

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

In the Matter of)	
)	
Amendment of the Commission's Rules to)	RM-11815
Allow Next-Generation Wireless Charging)	
Technology for Electric Vehicles Under)	
Part 18)	

**REPLY OF PETITIONERS TOYOTA MOTOR NORTH AMERICA, INC., FORD
MOTOR COMPANY, BMW OF NORTH AMERICA, LLC AND NISSAN NORTH
AMERICA, INC.**

Pursuant to Section 1.405(b) of the Commission's rules,¹ Toyota Motor North America, Inc. ("Toyota"), Ford Motor Company ("Ford"), BMW of North America, LLC ("BMW") and Nissan North America, Inc. ("Nissan," together with Toyota, Ford and BMW, the "Petitioners"), hereby reply to the filings that have been submitted to date in this proceeding in response to the above-referenced Petition for Rulemaking ("Petition").² As set forth below, the record fully supports the Commission's initiation of a rulemaking proceeding to amend the Part 18 rules to enable the deployment of next-generation wireless charging technologies for light-duty electric vehicles.

There is widespread and uniform support by industry for the Commission to proceed to issue a Notice of Proposed Rulemaking and create a record for a rule change that is manifestly in the public interest. All parties that timely submitted comments agree that amending Section 18.305 to allow higher power wireless charging technologies to operate in the 79-90 kHz

¹ 47 C.F.R. § 1.405(b).

² See Public Notice, Report No. 3103, Consumer & Governmental Affairs Bureau Reference Information Center, Petition for Rulemakings Filed (Sept. 21, 2018).

frequency range will enable faster, higher power wireless charging capabilities for light-duty EVs, and more generally, promote the advancement of EV consumer adoption, the development of EV-related infrastructure, continued U.S. economic growth and U.S. global technological leadership.

Specifically, Mercedes Benz R&D and Qualcomm underscore that “WPT technologies offer the real promise of increasing consumer adoption of EVs and improved accessibility of EV technology for all Americans, including persons with disabilities, as well as support for autonomous vehicles, improved traffic management, enhanced roadway safety, and reduced vehicle emissions.”³ They agree with Petitioners that “establishing higher power limits in the U.S. will advance commercial development and deployment of wireless charging technology for EVs and will position the U.S. as a leader in promoting WPT technology development.”⁴ Panasonic similarly supports the Petition, agreeing that “wireless transfer technologies would provide great benefits for consumers by enabling rapid charging without cables, and would encourage the adoption of EVs while also ensuring safety and performance.”⁵ Boeing notes that the requested rule change will “facilitate the wireless charging of vehicles in a safe and effective manner in order to support U.S. leadership in this critical growth area for U.S. industry.”⁶ And the Petition is further endorsed by representatives of Subaru Corporation,⁷ WiTricity,⁸ IHI

³ Comments of Mercedes Benz Research & Development North America, Inc. and Qualcomm Inc. on Petition for Rulemaking, RM 11815 (Oct. 22, 2018) at 2 (“Mercedes/Qualcomm Comments”).

⁴ *Id.*

⁵ Comments of Panasonic Corporation of North America, RM-11815 (Oct. 22, 2015).

⁶ Comments of The Boeing Company, RM-11815 (Oct. 22, 2018), at 3.

⁷ Letter from Kazumasa Arai, Subaru Corporation, RM-11815 (Oct. 19, 2018)

⁸ Letter from Morris Kesler, Chief Technology Officer, WiTricity Corporation, RM-11815 (Oct. 19, 2018).

Corporation,⁹ JSAE (Society of Automotive Engineers of Japan),¹⁰ and others.¹¹ Such broad support for the Petition clearly indicates the readiness of industry to contribute to the rulemaking process going forward.

Petitioners note that Qualcomm and Mercedes, which otherwise fully support the technical parameters set forth in the Petition, believe that the Commission should extend the EMC threshold limit beyond the 74.4dBuA/m limit requested by Petitioners to 82.8dBuA/m, a limit they assert is more consistent with proposed international limits expected to be published by CISPR and other international standards bodies.¹² Petitioners recognize that a more encompassing limit may be required by some manufacturers of WPT technology, and do not oppose the Commission's consideration of higher limits in the requested proceeding (along with any attendant safety or compliance issues that a higher limit may raise). Petitioners would simply emphasize here that such an extension of the limit is not required for Petitioners' system function, and that they take no position on the higher limit at this time.

