



August 31, 2018

**VIA EMAIL**

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Dear Mr. Lang:

**Re: Notice of Market Study - *Competition in Broadband Services* posted in May 2018**

**I. Introduction**

1. Hughes Network Systems Canada ULC (“Hughes Canada”) and its parent company, Hughes Network Systems, LLC, (collectively, “Hughes), are pleased to submit these comments in connection with the market study initiated by the Competition Bureau (the “Bureau”) regarding the *Market Study Notice: Competition in Broadband Services* (the “Study”).
2. Commercial communications satellite operators have continually improved the overall performance and spectral efficiency of their satellites to bring to consumers significant benefits in terms of increases in throughput and speeds wherever they live. Today, customers are served by state-of-the-art, high throughput satellites, which have over a hundred frequency-reusing spot beams each, and the technology to shift power and capacity to service areas based on need. Hughes has improved the efficiency of its satellites exponentially, achieving two orders of magnitude greater throughput in less than a decade in order to meet the bandwidth requirements of its customers and today provides broadband satellite services to consumers throughout North America at speeds above 25 Mbps down and 3 Mbps up.<sup>1</sup>
3. The satellite industry, and Hughes in particular, plays a significant role in the delivery of broadband services: delivering capacity and offering competitive choices for consumers, businesses, and governments. To meet the Bureau’s goal of better understanding the competitive dynamics of the Canadian broadband markets, the Study must encompass the full breadth of competitive broadband services available to consumers in Canada,

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<sup>1</sup> See Hughes Networks Systems, LLC, White Paper: Evolution of Hughes Network System, LLC’s Broadband Satellite Services from Narrowband to Federal Communications Commission-Defined Broadband Speeds, 10 April 2017 (“Hughes White Paper (2017)”) attached at Schedule 1.



including satellite broadband. By including all broadband market participants, regardless of market share, the Bureau will be able to better assess the market outcomes and efficiencies that influence consumer purchasing decisions and power in the broadband market. Only then can regulations be enacted to ensure consumers across the country, no matter where they live, can benefit from the availability of advanced broadband connectivity.

## **II. Overview of EchoStar/Hughes**

4. Hughes' parent company, EchoStar Corporation, is the fourth largest commercial geostationary orbit ("GSO") satellite operator worldwide; providing broadband, video, and other services to meet the needs of small and large customers, including media and broadcast organizations, direct-to-home ("DTH") providers, enterprise customers, government service providers, and residential consumers in North America and globally.
5. Hughes is the largest provider of satellite broadband services in North America and globally, with approximately 1.3 million subscribers across the Americas. Hughes provides its broadband services using a three-satellite, Ka band GSO constellation over North America, which includes coverage of key portions of Canada. With the addition of its most recent satellite, EchoStar XIX/Jupiter 2, Hughes launched its new HughesNet Gen5 satellite Internet service; delivering faster speeds, more data, and built-in Wi-Fi for consumers and small businesses across the continental United States, southeastern Alaska, Puerto Rico, the U.S. Virgin Islands, Mexico, and key areas within Canada.
6. In Canada, Hughes provides broadband services to both enterprise customers and wholesale partners, such as Xplornet Communications Inc. ("Xplornet"). Xplornet makes use of Ka band capacity on the EchoStar XVII/Jupiter 1 and Jupiter 2 satellites to provide high speed broadband services to consumers in Canada, including those located in the more remote and underserved areas of the country.
7. Hughes is currently in the process of constructing its U.S.-licensed next-generation, Ultra High Density Satellite, EchoStar XXIV/Jupiter 3, which is planned for launch in early 2021 and is being manufactured by Space Systems Loral.<sup>2</sup> The Jupiter 3 satellite will be used to provide state-of-the-art satellite broadband services and capacity to customers throughout the Americas, including Canada, at speeds at or above 100 Mbps.
8. As a result of Hughes' global leadership in the development and provision of satellite solutions, Hughes has been selected by Worldvu Satellites Limited d/b/a OneWeb to develop the ground system, including gateways and user terminals, for its global low earth orbit ("LEO") satellite constellation. OneWeb's mission is to enable affordable Internet access to everyone, even in the most remote regions of the globe. The joint development of the ground network, currently valued at over USD \$300 million, began in

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<sup>2</sup> See Hughes Application for HNS 95W space station, IBFS File No. SAT-LOA-20170621-00092 (filed June 21, 2017).



