APPENDIX E

2024 REPORT ON CABLE INDUSTRY PRICES

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I. INTRODUCTION AND EXECUTIVE SUMMARY

1. Section 623(k) of the Communications Act of 1934 (Act), as amended by the Cable Television Consumer Protection Act of 1992 (Cable Act)[1] and RAY BAUM'S Act of 2018, requires the Commission to publish a statistical report (*Report on Cable Industry Prices*)[2] on the average rates cable operators charge for basic cable service and other cable programming, and cable equipment to access such programming.[3] The statute requires the Commission to compare the rates of operators subject to effective competition to the rates of operators not subject to effective competition under a statutorily defined standard (hereinafter referred to as "effective competition").[4] In addition, section 110 of the STELA Reauthorization Act of 2014 (STELAR) requires the Commission to report on retransmission consent fees paid by cable operators to broadcast stations or groups.[5] To the extent permitted by current cable market conditions as reflected in the data from the universe of all cable operators surveyed this year, this *Report on Cable Industry Prices* fulfills the statutory directives and presents our findings as of January 1, 2024.[6]

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[1] Section 623(k), adopted as section 3(k) of the Cable Act, Pub. L. No. 102-385, 106 Stat. 1460, codified at 47 U.S.C. § 543(k).

[2] RAY BAUM'S Act of 2018, Pub. L. No. 115-141, 132 Stat. 1087 § 402(e) (amending 47 U.S.C. § 543(k)).

[3] A "cable operator" (or operator) refers to an entity that operates a wireline system and is a multichannel video programming distributor (MVPD) that makes available for purchase, by subscribers or customers, multiple channels of video programming. 47 U.S.C. § 522(5). "Service tier" (or service) refers to a cable service for which a separate rate applies. *Id.* § 522(l7). With regard to the statutory provision for regulation of rates, operators must provide a separately available "basic cable service" (or basic service) to which customers must subscribe before accessing any other tier of service. *Id.* § 543(b)(7). Other "cable programming service" means any video programming other than programming offered with the basic service or programming offered on a per channel or per program basis. *Id.* § 543(l)(2). Section II further defines cable operators and services including other cable programming for the purpose of the *Report on Cable Industry Prices*.

[4] Commission findings of effective competition are generally made in reference to a cable community identified by a cable community unit identifier (CUID). The Commission assigns a unique CUID to each community served by an operator. If two unaffiliated cable operators serve an overlapping area, the Commission assigns two CUIDs. 47 CFR § 76.1801. As discussed in section II.A of this Appendix, in 2015, the Commission changed its process and presumption for determining effective competition by adopting a rebuttable presumption that cable operators in all cable communities are subject to effective competition. *Amendment to the Commission's Rules Concerning Effective Competition, Implementation of Section 111 of the STELA Reauthorization Act*, MB Docket No. 15-53, Report and Order, 30 FCC Rcd 6574 (2015) (*Cable Effective Competition Report and Order*). As a result of this change, operators in nearly all communities became subject to effective competition. In addition, in October 2019, the Commission found, for the first time, that a cable operator was subject to effective competition from a local exchange carrier (LEC)-affiliated online video distributor (OVD) under the LEC effective competition test. *Petition for Determination of Effective Competition in 32 Massachusetts Communities and Kauai, HI (HI0011)*, MB Docket No. 18-283, Memorandum Opinion and Order, 34 FCC Rcd 10229 (2019) (*Charter Effective Competition Order*). Rates of an operator subject to effective competition are not subject to regulation by a local franchising authority (LFA). 47 U.S.C. § 543(a)(2); 47 CFR § 76.905(a). An LFA may elect to regulate the rate of basic service of an operator not subject to effective competition. *Id.*

[5] Pub. L. No. 113-200, 128 Stat. 2059 (2014) enacted December 4, 2014 (H.R. 5728, 113th Cong.). Specifically, STELAR instructs the Commission to include in its now biennial *Report on Cable Industry Prices* "the aggregate average total amount paid by cable systems in compensation under section 325 [of the Communications Act of 1934, as amended,]" and to report such information "in a manner substantially similar to the way other comparable information is published" in the report. 47 U.S.C. § 543(k)(2).

[6] Consistent with past practice, the current survey collects data as of January 1 of the survey year (2024) and the previous year.

2. Commission staff surveyed a stratified random sample of cable communities[7] nationwide to collect data on the cable rates (prices) in effect in communities as of January 1, 2024.[8] In the *Report on Cable Industry Prices*, we refer to the communities in which the operator is subject to effective competition as the "effective competition group" and to communities in which the operator is not subject to effective competition as the "noncompetitive group." Our sample includes communities from both groups. However, for this year's *Report on Cable Industry Prices*, there is only one community in the noncompetitive group, the same community reported in the 2022 *Communications Marketplace Report*,[9] which serves less than 0.1% of U.S. cable subscribers. Therefore, we no longer compare prices in effective competition communities to prices in noncompetitive communities. As noted in section II.E.2.a of the *2024 Communications Marketplace Report*, most households are served by at least three multichannel video programming distributors (MVPDs).[10] Since operators in nearly all communities are subject to effective competition, this price comparison no longer provides any useful information.[11] Notwithstanding this change, we collected data on monthly prices to purchase basic service, expanded basic service, the next most popular service, and cable equipment, as well as other information, as described in greater detail below.[12] The *Report on Cable Industry Prices* presents the average prices, the average annual changes in prices, and other information, by cable service tier.

3. *Average price over all communities.* Cable prices increased over the twelve months ending January 1, 2024, at a lower rate compared to the average annual increase over the past five years. The monthly price for cable subscribers who take only basic service grew by 7.7%, to $47.06 over the year ending January 1, 2024. Over the five years ending January 1, 2024, basic service prices rose by an average of 13.4% per year. Prices for expanded basic service increased by 5.9% to $108.41 over the year ending January 1, 2024. This compares to an average annual increase of 7.6% over the last five years. To account for growth in the number of channels offered with cable services, we also report price per channel (service and equipment lease price divided by number of channels).[13] Over the year ending January 1, 2024, price per channel for basic and expanded basic service grew by 5.5% and 5.2% to $1.21 and 89 cents per channel, respectively. In comparison to cable prices, the rate of general inflation measured by the Consumer Price Index (all items) rose by 3.1% over the twelve months ending January 1, 2024, and at an average annual rate of 4.5% over the last five years.[14]

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[7] A cable community is an area that a cable operator serves, and to which the Commission has assigned a unique Community Unit.

[8] *See* Attach. 3: Survey Methodology for a detailed description of the sampling and stratification methodology.

[9] *2022 Communications Marketplace Report*, 37 FCC Rcd at 15688-89, para. 293.

[10] Most households are served by at least one cable operator and two direct broadcast satellite (DBS) operators. *See supra* section II.E.2.a.

[11] Further, we cannot make a statistically valid comparison between prices in the effective competition group and prices in the noncompetitive group. When comparing average values between two groups, it is necessary to account for sampling error and this cannot be done if one of the groups has only one sampling unit.

[12] The prices collected exclude state and local taxes as well as franchise fees.

