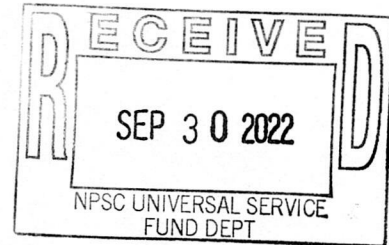




September 30, 2022  
Nebraska Public Service Commission  
1200 N St. #300  
Lincoln, NE 68508



Members of the Nebraska Public Service Commission,

Thank you for the opportunity to offer our comments for the implementation of the Precision Agriculture Infrastructure Grant Program (PRO-AG). The following are submitted by the following seven agriculture organizations: Nebraska Cattlemen, Nebraska Corn Growers Association, Nebraska Dairy Association, Nebraska Farm Bureau, Nebraska Soybean Growers Association, Nebraska Pork Producers Association, and Nebraska Wheat Growers Association, collectively referred to as the Nebraska Agriculture Leaders Working Group.

In these unprecedented times, we find ourselves in a position of opportunity and necessity when it comes to implementing precision agriculture. Nebraska is home to the third largest agriculture complex in the country. More than one-fourth of our state's economy depends on agriculture and the future of agriculture depends on precision technology.

Nebraska is keenly positioned to be the nation's gold standard in precision agriculture. If implemented correctly, PRO-AG can serve as the foundation for more programs that can catapult Nebraska's food production complex to the forefront.

E-connectivity is paramount to be competitive in today's market. In a state that is as agriculturally diverse as ours, there is no "one-size fits all" solution. The purpose of PRO-AG is to propel Nebraska agricultural producers to lead the nation in precision agriculture connectivity, sustainability, traceability, and autonomy to accelerate rural economic development, and to provide high-speed Internet service to farm sites in unserved areas of the state.

Grants may be awarded to wireless network providers that provide adequate precision agriculture connectivity, or to an agricultural cooperative, agronomist, or agricultural producer. PRO-AG grants may be used to provide the following:

- (a) Adequate precision agriculture connectivity to on-farm structures and devices, including, but not limited to, tractors, combines, irrigation systems, livestock facilities, and farm offices,

- (b) On-farm traceability solutions that satisfy food supply stakeholder demand, including blockchain,
- (c) Products that improve soil health, water management tools and sensors that facilitate judicious use of water resources, and products that promote the use of water efficiency seed technologies that lower agriculture's water, carbon, and nitrate footprint, and
- (d) Products that use autonomous solutions in agricultural machinery, including, but not limited to, grain carts, spreaders, precision drone scouting, and scouting robots.

The Act requires the Public Service Commission (Commission) to award up to one-half of the available grant funds for the purpose stated under (a) above, ensuring adequate precision agriculture connectivity to on-farm structures. The Act further requires the Commission to award up to one-half of the available grant funds to the purposes stated under (b), (c), and (d) above.

The Commission's request for comments asks for input in eight areas.

1. Entities Eligible to Receive Grants
2. Funding Source
3. Priority for Grant Distribution
4. Match Percentage and Grant Amounts
5. Speed Testing and Broadband Affordability
6. Completion of Other Grant Projects
7. Program Schedule
8. Other Issues

Our comments for each of the above areas are as follows.

## 1. Entities Eligible to Receive Grants

The Act allows the Commission to award grants to "[a] provider, an agricultural cooperative, an agronomist, or an agricultural producer." The Commission seeks input on:

- What the criteria and/or definitions for each category should be?
  - *Provider – The enabling language defines provider to mean a wireless network provider that provides adequate precision agriculture connectivity.*
    - *Precision agriculture (PA) utilizes high-tech devices like drones, robots, sensors, geo-mapping, and big data to enhance an agriculture producer's efficiency and competitiveness. Services provided may include GPS-based mapping systems, yield monitors, soil monitors, guidance and auto-steer systems, soil mapping using GPS coordinates, and variable rate technology for applying inputs.*
    - *The primary goal of PA is to strive for profitability, efficiency, growth, cleaner processes, less use of resources, agility, improved quality, and sustainability on the farm or ranch. PA technology collects and analyzes data from every action performed and helps guide immediate and future decisions.*
    - *The most common PA applications in smart agriculture are:*

