



2021 BROADBAND PRICING INDEX

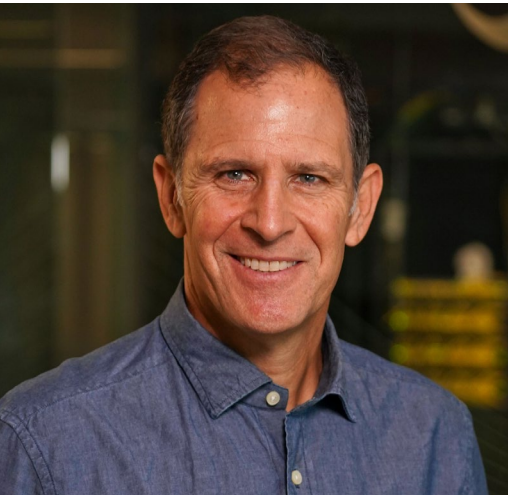
An Updated Analysis
of Decreasing Prices
and Increasing Value for
U.S. Broadband Service
Over Time

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It's Time to Face the Facts About Broadband Affordability

We stand at the cusp of a historic milestone. As we begin to emerge from the COVID-19 pandemic, our nation has the means, the resources and the determination to close the digital divide once and for all. This requires a dual approach—committing funds to deploy broadband infrastructure to high-cost, unserved areas and adding broadband to the social safety net of food, housing and other essentials where targeted government assistance helps those in need.



In the midst of a global health crisis, American consumers relied on their broadband connections as never before. From school to work, health care to connecting with loved ones, broadband helped hold our economy and our communities together. Equally true, the experience deepened the resolve of our nation's leaders to act with a sense of urgency to ensure all in America have access to the full range of opportunities and resources that broadband makes possible.

Already, Congress has taken emergency actions to help connect students without broadband in the home and to help low-income Americans access no- or low-cost connectivity during the pandemic. Now, we are looking collectively to permanent, sustainable solutions for the future.

Some are dusting-off misguided proposals that would have the government essentially step in and set prices for all broadband, imperiling the roughly \$80 billion providers invest each year in ever stronger, faster and more resilient networks. Others want to take the focus off unserved areas and unconnected citizens and divert tax dollars to local governments or non-profits—most with little or no experience or expertise in broadband—and task them with building and managing new networks to compete, rather than partner, with existing broadband networks, despite the long and discouraging track record of similar, past efforts.

As this second installment of USTelecom's Broadband Pricing Index makes clear, nothing in the marketplace could justify such an extraordinary reversal of U.S. innovation policy. From achieving universal connectivity to acting with fiscal responsibility toward future

TABLE OF CONTENTS

Welcome Letter	1
Executive Summary	3
BPI 2021: Lower Prices + Faster Speeds = Expanding Opportunities and Value for Consumers	4
<i>Table 1: U.S. Broadband Prices</i>	5
<i>Table 2: Real U.S. Broadband Prices</i>	5
<i>Table 3: Speeds of Most Popular and Fastest Broadband Services</i>	6
<i>Table 4: Real Price per Weighted Download Mbps</i>	6
<i>Table 5: U.S. Broadband Price Year-Over-Year Comparison</i>	7
<i>Table 6: Real U.S. Broadband Prices Year-Over-Year Comparison</i>	7
Appendix A: Broadband Affordability Bucks Overall Trend of Rising Consumer Prices for Other Important Goods & Services	8
<i>6-Year Comparison of Consumer Price Index for Essential Goods & Services (2015-2021)</i>	8
<i>1-Year Comparison of Consumer Price Index for Essential Goods & Services (2020-2021)</i>	8
About the Author	9
Endnotes	9

generations, there is a better path forward. It begins with facing the facts about the pricing and availability of broadband in the United States.