[13] Beginning in 2022, the survey instrument was modified to collect the number of high definition channels only, whereas previous surveys also collected the number of standard definition channels. Channel counts for 2021 and 2022, therefore, are about half of the channel counts reported in the previous survey covering 2019 and 2020. Beginning in 2024, year over year channel counts are comparable.

[14] U.S. Bureau of Labor Statistics (BLS), *Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCNS]*, https://fred.stlouisfed.org/series/CPIAUCNS (last visited Jul. 6, 2024).

4. *Broadcast retransmission consent compensation fees*. From 2022 to 2023,[15] total retransmission consent fees paid by cable systems to television broadcast stations increased, on average, by 3.4%. Annual fees paid per subscriber increased, on average, by 16.2%, rising from $231.52 to $268.99 over the same period. Average monthly retransmission consent fees per subscriber per broadcast station increased by 19.0%, increasing from $2.27 to $2.70 from 2022 to 2023. Over the period 2013-2023, the compound average annual increase in retransmission consent fees per subscriber was 27.3%.

II. OVERVIEW OF THE SURVEY

5. The basis of information and analysis in the *Report on Cable Industry Prices* is the Commission's 2024 survey of cable industry prices. The Commission directed cable operators serving a randomly selected sample of cable communities nationwide to respond to a survey questionnaire requesting prices and other information on cable service. Information was collected as of January 1, 2023 and January 1, 2024.[16] We used the information collected to estimate average values and annual changes, and to make comparisons across groups of cable communities.

6. In section II.A, we discuss effective competition communities and the process for establishing effective competition. In section II.B, we provide an overview of the survey methodology, described in more detail in Attachment 3: Survey Methodology. In section II.C, we provide definitions of specific cable services. In section II.D, we review the survey's accuracy and reliability.

A. Effective Competition Communities

7. In 2015, the Commission adopted a rebuttable presumption that cable operators are subject to the type of effective competition known as competing provider effective competition, which is verified through the 50/15 test.[17] In the 2015 proceeding, the Commission concluded that the ubiquitous nature of direct broadcast satellite (DBS) services made it appropriate to presume that competing provider effective competition is present in all communities, unless a showing is made to the contrary to rebut this presumption. In a community where competing provider effective competition does not exist, the local franchising authority (LFA) must certify the lack of effective competition by showing that the 50/15 test is not met before the LFA can regulate the price of basic service and equipment. The certification is valid unless and until the Media Bureau issues a decision denying the certification request. Only LFAs with a valid certification may regulate basic cable rates. Few LFAs have filed certifications to date. In addition, in October 2019, the Commission found, for the first time, that a cable operator was subject to effective competition from a local exchange carrier (LEC)-affiliated online video distributor (OVD) under the LEC effective competition test.[18] As a result of these changes, as of January 1, 2024, the Media Bureau

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[15] Retransmission consent fee data are collected somewhat differently than the rest of the data in the *Report on Cable Industry Prices*. Retransmission consent fee data are collected for complete years, whereas all other data are collected as of a certain date (January 1) of the survey year and previous year. As a result, the retransmission consent fee data are for the complete years 2022 and 2023 (the latest two years for which annual retransmission consent data were available at the time of the 2024 survey), whereas the other data in the survey are snapshots as of January 1, 2023 or January 1, 2024.

[16] *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992, Statistical Report on Average Prices for Basic Service, Cable Programming Service, and Equipment*, MM Docket No. 92-266, Order, 35 FCC Rcd 2871 (2020).

[17] *See generally Cable Effective Competition Report and Order*. The 50/15 test requires that at least two unaffiliated MVPDs offer comparable programming each of which offers its service to at least 50% of households in the market, and the percentage of households taking service from MVPDs, other than the largest MVPD, exceeds 15%. Effective competition can also be found by one of the following three tests: (1) fewer than 30% of households subscribe to the operator's programming service (low penetration test); (2) a franchising authority operates as an MVPD in that franchise area and offers programming to at least 50% of households (municipal test); or (3) LEC or its affiliate (or an MVPD using the facilities of a LEC or affiliate) offers service by means other than DBS in the franchise area of an unaffiliated operator that is offering comparable programming (LEC test). 47 U.S.C.§ 543(l)(1).

[18] *See generally Charter Effective Competition Order*.

certified only one cable community in the United States as not subject to effective competition.[19] As a result, we no longer compare average cable prices in the effective competition communities to average cable prices in noncompetitive communities.

B.   Overview of Survey Methodology

8.   We selected the sample from three groups of communities based on system size.[20] We define small systems as cable systems serving 10,000 or fewer subscribers, midsize systems as cable systems serving between 10,000 and 75,000 subscribers, and large systems as cable systems serving more than 75,000 subscribers.[21] Usually, many cable communities belong to one cable system. In 2024, there were about 4,000 cable systems and more than 36,000 cable communities.

9.   In previous surveys, there were two additional subgroups composed of communities in which the Commission made a finding of effective competition because a second wireline MVPD served the same area as an incumbent cable operator. The first subgroup was made up of *incumbent* cable system operators and the second subgroup was made up of the *rival* MVPDs in these communities. In this year's survey, we no longer separate these cable communities into their own subgroups and include them in the system size subgroups explained above. We made this change because, due to the adoption of a rebuttable presumption of effective competition, no new communities can be added to these subgroups even where a second wireline MVPD enters to serve an area already served by a wireline MVPD.

C.   Programming Services

10.   We next define the programming services referenced in the *Report on Cable Industry Prices*. Service prices reflect the non-promotional rates and exclude taxes and fees as well as fees subscribers may incur to lease cable equipment unless the customer received equipment along with programming without incurring a separate lease charge. We collected information on basic service and other cable programming services not offered on a per channel or per program basis, as well as cable equipment. The other programming services about which the survey collected information are expanded basic service and the next most popular service.

11.   *Basic service.* The Cable Act requires operators to offer a separately available basic cable service to which customers must subscribe before purchasing any other service.[22] A basic service tier includes local broadcast stations entitled to carriage under the Cable Act; public, educational, and governmental (PEG) access channels that a local franchising authority requires; and other channels the operator chooses to add.[23]

12.   *Expanded basic service.* Expanded basic service includes basic service channels in addition to the next most highly subscribed tier of channels. This tier generally includes the most popular national cable networks.

13.   *Next most popular service.* The next most popular service is the most highly subscribed service after expanded basic service. It generally consists of the channels offered with expanded basic

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[19] *See supra* para. 2.

[20] These subgroups are designed to achieve desirable levels of statistical precision, and, thus, are not necessarily selected proportionately from the universe of communities belonging to each subgroup. *See infra* Fig. 1, *infra* Attach. 3: Survey Methodology for a more complete description.

[21] Subscriber counts were assigned to cable communities and then, using physical system identifiers (PSIDs) to identify cable systems, aggregated to cable systems. Subscriber estimates come from S&P Global. S&P Global, *MediaCensus, Operator Subscribers by Geography 2023 Q3* (last accessed Jan. 4, 2024). *Infra* Attach. 3: Survey Methodology explains how subscribers were assigned to cable communities.

[22] *See supra* n.3.

[23] 47 U.S.C. § 543(b)(7); 534-35.

service plus at least seven additional video channels. These additional channels could offer all types of content, for example, general entertainment, sports, and Spanish-language programming.