- *Sensor-based systems for monitoring crops, soil, fields, livestock, storage facilities, or basically any important factor that influences the production.*
- *Smart agriculture vehicles, drones, autonomous robots, and actuators.*
- *Connected agriculture spaces such as smart greenhouses or hydroponics.*
- *Data analytics, visualization, and management systems.*
- *Agricultural cooperative – An agriculture cooperative is a legal business entity created under state law that is owned and operated for the purpose of benefiting those individuals who use its services, known as patrons. A cooperative allows similar businesses to associate together in order to gain leverage over a market that they might not have access to as individual businesses. Those individuals are the stockholders, members, owners, and users of the cooperative. Agricultural cooperatives provide a variety of services to their farming and ranching members including the processing and marketing of commodities, providing farm supplies and inputs including crop nutrients, crop protection products, feed and energy-related products and services*
- *Agronomist – Agronomists are scientists who specialize in crop production, soil control, and soil management. Their expertise is maximizing crop production from a given acreage of soil through managing nutrients and soil health.*
- *Agricultural producer – As defined in 7 CFR § 4280.103, an agriculture producer is an individual or entity directly engaged in the production of agricultural products, including crops (including farming); livestock (including ranching); forestry products; hydroponics; nursery stock; or aquaculture, whereby 50 percent or greater of their gross income is derived from those products.*
- What entities, or types of entities, should be eligible to apply?
  - *Individuals and entities described above as providers, agricultural cooperatives, agronomists, and agricultural producers, whereby 50 percent or more of their gross income is derived from the production of agricultural products should be eligible to apply.*
- How should the Commission evaluate applicants?
  - *Ability to provide connectivity to agriculture producer's precision ag devices which are beyond the endpoint of their broadband service.*
  - *Understanding of the management and maintenance required.*
  - *Proven track record of reliability and profitability as a business.*
  - *Ability to calculate/demonstrate a positive return on investment (ROI) of precision agriculture practices deployed.*
  - *Proven support network.*
  - *Reliable provider of e-connectivity.*
  - *Proven history of the precision ag technology to be deployed.*
  - *Forward thinking.*
  - *Will it benefit others in Nebraska's agriculture complex in the future?*
  - *Willingness to invest their own money in this endeavor.*
  - *Ability to refund grant funds to the Commission if criteria of grant application are not achieved within the timeframe allotted.*

- *Multiple applicants from different geographic regions of Nebraska and involved in different areas of agriculture should receive grant awards to enhance the effectiveness of this program statewide.*
- Are there any types or categories of applicant which would merit additional or different scrutiny, or that the Commission should not consider for funding?
  - *Deployment of precision ag technologies still in the developmental/experimental stages should not be eligible for grant awards.*

## 2. Funding Source

The Act states that the Commission may use BEAD funding for the purpose of carrying out the Program, not to exceed two million dollars per year. One-half of available grant funds should be used for grant funding for precision agriculture connectivity to on-farm structures and devices. The remaining one-half of funding is to be used for on-farm traceability solutions, products relating to soil health and water management, and products using autonomous solutions in agricultural machinery.

The Notice of Funding Opportunity ("NOFO") released for the BEAD program lists eligible uses of funding. These eligible uses include, *inter alia*, the construction, improvement, and/or acquisition of facilities and telecommunications equipment required to provide broadband service; leases of broadband facilities; engineering and design work; personnel costs for implementation of the BEAD program; and training and workforce development.

Given the information promulgated to date in the BEAD program,

- Are all purposes of the PRO-AG Program allowable uses of BEAD funding?
  - *We believe that to be true.*
- Which purposes, if any, are not allowable uses of BEAD funding?
  - *Some non-allowable uses of BEAD funding need to be taken into consideration when awarding grants pursuant to the PRO-AG Program so as not to run afoul to the BEAD Program. Those include:*
    - *No BEAD funding may be used to purchase any communications equipment or services on the FCC's list of covered communications equipment under the Secure and Trusted Communications Networks Act of 2019.*
    - *BEAD funds may not be used to pay any profit, fee, or charge above actual cost incurred by the State or subgrantee under the Program.*
    - *BEAD funds may not be used to either support or oppose collective bargaining.*
    - *States may not use more than two percent of the BEAD Program funds they receive for direct and indirect administrative expenses.*
    - *The limitations on eligible costs apply both to BEAD funds directly and to non-federal matching funds, whether from the State directly or otherwise. In other words, in making subgrants, the State is expressly prohibited from allowing any non-federal matching funds that are committed as part of an award to pay costs that could not otherwise be paid through BEAD funding.*



