REDACTED—FOR PUBLIC INSPECTION

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November 3, 2015

VIA ECFS

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Re: **MB Docket No. 15-149**
Charter Communications Response to FCC's Information and Data Request

Dear Ms. Dortch:

Enclosed please find the public version of supplemental materials from Charter Communications, Inc. in response to the Information and Data Request issued by the Federal Communications Commission ("Commission" or "FCC") on September 21, 2015, in connection with the above referenced docket. The materials consist of the following:

- **Supplemental Narrative Responses**

  We are submitting in hard copy and on the enclosed disk a supplemental narrative response to Requests 3, 25, 26, 28, 30, 49, 54, 60, 67, 71, 72, 73, 77, 86, 92, 94, 95, and 102.

- **Exhibits to Supplemental Narrative Responses**

  We are submitting on the enclosed disk exhibits in support of the supplemental narrative responses.

Consistent with the instructions in the Protective Order, the Highly Confidential version is being hand-filed under separate cover, and copies are being provided to the Media Bureau. These materials are being submitted pursuant to the modifications to the Commission's Information and Data Request set forth in my letter dated October 13, 2015, as applicable, and any modifications set forth in the enclosed response.

Please let me know if you have any questions.

Sincerely,

/s/ John L. Flynn

John L. Flynn

Enclosures

cc: V. Lemmé

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BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Applications of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership for Consent to Transfer Control of Licenses and Authorizations.	)	MB Docket No. 15-149

THIRD SUPPLEMENTAL RESPONSE OF CHARTER COMMUNICATIONS, INC. TO INFORMATION AND DATA REQUESTS DATED SEPTEMBER 21, 2015

November 3, 2015

INTRODUCTION

In further response to the letter dated September 21, 2015 from William T. Lake, Chief of the Media Bureau, to the accompanying Information and Data Request to Charter Communications, Inc., Charter Communications, Inc. ("Charter" or the "Company") provides the following supplemental answers and responsive documents, as applicable. Unless otherwise defined herein, capitalized terms shall have the meanings set forth in the Definitions section of the Information Request.

Charter has based its responses on a review of available documents that are reasonably likely to contain responsive information and on inquiries of those individuals and available sources that are likely to have relevant information. In certain cases, Charter does not maintain in the ordinary course of business some of the information requested, or does not maintain the information in the precise manner requested.

In addition, per discussions with Commission Staff, Charter notes that several qualifications and agreements apply regarding its submissions. These modifications appear in the cover letter to Charter's initial responses, dated October 13, 2015 ("Cover Letter"), as applicable, as well as herein.

The narratives, attachments and submitted data contain material that is extremely sensitive from a commercial, competitive and financial perspective, and that, in the normal course of its business, Charter would not reveal to the public, to its competitors or to other third parties. Per discussions with Commission Staff, Charter is submitting these responses on a Highly Confidential basis under the Joint Protective Order in effect in this proceeding.[1]

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[1] *Applications of Charter Communications, Inc., Time Warner Cable Inc., and Advance/Newhouse Partnership for Consent to Assign or Transfer Control of Licenses and*

Redacted submissions are marked, **"REDACTED – FOR PUBLIC INSPECTION,"** and are being filed electronically in the Commission's Electronic Comment Filing System ("ECFS"). The confidential, unredacted submissions are marked "**HIGHLY CONFIDENTIAL INFORMATION – SUBJECT TO PROTECTIVE ORDER IN MB DOCKET NO. 15-149 BEFORE THE FEDERAL COMMUNICATIONS COMMISSION**" and are being delivered to the Secretary. Additional copies of the unredacted response are being delivered as instructed in the Information Request and will be made available pursuant to the Protective Order.

Any inadvertent inclusion of material subject to the attorney-client, attorney work-product, or other applicable privilege does not constitute a waiver of that privilege. Charter requests the return or destruction of all confidential material at the conclusion of this proceeding.

[remainder of this page intentionally left blank – responses follow]

Authorizations, MB Docket No. 15-149, Protective Order, FCC 15-110 (Sept. 11, 2015) ("Protective Order").

INFORMATION AND DATA REQUEST TO CHARTER COMMUNICATIONS, INC.

REQUEST 3

3. Describe, and identify documents sufficient to show, the Company's past and current business and deployment plans with respect to:

a. DOCSIS 3.1;

b. IP cable and Wi-Fi access;

c. mobile wireless broadband services;

d. any OVD service inside or outside of the Company's current service area;

e. wireless backhaul services;

f. build-out to additional homes in your footprint or franchise area, including the Application's claim that the Company will "build out one million line extensions of our networks to homes in our franchise area";

g. IP set-top-boxes;

h. user interfaces and programming guides for subscribers;

i. increasing speeds for Internet broadband services;

j. business services; and

k. time-shifted and place-shifted video programming.

Supplemental Response to Request 3(d):

As previously discussed in Charter's October 13, 2015 response to Request 3(d), Charter has no past or current business and development plans to offer an OVD service, as that term is understood by the Commission.[2] As discussed in Charter's October 13, 2015 response to Request 23, Charter announced the release of a Spectrum Guide App on Roku devices on October 12, 2015. The Spectrum App provides Charter customers an additional way to view the

[2] Information and Data Request to Charter Communications, Inc., Definitions No. 46 ("Online Video Distributor" or "OVD").

content they have purchased with their cable TV service on an IP-enabled device, in this case, an in-home Roku device. Charter also is testing in certain markets a cable TV product—Spectrum Stream and Spectrum Stream Plus—utilizing a Roku device that receives IP transmissions over Charter's private network. These products are not OVD products.