14.   *Equipment lease charge*. Subscribers may incur a separate monthly charge to lease cable equipment such as a cable signal converter box and remote-control unit, cable card, or other equipment necessary to access programming. We collect data on such charges to the extent that respondents charge a separate monthly fee to lease such equipment. Specifically, we asked the survey respondents to report the price of the most commonly leased equipment at each service level (basic service, expanded basic service, and the next most popular service) unless the equipment was included at no extra charge or was not necessary to view all channels offered with the service.

15.   *Price per channel*. Price per channel equals the price of the service divided by the number of channels the service offers.[24] If equipment is necessary to view all channels in the service's channel lineup and is not included in the service price, the charge to lease equipment is added to the price component of price per channel. Price per channel is a proxy for quality adjusted price and declines as the number of channels increases, all else equal.

D.   Survey Accuracy and Reliability

16.   The data and analysis presented in this *Report on Cable Industry Prices* are consistent with the Commission's information quality guidelines.[25] Consistent with prior reports, we took steps to ensure the accuracy and reliability of the survey data. We provided the questionnaires to respondents to complete and submit on the Commission's website. Many survey questions have built-in checks for reasonableness, which prompted the respondents to recheck seemingly unreasonable or inconsistent responses. After receiving the submitted surveys, we examined responses using a computer program designed to identify apparent inaccuracies. If a response lay outside its expected range or was inconsistent with answers to other questions, the program flagged that response for further review. We then asked the cable operator to review the response and make any necessary corrections. Attachment 3: Survey Methodology contains more detail on our data validation process.

III.   SURVEY RESULTS

17.   The figures in this section report results from the survey of cable operators in communities nationwide. All averages reported are weighted averages where the weight given to a community depends on the number of cable subscribers in the community relative to the number of cable subscribers in the other communities within the sampling group or subgroup.

18.   Figure 1 summarizes the 2024 universe and sample of cable communities. There is only one community in the noncompetitive group, and the rest of the communities are in the effective competition group. The effective competition communities are divided into three subgroups defined by system size.[26] The large systems subgroup has 10,497 communities and serves 61.3% of subscribers. The midsize systems subgroup has 10,038 communities and serves 29.8% of subscribers. Finally, the small systems subgroup has 16,168 communities and serves 8.9%of subscribers. We sampled 761 communities from the universe of 36,704 communities, and received 753 survey responses. We included the one noncompetitive community in the sample.

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[24] *See supra* n.11 for a discussion of a change in the channel and price per channel data.

[25] *Implementation of Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility and Integrity of Information Pursuant to Section 515 of Public Law No. 105-554*, FCC-02-277, Information Quality Guidelines, 17 FCC Rcd 19890 (2002); *FCC Updates Information Quality Guidelines in Accordance with Data Quality Act*, DA 19-709, Public Notice, 34 FCC Rcd 6376 (OEA/OMB 2019).

[26] *See supra* para. 8.

Fig. 1
Sample Universe and Survey Sample

Sampling Groups and Subgroups	Number of Cable Communities	Percentage of National Subscribers	Survey Sample Size	Number of Survey Responses
Full Sample	36,704	100%	761	753
Sampling Groups				
Noncompetitive group	1	0.03%	1	1
Effective competition group	36,703	99.97%	760	752
Effective Competition Subgroups				
Large Systems: More than 75,000 subscribers	10,497	61.29%	381	378
Midsize Systems: 10,001 – 75,000 subscribers	10,038	29.79%	251	249
Small Systems: 10,000 and fewer subscribers	16,168	8.89%	128	125

Source: Cable Community Registration, FCC Form 322; Annual Cable Operator Report, FCC Form 325; S&P Global, *MediaCensus, Operator Subscribers by Geography 2023 Q3* (last accessed Jan. 4, 2024).

A.   Cable Programming Services

19.   Figure 2 reports the average monthly prices of basic, expanded basic, and the next most popular services on January 1, 2024. In the full sample, average monthly prices for basic, expanded basic, and the next most popular services were $47.06, $108.41, and $124.54, respectively. Figure 2 also reports the percentage change in price from January 1, 2023, to January 1, 2024. In the full sample, the average monthly price for each service tier increased by a statistically significant amount.[27] The average monthly price for basic service increased by 7.7% ($3.29), while the average monthly price for expanded basic service increased by 5.9% ($6.04), and the average monthly price for the next most popular service increased by 5.1% ($6.08). Increases in the price for cable services may be a result of increases in the cost of programming faced by cable operators.[28] Although the *Report on Cable Industry Prices* does not collect information on the cost of carrying cable networks, we find a significant increase in the cost of carrying broadcast stations under retransmission consent.[29]

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[27] Throughout this *Report on Cable Industry Prices*, we determine statistical significance using a 5% significance level. A difference that is statistically significant at the 5% significance level is unlikely to be due to random sampling error. Instead, the difference is likely to reflect a true difference between survey groups. *See*, *e.g.*, David S. Moore, George P. McCabe & Bruce A. Craig, *Introduction to the Practice of Statistics* (10th ed. 2021), ch. 6.

[28] S&P Global, *US Cable Results, Q4'23: Top public MSOs' financial and subscriber data* (Apr. 18, 2024).

[29] We find that retransmission consent fees paid per subscriber increased 16.2% from 2022 to 2023. *See infra* section III.D.

Fig. 2
Monthly Price of Cable Programming Services
January 1, 2024

Cable Service	Full Sample	System Size		
		Small	Midsize	Large
Basic	$47.06	$48.95	$44.80	$47.90
Annual change	7.7%*	6.6%*	6.9%*	8.3%*
Expanded basic	$108.41	$115.35	$109.94	$106.67
Annual change	5.9%*	5.9%*	5.8%*	5.9%*
Next most popular	$124.54	$130.67	$125.10	$123.45
Annual change	5.1%*	5.1%*	5.0%*	5.2%*

Source: 2024 Survey. * Indicates annual change is statistically significant at the 5% significance level. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

20.   Figure 3 reports the average price per channel by service tier on January 1, 2024. Price per channel is calculated as the sum of the monthly service and equipment prices (if equipment is necessary to view all channels) divided by the number of channels offered. Starting with the 2022 survey, we changed the way the number of channels is captured. Previous surveys collected the number of standard definition (SD) and high definition (HD) channels, whereas this year's survey asked only for the number of HD channels. As a result, the number of channels reported in 2022 is generally half the number of channels reported in the previous survey, and therefore the average price per channel reported in 2022 is generally twice as much as the corresponding price per channel reported in the previous survey. This year, the average price per channel in the full sample is highest for the basic service tier ($1.21), lower for the expanded basic tier (89 cents), and lowest for the next most popular service tier (84 cents). For the full sample of basic, expanded basic, and next most popular service, the increase in average price per channel from January 1, 2023, to January 1, 2024 was statistically significant.

