comments at 13.
the testing also likely understates the severity of the trade-off between FM reception and DTV-host interference. Among other things, the study authors estimated the reception performance of an FM signal embedded within the LPTV signal based on general technical parameters, and real world conditions are likely to be less favorable. For instance, the authors assumed reception in terms of monophonic FM, but stereo transmission is used almost universally for music and mixed format broadcasting. As a result, reception would likely be too noisy for quality service in mono, but the additional noise penalty with stereo reception would effectively rule out this broadcast mode. In sum, the study data indicates that the quality of FM reception with DTV emissions in compliance with Commission transmission rules would be marginal at best.

The Commission must ensure that adjacent NCE FM stations are insulated from actual and proposed interference from such services. Because LPTV stations provide a secondary service and full power FM stations provide a primary service, adjacent NCE FM stations are entitled to no less protection.31 Under the Commission's "newcomer" policy, LPTV stations must also protect other secondary services, such as FM translator, FM booster, and low power FM ("LPFM") stations, already in existence when the LPTV station is authorized.32

Accordingly, NPR agrees that, if the Commission permits LPTV analog FM radio operations, it should prohibit any overlap between the 100 dBu interfering contour of the LPTV Channel 6 station and the 60 dBu protected contour of the NCE FM station.33 In addition, if the operation of the LPTV station causes any actual interference to the transmission of any

31 See Third Notice, 29 FCC Rcd. at 12555.


33 Third Notice, 29 FCC Rcd. at 12555.
authorized FM broadcast station, the LPTV station should be required to eliminate the interference or immediately suspend operations.34 Any credible evidence, whether presented by an adversely affected FM station or in the form of a listener complaint, should be sufficient to result in the immediate elimination of the interference or suspension of the LPTV operations.

C. The Proposed LPTV Analog FM Radio Service Raises Significant Spectrum Efficiency and Communications Policy Issues

The Commission’s LPTV analog FM radio service proposal also conflicts with the Commission's efforts to promote spectrum efficiency and diversification of broadcast ownership. As a threshold matter, the Commission assumes but has never established the public interest benefits provided by LPTV stations generally, let alone LPTV stations operating as analog FM radio stations.35 Are the latter stations providing an important public service, including to underserved communities, or simply offering more of the same programming found elsewhere among commercial FM stations?36 And, if LPTV FM stations are providing an important public service, is the service so important that it justifies allowing a single LPTV station to utilize 6 MHz of spectrum for that purpose when the same spectrum could accommodate many more FM stations because of the much smaller bandwidth they require?

34 Id.


36 See www.chicagotribune.com/business/ct-post-game-format-1207-biz-20141205-story.html ("WG WG-LP is a low-power television station whose Channel 6 frequency delivers audio at the bottom of the FM band. It has been everything from Spanish to country to smooth jazz to alternative rock to sports in the six years since it fired up its signal in Chicago, with varying degrees of ratings success.")
The Commission has long expressed a need for diversity of broadcast media ownership.

As the Commission wrote in 2009, for instance:

> The Commission has long sought to promote broadcast station ownership by minorities and women in order to foster diversity in broadcasting. Although some of the Commission’s initiatives . . . have had beneficial effects, the overall level of minority and female ownership in the broadcast industry remains dismal.37

In the six years since, the Commission has continually reaffirmed this point,38 and confirmed low levels of ownership by women and minorities after collecting extensive data.39 Individually, the Chairman and his fellow Commissioners have identified diversification of broadcast ownership as a paramount concern.40 Indeed, Commissioner Pai has offered concrete proposals emphasizing the improvement of AM radio as a method of supporting and increasing the number of diverse media voices.41 Commissioner Clyburn has emphasized media diversity as a top agency priority:

> Media ownership affects every single person in this country, whether they realize it or not. Everyone digests news, some casually others voraciously. Therefore,

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38 See Promoting Diversification of Ownership in Broadcasting Services, Sixth Further Notice of Proposed Rulemaking, 28 FCC Rcd. 461, 463 (2013) (“It has been a longstanding goal of the Commission to promote diverse ownership of broadcast stations, including ownership by women and minorities.”).


40 Id. at 4582 (Statement of Chairman Wheeler). See also id. at 4586 (“[W]e need policies that help bring us beyond the status quo.”) (Statement of Commissioner Rosenworcel).

preserving journalistic integrity and promoting a diversity of viewpoints are paramount concerns, and should remain top priorities for this agency.”

A statutory imperative underlies the Commission’s expressed desire to promote a diversification of broadcast ownership.43

Coupled with this statutory and Commission policy imperative is an undeniably broad and longstanding demand for FM radio station ownership. The Commission recognized more than 30 years ago that the radio broadcast spectrum in many parts of the country was severely congested.44 The Commission has sought to address this demand by establishing additional classes of radio broadcast facilities and modifying interference standards.45 Yet, the demand for radio broadcast facilities continues to outpace available spectrum, and the Commission has expended considerable resources expanding opportunities for new FM radio stations, particularly in recent years through the LPFM service.46


43 Section 257 of the Communications Act expressly directs the FCC to promote a “diversity of media voices.” 47 U.S.C. § 257(b).

44 Modification of FM Broadcast Station Rules to Increase the Availability of Commercial FM Broadcast Assignments, 94 F.C.C.2d 152, 153 (1983). See also www.fcc.gov/guides/how-apply-radio-or-television-broadcast-station (“Potential applicants for radio and television services should be aware that frequencies for these services are always in heavy demand. A few years ago, the Commission received approximately 30,000 inquiries in a year from people who wanted to start a radio broadcast station. Since then, demand for radio broadcast stations has grown while the amount of available spectrum has diminished.”)


Therefore, NPR urges the Commission to broaden consideration of the LPTV analog FM radio service proposal as part of a separate inquiry into the future use of the 82-88 MHz spectrum. As part of such a proceeding, the Commission should consider permitting traditional FM radio stations to use the spectrum in areas unserved by DTV stations following the broadcast television spectrum auction and channel repacking process. Allowing such use would encourage diversification of ownership in a far more spectrum-efficient manner. Even if served DTV Channel 6 markets were more numerous following the television auction and repacking process than they are today, many more FM radio stations could be constructed based on a single 6 MHz channel than a single LPTV station where there are areas unserved by DTV Channel 6 stations.

In any event, because of the uncertainty associated with the broadcast auction and repacking process, it is premature to authorize an LPTV analog FM radio service at this time. Whether the Commission ultimately decides to authorize existing LPTV Channel 6 licensees to operate as analog LPTV FM stations or make the spectrum available to a much larger number of FM station owners in unserved DTV Channel 6 markets, the Commission cannot know how much of the 82-88 MHz spectrum will be available for either purpose until after the auction and repacking process is completed. It may turn out there are few areas in which an LPTV analog FM radio service might be viable because of competing demand by full power DTV stations. Once the auction and repacking process is completed, however, the Commission will be better positioned to determine how the 82-88 MHz spectrum can best be used to promote the public interest.
Conclusion

For the foregoing reasons, NPR supports the Commission’s efforts to facilitate the transition of the remaining LPTV and television translator stations to DTV operations, but NPR urges the Commission to initiate a separate proceeding specifically directed to the issues raised by its LPTV analog FM radio proposal.

Respectfully submitted,

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