REQUEST 25

25. Describe, and produce all documents relating to, reflecting, or describing, the Company's pricing of integrated and unintegrated cable modems, and billing policies and practices, in effect at any time between January 1, 2012 and the present.

Supplemental Response to Request 25:

Since the introduction of New Price Packaging ("NPP"), approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of customers have elected not to switch to NPP, thus keeping their legacy Internet access service. These customers continue to pay a monthly rental fee if they use a Charter-provisioned cable modem, but there is no such fee if they use their own cable modem. Charter's internal records reflect that approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of the customers who have chosen to keep their legacy service have their own cable modem. In addition, approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of Charter customers on NPP also have their own cable modem. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION]

REQUEST 26

26. Separately for each cable modem billing policy or practice identified state:

a. when the Company established the policy or practice and the reasons for the policy or practice and altering or abandoning any prior policy or practice;

b. any change to the policy or practice that has occurred at any time since January 1, 2012, including but not limited to, the date when the change in policy or practice took effect and the reasons for the change; and

c. all effects that the transaction, if consummated, would have on any policy or practice.

Supplemental Response to Request 26:

As explained in Charter's October 13, 2015 response, in 2012 Charter implemented its New Pricing Packaging, which eliminated modem fees, in part to reduce Charter's operational costs and provide greater transparency to consumers. Under legacy plans, Charter's pricing for modem fees varied across its footprint, and customers could be charged different amounts for modem fees depending on their service plan and location. As part of NPP, however, Charter simplified subscribers' bills by merging various component service fees—including any pre-existing modem fee—into a simple bottom line number at no additional cost. In doing so, Charter sought to eliminate pricing variances and to provide an easy-to-understand, streamlined service plan that was universal across its footprint.

NPP has reduced back office costs for Charter in a number of ways. For instance, because NPP standardized pricing across all markets, sales representatives no longer need to look up rates based on customer location, leading to shorter, more efficient sales calls. Similarly, standardized pricing makes it easier for customer care representatives to explain charges to customers, which reduces the amount of information Customer Care representatives must learn and allows Charter to focus its representatives' training on other areas of the business. The

inclusion of standard features under NPP also translates into less time spent explaining various options to customers. Finally, because all subscribers across Charter's network enjoy similar features, less effort is required to adjust customer accounts to reflect each customer's specific services.

In addition, as noted in Charter's October 13, 2015 response, when Charter introduced NPP, it was also in the process of increasing the speeds available to many subscribers from 15 Mbps to 30 Mbps (and later to 60 Mbps). But Charter discovered technical deficiencies related to legacy modems that could not efficiently handle these higher speeds. Accordingly, Charter changed its modem policy concurrently with adopting NPP in an effort to protect its network from harm caused by these legacy modems, improve the customer experience, and to reduce operational costs associated with an increased Customer Care call volume.

REQUEST 28

28. State whether, at any time since January 1, 2012, you have provided any service discount or account credit to an Internet access service subscriber that uses a non-Company-provisioned cable modem, and if so, the amount and frequency of that discount or credit. Provide documents sufficient to show such charges as they were reflected on subscriber bills.

Supplemental Response to Request 28:

In further response to this Request, Charter is producing on the enclosed disk in the folder "Request 28" sample bills for Charter legacy broadband customers, one with and one without a line-item modem fee.

REQUEST 30

30. Describe, and produce all documents relating to the policies, procedures and practices the Company follows in processing trouble or incident reports from edge providers or subscribers concerning the Company's Internet access services.

Supplemental Response to Request 30:

In addition to avenues described in Charter's October 13, 2015 response, Charter receives periodic communications from subscribers directed at Charter's management team. When those communications concern technical issues related to Internet access service, they are routed to staff designated to address subscriber concerns. The same team reviews and responds to these questions or complaints regardless whether they come to Charter via its dedicated web address (referred to in Charter's first response to this RFI) or informally as described above.

Additionally, Charter from time to time receives informal customer complaints related to Internet access services lodged with the Commission. In such instances, Charter investigates the basis for the complaint by sending a technician to the subscriber's address and by attempting to contact the subscriber. As required, Charter responds to such complaints within 30 days of receipt of the notice in each instance.

Charter has not received complaints by any means other than those described here and in Charter's October 13, 2015 response. Charter, moreover, is unaware of ever having received a complaint from an edge provider.

REQUEST 49

49. Describe and provide all documents concerning:

a. when and why the Company decided to build an Internet backbone;

b. the Company's interconnection strategy, and how that strategy may have changed over time;

c. the benefits the Company has identified relating to controlling an Internet backbone; and

d. when the Company's Internet backbone went into service.

Supplemental Response to Request 49:

As Charter explained in its October 13, 2015 response, Charter initially offered Internet connectivity through contracts with small regional telecommunications companies and competitive local exchange providers. This arrangement proved costly and unreliable, and Charter was required to maintain relationships with multiple third-party providers—when available—to ensure redundancy. Because Charter had to route traffic through multiple providers, Charter experienced latency in its network, leading to sub-optimal performance and network outages. In order to provide for a better, more reliable customer experience, reduce costs for Internet connectivity in the face of dramatically rising Internet connectivity across Charter's network, streamline operations, and standardize the delivery of services to Charter markets, Charter began to examine the possibility of building its own backbone in 2007. Preliminary design work began in 2008, and the National Backbone was established in 2009.