Fig. 3
Price per Channel
January 1, 2024

Cable Service	Full Sample	System Size		
		Small	Midsize	Large
Basic	**$1.21**	**$1.69**	**$1.29**	**$1.11**
Annual change	5.5%*	5.9%*	4.5%*	5.9%*
Expanded basic	**$0.89**	**$1.34**	**$0.94**	**$0.81**
Annual change	5.2%*	2.8%	5.9%*	5.4%*
Next most popular	**$0.84**	**$2.35**	**$0.82**	**$0.64**
Annual change	7.2%*	10.9%*	6.3%*	6.0%*

Source: 2024 Survey. * Indicates annual change is statistically significant at 5% significance level. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

21. Figure 4 reports a historical series of basic service prices; expanded basic service prices, channels, and price per channel; and the next most popular service and equipment price. Figure 4 also reports the compound average annual change in prices and channels over the last five and ten years. The price of basic service grew annually by 13.4% over the five-year period and by 8.6% over the ten-year period. The price of expanded basic cable service grew annually by 7.6% over the five-year period and by 5.8% over the ten-year period. We cannot report five- and ten-year rates of change for the average number of channels and average price per channel for expanded basic service because, as explained above, the 2022 and 2024 surveys materially changed the way the number of channels is captured. The price of the next most popular service and lease of equipment, if not included in the programming price, increased by 6.9% over the five-year period and by 5.3% over the ten-year period.

22. Figure 4 also reports the Consumer Price Index (CPI) for all items, published by the Bureau of Labor Statistics (BLS), which serves as a measure of general price inflation and a basis for comparison.[30] The CPI (all items) grew at an average annual rate of 4.5% over the last five years and by 2.9% annually over the last ten years. In addition, Figure 4 reports a BLS price index for Cable and Satellite Television and Radio Services (CSR Index).[31] The CSR Index grew annually by 4.4% and 3.7% over the last five and ten years, respectively. Because this index covers a different mix of services and is adjusted for changes in the number of programming channels, the CSR Index is not directly comparable to changes in cable programming prices in this *Report on Cable Industry Prices*.[32]

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[30] U.S. BLS, *Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCNS]*, https://fred.stlouisfed.org/series/CPIAUCNS (last visited Jul. 6, 2024).

[31] U.S. BLS, *Consumer Price Index for All Urban Consumers: Cable and Satellite Television Service in U.S. City Average [CUUR0000SERA04]*, https://fred.stlouisfed.org/series/CUUR0000SERA04 (last visited Jul. 6, 2024). This index is a sub-component of the overall CPI.

[32] The U.S. BLS bases the CSR Index on a survey of items on consumers' monthly cable bills, including premium services and installation costs, which are not included in the monthly service price. When an item shows a significant change in price, BLS makes a quality adjustment and may change the observed price depending on the change in the quality of the product or service in question. In the case of cable service, BLS generally perceives additional channels as an improvement in quality and adjusts the observed price downward. U.S. BLS, *How BLS Measures Price Change in the Consumer Price Index for Cable and Satellite Television and Radio*, https://www.bls.gov/cpi/factsheets/cable-and-satellite-television-and-radio.htm (last visited Jul. 6, 2024).

Fig. 4
Historical Price Series
2010–2024

Year	Basic Service Price	Expanded Basic Service			Next Most Popular Service and Equipment	CPI	
		Price	Channels	Price per Channel		All Items	CSR Index
2010	$17.93	$54.44	117	$0.560	$71.39	144.5	191.9
2011	$19.33	$57.46	124.2	$0.569	$75.37	146.9	192.0
2012	$20.55	$61.63	149.9	$0.505	$78.91	151.2	199.8
2013	$22.63	$64.41	159.6	$0.484	$81.64	153.6	206.5
2014	$22.78	$66.61	167.3	$0.496	$84.65	156	212
2015	$23.79	$69.03	181.3	$0.456	$86.83	155.8	216.4
2016	$25.40	$71.37	181	$0.469	$90.42	158	220.1
2017	$25.06	$75.21	195.1	$0.487	$95.13	161.9	231.7
2018	$28.42	$77.24	241.1	$0.373	$96.48	165.3	241
2019	$31.42	$80.98	256.1	$0.365	$100.34	167.9	245.9
2020	$34.79	$86.70	256.7	$0.390	$106.68	172.1	254.4
2021	$39.85	$96.53	135	$0.826	$110.16	171.5	252.4
2022	$42.63	$101.54	137.1	$0.902	$115.73	184.4	263.3
2023	$43.77	$102.37	139.73	$0.850	$126.07	196.2	272.3
2024	$47.06	$108.41	140.37	$0.894	$132.76	202.2	287.7
5-year average	13.4%	7.6%	—	—	6.9%	4.5%	4.4%
10-year average	8.6%	5.8%	—	—	5.3%	2.9%	3.7%

Source: Attach. 1. Notes: Attach. 1 shows the series back to 1995. Five- and ten-year compound average annual rates of change cannot be calculated for expanded basic channels and price per channel because the Survey changed the definition of number of channels starting with the 2022 survey cycle.

B. Cable Programming Channels

23. Figure 5 shows the average number of video channels offered as of January 1, 2024, and the annual percentage change in the number of channels. The number of channels offered under each service tier includes the channels offered under each lower tier. Also, the channel figures given here include video channels in HD format only and exclude SD channels and audio-only channels. In the full sample, an average of 53 channels were offered with the basic service tier, while the expanded basic and next most popular tiers offered 140 and 195 channels, respectively, on average. A total of 388 video channels were offered by cable operators on average. This total includes pay and pay-per-view channels and other programming tiers not included in the *Report on Cable Industry Prices*.[33]

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[33] *See supra* para. 20.

Fig. 5
Number of Channels
January 1, 2024

Cable Service	Full Sample	System Size		
		Small	Midsize	Large
Basic	$53.3	$37.7	$50.3	$56.8
Annual change	3.1%*	3.5%*	3.2%*	3.0%*
Expanded basic	$140.4	$103.9	$134.4	$148.5
Annual change	0.5%*	0.9%	0.7%*	0.4%*
Next most popular	$195.4	$125.2	$192.5	$206.9
Annual change	-0.5%*	-0.4%	-0.1%	-0.7%*
All channels	$388.3	$262.8	$376.2	$412.2
Annual change	0.3%*	0.4%	0.6%*	0.2%

Source: 2024 Survey. * Indicates annual change is statistically significant at 5% significance level. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

24. Figure 6 reports the average number of channels in each category available with basic service. The categories are broadcast, PEG access, local commercial leased access, non-premium regional sports networks (RSNs), and other non-premium channels. About 32% of channels offered with basic service are broadcast channels. It is important to note that a broadcast channel is an individual channel and not a broadcast television station. Thus, any multicast subchannels carried, if reported, count as additional channels.
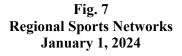
Fig. 6
Channel Composition of Basic Cable Service
January 1, 2024

Channel Category	Full Sample	System Size		
		Small	Midsize	Large
Broadcast	16.9	12.7	14.0	19.0
PEG channels	3.9	1.9	3.3	4.4
Leased access	2.1	0.9	1.9	2.3
RSNs	0.0	0.0	0.0	0.0
Other channels	30.3	21.5	30.9	31.1
Total	**53.3**	**37.7**	**50.3**	**56.8**

Source: 2024 Survey. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

25. Figure 7 reports the average number of regional sports networks included with each service tier. The survey defines regional sports networks as networks that carry a substantial number of live games from at least one nearby professional sports team that is a member of the National Football

League, Major League Baseball, National Basketball Association, or National Hockey League. Pay-per-view channels are not considered regional sports networks. The average number of regional sports networks offered with basic, expanded basic, and the next most popular service tiers are 0, 2.7, and 2.7 regional sports networks, respectively.

