

Rural Broadband Task Force

Friday, Sept. 20, 2019
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

Agenda

9:30	Opening Business — <i>Ed Toner, Office of the Chief Information Officer</i> Roll Call Notice of Posting of Agenda Notice of Nebraska Open Meetings Act Posting <u>Approval of the August 16, 2019 minutes*</u>
9:40	Public Comment <i>Public comment will be limited to 5 minutes per commenter. Written comments may be submitted at https://ruralbroadband.nebraska.gov/contact/contact.php or e-mailed to ruralbroadband@nebraska.gov. Written comments will be posted on the Rural Broadband Task Force website.</i>
10:20	Discussion and Approval of Findings and Recommendations <ul style="list-style-type: none">• NUSF Subcommittee• Public-Private Partnerships Subcommittee• Broadband Data• Broadband Technologies• Homework Gap and Leveraging Funding• Federal Broadband Rural Infrastructure Funds
12:00	Adjourn

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 and Rural Broadband Task Force Website on May 16, 2019. The agenda was posted on the Rural Broadband Task Force website on Sept. 11, 2019.

[Nebraska Open Meetings Act](#)

Zoom Webinar Connection Instructions for General Public:

Please click the link below to join the webinar:

<https://zoom.us/j/317811136>

Or Telephone:

US: +1 669 900 6833 or +1 646 558 8656

Webinar ID: 317 811 136

RURAL BROADBAND TASK FORCE
Friday, August 16, 2019, 9:30 a.m. to 12:00 noon CT
Governor's Mansion, Lower Level
1425 H Street, Lincoln, Nebraska

MINUTES

MEMBERS PRESENT:

Ed Toner, Chair, Nebraska Information Technology Commission
Mary Ridder, Chair, Nebraska Public Service Commission
Allison Hatch, Nebraska Department of Economic Development
Zachary Hunnicutt, Farmer, Hunnicutt Farms
Isaiah Graham, Vice-President, Homestead Bank
Daniel Spray, Owner, Precision Technology
Timothy Lindahl, CEO/General Manager, Wheat Belt Public Power District
Andrew Buker, Executive Director of Infrastructure Services, University of Nebraska
Ron Cone, Director of Network Information Services, ESU 10
Tom Shoemaker, President, Pinpoint Communications
Anna Turman, CEO, Chadron Community Hospital & Health Services

MEMBERS ABSENT: Senator Curt Friesen, Nebraska Legislature; Senator Bruce Bostelman, Nebraska Legislature; and Steve Wellman, Nebraska Department of Agriculture

OPENING BUSINESS, ROLL CALL NOTICE OF POSTING OF AGENDA NOTICE OF NEBRASKA OPEN MEETINGS ACT POSTING

Ed Toner, Office of the Chief Information Officer

Mr. Toner called the meeting to order at 9:30 a.m. Roll call was taken. Eleven voting members were present. A quorum existed to conduct official business.

The meeting announcement was posted on the Nebraska Public Meeting and Rural Broadband Task Force websites on May 16, 2019. The agenda was posted on the Rural Broadband Task Force website on August 12, 2019. The Nebraska Open Meetings Act was on the meeting table next to the recorder.

APPROVAL OF THE MAY 3, 2019 MINUTES*

Mr. Lindahl moved to approve the May 3, 2019 minutes as presented. Mr. Shoemaker seconded. Roll call vote: Toner-Yes, Ridder-Yes, Hatch-Yes, Hunnicutt-Yes, Graham-Yes, Shoemaker-Yes, Spray-Yes, Lindahl-Yes, Turman-Yes, Buker-Yes, and Cone-Yes. Results: Yes-11, No-0, Abstained-0. Motion carried.

LEGISLATIVE UPDATE

Tip O'Neill, Nebraska Legislature

Mr. O'Neill gave an update on LB 184, LR 166 and LR 175.

LB 184 Adopt the Small Wireless Facilities Deployment Act. LB 184 was approved by Governor Ricketts on May 17, 2019. The legislation ensures that wireless providers have access to right of ways, provides a uniform application process at the local level, and provides reasonable fees for rights-of-way and pole attachments. Rural areas may not benefit from small cell deployment initially. Deployment will start in cities where there is more density.

LR 166 Interim Study to Review the Report of the Rural Broadband Task Force. The interim hearing to discuss the findings of the Rural Broadband Task Force has been scheduled for Dec. 4.

LR 175 Interim Study to Ensure Accelerated Broadband Deployment Statewide. This interim study may also be scheduled for Dec. 4.

RURAL BROADBAND TASK FORCE REPORT WORK PLAN

Ed Toner, Office of the Chief Information Officer

Ed Toner reviewed the work plan. Although the task force will discuss the recommendations of the NUSF and Public-Private Partnership Subcommittees as well as recommendations for federal infrastructure funding, the task force will wait to approve the findings and recommendations until after there has been an opportunity for public comment at the beginning of the Sept. 20 meeting.

