

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

In the Matter of

Commission Policy Regarding
Terrain Shielding in the Evaluation
of Television Translator, Television
Booster and Low Power Television
Applications

POLICY STATEMENT

Adopted: April 21, 1988;

Released: April 25, 1988

By the Commission:

INTRODUCTION

1. The Commission herein revisits its policy regarding its treatment of the effects of terrain on propagation in the Low Power Television Service (LPTV). This action responds to our concern that some consideration of terrain shielding in the evaluation of television translator, television booster and LPTV applications is essential to the further authorization of service in many communities. Circumstances previously prohibiting any such consideration have changed. Accordingly, although we do not find that the public interest would be best served by incorporating considerations of terrain shielding into regular processing procedures at this time, the Commission will now grant waivers of its LPTV application acceptance standards concerning interference protection, when such requests are supported by either terrain studies or, alternatively, the assent to such grants by stations predicted to receive interference from proposed facilities, together with a less rigorous terrain showing. This *Policy Statement* sets forth general guidelines, on when we will consider terrain shielding requests, and provides general guidance for the submission of such requests.

BACKGROUND

2. The Commission's experience and concerns with accounting for the effects of terrain on signal propagation in the assignment of television translator stations provide an understanding of both how it could impede the efficiency of application processing and why we must limit the applicability of its consideration at this time. During the years before the Low Power Television Service was created, interference protection studies on television translator applications depended largely on engineering judgment, where terrain shielding played a major role. In evaluating the likelihood of interference from proposed facilities to nearby stations, the Commission staff reviewed topographic maps and terrain profiles submitted by applicants. Decisions were sometimes made on the basis of an assent by stations potentially affected by the grant of the application, with the understanding that the applicant would resolve any interference problems. These processing procedures were then feasible and worked effectively be-

cause the Commission dealt with relatively small backlogs of applications, the applications rarely were mutually exclusive, and most proposals were for service in areas of rugged terrain familiar to the applicants. Thousands of television translator stations were authorized in this manner and, generally, have operated without causing interference.

3. By the time the LPTV rules were adopted in 1982, the processing situation had changed drastically. The Commission then faced a backlog of more than 5,000 applications proposing translator and LPTV service throughout the country, and it was apparent that many of these applications were mutually exclusive. These circumstances prompted the Commission to conclude in the LPTV proceeding that it could no longer consider terrain shielding in the authorization process, where it stated in pertinent part:

We believe that the overwhelming argument is presented by our experience with interim applications. It is far beyond our staff capacity to evaluate individually thousands of terrain shielding claims . . .

[Low Power Television Report and Order, 51 RR 2d 476, 495 (1982).]

There is no universally accepted method of predicting the effects of terrain shielding. It would be beyond the scope of this proceeding to adopt a general terrain correction factor, even if we had sufficient information to enable us to do so. Under these circumstances, any attempt to allow for terrain shielding would embroil us in disputes that may not be susceptible to resolution by accepted standards and would therefore frustrate our efforts to expedite grant of low power licenses.

[Reconsideration of LPTV Report and Order, 53 RR 2d 1267, 1274 (1983).]

Since then, and for the same reasons, the Commission has repeatedly declined to consider terrain shielding in the evaluation of television translator and low power television applications. See *Tel Radio Communications Properties, Inc.*, FCC 85-327, released June 27, 1985; *Kennebec Valley Television (Channel 3, Augusta, Maine)*, 60 RR 2d 104, 105 (1986) (and authorities cited therein); *Kennebec Valley Television (Channel 12, Rutland, Vermont)*, 60 RR 2d 107 (1986).

4. Efficient and systematic processing of the more than 30,000 applications filed in the service has necessitated strict adherence to our LPTV interference protection standards (47 C.F.R. 74.705, 74.707 and 74.709). These standards, in effect, prohibit the overlap of particular field strength contours, where contour locations are predicted from station engineering parameters and the Commission's signal propagation curves (47 C.F.R. 73.699). The standards in Section 74.707 of the rules also define mutual exclusivity among pending applications. In order to verify compliance with the standards and to determine which applications are mutually exclusive, the Commission staff generally relies on computer routines that make thousands

of calculations for each application studied. These routines compute antenna height above average terrain (HAAT) in pertinent directions and utilize HAAT in predictions of contour locations. The HAAT is the antenna height above the average terrain elevation between 3.2 to 16.1 kilometers (2 - 10 miles) from the antenna site. Except for HAAT, the effects of terrain cannot be incorporated into these routines until we adopt standard prediction methods, and we are not yet prepared to do so. Therefore, the evaluation of terrain shielding claims in LPTV application studies would involve the use of nonroutine, and possibly lengthy, engineering analysis.