Perhaps most relevant to the current and necessary debate about broadband affordability: in a year when consumers needed and used

The truth is: more Americans have cheaper and flat-out better broadband service choices than they did one year ago.

broadband connectivity as never before and the cost of overall consumer goods and services rose by 1.9%, the price of the most popular tier of broadband service declined by 7.5%. That's a 9.3% year-over-year drop when adjusted for inflation. And, this continues a years-long story of declining prices and accelerating speeds that help unlock the full

gamut of broadband-fueled opportunities for more Americans. The truth is: more Americans have cheaper and flat-out better broadband service choices than they did one year ago.

The findings bolster our recent study comparing broadband deployment and adoption in the U.S. and the European Union. There, the U.S. handily leads in both categories—offering far superior services fueled by three times the investment in infrastructure—driven by more intense competition from multiple networks in the marketplace, and smart policies that work in partnership, rather than to punish, some of the leading investors in the U.S. economy.

In the past, our nation has rallied to press for universal electricity and safe, running water. Should our nation now strive for universal broadband connectivity? Absolutely. Should we do so by upending the policies that have made our innovation economy—and our broadband networks which fuel it—the envy of the world and sparked investment that has already connected 90%+ of the U.S. population? No way.

America is winning at broadband. Our primary and targeted focus now must be ensuring all our fellow citizens are able to participate in the victory.



Jonathan Spalter
CEO, USTelecom

Executive Summary

The USTelecom Broadband Pricing Index uses FCC and other public data sources to assess recent trends in residential fixed broadband pricing in the United States. In this second installment, the analysis reveals continued substantial price reductions for both the most popular and highest-speed broadband internet services. The data show consumers are also benefiting from marked increases in the speeds they receive for their broadband dollar.

U.S. broadband prices continue to decline in the face of unprecedented increased broadband demand due to the pandemic, and as the overall cost of consumer goods and services continue to rise. These facts are likely drivers of recent findings that the U.S. is well ahead of the European Union when it comes to broadband deployment and adoption.¹ Faster services at competitive prices—combined with pro-investment policies—are creating a virtuous cycle that benefits individual consumers and the U.S. innovation economy as a whole.

The 2021 edition of the Broadband Price Index makes pricing comparisons over time on two fronts: the most popular speed tiers in 2015 and 2021 (BPI-Consumer Choice), and the highest speed tiers in 2015 and 2021 (BPI-Speed). This second edition of BPI research also offers year-over-year comparisons for the pandemic years of 2020 and 2021.

KEY FINDINGS

2021 versus 2020: Substantial Broadband Price Reductions Still Occurring

- ▶ **BPI-Consumer Choice:** the price of the most popular tier of broadband service has declined by 7.5% YOY; adjusted for inflation, this one-year price decline is 9.3%.
- ▶ **BPI-Speed:** the price for the highest speed offering index declined by 2.3% YOY; adjusted for inflation, this one-year price decline is 4.2%.
- ▶ **CPI-U:** these broadband price declines occurred at a time when the cost of overall goods and services rose by 1.9%.

2015-2021: Long-Term Trend Toward Greater Broadband Affordability

- ▶ **BPI-Consumer Choice:** the most popular tier of broadband service in 2015 is now priced 26.2% lower and offers 126% faster speeds in 2021 than in 2015.
- ▶ **BPI-Speed:** the highest speed offerings in 2015 are now priced 39.2% lower and offer 77% faster speeds in 2021 than in 2015.
- ▶ **CPI-U:** these broadband price reductions run counter to inflation, which has increased consumer costs overall by 12.1% over the same six-year period.
- ▶ When inflation is considered, the real price of the most popular tier of broadband service has dropped by 34.1% and the highest speed tier by 45.7% since 2015.

The combination of pro-consumer pricing and speed trends indicates that facilities-based competition continues to deliver increasingly affordable options for high-quality, high-speed connectivity.

BPI 2021: Lower Prices + Faster Speeds = Expanding Opportunities and Value for Consumers

In a year with surging pandemic-driven demand, broadband prices still dropped 9.3% in real dollars.

