

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of)	
)	
Digital Audio Broadcasting Systems)	MM Docket No. 99-325
And Their Impact on the Terrestrial)	
Radio Broadcast Service)	
)	

APPLICATION FOR REVIEW
OF PROMETHEUS RADIO PROJECT

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SUMMARY

Media Access Project, on behalf of Prometheus Radio Project, respectfully submits this Application for Review of a decision by the Media Bureau. The Media Bureau revised the Commission's digital audio broadcasting technical rules to permit FM stations to increase their power. This decision was rendered without consideration of any of the substantive concerns and recommendations submitted by Prometheus and other affected parties. It is a basic principle of administrative law that an agency must address the arguments in front of it and the failure to do so is arbitrary and capricious. Thus, this Application for Review warrants full Commission action because of prejudicial procedural error.

Specifically, the Media Bureau failed to address documented concerns of significant interference as a result of a power increase. The Media Bureau also failed to address the concerns that the power increase would harm radio listeners who continued to rely on full power, low power, and translator analog signals. The Media Bureau also failed to explain whether a power increase was appropriate in light of open proceedings in this docket and pending petitions for reconsideration. Finally, the power increase decision is arbitrary and capricious because the Commission failed to consider alternatives that could limit the disruption to analog signals.

This procedural error is harmful to the public interest. Prometheus asks that the Commission vacate the Media Bureau's decision, that the Commission consider the objections and recommendations on their merits and grant the relief requested therein, and that the Commission grant all such other relief as may be just and proper.

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Pursuant to 47 CFR §1.115(b)(v), Media Access Project, on behalf of the Prometheus Radio Project (“Prometheus”), respectfully submits this Application for Review of an *Order* in which the Chief, Media Bureau (“Staff”), revised the Commission’s digital audio broadcasting (“DAB”) technical rules to permit FM stations to increase their power. *See Order, In the Matter of Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service, 25 FCCRcd 1182 (January 29, 2010) (“Order”)*. This Application for Review warrants full Commission action because of prejudicial procedural error. Specifically, the Staff’s decision was arbitrary and capricious because the *Order* failed to discuss or consider any of the substantive concerns and recommendations submitted by Prometheus and other affected parties.

The effect of this decision is to harm radio listeners and the decision is not in the public interest. As explained further below, the Staff failed to provide a reasoned basis for its actions, failed to consider all of the evidence presented to it, and failed to articulate a rational connection between the presented facts and its decision. Prometheus asks that the Commission vacate the Staff action because it is a basic element of administrative law that an agency cannot ignore significant comments submitted in the course of a proceeding, that the Commission consider the objections and recommendations on

their merits and grant the relief requested therein, and that the Commission grant all such other relief as may be just and proper.

I. THE STAFF DECISION

This proceeding grew out of a *Petition for Rulemaking* filed October 7, 1998, by USA Digital Radio, Inc., which later merged with Lucent Digital Radio to form iBiquity. See *Petition for Rulemaking, Amendment of Part 73 of the Commission's Rules to Permit the Introduction of Digital Audio Broadcasting in the AM and FM Broadcast Services*, RM-9395, 13 FCCRcd 22489 (1998) (“*DAB Petition*”). The petition sought to permit the introduction of DAB in the AM and FM bands.

In the First Report and Order released in October 2002, the Commission selected iBiquity's in-band, on channel (“IBOC”) technology as the system to be employed to transition analog radio to digital service. See First Report & Order, *Digital Audio Broadcasting Systems And Their Impact on the Terrestrial Radio Broadcast Service*, 17 FCCRcd 19990, 20006 (2002) (“*2002 Order*”). The goal of the IBOC system was to ensure there would be no adverse effect on the host analog signal or the adjacent analog broadcasters. See *DAB Petition* at 41. The *2002 Order* authorized stations to begin digital operations at a level of one percent of a station's authorized analog power. See *2002 Order* at 20004-05.

This *Order* grew out of a request by a group of broadcasters and others (the “Joint Parties”) for a digital power increase. See Public Notice, *Comment Sought on Joint Parties Request for FM Digital Power Increase and Associated Technical Studies* (October 23, 2008) (“*October Public Notice*”). The Joint Parties asked the Commission to increase the maximum permissible digital operating power using the IBOC system from the current level of one percent to ten percent of a station's authorized analog power.

