

Testimony of Jay C. Bartlett, PE

President & CEO, Prairie Power, Inc.

**Subcommittee on Rural Development, Research, Biotechnology and Foreign
Agriculture**

September 24th, 2011

Good afternoon Chairman Johnson, Ranking Member Costa, and members of the Subcommittee. I am Jay Bartlett, and I am the President and CEO of Prairie Power, Inc. (PPI). Thank you for the opportunity to testify on the importance of access to broadband telecommunications to support economic development in rural areas. More specifically, I would like to share with you some of the challenges we face in serving rural areas due to the lack of suitable broadband communications infrastructure, and our plan to overcome these obstacles. There are certainly many ways to accomplish rural broadband proliferation. It is my honor to present the solution we are pursuing to deploy broadband infrastructure in that part of central and western Illinois served by PPI's member distribution cooperatives. This solution was conceived with rural economic development as a primary goal.

As a matter of background, PPI is a not-for-profit electric generation and transmission cooperative headquartered in Jacksonville, Illinois. PPI is a Touchstone Energy Cooperative that is owned by its ten members which are all rural electric distribution cooperatives in Illinois. PPI and its member distribution cooperatives provide electric service to rural residential, farm and business members in a combined service territory that covers approximately 17,500 square miles. PPI's primary mission is to generate, procure and deliver reliable electric energy to its members via approximately 78 electrical transmission or distribution substations. It is also PPI's function to support economic development and to support energy efficiency initiatives on behalf of its members. PPI's member cooperatives understand the challenge of delivering service to sparsely populated rural areas. To put this challenge in perspective, the combined service territories of PPI member cooperatives cover an area slightly smaller than the combined area of New Jersey, Connecticut, Delaware and Rhode Island, while the number of member/consumers that the PPI member cooperatives serve is just slightly less than those located in just Springfield, Illinois.

Prior to joining PPI in 2009, I had been directly involved in the construction of a metropolitan-area fiber-optic network. As a result, I have witnessed firsthand the positive impact that the availability of an advanced telecommunications network infrastructure can have on economic development, education and improved delivery of healthcare services.

PPI is a technology-oriented entity, and our core business is absolutely dependent on reliable, secure high-speed data communications. Two trends have thrust PPI into taking a proactive role in the development of rural broadband. First, PPI has experienced a steady decline in our ability to obtain data communications services from the traditional commercial service providers. Second, in striving to reduce costs and lessen our impact on the environment, PPI requires drastically increased bandwidth to realize the benefits to be derived from implementation of new smart-grid technologies. Stated differently, PPI suffers from the lack of rural broadband access, and we are in a prime position to witness and understand the impact this lack of access has on the rural economy and quality of life. PPI is also in a prime position to attack the problem. It is not in our nature to complain or stand by idly in the face of adversity. It is our job to find and implement solutions to benefit our distribution cooperative members and, in turn, their residential, farm and business members, no matter how challenging the endeavor.

PPI commends the commitment made by the federal government and the Rural Utilities Service of the U.S. Department of Agriculture in particular for striving to improve access to broadband for rural citizens. It is our hope that this commitment is sustained and improved upon until ubiquitous broadband access is attainable to all. Our distribution cooperative members were founded to provide the benefits of electric energy to rural America at a time that commercial entities had little interest in serving rural locations. The result of this effort has contributed to the evolution of the greatest and most efficient agricultural system in the world. It is our belief that to sustain and advance this advantage, the delivery of broadband services to rural America will be equally as important as was rural electrification. Perhaps even more important, the lack of broadband services to rural areas is akin to depriving those citizens of both the energy to mechanize and the libraries to learn.

We believe it is essential to separate the rural broadband services issue into two distinct tiers that both have merit, but require separate consideration. These tiers, which I will define as tier 1 and tier 2, differ in the level of service provided and in the type of technologies which are generally used to deploy them. Most rural broadband discussions to date have centered on expanding broadband access in general terms, a one-size-fits-all approach that is noble in its cause. But, in our opinion, this approach is insufficient to realize the full range of benefits that remain unrealized by fully engaging rural America.

