Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Expanding the Economic and Innovation	)	GN Docket No. 12-268
Opportunities of Spectrum Through Incentive Auctions	)	

TO: Marlene H. Dortch, Secretary

For direction to the Commission

COMMENTS OF PMCM TV, LLC

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1. PMCM TV, LLC ("PMCM"), licensee of VHF Television Stations KVNV(TV), Middletown Township, New Jersey, and KJWP(TV), Wilmington, Delaware, hereby submits these comments in connection with the Commission's ongoing efforts to develop and implement an incentive auction process to encourage, *inter alia*, the orderly migration of broadcast television stations from their currently authorized channels in order to free that spectrum up for the provision of broadband services. As the Commission continues to develop and refine the process by which TV channels will be "repacked"[1], attention must be paid to the role that low band VHF stations will play in that process.[2] In PMCM's view, revisions to two areas of the Commission's rules could improve not only the service provided to the public by VHF stations, but also the chances of a successful incentive auction process. The two areas in question are the maximum power levels available to low band VHF stations and the multiple ownership rules.

Maximum Power Levels

2. The Commission has recognized (at, *e.g.*, Paragraphs 85-86 of the Incentive Auction NPRM) that low band VHF channels are less ideal than UHF channels for digital

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[1] *See, e.g.*, Incentive Auction Task Force Releases Information Related to Incentive Auction Repacking, DA 13-1613, released July 22, 2013.

[2] Both of PMCM's stations are Low Band VHF stations – Station KJWP operates on Channel 2, Station KVNV operates on Channel 3. PMCM has been the licensee of its stations for more than four years. However, until April, 2013, the stations were allotted to communities – Ely, Nevada (KVNV) and Jackson, Wyoming (KJWP) – not likely to be affected by the incentive auction process because of the relatively low spectrum congestion there. In April, 2013, however, PMCM's stations were reallotted to their current communities (in response to a process PMCM had initiated in 2009). *See PMCM TV, LLC v. FCC*, 701 F.3d 380 (D.C. 2012). That reallotment has prompted PMCM to focus on the role that VHF channels can, should, and will likely play in the incentive auction and repacking processes, especially in highly congested areas. PMCM is submitting its comments now to ensure that the Commission has the benefit of its input as the deliberative process for the auction and the subsequent re-packing proceed. *See* Footnote 1, above.

transmissions due to ambient noise. Thus, low band VHF channels will not be repurposed for broadband transmission services. Instead, low band VHF channels will remain as potential alternatives for UHF licensees who voluntarily relinquish their UHF slots in connection with the incentive auction process. The Commission should thus be exploring possible ways to encourage migration to the VHF band. In particular, UHF licensees may be considerably more enthusiastic about relocating to low VHF channels if those channels will afford such relocating licensees coverage reasonably equivalent to the coverage provided by their UHF channels. Without the prospect of such equivalent coverage, UHF licensees would have no incentive to move to the VHF band. Recognizing this, the Commission expressly asked for comment on whether waivers of the VHF height/power rules should be "favored" for licensees who relocate to the VHF band as a result of the auction. *See* NPRM, ¶85. In response to that request, PMCM offers the following comments.

3. PMCM supports increased technical facilities for ***all*** low band VHF stations in order to adjust for well-established disparities between VHF and UHF transmission characteristics.[3] Such an across-the-board approach would have multiple salutary effects:

- it would obviate the need for case-by-case waivers, thus avoiding the unsettling uncertainty attendant to that process;
- by eliminating that uncertainty, it would provide further impetus to the migration of UHF stations to the lower VHF band, thereby increasing the likely success of the incentive auction process;
- it would create competitive parity between low band VHF stations and the remaining UHF stations; and last, but certainly not least,

[3] The Commission may also wish to extend this power increase to upper band VHF channels as well. PMCM has no objection to that broader approach, although PMCM emphasizes that, regardless of what the Commission may opt to do with upper band VHF channels, it should at a bare minimum increase the power of low band VHF stations as set forth herein.

- it would restore to low band VHF stations coverage areas commensurate both with their analog coverage levels and the wide-area service obligations of full service stations, thereby insuring substantially improved ***service to the public***.