The National Backbone has benefited Charter in a number of ways, including reduced costs, improved Internet connection reliability and resiliency, reduced network complexity, and improved interconnection ability. The National Backbone also allows Charter to increase its network capacity for increased customer Internet consumption in order to offer customers additional products and services.

REQUEST 54

54. Describe, and produce and identify all documents sufficient to show:

a. the Company's policies with respect to upgrading, declining to upgrade, or downgrading interconnections between the Company and any person;

b. the Company's policies, processes and procedures for addressing congestion at interconnection links, including but not limited to: (1) how far in advance the Company plans for upgrading of interconnection links; (2) the criteria used to determine whether to upgrade capacity when requested, whether requests from settlement-free peers, paid peers, transit service providers, and transit service customers are evaluated using different criteria, and how requests for and installation of upgrades of interconnection links are prioritized; (3) whether the Company seeks to augment capacity when interconnection links reach a certain level of utilization (*i.e.*, 70% utilization) and if so, where that level is set; and (4) the costs, processes, and length of time involved in provisioning additional capacity, including a description of, and how the Company determines, which party should bear which costs;

c. any metrics that the Company uses in order to determine whether to upgrade or downgrade an interconnection (e.g., maximum acceptable network utilization or congestion, maximum acceptable packet loss, port availability, bandwidth capacity at particular points, latency, etc.), including what metrics are gathered and what measurement intervals are used; and

d. any criteria by which the Company chooses a particular type of upgrade or downgrade (*e.g.*, addition or subtraction of an interconnection site, or addition or subtraction of capacity at an existing site).

Supplemental Response to Request 54:

Charter pays for the cost of upgrades, if any, on Charter's side of the interconnection, and interconnecting entities are responsible for any associated costs necessary to upgrade their own equipment at the point of interconnection. In other words, each party covers its respective costs.

Given Charter's consistently rising traffic at interconnection points, Charter is unaware of downgrading an interconnection. Accordingly, Charter does not have any policies with respect to downgrading interconnections.

REQUEST 60

60. Describe, and identify and produce documents sufficient to show, the Company's post-transaction plans for interconnection agreements between the Company and interconnection partners in the following situations:

a. when Charter or TWC has a transit services agreement and the other has a peering agreement, which agreement New Charter will proceed under;

b. when either Charter or TWC has a peering agreement or a transit services agreement and the other has no interconnection agreement, whether New Charter will apply the existing interconnection agreement for the full network; and

c. when New Charter has no interconnection agreement with a major network (i.e., Tier 1 backbones, major CDNs), whether New Charter will seek new interconnection agreements and under what peering policy or terms.

Supplemental Response to Request 60:

Post-Transaction, New Charter will maintain POPs for IP network interconnection at the locations identified in Exhibit 60 on the enclosed disk in the folder "Request 60." New Charter may, however, change its interconnection configuration from time to time as part of its network augmentation and management efforts in order to ensure the efficiency and integrity of traffic exchange, minimize congestion, and optimize backbone infrastructure.

REQUEST 67

67. Explain, and provide and identify all documents, studies, surveys, forecasts, or estimates that substantiates the claim on page 12 (paragraph 37) of the Dr. Scott Morton Declaration that "each firm's profitability and future success depends far more on its broadband business than its video business."

Supplemental Response to Request 67:

Charter's "profitability and future success depends far more on its broadband business than its video business" for several reasons. Consumers are increasingly viewing streaming video and taking advantage of a rapidly growing variety of content online, often through subscription services. For example, the Leichtman Research Group found that 52% of U.S. households use a subscription OVD service from Netflix, Hulu, or Amazon,[3] which, of course, are not the only streaming video sources available to consumers. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION] In the first quarter of 2015 alone, subscribers to Netflix watched over 10 billion hours of Netflix programming.[5] Similarly, YouTube accounts for hundreds of millions of video hours per day.[6]

As a result of the increasing consumption of OVD services, Internet traffic is growing at a tremendous pace. A 2015 Cisco White Paper found that North American Internet traffic would

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[3] *See* "Over Half of U.S. Households Have a TV Connected To the Internet," Leichtman Research Group, press release, May 27, 2015, http://www.leichtmanresearch .com/press/052715release.html.

[4] *See* **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION]

[5] *See* Netflix April 15, 2015 Letter to Shareholders, http://files.shareholder.com/downloads/ NFLX/50690019x0x821407/DB785B50-90FE-44DA-9F5B-37DBF0DCD0E1/Q1_15_ Earnings_Letter_final_tables.pdf.

[6] YouTube statistics, https://www.youtube.com/yt/press/en-GB/statistics.html.

grow at a 20% compound annual growth rate through 2019.[7] Most of this growth will come from online video. OVD services are expected to grow from 69% of all Internet traffic in 2014 to 80% by 2019.[8] During that same time, North American video traffic is forecast to grow at a compound annual growth rate of 29%.[9] ACG Research forecasts that broadband speed requirements will rise at a compound annual growth rate of 31% from 2014 through 2018,[10] and much of that increasing demand for broadband speed is to satisfy consumer use of OVDs.

