Before the
**FEDERAL COMMUNICATIONS COMMISSION**
Washington, DC  20554

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| In the Matter of | ) | |
| | ) | |
| Establishing the Emergency Connectivity Fund to | ) | WC Docket No. 21-93 |
| Close the Homework Gap | ) | |
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**COMMENTS OF HUGHES NETWORK SYSTEMS, LLC**

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## COMMENTS OF HUGHES NETWORK SYSTEMS, LLC

Hughes Network Systems, LLC ("Hughes") submits these comments in response to the

Commission's Public Notice regarding the establishment of the Emergency Connectivity Fund,[1]

as mandated by Congress in the American Rescue Plan Act.[2]

As discussed in more detail below, satellite broadband can play an integral role in closing

the homework gap and thus should be part of the Emergency Connectivity Fund.  Hughes' high-

quality satellite broadband services are ubiquitously available providing service in 2-3 days from

the date of order, including in the most rural and remote areas.  The standard equipment package

included with HughesNet satellite broadband service incorporates a modem and a router that

creates a Wi-Fi hotspot in the customer's home or office, along with a satellite antenna for

connectivity with the satellite broadband network, and thus is "eligible equipment" for the

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[1] *Wireline Competition Bureau Seeks Comment on Emergency Connectivity Fund for
Educational Connections and Devices to Address the Homework Gap During the Pandemic,*
Public Notice, DA 21-317 (WCB rel. Mar. 16, 2021) ("Public Notice").

[2] *See* American Rescue Plan Act of 2021, H.R. 1319, 117th Cong. Tit. VII, § 7402 (2021)
("Statute").

Emergency Connectivity Fund.[3]  Broadband services that meet the Commission's current threshold for advanced telecommunications capability (25 Mbps download and 3 Mbps upload for fixed broadband) are already proven to be capable of supporting remote learning services,[4] including video conferencing, and should be supported "advanced telecommunications and information services."

## I.    SATELLITE BROADBAND CAN HELP CLOSE THE HOMEWORK GAP

Hughes is the largest provider of satellite broadband services in the United States and around the world, with more than 1.5 million subscribers across the Americas.  Hughes operates three geostationary orbit ("GSO") Ka-band satellites networks over the United States to provide ubiquitous broadband coverage of the continental United States, southeastern Alaska, Puerto Rico, and the U.S. Virgin Islands.  As such, Hughes is uniquely positioned to help schools and libraries provide connectivity for remote learning to locations such as the homes of students and teachers—and to do so more quickly than other fixed broadband providers.[5]

*Fast and Increasing Speeds, Even in Remote Areas.*  Throughout the United States, Hughes provides broadband service at Commission-defined speeds of 25/3 megabits per second ("Mbps") and above.[6]  Satellite broadband is an important solution for reaching customers in rural and other hard-to-reach areas, including in areas where terrestrial providers are unable to

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[3] *See* Public Notice at 5.

[4] *See* HughesNet, Blog, *Work and Study from Home with HughesNet*, available at https://support.hughesnet.com/en/faq/internet/supported_business_applications (explaining that HughesNet supports a number of classroom apps including Google Classroom and Microsoft Teams to support remote learning).

[5] *See id.*

[6] EchoStar Corp., Annual Report (Form 10-K) 4 (Feb. 21, 2019), available at https://www.sec.gov/ix?doc=/Archives/edgar/data/1415404/000141540419000003/sats12311810kdocument.htm.

provide service or cannot provide service cost-effectively. For example, in a video testimonial, a Hughes customer describes how Hughes satellite broadband service enables her to work remotely as a public relations executive with a New York-based agency while living on a mountaintop in a remote part of Oregon.[7]

Hughes is also deploying new infrastructure in order to provide greater speeds and capacity. Specifically, Hughes is currently constructing its next-generation, Commission-licensed, ultra-high-density satellite, EchoStar XXIV (also known as Jupiter 3), which will provide service in the United States and throughout the Americas at speeds of 100 Mbps or more.[8] Jupiter 3 is expected to launch and begin commercial service in the second half of 2022.

***Important Connectivity Solution in Time of Need.*** The COVID-19 pandemic has demonstrated the importance of satellite broadband to support the needs of customers in their daily lives, including for remote learning. Since the start of the pandemic, Hughes and other satellite broadband operators have undertaken significant new activations and jumped into action to provide service where terrestrial operators could not reach,[9] all while supporting their current customer bases with reliable, cost-effective broadband service to ensure they have access to the

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[7] *See* HughesNet, "Connecting Remote and Rural Businesses" (March 2020), available at https://www.youtube.com/watch?v=coNTmsMZlg4.

[8] Press Release, *Hughes Selects Space Systems Loral to Build Next-Generation Ultra High Density Satellite* HUGHES, (Aug. 9, 2017), available at https://www.echostar.com/Press/Newsandmedia/Hughes%20Selects%20Space%20Systems%20Loral%20To%20Build%20Next-Generation%20Ultra%20High%20Density%20Satellite.aspx .

[9] *See generally* Satellite Industry Association, *The Satellite Industry During the COVID-19 Pandemic*, Blog (last viewed March 31, 2021)(available at https://sia.org/covid-19/) (demonstrating what satellite operators did to respond to the pandemic to bring service to places that needed it immediately); *see also* Hughes Network Systems*,* Blog, How Satellite is Helping the Fight Against COVID-19, (April. 15, 2020) available at https://www.hughes.com/resources/blog/how-satellite-helping-fight-against-covid-19 (explaining what Hughes has done throughout the pandemic to provide services).

services they need during these challenging times.  Customer activations only ever take 2-3 days to install even in the most rural and remote portions of the country where no or limited terrestrial fixed broadband competition exists.

