

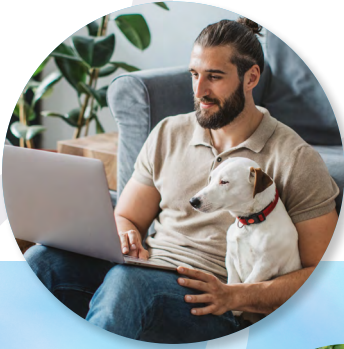
2022 **BROADBAND PRICING INDEX**

A Comparative Analysis
Showing Decreasing Prices
and Increasing Value
for U.S. Broadband Service
Over Time



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USTELECOM
THE BROADBAND ASSOCIATION



EXECUTIVE SUMMARY



THE THIRD INSTALLMENT OF THE USTELECOM BROADBAND PRICING INDEX (BPI) reveals continued substantial price reductions for both the most popular and highest-speed broadband internet services. The findings are particularly striking given the overall price inflation that has occurred in the U.S. marketplace over the past year.

As in previous years, the BPI uses FCC and other public data sources to assess recent trends in residential fixed broadband pricing in the United States. The 2022 edition of the BPI compares prices over two time intervals: (1) the price difference from 2021-2022; and (2) a longer-term view in price changes between 2015 and 2022. In both cases, as in the past, the BPI creates an index that allows comparisons between the most popular speed tiers in each year (BPI-Consumer Choice) and the highest speed tiers in each year (BPI-Speed).

KEY FINDINGS:

Broadband Pricing Ran Counter to Significant Overall Inflation in the Past Year

- Real BPI-Consumer Choice broadband prices dropped by 14.7% from 2021-2022
- Real BPI-Speed broadband prices dropped by 11.6% from 2021-2022
- In contrast, the cost of overall goods and services rose by 8% from 2021-2022

Historical Broadband Pricing Analysis Shows Real Broadband Prices Have Been Cut in Half from Seven Years Ago

- Real BPI-Consumer Choice tier prices dropped by 44.6% from 2015-2022
- Real BPI-Speed tier prices dropped by 52.7% from 2015-2022

The Consumer Value of Broadband Service Has Never Been Higher

- Providers have increased the speeds of their broadband offerings. When combined with the price drops for that service, the overall value to customers (measured on a dollars/megabit basis) shows a dramatic improvement over the past seven years.
- The real cost per megabit of both the most popular and fastest service offerings have dropped by around 75% since 2015. This gives the consumers a boost in their wallet and in their daily online performance.



BPI 2022: Lower Prices + Faster Speeds = Expanding Opportunities, Value for Consumers

With the price of goods and services top of mind for Americans battling historic inflation surges, the results of this third iteration of the Broadband Pricing Index are more meaningful than ever before. The good news continues: recent data shows the cost of broadband has never been lower and consumers have never received more value for their broadband buck than they are right now. This couldn't come at a better time as nearly all aspects of American life—work, entertainment, education, and social—have moved online.

Given the need for broadband is no longer an issue for debate, the key question for policymakers is how to ensure everyone in America has the online access necessary to power their daily lives. Since the 2021 Broadband Pricing Index, both federal and state governments have responded by providing unprecedented resources to achieve universal broadband access by funding additional deployment, offering funding assistance to ensure affordability, and promoting digital equity.

While increasing broadband access and equity are inherently longer-term projects, the public-private partnership to ensure affordability is paying immediate results. The Federal Communications Commission's Affordable Connectivity Program (ACP), a \$30/month credit for broadband services established by Congress, is now making broadband more affordable for over 12 million American households, with more signing up every day.

Broadband service providers are doing their part to increase affordability. Beyond the fact that hundreds of providers have signed up to participate in the ACP, broadband providers have been *steadily decreasing the cost* of broadband services. As this report demonstrates, broadband has never been more affordable and the value of the service has never been higher.

