



December 14, 2018

Via ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Subject: *Notice of ex parte presentation*
 Petitions for Reconsideration of CAF-II Metrics Order (WC Docket No. 10-90)

Dear Ms. Dortch:

On Thursday, December 13, 2018, Hughes Network Systems, LLC (Hughes) met with staff of the Wireline Competition Bureau's Telecommunications Access Policy Division (TAPD) and the Office of Economics and Analytics (OEA) regarding the pending petitions for reconsideration of the Metrics Order. Specifically, the undersigned and outside counsel L. Charles Keller of Wilkinson Barker Knauer LLP met with Suzanne Yelen and Stephen Wang of TAPD, and Rodger Woock, Cathy Zima, Alec MacDonell, and Cha-Chi Fan of OEA. The latter three individuals attended telephonically. Hughes's presentation in the meeting followed the attached talking points, which were distributed to the meeting attendees.

Please direct any questions regarding this filing to the undersigned.

Sincerely,

/s/
Jennifer A. Manner
Senior Vice President, Regulatory Affairs

Attachment

cc: Rodger Woock
 Suzanne Yelen
 Cathy Zima
 Alec MacDonell
 Cha-Chi Fan
 Stephen Wang



CAF-II *Metrics Order* Petitions for Reconsideration

December 2018

- High-latency bidders must demonstrate:
 - Latency at or below 750 ms.
 - Voice quality meeting a Mean Opinion Score (MOS) of 4 or greater.
- The issue:
 - What procedures must winning bidders use to demonstrate their MOS score?
 - ITU-T P.800 protocol for determining MOS:
 - Listening-opinion test
 - Conversational-opinion test
 - *Metrics Order*:
 - Conversational-opinion test only
 - Other changes to P.800 testing framework
- Unlike other testing parameters set in the *Metrics Order*, the change to the MOS testing framework affects a fundamental gating criterion for auction participation.
 - Per ITU-T G.107 tool for estimating MOS scores, a network with 600 ms roundtrip latency (i.e., a geostationary satellite network) achieves at best a MOS of 3.7 using the conversational-opinion test.
- Two petitions for clarification/reconsideration of the *Metrics Order* related to MOS testing:
 - Hughes: *Metrics Order*'s modifications to the MOS testing framework should not apply to the NY auction, which occurred before the *Metrics Order* was released. (*Metrics Order* also does not mention the NY program.)
 - Viasat: Change the *Metrics Order*'s approach to MOS testing now, after the CAF-II auction has closed.
- The point is NOT just to “fix” the MOS testing framework. Both the NY auction and the CAF-II auction have ended. ***The point is that, for USF auctions to allocate resources efficiently, parties must be able to rely on the Commission's rules in place at the time of the auction.*** (See attached chronology.)
 - If fundamental participation rules change after the auction ends, the results of the auction are worthless.
 - If the *Metrics Order* had been adopted before the NY auction, Hughes would not have participated, reducing competition and lowering the number of consumers that benefit from FCC and NYS support. (*Hughes Petition*)
 - If the *Metrics Order* had been fixed before the CAF-II auction, Hughes would have participated, increasing competition and resulting in more efficient auction results. (*Viasat Petition*)

- Neither outcome can be changed now without re-opening both auctions. ***All the Commission can do is safeguard bidders' expectations based on the rules in place at the time of the auction.***
 - Hughes supports **prospective** consideration of how to fix the MOS testing framework **for future auctions**, including the Remote Areas Fund auction. But the Commission should not change the rules for participation in any auction after that auction is over.
- Applying the *Metrics Order's* modifications to the MOS testing framework to New York is not necessary to ensure that New York consumers receive high-quality voice service.
 - High-latency bidders in NY will still have to show:
 - Latency not exceeding 750 ms.
 - MOS of 4 or greater using the ITU-T P.800 standard protocol.
 - Note: Hughes voice customers are satisfied.
 - Hughes's VoIP product incorporates industry-leading features to maximize voice quality.
 - Churn is lower among voice/broadband customers than among broadband-only customers.
 - Hughes overall broadband churn rate is low and declining.
- Applying the *Metrics Order's* changes to the MOS testing framework to the NY auction is not just bad policy, it would also be also illegal.
 - Retroactive rulemaking: Changes what the rule was at the time of the NY auction ("showing of MOS 4 or higher using the ITU-T P.800 protocol").
 - Secondary retroactivity: Upsets investment expectations made in reliance on the regulatory status quo before the *Metrics Order* was adopted, and decision was not reasonable (made on basis of a record full Commission had called "insufficient" and no explanation of about-face on state of record).

