



# Broadband Insights Report (OVBI)

2Q23

# Introduction

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Power users stream six times more data than the average broadband user — 2.2 terabytes of data per month — according to a first-of-its-kind breakout of broadband consumption by application category in the 2Q23 OpenVault Broadband Insights (OVBI) report. The latest edition of the OVBI report breaks new ground by identifying the application categories driving the most data traffic and shows how application usage differs across three different user types—power users, average users and light users.

The 2Q23 OVBI highlights consumers' continued migration to higher speed plans. The gigabit tier now constitutes nearly 32% of all subscribers, more than doubling in size year-over-year. The report also shows marked differences in usage behavior between fully-subsidized and partially-subsidized participants in the Affordable Connectivity Plan and details how both types of participants continue to use more data than the average unsubsidized subscriber.

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**With average and median usage continuing to experience double-digit percentage growth, operators must pay close attention to matching growing bandwidth demands by improving network health and resiliency.**

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As with all editions of the OVBI, this 2Q23 edition uses data points from millions of individual broadband subscribers, aggregated from OpenVault's software-as-a-service (SaaS) technology solutions to pinpoint usage patterns that can affect network performance, operator revenue and customer satisfaction.



# Key findings from the 2Q23 OVBI include:



## Usage

The monthly weighted average data consumed by subscribers in 2Q23 was 533.8 GB, up 9% from 2Q22's average of 490.7 GB.



## Key ARPU Insight

FRB operators have over 2x more subscribers than UBB operators in speed tiers below 200 Mbps (37.1% vs. 18.4%).



## Power Users

The super power user category consuming 2 TB or more per month increased by 26% since 2Q22.



## Key Bandwidth Usage Insight

Among power users of 1TB or more data per month, 16% of data usage is from gaming.



## Speed Tiers

The percentage of subscribers on gigabit speed tiers more than doubled over the previous year, reaching 31.6% in 2Q23.



## Key UBB vs FRB Insight

Annual average usage growth for UBB networks (11.8%) was nearly 3x more than for FRB networks (4.0%).

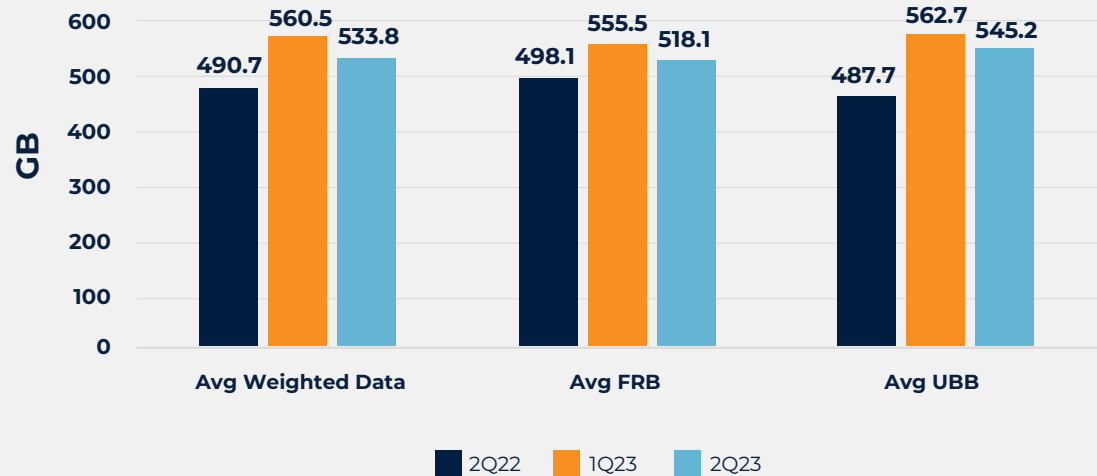


# 2Q23 Broadband Usage Key Findings

The following broadband usage trends were observed in 2Q23.