5. Deviation from normal processing procedures delays the final disposition of an application. The adverse impact on expeditious processing is magnified when groups of mutually exclusive applications are involved, since delays in the processing of one application in the group, delay action on the others. Until recently, the majority of the applications filed in the service have been mutually exclusive with other applications proposing operation in the same or nearby communities. In many cases, those applications, in turn, have been mutually exclusive with yet other applications, and so on. In this manner, hundreds of applications have been linked in "daisy chains" involving many channels and communities spread over distances of hundreds of miles. Even under normal procedures, the processing of such groups of applications is very time consuming. For instance, whenever one or more defective applications in the group is dismissed, a lottery involving the group cannot take place until the time has passed for appeals of the staff action and all appeals have been resolved. Had terrain shielding been involved in determinations of mutual exclusivity, processing would have been brought to a near halt.

DISCUSSION AND REVISED POLICY

6. Despite the positive effect it has had on our ability to process applications expeditiously, we are mindful that our policy on terrain shielding has frustrated well-intentioned efforts to obtain additional or improved television reception, particularly in western mountainous areas where service is provided primarily by translators. We are aware that without consideration of terrain, it has been difficult to file acceptable applications in some areas. Many applications have been rejected because of predicted interference to a nearby station where, in reality, terrain obstructions may have prevented interference. Because of these concerns and our wish to authorize desired service wherever possible, we have looked toward the time when changing circumstances would permit us to pursue a more flexible terrain policy.

7. Circumstances have changed considerably since we received 25,000 LPTV and translator applications in March of 1984. First, the application backlog, which reached a peak of 37,000, has been reduced to fewer than 4,000 applications. Second, we have recently observed favorable changes in application filing patterns. Last summer, following a three-year filing freeze, we opened the first nationwide application "filing window," in which only 1,350 applications were filed. *Report and Order in the Low Power Television / Television Translator Service (Filing Window II)*, 2 FCC Rcd 1278 (1987). Significantly, nearly 500 of these applications were not mutually exclusive with other applications, and more than 400 of these have already been granted. Moreover, a relatively low percentage

of the window applications are mutually exclusive, and these are not configured in long and complicated daisy chains. These factors are enabling much quicker authorization of service and are permitting actions to be taken on many applications without delaying the processing of others. While we wish to be cautious, it appears that our recently revised LPTV window procedures and the institution of filing fees have resulted in a reduction in incoming applications. Finally, the implementation of the LPTV service is now well underway. More than 3,000 construction permits have been granted since the service began, and the number of operating LPTV stations has been increasing steadily.

8. As a result of these changes, the Commission can give limited consideration to terrain shielding in the LPTV service. We cannot, at this time, propose standards for incorporating shielding into regular processing procedures. However, we will consider, on a case-by-case basis, requests for waiver of Sections 74.705 and 74.707 of our application acceptance standards, on the grounds of terrain shielding. Waivers must be secured in cases where proposed new or changed facilities would be predicted to cause prohibited interference. In order to be considered, waiver requests must be supported by a demonstration that the proposed facility would not be expected to interfere at the protected contour of all potentially affected stations, existing and proposed, because of the intervening terrain. An applicant may also submit the written assent to the grant of the waiver by all licensees, permittees and applicants of potentially affected stations. If the necessary assent is obtained, the demonstration may be less rigorous than otherwise expected. Potentially affected stations will include authorized full-service television, low power television and television translator stations, and those proposed in earlier filed LPTV or translator applications that are cut-off from further competing applications. As further discussed in paras. 10 and 11, *infra*, the supporting documentation generally should include a graphic description of the terrain obstructions (terrain profiles). However, in cases where the assent of affected stations has been demonstrated, our determination to grant the waiver may rely less on terrain analysis.

9. At this time, we must limit the scope of terrain waivers because we are uncertain about the administrative resource impact of specialized manual studies, and because we want to avoid situations where lengthy analysis of certain applications delays the processing of other related applications significantly. We do not know how many terrain shielding claims will be submitted, nor how much time, on average, will be involved in evaluating each case. Accordingly, we will consider terrain shielding waivers only in connection with the acceptance of applications, i.e., whether television translator, booster or LPTV applications should be returned because of predicted interference to facilities previously proposed or authorized. We will not consider terrain shielding in determining mutual exclusivity among applications. We will further limit its consideration to those applications which, under normal processing standards and methods, are not found to be mutually exclusive with one or more applications. Requests for waivers and supporting documentation must be submitted with applications when filed. Because this is an acceptability criterion, we will not consider terrain-related issues raised for the first time in petitions for reconsideration or applications for review of staff actions. Our revised policy on terrain shielding will apply only to

applications filed on or after the date on which it takes effect. Finally, our computer data base is not able to reflect any approved waivers of the acceptance standards based on terrain shielding. Therefore, applicants seeking waivers based on terrain shielding must make the required showing in each case and cannot incorporate by reference any earlier waiver.