4. Digital VHF is not your father's analog VHF. Until the digital television transition was implemented in June 2009, VHF Television Channels were considered vastly superior to UHF Television Channels; within the VHF band, low band channels (2-6) were deemed superior to high band VHF (7-13). However, that radically changed when stations converted from analog to digital. As a result of that transition, Channels 2-6 are now considered the worst TV channels due to their susceptibility to man-made impulse noise. Electrical devices (such as motors, LED bulbs, dimmer switches and other consumer electronic equipment) operating near home television receivers create "impulse" noise that inhibits the clear reception of a digital signal. Such reception problems – which especially affect low band VHF Channels 2-6 – are most common among viewers in urban areas who use indoor antennas due to restrictions on outdoor antennas.[4]

5. While the impulse noise problem is itself not immediately remediable, its harmful effects can be reduced considerably by an increase in Effective Radiated Power ("ERP") which increases the signal-to-noise ratio and thus improves reception. That, however, highlights another problem with low band VHF channels: the power levels established for those channels in connection with the DTV transition were far too low.

6. The Commission itself has recognized that there is a serious inequity regarding the maximum ERP of VHF DTV facilities operating in Zone I. In ET Docket 10-235 (November 30, 2010) the FCC issued a Notice of Proposed Rulemaking ("NPRM") suggesting several proposals

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[4] As a sidenote, PMCM observes that interference to over-the-air ("OTA") viewers using indoor antennas is particularly undesirable in view of the fact that, in recent years, OTA reception has enjoyed a dramatic resurgence in public acceptance (judging from, *e.g.*, the number of conventional "rabbit ear" antennas sold nationwide). It appears that consumers are embracing OTA reception as an inexpensive way to "cut the cord", *i.e.*, abandon pay television providers (cable, satellite), thereby saving as much as $50-$100 per month.

intended to improve reception of VHF DTV service. While the Commission ultimately declined to adopt any across-the-board solution in that proceeding, it did commit to addressing VHF service problems at least on a case-by-case basis, and it held open the possibility of revisiting the issue.

7. The problem of under-powered VHF stations came to light in 2009. Immediately after the digital conversion in June, 2009, the Commission received numerous complaints from digital VHF stations that found themselves unable to replicate the coverage areas they had as analog stations. The Commission acted to ameliorate that unintended effect by granting the stations involved very significant power increases.[5] These increases permitted the stations to continue to serve their well-established analog audiences by more accurately approximating their previous, analog service area. That is, the power increases afforded those stations the power, and coverage areas, they ***should have been*** given at the outset.

8. That well-considered judgment – *i.e.*, that significant power increases are necessary and appropriate to assure VHF stations the coverage to which they, and their audiences, are entitled – should apply to ***all*** low band VHF stations, not just those that complain about service area losses. The problem of inadequate power affects ***all*** low band V's, and it can and should be addressed through an industry-wide solution rather than one reached on an ad hoc case-by-case basis.

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[5] As a case in point, as a low band VHF station WPVI DTV-6 in Philadelphia, PA, was initially eligible for the equivalent of 10 kW at 305 m HAAT for its digital operation. Immediately after transitioning to facilities with slightly less ERP (*i.e.*, 7.56 kW at 330 m) than the maximum possible in June 2009, however, the station (and the Commission) received thousands of complaints from viewers no longer able to receive the station's OTA signal. That, of course, indicated that the maximum permissible digital ERP/HAAT failed by a long shot to replicate the station's former analog facility (which had operated with 74.1 kW). WPVI is now fully licensed with an ERP of 34 kW utilizing circular polarization (3.8 times or +5.8 dB above the maximum currently specified in the rules). WPVI also has a pending application to increase its ERP to 62.9 kW (7.1 times or +8.5 dB above the maximum currently permitted).

9. How should VHF power levels be adjusted?

10. Under one of the proposals in ET Docket 10-235, the maximum ERP of VHF TV stations in Zone I would be increased by +6 dB, or a multiplication factor of four times. Stations on Channels 2-6 would thus have been permitted a maximum ERP of 40 kW and stations on Channels 7-13 would have been permitted a maximum ERP of 120 kW **(**with appropriate reduction in ERP if the HAAT exceeds 305 m). In PMCM's view, that proposal did not go quite far enough, especially for Channels 2-6**.** Any increase in the maximum permissible ERP/HAAT should also include a corresponding adjustment in the dBu value of the protected contours and city grade contours for these VHF channels. The increase in ERP is, after all, intended to permit these stations to serve the original area intended by the FCC, not to expand their service footprint. Changing the protected and city grade contour dBu values will also help to maintain the integrity of the minimum spacing to new allotments.