2015 and shipments are expected to begin in mid-2018.<sup>3</sup> By partnering with OneWeb, Hughes is facilitating broadband connectivity to regions of the world that are outside of the sight of equatorial orbit satellites and economically or physically infeasible for terrestrial networks, such as the arctic regions of Canada.

### III. Discussion

#### A. Satellite Broadband Should be Included in Discussions about the Available Options for Consumers to Access Affordable and Reliable Broadband Connectivity

9. While the Bureau correctly notes that the majority of Canadian homes access their broadband services through networks provided by either the local telephone or cable company,<sup>4</sup> the Study's current parameters perpetuate the idea that the reason for this trend is that these two types of providers are the only service options available to consumers. By so limiting the Study, the Bureau omits at least one significant service that is essential for the delivery of broadband services to Canadians: satellite networks.

10. Industry Canada noted the importance of satellite for the delivery of broadband services in its recent Spectrum Outlook:

59. Due to Canada's vast land mass and widely dispersed population, satellite systems play a vital role in providing communications capabilities in rural, remote and northern communities, where terrestrial facilities are limited or non-existent. In these communities, satellite systems provide the backbone for, or direct access to, essential services such as basic telephone, broadcasting and Internet services.

60. In urban areas, satellite systems are used to provide direct-to-home television services to consumers and underpin Canada's broadcasting system by transferring content from creators into the cable distribution system. In both urban and rural areas, satellite services also play a critical role in times of emergency, such as natural disasters, when terrestrial telecommunications infrastructure may be disabled. Satellite systems are also used extensively by government to support national security and to assist in monitoring the environment.<sup>5</sup>

11. Satellite broadband services are available to a significant, and continuously increasing, portion of the Canadian population. These high throughput, multi-spot beam satellites,

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<sup>3</sup> See Hughes Network Systems, LLC, Press Release: [Hughes Announces Partnership in OneWeb's Innovative Global Satellite Broadband Initiative to Close the Digital Divide](#), PR Newswire, 25 June 2015.; see also Hughes Network Systems, LLC, Press Release: [Hughes Signs \\$190M Contract with OneWeb for Production of Ground Network System for Global Internet Services](#), 7 November 2017.

<sup>4</sup> Market Study Notice: Competition in Broadband Services, Competition Bureau Canada (10 May 2018) at para. 4.

<sup>5</sup> *Spectrum Outlook 2018 to 2022* – Notice No. SLPB-003-18, *Canada Gazette*, posted on 6 June 2018, at paras. 59-60 (“Spectrum Outlook”).



are capable of providing extremely wide geographic coverage with minimal ground infrastructure. This eliminates last-mile construction costs and allows for immediate connectivity for users, which is especially important for consumers located in remote and underserved communities, and often at prices comparable to customers in urban centers. While the look angle of an equatorially located satellite network diminishes the reach of services available to consumers located above 65° N latitude, the advent of the new non-geostationary orbit (“NGSO”) satellite systems, with inclined and polar orbits expands coverage to previously “unseen” portions of the globe, including communities located about the 65<sup>th</sup> parallel.<sup>6</sup>