Broadband services are growing in consumer penetration and usage to meet the growing demand for online video. More customers buy broadband than video. As shown in Tables 1 and 5 of Dr. Scott Morton's declaration, at the end of the first quarter of 2015, New Charter's total broadband subscriber count exceeded its total video subscriber count. The reverse was true in the first quarter of 2013. In 2014, approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of new Charter customers subscribed to a package that included broadband services.[11] Further, over **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of subscribers purchased packages with broadband but no video. The Company expects this faster growth in broadband subscribership relative to MVPD

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[7] *See* Cisco Visual Networking Index: Forecast and Methodology, 2014-2019, White Paper, May 27, 2015, http://www.cisco.com/c/en/us/solutions/collateral/service-provider/ip-ngn-ip-next-generation-network/white_paper_c11-481360.html.

[8] *Id.*

[9] *Id.*

[10] *See* Forecast of Residential Fixed Broadband and Subscription Video Requirements, ACG Research (2014), http://acgcc.com/wp-content/uploads/2014/12/Forecast-of-Residential-Fixed-Broadband-Requirements-2014.pdf.

[11] Declaration of Dr. Fiona Scott Morton, Theodore Nierenberg Professor of Economics at the Yale School of Management and Senior Consultant at Charles River Associates, Table 5 (June 24, 2015) ("Dr. Scott Morton Decl.").

subscribership to continue. Similarly, with respect to revenue, in 2014, Charter's residential Internet revenue grew by over 14%, while its residential video revenue grew by approximately 6%. This trend has continued with 2015 year to date (through September 30, 2015) residential Internet revenues growing approximately 17% while residential video revenue has grown approximately 3%.

The subscriber shift between traditional MVPD video and broadband services is true for the MVPD industry as a whole. FCC Chairman Wheeler has noted: "Last year, the cable industry hit a critical tipping point. In the second quarter of 2014, and for the first time, the number of cable broadband subscribers exceeded cable TV subscribers. And the trend has continued."[12] Industry data show that subscribership for traditional MVPD video services has been and is forecast to remain flat during 2010 through 2020, while broadband subscribership continues its rapid rise. The table below summarizes SNL Kagan forecast data for MVPD and broadband subscribership for 2010-2020. Broadband subscriptions are forecast to rise 15% between 2014 and 2020. By contrast, the subscribership for traditional MVPD services is forecasted to remain largely stagnant, with a slight decrease of 0.48 percent. The rapid growth of broadband is all the more dramatic when one considers the increasing speeds associated with broadband service over time.

[12] Prepared Remarks of FCC Chairman Tom Wheeler, NCTA – INTX 2015, Chicago, IL, (May 6, 2015), https://www.fcc.gov/document/remarks-chairman-tom-wheeler-ncta-intx-2015.

Total MVPD and Broadband Subscribers

Year	Total MVPD Subscribers	Broadband Subscribers
2010	100,856,894	76,079,489
2011	101,179,770	79,968,727
2012	101,349,082	84,056,202
2013	101,207,106	87,296,068
2014	101,260,436	89,908,463
2015	101,063,789	92,306,697
2016	101,052,594	94,680,525
2017	101,020,185	97,006,059
2018	100,964,328	99,220,343
2019	100,878,096	101,277,181
2020	100,774,325	103,167,125
Percent Change from 2010-2020	-0.08%	35.60%
Percent Change from 2014-2020	-0.48%	14.75%

Source: SNL Kagan. Includes residential cable, DSL, wireless and satellite high speed data subscribers.

The growth in consumer demand for a wide variety and extensive viewing of video content is a driving factor in Charter's investments and strategy for broadband. As Dr. Scott Morton states:

> The increasing number of subscribers with faster broadband speeds does indicate a clear conclusion: investments in complements to speed will become more profitable and more prevalent over time. Complements such as content itself, software interfaces, and mobile applications will all be faster, higher quality, and therefore in higher demand by subscribers as speeds increase. ISPs will want to sell subscribers services they demand, and will have an incentive to invest as described above. In particular, subscribers are likely to take advantage of speed by consuming more Online Video Distributor ("OVD") services. The primary rationale for such speed increases is to facilitate use of streaming video services. A credible signal of the post-merger firm's strategy to enhance entry of OVDs is therefore its investment in broadband speed.[13]

[13] *See* Dr. Scott Morton Decl. ¶ 26.

Moreover, as Dr. Scott Morton has discussed, broadband also generates higher per subscriber margins. Dr. Scott Morton that calculated New Charter's average gross margin per subscriber for broadband **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** is **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]**, even though the video gross margin includes both subscriber revenue and revenue from the sale of advertising.[14]

The lower video gross margin comes despite higher average revenue for video. The direct expenses for programming and retransmission dominate video direct expenses and have risen over time and squeeze video gross margins. Charter expects these direct expenses to rise even further. For example, SNL Kagan reports that the amounts subscribers pay for retransmission fees rose 40% year over year in the second quarter of 2015.[15] SNL Kagan forecasts retransmission fees will rise almost 90% by 2019 over their 2014 levels.[16]

Assuming these trends in consumer preferences and business profitability continue, the supply of broadband services offers a far greater profitability opportunity for Charter's business into the future. The potential broadband subscriber base available to Charter is growing at a

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[14] *Id.*, Table 4.