11. PMCM urges the FCC to consider a significantly larger increase than the +6 dB proposed in ET Docket No. 10-235. As noted in Footnote 4, above, WPVI DTV-6 in Philadelphia has a proposal pending for 62.9 kW ERP at 330 meters HAAT (the equivalent of 75 kW at 305 meters). PMCM believes that that level – which represents a +8.5 dB increase over the current maximum facilities – would be appropriate for all low band VHF stations. Should the Commission prefer to phase in a power increase gradually, PMCM proposes that all low band VHF stations initially be entitled to the equivalent of at least 50 kW at 305 meters, which represents a +7 dB increase over the current maximum facilities. The appropriateness of such an increase can be seen by comparing it to the increase already afforded by the Commission to digital LPTV and TV translator stations.

12. In MB Docket 03-185 (July 15, 2011), the Commission concluded that digital LPTV/translator stations operating in the VHF band, initially limited to 0.3 kW maximum ERP,

should be allowed a ten-fold power increase, to 3 kW (+10 dB). Since (as discussed above), *full-power* DTV stations on low band VHF channels in Zone I are currently limited to 10 kW maximum ERP, that means that such ***full-power*** stations can operate with only 3.3 times the power accorded to secondary service stations. Compare that ratio with stations (full-power and low-power) operating on UHF channels. Maximum power for digital LPTV/translator stations on UHF channels is 15 kW, while maximum power for full-power UHF stations is 1,000 kW, ***66.7 times greater*** than the low-power maximum.

13. This disparity makes no sense. Why, after all, should one subset of full-power stations be entitled to substantial power limits – limits that clearly reflect the goal of providing ***primary*** service, as opposed to the far lower power limits accorded to facilities designed to provide only ***secondary*** service – while the second subset is required to struggle with a power limit barely above that enjoyed by secondary stations?

14. Perhaps even more importantly, this disparity illustrates and underscores the fact that full-power DTV stations operating on low band VHF channels are seriously hampered in their ability to serve the wide audiences they are expected to serve.

15. Going forward, new TV allotments will be adopted based upon compliance with the minimum distance separations specified in the rules. But those separations must be calibrated to the maximum facilities (ERP/HAAT) permitted for the allotted channels, since the two values (*i.e.*, maximum facilities and minimum separations) are interrelated. That is, a significant change in either or both the maximum permissible ERP or HAAT will necessitate an equivalent change in the minimum separations. The continuing validity of those separations may be assured by changing the value of the protected contour by a value corresponding to the final increase in the maximum ERP. For example, if the ERP is increased by +8.5 dB, the protected service contour should also be increased by +8.5 dB.

16. Currently, the protected contour for a low band VHF DTV station is the 28 dBu contour. Thus, if the maximum ERP for low band VHF stations is increased by +8.5 dB**,** then the protected contour would have to be redefined as the 36.5 dBu contour. A similar adjustment would be made to the value of the city grade contour (from 35 dBu to 43.5 dBu).[6] Increasing the dBu value of these DTV contours prevents an expansion of the DTV service area which would result in a Longley-Rice Interference Analysis showing substantially greater interference in terms of population or area. Failure to re-define the protected and city-grade contours would also make it more difficult for other co-channel and first-adjacent stations to modify their facilities using Longley-Rice. Finally, adjusting the dBu value of the service contour would help to maintain the integrity of the spacing table which will be used when creating new allotments.

17. An across-the-board power increase for low band VHF stations (and corresponding adjustment of protected and city-grade contours) would serve multiple purposes.

18. First, such changes would permit *all* VHF licensees to serve the audiences that they are intended to serve. From a fundamental, base-line public interest perspective, this may be the

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[6] As an example, consider again low band VHF Station WPVI-DTV, Channel 6 in Philadelphia. Figure 1attached hereto is a standard FCC coverage map comparing the station's DTV 28 dBu service area against its original Analog 47 dBu service area (interference excluded). The map compares the DTV 28 dBu contours of a theoretical maximum low band VHF allotment (10 kW @ 305m) against the ***licensed*** WPVI-DTV facilities (34 kW @ 330m). WPVI's currently authorized facilities, which were obtained through the "case-by-case" waiver process, include authorized ERP of 34 kW, +5.84 dB greater than the equivalent ERP specified in the rules for a Zone I low band VHF station operating with an HAAT of 330 m. As a result of the waiver, the radial distance to the 28 dBu protected contour has increased +12.9% and the area encompassed within that contour has increased by +27.5%, an increase that results (according to the 2010 Census) in an additional +2.2 million persons – a +19.7% increase – in the population within the protected contour. But if the protected contour were to be re-defined as the 33.8 dBu contour (reflecting an increase of +5.8 dB corresponding to the waiver-based power increase), then the protected service area would be effectively reduced to that of the original allotment. The map clearly shows that all of the DTV contours being discussed are larger than the originally licensed analog 47 dBu service area they were intended to replicate.

most important consideration of all. After all, assuring the public a reasonably viewable OTA signal has been among the Commission's primary regulatory responsibilities since its very inception. Since assumptions about appropriate VHF power levels made prior to the digital transition have been shown, through several years' experience since that transition, to have been invalid, the Commission should take prompt steps to revise those power levels accordingly.