10. We next discuss our general disposition on terrain-waiver submissions, including the information the Commission will need from applicants to evaluate claims of noninterference. The expressed assent to the grant of the waiver by all potentially affected stations would weigh heavily in our determinations and would obviate total reliance on terrain studies and permit more expeditious handling. In that event, we will not expect applicants to provide detailed terrain profiles, although we will need some graphic depiction of the terrain in all cases. In assenting to a waiver, a potentially affected station licensee would merely concur that interference from a proposed facility would be unlikely, and it would not object to the operation of that facility, *provided* interference did not occur. We emphasize that we would never construe an "assent" as a surrender of a station's rights to protection from any actual interference which may subsequently arise. (Stations in the LPTV Service, including those for which terrain-related waivers are granted, will continue to be secondary to and must not interfere with the regular off-air reception of full-service television stations.) Upon grant of the construction permit, and provided that the engineering parameters of the facility have not changed and provided that it is not causing interference, assent, once given, cannot be withdrawn. We do not believe the public interest would be served by requiring a noninterfering LPTV station, for example, to discontinue operation simply because its new owner could not obtain the same assent afforded to the original owner.

11. Where the assent of a potentially affected station has not been obtained, a waiver request must be supported by a terrain study, from which it can be concluded that the proposed facility would not be likely to interfere at the authorized station's protected contour. We will not prescribe specific requirements for such showings. However, in order to conduct any meaningful evaluation, we will need from applicants accurate profiles of terrain elevations in the directions in which interference is predicted under our standards. Normally, interference is predicted along some arc of a station's protected contour. Applicants should submit a sufficient number of profiles depicting the terrain along signal propagation paths between the site of the proposed facility and the arc of predicted interference. Profiles may be drawn on rectangular coordinate paper, where the horizontal axis represents distance in kilometers and the vertical axis represents elevations above sea level in meters. Each profile should include the following information: (1) identification of the topographic map(s), including its source, from which elevations are taken, (2) an elevation point showing the proposed height of the antenna radiation center above sea level, (3) the azimuth of the terrain path, measured clockwise from True North, (4) identification, including the call sign, of the protected station, and (5) a sufficient number of elevation points to give an accurate representation of the terrain between the proposed site and the protected contour. Generally, points should be spaced at regular distances or terrain contour intervals. However, shorter intervals may be used to reflect abrupt changes in elevation. In addition to terrain

profiles, applicants may provide quantitative engineering analysis, such as calculations of obstruction losses, to support claims of noninterference.

12. In evaluating terrain showings, the Commission will consider all information provided by applicants, and may find it necessary to request additional information, including the topographic maps from which terrain elevations were taken. Failure to provide the requested information in a timely manner may result in the dismissal of an application. The nature of our case-by-case evaluations will depend on the conditions surrounding each case, and may involve use of a variety of applicable engineering methods. Applicants, rather than the Commission staff, will bear the burden of supporting waiver requests. In no instance will we grant such a waiver where it would be apparent to us that interference would occur within the protected contour of an authorized station. Although LPTV, translator and booster stations generally are authorized on a noninterference basis, station authorizations granted with a terrain-related waiver will be explicitly conditioned on noninterference to all stations predicted to receive interference, without consideration of terrain shielding. This condition also will appear on any subsequent authorization resulting from the assignment or transfer of the facility to another party. This will provide clear notice that LPTV, translator and booster operators bear responsibility for eliminating such interference.

13. We have elected to proceed in this matter by policy statement, rather than by rule making, in order to expedite consideration of terrain shielding factors in our application process and to thereby accelerate the provision of additional service to the public. This procedural approach is both appropriate and permissible under the express provision of the Administrative Procedure Act (APA) exempting general statements of policy from rule making requirements. 5 U.S.C. Section 553(b)(3)(A). In this regard, we note that our action here simply describes the class of cases in which we will consider terrain shielding showings. It does not purport to establish the standards by which such showings will be evaluated or to determine the disposition of such cases in advance. On the contrary, it is clear from the policy statement that these decisional concerns will be addressed in the context of the particular facts presented in individual applications at the time the applications are processed. These characteristics are consistent with those that the courts have considered significant in classifying an agency action as a general statement of policy for APA purposes. *See, e.g., Telecommunications Research and Action Center v. FCC*, 800 F.2d 1181 (D.C. Cir. 1986); *Pacific Gas and Electric Co. v. FPC*, 506 F.2d 33 (D.C. Cir. 1974).

CONCLUSION

14. In this Policy Statement, the Commission has relaxed its policy regarding consideration of terrain shielding in the LPTV service. Subject to certain limitations, we will waive our LPTV application acceptance standards whenever it can be made apparent to us that terrain shielding would provide adequate interference protection. Accordingly, we will grant waiver requests supported either by well-documented terrain showings or by the written assent of all potentially affected stations, together with less rigorous terrain showings. We are confident that our revised policy, resulting from changed processing circumstances, will provide opportunities for additional LPTV, translator

and booster service in areas of the country where terrain shielding is a significant factor. We will observe the effect of this policy on application processing efficiency and the extent to which it permits the authorization of additional stations. If future circumstances should warrant, we will again revisit this policy and make appropriate adjustments.

FEDERAL COMMUNICATIONS COMMISSION

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Acting Secretary