[15] SNL Kagan: Retrans Fees Up 40% Per Sub, As NCTA Looks To Kick Broadcasters Out Of Basic Tier," FierceCable (Sept. 23, 2015), *available at* http://www.fiercecable.com/story/snl-kagan-retrans-fees-40-sub-ncta-looks-kick-broadcasters-out-basic-tier/2015-09-23.

[16] SNL Kagan projected 2014 retransmission fees were $4.9 billion and would rise to $9.3 billion by 2020. *See* Broadcast Retrans Fee Growth On Pace To Hit $9.3B By 2020, FierceCable, October 27, 2014, *available at* http://www.fiercecable.com/story/broadcast-retrans-fee-growth-pace-hit-93b-2020/2014-10-27.

faster rate than video, and rising Internet speed and a growing OVD market continue to increase the attractiveness of broadband offerings to consumers.

REQUEST 71

71. Provide and identify documents, studies, surveys, or estimates sufficient to substantiate the claim on page 23 (paragraph 55) of the Dr. Scott Morton Declaration that "[a]n OVD foreclosure strategy that would blemish a broadband provider in the eyes of consumers would also reduce the demand for its broadband service from new customers, and would lead to less broadband growth." Explain whether this claim applies to the Company. If the claim is applicable to the Company, please explain why and to what extent the claim is applicable to the Company.

Supplemental Response to Request 71:

Broadband demand is driven to a great extent by demand for video streaming services, such as OVDs.[17] Charter is therefore properly concerned that, should it be perceived as foreclosing OVDs or otherwise harming its customers' experience of OVD content, it would suffer harm to demand for its broadband service.

Charter has raised broadband speeds dramatically in recent years, at a significant cost. The slowest speed Charter sells now is 60 Mbps—a speed designed to appeal to consumers that want a good online video viewing experience. Indeed, a recent survey conducted by Charter found that **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of subscribers used streaming video services.[18] This financial investment and business strategy would be undermined if customer perception was that viewing OVD content on Charter's network was a *negative* experience. Charter therefore monitors customer perception regarding its broadband performance on all devices (which

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[17] Dr. Scott Morton Decl. ¶ 26; *see also* 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment 30, https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-10A1.pdf; F. Rosston, S.J. Savage and D. Waldman, Household Demand for Broadband Internet Service, Final Report to the Broadband.gov Task Force, Federal Communications Commission (Feb. 2010).

[18] *See* **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]**

includes video streaming) in its regular tracking of how its brand is perceived. It is also one reason Charter does not employ data caps or usage-based billing.

A survey last year found that most broadband consumers would prefer to switch ISPs if Internet services such as streaming video were blocked or included additional fees—a result Charter of course wants to avoid.[19] It is not a secret that consumers discuss service issues on Netflix's Reddit comment board, including the fact that they are willing to switch ISPs in the event of disruptions to their OVD service.[20] Indeed, the disputes between Netflix and Comcast and between Netflix and Verizon about whether the ISPs were degrading Netflix content were a caution to all ISPs—regardless of the veracity of the claims, the disputes were very widely publicized and inevitably placed questions in the mind of consumers about whether their ISP was slowing their video streaming.[21]

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[19] *See* 71% of U.S. households would switch from providers that attempt to interfere with Internet, *Consumer Reports* (Feb. 18, 2014).

[20] *See, e.g.*, Miggitymikeb, *How Do I Solve Comcast Throttling?*, Reddit (2014), *available at* https://www.reddit.com/r/netflix/comments/1rcpk5/us_how_do_i_solve_comcast_throttling/ ("I just left [...] a month ago over this . . . throttling issue. . . . "Luckily . . . I was able to switch to [...] and never look back.").

[21] *See Verizon Claims Netflix Is Driving Its Customers Away, Threatens Lawsuit*, ars technical (June 5, 2014), http://arstechnica.com/tech-policy/2014/06/verizon-claims-netflix-is-driving-its-customers-away-threatens-lawsuit/; *Verizon Threatens to Sue Netflix Over Streaming Alerts*, PC Magazine (June 5, 2014), http://www.pcmag.com/article2/0,2817,2459062,00.asp; *The Netflix Case Against Comcast, in One Chart*, re/code (Aug. 27, 2014), http://recode.net/2014/08/27/the-netflix-case-against-comcast-in-one-chart/. Verizon threatened legal action, claiming that, "Netflix's false accusations have the potential to harm the Verizon brand in the marketplace." June 5, 2014 Letter from Randal S. Milch, Executive Vice President, Public Policy & General Counsel, Verizon Communications, Inc. to David Hyman, General Counsel, Netflix, *available at https://www.reddit.com/r/netflix/comments/1rcpk5/us_how_do_i_solve_comcast_throttling/*; *see also Verizon Claims Netflix Is Driving Its Customers Away, Threatens Lawsuit*, arstechnica (June 5, 2015), *available at* http://arstechnica.com/tech-policy/2014/06/verizon-claims-netflix-is-driving-its-customers-away-threatens-lawsuit/.

REQUEST 72

72. Produce all documents relied upon or referred to in the Declaration of Christopher L. Winfrey.

Supplemental Response to Request 72:

Documents analyzing, estimating, justifying, providing the basis for, or otherwise discussing the Declaration of Christopher L. Winfrey are provided on the enclosed disk in the folder "Request 72."