Members of the public can submit written comments via the comment and contact form on the Rural Broadband Task Force website any time up until Oct. 10. Comments will be forwarded on to task force members.

During the Sept. 20 meeting, the task force will also discuss the findings and recommendations of the Broadband Data, Broadband Technologies, and Homework Gap and Leveraging Funding Subcommittees.

A draft report will be available by Thursday, Sept. 26. Written comments on the report will be accepted until Thursday, Oct. 10. Written comments will be sent to task force members no later than Oct. 15.

NUSF SUBCOMMITTEE FINDINGS AND RECOMMENDATIONS

Mr. Toner thanked Mary Ridder, Tom Shoemaker, and Dan Spray for their work on the NUSF Subcommittee and Tom Shoemaker and Tim Lindahl for their work on the Public-Private Partnerships Subcommittee. He also thanked Cullen Robbins from the Public Service Commission and Anne Byers and Tom Rolfes for their assistance.

Ms. Ridder commented that the subcommittee process has worked very well. She discussed the following recommendations of the NUSF Subcommittee:

- Support the Nebraska Public Service Commission's efforts to stabilize the Nebraska Universal Service Fund by modernizing the contribution system.
- Support the Nebraska Public Service Commission's efforts to modernize the distribution method and improve provider accountability through the system of grant-like awards for broadband infrastructure projects.
- Encourage the Nebraska Public Service Commission to continue to investigate, through their Rules and Regulations 202 docket, a state-run reverse auction as a mechanism to spur broadband build out in rural areas.
- Monitor the implementation of the FCC's Connect America Fund II Reverse Auction to evaluate the success of the program and to identify any key lessons learned.
- Encourage the Nebraska Public Service Commission to explore alternate methods for redirecting support that allow for more collaboration between not only the incumbent and competitive carriers, but also the local business community, both main street and agriculture, as well hospitals, schools, municipalities, counties, and public power providers.

The NUSF Subcommittee also recommended including an additional recommendation:

- Examine how the Nebraska Public Service Commission currently collects information from carriers at the exchange level:
 - On what they built out the previous year and how the build out was funded, and
 - What their build out plans are for the next 3 to 5 years and how they intend to pay for that

Determine if the collection of this data could be improved.

Task Force members were given an opportunity to ask questions and provide input. There were no recommended changes and/or additions from the task force.

PUBLIC-PRIVATE PARTNERSHIP SUBCOMMITTEE FINDINGS AND RECOMMENDATIONS

Tim Lindahl and Tom Shoemaker discussed the findings and recommendations of the Public-Private Partnership Subcommittee.

Recommendations

- Encourage local and regional broadband planning. Each community, county or region is different and will likely require a unique solution. Bringing stakeholders together to develop a local, county or regional plan can lay the groundwork for public-private partnerships.
- Encourage each county or region to have a broadband coordinator to facilitate broadband planning and coordination.
- Encourage communications planning between telecommunications providers and public entities, such as public power districts and other private entities, such as cooperatives. This could be done in a number of ways, including:
 - Convening local or regional meetings of telecommunications providers and public power districts to explore how the communications needs of public power could be leveraged to improve broadband availability in rural areas.
 - Developing a joint RFP for public power districts which could be put out for bid by Network Nebraska or the OCIO.
- Explore the creation of broadband cooperatives in unserved and underserved localities.
- Establish a state broadband coordinator position to provide assistance to local and regional broadband coordinators and to coordinate with state agencies, telecommunications providers, local governments and other stakeholders.
- Explore the creation of a statewide broadband association. The association could include telecommunications providers, public power districts, schools, hospitals, municipalities, counties, and other stakeholders interested in advancing broadband in Nebraska. The association could convene regional and statewide discussions and develop and distribute resources such as model or sample agreements.
- Retain the existing prohibition on retail provision of broadband service by public entities. The public power industry has stated that it is not interested in retail provision of broadband services. In some states, municipalities are providing retail broadband service. Municipal provision of broadband does not help rural areas and may hinder rural broadband deployment by eroding a telecommunications provider's business case to provide service to a rural area.
- The public power industry, telecommunications industry, and the Transportation and Telecommunications Committee should work together to reach an agreement on what steps which should be taken to make it less burdensome for public entities to lease dark fiber. Possible steps include:
 - The Nebraska Public Service Commission could work with the Nebraska Rural Electric Association and NPPD to communicate information on the current process to provide additional clarity and address any misperceptions about the process.
 - The current legislation could be modified to ease the restrictions. Options include:
 - Requiring public entities to file their lease rate with the Public Service Commission. The PSC will publish the rate for 30 days. If no protest is filed, the PSC would approve the lease. If a protest is filed, a hearing would be scheduled.

- The percent of profits contributed to the Nebraska Internet Enhancement Fund could be reduced or eliminated.
 - All of the restrictions on leasing dark fiber could be eliminated.
- The NREA and NPPD should work with the members of the Transportation and Telecommunications Committee to explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.
- Identify funding for public-private partnerships. Possible funding sources for public-private partnerships include LB 840 funds, USDA broadband grants and loans, Community Reinvestment Act, and New Market Tax Credits. Additional sources of funding such as a state broadband grant program would facilitate the development of public-private partnerships. Approximately 25 states have created broadband grant funds.
- Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.