Tier 1 is the lowest cost technology to deploy and can be categorized generally by wireless, point-to-multipoint broadband delivery. These deployments oftentimes also use wireless connections to support backhaul of network traffic to a point of aggregation for connection to the internet. This broad category of technologies that has been rapidly developing in terms of its capabilities minimally fits the above-mentioned analogy of access to libraries for rural citizens. These technologies also certainly can support many forms of e-commerce that can help spur economic development.

However, we believe that access to higher speed, highly reliable symmetrical bandwidth is just as important to rural areas. There are various technologies employed to deliver these services, but they are generally characterized by the transport of data via optical or “wired” means. From an economic development standpoint, this type of service must be part of the rural broadband deployment plan for the United States. Many business operations, and more in the future, will depend on this level of network to thrive. We believe this fits the electrical energy part of the previous analogy. Unquestionably, there is overlap between the two loosely-described technologies that I have mentioned, and the proponents of each technology pervasively argue their respective merits. However, we believe it will require a deployment of a mixture of both types of technologies ultimately to close the digital divide and place rural areas on an even footing with their urban counterparts.

Tier 1 broadband access is important for many reasons to support economic development in rural areas. This level of service is capable of improving rural quality of life by allowing rural residents to join the growing social networking fabric of the world and to participate in non-critical or non-time-sensitive e-commerce with other businesses. This level of service also allows for non-time- or non-bandwidth-critical maintenance of remotely hosted (cloud-based) business solutions located in remote data centers with higher speed, higher reliability network access. Finally, this level of service also provides alternative means of supporting voice communications.

Tier 2 broadband services are required to attract and enable an entirely different segment of business activities. In our opinion, it is vital to ensure this segment is not overlooked. Examples of entities that require this tier 2 level of service are many, and the following are some examples.

- Financial and commodities service businesses which require highly reliable, low-latency access to remote trading systems.
- Warehousing and order fulfillment centers which require rock-solid reliability to ensure transaction processing is available continuously.
- Tele-medicine applications which require both high reliability and high bandwidth to support applications such as remote radiography with distant medical centers.
- Enterprises that generate substantial amounts of data locally in their operations that require high-bandwidth connections to support off-site backup and disaster recovery, such as local government entities and utilities.
- Educational institutions seeking to apply high-quality distance learning. These applications require high bandwidth and low latency to allow real-time multimedia interaction with remote participants. Highly reliable, high bandwidth connections also greatly expand the suite of offerings available to small, rural school systems.
- Any business that has multiple locations which can realize efficiency benefits by collapsing its information technology infrastructures to fewer centralized locations to reduce expenses if it has access to reliable, high bandwidth connections.

- Finally, this infrastructure can provide ideal backhaul support of tier 1 systems.

As mentioned earlier, PPI and its member electric cooperatives serve as a prime example of how tier 2 level services could create economic development opportunities by lowering energy prices and improve the environment through lower emissions by implementing elements of the smart grid. This result will not happen without drastic increases in the availability of bandwidth to our remote locations. PPI's rural electric cooperatives are already well poised to take advantage of these new technologies, as the vast majority of our members have already installed advanced customer metering systems. To gain the next level of benefits from this investment will require the transmission and storage of terabytes of usage information, and the ability to signal large numbers of electric loads (member/consumers) in near real time.

PPI can realize the benefits of such a system through the use of wireless technology at less cost to PPI than it can with fiber-optic cable. But, by using wireless technology, rather than fiber-optic cable, PPI would miss an opportunity to support future economic development. By striving to drive fiber-optic deployment to the electric substation level, PPI would ensure that tier 2 network services are within reasonable distances of other potential users throughout most of PPI's cooperative members' service territories. This fiber-optic proximity would then allow for selective build-out of fiber-based solutions where needed and provide excellent tower locations for tier 2 services.