19. By approving a number of case-by-case waivers, the Commission has already effectively conceded the invalidity of its earlier assumptions. But a case-by-case approach ignores the fact that *all* low band VHF stations suffer from the ill effects arising from the unduly low maximum power available to them. A case-by-case approach merely rewards those who opt to complain, while disadvantaging the rest. That is hardly fair.

20. Second, an across-the-board power increase would restore parity between UHF and VHF stations. To the extent that the success of the incentive auction program may depend to a significant degree on the willingness of TV operators to relocate from the UHF to the VHF band, it is of particular importance that the Commission eliminate any disparity between the two bands that might discourage such relocation.

21. This factor leads the third important consideration here. The Commission should therefore be taking all available steps to make relocation from the UHF band to the VHF band desirable. The existing situation plainly does not do so. As discussed above, the digital VHF service suffers considerably from the unduly low power limits imposed on it in connection with the digital transition. The simple expedient of an across-the-board power increase can mitigate that problem and thereby enhance the attractiveness of VHF service in the eyes of existing UHF operators.

22. In this regard, the existing case-by-case waiver approach the Commission has taken thus far with respect to VHF power limits plainly falls short. Even if waivers may be available on

a case-by-case basis, the waiver process carries with it inherent uncertainties with respect to whether (and when) any waiver will ultimately be granted and, if it is granted, what power levels might be obtained. UHF licensees contemplating a possible relocation to the VHF band will likely be less than enthusiastic about such a move if, in order to achieve equivalent coverage, they will be forced to deal with the uncertain waiver process. To the extent that such uncertainty may discourage migration to the VHF band, it could have a serious adverse effect on the prospects for a successful incentive auction.

23. Adding to the disincentive created by the uncertainty of the waiver process are the practical considerations flowing from that process. If a UHF licensee moving to a VHF channel is forced to acquire and install equipment meeting the current, lower, power limits, only to have to modify that equipment if and when a waiver of those limits is granted, the licensee will face unnecessary costs and efforts. Again, the Commission can and should take steps ***now*** to avoid the imposition of such foreseeable disincentives once the auction process is ready for implementation.

Multiple Ownership Rules

24. As a further measure to incentivize current UHF licensees to migrate to the VHF band (thus freeing up additional UHF spectrum for the incentive auction), PMCM submits that the Commission should also consider amending Section 73.3555(e)(2)(i) to specify that, for purposes of the multiple ownership rules, ***VHF*** television stations – rather than UHF, as the rule currently provides – shall be attributed with only 50 percent of the television households in their DMA market. Such a "VHF discount" would be consistent with the rationale which underlay the historical UHF discount – that is, it is appropriate to adjust the multiple ownership limits as an inducement to licensees to migrate to a service band subject to real or perceived inferior characteristics. The need for such an inducement is especially keen now, when the Commission has a clear and specific interest in encouraging current UHF licensees to relinquish their spectrum

for the incentive auction. Unfortunately, as discussed above, the demonstrable technical inferiority of the VHF band presents a clear deterrent to such migration. The VHF band is viewed as the neglected and neglectable stepchild of television service. By adopting a "VHF discount" – whether separately or in conjunction with an across-the-board power increase for all VHF stations – the Commission would clearly signal its intent to make the VHF band as attractive as possible for television operators.

Conclusion

25. The upcoming incentive auction is likely to be a pivotal moment in the history of the Commission, the public, and the television broadcasting industry. It is important that the Commission take all possible steps to ensure the auction's success. Two such steps that can and should be taken as soon as possible are: (a) the adoption of an across-the-board power increase for full-service digital VHF stations; and (b) amendment of the multiple ownership rules to substitute a "VHF discount" for the existing, out-dated "UHF discount". Such changes can be implemented in relatively short order, well in advance of the incentive auction, so that prospective auction participants will be able to factor the revised power levels and ownership caps into their planning. The results of such action will be greater prospects for a successful auction, greater fairness to VHF television licensees and, more importantly, improved service to the public.

