

# 2023 Trends in the Broadband Industry

A growing crop of competitive players is emerging to shake up the broadband market with a new set of fiber-based symmetrical services for consumers and businesses.

By Gary Bolton / *Fiber Broadband Association*

The broadband industry's prospects couldn't look brighter for 2023. Hundreds of billions of dollars in federal and private capital are flowing into building fiber networks to close the digital divide for the unserved and underserved.

Meanwhile, a new wave of competition is starting to surge between broadband internet service providers building new fiber networks and MSOs investing more in fiber to deliver symmetrical and 10 Gbps speeds.

Here are five key trends that will emerge over the next year:

- **Prioritizing Workforce Development Will Be Critical to Broadband Infrastructure Deployment:**

Workforce development will become a focused effort to meet the demand for broadband communications workers over the next five years. The Fiber Broadband Association (FBA) estimates that the nation needs more than 200,000 fiber optic technicians. Creating a sustainable pipeline for training and certifying this workforce is critical to local efforts. Plus, workforce development is an eligible expense under the \$42.45 billion Broadband Equity, Access, and Deployment (BEAD) Program. Getting the required number of skilled technicians to fill the need in the industry can be completed with an all-hands effort, including participation by the public sector, private sector, industry associations and educational institutions.

- **Taking the Quantum Leap:** 2023 will be the year that the quantum internet will begin registering on everyone's radar. On November 29, 2022, EPB of Chattanooga announced the launch of the world's first commercial quantum network. Quantum technology is not just a step function improvement over classical technologies: It is more than a billion times more potent in solving certain types of problems. Quantum networks provide ultra-secure communications and quantum sensing that can detect significant weather events, such as tornados and earthquakes. They can also network cloud-based quantum computers. Next-generation quantum networks will enable people to provide advance warnings of tornados and earthquakes, create cures for specific cancer types, improve manufacturing modeling and improve supply chain delivery. Quantum networks require fiber, so any community that doesn't invest in a fiber network will be left on the wrong side of a quantum divide.

- **Technology Neutral Is a Career Killer:** In 2023, any politician who utters the phrase "technology neutral" will be run out of town on a rail and not be reelected. The U.S. has an opportunity to build critical broadband infrastructure for the future that must provide the capacity and performance for today and usher in the next generation of quantum networks and the metaverse. It must also support intelligent grid modernization, public safety and new services such as 5G mobile communications. Fiber deployment will bring jobs, economic development and access to education and health care and will close the digital divide.
- **Zero Carbon Footprint:** Sustainability is a priority in Europe and some leading nations. The U.S. will finally begin including sustainability requirements and metrics in RFPs and broadband grant applications, and broadband internet service providers will begin becoming accountable for the number of active (powered) components in their networks. The latest FBA studies show that when fiber is deployed to every home across the U.S., it will be the equivalent of taking 11 million cars off the road from a carbon reduction perspective. Let's think green, or in this case, *fiber*, in 2023.
- **All PON All the Time:** Though 10G XGS-PON will be the predominant technology operators deploy in 2023, leading-edge broadband service providers, large and small, are already moving to 25G PON to support multi-gig service to homes. At Fiber Connect 2022 in Nashville last June, Nokia unveiled a 100G PON live demo. Terabit PON is just around the corner as a combination of improved optics and DSP signal processing will continue to increase speeds and performance for homes and businesses, enabling the adoption of AI, advanced telehealth, AR/VR and whatever else the future holds. 🌱



*Gary Bolton is the president and CEO of the Fiber Broadband Association.*