- *BEAD Program funds must be expended in compliance with the Build America, Buy America Act. Under that law, all manufactured products, and construction materials, including communications equipment and building materials such as fiber-optic cable, iron, and steel, must be produced in the United States.*
  - *Subgrantees may request a waiver of the Build America, Buy America Act requirements from the Secretary of Commerce in certain cases. For example, waivers are available where products or materials are not produced within the United States in necessary quantities or quality, or where using domestically produced products and materials would increase the overall cost of the project by 25 percent compared to using foreign-sourced materials. In addition, BEAD funding may not be used to purchase fiber made in China, unless a waiver is granted under the same standard as the Build America, Buy America requirements, and NTIA is satisfied that national security concerns are satisfied.*
- *We recommend the state seek legal advice from the Attorney General on these matters.*
- Are any alternative sources of funding available for PRO-AG?
  - *We encourage the state to allow the use of state and/or private funds to augment successful grant applicants, so long as those funds are committed in a way that they are used to pay costs allowed through BEAD funding.*
- What steps should be taken to ensure both halves of the PRO-AG program can be fully funded?
  - *To ensure both halves of the program remain **fully funded**, the state and the private sector stakeholders must work to ensure funding levels for the program are not diminished by future legislative bodies.*
    - *Ways to do that include:*
      - *Developing criteria that must be reported by the successful applicants which demonstrates the positive impact said grants will have on the:*
        - *Recipients,*
        - *Nebraska's agriculture and food complex, and*
        - *Nebraska's economy.*
  - *To ensure that both halves are **fully utilized** requires the state and the organizations that represent eligible entities (such as those who are signatories to these comments) to develop informational materials and aggressively market the availability of these grants to the entities eligible to use these funds.*

### 3. Priority for Grant Distribution

The Act provides that the Commission may award funding for four different purposes.

One-half of available funding each year is to be awarded for the purpose of “adequate precision agriculture connectivity to on-farm structures and devices, including, but not limited to, tractors, combines, irrigation systems, livestock facilities, and farm offices.”

- How should the Commission evaluate and prioritize grant awards within this category?

- *Similar to the priorities of the Nebraska Broadband Bridge Act, the highest priority should be deployment of PA in unserved areas of the state where locations lack access to broadband Internet service at speeds of at least twenty-five megabits per second for downloading and three megabits per second for uploading (25Mbps/3Mbps) and has not received federal support for deployment of a broadband network.*
- *The second highest priority should be an unserved areas of Nebraska in where locations lack access to broadband Internet service at speeds of at least twenty-five megabits per second for downloading and three megabits per second for uploading (25Mbps/3Mbps), and have received federal support for development of a broadband network.*
- *The third priority should be underserved areas of Nebraska in which locations lack access to broadband Internet service at speeds of at least one-hundred megabits per second for downloading and twenty megabits per second for uploading (100Mbps/20Mbps).*
  - *Projects that include a mix of both unserved and underserved project areas will be considered in this third priority.*
- Should the Commission adopt criteria previously set forth in the Commission's Nebraska Broadband Bridge Program ("NBBP")?
  - *Yes. The criteria for PRO-AG grants should include those used for the NBBP, but should not be limited to them. We suggest the following criteria be considered for the PRO-AG grants:*
    - *Financial capability*
    - *Legal capability*
    - *Rate capability*
    - *Speed*
    - *Match source*
    - *Match percentage*
    - *Value proposition to producer and provider*
    - *Public private partnership*
    - *Technical capability*
    - *Administrative and management capability*
    - *Proven reliability*
    - *Benefit to Nebraska's agricultural complex*
    - *Location/geographic disbursement across the state*
    - *Long-term sustainability*
    - *A tiebreaker could be the application demonstrating the greatest return on investment (ROI)*
  - *Any unused funds for this purpose shall be carried over to the next year and added to the one-million dollars allotted to this purpose annually.*
- Are there any issues or concerns unique to precision agriculture connectivity that the Commission should consider in determining grant awards in this category?
  - *We are concerned that the enabling legislation defines "adequate precision agriculture connectivity" as a download speed of one hundred megabits per second (100mgbs) and an upload speed of at least twenty megabits per second (20mgbs), yet not all PA applications require those speeds to the desired destination, such as a field or the*