REQUEST 73

73. The Winfrey Declaration at page 3 (paragraph 8) states that New Charter will increase base speed tiers to "Charter's current standard minimum of 60 or 100 Mbps at uniform pricing in Time Warner Cable and Bright House territories." Provide the following:

a. the number of the Company's customers that have access to 60 Mbps broadband download speed and where they are located, how many have access to a speed of 100 Mbps and where they are located, and how many customers do not have access to at least 60 Mbps and where they are located;

b. a description, and provide and identify documents sufficient to show what is meant by the term "uniform pricing" and how such a pricing system differs from the current pricing systems of TWC and Bright House;

c. a description, and provide and identify documents sufficient to show, the Company's pricing strategy for stand-alone broadband, bundled and triple-play services for 2011, 2012, 2013, 2014, 2015;

d. a description, and provide and identify documents sufficient to show, the rationale for changing the Company's pricing strategy as noted on page 18 of Charter's SEC Form 10-K for the year ending December 31, 2012;

e. a description , and provide and identify documents sufficient to show, the benefits of the 2012 pricing change, whether the Company's pricing policy would apply across New Charter and why applying this policy across New Charter would be a benefit.

Supplemental Response to Request 73:

As Charter previously explained, its pricing strategy is designed to create incentives for customers to subscribe to a bundle of Internet, video, and voice services. This strategy, which Charter has pursued throughout the relevant 2011-2105 time period and continues today, is typical in the industry. Bundling services provided over the same connection is cost-effective for Charter, and drives ARPU and long-term revenue. Moreover, Charter's sales force can demonstrate to new customers that they receive additional value from bundling services, both in terms of discounted pricing and the ease of obtaining services from a single provider.

Charter's pricing *strategy* has been the same across pricing models: to encourage customers to subscribe to a bundled package of services. But Charter's pricing *practices* have evolved along different tracks for the two distinct pricing models: (i) its "Legacy" services—which were offered from 2005 or earlier through 2012 and are still available to customers who have chosen to retain their legacy services; and (ii) its "NPP" services—which Charter adopted in 2012 and offers to both legacy subscribers and new subscribers (and which currently account for approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** of Charter's subscribers).

Charter's Legacy Internet Service

Subscribers to Charter's legacy Internet service subscribed to one of five speed tiers (Lite, Base, Plus, Max, and Ultra), each available at different price points.[22] In 2011, Charter's Internet service prices were as follows, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[22] Prices discussed herein for both legacy and NPP do not reflect promotional offerings. Bundles were and continue to be offered at a greater promotional value due to the aggregate discounts provided over multiple lines of business.

[23] **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION]

[END HIGHLY CONFIDENTIAL INFORMATION]

In short, consistent with its overall pricing strategy to encourage customers to subscribe to the whole bundle of Charter's services, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGLY CONFIDENTIAL INFORMATION]

Charter's Internet Service Under NPP

When Charter introduced NPP in July 2012, it offered its base Internet service for **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL

INFORMATION] There have been no other changes to Charter's NPP pricing for its standalone or bundled Internet service at either speed tier.

REQUEST 77

77. Describe and explain in detail and provide all documents relating to the effect of the proposed transaction on the Company's investment of resources in communications security and the Company's existing cybersecurity technologies and practices, including:

a. the extent to which the proposed transaction would improve service quality and management of communications security and reliability risks in general;

b. whether, and to what extent, the combined entity plans to utilize the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity;

c. cybersecurity risk management challenges and improvements associated with the transaction, including combining network infrastructure, enterprise risk management functions, procurement processes, and communications security personnel; the current states and target states of cybersecurity risk management; and present cybersecurity gaps, and any actions, policies, and timeframes identified to close the gaps;

d. the methods and technologies the combined entity will use to enable real-time awareness of cyber risk across its combined network; and

e. how the combined entity will enhance communications security for its own customers and for the overall broadband ecosystem, including but not limited to the performance, integrity, and reliability of public safety communications imperatives that may rely on its networks or applications, such as E911, NG911, text-to-911, and emergency alerts.

Supplemental Response to Request 77:

Charter provides E911 capability in all states where it provides voice service—and, more specifically, in all locations where there is an E911-capable PSAP. These locations constitute the overwhelming majority of Charter's network. In addition, Charter participates in NG911 initiatives that state and local governments have undertaken in various locations within its footprint—such as Vermont, Washington State, and portions of Michigan. Charter's transition to E911 and NG911 has been a smooth one, with no adverse effects on system reliability or redundancy.

Following the Transaction, New Charter will continue to participate in E911 and NG911, and will continue to work with the industry on any other emergency communications service initiatives. Prior to integration of the three companies' networks, Charter personnel will communicate closely with their counterparts at TWC and BHN to ensure that the network integration process is seamless from an emergency-communications perspective. Additionally, Charter expects that the Transaction will enable New Charter to leverage the investments that TWC and BHN have made in emergency communications services and infrastructure, so as to further facilitate the reliable provision of advanced emergency communications services across the merged company's footprint.

REQUEST 86

86. Identify, describe and explain in detail, and identify documents that support and demonstrate for each of the claimed efficiencies, savings, new and improved products and synergies that are projected by the Applicants to result from the proposed transaction. These synergies included but are not limited to transitioning TWC's and BHN's cable systems to all digital, increasing speeds as a result of transitioning to digital; marketing services that are consistent with Charter's current package and pricing strategies; making available a broadband program to low-income consumers; and the continued expansion of TWC's 300 Mbps service. Submit a timeline for when these efficiencies or savings will be generated and recognized by the Company.