FIGURE 1

## Data Usage Trends by Billing Type — 2Q23



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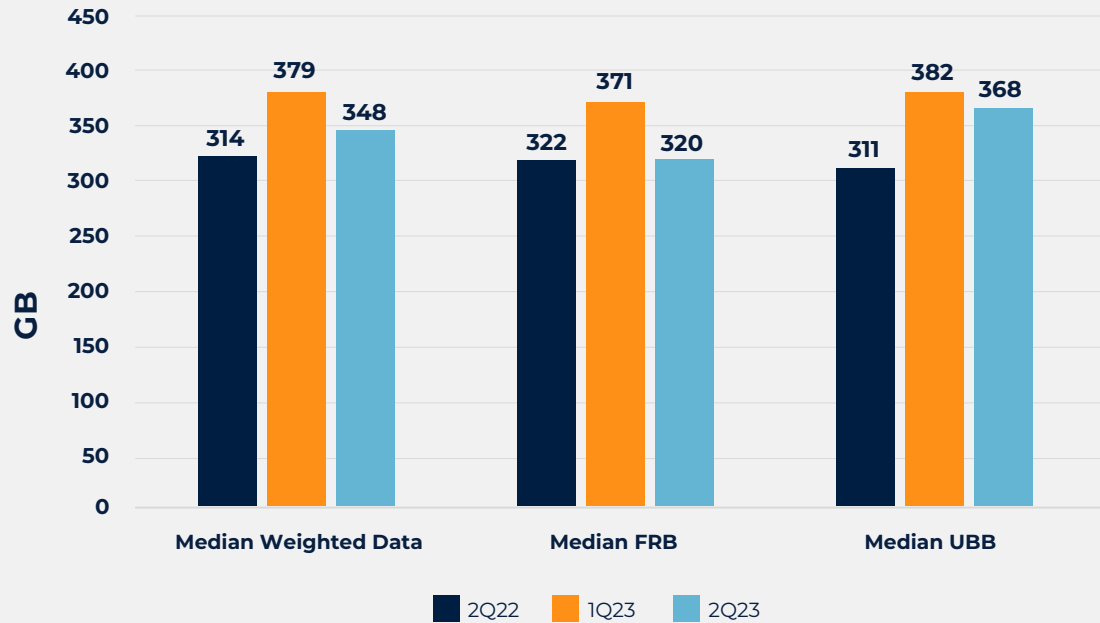
The monthly weighted average data consumed by subscribers in 2Q23 was 533.8 GB, up 9% from 2Q22's average of 490.7 GB. The weighted average is down 4.8% from the previous quarter (1Q23), which is consistent with historical second quarter seasonal patterns. Weighted averages combine data from all subscribers.

- Notably, year-over-year upstream data usage growth (14.8%) was greater than downstream data usage growth (8.4%) in 2Q23.
- Average consumption by UBB subscribers has increased 11.8% vs. the previous year and continues to grow faster than for FRB subscribers (4% YoY).
- The average amount of data consumed by UBB subscribers, which caught up to FRB subscribers' usage in 1Q23, now eclipses that of consumers on FRB plans. As UBB subscribers have outpaced their FRB counterparts in upgrading to faster speed tiers, their average data usage reached 545.2 GB, compared to 518.1 GB among FRB subscribers.



FIGURE 2

## Median Usage Trends by Billing Type — 2Q23



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- The monthly weighted median usage in 2Q23 was 348 GB, up 10.7% from 314 GB a year ago.
- In 1Q23, median usage among UBB subscribers surpassed that of FRB subscribers for the first time. This trend continues in 2Q23, with median usage at 368 GB vs. 320 GB among UBB and FRB subscribers, respectively.