Task Force members were given an opportunity to ask questions and provide input. There were no recommended changes and/or additions from the task force.

Ms. Byers commented that there seems to be a lot of interest in local broadband planning. The Community Council will discuss how they can help support local broadband planning efforts at their next meeting.

RECOMMENDATIONS FOR FEDERAL INFRASTRUCTURE FUNDING

Mr. Toner recommended that the task force approve a process for making recommendations on the use of federal infrastructure funding if funding becomes available. He presented the following draft recommendation:

If federal rural broadband infrastructure funds become available, the Rural Broadband Task Force will immediately form a subcommittee to review any rules or requirements associated with the funding and will draft recommendations on how the funds should be expended. The subcommittee will address the following questions and any other issues identified in the rules and requirements:

- Who should administer the funds? Should other agencies/entities be involved/consulted in the development of guidelines and selection criteria?
- How should the distribution of infrastructure funds be coordinated with the NUSF?
- Should the funds be distributed through a grant program, a reverse auction, or other mechanism?
- What criteria should be used to evaluate grant applications or bids?
- Should the funds be available to all carriers or just ETCs?
- Should rural communities be involved in the process? How could they be involved?

Task Force members were given an opportunity to ask questions and provide input. There were no recommended changes and/or additions from the task force.

REVIEW DRAFT OUTLINE AND REPORT

Ms. Byers reviewed the draft plan and thanked Ms. Ridder for allowing some of her photos to be used in the report. The report will be presented to the Legislature on November 1, 2019.

ADJOURNMENT

Ms. Turman moved to adjourn. Mr. Spray seconded. All were in favor. Motion carried.

The Rural Broadband Task Force meeting was adjourned at 10:37 a.m.

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

NUSF and Reverse Auction Findings and Recommendations

Draft—August 22, 2019

Examine the role of the Nebraska Telecommunications Universal Service Fund in bringing comparable and affordable broadband services to rural residents and any effect of the fund in deterring or delaying capital formation, broadband competition, and broadband deployment;

—Nebraska Revised Statutes 86-1102(3)(b)

Examine alternatives for deployment of broadband services to areas that remain unserved or underserved, such as reverse auction programs described in section 4 of this act, public-private partnerships, funding for competitive deployment, and other measures, and make recommendations to the Public Service Commission to encourage deployment in such areas;

—Nebraska Revised Statutes 86-1102(3)(d)

Findings

- The Nebraska Universal Service Fund (NUSF) provides support to price cap, rate of return, and mobile wireless carriers in Nebraska. In 2019, the Nebraska Public Service Commission allocated \$12,049,546 for broadband support for price cap carriers and \$14,100,058 for rate of return carriers. In 2018, \$3,200,000 was allocated for support for mobile wireless carriers.¹
- Providers must be accountable for the support received from the Nebraska Universal Service Fund. The Nebraska Public Service Commission has taken steps to move the fund toward a grant-like method of distribution whereby carriers must build first before receiving reimbursement.
- The total remittances to the NUSF have decreased from \$52 million in 2013 to about \$33 million in 2018. However, the Nebraska Public Service Commission has taken steps to stabilize the fund by modernizing the contribution methodology. Even with steps to stabilize the fund, however, the size of the fund is not sufficient to provide support for fiber deployment to all Nebraska residences and businesses.²
- In order for providers to make decisions about broadband infrastructure investments, support from the NUSF should be sustainable and predictable.
- Broadband availability varies by incumbent carrier. Approximately 80% of those rural households which do not have broadband available reside in Windstream, CenturyLink, Great Plains or Frontier (Citizens) exchanges.³ Addressing the rural broadband divide in Nebraska will require strategies which address areas without broadband access served by both price cap and rate of return carriers.
- Implementing a reverse auction-like component could potentially maximize the impact of limited NUSF dollars in underserved areas of the state. The current NUSF high cost distribution processes do not provide opportunities for entities that are not the incumbent carriers to compete for state universal service fund support.

¹ See Appendix 6 NUSF Overview and Support Allocations for more information.

² See Appendix 6 NUSF Overview and Support Allocations for more information.

³ See Appendix 7 Broadband Coverage by ILEC Including Fixed Wireless Coverage by Rural Households Not Covered

- The FCC implemented a reverse auction, allocating \$1.488 billion in support in August 2018 to be distributed over 10 years to expand rural broadband service in unserved areas in 45 states. Awarded bids came in at 70% of the reserve/model costs for the block groups. Over \$4 million was awarded to four carriers to serve 8,900 locations in Nebraska. Most locations in Nebraska are to receive service of 100 Mbps down/20 Mbps up via fixed wireless. Providers must build out to 40 percent of the assigned homes and businesses in a state within three years of becoming authorized to receive support. Buildout must increase by 20 percent in each subsequent year, until complete buildout is reached at the end of the sixth year.⁴
- Nebraska Legislative Bill 994, enacted in 2018, permits the Nebraska Public Service Commission to withhold support from the Nebraska Universal Service Fund “to any telecommunications company that has not served, to the commission’s satisfaction, those areas with service that meets the criteria for successful investment of funding from the Nebraska Telecommunications Universal Service Fund.”