Supplemental Response to Request 86:

There are a number of factors that explain why certain systems serving fewer than 1% of homes may not be taken all-digital, including that these systems may (i) not currently be interconnected to the network; (ii) are a significant distance from the network; (iii) serve few homes; (iv) involve difficult permitting due to environmental concerns and the need to cross state and national parks, tribal lands, and bridges; and (v) involve difficult terrain to build across such as mountain ranges and bodies of water (or a combination of these factors). **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION]

REQUEST 92

92. Describe and explain in detail and provide all documents regarding:

f. your investment in the Spectrum Guide and the Worldbox CPE;

g. how Charter "validated internally" the capability to run the Spectrum Guide over other equipment;

h. any plans to sell, provide, or license the Spectrum Guide to other persons or on any other person's platform or CE device;

i. any plans to sell, provide, or license the Worldbox to other persons;

j. any plans to integrate Spectrum Guide and the Worldbox CPE post-merger to TWC and Bright House subscriber households on their legacy equipment;

k. any cost savings or more efficient customer service from deploying your cloud computing systems such as Worldbox, particularly by eliminating the need for technicians to install equipment and software; and

l. how the transaction will spur innovation in the further development of consumer devices such as set-top boxes, and of cloud computing services and products; and whether such innovations would be possible absent the transaction.

Supplemental Response to Request 92:

The Commission has recognized that the "transition[] to more efficient all-digital service [has] free[d] up spectrum to offer new or improved products and services like higher-speed Internet access and high definition programming."[24] This has proven true in Charter's case. By upgrading to an all-digital network, Charter was able to free capacity for more high-definition and on-demand channels and increased broadband speeds. Similarly, taking New Charter all-digital will benefit consumers by enabling the combined company to reallocate network capacity for broadband use such that substantially all customers will be able to take advantage of at least 60 Mbps download speeds as well as more high-definition and on-demand channels.

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[24] *Basic Service Tier encryption, Compatibility Between Cable Systems and Consumer Electronics Equipment*, 27 FCC Rcd 12,786, 12,788.¶ 3 (2012).

In addition, transitioning to an all-digital network will allow New Charter to deploy its innovative Worldbox CPE and Spectrum Guide user interface system across the New Charter footprint. Because Spectrum Guide's functionality is cloud-based, consumers will benefit from its advanced features using their existing two-way set-top boxes without the wait, disruption, and expense of a new set-top box or a truck roll to the home for installation. Spectrum Guide can be updated from the cloud at almost no cost whenever an improvement is available. This capability will offer significant consumer benefits over the legacy method of infrequent updates and even less frequent box replacements. **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION] For example, Charter just announced on October 12, 2015 the release a Spectrum Guide TV App on Roku devices.

REQUEST 94

94. Describe in detail, and identify documents that support and demonstrate: which multi-location businesses New Charter will be able to provide business services to that it would have been unable to serve prior to the transaction. In your description, please provide detailed information about the scale or characteristics of these potential customers, by geographic unit (such as DMA or MSA) or by each individual business, such as: revenues, proportion of the market, and how revenues that could be earned from the potential customer(s) compare to the Company's total business services revenues.

Supplemental Response to Request 94:

Charter does not have a strict business rule defining the portion of customer sites that must be within its footprint in order to serve businesses with multiple office locations. Rather, customer preferences tend to dictate Charter's ability to compete effectively against other providers, and Charter is not a viable competitor when it is not able to directly serve a significant portion of a potential customer's locations. As Charter has explained, partnership among multiple cable companies is unlikely to be appealing because of the economic and operational complexity involved. A partner model entails high transaction costs, as multiple networks and personnel must be coordinated. Additionally, the price for service to the end-customer may be unattractive because the retail price includes the profit margin of the wholesale supplier as well as that of the retail service provider, resulting in a less competitive product.

Moreover, potential customers recognize that when a service utilizes off-net, or "Type II," circuits, it often leads to operational complexity that extends installation and repair intervals. Customers' desire for responsiveness and transparency drive them to prefer a single network, with a single set of technical standards and a single point of contact for customer support—benefits that Charter, TWC, and BHN, operating as independent companies, cannot provide to many businesses. Additionally, when Type II circuits are utilized, performance data for the off-

net circuits, which is increasingly being offered to the end-user customer via portals, is often masked or has less fidelity.

In Charter's experience, it has an extremely limited ability to offer competitively priced solutions while maintaining an appropriate level of return when it is unable to directly service at least a majority of a given customer's locations. As the number of locations that Charter can serve increases, its ability to minimize the adverse economic impacts of double marginalization improves (*i.e.*, as the costs associated with managing multiple networks and personnel decreases).

Additionally, there are cases in which a customer requires a single-provider network solution and, in order to provide a solution that meets a customer's network requirements, Charter must source off-net circuits. In Charter's experience, the more off-nets circuits that Charter must source, the less competitive Charter is as an enterprise service provider. Charter experienced this, for example, **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[END HIGHLY CONFIDENTIAL INFORMATION] Ultimately, the State of Wisconsin chose AT&T as their network provider. Assuming that the RFP had been issued post-Transaction, New Charter would have been capable of directly servicing approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END HIGHLY CONFIDENTIAL INFORMATION]** of the State's locations, leaving only **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[END**

HIGHLY CONFIDENTIAL INFORMATION] to be supplemented with off-net circuits and putting New Charter in a better position to compete for the State's business.

