

# Rural Broadband Task Force

Monday, December 10, 2018

9:30 a.m. to Noon CDT

Varner Hall, Lower Level, Board Room  
3835 Holdrege Street, Lincoln, Nebraska

Web streaming for up to 100 viewers will be available. Information for connecting via Zoom is included on the following page. Links to agendas, minutes, and meeting materials are available at [ruralbroadband.nebraska.gov](http://ruralbroadband.nebraska.gov)

## Agenda

9:30	<b>Opening Business</b> — <i>Ed Toner, Office of the Chief Information Officer</i>  Roll Call Notice of Posting of Agenda Notice of Nebraska Open Meetings Act Posting <b><i>Approval of the Nov. 7, 2018 minutes*</i></b>
9:40	<b>Public Comment</b>  <i>Public comment will be limited to 5 minutes per commenter. Written comments may be submitted at <a href="https://ruralbroadband.nebraska.gov/contact/contact.php">https://ruralbroadband.nebraska.gov/contact/contact.php</a> or e-mailed to <a href="mailto:ruralbroadband@nebraska.gov">ruralbroadband@nebraska.gov</a>.</i>
10:00	<b>Panel Discussion: Public-Private Partnerships</b> <b>Tentative Panelists:</b> <ul style="list-style-type: none"><li>○ Tom Shoemaker, Pinpoint Communications</li><li>○ Brian Thompson, Consolidated Telephone</li><li>○ Tim Lindahl, Wheat Belt Public Power District</li><li>○ Kim Christiansen, Nebraska Rural Electric Association</li></ul> <b><i>Formation of a Subcommittee*</i></b>
11:00	<b>Middle Mile Discussion</b> — <i>Jason Axthelm, NebraskaLink</i>
11:20	<b>Update on Subcommittees</b> <ul style="list-style-type: none"><li>• NUSF</li><li>• Broadband Data</li><li>• Broadband Technologies</li></ul>
11:30	<b>Adjourn</b>

The task force will attempt to adhere to the sequence of the published agenda, but reserves the right to adjust the order and timing of items and may elect to take action on any of the items listed.

Meeting announcement was posted on the Nebraska Public Meeting Website on Sept. 26, 2018 and on the Rural Broadband Task Force website on Sept. 28, 2018. The agenda was posted on the Rural Broadband Task Force website on December 3, 2018.

[Nebraska Open Meetings Act](#)

**Zoom Webinar Connection Instructions for General Public:**

Please click the link below to join the webinar:

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## **RURAL BROADBAND TASK FORCE**

Wednesday, November 7, 2018, 9:30 a.m. to Noon CDT  
Varner Hall, Lower Level, Board Room  
3835 Holdrege Street, Lincoln, Nebraska

### **MEMBERS PRESENT:**

Ed Toner, Chair, Nebraska Information Technology Commission  
Mary Ridder, Chair, Nebraska Public Service Commission  
Daniel Spray, Owner, Precision Technology  
Isaiah Graham, Vice-President, Homestead Bank  
Dave Rippe, Director, Nebraska Department of Economic Development  
Amelia Breinig, Designee for Steve Wellman, Director, Nebraska Dept of Agriculture  
Zachary Hunnicutt, Farmer, Hunnicutt Farms (Video)  
Tom Shoemaker, President, Pinpoint Communications  
Timothy Lindahl, CEO/General Manager, Wheat Belt Public Power District (Video)  
Andrew Buker, Executive Director of Infrastructure Services, University of Nebraska  
Ron Cone, Director of Network Information Services, ESU 10

**MEMBERS ABSENT:** Senator Curt Friesen, District 34, Chair, Transportation and Telecommunications Committee, Nebraska Legislature; Senator Bruce Bostelman, District 23, Nebraska Legislature; and Anna Turman, CEO, Chadron Community Hospital & Health Services

### **ROLL CALL, NOTICE OF POSTING OF AGENDA, NOTICE OF NEBRASKA OPEN MEETINGS ACT POSTING**

*Ed Toner*

Mr. Toner called the meeting to order at 9:32 a.m. Roll call was taken with eleven members in attendance. A quorum was present. The Nebraska Open Meetings Act was posted on the south wall. The meeting announcement was posted on the Nebraska Public Meeting website on September 26, 2018 and on the Rural Broadband Task Force website on September 28, 2018. The agenda was posted on the Rural Broadband Task Force website on November 1, 2018.

### **APPROVAL OF THE OCTOBER 15 MINUTES**

**Mr. Shoemaker moved to approve the October 15, 2018 meeting minutes as presented. Mr. Spray seconded. Roll call vote: Toner-Yes, Ridder-Yes, Rippe-Abstained, Breinig-Yes, Hunnicutt-Yes, Graham-Yes, Shoemaker-Yes, Spray-Yes, Lindahl-Yes, Buker-Yes, and Cone-Yes. Results: Yes-10, No-0, Abstained-1. Motion carried.**

### **RESOLUTION--DEFINITION OF RURAL, PRIORITIES, AND DEFINITIONS OF UNSERVED/UNDERSERVED\***

At the last meeting, the task force came to a consensus on a definition of rural, prioritization, and definitions of unserved and underserved. The definitions and priorities were drafted as a resolution. The members were given an opportunity to review it before formally adopting the definitions and prioritization. There was a recommendation to change the word "and" to "or" in the following sentence:

*"Open countryside with population densities less than 500 people per square mile ~~and~~ or places with fewer than 2,500 people."*