LB 994 further permits the Nebraska Public Service Commission to “use the funding that is withdrawn to implement and operate a reverse auction program, except that any funding that is withdrawn shall be utilized in the exchange area for which the funding was originally granted.”

- On March 12, 2019, the Nebraska Public Service Commission opened a docket, Rule and Regulation #202, to adopt Reverse Auction and Wireless Registry rules in accordance with LB 994. The process of developing rules and regulations is expected to take approximately one year.⁵
- The NUSF Subcommittee found no evidence that the Nebraska Universal Service Fund has deterred or delayed capital formation, broadband competition, and broadband deployment in conversations with stakeholders or in the subcommittee’s research efforts.

Key Recommendations

- *Support the Nebraska Public Service Commission’s efforts to modernize the NUSF contribution system and to improve provider accountability by moving to a grant-like system of distribution.*
- *Encourage the Nebraska Public Service Commission to continue to investigate a state-run reverse auction as a mechanism to spur broadband build out in rural areas.*

Recommendations

- Support the Nebraska Public Service Commission’s efforts to stabilize the Nebraska Universal Service Fund by modernizing the contribution system.
- Support the Nebraska Public Service Commission’s efforts to modernize the distribution method and improve provider accountability through the system of grant-like awards for broadband infrastructure projects.

⁴ More information on the Connect America Fund Phase II reverse auction is available at <https://www.fcc.gov/auction/903>. A map of winning bids is available at <https://www.fcc.gov/reports-research/maps/caf2-auction903-results>.

⁵ See <https://psc.nebraska.gov/administration/proposed-rules-regulations> for information on the docket.

- Encourage the Nebraska Public Service Commission to continue to investigate, through their Rules and Regulations 202 docket, a state-run reverse auction as a mechanism to spur broadband build out in rural areas.
- Monitor the implementation of the FCC’s Connect America Fund II Reverse Auction to evaluate the success of the program and to identify any key lessons learned.
- Encourage the Nebraska Public Service Commission to explore alternate methods for redirecting support that allow for more collaboration between not only the incumbent and competitive carriers, but also the local business community, both main street and agriculture, as well hospitals, schools, municipalities, counties, and public power providers.⁶
- Examine how the Nebraska Public Service Commission currently collects information from carriers at the exchange level:
 - On what they built out the previous year and how the build out was funded, and
 - What their build out plans are for the next 3 to 5 years and how they intend to pay for that.

Determine if the collection of this data could be improved.

Metrics

NUSF	
Measure	2019 Most Recent Data Nebraska Public Service Commission
Annual contributions to the Nebraska Universal Service Fund (By Calendar Year)	2017 - \$35,321,380 2018 - \$32,796,228 2019 - \$18,333,749 (Through 1 st Half, 2019)
Annual allocations from the Nebraska Universal Service Fund (By Calendar Year)	2017 – \$40,087,483 2018 - \$33,139,591 2019 - \$30,056,117 (Additional allocations may still be made in 2019)
The number of households and businesses in Nebraska which have broadband (25/3 Mbps Down/Up) available as a result of CAF II funding	A-CAM (2016-2018) – 3,828 Locations CAF II (Price Cap Carriers) – 677 locations

⁶ See comments submitted by the Rural Telecommunications Coalition of Nebraska (RTCN) on April 18, 2019 available at <https://psc.nebraska.gov/sites/psc.nebraska.gov/files/doc/administration/2019-04-18%20Comments%20of%20RTCN.pdf>.

<p>The number of households and businesses in Nebraska which have, or will have broadband available as a result of NUSF funding (Includes only High Cost programs, NUSF-99 and NUSF-108)</p>	<p>NUSF-99 Projects (2016-Present) – 8,092</p> <p>NUSF-108 Projects (2019) – 346 (Includes project notices received as of 8/9/2019)</p>
--	---

Public-Private Partnerships Findings and Recommendations

Draft—August 23, 2019

Examine alternatives for deployment of broadband services to areas that remain unserved or underserved, such as reverse auction programs described in section 4 of this act, public-private partnerships, funding for competitive deployment, and other measures, and make recommendations to the Public Service Commission to encourage deployment in such areas;

—Nebraska Revised Statutes 86-1102(3)(d)

