

Before the
FEDERAL COMMUNICATIONS COMMISSION

Washington, DC 20554

In the Matter of)	
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Modernizing the FCC Form 477 Data Program)	WC Docket No. 11-10
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COMMENTS OF HUGHES NETWORK SYSTEMS, LLC

To the Commission

I. Introduction

Hughes Network Systems, LLC (“Hughes”) submits these comments to assist the Federal Communications Commission’s (“Commission”) efforts to modernize Form 477, the Commission’s principal tool for gathering data on communication services, including broadband, and informing policy decisions by improving accuracy, quality, and usefulness while simultaneously reducing burdens on industry.¹

Hughes is the largest provider of satellite broadband services in the United States and globally, with more than 1 million subscribers in North America. Hughes offers Commission-defined broadband speeds of 25 Mbps down and 3 Mbps up for residential customers across the continental United States, Puerto Rico, and Southeastern Alaska. Since launching its new high-speed broadband service in March 2017, Hughes added over 200,000 satellite broadband

¹ *Modernizing the FCC Form 477 Data Program*, Further Notice of Proposed Rulemaking, FCC 17-103 (August 24, 2017) (“FNPRM”).

subscribers to its new HughesNet® Gen5 service in the first 4 months of its offering,² and subscribership has grown substantially since.

Hughes has applied to the Commission for authority to construct, launch, and operate its next-generation satellite, HNS 95W, to ensure that the most state-of-the-art satellite broadband services are available to consumers across the United States.³ Construction of HNS 95W has begun, and launch is planned for early 2021.⁴

As the Commission recognizes in the FNPRM, having access to current, reliable, and accurate data on broadband deployment is essential to consumers and the government. However, the Commission must strike a balance between an inclusive data set and the needs of service providers that operate in a competitive marketplace. Updating the methods by which Form 477 is utilized to obtain data from service providers is an important step to ensure that this critical balance is met. Hughes supports the Commission's efforts to devise satellite industry-specific reporting mechanisms and encourages the Commission to adopt larger reporting blocks that are more reflective of the nature of satellite-broadband delivery, namely Census Regions. Hughes opposes the Commission's recommendation to release disaggregated subscription data, as the potential risks to service providers vastly exceed the de minimis public interest benefit that has been advanced in the FNPRM.⁵ Hughes also supports a move toward annual reporting.

² EchoStar Corporation Q2 Earnings Call, (August 9, 2017).

³ Hughes Network Systems, LLC Application for Satellite Space Station Authorizations, IBFS File No. SAT-LOA-20170621-00092.

⁴ Press release: "Hughes Selects Space Systems Loral to Build Next-Generation Ultra High Density Satellite" (August 9, 2017), available at: <http://ir.echostar.com/news-releases/news-release-details/hughes-selects-space-systems-loral-build-next-generation-ultra>

⁵ See FNPRM at FN 73.

II. Discussion

A. The Commission Should Modify Form 477 for Satellite Broadband Operators to Use the Four Census Regions in the Measuring Broadband Report to Create Reporting Blocks that Accurately Capture the Ubiquity of Satellite Service While Providing the Desired Granularity the Commission Requires

There has been a disconnect in Form 477 collections between the ways in which satellite networks deliver ubiquitous broadband services and the ability of satellite operators to quantify the services provided at the level of granularly desired by the Commission.⁶ This is largely due to Form 477 data being collected on reporting block samples that are designed to accurately capture terrestrial network deployments—not satellite deployments. Geostationary orbit (“GSO”) satellites provide wide-area coverage that do not merely cross multiple census blocks, but rather provide coverage of up to one-third of the earth’s surface from a given orbital position. For example, within its coverage zone, a high-throughput GSO satellite may utilize an overlay of spot beams to enable ubiquitous coverage of the entire region to which it provides service. For many United States-authorized satellites, including the three-satellite constellation employed by Hughes to provide domestic broadband services, this means complete, uniform service coverage of the contiguous 48 states.⁷ Reporting deployment data on a census block level thus creates unique issues for service providers with a continental sized footprint as it is unduly burdensome to report the same information in every census block.

⁶ *See Id.*

⁷ Depending on the orbital position of the satellite, Puerto Rico, Hawaii, and portions of Alaska may also be within this coverage zone.

As stated in the FNPRM, the Commission has attempted to accommodate broadband satellite service by permitting satellite operators to submit only one block-level record for each state included in the spacecraft's footprint.⁸ However, this rule has not provided the Commission with any meaningful insight into variations in service, if any, throughout the country. While a satellite can, and typically does, provide uniform service throughout the country, especially when part of a high-throughput constellation, variation may exist between services offered on different spacecraft.

Accordingly, Hughes proposes that the Commission adopt the four Census Regions—Northeast, Midwest, South, and West—employed in the Measuring Broadband America Report⁹ for purposes of satellite providers' Form 477 reporting. As the Commission explains in the Measuring Broadband Report Technical Appendix, the Census Regions were selected to ensure “geographic diversity...and compensate for network variance across the United States.”¹⁰ These regions are appropriately sized blocks to reflect the ubiquitous nature of satellite service coverage, while also respecting the Commission's need for more granular information into regional experiences. As these Census Regions have been adopted to verify and validate whether consumers are receiving satisfactory broadband access, they should also be sufficiently sized for providing insight for policymaking purposes on broadband deployment and adoption.