**Mr. Spray moved to approve the Resolution-Definition of Rural, Priorities, and Definitions of Unserved/Underserved with the recommended change. Ms. Ridder seconded. Roll call vote: Toner-Yes, Ridder-Yes, Rippe-Yes, Breinig-Yes, Hunnicutt-Yes, Graham-Yes, Shoemaker-Yes, Spray-Yes, Lindahl-Yes, Buker-Yes, and Cone-Yes. Results: Yes-11, No-0, Abstained-0. Motion carried.**

## **PANEL DISCUSSION: BROADBAND TECHNOLOGIES**

**Panelists:** Tom Shoemaker, Pinpoint Communications; Dan Spray, Connecting Point; Greg Baltzer, Geneva Broadband; Dr. Mehmet Can Vuran, University of Nebraska Lincoln; and Matt Larsen, Vistabeam

Ms. Byers moderated the panel. Mr. Larsen joined the panel late via Zoom. Panelists identified funding as the biggest challenge to providing broadband at higher speeds in rural areas. Other challenges identified included standardization, regulations including the FCC's limits on transmitter power, and transport/middle mile costs.

Panelists agreed that fiber is considered the best technology, but may not be financially feasible. Panelists discussed other technologies/spectrum, including:

- CBRN (3.65 GHz)
- TV white space
- 2.5 GHz spectrum
- Power line technologies

Dr. Vuran shared information on agricultural use cases for broadband, including soil monitoring for moisture for use in variable rate irrigation and imaging through the use of unmanned aerial vehicles (UAVs). Many agricultural Internet of Things applications will require a large coverage area, but will not require a high bandwidth.

The panel entertained questions from the task force members.

**Formation of a Subcommittee.** LB 994 charges the task force with reviewing “the feasibility of alternative technologies and providers in accelerating access to faster and more reliable broadband service for rural residents.” Discussion followed regarding establishing a subcommittee to study the issue and bring back findings to the task force. The task force agreed that forming a subcommittee would be the best way to address this requirement.

**Ms. Ridder moved to approve the formation of a subcommittee to examine the feasibility of alternative technologies and providers in accelerating access to faster and more reliable broadband service for rural residents. Mr. Cone seconded. Roll call vote: Rippe-Yes, Breinig-Yes, Hunnicutt-Yes, Graham-Yes, Shoemaker-Yes, Spray-Yes, Lindahl-Yes, Buker-Yes, Cone-Yes, Toner-Yes, Ridder-Yes. Results: Yes-11, No-0, Abstained-0. Motion carried.**

Mr. Toner asked if any members wished to volunteer to serve on the subcommittee. Dan Spray, Zachary Hunnicutt, and Ron Cone volunteered to serve on the Broadband Technologies Subcommittee.

## **PANEL DISCUSSION: RURAL BROADBAND COSTS AND BUSINESS CASE**

**Panelists:** Dan Spray, Connecting Point and Gary Warren, Hamilton Telecommunications

Mr. Warren shared data showing that the estimated annual gap between the cost of providing broadband in Nebraska and the available support is \$120,977,026. He also presented information showing that density is a very significant determinant of cost. The out-of-town portions of the Omaha area with 103.71 households per square mile have a monthly cost of \$19.93 per location. The out-of-town portions of the Mullen area with .11 households per square mile have a monthly cost of \$572.67 per location.

Mr. Spray presented information on fixed base wireless costs. He estimated the build costs for a fixed base wireless network with a 3-12 sector tower using 5 GHz with wireless backhaul in out would be \$6,000 to \$12,000. Customer premise equipment was estimated at \$500 per client. He noted that fixed wireless networks are typically rebuilt every 5-6 years. Estimated operating costs ranged from \$25-\$130 per month per client.

Mr. Warren and Mr. Spray entertained questions from the task force members.

## **WHAT OTHER STATES ARE DOING**

*Anne Byers, Nebraska Information Technology Commission*

Ms. Byers provided information on three states (Colorado, Minnesota and Utah) often cited as having successful broadband programs. Commonalities among these states include having a broadband plan with goals, coordinating broadband efforts among state agencies, and maintaining a broadband map. Colorado and Minnesota have had broadband grant programs.

Ms. Byers also provided information on neighboring states. Three neighboring states (Wyoming, Iowa, and Colorado) have funded broadband grant programs. Missouri has established a broadband grant program, but it is not yet funded. The Nebraska Internet Enhancement Fund has awarded \$735,000 in grants since 2001. Colorado, Kansas, Nebraska and Wyoming had high cost universal service programs in 2014. Nebraska and Colorado had broadband universal service programs in 2014. Iowa, Missouri, and South Dakota do not have broadband or high cost universal service programs.

## **WYOMING'S BROADBAND PLAN AND MAPPING EFFORT**

*Russ Elliott, State of Wyoming*

Mr. Elliott joined the meeting via video to talk about Wyoming's Broadband Plan and mapping efforts. Wyoming completed their plan in 38 days. Mr. Elliott suggested a meeting with Colorado, Wyoming and Nebraska for information sharing and to possibly collaborate efforts.

## **UPDATE ON SUBCOMMITTEES**

**NUSF Subcommittee.** Ms. Ridder reported that subcommittee will meet on November 19 at 8:00 a.m.

**Broadband Data.** Mr. Buker reported that the subcommittee will meet on November 19 at 1:30 p.m.

Mr. Toner invited interested stakeholders to contact Ms. Byers if they were interested in serving on the new subcommittee.

## **ADJOURNMENT**

**Mr. Spray moved to adjourn. Mr. Buker seconded. All were in favor. Motion carried.**

The meeting was adjourned at 11:58 a.m.

Meeting minutes were taken by Lori Lopez Urdiales and reviewed by Anne Byers, Office of the CIO/NITC.