*feedlot. If those speeds are an absolute requirement, that could be a significant limiting factor in the deployment of these grants.*

The remaining three allowable uses for PRO-AG grant funding are discrete categories.

1. On-farm traceability solutions that satisfy food supply stakeholder demand, including blockchain,
  2. Products that improve soil health, water management tools and sensors that facilitate judicious use of water resources, and products that promote the use of water efficiency seed technologies that lower agriculture's water, carbon, and nitrate footprint, and
  3. Products that use autonomous solutions in agricultural machinery, including, but not limited to, grain carts, spreaders, precision drone scouting, and scouting robots.
- How should the Commission determine how funding should be awarded between each of these three categories?
    - *\$333,333 to each of the three categories annually.*
    - *Unused funds for any of these three categories can be reallocated to one or both of the other categories if there are grant applications worthy of being funded.*
    - *If there are still unused funds after funding all worthy applications in all three categories, said funds shall be carried over to the next year and be added to the one-million dollars allotted to these three purposes annually and divided in equal proportions between all three categories.*
  - Should any funding categories be prioritized?
    - *No. We recommend that all three categories shall be treated equally until such time as utilization of this program indicates that the state should place a higher priority on one or two of the three categories.*
  - How can the Commission fairly and objectively evaluate applications in these three categories?
    - *The criteria for grants in each of these categories should include an assessment of the following:*
      - *Financial capability*
      - *Legal capability*
      - *Rate capability*
      - *Speed*
      - *Match source*
      - *Match percentage*
      - *Value proposition to producer and provider*
      - *Public private partnership*
      - *Technical capability*
      - *Administrative and management capability*
      - *Proven reliability*
      - *Benefit to Nebraska's agricultural complex*
      - *Location/geographic disbursement across the state*
      - *Long-term sustainability*
      - *A tiebreaker could be the application demonstrating the greatest return on investment (ROI)*

- Are there any considerations for the long-term sustainability of these projects which the Commission should consider?
  - *If the primary goal of precision agriculture is to strive for profitability, efficiency, growth, cleaner processes, less use of resources, agility, improved quality, and sustainability on the farm or ranch, it would benefit the Commission to develop a matrix that measures the effectiveness of each grant awarded and a requirement for the grant recipients to complete an annual report for five consecutive years following the completion of the grant implementation.*
  - *Said information shall be compiled by the Commission and made available to the public, taking all precautions necessary to protect confidential and proprietary information.*
  - *Failure to comply with this requirement would trigger repayment of the grant by the grant recipient.*

#### 4. Match Percentage and Grant Amounts

The Act does not require that applicants provide matching funds for PRO-AG grants.

- Should the Commission require that applicants provide matching funds?
  - Yes
- If so, what match percentage would be appropriate for each type of grant request?
  - *It makes sense to require a match similar to that approved for the Nebraska Broadband Bridge Program (NBBP).*
  - *In the NBBP, the applicant must provide matching funds, with a minimum of 50% of matching funds if located outside a high-cost area, or 25% of the total development costs of the project if located inside a high-cost area. Applications that leverage additional matching funds beyond the required match percentage are awarded additional points.*
  - *For the purpose of determining what is considered a "high-cost" project area, the Commission publishes a spreadsheet with designations for all Nebraska census blocks. Projects eligible for the lower match percentage must consist only of blocks designated as "high cost." Applicants must review the information to determine whether their project would qualify as "high cost" and therefore eligible for the lower match percentage. The Commission reviews projects that have identified themselves as "high cost" and may modify the designation if it is determined that non-high-cost census blocks are included in the project. If a project is reclassified by the Commission from high cost to non-high cost, that determination could result in an applicant being required to submit revised documentation reflecting the minimum 50% match requirement.*
  - *Applicants should attach a table detailing the confirmed matching fund commitments by source. The table should include the total amount committed for matching funds, a detailed description of the dollar amount of each match as well as the source of the match. The table should first list the amount committed by the applicant, and then list each funding partner.*
- Also, what match sources may be available for PRO-AG projects?