Fig. 7
Regional Sports Networks
January 1, 2024

Cable Service	Full Sample	System Size		
		Small	Midsize	Large
Basic	0.0	0.0	0.0	0.0
Expanded basic	2.7	2.0	2.6	2.9
Next most popular	2.7	1.7	2.5	2.9

Source: 2024 Survey. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

C.   Cable Equipment

26.   Figure 8 reports the average equipment lease fee for each service tier.[34] Specifically, this is the monthly fee to lease the equipment most commonly leased by subscribers of each service tier. This equipment may be a converter box or other equipment necessary to view all channels offered with the service tier. The equipment lease fees reported represent the fee to lease a single piece of equipment, not the total amount paid for all equipment leased by a household (i.e., some households may lease equipment for more than one television).

Fig. 8
Equipment Lease Fee
January 1, 2024

Cable Service	Full Sample	System Size		
		Small	Midsize	Large
Basic	$9.93	$7.46	$10.05	$10.18
Annual change	7.6%*	9.0%*	7.0%*	7.7%*
Expanded basic	$9.93	$7.54	$10.03	$10.18
Annual change	7.6%*	8.7%*	7.1%*	7.8%*
Next most popular	$9.94	$7.88	$9.98	$10.18
Annual change	7.6%*	7.5%*	7.1%*	7.8%*

Source: 2024 Survey. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

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[34] Some operators do not charge an additional fee for equipment. Instead, these operators bundle cable service and equipment. The average equipment lease fees reported in Figure 8 are the average fees for operators who did not bundle cable service and equipment and priced cable service and equipment separately.

D. Broadcast Retransmission Consent

27. Section 110 of STELAR requires the Commission to report on retransmission consent fees paid by cable operators to broadcast stations.[35] Accordingly, the survey asked operators to report total retransmission consent fees paid to broadcasters and the number of subscribers covered by retransmission consent payments in 2022 and 2023. The instructions requested that respondents exclude copyright fees. In addition, operators reported the number of broadcast stations carried pursuant to retransmission consent agreements.

28. Figure 9 presents information on retransmission consent compensation. From 2022 to 2023, average annual retransmission consent fees per subscriber increased by 16.2%, rising from $231.52 to $268.99. The average number of broadcast stations carried per cable system pursuant to retransmission consent agreements slightly decreased by 1.4%, from 10.31 in 2022 to 10.15 in 2023; about ten broadcast stations were carried per cable system each year.[36] Average monthly retransmission consent fees paid by cable systems to broadcast stations per subscriber per station increased from $2.27 to $2.70 from 2022 to 2023. In the sample, total retransmission consent fees were $8.5 billion in 2022 and $8.8 billion in 2023. Operators in the sample reported fees covering about 38.7 million subscribers in 2022 and 34.7 million subscribers in 2023.

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[35] *See supra* n.5.

[36] The number of broadcast stations carried pursuant to retransmission consent is different from the number of broadcast channels reported in Figure 6 for two reasons. First, a broadcast station may multicast several programming channels and second, some broadcast stations are carried pursuant to must-carry rules. Under must-carry rules, cable operators are generally required to carry commercial stations, qualified low power stations, and qualified noncommercial educational stations within the local market. 47 U.S.C. §§ 534, 535; 47 CFR § 76.56. Commercial broadcast television stations, however, may opt out of mandatory cable carriage by electing retransmission consent. 47 U.S.C. § 325(b); 47 CFR § 76.64.

Fig. 9
Retransmission Consent Fees and Subscribers

	2022	2023	Annual Change
Average Annual Retransmission Consent Fees Paid per Cable System	$113,089,453	$116,967,252	3.4%*
Average Number of Subscribers Pursuant to Retransmission Consent per Cable System[37]	488,278	428,358	-12.3%*
Average Annual Retransmission Consent Fees Paid per Subscriber	$231.52	$268.99	16.2%*
Average Number of Stations Carried Pursuant to Retransmission Consent per Cable System	10.31	10.15	-1.4%*
Average Monthly Retransmission Consent Fees Paid per Subscriber per Station	$2.27	$2.70	19.0%*
Total Retransmission Consent Fees Reported in Sample	$8,531,541,295	$8,836,284,626	3.6%
Total Subscribers under Retransmission Consent Reported in Sample	38,694,751	34,708,727	-10.3%

Source: 2024 Survey. * Indicates annual change is statistically significant at the 5% level. No test of statistical significance is applied to total retransmission consent fees or total subscribers under retransmission consent because total retransmission consent fees and total subscribers are known quantities in the sample. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

29. To track changes in retransmission consent fees over time, Figure 10 provides the average annual retransmission consent fees per subscriber reported in the surveys that have collected retransmission consent data. Over the 2013-2023 period, the compound average annual rate of increase for retransmission consent fees per subscriber was 27.3%. In 2023, fees per subscriber were more than 11 times their 2013 value. Growth in retransmission consent fees, however, has significantly slowed during this period. The annual change from 2022 to 2023 was 16.2% while the annual change from 2013 to 2014 was 77.4%.

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[37] In this figure, cable system is not strictly defined. Retransmission consent fees and subscriber counts per cable system were reported at various system levels ranging from an individual cable community to a broad geographic region encompassing multiple markets. Respondents may vary this level of aggregation from year to year, and thus the fees paid per cable system cannot be directly compared across surveys.

Fig. 10
Change in Retransmission Consent Fees
2013 – 2023

Year	Annual Retransmission Consent Feesper Subscriber	Annual Change
2013	$24.06	---
2014	$42.67	77.4%
2015	$55.82	30.8%
2016	$73.71	32.0%
2017	$94.93	28.8%
2018	$109.70	15.6%
2019	$129.27	17.8%
2020	$168.83	30.6%
2021	$203.03	20.3%
2022	$231.52	14.0%
2023	$268.99	16.2%
	Compound Average Annual Rate of Change	
2013 – 2023	27.3%	

Source: 2015, 2016, 2017, 2018, 2020, 2022, and 2024 Surveys.

30.	Figure 11 reports information on retransmission consent fees by both system and operator size. We report retransmission consent fees paid by system size to be consistent with earlier figures that report averages by system size. We also report retransmission consent fees by operator size because small cable operators may have less negotiating leverage with broadcast station groups compared to large cable operators.[38] For a broadcast station, a deal struck with a large cable operator generates a larger total retransmission consent payment and delivers a larger audience and therefore more advertising revenue than is associated with a deal struck with a small cable operator. Because a broadcast station stands to benefit more from reaching a deal with a large cable operator than from reaching a deal with a small cable operator, the large operator has more leverage in negotiations with the broadcast station than the small cable operator. As before, a small system has 10,000 or fewer subscribers; a midsize system has 10,001 to 75,000 subscribers; and a large system has more than 75,000 subscribers.[39] A small operator is defined as an operator serving fewer than 500,000 subscribers nationwide and a large operator is defined as an operator serving at least 500,000 subscribers.[40]

31.	Figure 11 shows that retransmission consent fees are higher for small systems. On average, small systems paid $279.03 annually per subscriber in 2023, while midsize and large systems paid $274.24 and $264.99, respectively. The differences in fees paid per subscriber between small and

[38] *See Implementation of Section 1003 of the Television Viewer Protection Act of 2019*, MB Docket No. 20-31, Report and Order, 35 FCC Rcd 4961 (2020) (*Implementation of Section 1003 of 2019 TVPA*). This order sets rules which allow small MVPDs to negotiate collectively as a "qualified MVPD buying group" for retransmission consent with large broadcast station groups. *See also* ACA Connects Comments at 17.