As in the past, this report develops two metrics for examining broadband pricing by making use of the FCC's "Urban Rate Survey." This data set is collected from a required broadband reporting metric for broadband service providers. It contains nearly 10,400 plan observations in 2022 and is statistically constructed to represent an accurate profile of a mix of U.S. broadband prices at various speeds/technologies and fixed providers (small and large) throughout the entire country. While the full methodology is described below, analysis of the FCC data, combined with other public data sources, allows us to establish two national indices for comparing pricing between years.

The **BPI-Consumer Choice** compares providers' *most popular* speed tier of broadband service in a given year to its most comparable 2022 service.¹

The **BPI-Speed** compares providers' *fastest* speed tier option in a given year to the comparable plan in 2022.

Table 1: NOMINAL
U.S. BROADBAND PRICE
YEAR-OVER-YEAR COMPARISON

BPI-CONSUMER CHOICE	
PRICE 2021	CHANGE
\$48.42	-5.1%
PRICE 2022	
\$45.97	

BPI-SPEED	
PRICE 2021	CHANGE
\$74.80	-1.7%
PRICE 2022	
\$73.55	

Table 2: REAL
U.S. BROADBAND PRICES
YEAR-OVER-YEAR COMPARISON*
(adjusted for inflation)

BPI-CONSUMER CHOICE	
PRICE 2021	CHANGE
\$42.59	-14.7%
PRICE 2022	
\$36.33	

BPI-SPEED	
PRICE 2021	CHANGE
\$65.78	-11.6%
PRICE 2022	
\$58.12	

* Measured in constant 2015 dollars to allow for even comparisons throughout the report.

Table 3: 1-YEAR COMPARISON OF CONSUMER PRICE INDEX
FOR ESSENTIAL GOODS & SERVICES**

	MARCH 2021	MARCH 2022	PRICE CHANGE
OVERALL CPI-U	\$264.88	\$287.50	+8.5%
HEALTH INSURANCE	\$176.80	\$187.60	+6.1%
CAR INSURANCE	\$565.17	\$584.85	+3.5%
RENT	\$345.72	\$361.05	+4.4%
COLLEGE TUITION & FEES	\$877.50	\$898.09	+2.3%
FOOD & BEVERAGE	\$271.14	\$294.12	+8.5%
BPI-SPEED (Nominal)	\$74.80	\$73.55	-1.7%
BPI-CONSUMER CHOICE (Nominal)	\$48.42	\$45.97	-5.1%

**Source: CPI-U March 2022 v. March 2021

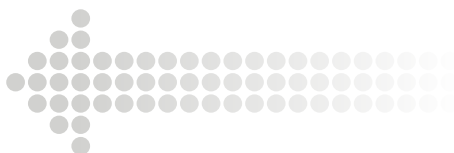
Bucking the Inflation Trend: The Cost of American Broadband Decreased Since Last Year

This third year of producing the Broadband Pricing Index affords the opportunity to examine year-over-year progress in addition to longer-term pricing trends. The year-over-year analysis yields essential factual context as inflationary pressures in most sectors are significantly straining Americans' wallets. But not for broadband. Table 1 shows downward pricing progress for both indices in nominal terms. Table 2 adjusts these price reductions for inflation.

The year-over-year data comparison yields the most popular tier of broadband service (BPI-Consumer Choice) showing a 14.7% real price reduction, while the real price of the fastest option (BPI-Speed) dropped by 11.6% since last year's report. Context matters: this was during a time when the cost of overall goods and services rose 8.0%.

Even when removing inflation from the discussion, the data shows plainly that prices are decreasing for consumer broadband. The price of the most popular tier of broadband service dropped by 5.1%, while the price of the fastest option dropped by 1.7%. The inescapable conclusion is that Americans are paying less for broadband than they were just a year ago. This makes sense given the increasing amount of competition faced by broadband providers.

The contrast is striking when you compare the price trend of broadband to the costs of other consumer purchases over the past year.



