

## Overview of the BEAD Program

The Broadband Equity, Access, and Deployment (BEAD) Program is a government initiative aimed at ensuring that all communities have access to reliable and high-speed internet service. This program works by providing funding opportunities and resources to expand broadband infrastructure in underserved and rural areas, as well as to support digital literacy and adoption programs. Overall, the BEAD Program plays a crucial role in promoting digital equity and ensuring that all individuals and communities have the opportunity to benefit from the advantages of high-speed internet access. By addressing the disparities in broadband access and investing in infrastructure and digital skills training, the BEAD Program is helping to create a more connected and inclusive society.



## Data Usage by Average Household

The average household is using 3.5 times the amount of internet data they were five years ago. The average household is using 38 times the amount of internet data they were ten years ago. If this trend continues, we estimate the average internet customer will hit ISP data caps and pay associated overage fees by 2023. The number of internet users is expected to increase 47% from 5.35 billion users in 2024 to 7.9 billion users in 2029.

## Broadband Solutions and Public Awareness

The BEAD Program also has provisions for incentivizing innovative broadband technologies and solutions, such as next-generation wireless connectivity, satellite internet, or fiber optic deployments. By encouraging the adoption of cutting-edge technologies, the program ensures that communities have access to the most advanced and efficient broadband infrastructure available. Additionally, the BEAD Program involves public awareness campaigns to inform residents in underserved areas about the benefits of expanded broadband access and the resources available to them. This aims to increase take-up rates and usage of the new infrastructure. Furthermore, the program includes measures to address cybersecurity and privacy considerations to safeguard the integrity of the broadband networks and protect user data in line with regulatory standards.

## Broadband Infrastructure Equipment Utilized in the BEAD Program

The BEAD Program incorporates a variety of essential equipment, including industry-standard switches and routers, to support the expansion of broadband infrastructure. These devices are commonly deployed in network aggregation and core layers, ensuring efficient data transmission and reliable connectivity. Additionally, the program utilizes fiber optic connectors, compliant with industry-standard TIA/EIA and Telcordia GR-326-CORE specifications. This enables high-density fiber deployments and ensures reliable fiber optic connectivity across diverse environments.



## **Wireless Technologies and Connectivity Solutions Implemented by the BEAD Program**

Furthermore, the BEAD Program integrates wireless bridges, equipped with industry-standard 5GHz and 24GHz frequency bands, to extend broadband access to remote and underserved regions. These wireless technologies comply with FCC Part 15 regulations and are designed to deliver high-speed internet connectivity over long distances. Alongside this, the program utilizes coaxial cables, meeting industry-standard IEC and TIA/EIA-568C specifications, to provide robust and low-loss signal transmission in challenging outdoor environments.

## **Cybersecurity and Enclosure Solutions Ensuring Compliance and Data Protection**

In addition, the BEAD Program emphasizes the deployment of next-generation firewalls, compliant with industry-standard NIST and ISO regulations, to secure broadband networks and protect user data from cyber threats. As part of the cybersecurity framework, the program leverages enclosures built to NEMA 4X and IP66 standards to house critical equipment.

## **Program Governance and Infrastructure Partnership**

Specific eligibility criteria, regulations governing fund usage, reporting and accountability requirements, and standards for infrastructure deployment are likely in place to ensure that funds

are used effectively and that broadband access is expanded in a reliable and equitable manner. In addition to funding infrastructure expansion, the BEAD Program may also involve partnerships with local community organizations, internet service providers, and technology companies to implement initiatives that promote digital literacy and skills training. These partnerships can help ensure that underserved communities not only gain access to broadband infrastructure but also have the resources and knowledge to maximize the benefits of high-speed internet. Furthermore, the program may include provisions for monitoring the impact of broadband expansion on community development, economic growth, and educational outcomes. This will assess the effectiveness of the initiatives and make any necessary adjustments for continuous improvement.





## **The NTIA**

The National Telecommunications and Information Administration (NTIA) plays a crucial role in the implementation and oversight of the Broadband Equity, Access, and Deployment (BEAD) program. Established as part of the Infrastructure Investment and Jobs Act, the BEAD program aims to promote equitable access to high-speed internet across the United States, particularly in underserved and rural areas.



The NTIA is responsible for managing the allocation of federal funding to states and territories, enabling them to develop and expand broadband infrastructure. This includes coordinating with local governments, community organizations, and private sector partners to ensure that investments are targeted effectively and that the benefits of improved connectivity reach those who need it most.

Through the BEAD program, the NTIA emphasizes the importance of digital equity, helping to bridge the digital divide and foster economic growth. Their involvement includes setting guidelines for project proposals, ensuring compliance with federal standards, and providing technical assistance to enhance the effectiveness of broadband deployment efforts. By prioritizing accessibility and affordability, the NTIA's role is vital in shaping a future where high-speed internet is a universal utility for all Americans.

## **DDB's Statement**

DDB Unlimited, a leading provider of outdoor enclosures and equipment, can play a vital role in supporting the Broadband Equity, Access, and Deployment (BEAD) Program. DDB Unlimited offers a range of rugged enclosures and cabinets specifically designed to house and protect sensitive broadband infrastructure equipment. By providing durable and weather-resistant enclosures, DDB Unlimited ensures that the critical broadband infrastructure deployed as part of the BEAD Program is well-protected from harsh environmental conditions, vandalism, and theft. The company's expertise in designing and manufacturing these enclosures can contribute to the overall reliability and longevity of broadband infrastructure, which is crucial for delivering consistent and high-quality internet access to underserved communities.

Furthermore, DDB Unlimited's solutions can support the expansion of broadband access by enabling the deployment of network equipment in remote and challenging locations. The company's innovative enclosures are engineered to withstand extreme temperatures, moisture, and other environmental factors, making them suitable for outdoor installations in diverse geographical settings. By partnering with DDB Unlimited, the BEAD Program can ensure that the broadband infrastructure it funds is housed in secure and resilient enclosures, thereby contributing to the program's overall success in providing equitable access to high-speed internet.