In the year since we published our initial Broadband Pricing Index (BPI),² our dependence on broadband has only deepened. Broadband connectivity has reshaped 21st century education, healthcare, access to government services, entertainment, civic participation and commerce. The huge surge in broadband usage occasioned by the COVID-19 pandemic has demonstrated vividly our national dependence on broadband. Indeed, a broadband connection has become nearly indispensable to modern life. But not all Americans have a broadband connection. For some, this is because connections are not available in their neighborhood. But for others, a high-quality fixed broadband connection may be unaffordable. This research demonstrates the significant, continuing downward trend in broadband prices that is causing affordability as a barrier to broadband adoption to recede. These data support the policy case that targeted federal programs aimed at providing connectivity assistance to the most low-income Americans is what can effectively and efficiently close the digital divide.

This report builds upon our 2020 BPI report and finds that the declining price trends previously observed for the 2015-2020 period have continued into 2021. Thus, over the past six years fixed broadband prices have reduced substantially, even while the speed of connections has increased. Indeed, in the midst of a global pandemic, with sharply increased demand for more and better broadband, consumer prices for the most popular tier of broadband service declined by 7.5%, while the cost of overall goods and services rose 1.9%, yielding an inflation-adjusted broadband price reduction of 9.3%.

This updated report, like its predecessor, employs FCC and other public data sources to assess trends in U.S. residential fixed broadband pricing between 2015 and 2021. Specifically, this report continues to develop two metrics for examining broadband prices reported in the FCC's "Urban Rate Survey." These data are collected from all broadband service providers offering service within specific geographies. The 2021 data contain over 3,200 observations of service plans and prices and has been statistically constructed to represent an accurate profile of U.S. broadband prices at various speeds/technologies offered by fixed service providers (small and large) throughout the entire U.S.³

These FCC data are in contrast to data used in other studies, such as New America's Open Technology Institute's (OTI) "The Cost of Connectivity" report.⁴

In that report, broadband plans were sampled only from 13 hand-picked U.S. cities, without ensuring the collected data to be a reasonably accurate and inclusive statistical representation of the entire United States. Our analysis is also in contrast to other studies that have followed the 2020 BPI report's lead to examine the Urban Rate Survey, but have done so in a manner that either disregards subscription/service class weighting—i.e., what people are actually buying—or disregards whole classes of technologies that happen to present inconvenient results.⁵

2015-2021: A Clear Trend Towards Lower Prices and Higher Value


Analysis of the FCC data, combined with other public data sources, allows us to establish two national indices for comparing pricing from 2015 to 2021.

- ▶ The **BPI-Consumer Choice index**, which compares providers' *most popular* 2015 speed tier of broadband service to the most comparable (or higher) tier of service they offered in 2021.
- ▶ The **BPI-Speed index**, which compares providers' *fastest* speed tier in 2015 to the most comparable (or higher) service tier they offered in 2021.

The results are striking: the BPI-Consumer Choice index shows that the U.S. weighted average price for the most popular speed tiers by subscription has decreased by 26.2% from 2015 through 2021—and the BPI-Speed index shows weighted average price for the fastest speed tiers has decreased by 39.2% over the same period. These results are displayed in Table 1. Further, when accounting for inflation, Table 2 shows that the decreases in real prices for these services have been 34.1% and 45.7%, respectively.