The *October Public Notice* also sought comment on National Public Radio's ("NPR") research on digital radio coverage and interference. *Id.* NPR's research found high levels of interference to analog channels with ten percent IBOC transmission power. *See* National Public Radio, *Report to the Corporation for Public Broadcasting, Digital Radio Coverage & Interference Analysis (DRCIA) Research Project* (May 19, 2008) ("*NPR Report*"). The *NPR Report* noted that an increase of IBOC transmission power would cause severe interference with some stations. *See id.* at 5. Thus, the *NPR Report* concluded that a "10% IBOC transmission power is predicted to cause substantial interference to analog reception of a significant number of first- and second- adjacent channel stations." *Id.* at 6. A number of parties, including Prometheus, filed comments in response to the *October Public Notice*. The majority of commenters expressed concern over the power increase sought by the Joint Parties.

NPR began another round of testing in April 2009 and advised that the results of the new study would be available in September 2009. *See* Letter from Gregory A. Lewis, Counsel for NPR, to Marlene H. Dortch, Secretary (March 30, 2009). In May 2009, the Staff released a second *Public Notice*, seeking comment on four specific questions. *See* Public Notice, *Comment Sought on Specific Issues Regarding Joint Parties Request for FM Digital Power Increase and Associated Technical Studies*, 24 FCCRcd 5818 (2009). One of the questions asked whether the Staff should defer consideration of the request for a power increase until the Staff received the results of NPR's new study. *See id.* Again, a number of parties, including Prometheus, filed comments. In addition to raising concerns over a power increase, Prometheus specifically noted that the Staff should seek comment on NPR's new study before rendering a decision. *See* Comments of Prometheus Radio Project at 2-3 (July 6, 2009).

In November 2009, NPR submitted the results of its new study, *Report to the FCC on the*

Advanced IBOC Coverage and Compatibility Study (“*NPR Advanced Study*”). The *NPR Advanced Study* concluded that a 6 dB (four percent) blanket increase was acceptable. Subsequently, NPR and the Joint Parties reached an agreement and submitted a joint proposal. The joint proposal, among other things, endorsed an across the board 6 dB increase. See iBiquity/NPR letter to Marlene H. Dortch, Secretary (November 5, 2009). Despite the fact the Staff did not seek further comment on the *NPR Advanced Study* or the joint proposal, Prometheus submitted a written *ex parte* notice challenging the conclusions and methodology of the *NPR Advanced Study* and opposing the joint proposal. See Parul P. Desai, *Written Ex Parte Notice* to Marlene H. Dortch, Secretary (January 4, 2010) (“*Prometheus Ex Parte Notice*”). Without seeking further comment on the *NPR Advanced Study* or the joint proposal, the Staff adopted this *Order*, which allows stations to increase their current operating power levels to ten percent of analog.

II. THE STAFF’S DECISION IS ARBITRARY AND CAPRICIOUS

The adoption of the rule allowing for a power increase is arbitrary and capricious because the Staff failed to address the legitimate concerns of a number of parties that the results of the *NPR Study* and the *NPR Advanced Study* (collectively, “*NPR Studies*”) do not support the Commission’s conclusion that there will be no significant interference. The Staff also failed to address the concerns that the power increase would harm radio listeners who continued to rely on analog signals. Additionally, the Staff gave no consideration to the effect on the low power (“LPM”) radio service. The Staff also failed to explain whether a power increase was appropriate in light of the pending rulemaking regarding broadcasters’ public interest obligations. Similarly, the Staff also failed to explain how the power increase would be affected by the pending *Petitions for Reconsideration* regarding the question of whether the digital radio service constituted the licencing of new spectrum

and whether the spectrum should be used for alternative purposes. Finally, the power increase decision is arbitrary and capricious because the Commission failed to consider alternatives that could limit the disruption to analog signals.

While the Staff referenced the objections and concerns of some parties, it did not adequately respond to the issues raised. However, the Staff is required to address the arguments in front of it and the failure to do so is arbitrary and capricious. *See Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Ins. Co.*, 463 U.S. 29, 42-43 (1983) (the agency is required to consider all the “relevant factors[,]...examine the relevant data and articulate a satisfactory explanation for its action.”). Here, Prometheus raised a number of relevant factors, which the Staff did not discuss or explain why those factors were not relevant to the decision.

