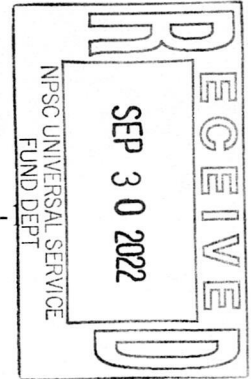


BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public  
Public Service Commission to  
implement the Precision Agriculture  
Infrastructure Grant Act.  
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Application No. BEAD-



**COMMENTS OF PAIGE WIRELESS**

Paige Wireless submits these comments in response to the Order Opening Docket and Seeking Comment regarding the Precision Agriculture Infrastructure Grant Act (“Act”) and the Commission’s implementation of the Act. Paige appreciates the Commission’s interest in Precision Agriculture and recognizing its importance to the overall health of Nebraska.

**INTRODUCTION**

Paige Wireless is the owner and operator of the largest public, carrier-grade contiguous Low Power Wide Area Network (“LoRaWAN”) network in the United States, including the first statewide network implemented in the state of Nebraska. Paige Wireless designs, deploys, and operates robust and secure broadband networks for mission-critical applications including precision agriculture. Paige Wireless’ network provides open-source, interoperable, connectivity where it is needed most.

Paige Wireless has successfully achieved a 99.996% network uptime across its network footprint in Nebraska, covering the most rural areas including areas with no people solely center pivots and cattle. Paige Wireless has also deployed 100/100 symmetric service across 10,000 contiguous ACRES of farmland. This network is highly secure and optimized to support autonomous farm equipment, live streaming video and analytics. Designed for the mission-critical applications, this network exceeds our most critical national security concerns and protects our most critical national security assets- our farmers.

## COMMENTS

In its order, the Commission asked several questions surrounding the Act and how it should be implemented that Paige Wireless will provide answers based on its experience as experts in the precision agriculture field.

- 1. Entities Eligible to Receive Grants.** *What entities, or types of entities, should be eligible to apply? How should the Commission evaluate applicants? Are there any types or categories of applicant which would merit additional or different scrutiny, or that the Commission should not consider for funding?*

### **Connectivity- \$1million**

- Connectivity providers that exhibit a demonstrated history in the precision ag connectivity solution space. The networks designed for precision agriculture are grossly different from the connectivity deployed to residences and business today.
- Grants should be awarded to wireless providers that exhibit exceptional cyber-security protocols that can support mission critical applications such as autonomously driving tractors.
- Grants should be awarded to wireless providers that use approved solutions. (Example: Chinese-made radios such as Huawei should be strictly prohibited.)
- Monopolization of cellular providers poses a homeland security threat. Providers that offer a differentiated connectivity solution should be preferred.

### **AgTech Solutions- \$1million**

- Producers should be prioritized to be eligible for the grant to purchase the following but not limited to sensors, soil health amendments, blockchain, weather stations, or automation solutions to help alleviate the cost barrier of technology adoption.
  - Agronomist should be eligible for the above mentioned solutions.
  - Ag Co-ops should be eligible for the above mentioned solutions.
- Paige Wireless suggests Dr. Joe Luck, University of Nebraska, to develop a schedule of qualifying technologies for PSC to reference.

- 2. Funding Source.** *Are all purposes of the PRO-AG Program allowable uses of BEAD funding? Which purposes, if any, are not allowable uses of BEAD funding? Are any alternative sources of funding available for PRO-AG? What steps should be taken to ensure both halves of the PRO-AG program can be fully funded?*

The Broadband Equity, Access, and Deployment (BEAD) Program provides \$42.45 billion to expand high-speed internet access by funding planning, infrastructure deployment and adoption programs in all states and territories. Eligible uses of funds includes deploying and/or upgrading broadband network facilities in connection with an Unserved Service Project or an Underserved Service Project. (NOFO Sections IV.B.7.a(ii) and (iii)). An “unserved or underserved location” may be as small as a single broadband serviceable location (NOFO Sections I.C. ee. & I.C. cc). As such, the connectivity portion of the PRO-AG Program would clearly fall within the acceptable uses of BEAD funding.

