

Intelligent Networks: Powering Artificial Intelligence and Transforming Communications

Testimony for the Record Submitted to the U.S. Senate Committee on
Commerce, Science, and Transportation

Subcommittee on Telecommunications and Media

Dan Watermeier, Nebraska Public Service Commission, 1st District

Good morning, Chair Fischer and members of the Committee. My name is Dan Watermeier, and I represent Nebraska's First District on the Nebraska Public Service Commission. I appreciate the invitation to speak to you today about the future of AI technology and the opportunities – and the challenges – it offers in Nebraska and on the national scale.

The Nebraska Public Service Commission is dedicated to the advancement of broadband funding. Since the early 2000s, we have administered the Nebraska Universal Service Fund, which now supports the development and maintenance of broadband-capable networks at speeds of at least 100/100 Mbps. We have also administered the Nebraska Broadband Bridge Program and the federally funded Capital Projects Fund, which over the course of just a few grant cycles funded broadband deployment projects and fueled competition to build new service to nearly 20,000 unserved and underserved locations across the state.

Over the past five years, we have been fortunate to receive federal and state support for this work. I'm excited to see how this enthusiasm will grow as we develop new AI tools. In Nebraska, AI could become a tremendous support for our agricultural producers. Precision agriculture tools are fantastic ways to conserve water, monitor livestock health, and target application of fertilizers and pesticides, saving our farmers money and protecting the environment at the same time. These AI-powered tools are the future of agriculture. But we need reliable, universally available broadband in order to use them.

As adoption of – and reliance on – AI technology increases, it will become even more important to ensure that all Americans have access to reliable, high-speed broadband networks. We need to ensure that rural Americans are not left behind as this technology moves forward. For the average citizen, AI technology is only useful if they have access to broadband connectivity. We must continue funding rural buildout, or this technology simply won't be available for all who need it.

I also want to mention the importance of fiber buildout for an AI future. While we recognize that many technologies may be able to deliver broadband to our citizens, our commission has focused on fiber deployments for a few reasons:

- **First**, scalability. Not every technology can easily meet the FCC's current 100/20 Mbps threshold defining broadband-capable speed. Meanwhile, fiber-optic networks can greatly exceed those speed thresholds, and are capable of meeting our needs into the foreseeable future. I want to point out that data centers aren't using wireless or satellite technology to move data – they are using fiber.
- **Second**, supporting development. Fiber is the backbone for basically all other technologies. We need fiber-based networks to support wireless, fixed wireless, and cable networks.
- **Third**, reliability. Buried fiber is much less susceptible to weather hazards and natural disasters. Fires, tornadoes, and ice storms in recent years in Nebraska have shown the need for the resiliency that fiber can provide.

I also want to mention that deploying broadband infrastructure will not be enough if these networks are not maintained. We have heard from industry providers that although the investment in fiber itself may last for 40 years, the circuitry required by fiber must be upgraded much more frequently to accommodate changing technology. This is to be expected as demands on the networks for download and upload capacity, as well as latency demands, continue to grow. The tasks AI is capable of today will be eclipsed by what it can do five years from now – so long as the network is upgraded to keep up. For that reason, I want to emphasize that new buildout must be as future-proof as possible in the face of developing technology.

Senator Fischer, I know that you recognize the importance of maintaining broadband networks. Hopefully it is clear that AI technology is dependent on these networks. I also think it is important to recognize that many of these networks are supported through federal and state universal service funds. I, and the Nebraskans I represent, are grateful for your work and the work of your colleagues on the Universal Service Fund Working Group. I look forward to hearing the group's recommendations for the future of the USF. I know there is discussion as to how the federal USF is funded. I would just point out that AI creates, and will create, significant demand on the network – a network that is supported today through surcharges on voice service.

Thank you for the invitation to speak with you today. I'm happy to answer any questions you may have.