

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

In the Matter of )  
 )  
Petition for Rulemaking Requesting ) MB Docket No. 22-405  
Authority to Increase the Maximum )  
Power of Digital FM Radio )

**REPLY COMMENTS OF THE  
NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters (NAB)<sup>1</sup> submits these comments regarding our Petition, filed jointly with Xperi, Inc. (Xperi), seeking a rulemaking proceeding to consider certain rule changes that would allow FM radio stations to increase the maximum permitted power level of in-band/on-channel (IBOC) digital audio broadcasting.<sup>2</sup> Specifically, we proposed an updated formula for determining FM power levels for stations seeking to exceed the currently authorized FM digital ERP of -14 dBc. The proposed new formula is based on more than a decade of real-world, operational experience,<sup>3</sup> and will allow more broadcasters to efficiently provide improved digital radio service without having to obtain additional FCC permission. As discussed below, the record demonstrates widespread support for our proposal and ample justification to launch the requested proceeding.

NAB appreciates the Bureau's grant of our request to combine this request with a Petition filed in 2019 for a rulemaking proceeding to permanently authorize FM radio

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<sup>1</sup> NAB is a nonprofit trade association that advocates on behalf of local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

<sup>2</sup> Petition for Rulemaking of National Association of Broadcasters and Xperi, Inc. (filed Oct. 26, 2022) (Petition).

<sup>3</sup> The FCC last enacted a digital power increase in 2010. *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, Order, 25 FCC Rcd 1182 (2010) (2010 Order).

stations to utilize IBOC with asymmetric sideband power levels without the need for separate or experimental authorization.<sup>4</sup> A blanket authorization of asymmetric sidebands combined with the proposed updated power level formula will enable many more FM stations to improve sound quality for their listeners.

#### **I. PETITIONERS HAVE DEMONSTRATED THAT THE REQUESTED RULEMAKING PROCEEDING IS JUSTIFIED**

Petitioners explained that the penetration of digital audio broadcasting technology (“HD Radio™”) has grown steadily since the Commission authorized digital broadcasting in 2002.<sup>5</sup> As of June 2022, nearly 60 percent of new vehicles include a factory-installed HD Radio receiver, and more than 90 million existing vehicles have a digital receiver.<sup>6</sup> However, the conversion of radio stations to digital broadcasting has not kept pace with the growth in digital receivers. One obstacle has been the inability of some stations to duplicate their analog coverage under currently permitted maximum power levels for digital broadcasting. NAB submits that blanket authority to use asymmetric sidebands combined with an updated digital power formula will spur more broadcasters to adopt HD Radio, which will encourage manufacturers to continue to invest in the development of HD Radio equipment, reducing the costs to convert stations.

Petitioners also highlighted real-world experience since the FCC adopted the current approach in 2010, which shows that the FCC’s existing formula for determining maximum

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<sup>4</sup> *Media Bureau Seeks Comment on Petitions for Rulemaking Proposing Amendments to FM Broadcast Digital Radio Rules*, Public Notice, MB Docket No. 22-405, DA-22-1226 (Nov. 28, 2022); *Petition for Rulemaking of National Association of Broadcasters, Xperi, Inc., and National Public Radio, Inc.*, RM-11851 (Dec. 9, 2019).

<sup>5</sup> *Petition at 2-4; Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, First Report and Order, 17 FCC Rcd 19990 (2002) (First Report and Order).

<sup>6</sup> *Petition at 2-3.*

power levels over-compensates for the level of interference protection that 1<sup>st</sup> adjacent analog radio stations actually need.<sup>7</sup> The Commission itself noted that its approach in 2010 was likely too cautious, but deferred to industry consensus at the time.<sup>8</sup> Our understanding is that the current formula, and the administrative costs of seeking authority to exceed the current maximum, inhibits stations from increasing power, including stations that would not cause any harmful interference.

Finally, we highlighted engineering studies that examined several real-world examples of short-spaced digital stations that effectively operate at power levels exceeding current limits, but have not caused harmful interference.<sup>9</sup> As a result, Petitioners concluded that the existing formula is overly restrictive because many stations could increase their digital power level without interfering with other stations. Petitioners then conducted additional field tests to confirm an updated formula for determining more reasonable maximum digital power levels based on engineering analysis and field-tested acceptable interference levels. The two separate tests, both conducted in March 2021 at WNYC 93.9 FM, a Class B station in New York City, revealed no significant impact on WNYC's signal when a 1st-adjacent channel elevated its power level under the proposed new formula.<sup>10</sup>

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<sup>7</sup> *Id.* at 6.

<sup>8</sup> *Id.* at 9.

<sup>9</sup> *Id.* at 10-15.

<sup>10</sup> *Id.* at 18-20.