These findings establish clearly that on an apples-to-apples basis (i.e., using similar speeds and technologies in 2021 as in 2015) average prices that U.S. subscribers pay for broadband services have been declining. In addition to the favorable consumer trend toward lower broadband prices, these same FCC data show that the *speeds* consumers receive for their broadband dollars are substantially higher, permitting more Americans to have robust access to video and other

TABLE 1:
U.S. BROADBAND PRICES
(measured in nominal dollars)

BPI-CONSUMER CHOICE	
PRICE 2015 \$65.62	CHANGE -26.2%
PRICE 2021 \$48.42	




BPI-SPEED	
PRICE 2015 \$122.94	CHANGE -39.2%
PRICE 2021 \$74.80	

TABLE 2:
REAL U.S. BROADBAND PRICES
(measured in constant 2015 dollars)

BPI-CONSUMER CHOICE	
PRICE 2015 \$65.62	CHANGE -34.1%
PRICE 2021 \$43.21	

BPI-SPEED	
PRICE 2015 \$122.94	CHANGE -45.7%
PRICE 2021 \$66.75	

Not only have U.S. broadband subscribers been getting price reductions, they have also gotten speed increases.

bandwidth-intensive activities that have grown so essential from remote work, distance schooling and telehealth. So not only have U.S. broadband subscribers been getting price reductions, they have also gotten speed increases.

This is shown in Table 3. Within the same sample groups—BPI-Consumer Choice and BPI-Speed—the speeds offered in the most popular tier have increased by 126%, while speeds in the fastest-offered tiers have increased by 77%.

The combination of decreased prices and increased speeds yields even more value and access to the full spectrum of connected opportunities for American consumers. Table 4 shows the good news for both indices. Americans are getting more for their broadband buck than ever before.

TABLE 3: SPEEDS OF MOST POPULAR AND FASTEST BROADBAND SERVICES

BPI-CONSUMER CHOICE		BPI-SPEED	
MBPS DOWNLOAD 2015	MBPS DOWNLOAD 2021	MBPS DOWNLOAD 2015	MBPS DOWNLOAD 2021
43	98	141	248
CHANGE 126%		CHANGE 77%	
BPI-CONSUMER CHOICE		BPI-SPEED	
MBPS UPLOAD 2015	MBPS UPLOAD 2021	MBPS UPLOAD 2015	MBPS UPLOAD 2021
13	45	51	99
CHANGE 256%		CHANGE 98%	

TABLE 4: REAL PRICE PER WEIGHTED DOWNLOAD MBPS

BPI-CONSUMER CHOICE	
PRICE PER MBPS 2015	CHANGE -70.9%
\$1.52	
PRICE PER MBPS 2021	
\$0.44	
BPI-SPEED	
PRICE PER MBPS 2015	CHANGE -69.3%
\$0.88	
PRICE PER MBPS 2021	
\$0.27	

TABLE 5: U.S. BROADBAND PRICE YEAR-OVER-YEAR COMPARISON (measured in nominal dollars)