A. The Staff Failed to Address Legitimate Concerns and Relevant Data.

Prometheus and others argued that the results of the *NPR Advanced Study* do not support the Commission’s conclusion that there will be no significant interference. *See, e.g. Prometheus Ex Parte Notice*. Prometheus noted that “the Commission should be concerned that ‘nearly half’ of listeners would turn-off their radios within a significant portion of a station’s protected coverage area due to interference [thus NPR should] provide results of interference levels within the protected contours of stations, since...it is likely that the interference inside the protected contours also will be significant.” *Id.* at 2. Prometheus also highlighted that fact that “the [*NPR Advanced Study*] was limited because only mobile reception was tested. Although NPR did conduct tests of potential improvements to indoor digital reception, interference to analog was only studied in the mobile context. This shifting standard again limits the usefulness of the results.” *Id.* at 2-3.

Despite these significant concerns regarding the methodology of the *NPR Advanced Study*,

the *Order* did not address the arguments raised. Instead, the Commission made the following observations about the *NPR Advanced Study*:

Based on [the findings of the *NPR Advanced Study*], NPR concluded that a blanket 6 dB increase in FM Digital ERP (from -20 dBc to -14 dBc) was acceptable for most FM stations, and that using a formula it developed based on its testing, certain FM stations could increase FM Digital ERP up to a maximum of 10 dB (from -20 dBc to -10 dBc).

Order at 1186 (footnotes omitted).

The Staff further observed that

Since the commencement of 1% FM IBOC Power operations in 2004, the Bureau has not received any well documented complaints of interference to analog FM stations from digital signals. Since May 2006, the Media Bureau issued a total of 15 experimental authorizations to permit operations at up to 10% FM IBOC Power, including authorizations for ten grandfathered short-spaced stations with as many as four first-adjacent channel short spacings. Some of these short spacings are severe. These stations operated their FM digital facilities with different levels of increased FM Digital ERP throughout the experimental period, with the preponderance of the time spent operating with the maximum permissible FM Digital ERP of -10 dBc. The Bureau did not receive any complaints of interference to analog FM stations from licensees of analog FM stations or the listening public as a result of the experimental operations.

Id. at 1187-1188 (footnotes omitted).

Finally, the Staff stated that it had

reviewed the [*NPR Advanced Study*], the Agreement submitted by NPR and iBiquity, the MAP 2010 Ex Parte and the Jurison Comments. Based on our analysis of these documents and data, as well as five years of interference-free FM hybrid digital operations by approximately 1500 stations, we are convinced that an immediate voluntary 6 dB increase in FM Digital ERP is appropriate for all FM stations except super-powered FM stations.

Order at 1188 (footnotes omitted).

However, these observations do not address the legitimate arguments raised. While the lack of interference complaints at a level of one percent is positive, the *Order* ignores the results of the *NPR Advanced Study* which indicated significant new interference. The *Order* is also silent on the limitations of the study, such as the exclusive focus on mobile receivers.

The *Order* also failed to address Prometheus' concern that the power increase was not in the public interest. Prometheus observed that analog signals (both LPFM and full power) are still the primary form of reception for the public. Prometheus documented:

Despite the advent of digital radio technology, very few listeners have adopted the new HD radio technology; a 2007 study demonstrates HD radio reaches less than 1% of the U.S. Population. Additionally, awareness of HD radio dropped 2%, from 26% audience awareness in 2007 to 24% audience awareness in 2008. Of the 24% of the audience that was aware of HD radio, only 6% were "very interested" in HD Radio. Further, fewer broadcast stations are converting to HD; a recent study shows only 185 stations switched in 2008, compared to 394 stations that switched in 2007. Similarly, IBOC currently relies on a proprietary technology that prohibits innovation or participation by others, a shortfall that clearly limits the potential of the new service. Consequently, it is unlikely that HD radio will strongly penetrate the American market in the near future.

Comments of Prometheus Radio Project at 4-5 (July 6, 2009) (citations omitted).

Prometheus further noted:

It is unlikely that digital radio will strongly penetrate the American market in the near future. Awareness of digital radio has dropped in the past few years and fewer broadcast stations are converting to digital. In addition, there are approximately "less than four digital radios to every twenty five thousand analog radios." Also, the cost of converting to digital radio deters consumers from adopting the new technology, which limits the public's desire to purchase digital receivers. Because of costs and a lack of awareness, more listeners rely on analog radio over digital radio.

Reply Comments of Prometheus Radio Project (July 17, 2009) (citations omitted).

