



November 24, 2015

The Honorable John Thune
Chairman
U.S. Senate Committee on Commerce, Science, and Transportation
512 Dirksen Senate Office Building
Washington DC, 20510

Dear Chairman Thune:

Thank you for inviting Ericsson Vice President Bruce Morrison to appear before the U.S. Senate Committee on Commerce, Science, and Transportation at its hearing on “Removing Barriers to Wireless Broadband Deployment” on October 7. In response to the committee’s questions for the record, Mr. Morrison would like to offer the following responses:

Senator Deb Fischer

Question 1: *Mr. Morrison talked about a few new technologies that could change broadband infrastructure. Federal policy, however, can slow the implementation of these technologies or inhibit them altogether. Do you think there are structural changes that could be made to federal agencies that would encourage the integration of new technologies?*

Mr. Morrison: Yes Senator Fischer, federal policy can assist technology implementation by continuing to improve processes as they relate to: local jurisdictional review timelines (so-called shot clocks), environmental review processes, and use in the public right of way. New technology typically requires the swapping out or addition of new wireless equipment and as a result, having a streamlined process for carrier site modification is very important. This is not always captured however in shot-clock policy as deployment can involve replacing existing equipment (ground and antennas for example) or the expansion of additional equipment for other carriers.

Also, with new technologies comes the increased need for smaller, low-visibility sites that must be deployed to handle gaps in the network. These sites typically cover a lot less area than a typical wireless site, so the ability to deploy in a quick, cost-effective manner is very important and allows for better infrastructure build out. Many of these micro or small-cell sites have a minimal footprint and can be located in public right of ways such as rooftops and billboards.

It is important to note though that small-site technology shouldn’t be subject to the same scrutiny and processes as a full macro-site deployment. Many jurisdictions account for this methodology outside of wireless. For example, the permitting process to construct

an addition to an existing house is much more streamlined than one for an entirely new construction project. Wireless broadband infrastructure should benefit from a similar methodology.

Question 2: *Earlier this year Senator Klobuchar and I introduced the 'Rural Spectrum Accessibility Act,' which would incentivize wireless carriers to lease unused spectrum to smaller rural carriers. Have any of the witnesses had an opportunity to review this proposal or others to incentivize spectrum sharing? Do you believe this would help expand access?*

Mr. Morrison: Ericsson believes that efforts to make broadband service available to unserved areas can reduce poverty, enable development, and foster better lives. Ericsson has the capability and capacity to support rural broadband infrastructure deployment at the request of our commercial customers, yet cost remains the biggest challenge in this area.

Proposals, such as the 'Rural Spectrum Accessibility Act,' that seek to incentivize major wireless carriers to collaborate with their smaller providers should be considered with the goal of expanding wireless broadband access to rural and underserved communities.

Senator Marco Rubio

Question 1: *Delays, needless paperwork, and moratoria mean higher costs for wireless infrastructure companies, correct? And would you agree that these factors contribute to less deployment? Would it be correct to conclude that many regulations ignore the realities of modern wireless technology - for instance, applying the same rules for constructing a new 200-foot tower to swapping out new antennas for older, existing ones?*

Mr. Morrison: Yes, Senator Rubio, the cost to deploy or build facilities is a key consideration when determining how to provide coverage to certain areas. Applying the same rules, regardless of the scope of the facility, typically slows down deployment however. Looking at low-impact sites (attaching antennas to existing structures, right of way deployment, and replacing existing equipment) under the same view as a full new tower site deployment typically incurs longer timeframes and costs despite the fact that any impact on the environment or community is usually negligible.

Also, due to new technologies, there is an increased need for smaller, low-visibility sites that need to be deployed to handle gaps in the network based on customer demands. These sites typically cover a lot less area than a typical wireless site, so the ability to deploy in a quick, cost-effective manner allows for a more efficient build out. Many jurisdictional codes and processes already account for different deployment

methodologies outside of wireless. Policymakers could help industry by applying similar approaches to wireless deployment.

Senator Steve Daines

Question 1: *Mr. Morrison, removing barriers to broadband deployment doesn't guarantee that companies will invest in networks in rural America. From your experience, what are some incentives that can encourage companies to serve rural consumers?*

Mr. Morrison: Thank you for the question Senator Daines. As a leader in the ICT industry, Ericsson aims to provide significant and measureable contributions to a sustainable 'Networked Society,' a world where individuals and industries are empowered to reach their full potential. To that end, Ericsson believes that efforts to make broadband service available to unserved areas, including those in Montana, can reduce poverty, enable development, and foster better lives. Ericsson has the capability and capacity to support rural broadband infrastructure deployment at the request of our commercial customers, yet cost remains the biggest challenge in this area.

Federal subsidies and allocation of funds to help with development have spurred deployment in the past. Additionally, facilitating the access or rights for low-band spectrum makes rural deployment more feasible due to signal strength. In addition, any incentives that can be provided to land and facility owners (public and private) for the placement of wireless equipment or to access utilities for power and backhaul needs would prove helpful as well.

Finally, to the extent that the federal government can incentivize investment by wireless carriers, through programs such as the 'Connect America Fund' (CAF) and the 'Mobility Fund,' rural and underserved communities will benefit greatly.

Additional Comments for the Record

In addition to these responses, we would also respectfully ask that the following additional comments be included in the record as amplified responses to those given by Mr. Morrison in person at the hearing. They include:

- In response to Senator Manchin's question (Page 74, line 16 of the unofficial transcript) about the 'Mobility Fund,' Mr. Morrison would like to add the following:

"Ericsson supports improving the 'Mobility Fund' by targeting funding allocated for infrastructure to the truly unserved areas that still exist in our nation today. In our written testimony, we highlighted this support and acknowledged Senator

Manchin's recent engagement with the FCC on this issue. We appreciate his leadership on this effort and recognize that he knows firsthand the challenges rural America faces with access to infrastructure. In terms of states with advanced wireless penetration, West Virginia ranks as one of the lowest, and that needs to change. Without investment by the federal government as well as incentives for private investment in such areas, states like West Virginia will never experience the full benefits of a networked society."

- In response to Senator Markey's question about the Federal Spectrum Incentive Act (Page 102, line 16 of the unofficial transcript), Mr. Morrison would like to add the following:

"Ericsson supports the advancement of legislative efforts, including the 'Federal Spectrum Incentive Act,' to clear underutilized spectrum currently held by the federal government for commercial, licensed broadband use. We applaud the leadership of Senators Markey and Fischer whose bill offers new incentives for federal agencies to relinquish badly-needed spectrum. This will ultimately make our networks more efficient, create jobs, raise revenue at a time when budgets are constrained, and foster innovation."

Thank you again for the opportunity to participate in this important public hearing. Do not hesitate to contact us should you have additional questions.

Sincerely,

Brian C. Jones
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Ericsson Inc.