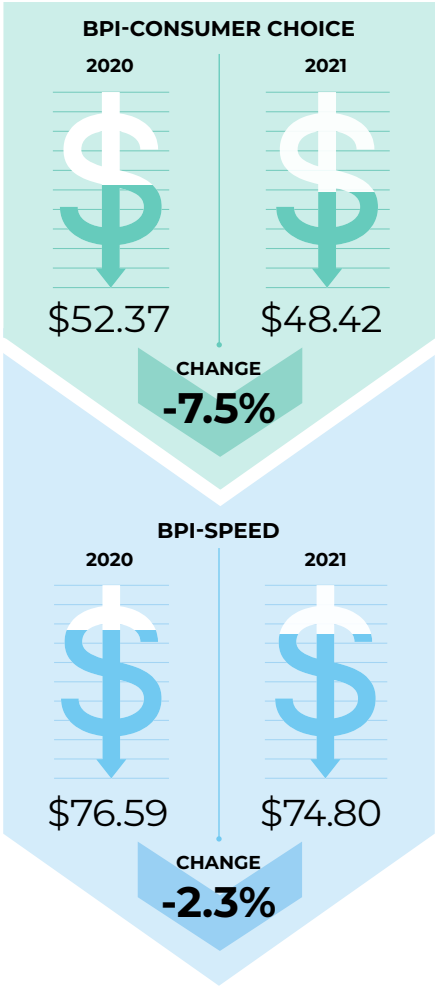
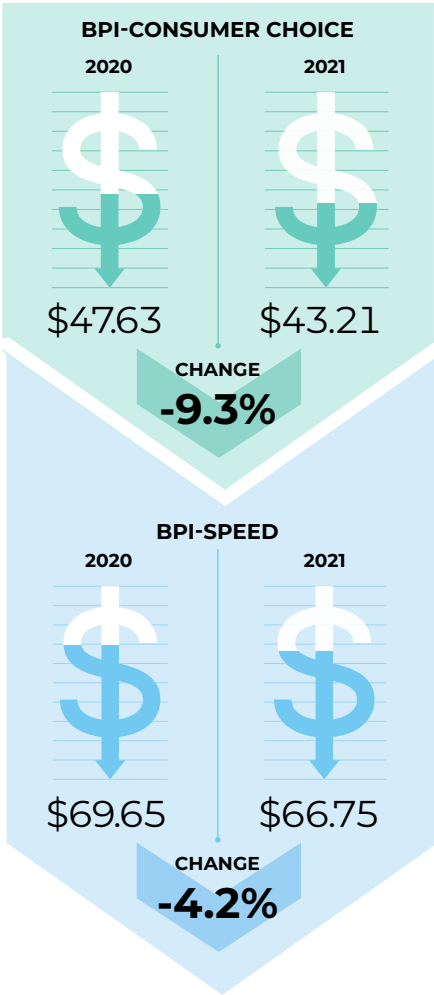


TABLE 6: REAL U.S. BROADBAND PRICE YEAR-OVER-YEAR COMPARISON (measured in constant 2015 dollars)



The price of the most popular tier of broadband service declined 9.3% when adjusted by inflation.

2020-2021: A Year of Good News for American Broadband Customers

This second year of producing the Broadband Pricing Index provides the opportunity to examine not only longer-term pricing trends, but also most recent year-over-year progress. Amid an often-heated public policy debate over whether broadband service is adequately affordable, the results are in. The BPI shows that the price of the most popular tier of broadband service declined by 7.5% in nominal terms, and when adjusted for economy-wide price inflation, the decline is nearly 9.3%. Further, the price of the fastest speed tier declined by 2.3% nominally, and 4.2% adjusted for inflation. Table 5 shows the price changes for both BPI indices in nominal terms and Table 6 displays these reductions when prices are adjusted for inflation.⁶

APPENDIX A

Broadband Affordability Bucks Overall Trend of Rising Consumer Prices for Other Important Goods & Services

The broadband consumer savings documented in this report are especially noteworthy because they run in the opposite direction of other categories of important consumer goods and services. While Americans have the opportunity to both save more and get more for their broadband dollar, the same cannot be said for food, shelter, education and health care, or for consumer purchases overall.

From 2015 to 2021, the cost of all U.S. consumer goods and services, measured by the Bureau of Labor Statistics’ Consumer Price Index (CPI-U) rose by 12.2%.⁷ This is in contrast to the 26.2% and 39.2% reductions for the BPI-Consumer Choice and BPI-Speed indices over the same period. This divergent trend continued during the 2020 to 2021 period. On a March to March basis overall CPI-U rose by 2.6% during this period, while the BPI-Consumer Choice and BPI-Speed indices dropped by 7.5% and 2.3%. The following table shows this trajectory of broadband prices relative to prices of other important items in consumers’ budgets.