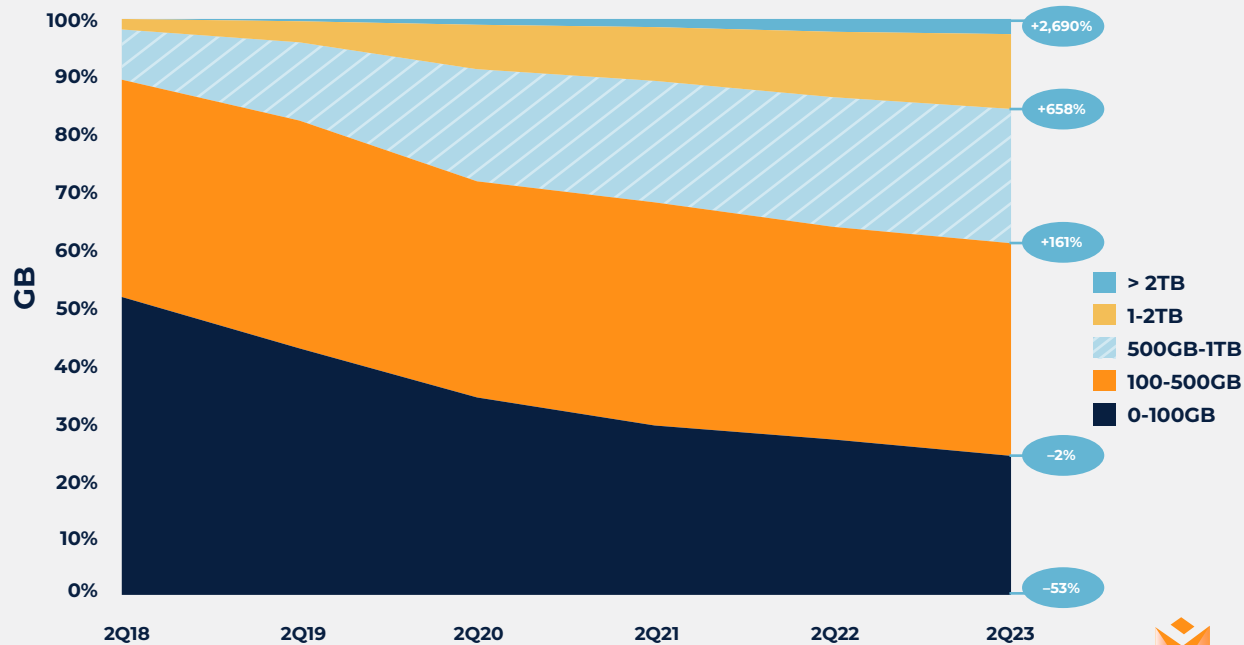


# Bandwidth Usage Growth

As average monthly data usage continues to shift, so does the pattern of individual consumption. The percentage of power users (>1 TB per month) now is nearly eight times greater than it was five years ago (15% vs. 1.8%), while the percentage of subscribers using 100 GB or less per month is half what it was in 2Q18 (24.2% vs. 51.6%). Operators must proactively monitor and adapt to these growth trends to ensure their networks are effectively managed and optimized.

