March 27, 2019

Sen. Roger Wicker
Committee on Commerce, Science,
and Transportation
512 DSOB
Washington DC, 20510

Sen. Maria Cantwell, Ranking Member
Committee on Commerce, Science,
and Transportation
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Washington DC, 20510

Dear Chairman Wicker and Ranking Member Cantwell:

As you consider legislation to improve America's infrastructure, we urge you to incorporate advanced technologies to help make the infrastructure safer, more resilient, and longer lasting.

A critical "smart infrastructure" technology is fiber optic sensing, currently used around the world to monitor the condition and integrity of many critical infrastructure assets. The fiber optic cable buried next to or attached to the infrastructure acts as a sensor that provides earlier warning of potential issues or monitors the activity along the asset, helping with safety and efficiency.

This technology is installed on more than 100,000 miles of infrastructure around the world for different applications. Here are some specific examples:

* Near Erie, Pennsylvania, Class 1 railroad is fitted with fiber optic sensing to monitor for rail breaks, wheel flats, and railway intrusions;
* Beneath the streets of Indianapolis, fiber optic sensing is used to monitor Indianapolis Power & Light's power network for signs of overheating, cable faults or unauthorized activity;
* In North Dakota, the State DOT uses a fiber buried alongside the I-29 to monitor traffic flows with higher accuracy and speed of congestion detection;
* In Colorado, I-70's Eisenhower-Johnson Memorial Tunnel employs fiber optic sensing as heat detection to determine temperature anomalies with pinpoint accuracy;
* A 1,000-mile West Texas pipeline uses fiber optic sensing for leak detection and intrusion detection from construction activity;
* Numerous power facilities, military bases, airports, and dams around the world utilize fiber optic sensing for 24/7 security and safety monitoring;

Incorporating a fiber optic cable and sensing into the nation's infrastructure will enhance safety, improve physical integrity, lower maintenance costs, and increase resilience. It is a key technology to enable smart infrastructure. The same fiber optic cable can also provide high bandwidth data backbones, meaning the United States can leverage infrastructure investments for better national connectivity.

Thank you for your consideration. We look forward to working with you to make America's infrastructure the best in the world.

Sincerely

Mark Uncapher

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Executive Director - FOSA

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