Findings

- Public-private broadband partnerships have primarily been utilized in communities, but not rural areas. Some models, however, could be adapted for use in rural areas.¹ Stakeholders should take the following considerations into account:
 - Public-private partnerships should include consumer protections and ensure quality of service.
 - Stakeholders should be aware that forming a public-private partnership takes time.
 - Stakeholders should be careful of forming a public-private partnership that addresses business needs only and leaves out residential and/or rural areas out.
- Public power districts and cooperatives could play a role in advancing the deployment of broadband services in rural Nebraska through public-private partnerships. Public power districts and cooperatives may own fiber rings to connect necessary electric controls and data points. The communications network enables public power districts to safely operate and manage the electric grid. The communications network could be leveraged to facilitate the deployment of broadband in rural areas. Possible models are described below:
 - A public power district or cooperative could work with a local telecommunications provider to put fiber in to connect electric communication needs. The local telecommunications provider could sell some of the fiber to the public power district or cooperative. The

Key Recommendations

- *Encourage local and regional broadband planning, including communications planning between telecommunications providers and public power districts and cooperatives.*
- *Explore the creation of broadband cooperatives in unserved and underserved localities.*
- *Retain the existing prohibition on retail provision of broadband service by public entities.*
- *Explore ways to make it easier for public entities to lease dark fiber.*
- *Explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.*
- *Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.*

¹ See Appendix 8 Supplemental Information--Public-Private Partnerships for more information.

telecommunications provider could also connect homes and businesses passed by the newly installed fiber.

- A public power district or cooperative could work with a local telecommunications provider to put fiber in to connect electric communication needs and could then lease services from the telecommunications provider. The telecommunications provider could also connect homes and businesses passed by the newly installed fiber.
 - As public power districts replace aging infrastructure, fiber could be placed overhead at a cost of a few dollars per foot. The dark fiber could be leased to telecommunications providers.
 - Public power districts and other public entities could aggregate their demand for telecommunications services through a joint RFP which could be put out for bid by the State of Nebraska Office of the CIO or Network Nebraska. Telecommunications providers could connect homes and businesses passed by the newly installed fiber.
 - An electric cooperative could create a communications subsidiary and provide retail service, however a public power district could not.
- The formation of broadband cooperatives may be an option for unserved and underserved areas.
 - Neb. Revised Statutes Section 86-577 places restrictions on leasing of dark fiber by public entities. The current legislation requires public entities to lease dark fiber at the market rate, have the lease price and profit distribution approved by the public service commission, and contribute 50 percent of the profit to the Nebraska Internet Enhancement Fund.

This process adds additional time and uncertainty to a provider's implementation schedule. Currently one lease is in place. The burden of complying with the restrictions may factor into the low number of leases. However, it is likely that other factors are involved. Factors cited by telecommunications providers include:

- Existing public power-owned leasable fiber is not "last-mile fiber."
- Existing fiber is limited in quantity in routes and number of fibers.
- Existing public owned fiber is generally in areas that have alternative private sector fiber available.
- Private sector fiber is generally connected to a much more robust and established set of telecommunications carrier networks.
- Existing fiber may primarily be aerial fiber.
- There may not be any appreciable cost savings.

As more fiber is deployed by public entities, however, leasing could become more attractive in the future.

Another issue appears to be a lack of trust between the public power and telecommunications industries and a lack of familiarity with the other industry's regulatory structure.

- It is unclear if private easements set up for telephone and electric use could also be used for communications. Legislation clarifying that communications is an approved use for private easements set up for telephone and electric use would eliminate uncertainty and litigation.

Recommendations

- **Encourage local and regional broadband planning.** Each community, county or region is different and will likely require a unique solution. Bringing stakeholders together to develop a local, county or regional plan can lay the groundwork for public-private partnerships.
- **Encourage each county or region to have a broadband coordinator to facilitate broadband planning and coordination.**
- **Encourage communications planning between telecommunications providers and public entities, such as public power districts and other private entities, such as cooperatives.** This could be done in a number of ways, including:
 - Convening local or regional meetings of telecommunications providers and public power districts to explore how the communications needs of public power could be leveraged to improve broadband availability in rural areas.
 - Developing a joint RFP for public power districts which could be put out for bid by Network Nebraska or the Nebraska Office of the CIO.
- **Explore the creation of broadband cooperatives in unserved and underserved localities.**
- **Establish a state broadband coordinator position to provide assistance to local and regional broadband coordinators and to coordinate with state agencies, telecommunications providers, local governments and other stakeholders.**
- **Explore the creation of a statewide broadband association.** The association could include telecommunications providers, public power districts, schools, hospitals, municipalities, counties, and other stakeholders interested in advancing broadband in Nebraska. The association could convene regional and statewide discussions and develop and distribute resources such as model or sample agreements.
- **Retain the existing prohibition on retail provision of broadband service by public entities.** The public power industry has stated that it is not interested in retail provision of broadband services. In some states, municipalities are providing retail broadband service. Municipal provision of broadband does not help rural areas and may hinder rural broadband deployment by eroding a telecommunications provider's business case to provide service to a rural area.
- **The public power industry, telecommunications industry, and the Transportation and Telecommunications Committee should work together to reach an agreement on what steps which should be taken to make it less burdensome for public entities to lease dark fiber.** Possible steps include:
 - The Nebraska Public Service Commission (PSC) could work with the Nebraska Rural Electric Association (NREA) and Nebraska Public Power District (NPPD) to communicate

information on the current process to provide additional clarity and address any misperceptions about the process.