[39] *See supra* para. 8.

[40] A threshold of 500,000 nationwide subscribers was chosen to be consistent with the upper limit set on the size of an MVPD allowed to participate in a "qualified MVPD buying group." *Implementation of Section 1003 of 2019 TVPA*, 35 FCC Rcd at 4962, para. 3.

large systems, and between midsize and large systems are statistically significant.. We also find that small systems carry fewer stations pursuant to retransmission consent than large systems.[41] When retransmission consent fees are calculated per subscriber per station, fees are again highest for small systems. Midsize systems carry about two fewer stations under retransmission consent than large systems, and also have higher fees than large systems when retransmission consent fees are calculated per subscriber per station.

32.   Figure 11 also shows that retransmission consent fees per subscriber are larger for small operators compared to large operators. On average, small operators paid $279.85 per subscriber annually, while large operators paid $267.93 per subscriber annually. Small operators carried about the same number of stations under retransmission consent and paid higher fees per subscriber per station. The difference in fees per subscriber per station between small and large operators is statistically significant.

Fig. 11
Retransmission Consent Fees by System and Operator Size (2023)

	System Size			Operator Size	
	Small	Midsize	Large	Small	Large
Average Annual Fees paid per Subscriber	$279.03	$274.24	$264.99	$279.85	$267.93
Annual Change	14.0%*	16.8%*	16.3%*	9.6%*	16.9%*
Average Number of Stations Carried under Retransmission Consent	8.10	8.96	11.03	10.07	10.16
Annual Change	-1.9%	-1.0%*	-1.5%*	-2.3%*	-1.3%*
Average Monthly Fees paid per Subscriber per Station	$3.58	$3.19	$2.33	$3.48	$2.62
Annual Change	16.6%*	19.2%*	19.5%*	14%*	19.7%*

Source: 2024 Survey. * Indicates annual change is statistically significant at 5% significance level. See *infra* Attach. 2 for comparisons between subgroups. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

IV.   CONCLUSION

33.   Cable service prices increased over the period covered by this *Report on Cable Industry Prices*. Basic service prices grew by 7.7%, and prices for expanded basic service increased by 5.9%, over the 12 months ending January 1, 2024. These price increases are larger than the 5.7% increase in general inflation as measured by the CPI (cable) for the same one-year period. In addition, over the last five years, basic service prices, on average, increased by 13.4% annually and expanded basic service prices increased by 7.6% annually, while the average annual increase in inflation by one measure was 2.9% over the period. Average annual retransmission consent fees paid by cable systems to television broadcast stations per subscriber increased by 16.2%, from $231.52 in 2022 to $268.99 in 2023. During the 2013-2023 period, the average annual increase in retransmission consent fees per subscriber was 27.3%.

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[41] This finding does not necessarily imply that systems of different sizes in the same market carry different numbers of stations pursuant to retransmission consent. Instead, it is likely that small cable systems are located in smaller markets with fewer stations, and therefore, on average, carry fewer stations pursuant to retransmission consent.

Attachment 1
Historical Price Series: 1995-2024

Year	Basic Service Price	Expanded Basic Service					Next Most Popular Service and Equipment	CPI	
		Price	Channels		Price per Channel			All Items	Cable
			No.	Index	Dollars	Index			
Jul. 1995	---	$22.35	44.0	100.0	$0.600	100.0	---	100.0	100.0
Jul. 1996	---	$24.28	47.0	106.8	$0.610	101.7	---	103.0	106.9
Jul. 1997	---	$26.31	49.4	112.3	$0.630	105.0	---	105.2	114.9
Jul. 1998	$12.06	$27.88	50.1	113.9	$0.650	108.3	$38.58	107.0	122.6
Jul. 1999	$12.58	$28.94	51.1	116.1	$0.650	108.3	$38.43	109.3	127
Jul. 2000	$12.84	$31.22	54.8	124.5	$0.660	110.0	$39.64	113.3	132.9
Jul. 2001	$12.84	$33.75	59.4	135.0	$0.600	100.0	$45.33	116.4	139.1
Jul. 2002	$14.45	$36.47	62.7	142.5	$0.660	110.0	$46.59	118.1	147.8
Jan. 2003	$13.45	$38.95	67.5	153.4	$0.650	108.3	$49.03	121.2	157.1
Jan. 2004	$13.80	$41.04	70.3	159.8	$0.660	110.0	$51.76	123.5	163.1
Jan. 2005	$14.30	$43.04	70.5	160.2	$0.620	103.3	$56.03	127.2	169.6
Jan. 2006	$14.59	$45.26	71.0	161.4	$0.650	108.3	$59.09	132.2	174.4
Jan. 2007	$15.33	$47.27	72.6	165.0	$0.670	111.7	$60.27	135.0	179.0
Jan. 2008	$16.11	$49.65	72.8	165.5	$0.680	113.3	$63.66	140.8	183.9
Jan. 2009	$17.65	$52.37	78.2	177.7	$0.710	118.3	$67.92	140.8	186.5
Jan. 2010	$17.93	$54.44	117.	204.7	$0.560	110.3	$71.39	144.5	191.9
Jan. 2011	$19.33	$57.46	124.	217.3	$0.569	112.0	$75.37	146.9	192.0
Jan. 2012	$20.55	$61.63	149.	262.2	$0.505	99.4	$78.91	151.2	199.8
Jan. 2013	$22.63	$64.41	159.	279.2	$0.484	95.3	$81.64	153.6	206.5
Jan. 2014	$22.78	$66.61	167.	292.6	$0.496	97.6	$84.65	156.0	212.0
Jan. 2015	$23.79	$69.03	181.	317.1	$0.456	89.3	$86.83	155.8	216.4
Jan. 2016	$25.40	$71.37	181.	316.5	$0.469	91.8	$90.42	158.0	220.1
Jan. 2017	$25.06	$75.21	195.	341.3	$0.487	95.4	$95.13	161.9	231.7
Jan. 2018	$28.42	$77.24	241.	392.1	$0.373	85.2	$96.48	165.3	241.0
Jan. 2019	$31.42	$80.98	256.	416.5	$0.365	83.2	$100.3	167.9	245.9
Jan. 2020	$34.79	$86.70	256.	417.5	$0.390	89.0	$106.6	172.1	254.4
Jan. 2021	$39.85	$96.53	135.	—	$0.826	—	$110.1	171.5	252.4
Jan. 2022	$42.63	$101.54	137.	—	$0.902	—	$115.7	184.4	263.3
Jan. 2023	$43.77	$102.37	139.	—	$0.850	—	$126.0	196.2	272.3
Jan. 2024	$47.06	$108.41	140.	—	$0.894	—	$132.7	202.2	287.7
Compound Average Annual Rate of									
5-year average	13.4%	7.6%	—	—	—	—	6.9%	4.5%	4.4%
10-year average	8.6%	5.8%	—	—	—	—	5.3%	2.9%	3.7%
1995-2024	—	6.5%	—	—	—	—	—	2.9%	4.3%