FIGURE 3

### Bandwidth Usage Distribution Trending — 2Q18 to 2Q23

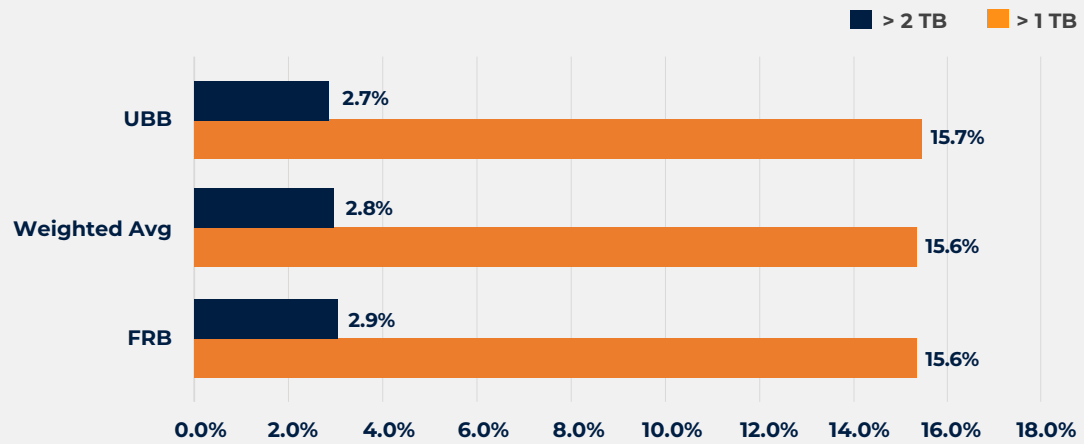


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FIGURE 4

## Power Users Monthly Consumption — 2Q23



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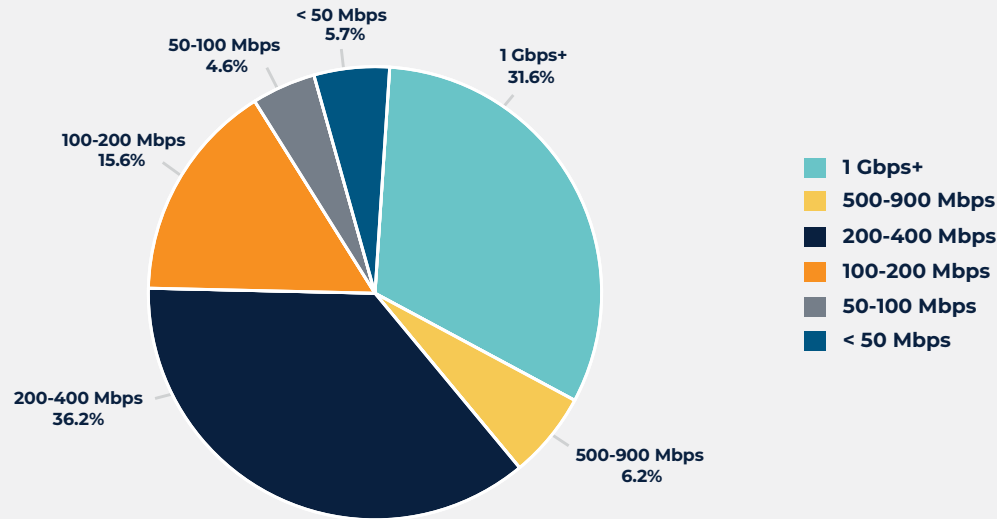


- The percentage of power users consuming 1 TB or more per month in 2Q23 was 15.6%, a year-over-year increase of 14.5%.
- Super power users consuming 2 TB or more per month rose to 2.8% in 2Q23 from 2.2% a year earlier, a 26.2% YoY increase.