A Historical Perspective Demonstrates Significant Value Gains for Broadband Consumers

When the first Broadband Pricing Index was published in 2020, we did a five-year look back to 2015 to see how broadband pricing and service had evolved over that span. We continue to use 2015 as our benchmark to chart the industry's progress. This year's comparison shows the seven year impact of price and value improvements.

The topline result is that the value of broadband service has increased dramatically, with the **real service price dropping by about half while consumers are receiving approximately twice as much broadband speed as in 2015.**

The U.S. weighted average nominal price for the most popular speed tiers by subscription has decreased by 29.9% over the past seven years and the weighted average price for the fastest speed

Table 6: 1-YEAR COMPARISON OF CONSUMER PRICE INDEX FOR ESSENTIAL GOODS & SERVICES FROM 2015-2022**

	MARCH 2015	MARCH 2022	PRICE CHANGE
OVERALL CPI-U	\$236.12	\$287.50	12.1%
HEALTH INSURANCE	\$122.34	\$187.60	53.3%
CAR INSURANCE	\$455.37	\$584.85	28.4%
RENT	\$283.13	\$361.05	27.5%
COLLEGE TUITION & FEES	\$775.43	\$898.09	15.8%
FOOD & BEVERAGE	\$245.69	\$294.12	19.7%
BPI-SPEED (Nominal)	\$122.94	\$73.55	-40.2%
BPI-CONSUMER CHOICE (Nominal)	\$65.62	\$45.97	-29.9%

**Source: CPI-U March 2022 v. March 2015

tiers has decreased by 40.2%. These results are displayed in Table 4. Further, when accounting for inflation, Table 5 shows that the decreases in real prices for these services are 44.6% and 52.7%, respectively.²

Table 6 puts these results in historical context by showing how broadband compares to other goods and services that have, unlike broadband, continued to increase in price significantly over the past seven years. While Americans can both save more and get more for their broadband dollar, the same cannot be said for food, shelter, education, and health care.

Overall, from 2015 to 2022, the cost of consumer goods and services rose by 12.1% from 2015 to 2022, according to the CPI-U.³ This stands in marked contrast to the 29.9% and 40.2% reductions for prices of BPI-Consumer Choice and BPI-Speed, respectively, over that same period.

**Table 4: NOMINAL
U.S. BROADBAND PRICES**

BPI-CONSUMER CHOICE	
PRICE 2015 \$65.62	CHANGE -29.9%
PRICE 2022 \$45.97	

BPI-SPEED	
PRICE 2015 \$122.94	CHANGE -40.2%
PRICE 2022 \$73.55	

**Table 5: REAL
U.S. BROADBAND PRICES
(adjusted for inflation)**

BPI-CONSUMER CHOICE	
PRICE 2015 \$65.62	CHANGE -44.6%
PRICE 2022 \$36.33	



BPI-SPEED	
PRICE 2015 \$122.94	CHANGE -52.7%
PRICE 2022 \$58.12	

Feeding the Need for Speed

In addition to broadband becoming more affordable, the same FCC data shows that the speeds consumers receive for their broadband dollar are substantially higher over the past seven years. This ensures more Americans have access to video and other bandwidth-intensive activities that have grown so essential for remote work, distance learning, and telehealth. So, not only did U.S. broadband subscribers get a price decrease, they also got a speed increase. Within the same control groups—BPI-Consumer Choice and BPI-Speed—the download speeds offered in the most popular tier have increased by 127.7%, while speeds in the fastest-offered tiers have increased by 84.6%. Upload speeds have improved even more dramatically, offering 2-3 times what was available in 2015.

This speed increase creates value for consumers, as Table 8 demonstrates. Table 8 shows that the real price per megabit for the most popular speed tiers dropped by nearly 76% and the price per megabit for the faster tier dropped by 74%. This boost is particularly meaningful as U.S. subscribers continue to upgrade their services to power their increasingly online lives. Across the board, Americans are getting more for their broadband buck than ever before.