- *The Commission should allow match resources from all sources allowed to provide match resources for the BEAD program.*
- 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 NBBP program?
  - Yes

The Act provides that the Commission may award up to \$2 million per year in the PRO-AG program.

- Should the Commission set a maximum amount which may be awarded for a single PRO-AG project?
  - Yes.
- If so, what should that amount be?
  - *We recommend the PRO-AG program can pay up to 50% of the eligible deployment costs for a qualifying project if located outside a high-cost area, or 75% of the eligible deployment costs of the project if located inside a high-cost area, with a maximum grant amount of \$250,000 per single project.*
  - *Applicants may apply for and be awarded more than one grant as long as each application can clearly be classified as separate and distinct.*
  - *Funds that remain uncommitted from the prior grant cycle will be added to the amount available for grant awards in the current grant cycle.*
- Should the maximum grant award differ between the four categories of PRO-AG projects?
  - *We see no reason to create different limits for each of the four categories.*

## 5. Speed Testing and Broadband Affordability

The Act provides that applicants in the first category, adequate precision agriculture connectivity, must complete the project within twelve months after the date on which the grant is awarded, with one available extension of six months. These applicants must further submit the connectivity to speed testing, and shall be allowed a “reasonable time” to correct any deficiencies found by the speed testing. The Commission seeks input as to how speed testing should be conducted, and what the criteria for completion in this category should be.

- What constitutes adequate connectivity for purposes of this category?
  - *The enabling language defines adequate precision agriculture connectivity as a download speed of at least 100 mbps and an upload speed of at least 20 mbps.*
- How long should the Commission allow for awardees to correct any deficiencies found through speed testing?
  - *Six months.*
- Furthermore, for how long following project completion should an applicant be required to maintain the speeds required by the Act?
  - *At least five years after deployment is completed.*

The Commission also seeks input as to the affordability of any broadband projects funded by the Commission in this program.

- Should applicants for PRO-AG funding be required to demonstrate that their service offerings are affordable?
  - Yes
- If so, what benchmarks should applicants be required to meet?
  - *As part of the grant application, applicants must be required to submit a business plan that demonstrates the precision agriculture technology to be deployed has a positive value proposition for all parties involved.*
  - *Criteria to be considered shall include, but not be limited to:*
    - *Financial sustainability*
    - *Fair and reasonable rates*
    - *Scalability to different sizes of agriculture operations*
    - *Speeds*
    - *Match sources and percentages*
    - *Ability to adjust the project*
    - *Administrative and management costs*
    - *Reliability*
    - *Return on investment (ROI)*
- How long following project completion should an applicant be required to maintain the rates stated in their application?
  - *At least five years after deployment is completed.*

## 6. Completion of Other Grant Projects

While the Act sets forth completion requirements for applicants in the connectivity category of PRO-AG grants, it does not specify any completion requirements for projects in the other three categories.

- When should a project in one of these categories be considered complete?
  - *A project shall be considered complete when all substantive aspects of the grant application have been completed as determined by the Commission.*
- Should the Commission impose any deadline upon the completion of the projects within this category?
  - *Ideally, projects should be completed within one-year of receiving that grant award notification from the Commission.*
  - *Grant awardees are allowed to apply for one six-month extension per project by providing sufficient information that demonstrates the project could not be completed within twelve months.*
  - *It should be made clear that granting an extension is up to the Commission's discretion.*
  - *An administrative process for filing an application for extension and the Commission rendering its decision will need to be developed.*
- How long after the completion of these projects should they be required to continue to be in service?
  - *At least five years.*
- Are there any affordability or accessibility considerations for these projects which the Commission should consider?