Finally, one party, an association of amateur radio operators, filed comments which, while not formally opposing the Petition, suggest that the Commission should delay its consideration of the Petition because WPT systems are being studied internationally by the International Telecommunications Union ("ITU"), and because there allegedly is some

⁹ Brief Comment of Satoshi Yazaki, IHI Corporation, RM-11815 (Oct. 19, 2018).

¹⁰ Letter from Yukio Yokoi, Secretary of JSA, WPT System Technology Committee, RM-11815 (Oct. 19, 2018).

¹¹ Letter from Hidenobu Korenaga, RM-11815 (Oct. 19, 2018); Letter from Toshiyuki Fujita, RM-11815 (Oct. 19, 2018).

¹² See Mercedes/Qualcomm Comments at 3-5. In comments that appear to be late-filed, Prodrive Technologies, a manufacturer of WPT systems, generally supports the Petition, but also believes that a limit of 82.8dBuA/m is preferable. See Comments of Prodrive Technologies, RM-11815 (dated Oct. 22, 2018, but filed Oct. 26, 2018).

(unsupported and ill-defined) interference risk to amateur radio operations.¹³ These comments should pose no impediment to the Commission moving forward to open a proceeding expeditiously, for several reasons.

As a threshold matter, the ARRL filing is procedurally defective and fails to meet the requirements of Rule 1.405(a), which expressly provides that any interested person seeking to support or oppose a rulemaking petition do so “not later than 30 days.”¹⁴ ARRL provides no motion to accept a later-filed submission or any other justification for its decision to file comments on October 29, a full week after the deadline specified in the Public Notice. Furthermore, Rule 1.405 specifies that any filing “shall be accompanied by proof of service upon the petitioner on or prior to the date of filing,” a requirement that ARRL did not satisfy.¹⁵ These procedural defects alone warrant striking the ARRL Comments from the record.

On the merits, ARRL’s stated reasons for the Commission to delay consideration of the Petition likewise are defective and do not warrant consideration. For example, the notion that the Commission should yield to WPT study requests made at the 2015 World Radio Conference (WRC-15) and take a “wait-and-see” approach to review reports emerging from next year’s WRC-19¹⁶ before even initiating a rulemaking proceeding is inconsistent with the strong public

¹³ See Comments of ARRL, The National Association for Amateur Radio, RM-11815 (Oct. 29, 2018) (“ARRL Comments”).

¹⁴ 47 C.F.R. § 1.405(a). See, e.g., In the Matter of Western Union Telegraph Co., *Memorandum Opinion and Order on Reconsideration*, 1 FCC Rcd 829, 831 n.13 (1986) (comments filed weeks late with no explanation or petition to accept late-filed comments stricken from record as untimely under Section 1.405); compare In the Matter of Amendment of rules concerning medical services operations in the 450-460 MHz band in the Special Emergency Radio Service, *Memorandum Opinion and Order*, 80 FCC 2d 393, 398 (1980) (accepting late filing where organization submitted showing that its irregular schedule and widely dispersed nature of its membership precluded timely filing of comments in proceeding).

¹⁵ 47 C.F.R. § 1.405(a).

¹⁶ See ARRL Comments 3-6.

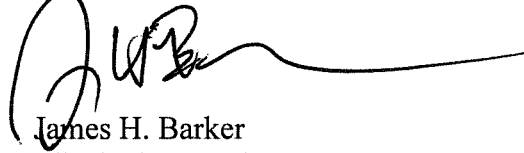
policy favoring active U.S. leadership in driving innovation, and is one the Commission wisely has refused to countenance. In its pending “Spectrum Frontiers” proceeding, the Commission has not let WRC-15 activities delay “securing the Nation’s future in the next generational evolution of wireless technology to so-called 5G,”¹⁷ and regardless of WRC-15 studies of frequency ranges at issue in that proceeding or WRC-19 time frames, has affirmed its “commitment to pursue authorizing mobile operations in these bands domestically.”¹⁸ So too, here. The same logic and policy underpinnings apply with respect to advancing WPT technological development. As for interference risks, the 79-90 kHz range was specifically chosen by Petitioners because of the extremely low likelihood of it posing any interference concerns. Indeed, this is a key reason why the proposal for this frequency range is uniformly supported by 100 percent of SAE participants as well as by every industry commenter in this proceeding. And to the extent there are any unanticipated interference concerns that should be addressed, such concerns can be fully vetted on the record of the requested rulemaking.