For the AgTech portion of the program, an argument could be made that the IoT devices that will be required could be considered Programmatic Costs under the BEAD program. Programmatic costs are costs that are directly tied to the delivery of a particular project, service or activity undertaken by a Grantee to achieve an outcome intended by the funding program. Examples of programmatic costs include, but are not limited to, digital equity and adoption, such as providing low-cost devices and digital navigators (FAQ Draft Version 2.0, BEAD Program, NTIA, Page 32). The Commission should make an inquiry to NTIA whether this would be an acceptable use of funds.

- 3. Priority for Grant Distribution.** *For connectivity to on-farm structures and devices, how should the Commission evaluate and prioritize grant awards within this category?*

Refer to the answer provided in #1 above.

*Should the Commission adopt criteria previously set forth in the Commission’s Broadband Bridge Program?*

Yes, the Bridge Program provides acceptable criteria that would be applicable to this program.

*Are there any issues or concerns unique to precision agriculture connectivity that the Commission should consider in determining grant awards in this category?*

Precision ag connectivity needs to be designed for real-time handoff of data from combine to grain-cart- cow to cowboy-robot to controller. It takes a skilled company engrained in the ag industry to build networks to support wireless connectivity over land..

*For the other three categories eligible for grant awards, should the Commission determine how funding should be awarded between the three?*

Connectivity and agtech adoptions are equally important to enable the economic potential of Nebraska's producers.

*Should a category be prioritized? How can the Commission fairly and objectively evaluate applications in these three categories?*

Connectivity providers should be evaluated on the criteria laid out above.

Regarding AgTech,producers should be prioritized as it is time producers are empowered to make decision on the solutions that will work for their operation.

- 4. Match Percentage and Grants Amounts.** *Should the Commission require that applicants provide matching funds? If so, what match percentage would be appropriate for each type of grant request? Also, what math sources may be available for PRO-AG projects? Should the Commission allow applicants to provide in-kind contributions as a project match, including goods and labor costs, as it currently does in the Bridge Program? Should the Commission set a maximum amount which may be awarded for a single project? If so, what should the amount be? Should the maximum award be different between the four categories?*

Match should not be required. This program was passed to meet the most rural and cost prohibitive locations in the state. Should this project prove successful over the next 2 years, match requirements should be considered by the Commission at that time.

- 5. Speed Testing and Broadband Affordability.** *What constitutes adequate connectivity? How long should the Commission allow for awardees to correct any deficiencies found through the speed testing? How long following project completion should an applicant be required to maintain the speeds required by the Act? Should applicants be required to*

*demonstrate that their service offerings are affordable? If so, what benchmarks should applicants be required to meet? How long following the project completion should an applicant be required to maintain the rates stated in the application?*

30/30 Mbps constitutes adequate connectivity when a network is properly designed for precision ag applications, but Paige supports the state standard of 100/20 Mbps as determined by the Broadband Bridge Act.

- 6. Completion of Other Grant Projects.** *For the other three categories, when should a project be considered complete? Should the Commission impose any deadline upon completion of the projects within this category? How long after the completion of these projects should they be required to continue to be in service? Are there any affordability or accessibility considerations for these projects which the Commission should consider?*

Projects can realistically be expected to be completed within 6 months from award.

Connectivity should be continued for a minimum of 5 years. There should be no time frame on agtech solutions.

Connectivity costs should be in line with market pricing for fiber access in service area.

- 7. Program Schedule.** *Given BEAD funding won't be available until final approval by the NTIA, when should the Commission consider beginning a grant cycle? What should the procedural schedule for each cycle be? Given the constraints of BEAD funding, in how many years should the Commission plan to hold grant cycles?*

While LB 1144 permitted the Commission to use BEAD funding for the program, it did not require it. Therefore, the Commission should look to other funds available to it if possible because Nebraska's Ag producers need connectivity and solutions today. The pressure to produce more with less while improving water and carbon footprint is a pressing and urgent matter that producers are facing in the market every day. The solutions must be delivered immediately so Nebraska's producers can continue to lead in ag productivity and sustainability.



## CONCLUSION

Paige Wireless appreciates the opportunity to provide these comments and its experience with precision agriculture in Nebraska and looks forward to continuing the discussion in this docket.

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