12. Further, as demonstrated by Hughes’ own services, satellite broadband services continue to improve in terms of customer adoption and retention. Hughes has witnessed a more than threefold increase in customers in the past ten years and is currently providing consumers broadband speeds of 25/3 Mbps and more; meeting or exceeding current definitions of broadband service.<sup>7</sup> Moreover, since launching the HughesNet Gen5 service in March 2017, Hughes has experienced a 20 percent decrease in North American retail consumer churn, demonstrating that customers are trying the service and staying with it, even when there are alternative services available.<sup>8</sup>
13. Meeting rapidly increasing demand for broadband access will be the primary challenge for providers across all communications platforms over the next five years. While demand for high-bandwidth downloads continues to surge in every region, in unserved and underserved areas, it is largely unmet. Given Canada’s vast land mass and widely dispersed population, as ISED has recognized, satellite services will play a vital role in enabling access to ever-increasing download speeds and throughput capacity to Canadians, no matter where they live and must be included in any market competition analysis.<sup>9</sup>

**B. Satellite Broadband is Critical to Meeting the Future Broadband Connectivity Objectives of the Canadian Government**

14. The Canadian government has recognized the importance of broadband connectivity as “fundamental to Canada’s future economic prosperity, global competitiveness, social development, and democratic discourse.”<sup>10</sup> In order to ensure that all Canadians will be able to participate in this digital economy, the Canadian Radio-television and Telecommunications Commission (“Commission”) has established a universal service

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<sup>6</sup> This includes the ISED-authorized Telesat Canada NGSO systems, Polarsat, LEOVantage and LEO-V, and the 1021823 B.C. Ltd. system, OneWeb-2.

<sup>7</sup> Currently, the Canadian Radio-television and Telecommunications Commission defines “broadband service” as any service including a 1.5 Mbps or greater download speed: Telecom Regulatory Policy CRTC 2011-291, *Obligation to serve and other matters*, 3 May 2011, para. 18 and footnote 19.

<sup>8</sup> Q1 2018 marked the lowest quarterly churn in over five years for the HughesNet service in North America. EchoStar Second Quarter 2018 Investor Call (7 August 2018).

<sup>9</sup> Spectrum Outlook, at para. 58.

<sup>10</sup> Telecom Regulatory Policy 2016-496, *Basic telecommunications services*, 22 December 2016.



objective that all Canadians, in urban areas as well as in rural and remote areas, have access to voice and broadband Internet access services on both fixed and mobile wireless networks.<sup>11</sup> Recognising that many factors can uniquely affect the performance of mobile wireless broadband Internet access service, the Commission established a broadband universal service objective speed criterion of 50 Mbps download and 10 Mbps upload to be made available to Canadian residential and business *fixed* broadband Internet access subscribers<sup>12</sup> in both urban areas as well as in rural and remote areas.

15. Satellite broadband providers will be instrumental in enabling the Canadian government to achieve these universal service objectives, especially in the currently unserved or underserved rural and remote regions of the country. Hughes delivers 25 Mbps download 3 Mbps upload speed services today in Canada through its partnership with Xplornet. With a scheduled launch 2021, and planned service speeds at or above 100 Mbps, Hughes expects the Jupiter 3 satellite network will play a significant role in helping the Canadian government achieve its connectivity goals, ensuring that Canadians, regardless of where they live, will be able to access broadband exceeding download speeds of 50 Mbps.

#### IV. Conclusion

16. As demonstrated herein, the Bureau should expand the scope of the Study's current parameters to include satellite broadband. Only by including all technology platforms, regardless of their current market share, will the Bureau be able to accurately assess and inform the Canadian public of their options for broadband connectivity and direct a coherent and comprehensive regulatory regime that will ensure all Canadians can benefit from advanced telecommunications.
17. Hughes would be willing to participate in an oral interview to provide the Bureau with information regarding the Study. Please contact the undersigned with any additional questions.

*[original signed by Jennifer Manner]*

*[original signed by Jodi Goldberg]*

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<sup>11</sup> Telecom Regulatory Policy 2016-496, *Basic telecommunications services*, 22 December 2016, paras. 25-39, viz. para. 37.

<sup>12</sup> Telecom Regulatory Policy 2016-496, *Basic telecommunications services*, 22 December 2016, paras. 65-81, viz. para. 80.