FIGURE 5

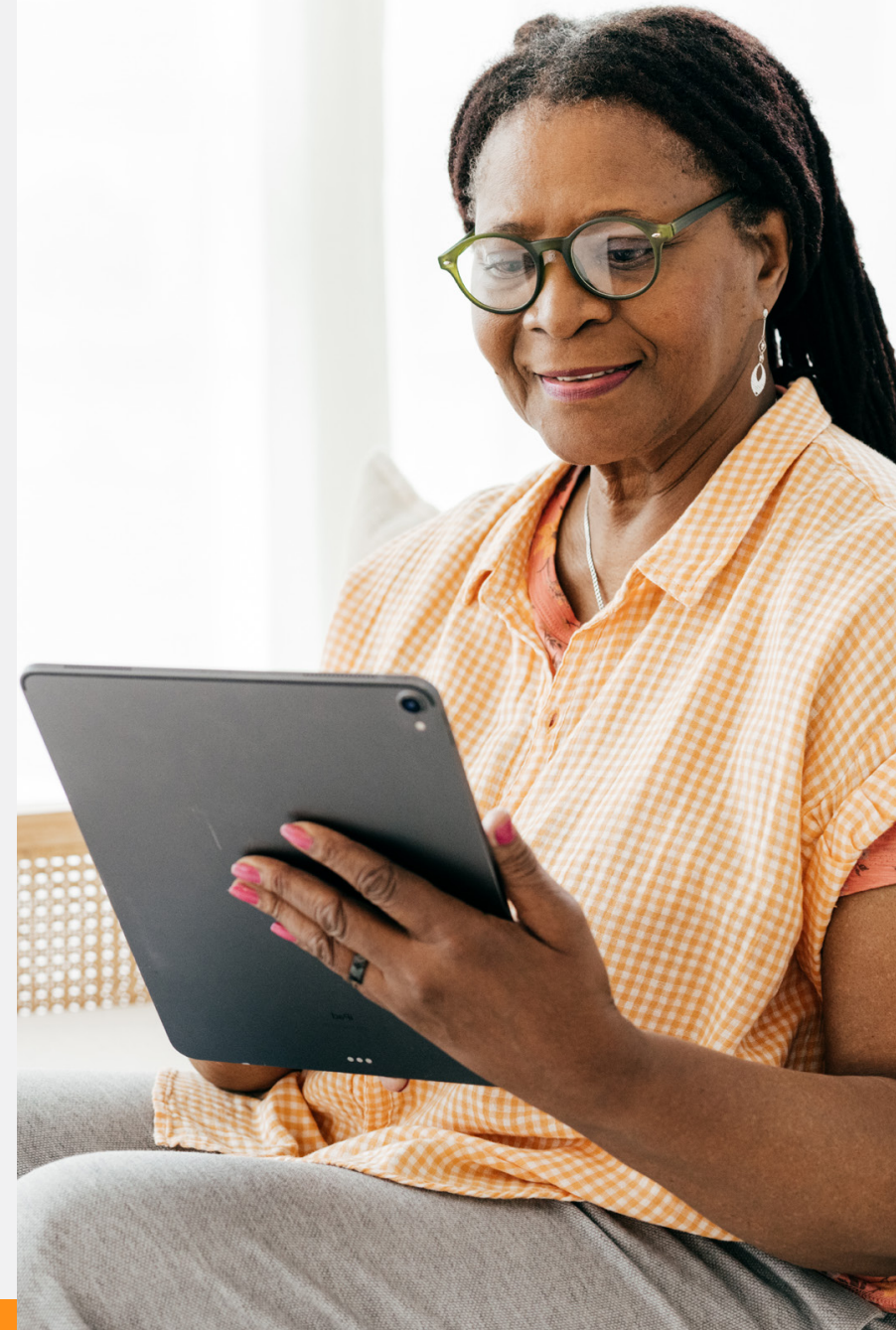
## Provisioned Broadband Speeds — 2Q23



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- The percentage of subscribers on gigabit speed tiers reached 31.6% in 2Q23, an all-time high and more than twice the percentage observed one year ago (14.2%).
- There are now 3.5x more UBB subscribers (44.5%) than FRB subscribers (12.5%) provisioned for gig+ speeds, the widest gap observed thus far.
- FRB operators have 2x more subscribers than UBB operators in speed tiers below 200 Mbps (37.1% vs. 18.4%).
- The percentage of subscribers provisioned for speeds under 100 Mbps (10%) continues to decrease, dropping 30% since 2Q22.





# Application Categories Driving Data Traffic

For the first time, OpenVault identified the primary application categories driving data traffic, then analyzed differences by subscriber segment. Segments were identified as Power Users (>1 TB), Average Users (400–600 GB) and Light Users (<100 GB), based on average monthly data usage. As Figure 6 shows, streaming accounts for the largest proportion of data consumed by far, followed by gaming and social media.



## Streaming data

includes any media content, live or recorded (e.g., movies, TV programs, videos, podcasts, music, etc.).



## Gaming data

includes any type of game that is played online or through an internet connection (e.g., simulation, sports, action-adventure, online battle arena, real-time strategy, role-playing, etc.).



## Social media data

includes any data transferred to/from social media platforms (e.g., Facebook, Instagram, TikTok, Snapchat, YouTube, LinkedIn, Twitter, WhatsApp, etc.).