Table 7: SPEEDS OF MOST POPULAR AND FASTEST BROADBAND SERVICES

BPI-CONSUMER CHOICE			
WEIGHTED MBPS DOWNLOAD SPEED		WEIGHTED MBPS UPLOAD SPEED	
2015 43	GROWTH 127.7%	2015 13	GROWTH 249.3%
2022 98		2022 44	



BPI-SPEED			
WEIGHTED MBPS DOWNLOAD SPEED		WEIGHTED MBPS UPLOAD SPEED	
2015 141	GROWTH 84.6%	2015 51	GROWTH 107%
2022 259		2022 103.7	

Table 8: REAL PRICE PER MBPS




BPI-CONSUMER CHOICE		BPI-SPEED	
PRICE PER MBPS 2015	PRICE PER MBPS 2022	PRICE PER MBPS 2015	PRICE PER MBPS 2022
\$1.52	\$0.37	\$0.87	\$0.22
CHANGE -75.7%		CHANGE -74.4%	

Even when removing inflation from the discussion, the data shows plainly that prices are decreasing for consumer broadband




Putting it All Together: Broadband Consumers Win

The historical changes from 2015-2022 overwhelmingly demonstrate that the price of broadband has decreased steadily over the past seven years while the performance and overall value of the product has increased significantly to the benefit of the broadband consumer.

2015-2022 COMPARISON BROADBAND PRICE INDEX: CONSUMER CHOICE

WEIGHTED AVG PRICE (inflation-adjusted)	DOWNLOAD SPEED (MBPS)	REAL PRICE PER MBPS (download)
2015 \$65.62	2015 43	2015 \$1.52
2022 \$36.33	2022 98	2022 \$0.37
CHANGE -44.6% 	CHANGE +127.7% 	CHANGE -75.7% 

2015-2022 COMPARISON BROADBAND PRICE INDEX: SPEED

WEIGHTED AVG PRICE (inflation-adjusted)	DOWNLOAD SPEED (MBPS)	REAL PRICE PER MBPS (download)
2015 \$122.94	2015 141	2015 \$0.87
2022 \$58.12	2022 259	2022 \$0.22
CHANGE -52.7% 	CHANGE +84.6% 	CHANGE -74.4% 

Methodology

This research analyzes residential broadband prices across the three major wired technologies (cable, DSL, and FTTH) from 2015 to 2022. Using the FCC's Urban Rate survey⁴ the 14 largest U.S. wireline broadband providers were selected to benchmark comparable offerings over time. They include the top seven cable and top seven telecom companies by subscriber count and account for over 90% of all terrestrial broadband services sold in the U.S.:

- Cable: Altice,⁵ Cable One, Charter, Comcast, Cox, Mediacom, and WOW
- Telecom: AT&T, Consolidated, Frontier, Lumen, TDS, Verizon, and Windstream

The next step in constructing the Broadband Price Index is to establish proper weights for each provider. These are calculated by applying the broadband subscriber market share in 2015 and 2022 for each provider in the given technology (cable, FTTH, and DSL). These weights are averaged over the two periods⁶ then multiplied by the price for that specific offering in that year, and the resulting sum becomes each company's contribution to the overall index from 2015 to 2022. These weights represent a carrier's aggregate market share and not market share at a particular service speed.

BPI-CONSUMER CHOICE

The FCC's June 2015 Internet Access Report⁷ shows the distribution of residential fixed connections by download speed tier and technology. The "consumer choice" download speed for each technology is the speed interval that has the most connections. Cable and FTTH's most popular speeds were between 25 Mbps and 100 Mbps. Most DSL connections, a declining contributor to the technology mix by 2022, were between 3 Mbps and 10 Mbps.

BPI-Consumer Choice uses the 2022 service offering most comparable to each company's 2015 dominant speed offering.