- The current legislation could be modified to ease the restrictions. Options include:
 - Public entities could be required to file their lease rate with the Public Service Commission. The PSC would publish the rate for 30 days. If no protest is filed, the PSC would approve the lease. If a protest is filed, a hearing would be scheduled.
 - The percent of profits contributed to the Nebraska Internet Enhancement Fund could be reduced or eliminated.
 - All of the restrictions on leasing dark fiber could be eliminated.
- **The NREA and NPPD should work with the members of the Transportation and Telecommunications Committee to explore legislation clarifying communications as an approved use for private easements set up for telephone and electric use.**
- **Identify funding for public-private partnerships.** Possible funding sources for public-private partnerships include LB 840 funds, USDA broadband grants and loans, Community Reinvestment Act, and New Market Tax Credits. Additional sources of funding such as a state broadband grant program would facilitate the development of public-private partnerships. Approximately 25 states have created broadband grant funds.
- **Encourage local governments to review their rights of way and permitting processes and take steps if necessary to make the processes less burdensome for telecommunications providers.**

Metrics

Measure	2019 Most Recent Data July 2019, Nebraska Public Service Commission
The number of leases of dark fiber from public entities	1

Broadband Data Findings and Recommendations

Draft—August 30, 2019

Determine other issues that may be pertinent to the purpose of the task force.

—Nebraska Revised Statutes 86-1102(3)(g)

Findings

- Current state and federal broadband mapping efforts likely overstate broadband coverage and need to be improved.¹
 - Nebraska’s [broadband map](#) currently utilizes Form 477 data released by the FCC. Providers of fixed broadband (which includes providers of services via DSL, coaxial cable, fiber optic cable, fixed wireless, and satellite) report the type of technology, maximum advertised speeds in Mbps up and down, and whether the service is residential, business, or both by census block to the FCC. Providers must report every census block where service is provided or could be provided within a reasonable amount of time without an extraordinary commitment of resources.
 - The use of census block reporting can overstate broadband availability in large census blocks. Census blocks are statistical areas that can be as small as 1/1,000 of a square mile up to 200 square miles. Census blocks which are greater than two square miles cover about 50% of Nebraska geographically.
 - Mobile wireless providers provide polygons of their service area and the minimum speeds that are publicly available. The FCC is currently investigating at least one national mobile wireless provider for overstating coverage.
 - The FCC collects the data twice per year (March 1 for broadband availability as of Dec. 30 and September 1 for broadband availability as of June 30). There is not a set schedule for data releases, but data is usually released a year or more after the reporting date.
 - Supplementing data from providers with speed test data or other sources of data can help verify data submitted by providers.
- Because states are limited in their authority to compel providers to submit broadband coverage data, federal data collection efforts should be leveraged if feasible. Leveraging federal data collection efforts will also minimize state costs for data collection.

Key Recommendations

- Leverage the FCC’s Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska’s broadband map.
- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.
- Encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

¹ For additional information, see [Appendix 4 Supplemental Information--Broadband Data and Mapping](#).

- The FCC's Digital Opportunity Data Collection² program which was approved on August 1, 2019 and federal legislation being considered, including the Broadband DATA Act (SB 1822),³ would largely address the shortcomings of the current fixed broadband data collection method.
- Mobile wireless coverage data submitted through the Form 477 is insufficient to support sound policymaking and funding decisions, and needs to be improved either through further rulemaking by the FCC or federal legislation such as the Broadband DATA Act (SB 1822).

Recommendations

- Leverage the FCC's Digital Opportunity Data Collection program or an alternate broadband mapping program created through federal legislation to improve Nebraska's broadband map.
- To the extent possible, encourage the FCC and/or Congress to improve data collection of mobile wireless coverage data.
- Urge FCC and Congressional policy to support efforts to improve broadband data collection for both fixed and mobile broadband technologies.
- The Nebraska Information Technology Commission, Nebraska Public Service Commission and other stakeholders should explore strategies to encourage Nebraskans to participate in crowdsourcing efforts developed to enhance federal broadband mapping.

² The Report and Order and Second Further Notice of Proposed Rulemaking on establishing the Digital Opportunity Data Collection is available at <https://docs.fcc.gov/public/attachments/FCC-19-79A1.pdf>

³ Information on S. 1822 is available at <https://www.congress.gov/bill/116th-congress/senate-bill/1822/>

Broadband Technologies Findings

Draft—Sept. 4, 2019

Review the feasibility of alternative technologies and providers in accelerating access to faster and more reliable broadband service for rural residents.