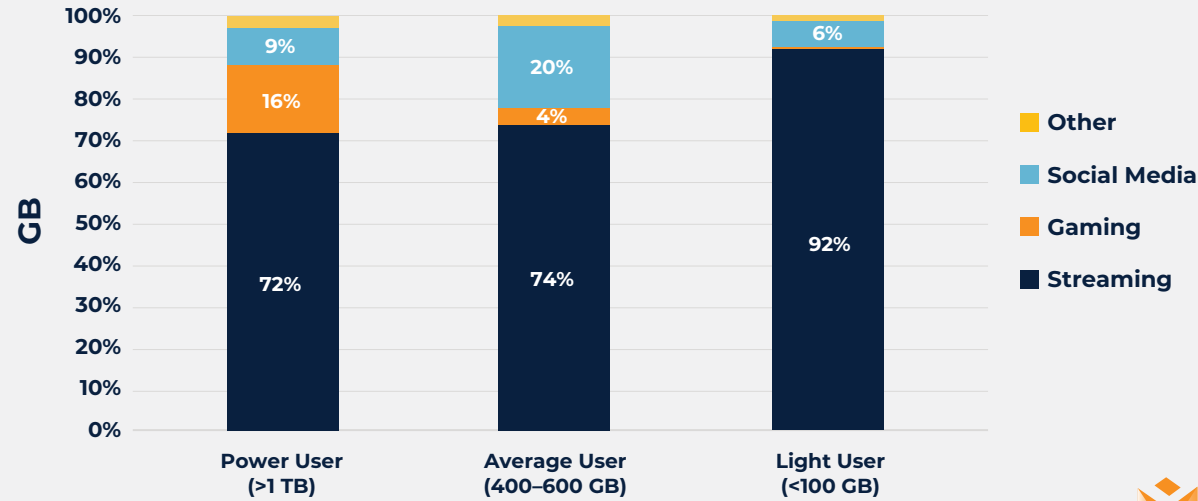
## "Other" data

mainly includes file transfers and video or audio conferencing.



FIGURE 6

## Applications Driving Data Traffic by Subscriber Segment — 2Q23



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- The proportion of streaming data used by Power Users and Average Users is similar (72% and 74%, respectively), though Power Users' volume of data (2.211 TB/month) is nearly 6x the 377 GB/month data used by Average Users.
- Power Users spend significantly more data – 16% vs. 4% – on gaming than do Average Users. Power Users' 498 GB/month gaming usage is 22.7x higher than Average Users' 21 GB/month.
- Average Users devote a significantly higher portion of consumption (20%) to social usage than do Power Users (9%) and Light Users (6%).
- At 92% of total usage, streaming activity is particularly prominent among Light Users.



# Affordable Connectivity Plan (ACP) Usage

As observed since 2Q22, ACP participants continue to use more data than the average subscriber. That trend continues one year later, and upon further examination, there are noticeable differences across specific groups of ACP participants.



**The ACP program** provides a \$30 per month subsidy that can be applied towards a monthly internet subscription.

Many participants subscribe to internet plans that are covered in full by the \$30 subsidy (considered fully subsidized). Others apply the \$30 toward a higher-priced plan with a faster speed (considered partially subsidized).