⁸ *Id.* at ¶ 45.

⁹ See *Measuring Broadband America Fixed Broadband Report*, (December 1, 2016) (“Measuring Broadband Report”), pg. 7 and Table 4.

¹⁰ *Ibid* at 2.2.

B. The Benefits of Releasing Disaggregated Subscriber Data Are Outweighed by the Competitive Risks to Companies in Limited-Participant Markets

While there is an argument in favor of releasing disaggregated subscription data to the public to enable consumers to comprehend policy decisions based on the data, the risks to service and competition from disclosure far outweigh the minimal benefit that can be ascribed. Disaggregation of subscription data, as proposed in the FNPRM, only gives consumers a different aggregated number: the number of consumers who have purchased a tier of broadband service in a particular region. This new aggregated number fails to inform the consumer as to “why” another consumer chose to purchase this service. Rather, it forces anyone reading Form 477 to presuppose that when given a choice, broadband users will always choose the highest speed and capacity service available. In a recent independent study, the researchers found that there is actually a decreasing marginal value associated with bandwidth and latency, meaning that while consumers are willing to pay significantly to improve their service from 56 kbps down to 1 Mbps down, they are less likely to maintain that valuation to upgrade from 10 Mbps to 100 Mbps.¹¹

Moreover, disaggregation of adoption rates can harm service providers even in markets where they are the sole broadband provider. In a separate independent study, researchers noted that even when there is only one broadband provider in an area, only 43% of households will adopt

¹¹ Yu-Hsin Liu, Jeffrey Prince, and Scott Wallsten, “Distinguishing Bandwidth and Latency in Households’ Willingness-to-Pay for Broadband Internet Speed,” Technology Policy Institute (Aug. 2017), available at <https://techpolicyinstitute.org/wp-content/uploads/2017/08/Distinguishing-Bandwidth-and-Latency-in-Households-Willingness-to-Pay-for.pdf>.

the higher speeds that are available.¹² By requiring service providers to allow this data to be disaggregated, the Commission is insisting on having competitors expose their own market vulnerabilities, such as at what price a competitor can enter the one-operator market and undercut the incumbent, without providing a compelling reason how this information will serve the “public interest.”

Disaggregating information that companies would otherwise treat as sensitive corporate intelligence, serves only to allow companies to determine the areas in which they can outprice their competition and which tiers of service will best bolster the corporate bottom line. Without underlying reasoning for why certain tiers of service were selected by consumers, whether it be price sensitivity, need, or availability, the disaggregated subscription data will not provide a meaningful metric to better inform the discourse on broadband adoption. On the contrary, disaggregation of subscriber data may harm many low-adoption communities where it encourages new entrants to force out the old, rather than serve as a basis to expand deployment to unserved and underserved areas.

The potential harm of disaggregated subscription data is not abated by the passage of time. Broadband deployments take time. Service generations and tier packages often remain similar, if not static, over periods of years based on the available infrastructure in a region. New services and upgrades roll out with the deployment of new towers, cells, spacecraft, and fiber. Thus, unless the Commission intends to wait until the subscription data is antiquated to the point that it is of no

¹² Andre Boik, “The Economics of Universal Service: An Analysis of Entry Subsidies for High Speed Broadband,” Information and Economics Policy (Revised: January 17, 2017), available at: <http://www.sciencedirect.com/science/article/pii/S0167624517300689?via%3Dihub>

empirical value, the same concerns with respect to market vulnerabilities will continue to attach to disaggregated subscription data for several years.

C. Form 477 Reporting Obligations Should Be Fulfilled Annually

Form 477 serves as the data collection for most of the Commission's, and Congress's, broadband policy making. There is an understandable desire to have Form 477 completed on a frequent basis in order to ensure that policymakers are working with the most up-to-date numbers possible. However, frequency can result in a trade-off in details provided in order to not be unduly burdensome on the service providers who must complete the data pulls and reports to the Commission.

Hughes supports the Commission's proposal to adopt an annual Form 477. While there are some metrics, such as speed-of-deployment subscriptions, that change more rapidly, none of the metrics being tracked in Form 477 will be obscured by switching from semi-annual to annual reporting. Annual reporting reduces the burdens on reporting entities and permits them to collect more detailed and accurate information for the purposes of informing Commission policymaking. It also provides the required information the Commission needs to meet its broadband policymaking.

III. Conclusion

Hughes supports the Commission's efforts to update Form 477 and its accompanying reporting structure and to develop more accurate reporting methods that reflect the unique delivery methods of satellite broadband services across the United States. Hughes urges the Commission to adopt the Measuring Broadband Report's Census Regions as accurate and appropriately sized reporting

blocks for satellite data on an annual basis. Further, Hughes supports annual reporting obligations of Form 477 information, which will provide the information the Commission requires, while minimizing administrative burdens on service providers.

Respectfully submitted,

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October 10, 2017