Although Prometheus demonstrated the harm the increase would have on the public interest, the Staff made no references to this data and appears to not have considered this issue in the *Order*.

Also, Prometheus questioned the appropriateness of moving ahead with the power increase when there are pending *Petitions for Reconsideration*, which could potentially affect the digital service. *See, e.g., Prometheus Ex Parte Notice* at 6. In a pending *Petition for Reconsideration*, Prometheus and others have previously argued that IBOC allows licensees to increase their use of new spectrum at the expense of other potential uses. *See id.* As Prometheus explained, while some have argued that IBOC as originally designed did not represent the transfer of new spectrum to incumbent broadcasters, this argument is less plausible in the context of a power increase. Nonetheless, the *Order* is completely silent on this issue.

Similarly, Prometheus questioned the appropriateness of moving ahead when the open issue of broadcasters' public interest obligations has yet to be resolved. In light of the request for a power increase, Prometheus argued that the "Commission is already considering public interest obligations to ensure that with the additional programming capacity, broadcasters, in return for the exclusive use of the public airwaves, provide meaningful service to the public." Comments of Prometheus Radio Project at 2 (July 6, 2009). Thus, Prometheus noted that before "any increase of power can be implemented, the Commission should allow for further comments on public interest obligations. Further comment would be necessary since any increase in power would be disruptive to the current scheme, and the public should have an opportunity to consider whether other or different public interest obligations are warranted." *Id.* at 2.

While the Staff did address this issue, it did so in a cursory and inadequate manner. In a footnote, the Staff simply stated that "[Prometheus'] request to first resolve the public interest

obligations of digital radio licensees is both beyond the scope of this proceeding and seeks action which exceeds the Bureau's delegated authority." *Order* at 1193, n. 56. The *Order* failed to explain why the request was beyond the scope of considering the power increase, especially when the issue of public interest obligations has been raised in the same proceeding, in the same docket number. Moreover, since some have argued that IBOC involves new use of spectrum, public interest obligations are well within the scope of this proceeding.

Finally, the effects on Low Power FM were not given due consideration. Prometheus demonstrated that LPFM stations, which were created to serve very localized communities or under-represented groups within communities, will be negatively affected by an increase. Prometheus noted that it is generally understood that the IBOC system interferes with LPFM stations. This interference would limit the effectiveness of LPFM broadcasters. *See Prometheus Ex Parte Notice* at 2-3. Prometheus also noted that an analog LPFM or translator signal can only broadcast one signal, while digital stations can reach listeners in a number of ways, including the main analog channel and signals on each side of the main analog signal. *Id* at 4. The interference combined with the limited opportunities for LPFM signals will hinder the Commission's duty to provide a diversity of voices on the public airwaves.

The Staff addressed the issue of LPFM by stating:

As a general matter, adoption of these recommendations would constitute a dramatic change in LPFM licensing rules and the relationship between LPFM and full-service stations. Analog LPFM and FM translator stations are secondary services, and, as such, are not currently entitled to protection from existing full-service analog FM stations. Moreover, this digital audio broadcasting proceeding has not created any additional rights for these secondary services vis a vis digital hybrid operations by full-service stations. In addition, one aspect of secondary service licensing would make this change particularly

problematic. In contrast to full-service stations, our technical rules permit LPFM stations to operate at locations at which they may receive interference from other stations. The ability to “accept” received interference is enormously beneficial to the LPFM service, providing greater flexibility in choosing transmitter sites and, in many instances, permitting the licensing of stations that would not be possible under full-service rules. Thus, to the extent that LPFM stations are operating at substandard spacings, it is generally the result of voluntary decisions by LPFM licensees to accept interference from nearby full-service stations. In these circumstances, it seems both unfair and at odds with secondary service licensing principles to deny a full-service station additional digital power based on the potential of increased interference to an LPFM station. In any event, only the Commission has the authority for such fundamental modifications in the digital protection scheme. Accordingly, we decline to establish new protection rights for secondary services from first-adjacent channel full-service analog FM stations commencing new or higher power digital operations within the narrow scope of this Order. Licensees will not be required to take into account nearby LPFM stations in calculating permissible digital power levels in excess of -14 dBc.

Order at 1191.