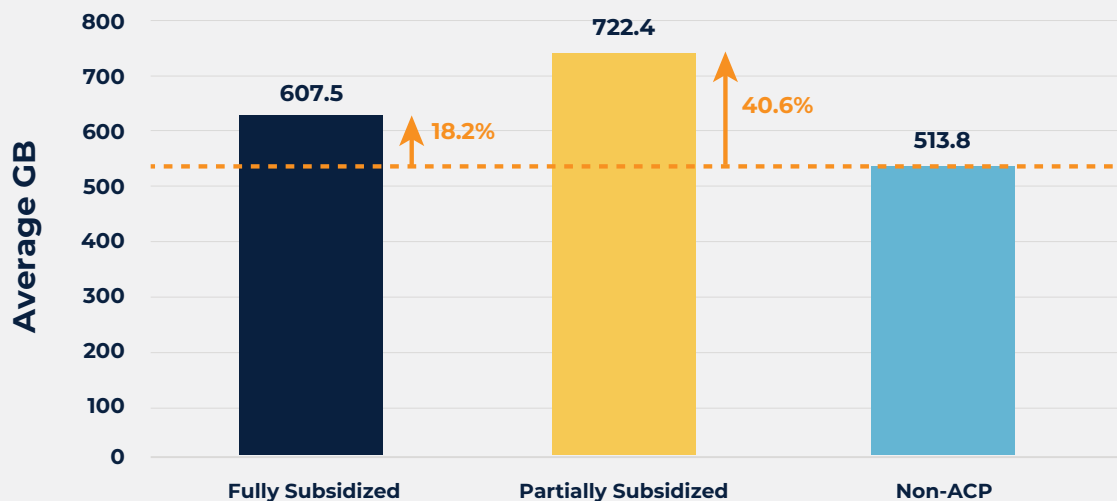


In this edition of the OVBI report, OpenVault analyzed data usage between fully and partially subsidized ACP participants. Partially subsidized ACP participants consumed 40.6% more data than non-ACP subscribers.

Comparatively, fully subsidized participants who receive slower speed tiers (50–75 Mbps) consumed just 18.2% more data (Figure 7). The faster speed tiers adopted by partially subsidized ACP subscribers lead to higher data consumption, compared to fully subsidized participants.

FIGURE 7

### ACP vs. Non-ACP Data Usage — 2Q23



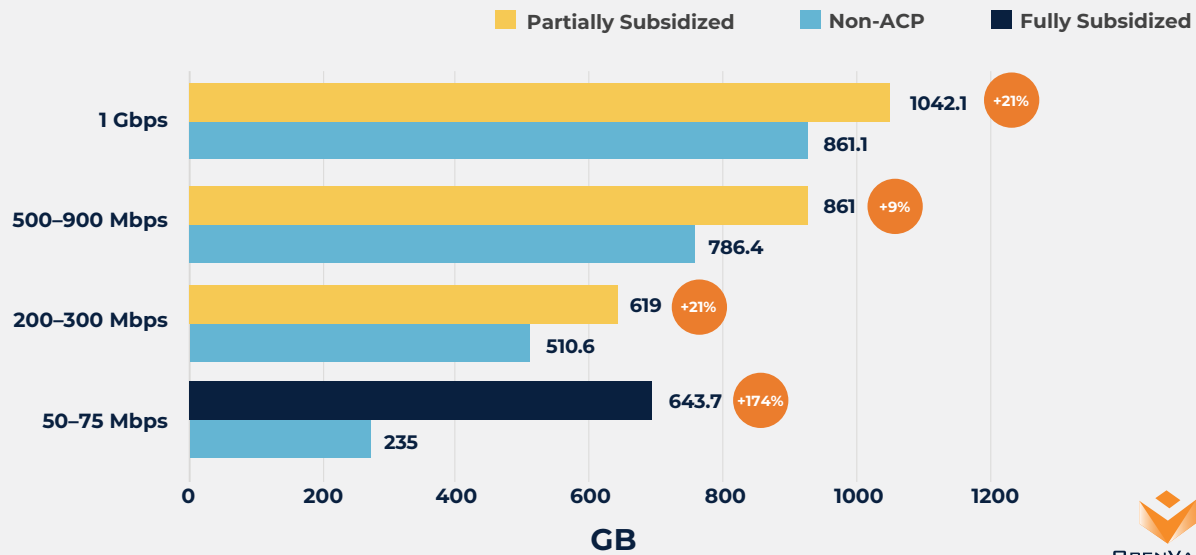
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Differences in data usage between ACP participants and non-ACP subscribers were observed across all speed tiers. Fully subsidized subscribers predominantly receive a 50–75 Mbps package; in 2Q23, they averaged 174% more data usage than non-ACP subscribers in the same speed tier. The partially subsidized averaged significantly more usage than non-ACP subscribers across the faster speed tiers. Percentages represent the difference in average usage between subsidized and non-subsidized (non-ACP) subscribers (Figure 8).

**FIGURE 8**

### ACP vs. Non-ACP Speed Tier Usage Comparison — 2Q23



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# Industry Observations

Below are recent milestones or data equivalences that put the observations noted in this OVBI 2Q23 report into perspective.