The point of these efforts is very simple. The rural areas served by PPI and its members are in desperate need of economic development to support the continued health of the nation's breadbasket. The service territories of the PPI members offer many unique advantages to businesses. Relatively low-cost labor and real estate, a more flexible workforce due to the cyclical labor demands of agriculture, and an attractive quality of life are all ready and waiting to enhance the productivity and efficiency of America's businesses. The one factor that is missing is the requisite connection to the digital fabric on which businesses now run.

Seeking Solutions

The absolute requirement for broadband access is of no surprise. It has been known for some time that it would be a requirement for the economic stability and growth of the rural economy. It is also just common sense to understand that achieving this goal is more expensive in areas with lower population densities than urban areas. Lastly, it is also well understood that our cities, and indeed many parts of the world, depend upon the rural United States for sustenance. There is no room for failure in the endeavor of keeping rural America economically stable, as the symbiotic relationship between it and the rest of the world is too important.

PPI was very pleased to see the tremendous importance the federal government placed on rural broadband development and hoped these programs would lead to the necessary investments for businesses like our own to continue to evolve. In our area, this has not been the case. Despite funding opportunities offered through the American Recovery and Reinvestment Act,

and the programs offered through the USDA, the telecommunication systems needed for our communities to thrive have not materialized. So, we have elected to “go it on our own”.

Common sense dictates that it is not a highly profitable venture to build broadband infrastructure into low population densities. If it were, it would already have been done. In light of this fact, we took a fresh look at what resources we could marshal to accomplish our goal of establishing broadband equality. The following is a synopsis of the elements we believe can be marshaled to reduce costs and yield a greater density of both types of broadband services previously described.

- Endeavor to create a consortium of not-for-profit and for-profit entities to construct and operate the infrastructure. We believe the not-for-profit cooperative business model is ideal to accomplish the task at hand. Rural electric cooperatives and rural telecommunication cooperatives have stood the test of time, and serve as a proven example of how to accomplish essentially the same task now at hand. The cooperatives have conquered the task of building extremely capital intensive electric networks to serve sparsely populated areas. We believe the same cooperatives are ideal candidates to facilitate the deployment of advanced telecommunication facilities.
- Utilize the existing right-of-ways already possessed by rural electric and telecommunication cooperatives to minimize expenditures on easements and right-of-ways.
- Leverage the existing close relationships between our member cooperatives and the local businesses and economic development officials to ensure we build the correct infrastructure to the right places. There are not enough resources available to build unwisely, and the cooperatives have detailed knowledge of the local requirements.
- Find multiple, non-competitive uses for the same dollar spent. In our case, PPI has needs and limited funds available to support smart-grid development and electric system control. The same optical fiber that we construct to accomplish this goal can be used by telecommunication providers to deliver broadband services. In kind, the telecommunication cooperatives can provide access to their existing fiber-optic infrastructures to facilitate PPI's accomplishment of its smart-grid and electric reliability enhancement goals without constructing unnecessary, redundant communications facilities.
- Seek ways of leveraging staff from the member consortiums to reduce overall labor costs. For example, PPI already operates a continuously-manned control center that can be utilized for network monitoring and maintenance dispatch, while the telecommunication providers can provide provisioning services and fiber-splicing services.
- Both the telecommunication cooperatives and some of the electric cooperatives are already providing third and fourth generation wireless internet services. We will strive to streamline service and support of these ventures and provide more robust data backhaul means.

- The electric cooperatives own many communications towers, some of which are already also in use to provide internet services. We believe these towers could be used to a greater extent to help facilitate providing tier 2 services.
- Lastly, accountability is essential to successfully tackling a challenge of this magnitude. Accountability is a cornerstone of the cooperative business model, as it is wholly-owned and democratically-controlled by the members that we serve.