Chronology

Date	Release	Action
5/26/16	FCC 16-64 <i>CAF-II Order</i>	<ul style="list-style-type: none"> • High-latency bidding tier established for CAF-II auction. • High-latency bidders must: <ul style="list-style-type: none"> ◦ Show 95% or more of all peak period latency measurements at or below 750 ms. ◦ “Demonstrate a score of four or higher using the [MOS].” “[S]ubmit laboratory testing consistent with the International Telecommunications Union recommendations P.800” [which includes both listening-opinion and conversational-opinion tests].¹
7/5/16		<ul style="list-style-type: none"> • ADTRAN Petition for Clarification or Reconsideration asks FCC to specify that only conversational-opinion test component of ITU-T P.800 standard should be permitted.
1/26/17	FCC 17-2 <i>NY Waiver Order</i>	<ul style="list-style-type: none"> • CAF support offered in NY would be distributed through the New NY Broadband Program auction. • NY must allow high-latency bidders and “satellite providers must be given the opportunity to compete.” • High-latency bidders must: <i>[identical to FCC 16-64]</i> <ul style="list-style-type: none"> ◦ Show 95% or more of all peak period latency measurements at or below 750 ms. ◦ “Demonstrate a score of four or higher using the [MOS].” “[S]ubmit laboratory testing consistent with the International Telecommunications Union recommendations P.800.”
8/15/17	<i>NY Auction</i>	<ul style="list-style-type: none"> • Final deadline for bids in New NY Broadband Program auction.
1/31/18	FCC 18-5 <i>CAF-II Recon Order</i>	<ul style="list-style-type: none"> • “[W]e clarify that the Commission has not yet specified which of the methods for subjective determination of transmission quality identified in ITU-T Recommendation P.800 should be used to demonstrate compliance with the second part of the two-part standard (MOS of four or higher).” • “We find that there is <i>insufficient information in the record to specify</i> which of the ITU’s recommended options applicants should be prepared to use to demonstrate an MOS of four or higher.” (emph. added) • “We expect that the specific methodology will be adopted by the Bureaus and the Office of Engineering and Technology by June 2018.”
		<ul style="list-style-type: none"> • <i>[No comment is sought.]</i> • <i>[No new information enters the record.]</i>
2/1/18	FCC 18-6	<ul style="list-style-type: none"> • CAF-II Auction Procedures PN released.
7/6/18	DA 18-710 <i>Metrics Order</i>	<ul style="list-style-type: none"> • “We agree with ADTRAN that listening-opinion tests would not suffice to demonstrate a high-quality consumer voice experience.... Therefore, we require that high-latency

¹ The ITU-T P.800 specification establishes both listening-opinion and conversational-opinion tests. See International Telecommunication Union, Telecommunication Standardization Sector, Series P: Telephone Transmission Quality, Methods for objective and subjective assessment of quality, P.800 (Aug. 1996).

		providers conduct an ITU-T Recommendation P.800 conversational-opinion test.... Specifically, we require the use of the underlying conversational-opinion test requirements specified by the ITU-T Recommendation P.800, with testing conditions as described below [specifying use of operational network infrastructure and actual customer locations and end-user equipment, which differs from the P.800 specifications].”
7/16/18 7/19/18		<ul style="list-style-type: none"> • Hughes ex parte letters to FCC expressing concerns about the impact of requiring use of the conversational-opinion test and noting that the <i>Metrics Order's</i> changes to the P.800 protocol cannot be applied to NY auction which was already completed.
7/23/18		<ul style="list-style-type: none"> • Viasat ex parte letter to FCC expressing concern about <i>Metrics Order</i>.
7/24/18- 8/21/18	CAF-II Auction	<ul style="list-style-type: none"> • CAF-II Auction bidding period.
9/15/18		<ul style="list-style-type: none"> • Long-form applications due committing winning bidders to CAF-II auction winning bids.
9/19/18		<ul style="list-style-type: none"> • Due date for petitions for reconsideration of <i>Metrics Order</i>. <ul style="list-style-type: none"> ◦ Hughes Petition filed. ◦ Viasat Petition filed