Enabling the deployment of higher power WPT technology, promoting the greater adoption of EVs, expanding the impact of the public interest benefits of EVs, and generally advancing U.S. leadership in the development of critically important emerging technologies are all worthy and important public interest goals. Petitioners’ proposal to increase the Part 18 field strength limits to 74.4 dBuA/m to accommodate wireless charging of light-duty EV batteries advances these goals, and clearly warrants moving forward with the commencement of a rulemaking proceeding, as requested in the Petition.

¹⁷ In the Matter Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, *Report and Order and Further Notice of Proposed Rulemaking* 31 FCC Rcd 8014 ¶1 (2016).

¹⁸ *Id.*, ¶16.

Respectfully submitted,



James H. Barker
Elizabeth R. Park
LATHAM & WATKINS LLP
555 Eleventh Street, NW, Suite 100
Washington, DC 20004
Tel: (202) 637-2200
Counsel to Petitioners

Roberto Rossetti
Vice President Engineering
BMW OF NORTH AMERICA, LLC
200 Chestnut Ridge Rd, Building 150
Woodcliff Lake, NJ 07677
(201) 571-5071

Bob Holycross
Global Director, Sustainability and
Vehicle Environmental Matters
FORD MOTOR COMPANY
World Headquarters, 218-A6
One American Road
Dearborn, MI 48126
(313) 323-6976

Christopher Reed
Vice President – Platform & Technology
Engineering
NISSAN NORTH AMERICA, INC.
39001 Sunrise Drive
Farmington Hills, MI 48331
(248) 488-8304

Kevin Webber
Director – Product Regulatory Affairs
TOYOTA MOTOR NORTH AMERICA, INC.
1555 Woodridge Avenue
Ann Arbor, MI 48105
(734) 955-4581

November 5, 2018

CERTIFICATE OF SERVICE

I, James H. Barker, hereby certify that on this 5th day of November, 2018, I caused to be served a true copy of the foregoing Reply of Petitioners Toyota Motor North America, Inc., Ford Motor Company, BMW of North America, LLC and Nissan North America, Inc., via first-class mail upon the following:¹⁹

Prodrive Technologies Inc.

Vincent Drietelaar
Business Development Manager
Prodrive Technologies Inc.
1 Broadway, 14th Floor
Cambridge, MA 02142
USA

Paul van Bavel
Compliance and Conformity Engineer
Prodrive Technologies
Science Park Eindhoven 5501
5692 EM Son
The Netherlands

ARRL, the National Association for Amateur Radio

Christopher D. Imlay
General Counsel, ARRL
Booth, Freret & Imlay, LLC
14356 Cape May Road
Silver Spring, MD 20904-6011

The Boeing Company

Audrey L. Allison
Vice President, Global Spectrum Management
The Boeing Company
929 Long Bridge Drive
Arlington, VA 22202

Bruce A. Olcott
Jones Day
51 Louisiana Ave. NW
Washington, D.C. 20001

Panasonic Corporation of North America

Paul G. Schomburg
Director, Government & Public Affairs
Panasonic Corporation of North America
1130 Connecticut Ave, N.W., Suite 1100
Washington, DC 20036

Mercedes Benz Research & Development North America, Inc.

Dr. Mohamad Abdul-Hak
Senior Manager, Electrical Drive
Mercedes Benz Research & Development
North America, Inc.
A Daimler Company
12120 Telegraph Rd
Redford, MI 48239

Andrew A. Vu
Vice President & General Counsel
Mercedes Benz Research & Development
North America, Inc.
A Daimler Company
309 North Pastoria Ave
Sunnyvale, CA 94085

Karlheinz Baier
Manager, RD/EIL
Wireless Charging
Development CASE & Development e-Drive
Mercedes-Benz Cars
DAIMLER AG
71059 Sindelfingen, Germany

¹⁹ Parties submitting text comments could not be served because complete mailing addresses could not be determined from the submission information.

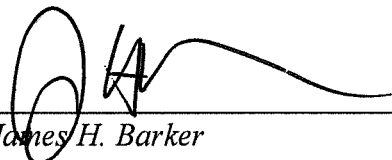
Qualcomm Inc.

Dean R. Brenner
Senior Vice President, Spectrum Strategy &
Technology Policy
Qualcomm Inc.
1730 Pennsylvania Ave, NW, Suite 850
Washington, DC 20006

John W. Kuzin
Vice President & Regulatory Counsel
Qualcomm Inc.
1730 Pennsylvania Ave, NW, Suite 850
Washington, DC 20006

WiTricity Corporation

Morris Kesler
Chief Technology Officer
WiTricity Corporation
57 Water Street
Watertown, MA 02472



James H. Barker