## II. THE RECORD SUPPORTS INITIATION OF A RULEMAKING PROCEEDING

All commenters in the record endorse Petitioners' request, including commercial and noncommercial FM broadcasters,<sup>11</sup> low power FM (LPFM) entities,<sup>12</sup> equipment manufacturers,<sup>13</sup> and broadcast engineers.<sup>14</sup> For example, CMG states that adopting the proposed power formula will allow many stations to reach more listeners with better service and improve reception inside buildings.<sup>15</sup> NPR states that granting Petitioners' request will serve the public interest in better digital FM signal quality and coverage.<sup>16</sup> Nautel echoes this conclusion, explaining that the proposed power increase will promote spectral efficiency of the IBOC system compared to analog FM by "exploiting the newfound available white space to deliver more audio services at a fraction of the equivalent FM power."<sup>17</sup> Nautel also notes that granting the request will facilitate higher capacity IBOC service modes that were recently introduced in the NRSC-5-E standard for IBOC.<sup>18</sup> CTI validates the Petitioners' field

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<sup>11</sup> Comments of CMG Media Corp., MB Docket No. 22-405 (Jan. 12, 2023); Comments of Beasley Media Group Licenses, LLC, MB Docket No. 22-405 (Jan. 12, 2023); Comments of National Public Radio, Inc. (NPR), MB Docket No. 22-405 (Jan. 12, 2023); Comments of New York Public Radio (NYPR), MB Docket No. 22-405 (Jan. 12, 2023).

<sup>12</sup> Comments of REC Networks., MB Docket No. 22-405 (Jan. 12, 2023); Comments of Santium Community Radio Corp., MB Docket No. 22-405 (Jan. 12, 2023) (not objecting if secondary services protected).

<sup>13</sup> Comments of GatesAir, MB Docket No. 22-405 (Jan. 12, 2023); Comments of Nautel Maine, Inc., MB Docket No. 22-405 (Jan. 12, 2023).

<sup>14</sup> Comments of E. Glynn Walden, MB Docket No. 22-405 (Jan. 12, 2023); Comments of Communications Technologies, Inc. (CTI), MB Docket No. 22-405 (Jan. 12, 2023); Comments of Cohen, Dippell and Everist, P.C. (CDE), MB Docket No. 22-405 (Jan. 12, 2023) (support subject to interference protections).

<sup>15</sup> CMG Comments at 3.

<sup>16</sup> NPR Comments at 2.

<sup>17</sup> Nautel Comments at 2.

<sup>18</sup> *Id.*

testing, finding the results consistent with their anecdotal experience listening to FM radio signals while driving in the northeast U.S.<sup>19</sup>

NYPR highlights two additional benefits of enhanced HD Radio service that will be facilitated by granting Petitioners' requests. First, the richer metadata provided by HD Radio signals, compared to that of analog service, is crucial to holding the attention of listeners. HD Radio allows stations to display graphic images like album cover art, sponsor logos, and photos of on-air talent during their programs. NYPR stresses the importance of listener engagement to FM radio stations' ability to compete in the increasingly crowded dashboard of automobiles.<sup>20</sup> Second, the richer metadata provided by HD Radio should enable enhanced emergency alerting capabilities, including the capacity to relay enhanced text notifications and geographically targeted information, "wake-up" signaling, and eventually multimedia content such as images, maps, and URL links.<sup>21</sup>

A few commenters express concerns that allowing digital broadcasts to increase power could increase the risk of inadvertent harmful interference to incumbent radio services.<sup>22</sup> However, as detailed in the Petition and in the record, real-world experience over the past 12 years and in Petitioners' field tests demonstrate the unlikelihood of such problems. That said, if such interference does occur, the Commission's existing regulations will sufficiently and appropriately address any issues.<sup>23</sup> In the 2010 Order, the FCC adopted a specific interference protection and complaint remediation scheme for resolving conflicts

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<sup>19</sup> CTI Comments at 3.

<sup>20</sup> NYPR Comments at 3-4.

<sup>21</sup> *Id.* at 4.

<sup>22</sup> CDE Comments at 2; Santiam Comments at 1; Comments of Howard C. Toole at 2, MB Docket No. 22-405 (Jan. 12, 2023).

<sup>23</sup> 2010 Order, 25 FCC Rcd at 1192-93.

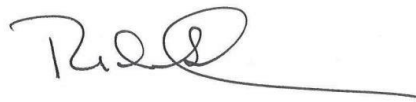
among digital and analog signals. This process was heavily debated among stakeholders and thoroughly vetted by the Commission. The Commission found that the remediation procedures it adopted would not result in numerous or non-resolvable cases of interference to analog FM stations.<sup>24</sup> Real-world experience since 2010 has borne out the Commission's prediction,<sup>25</sup> and there is no reason to believe that these procedures will not continue to adequately address any interference problems that arise from enacting the proposed new digital power formula. In any event, any remaining questions surrounding the application of the existing interference protection requirements under the proposed power formula could be fully addressed within the requested rulemaking proceeding.

### III. CONCLUSION

For the reasons stated above, the Petitioners respectfully request that the Commission promptly grant this Petition for Rulemaking to allow FM stations compliant with the proposed updated formula to increase FM digital power.

Respectfully submitted,

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Rick Kaplan  
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Dated: February 13, 2023

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<sup>24</sup> *Id.*

<sup>25</sup> See, e.g., CMG Comments at 2-4.