Sources: 1995-2024 Surveys*.* U.S. BLS, *Consumer Price Index for All Urban Consumers: All Items in U.S. City Average [CPIAUCNS],* https://fred.stlouisfed.org/series/CPIAUCNS (last visited Jul. 6, 2024); U.S. BLS, *Consumer Price Index for All Urban Consumers: Cable and Satellite Television Service in U.S. City Average [CPIAUCNS],* https://fred.stlouisfed.org/series/CUUR0000SERA02 (last visited Jul. 6, 2024). We re-based these CPI series to July 1995=100 for the purpose of this *Report.* Notes: This attachment is described in Attach. 3: Survey Methodology. Multi-year compound average annual rates of change cannot be calculated for expanded basic channels and price per channel because the 2022 Survey changed the definition of number of channels.

Attachment 2
Differences between System and Operator Size Groups:
Retransmission Consent 2023

	Comparison Variable	Group 1	Estimate 1	Group 2	Estimate 2	Significant?
System Size	Fee per Subscriber	Small	$279.03	Midsize	$274.24	No
		Small	$279.03	Large	$264.99	Yes
		Midsize	$274.24	Large	$264.99	Yes
	Number of Stations	Small	$8.10	Midsize	$8.96	NO
		Small	$8.10	Large	$11.03	Yes
		Midsize	$8.96	Large	$11.03	Yes
	Fee per Station	Small	$3.58	Midsize	$3.19	No
		Small	$3.58	Large	$2.33	Yes
		Midsize	$3.19	Large	$2.33	Yes
Operator Size	Fee per Subscriber	Small	$279.85	Large	$267.93	No
	Number of Stations	Small	$10.07	Large	$10.16	No
	Fee per Station	Small	$3.48	Large	$2.62	Yes

Source: 2024 Survey. Averages reported are weighted averages where responses are weighted by the number of cable subscribers in the community.

ATTACHMENT 3

SURVEY METHODOLOGY

A.   Sampling Procedure

1.   For the survey, we sampled communities at random from the list of cable community unit identifiers (CUIDs) the Commission assigns to each cable operator for each community the operator serves.[1] Because it is no longer feasible to compare average cable prices in the effective competition and noncompetitive groups,[2] we stratified only the effective competition group into three subgroups based on system size, and selected the sample independently within each subgroup.[3] For each community in our sample, we asked the cable operator in the community to complete a questionnaire regarding prices charged for video programming service offerings as well as other questions related to the operator's system. The information collected was used to estimate and compare mean prices across the different groups and subgroups of communities. Figure 1 provides additional information on this sample.

2.   We divided the sample into subgroups to achieve desirable levels of statistical precision. Creating subgroups in which prices are less disparate than in the full group increases the efficiency of sampling by reducing sample price variance.[4] Because there is a positive correlation between cable price and system size, the effective competition communities were subdivided by the size of the cable system serving the community, where size refers to the number of subscribers the system serves. We defined small systems as cable systems serving 10,000 or fewer subscribers, midsize systems as cable systems serving more than 10,000 and up to 75,000 subscribers, and large systems as cable systems serving more than 75,000 subscribers.

3.   We determined an overall sample size of 761 cable communities was necessary to estimate prices with statistical precision. We calculated a minimum overall survey sample size using a standard sample size formula which we calibrated to estimate sample price averages with 1% margin of error at the 5% significance level.[5] These sample selections were allocated among the two sampling groups and the subgroups within the effective competition group. The sample allocations were made using the Neyman method and power analysis.[6] Neyman allocation is an optimal method because it accounts for relative variance between groups and subgroups to which selections are allocated in addition to relative size of subgroups.[7] After making the Neyman allocations, if a subgroup's allocation was below the sample size calculated using power analysis, the power analysis sample size was used. Further,

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[1] 47 CFR § 76.1801. Cable operators must register with the Commission. FCC Form 322, Cable Community Registration, required by 47 CFR § 76.1801; FCC Form 325, Annual Cable Operator Report, required by 47 CFR §76.403.

[2] *See supra* section I, para. 2.

[3] *See supra* section II.A for a description of a recent change in the process to determine effective competition.

[4] *See, e.g.,* William Gemmell Cochran, Sampling Techniques 87-107 (2nd ed. 1977); George Waddel Snedecor & William Gemmell Cochran, Statistical Methods 434-59 (7th ed. 1980) (Cochran (1980)).

[5] *See, e.g.,* Cochran (1980) at 434-59.

[6] *See* Jerzy Neyman, *On the Two Di□erent Aspects of the Representative Method: The Method of Stratified Sampling and the Method of Purposive Selection*, 97 Journal of the Royal Statistical Society 558-625 (1934); *See, e.g.,* SAS Institute Inc., Introduction to Power Analysis and Sample Size Analysis (SAS 14.2 User's Guide. Cary, NC: SAS Institute Inc. 2016).

[7] *See, e.g.,* Tommy Wright, *A Simple Method of Exact Optimal Sample Allocation under Stratification with Any Mixed Constraint Patterns*, Center for Statistical Research & Methodology, U.S. Census Bureau, Research Report Series (Statistics #2014-07).

we chose 40 observations as the minimum sample size[8] so any subgroup sample size of fewer than 40 observations was adjusted to 40. Finally, we adjusted the sample selections by a non-response factor.[9] Figure 1 above provides sample sizes, survey responses, and other information regarding sampling groups and subgroups.

4. To select the final sample of communities, we used probability proportional to size (PPS) sampling without replacement.[10] A PPS design is efficient for our survey because there is a correlation between the number of subscribers in the community and our key survey study variable, price.[11] Using the PPS method of sampling, we assigned a selection probability to each community within individual subgroups in direct proportion to its relative number of subscribers. The greater the number of subscribers in a community, relative to others within the same stratum, the higher the likelihood of selection. PPS sampling requires sampling selection probability not exceed one (or 100%). Thus, we took the standard approach and sub-stratified communities whose probability exceeded one into one-unit strata with selection probability equal to one.[12]

5. The PPS sample design requires an estimate of the relative number of subscribers in each community. We estimated subscriber counts using 2023 county-level operator subscriber estimates.[13] Subscribers to an operator in a county were assigned evenly to all the operator's communities within the county.

B. Data Quality Control

6. After the sample was drawn, we notified operators serving the selected communities and instructed them to complete the survey questionnaire on the Commission's website.[14] We took steps to ensure the reliability and accuracy of the data collected. Online checks notified respondents in real time of inconsistent responses. In addition, we asked a responsible party within each company to certify the completeness and accuracy of the company's responses. Of the 761 communities in the sample, six were ineligible for the survey either because they no longer provided cable service, or had yet to commence service. Of the remaining 755, two did not respond to the survey. The survey response rate (ratio of

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[8] *See* C. Allan Boneau, *Effects of Violations of Assumptions Underlying the t-Test*, 57 Psychological Bulletin 49-64 (1960). We are using 40 selections to further reduce uncertainty. A sample size of 30 is often considered an acceptable minimum.