As the Emergency Connectivity Fund enables more schools and libraries to provide connectivity to students, teachers, and library patrons for remote learning, satellite broadband will be an important part of the solution, especially in rural and remote areas where other broadband solutions are inadequate or unavailable.  Schools and libraries should be able to access the Emergency Connectivity Fund to purchase satellite broadband service for students or teachers that are unable to receive broadband service at their location from other providers or are unable to afford such service.  Hughes, which was recently named the Best Satellite Internet Service Provider of 2021 by U.S. News and World Report,[10] is uniquely positioned to get such students and teachers online and do so quickly.

## II.   SATELLITE CUSTOMER EQUIPMENT PACKAGES INCLUDE MODEMS AND WI-FI ROUTERS AND ARE ELIGIBLE FOR REIMBURSEMENT FROM THE EMERGENCY CONNECTIVITY FUND

As the Public Notice observes, the Statute defines "eligible equipment" to include Wi-Fi hotspots, modems, routers, and devices that include a modem and a router.[11]  This ensures that customers receive both the equipment necessary to create an internet connection and a home network to utilize it.[12]  The standard equipment package included with each HughesNet satellite

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[10] *See* Hughes, "HughesNet Named Best Satellite Internet Service Provider of 2021 by U.S. News & World Report" (March 30, 2021), available at https://ir.echostar.com/news-releases/news-release-details/hughesnet-named-best-satellite-internet-service-provider-2021-us.

[11] Public Notice at 5, *citing* Statute § 7402(d)(6).

[12] *See, e.g.,* "Modem vs. Router: What's the Difference?" New York Times Wirecutter Blog (Feb. 11, 2021) ("Your modem is a box that connects your home network to the wider internet. A router is a box that lets all of your wired and wireless devices use that internet connection at

broadband internet subscription includes a modem and a Wi-Fi router, as well as a small dish antenna to allow the customer to communicate with the satellite broadband network.  The HughesNet standard customer equipment package thus fits neatly within the definition of "eligible equipment" and the Commission should so clarify.[13]

Hughes also encourages the Commission to include "installation costs, taxes, and fees" as allowable costs.[14]  These costs are standard elements of the price of obtaining eligible equipment or subscribing to eligible services for all types of broadband providers.  Failing to allow the Emergency Connectivity Fund to cover them would require schools and libraries to find other funding for these costs themselves—which risks substantially reducing the effectiveness of the funds Congress has appropriated, particularly for the most cash-strapped schools and libraries.

## III. THE COMMISSION'S CURRENT STANDARDS FOR ADVANCED TELECOMMUNICATIONS AND INFORMATION SERVICES SHOULD APPLY TO THE EMERGENCY CONNECTIVITY FUND

The Commission should define eligible "advanced telecommunications and information services" for purposes of the Emergency Connectivity Fund consistent with how the Commission has defined this term in other contexts in which it appears in the Communications Act.[15]  Hughes agrees that this encompasses the broadband connectivity services currently included in "category

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once and also allows them to talk to one another without having to do so over the internet."), available at https://www.nytimes.com/wirecutter/blog/modem-vs-router/.

[13] *See also* Public Notice at 7 (seeking comment on whether the Commission should "interpret 'advanced telecommunications and information services' to include the equipment necessary to deliver these services to connected devices as eligible.").

[14] Public Notice at 7.

[15] *See, e.g.,* 47 U.S.C. §§ 1302, 254(h)(2).

one" E-rate support, but does not include the construction of new network facilities.[16] This approach will allow schools and libraries to use the Emergency Connectivity Fund to provide connectivity in the near term, during the remainder of the pandemic emergency, to enable more students and teachers to participate in remote and hybrid learning.

With regard to minimum service standards, Hughes agrees that the current thresholds for advanced telecommunications capability (25 Mbps download and 3 Mbps upload for fixed broadband[17]) is an appropriate metric. Speeds at this level are more than adequate for robust remote learning, including video conferencing applications.[18] For example, Zoom's recommended bandwidth requirement for high-quality group video calling is only 1 Mbps upload and 600 kbps download, and even at 1080p video quality is only 3.8 Mbps upload and 3.0 Mbps download.[19] Similarly, Cisco's Webex product recommends 1 Mbps download and 1.5 Mbps upload for high-quality video and 2.5 Mbps download 3 Mbps upload for high-definition video conferencing.[20] Thus, a broadband connection at 25 Mbps download and 3 Mbps upload should

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[16] Public Notice at 7.

[17] *See Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion,* Fourteenth Broadband Deployment Report, FCC 21-18, at ¶ 11 (rel. Jan. 19, 2021).

[18] *See* Public Notice at 7-8.

[19] *See* Zoom, System requirements for Windows, macOS, and Linux, Bandwidth Requirements, available at https://support.zoom.us/hc/en-us/articles/201362023-System-requirements-for-Windows-macOS-and-Linux.

[20] *See* Cisco Webex, What are the Minimum Bandwidth Requirements for Sending and Receiving Video in Cisco Webex Meetings? (Mar. 10, 2021), available at https://help.webex.com/en-us/WBX22158/What-are-the-Minimum-Bandwidth-Requirements-for-Sending-and-Receiving-Video-in-Cisco-Webex-Meetings.

be more than sufficient, even where multiple people in a household are engaging in remote learning or work.

## IV. CONCLUSION

The Emergency Connectivity Fund holds enormous promise to help schools and libraries ensure that all students and teachers can fully participate in remote or hybrid learning through the remainder of the COVID-19 pandemic emergency.  Satellite broadband services should be an integral part of this solution, allowing high-quality broadband connectivity without long installation delays, including in the most rural and remote areas.  The Commission's rules should allow schools and libraries to use the most appropriate tools at their disposal, including satellite broadband, to meet these important connectivity needs.

Respectfully submitted,

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