- *In the current economy, it may be advisable for the Commission to take into consideration the limited availability of the equipment and workforce necessary to deploy the precision ag technology and connectivity called for in a successful grant application and adjust the deadlines for deployment accordingly.*

## 7. Program Schedule

The Act specifies that total funding for the PRO-AG program may not exceed two million dollars per year.

- Given that BEAD funding will not be available until final approval is granted by the National Telecommunications and Information Administration ("NTIA"), when should the Commission consider beginning a PRO-AG grant cycle?
  - *Within six-months of the state receiving notice that final approval has been granted.*
- What should the procedural schedule for each cycle be?
  - *Concurrent with the grant application for the Nebraska Broadband Bridge Program (NBBP), the grant application window for program year 2023 will open in mid-June 2023 and close at 5:00 p.m. Central Time on July 1, 2023.*
    - *Applicants must submit their applications to the Nebraska Public Service Commission (Commission) on or before the application deadline of July 1, 2023, no later than 5:00 p.m. Central Time.*
    - *Late filed applications will not be considered.*
    - *Completed applications and all required supporting documentation must be received electronically via e-mail to the Commission at [psc.broadband@nebraska.gov](mailto:psc.broadband@nebraska.gov) by the end of business on July 1, 2023.*
    - *The application form should be submitted in .pdf format using the provided application form.*
    - *If all documents can NOT be attached within a single e-mail due to size limitations, the submission may be sent in more than one e-mail.*
    - *If it is necessary to submit in separate transmissions, the subject of the e-mails should clearly indicate the applicant and project name, and how many e-mails are being sent (e.g., Email 1 of 4, etc.).*
    - *Files should be attached to the e-mails; links to websites are not acceptable. Alternatively, you may utilize programs such as zip files, Dropbox, Sharefile, provided that they contain individual files.*
    - *Each attachment should be clearly labeled to indicate the contents.*
  - *Protecting confidential information in an Application shall be done in the same fashion as the Commission protects said information for NBBP applications.*
  - *Applications received for program year 2023 will be posted to the Commission website on, or before, July 7, 2023, for review by interested parties.*
  - *If the Commission deems that a challenge process is necessary, we encourage the Commission to pattern it after the challenge process that it utilizes in the NBBP.*
  - *For program year 2023, grant awards will be released during the first week of December 2023.*

- *Successful applicants will need to submit required documentation for receipt of ACH payments from the State of Nebraska immediately upon the award of a grant in order to ensure that the first payment is not delayed.*
- *Additional instructions will be provided when grant awards are released.*
- Finally, given the time constraints of BEAD funding, in how many years should the Commission plan to hold PRO-AG grant cycles?
  - *For five years as required by the enabling legislation.*

## 8. Other Issues

The Commission seeks to make every effort to fulfill the purpose of the Act. The Commission therefore welcomes comments and suggestions regarding the implementation of the PRO-AG program. If there are other considerations which need to be addressed, stakeholders and interested parties are encouraged to bring them forward in comments and reply comments.

- Are there other considerations which need to be addressed?
  - *We encourage the Commission to consider a post-award repayment provision similar to the one utilized in the NBBP.*
    - *If a grant recipient fails to complete the project by the agreed upon or extended deadline (if requested and granted), the recipient shall repay the grant as provided in Neb. Rev. Stat. § 86-1304 (2)(b).*
    - *If no extension is permitted, 10% of the grant shall be repaid for each month that the project is not complete after the eighteen-month period, up to 100% of the grant.*
    - *If an extension is permitted, 20% of the grant shall be repaid for each month that the project is not complete after the 24-month period up to 100% of the grant.*

The above comments are the collective recommendations respectfully submitted by the Nebraska Agricultural Leaders Working Group which consists of the seven signatory organizations below. If you have any questions regarding these comments, please do not hesitate to contact us, via Bruce Rieker, Senior Director of State Public Policy for the Nebraska Farm Bureau at [brucer@nefb.org](mailto:brucer@nefb.org) or 402-432-4185.

Thank you.

Nebraska Cattlemen  
 Nebraska Corn Growers Association  
 Nebraska Dairy Association  
 Nebraska Farm Bureau  
 Nebraska Soybean Growers Association  
 Nebraska Pork Producers Association  
 Nebraska Wheat Growers Association