6-YEAR COMPARISON OF CONSUMER PRICE INDEX FOR ESSENTIAL GOODS & SERVICES (2015-2021)	
	PRICE CHANGE
OVERALL CPI-U	+12.2%
HEALTH INSURANCE	+43.1%
CAR INSURANCE	+24.1%
RENT	+22.1%
COLLEGE TUITION & FEES	+13.2%
FOOD & BEVERAGE	+10.6%
BPI-SPEED	-39.2%
BPI-CONSUMER CHOICE	-26.2%

Source: Bureau of Labor Statistics CPI-U March 2021 vs. March 2015

1-YEAR COMPARISON OF CONSUMER PRICE INDEX FOR ESSENTIAL GOODS & SERVICES (2020-2021)	
	PRICE CHANGE
OVERALL CPI-U	+2.6%
FOOD & BEVERAGE	+3.6%
RENT	+1.8%
COLLEGE TUITION & FEES	+3%
HEALTH INSURANCE	-1.0%
CAR INSURANCE	-2.5%
BPI-SPEED	-2.3%
BPI-CONSUMER CHOICE	-7.5%

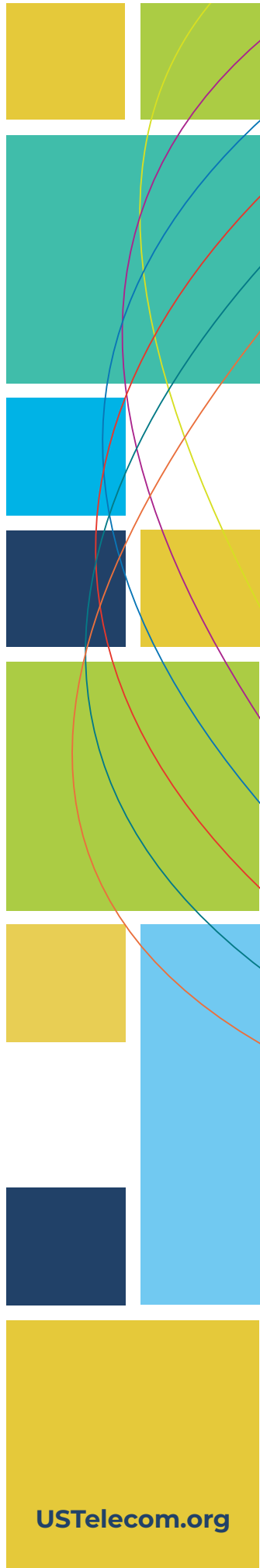
Source: Bureau of Labor Statistics CPI-U March 2021 vs. March 2020

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.

Endnotes

- 1 US vs EU Broadband Trends 2012-2019, USTelecom, April 21, 2021; available at: <https://www.ustelecom.org/no-contest-u-s-leads-europe-in-broadband-deployment-adoption-investment-and-competition/>
- 2 USTelecom, 2020 Broadband Pricing Index (2020) available at <https://www.ustelecom.org/research/2020-broadband-pricing-index-report/> (2020 BPI Report).
- 3 For a full description of the Report’s methodology see 2020 BPI Report at 6-8, which was repeated for this report. See also George S. Ford, PhD, *Are Broadband Prices Declining? A Look at the FCC’s Price Survey Data*, Phoenix Center for Advanced Legal & Economic Public Policy Studies, Perspectives, (Oct. 26, 2020) available at <https://phoenix-center.org/perspectives/Perspective20-07Final.pdf> (confirming the results of the 2020 BPI study using an alternative methodology).
- 4 Becky Chao & Claire Park, New America Open Technology Institute, *The Cost of Connectivity 2020* (2020) www.newamerica.org/oti/reports/cost-connectivity-2020/
- 5 See e.g., S. Derek Turner, Free Press, *Price Too High and Rising: The Facts about America’s Broadband Affordability Gap*, p. 14 (2021) https://www.freepress.net/sites/default/files/2021-05/free_press_report_prices_too_high_and_rising.pdf (removing fiber to the home pricing results from its pricing study because it is a “Cadillac” technology).
- 6 Due to adjustments in how CPI-U changes are calculated, 2020 BPI-Consumer Choice and BPI-Speed values in constant 2015 dollars may differ slightly from analogous figures in the 2020 BPI report.
- 7 This interval differs slightly from the 1Q to 1Q measurements for CPI-U changes used in the principal text of this report.



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