



Federal Communications Commission
Washington, D.C. 20554

July 9, 2018

Jeffrey H. Blum
Senior Vice President & Deputy General Counsel
DISH Network L.L.C.
1110 Vermont Avenue, NW, Suite 750
Washington, D.C. 20005
(202) 293-0981

Re: DISH Coverage and Service Construction Deadlines for AWS-4, Lower 700 MHz E Block, and H Block licenses; DBSD Corporation, AWS-4, Lead Call Sign T070272001; Gamma Acquisition L.L.C., AWS-4, Lead Call Sign T060430001; Manifest Wireless L.L.C., Lower 700 MHz E Block, Lead Call Sign WQJY944; American H Block Wireless L.L.C., H Block, Lead Call Sign WQTX200

Dear Mr. Blum:

On May 22, 2018, representatives of DISH Network Corporation, including its Chairman, Charles Ergen, met with FCC Commissioners and staff to discuss its plans to deploy a wireless network to meet its buildout obligations for several spectrum licenses.¹ The next day, at an event hosted by the Wireless Infrastructure Association, Mr. Ergen gave public remarks about DISH's plans.

On June 5 and 6, Mr. Ergen and representatives of DISH met with FCC Chairman Pai and staff of the Chairman's office and later with Wireless Bureau to discuss the same issues. Mr. Ergen and representatives of DISH, among other things, stated that they plan to deploy their network in two phases: in phase 1, DISH would deploy a narrowband Internet of Things (IoT) network using its AWS-4, 700 MHz E Block, and H Block licenses; and in phase 2, DISH would deploy using its other spectrum holdings, and would "upgrade and expand [its] network to full 5G to support new use cases in addition to mobile broadband services."² They also discussed plans to: (1) take delivery of network equipment and begin installation of the network this year, and (2) delay the completion of its phase 2 deployment in low- and mid-band spectrum until after 600 MHz spectrum is cleared on a nationwide basis in July 2020.

Previously, DISH and several of its wholly owned subsidiaries³ notified the Commission that they had failed to meet several interim construction deadlines for their FCC licenses, and that

¹ Letter from Jeffrey H. Blum, Senior Vice President & Deputy General Counsel for DISH Network Corporation to Marlene H. Dortch, Secretary, Federal Communications Commission, GN Docket No. 17-183 (filed May. 24, 2018).

² *Id.* at 2.

³ DBSD Services Limited ("DBSD"), Gamma Acquisition L.L.C. ("Gamma"), Manifest Wireless L.L.C. ("Manifest"), and American H Block Wireless L.L.C. ("American H Block"), are all wholly-owned subsidiaries of DISH. DBSD owns 176 licenses in the AWS-4 band; Gamma also owns 176 licenses in the AWS-4 band; Manifest owns 168 licenses in the Lower 700 MHz E Block, and American H Block owns 176 licenses in the AWS H Block.

they would therefore need to meet several accelerated final coverage and service construction deadlines.⁴ Specifically:

- On March 7, 2017, DISH notified the Commission that it had not met the applicable interim construction deadline for its AWS-4 licenses,⁵ and by rule its final construction deadline was accelerated by one year. It will be required to provide signal coverage and offer service to 70 percent of the population of each license's service area by March 7, 2020. Failure to meet its final requirement for any license area will result in automatic termination of that license without Commission action.
- On that same date, DISH notified the Commission that it had not met the applicable interim construction deadline for its 700 MHz Lower E Block licenses,⁶ and by rule its final construction deadline was accelerated by one year. It will be required to provide signal coverage and offer service to 70 percent of the geographic area of each license or 70 percent of the population of each license's area by March 7, 2020. Failure to meet these benchmarks by the deadline will result in unserved portions of the service area being returned to the Commission for relicensing.
- On May 14, 2018, DISH notified the Commission that it had not met the interim buildout requirement for its H Block licenses,⁷ and by rule its final construction deadline was accelerated by two years. It will be required to provide signal coverage and offer service to 75 percent of the population of each license's service area by April 29, 2022. Failure to meet its final requirement for any license area will result in automatic termination of that license without Commission action.