However, the *Order* fails to acknowledge the argument that a full power station using IBOC has three redundant radio signal paths to reach the audience, while an analog LPFM only has one path for delivery to audience. The primary status of full power stations was established in the analog context, where both the full power and the low power station had only one path to their audience. This circumstance has changed and it is unreasonable for the Staff simply to assert that not just the one analog signal, but also the two redundant digital signals, are all primary to the low power station.

B. The Staff Failed to Address Legitimate Recommendations.

The Staff did not consider any of the recommendations that could limit the negative impact on the public interest. For example, Prometheus suggested that instead of approving an across the board digital power increase, the Commission should first consider alternatives to improving digital

reception that will not interfere with the analog signal. Prometheus noted that several commenters had provided viable alternative solutions. These alternatives included an “on/off” test that allows the IBOC system to be turned on or off depending on whether interference exists; the use of TV channels 5-6 for digital FM service; increasing the power of only one side band may be sufficient to penetrate buildings; and improving receivers and antenna performance. *See Comments of Prometheus Radio Project at 3-4 (July 17, 2009).*

Prometheus suggested also that instead of a blanket increase, each station seeking a power increase should document the potential for interference, and provisional authorization should be granted prior to any permanent authorization. *See Prometheus Ex Parte Notice at 3.* Another suggestion to limit interference was for stations to have wider distance spacing or a wider ratio for first adjacent channels than the current first adjacent standard. *See id.* at 3-4. Additionally, Prometheus stated that other levels of a power increase could be considered. For example, if interference is predicted or experienced by LPFMs or translators, the IBOC signal should be held to a lower level on the side that the interference would not be caused. *See id.* at 4. Prometheus also suggested the use of functional asymmetric power software as a tool to remediate interference experienced and avoid predicted interference. *See id.* at 3-4. Finally, Prometheus recommended that the Commission should require notification to those analog stations that neighbor IBOC licensees about any digital power increase. *See id.* at 3-4.

However, a number of these viable recommendations were left unaddressed by the Staff. The Staff concluded that its

existing FM technical protection scheme has proven its efficacy and robustness over time. The analog FM predicted interference methodology promotes full spectrum utilization, permitting stations to maximize

service within protected coverage areas while generating extremely few interference complaints. A digital-into-analog predicted interference methodology would provide similar benefits to broadcasters and listeners. The present record does not support the establishment of protection standards.⁴⁸ Such standards, however, are unnecessary in light of the digital power limits and interference dispute procedures adopted herein. The Bureau anticipates that widespread implementation of FM Digital ERP increases will provide valuable coverage and interference data that will be useful in developing a prediction methodology. Neither the general 6 dB power increase nor the standards we adopt for additional FM Digital ERP is intended to prejudge future standard setting efforts. We are convinced that it is imperative for us to implement a power increase promptly and that the record establishes that the digital power limits set forth in this order will provide the necessary protection to analog FM stations. However, out of an abundance of caution, we are adopting interference remediation procedures...to address instances of loss of analog service within a full-service FM station's protected contour.

Order at 1191 (footnotes omitted).

The *Order* did not respond to suggestions which could have alleviated potential complications in the digital transition.

It is a basic principle of administrative law that an agency cannot ignore significant comments advanced in the course of a proceeding. *See, e.g., State Farm*, 463 U.S. at 43, 50-51 (rescission by the National Highway Traffic Safety Administration (NHTSA) of a standard requiring automatic passenger restraints was arbitrary and capricious because NHTSA failed to consider alternative technologies, and did not articulate a basis for its failure to require technology alternatives within the ambit of the standard); *Iowa v. FCC*, 218 F.3d 756, 759 (D.C. Cir. 2000) (“[T]he Commission’s failure to address [commenters’] arguments requires that [the Court] remand this matter for the Commission’s further consideration.”). The Staff’s failure adequately to address Prometheus’ comments constitutes a prejudicial procedural error that warrants full Commission review. *See* 47 C.F.R. § 1.115(b)(v).

III. CONCLUSION

Rather than addressing Prometheus' arguments, the Staff mainly ignores them. Although the Staff mentions the comments submitted by Prometheus, it hardly addresses the issues and concerns raised. Under well settled principles of administrative law, the Staff was required to provide a reasoned factual and legal basis for its decision. This includes some substantive response to significant issues. Prometheus asks that the Commission vacate the Staff action, consider the objections and recommendations on their merits, and that the Commission grant all such other relief as may be just and proper.

Respectfully submitted,

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CERTIFICATE OF SERVICE

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