In its October 13, 2015 response, Charter submitted data regarding the expected improvements in New Charter's ability to serve enterprise customers. Charter has now further quantified the improved market footprint benefit in terms of increased market opportunity. Our analysis indicates that the larger footprint would yield approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** **[BEGIN HIGHLY CONFIDENTIAL INFORMATION]** million in market opportunity available to New Charter beyond the market opportunities that exist currently among the three companies.[25] As the total enterprise market grows, Charter anticipates this opportunity growing as well.**[BEGIN HIGHLY CONFIDENTIAL INFORMATION]**

[25] Charter identified multi-site businesses that New Charter could serve over 50% of their locations but that Charter, TWC, and BHN do not serve 50% of the sites currently. Charter estimated the annual telecommunications spending of those businesses based on information it uses in the ordinary course of business. The resulting number represents the increased market opportunity.

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REQUEST 95

95. Describe and explain in detail, and identify documents that support and demonstrate how the transaction will "facilitate increased investment in enterprise capabilities, including the investment of "at least $2.5 billion in the build-out of networks into commercial areas within [New Charter's] footprint beyond where [you] currently operate," and describe how those plans differ from your investment plans made prior to the transaction.

Supplemental Response to Request 95:

Charter does not plan its commercial investment four years into the future, nor does it commit to particular build outs without first determining that the projected return on investments justified each individual project. As a result, Charter does not have commercial build out plans beyond 2016 (and the 2016 plan is still a recommendation awaiting approval as part of the budgeting process). The 2016 recommended plan is to invest **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** million on fiber construction and **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** million on commercial coax construction.

REQUEST 102

102. Produce all documents relating to the effects of geographic rationalization or clustering with respect to the operation of cable systems and the provision of programming, advertising, broadband Internet access, network interconnection, or other services on such cable systems. Describe how geographic rationalization or clustering enabled by the transaction will affect competition, your costs, the products and services New Charter will offer, and any pass through to consumers of any anticipated cost savings.

Supplemental Response to Request 102:

As Charter explained in its Public Interest Statement and accompanying declarations, geographic rationalization and clustering will generate significant efficiencies and competitive benefits. In the market for enterprise services, as discussed in Charter's supplemental response to Request 94, the combination of New Charter's greater geographic reach and more rationalized footprint following the Transaction will position New Charter to better serve enterprise customers and compete more effectively against incumbents such as AT&T, CenturyLink, and Verizon, thereby increasing competition and benefiting consumers in the market for enterprise services.[26]

In the market for regional and national advertising, the Transaction will allow New Charter to better serve customers by increasing opportunities for advertisers to address broader regional audiences on multiple screens, including mobile devices, and across multiple platforms, including VOD and online, increasing the value of their advertising campaigns; and, it will enhance the business case for New Charter to invest in developing still more advanced advertising services, such as addressable advertising and dynamic ad insertion for VOD.[27]

Moreover, geographic rationalization resulting from the Transaction will allow New Charter to better market its own services to subscribers by more efficiently purchasing mass

[26] The Public Interest Statement goes on to explain why these benefits are transaction specific. *See also* Scott Morton Decl. ¶ 20; Declaration of Christopher L. Winfrey ¶ 28 (June 24, 2015).

[27] *See also* Scott Morton Decl. ¶ 20.

marketing services. Specifically, Charter has noted that while Charter is currently able to economically buy mass media to advertise to approximately 50% of its passings, it will use mass marketing to reach 90% of potential customers upon the completion of the Transaction.[28]

In addition, Charter's assessment of cost savings and operating efficiencies indicates that a significant portion of the cost savings associated with the Transaction will be derived from savings associated with the rationalization of regional management operating structures. Specifically, Charter's analysis indicates that approximately **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL INFORMATION]** million of estimated overhead efficiencies would come through the rationalization of regional management operating structures (particularly in regions with shared DMA and/or regional presence), as well as call center, marketing, network and commercial services management structures, and non-programming procurement. Charter has not attempted to estimate precisely what portion of these savings are specifically associated with geographic rationalization, but believes the proportion to be substantial.

With respect to competitive effects, Charter has demonstrated that, even in markets where the transaction will result in increased clustering, the effects of the transaction on DMA-level concentration are small, and New Charter's share of MVPD subscribers will not exceed 50%. For example, in the Los Angeles, DMA, where geographic rationalization will generate substantial benefits of the types described above, TWC currently serves 28.5% of MVPD subscribers. Adding Charter's subscribers raises the proportion only slightly, to **[BEGIN HIGHLY CONFIDENTIAL INFORMATION] [END HIGHLY CONFIDENTIAL**

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[28] *See also id.* ¶ 18.

INFORMATION].[29] Charter does not believe the increased clustering associated with the Transaction will harm competition in any market.

Finally, with respect to the pass-through of savings to subscribers, Dr. Scott Morton has explained that the "cost savings and other synergies related to the merger will give the post-merger firm an incentive to lower prices" such that "the post-merger firm will likely pass through a portion of the savings . . . to its subscribers."[30]

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[29] *See id.*, Table 2.

[30] *See id.* ¶¶ 5, 21.