Respectfully submitted,

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FIGURE 1

DTV 28 dBu COVERAGE MAP

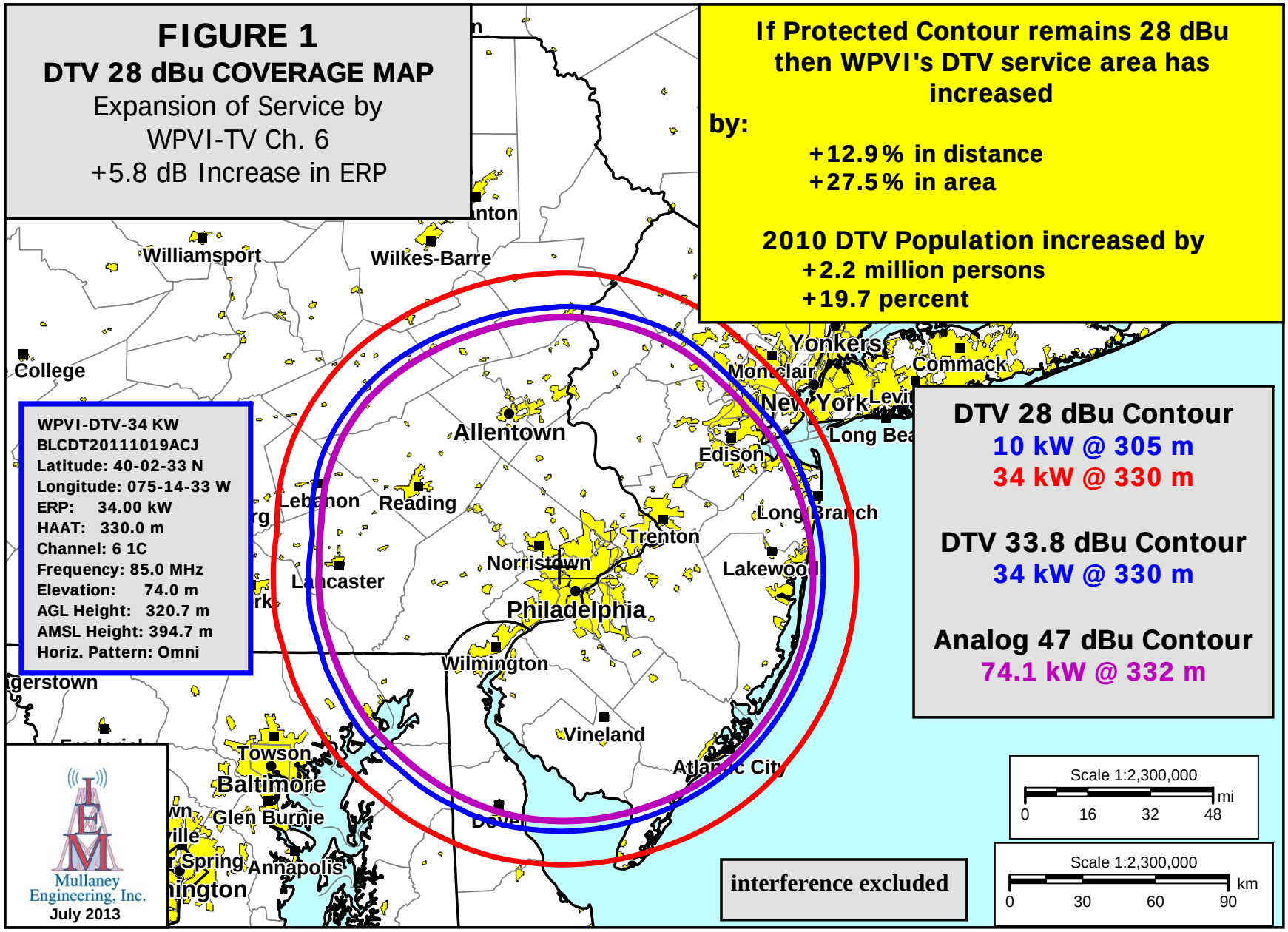
Expansion of Service by
WPVI-TV Ch. 6
+5.8 dB Increase in ERP

If Protected Contour remains 28 dBu then WPVI's DTV service area has increased

by:

+12.9% in distance
+27.5% in area

2010 DTV Population increased by
+2.2 million persons
+19.7 percent



WPVI-DTV-34 KW
BLCDT20111019ACJ
Latitude: 40-02-33 N
Longitude: 075-14-33 W
ERP: 34.00 kW
HAAT: 330.0 m
Channel: 6 1C
Frequency: 85.0 MHz
Elevation: 74.0 m
AGL Height: 320.7 m
AMSL Height: 394.7 m
Horiz. Pattern: Omni

DTV 28 dBu Contour
10 kW @ 305 m
34 kW @ 330 m

DTV 33.8 dBu Contour
34 kW @ 330 m

Analog 47 dBu Contour
74.1 kW @ 332 m