**232.5 Million**  
Netflix subscribers worldwide  
*Source: Statista*




**44%**  
Viewers who say they watch less TV as a result of live streaming  
*Source: IAB*




**\$247 Billion**  
The global live streaming market revenue estimated by 2027  
*Source: Market Research Future*



**67%**  
Viewers who say video quality is the #1 factor when watching a live stream  
*Source: Livestream*



**500 Mbps**  
Speed needed for 4K quality resolution  
*Source: Software Testing Help*



**2.9 Million**  
Viewers who watched the "Succession" Series Finale on HBO  
*Source: New York Times*



# OpenVault's Average Broadband Household Index — 2Q23

A snapshot of the average U.S. broadband household.



**533.8 GB**

Average Bandwidth Usage



**503.7 GB**

Average Downstream Usage



**36.1 GB**

Average Upstream Usage



**498 Mbps**

Average Downstream Speed



**35.8 Mbps**

Average Upstream Speed



# Conclusion

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Knowing what and who is driving the most data traffic gives operators more detailed insights to help them manage and optimize their networks effectively. Power Users want bandwidth for streaming and gaming traffic, Average Users for streaming and social media, and Light Users for streaming more than anything else. Operators need to ensure that their networks are proactively monitored and maintained to ensure satisfactory experiences for all three subscriber levels.

All ACP participants have a stronger appetite for broadband than the average subscriber, even fully subsidized participants at the lowest speed tiers. As the ACP subscriber base expands, operators will benefit from monitoring the numbers of partially and fully subsidized customers, the speed tiers adopted by the partially subsidized, and the rate at which fully subsidized subscribers upgrade their plans.

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**By understanding how subscribers consume data to the application level, broadband providers can implement the right tools to make sure networks are operating at peak performance.**

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# OpenVault Solutions to Address This Report's Insights

From network congestion to increasing revenue, OpenVault offers solutions to improve the value of broadband networks. Three of the solutions associated with this report's insights are:



## Dynamic Network Health Through Congestion Management and Capacity Boosting

For providers that have invested in DOCSIS networks, OpenVault offers a means to improve the network's performance and value without significant capital expenditure. Broadband providers can deploy a closed-loop and automated data-driven solution that identifies performance issues, pinpoints plant impairments and prioritizes areas to address. OpenVault can dynamically optimize bandwidth in DOCSIS 3.1 and 4.0 networks via direct CMTS (CCAP) integration through the OpenVault profile management application (PMA). While PMA enables the optimization of bandwidth, OpenVault's proactive network maintenance (PNM) application enables cable operators to quickly identify and resolve the root cause of the underlying impairments that cause degraded quality of experience (QoE) for the subscriber.



## Subscriber Upgrade Candidates

Now broadband providers can identify, in near real-time, subscribers with usage behavior that approaches the maximum speed of their service packages. Perfect candidates for upgrading to higher-speed and more provider-lucrative plans, targeted subscribers will experience higher QoE and reduce their need for customer care.



## ACP Reporting

OpenVault makes Affordable Connectivity Program audit reporting a simple process. OpenVault's access to subscriber usage data enables us to track usage/zero usage calculating as defined by the FCC. These reports provide a list of accounts that have hit the threshold for consecutive days with zero usage (also as defined by the FCC): 15 Days; 30 Days; or 45 Days. Also included are MAC addresses; billing account; usage by month – upstream, downstream, and total; as well as a data repository providing multiple years of history.

Learn more about these and other revenue-increasing and network management solutions at [OpenVault.com](https://OpenVault.com).



# About OpenVault

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OpenVault is a market-leading source of broadband technology solutions and data-driven insights into worldwide broadband consumption patterns. OpenVault's cloud-based, SaaS solutions and tools help service providers optimize network performance, increase revenue, and improve subscriber satisfaction. OpenVault aggregates and analyzes the resulting market data to provide unparalleled granular views of consumer usage that can be used to anticipate residential and business broadband trends.

For more information, please visit [openvault.com](https://openvault.com) or contact us directly:

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