Example: FCC data in 2015 indicates one company's most popular offering found in the 25 Mbps to 100 Mbps range was with 70 Mbps down/6 Mbps up at a price of \$100.00 per month. By 2022, the provider's next closest offering was 100 Mbps down/10 Mbps up at \$55.00 per month—a 45% price reduction in nominal terms and 57% decrease when adjusted for inflation. In this time period, the download speed increased by 43% and the upload by 67% for the comparable offering.

This exercise is repeated for each company and the results are average weighted by each provider's market share for the two periods and then aggregated into the "overall weighted price."

References to the 2021 results are derived from the 2021 BPI,⁸ which used the same methodology.

BPI-SPEED

The BPI-Speed compares each company's fastest 2015 service to its most comparable 2022 service.

Since broadband speeds vary by provider and improve over time, BPI-Speed uses the 2022 service offering most comparable to each company's 2015 highest speed service.

Example: One company's fastest service in 2015 was 100 Mbps down/5 Mbps up at a price of \$114.99 per month. In 2022, that provider offered faster services. The closest benchmark to that service found in the FCC survey in 2022 is 200 Mbps down/10 Mbps up at a price of \$74.99. Download speeds and upload speeds both doubled. The nominal consumer price tag drops in nominal terms by 34.8% and decreases by 49% when adjusted for inflation.



This exercise is repeated for each company by technology and the results are weighted by the average of each provider's market share in both years and then aggregated into the "overall weighted price."

References to the 2021 results are derived from the 2021 BPI, which used the same methodology.

Endnotes

- 1 These providers account for over 90% of all terrestrial fixed broadband services sold in the U.S.
- 2 National price inflation is measured by the BLS CPI-U index, which increased from 236.12 in March 2015 to 287.50 in March 2022.
- 3 All BPI price-related calculations in this report are adjusted for inflation using the Consumer Price Index (CPI-U)—a barometer of overall urban U.S. inflation.
- 4 FCC, Urban Rate Survey Data & Resources (2022) <https://www.fcc.gov/economics-analytics/industry-analysis-division/urban-rate-survey-data-resources>.
- 5 Altice has been split into its two pre-merger organizations, CSC (Cablevision) and Suddenlink, since the FCC rate survey identifies them separately.
- 6 The analysis used the Marshall-Edgeworth weighting methodology to construct the price index.
- 7 Internet Access Services as of 06/30/15, Federal Communications Commission, August 2018; available at: <https://docs.fcc.gov/public/attachments/DOC-342358A1.pdf>.
- 8 USTelecom, 2021 Broadband Pricing Index (2021) available at <https://ustelecom.org/research/2021-broadband-pricing-index-report/>.

Information Sources

Publicly available current and past prices of broadband by technology are found in the FCC's annual survey of urban rates. The FCC's Urban Rate Survey Data and Resources ("the FCC rate survey") collects pricing information by provider for stand-alone residential broadband services as well as by download/upload speed and by technology. This FCC data is a reasonable proxy for nationwide broadband pricing because it is the benchmark utilized for fixed voice and broadband services for the federal universal service program.

The contribution of each company to the overall price of broadband was derived from two primary inputs: (1) the FCC's 2015 and 2022 rate surveys, and (2) the average number of broadband subscribers by provider and technology for 2015 and 2022. Subscriber counts are largely sourced from the Leichtman Research Group. Adjustments have been made to 2015 and 2022 subscribers using SEC, investor relations and FCC sources to reconcile for updates, mergers, spin-offs, and technology segmentation.

About the Author

Arthur Menko, the founder of Telcodata and Business Planning, Inc., has been providing telecom and broadband research and consulting services since 1984. He has extensive industry background in the economic, regulatory, infrastructure, reliability and competitive market research areas. In recent years he has concentrated in fixed broadband deployment and adoption analytics and policy research matters.