I am contacting you to request updates and more detailed information on your buildout plans for the 53 megahertz of low- and mid-band spectrum that is apparently lying fallow in these bands. Specifically, we request the following information:

- What are the most significant challenges you face in constructing the intended network by 2020, and how do you intend to overcome those challenges?
- Please describe the timing of critical milestones leading up to your previously-stated goal of completing deployment by March 2020, including technology selection, vendor(s) selection, equipment selection/acquisition, system engineering, site acquisition, equipment testing, and advertisement of service and deployment to customers.

⁴ In addition to the buildout deadlines discussed below, we note that DISH holds interests in Northstar Wireless, LLC, and SNR Wireless LicenseCo, LLC, licensees of a total of 505 licenses in the AWS-3 bands that have an interim construction deadline (provide coverage to 40 percent of the population for each license's area by October 27, 2021). DISH also, directly and through its wholly-owned subsidiary South.Com L.L.C., holds a total of 82 licenses in the Multichannel Video Distribution and Data Service (MVDDS) with interim construction deadlines (provide substantial service in each license's area by July 26, 2019 (44 licenses), August 18, 2019 (37 licenses), and September 23, 2019 (1 license)).

⁵ 2000-2020 MHz and 2180-2200 MHz.

⁶ 722-728 MHz.

⁷ 1915-1920 MHz and 1995-2000 MHz

- Please describe the service DISH intends to provide with respect to each spectrum band that has an upcoming construction deadline. Do you intend to include other licensed bands in the phase 1 deployment? If not, why? It has been reported that DISH began testing ATSC 3.0 in Dallas, TX, on the 700 MHz E block spectrum earlier this year. What role will this technology play in meeting the upcoming construction requirements for this spectrum?
- How will each spectrum license independently be constructed to meet the service requirement? Will each and every spectrum band be deployed at each base station? If not, how do you plan to demonstrate that you have met the buildout requirement for each license in each band??
- If an industry standard technology will be used, what is the standard and what is its status? Has DISH decided to not move forward given the current state of the standard? If so, please provide an explanation of the actions DISH chose to delay due to the pace of standards development.
- Please describe the architecture of the network DISH is constructing for its phase 1 network (including how base stations, repeaters, and end-user devices will interact) and the IOT services/applications it plans to provide?
- Describe the coverage area you expect to achieve from each base station in phase 1. What are the technical parameters that are assumed in arriving at the expected coverage—such as data rate, receive signal level, frequency of transmissions (how often and how long does the base station communicate with subscriber units or an individual subscriber unit), and link budget? Also, describe the amount of bandwidth that you expect to use for each band (AWS-4, 700 MHz E Block, and H Block) for the phase 1 network.
- Please clarify whether any portion of a narrowband IoT network using DISH's AWS-4, 700 MHz E Block, and H Block licenses in phase 1 will consist of one-way base stations that transmit to subscriber units that do not communicate with a base station. If the network will support two-way communications between base stations and customer equipment, how do you intend to deploy each band to support two-way communication?
- Describe the end-user devices you intend to deploy in order to meet the construction requirements for these spectrum bands (e.g., types of devices and their intended applications, locations and heights above ground where they would be installed, frequency bands available in the devices, how frequently they would interact with base stations). Also, please indicate when you expect these devices to become available.
- When you previously stated that you expect to deploy by March 2020, did you mean that network coverage and equipment would be available to customers as of that date? Do you expect to be marketing and providing service to customers in each licensed area as of that date? How do you intend to market the service to customers in each licensed area?
- For the H Block licenses, do you anticipate having chip sets and developer kits that support the band available in time to offer customer equipment by April 29, 2022?

- Do you anticipate that the contemplated construction will require any rule waivers from the Commission (excluding any waivers already filed), including an extension of the construction deadline, waiver of the substantive construction requirement, or waiver of any service rules?

Please upload your response to this letter by using the FCC's Universal Licensing System (ULS) non-docketed pleadings module at <https://wireless2.fcc.gov/UlsEntry/pleadings/pleadingsType.jsp>. Choose "Reply" as the Type of Pleading and associate the response with the three lead call signs listed at the top of this letter. We appreciate your cooperation in this matter. Questions regarding the foregoing may be referred to Matthew Pearl, (202) 418-2607.

Sincerely,

Donald K. Stockdale, Jr.
Chief
Wireless Telecommunications Bureau