—Nebraska Revised Statutes 86-1102(3)(c)

Findings

- A review of broadband technologies found that several emerging technologies may be well-suited for rural areas¹:
 - Fixed wireless technologies using mid-band spectrums could potentially provide service of 100 Mbps or greater in rural areas. Several telecommunications providers are using or planning to use mid-band fixed wireless providers to meet their Connect America Fund obligations to provide broadband to rural areas.
 - TV white space may be suited for lower bandwidth agricultural internet of things applications. With Microsoft’s support, the cost of customer service equipment has been coming down. Future reductions in the prices of customer service equipment to about \$100 would likely make this technology economically feasible.
 - Low Earth orbit satellites could potentially provide 100 Mbps or greater service with low latency by mid-2020.
 - AT&T’s AirGig may be another technology to watch. AirGig uses antenna modules called eggs which are clamped on power lines to send data signals which cling to the wire. A demonstration in September 2018 showed data capacity of 90 gigabits per second. The technology will reportedly be available for commercial use in 2021.
- A number of emerging and currently technologies may provide speeds of one gigabit per second or more. It is likely that most of these technologies—particularly 5G—will be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.

Key Findings

- *Several emerging technologies may be well-suited for rural areas, including fixed wireless using mid-band spectrums, TV white space, and low Earth orbit satellites. AT&T’s AirGig technology may be another technology to watch.*
- *Higher speed technologies like 5G will likely be deployed first in urban areas, potentially exacerbating the speed gap between rural and urban areas.*

¹ See [Appendix 5 Supplemental Information—Broadband Technologies](#)

Homework Gap and Leveraging Funding Subcommittee

Findings and Recommendations

Draft—September 13, 2019

Determine other issues that may be pertinent to the purpose of the task force.

—Nebraska Revised Statutes 86-1102(3)(g)

Recommend state policies to effectively utilize state universal service fund dollars to leverage federal universal service fund support and other federal funding;

—Nebraska Revised Statutes 86-1102(3)(e)

Findings

- As more services move online, internet access is becoming a necessity. Students who need to use the internet to complete homework are especially impacted. The term “homework gap” is used to describe the challenge that students who lack home internet access face in completing online assignments.
- Approximately 16% of Nebraskans and 12% of Nebraskans under 18 years of age lack a home internet subscription.¹ In addition, approximately 17% of Nebraskans only have mobile-broadband internet, which may be limited by data caps.² Mobile-only broadband users may also lack a computer or tablet which can make some tasks like applying for jobs or completing homework online more difficult.
- In some schools, the percent of students without internet access may be greater than 30%.³
- Libraries are key community partners in providing internet and computer access to students and the general public—especially in rural areas.
- 84% of Nebraska public libraries serving populations less than 2,500 reported internet speeds of less than 24 Mbps down, with 68% reporting speeds of less than 13 Mbps.⁴

¹ Source: U.S. Census Bureau 2017 American Community Survey 5-Year Estimate Data available at <https://factfinder.census.gov/>. Note: The percent population with broadband internet subscription from the U.S. Census Bureau 2017 American Community Survey 5-Year Estimate includes those who subscribe to cable, fiber optic, or DSL, satellite or a fixed wireless service as well as those who only use mobile broadband plans for internet access.

² Pew Internet Research Center. Internet/Broadband Fact Sheet. Available at <https://www.pewinternet.org/fact-sheet/internet-broadband/>

³ In a recent survey of Nebraska teachers, 49% of teachers from ESU 19 (Omaha Public Schools) and 32% of teachers from ESU 1 (Wakefield/Northeast Nebraska) estimated that over 30% of their students lacked internet access at home. See Appendix 10 Supplemental Information--Addressing the Homework Gap and Leveraging Funding.

⁴ Information on library broadband availability is from the Nebraska Library Commission. See Appendix 9 for more information on Broadband Adoption Data and Broadband in Nebraska Libraries or the map at <https://www.zeemaps.com/view?group=3499369&x=-100.053561&y=43.439597&z=11>

- Having high bandwidth of at least 100 Mbps available in public libraries would not only provide patrons with ample bandwidth for internet-dependent applications, but would also demonstrate high bandwidth capabilities to community members.
- Some school districts, ESUs, public libraries, and communities in Nebraska and in the United States are exploring or implementing programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.
- Strategies which address the homework gap can also help improve internet access for other demographic groups who lack internet access as well.
- The federal E-Rate program provides support for broadband connections in schools and libraries under two categories of service: Category 1 services to a school or library (telecommunications, telecommunications services and Internet access), and Category 2 services that deliver Internet access within schools and libraries (internal connections, basic maintenance of internal connections, and managed internal broadband services). Discounts for support depend on the level of poverty and whether the school or library is located in an urban or rural area. The discounts range from 20 percent to 90 percent of the costs of eligible services.
- The E-Rate program is underutilized by Nebraska libraries with only 25% of public libraries in Nebraska applying for Category 1 (external connections) funding, and 3% of Nebraska public libraries applying for Category 2 (internal connections) funding in 2019-20.
- Reasons cited for not participating in the E-Rate program include the perceived difficulty in applying for funding, lack of time to learn the process and apply, and concerns about requirements for filtering internet content for children.
- If all Nebraska libraries fully participated in the E-Rate program, it would increase the level of USF support by:
 - an estimated \$210,000 in Category 1 E-Rate support per year;
 - and an estimated \$3.25 million in E-Rate support for Category 2 over the next five years.