[9] The non-response factor reflects the possibility of not receiving a survey response from some cable operators. There are few non-responses to our survey, mainly in the small system stratum, and generally as a result of the cable operator no longer being in operation. Our non-response factor increases the sample allocation by a percentage equal to $[NR_h / (NR_h + R_h)]$, where in stratum h, NR_h equals non-responses and R_h equals responses to the previous survey.

[10] Samples were generated using a standard PPS sampling algorithm. *See*, *e.g.*, Cochran (1977) at 265-266.

[11] *See, e.g.,* Frank Yates and Patrick M. Grundy, *Selection without Replacement from Within Strata with Probability Proportional to Size*, 15 Journal of the Royal Statistical Society 253-261 (1953); B. K. Som, Practical Sampling Techniques (2nd ed. 1996).

[12] We applied the following algorithm to sub-stratify each community (or unit) with selection probability greater than one. For a sampling subgroup, where Z represents the total number of subscribers, z_i is the number of subscribers in unit i, n is the sample size, $\pi_i = n (z_i /Z)$ is the selection probability of unit i, and k is the number of units for which the sampling probability exceeds one, we sub-stratify each unit for which the sampling probability exceeds one, which reduces the sample size in the subgroup to n-k. This then requires recalculating sampling probability π_i for each of the remaining communities in the subgroup. We repeat the process until there are no communities left in the subgroup with a sampling probability greater than one.

[13] Estimates of operator subscribers at the county level come from S&P Global. S&P Global, *MediaCensus, Operator Subscribers by Geography 2023 Q3* (last accessed Jan. 4, 2024).

[14] In our web-based questionnaire, we include features that ease the respondent's filing burden. For example, the questionnaire pre-fills some survey questions based on information already on file with the Commission and asks the respondent to verify the information.

completed to requested questionnaires from eligible respondents) is therefore 753 divided by 755 = 99.7%.

7.   We systematically examined all responses using algorithms designed to identify potentially inaccurate responses. When a particular response was deemed unreasonable or was inconsistent with responses to other questions, we contacted the operator and asked the operator to verify the answer or make a correction. The percentage of survey responses that require follow-up inquiries varies each year based on factors such as the familiarity of the respondents with the survey, the complexity of the questions, and introduction of new questions to the survey instrument. For the 2024 survey, we contacted approximately 5% of parent operators with follow-up inquiries via email or telephone calls. Each operator replied with a correction or an explanation of the particular response. In the case of missing data, some operators provided these data and others explained that they did not collect that information or were not serving the community at the time.

C.   Estimation of Price Averages

8.   The *Report on Cable Industry Prices* presents the average (mean) levels of the survey data by cable service level for the full sample and subgroups of effective competition cable operators. The figures summarize these findings, and the attachments display detailed statistics. After we collected and checked the responses, we estimated the population means and variances from the sample data. We estimated the means and variances of cable prices and the other variables on a subscriber basis rather than a cable community basis. We choose this level of analysis because we are interested in understanding the price paid by the average subscriber rather than the price charged in the average community. The two methods of analysis yield different results when there is a correlation between the size of a community (number of subscribers) and the level of price. To produce per-subscriber means, we use the Horvitz-Thompson ratio estimator.[15] This estimator weights the price in each of the sampled communities by its number of subscribers. The numerator of the ratio sums the weighted product of price and subscriber count across communities in the sample and is equivalent to total revenues from purchases of the cable service. The denominator of the ratio sums weighted subscriber counts across communities in the sample. The result is an estimate of service revenue per subscriber. For any price (X), the mean price (service revenue per subscriber) equals:

$$\frac{\sum_{i=1}^{N} \frac{1}{\pi_i} X_i \cdot Sub_i}{\sum_{1=1}^{N} \frac{1}{\pi_i} Sub_i}$$

where X_i is the price within an individual community i, Sub_i is the number of subscribers in community i, and π_i is the size weighted probability of selecting community i for the sample.[16]

D.   Historical Price Series

9.   In 2018, the survey became a biennial survey instead of an annual survey. As a result, the average prices and channel counts reported in Attachment 1 for all years before 2019 come from the annual surveys. Because there was no 2019 survey, Attachment 1 shows the average prices and channel

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[15] The Horvitz-Thompson ratio estimator is a well-known, unbiased method of estimation applicable to probability sampling. *See* Daniel G. Horvitz & Donovan J. Thompson, *A Generalization of Sampling without Replacement from a Finite Universe*, 47 Journal of the American Statistical Association 663-685 (1952); W. Scott Overton & Stephen V. Stehman, *The Horvitz-Thompson Theorem as a Unifying Perspective for Probability Sampling: With Examples from Natural Resource Sampling*, 49 The American Statistician 261-268 (1995); Cochran at 259.

[16] We conducted the data analysis using SAS 9.4 SAS Institute Inc. 2023. SAS Statistical Analysis Software: Release 9.4. Gary, NC: SAS Institute Inc.

counts reported for 2019 in the 2020 survey, similarly for 2021 and 2022, and for 2023 and 2024. With some exceptions, indices reflect the year to year percentage increase or decrease in these averages.

10. The exceptions to the rule above are described here. The 1995-2000 prices and 2000-2001 channels are for the noncompetitive sample group of operators. The 1995 price of expanded basic programming is the price of programming and some equipment. In 2003, the survey changed from a July to a January collection date. To account for the change, the 2003 index values reflect the changes in the January 2002 to January 2003 averages reported in the 2003 survey. In 2010, we began collecting data on a more expansive set of channels including HD. Accordingly, the 2010 channel and price per channel index values reflect the increase or decrease in the 2009 to 2010 averages reported in the 2010 survey. Further, in 2022, we began collecting HD channels offered, instead of SD and HD channels offered. There is no way to account for this change in the channel and price per channel index because, as we now collect the survey biennially, we cannot identify the change in channels offered, under the new channel definition.

E. Survey Accuracy

11. Because the basis of our survey is a sample of communities rather than a 100% census, the average prices in this *Report on Cable Industry Prices* are subject to sampling variance. Expanding the survey to include all communities might increase accuracy but would also increase the cost and burden of collecting the information. To prevent random variance that may occur across samples when measuring annual percentage change, the survey collected two years of data rather than comparing estimates from two different surveys. The exception is the historical time series table, which reports means collected for that particular survey year for the years before 2019.

12. In addition to the sampling variance discussed above, changes in the composition of sample subgroups affect the estimated means.[17] The composition of communities making up the subgroups changes every year due to operators starting, ceasing, merging, and transferring operations. Composition of the subgroups changes further as a result of findings of effective competition. All but one community that had been part of the noncompetitive group in the 2020 survey were in the effective competition group in the 2022 and 2024 surveys because of a change in the effective competition determination process.

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[17] *See, e.g.,* David T. Holt and Chris J. Skinner, *Components of Change in Repeated Surveys*, 57 International Statistical Review 1-18 (1989).