In summary, we are attempting to use many of the same principles that were used to accomplish rural electrification three-quarters of a century ago. In some ways, we are clearly ahead of our position 70-plus years ago. We know who our customers are and much about their needs, because they are our owners. We already have established rights-of-way, and we know how to conduct business in the rural environment.

What is different, is that we will be moving forward largely without the financial support of the government which was a prominent part of enabling rural electrification. We are hopeful that by demonstrating successful, responsible and effective solutions to bringing modern telecommunications capabilities to rural areas, state and federal governments will recognize this unique approach to solving the rural broadband issue is worthy of special consideration. With the addition of governmental support, we will be able to provide deeper network penetration at a more rapid rate.

Mr. Chairman, thank you for inviting me to testify today. I am happy to answer any questions you or the Members of the Committee may have.

Jay C. Bartlett
P.O. Box 610
2103 South Main
Jacksonville, IL, 62651

Education

B.S. Electrical Engineering – Rose-Hulman Institute of Technology, 1984

M.B.A. – University of Illinois at Urbana-Champaign, 2002

Professional Accreditation

Licensed Professional Engineer, Illinois

Professional Experience

Prairie Power, Inc. 2009 - Present

President & CEO

- Accountability - 20 member Board of Directors
- Responsible for management and operation of business activities
- Recommendation and implementation of corporate strategy
- Manage energy market and financial risk
- Management and operation of generation fleet
- Management and operation of electric transmission and distribution system
- Approximately \$575 million in assets
- Approximately \$130 million in annual revenue
- Provide member cooperatives approximately 1.5 million MWH/year

City Water Light & Power, Springfield, IL. 1984-2009

Chief Utilities Engineer & Assistant General Manager

- Accountability – Utility General Manager and Mayor
- Responsible for operational management of electric & water utility
- Construction of new 200 MW coal fired power station
- Approximately \$750 million in assets
- Approximately 700 employees
- Responsible for telecom division, high speed fiber optic metropolitan area network, 100+ mile network

Other Positions at City Water Light & Power

- Chief Utilities Engineer & Electric Division Manager
- Supervisor of Power Generation Engineering
- Supervisor of Generation
- Electrical Engineer I, II, III

Board of Directors Membership

Prairie State Generating Company

Association of Illinois Electric Cooperative Managers Association

ACES Power Marketing Board of Directors

National Renewables Cooperative Organization Board of Directors

Committee on Agriculture
U.S. House of Representatives
Required Witness Disclosure Form

House Rules* require nongovernmental witnesses to disclose the amount and source of Federal grants received since October 1, 2008.

Name: Jay Bartlett

Organization you represent (if any): Prairie Power, Inc.

1. Please list any federal grants or contracts (including subgrants and subcontracts) you have received since October 1, 2008, as well as the source and the amount of each grant or contract. House Rules do **NOT** require disclosure of federal payments to individuals, such as Social Security or Medicare benefits, farm program payments, or assistance to agricultural producers:

Source: Geothermal tax credit Amount: \$7,200.00

Source: _____ Amount: _____

2. If you are appearing on behalf of an organization, please list any federal grants or contracts (including subgrants and subcontracts) the organization has received since October 1, 2008, as well as the source and the amount of each grant or contract:

Source: FEMA - 1960 - DR - 11 Amount: \$413,897.51

Source: USDA Rural Development Amount: \$98,000.00

Please check here if this form is NOT applicable to you: _____

Signature: 

* Rule XI, clause 2(g)(4) of the U.S. House of Representatives provides: *Each committee shall, to the greatest extent practicable, require witnesses who appear before it to submit in advance written statements of proposed testimony and to limit their initial presentations to the committee to brief summaries thereof. In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a curriculum vitae and a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by any entity represented by the witness.*

PLEASE ATTACH DISCLOSURE FORM TO EACH COPY OF TESTIMONY.