Key Recommendations

- *Increase the number of public libraries applying for E-Rate support;*
- *Fund four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing;*
- *Implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools.*
- *Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.*
- *Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.*

- The E-Rate Program includes a matching program for special construction charges for high-speed broadband. The E-Rate Program will increase an applicant's discount rate for these charges up to an additional 10 percent to match the state funding on a one-to-one dollar basis. States participating in the matching program include Arizona, California, Colorado, Florida, Idaho, Illinois, Indiana, Kansas, Massachusetts, Maryland, Maine, Michigan, Missouri, Montana, Nevada, North Carolina, New Hampshire, New Mexico, New York, Oklahoma, Texas, Virginia, Washington, and Wisconsin.
- If the State of Nebraska provided matching funds for the construction of fiber network facilities to 22 libraries per year for 4 years (estimated at \$55,000 per year or \$220,000 over 4 years), the FCC would contribute a match of \$220,000, the E-Rate program would contribute an additional \$1.54 million in support, and libraries would contribute \$220,000 (based on a statewide average E-Rate discount of 70%).
- Nearly all Nebraska public school districts applied for E-Rate Category 1 (100%) and E-Rate Category 2 funding (98%) for 2019-20.⁵

Recommendations

- Support the efforts of the Nebraska Library Commission to increase the number of public libraries applying for Category 1 and Category 2 E-Rate support in FY 2020-21 and beyond.
- Support funding for four regional technicians to assist public libraries with technology support, upgrades, digital literacy training, and E-Rate filing, starting in FY2020-21.
- Encourage the Nebraska Public Service Commission to implement an E-Rate Special Construction matching fund program with funding from the Nebraska Universal Service Fund to incentivize new fiber construction to public libraries and schools, starting in FY 2021-22.
- Encourage school districts, ESUs, public libraries, and communities to implement programs such as Wi-Fi on buses, hotspot lending programs, low cost pay-by-the-month internet access, or TV White Space deployments for student access on school-issued devices in order to reduce the number of unserved and underserved students.
- Encourage education leaders and public library staff to be part of local community discussions involving broadband services and digital inclusion.
- Network Nebraska should map its fiber Ethernet circuits showing the location, name of the provider, bandwidth capacity, monthly recurring costs, cost per Mbps, number of bidders, and kbps per student in order to determine areas where advanced services would be cost-prohibitive.

Metrics

Percent of Nebraskans Lacking Home Internet Subscriptions or Subscribing to Mobile Only	
Measure	Most Recent Data
Percent of Nebraskans who lack a home internet subscription	16% 2017, ACS 5-Year

Percent of Nebraskans under 18 years of age who lack a home internet subscription	12% 2017, ACS 5 Year
Percent of U.S. adults with a mobile only broadband subscription	17% 2019, Pew Research Center

Percent Nebraska Libraries and School Districts Applying for E-Rate	
Measure	Most Recent Data
Percent of Nebraska Libraries Applying for Category 1 (External Connections) E-Rate	25% 2019-20, USAC
Percent of Nebraska Libraries Applying for Category 2 (Internal Connections) E-Rate funding	3% 2015-20, USAC
Percent of Nebraska K-12 public school districts Applying for Category 1 (External Connections) E-Rate	100% 2019-20, USAC
Percent of Nebraska K-12 public school districts Applying for Category 2 (Internal Connections) E-Rate funding	98% 2015-20, USAC

Nebraska Library Broadband	
Measure	Most Recent Data
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of Less than 12 Mbps	42% FY 2017-2018, Nebraska Library Commission
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of Greater than 24 Mbps	16% FY 2017-2018, Nebraska Library Commission
Percent of Nebraska Libraries Serving Populations of Less than 2,500 with Internet Access of 100 Mbps or Greater	.6% FY 2017-2018, Nebraska Library Commission

⁵ Source: Universal Service Administrative Corporation (USAC) Data Retrieval Tools:
<https://slpin.universalservice.org/DRT/Default.aspx>

Make recommendations to the Governor and Legislature as to the most effective and efficient ways that federal broadband rural infrastructure funds received after the operative date of this section should be expended if such funds become available;

–Nebraska Revised Statutes 86-1102(3)(f)

Federal Rural Broadband Infrastructure Funds

Draft Recommendation

If federal rural broadband infrastructure funds become available, the Rural Broadband Task Force will immediately form a subcommittee to review any rules or requirements associated with the funding and will draft recommendations on how the funds should be expended. The subcommittee will address the following questions and any other issues identified in the rules and requirements:

- Who should administer the funds? Should other agencies/entities be involved/consulted in the development of guidelines and selection criteria?
- How should the distribution of infrastructure funds be coordinated with the NUSF?
- Should the funds be distributed through a grant program, a reverse auction, or other mechanism?
- What criteria should be used to evaluate grant applications or bids?
- Should the funds be available to all carriers or just ETCs?
- Should rural communities be involved in the process? How could they be involved?