

Arvig Telephone Company (Arvig Tel), a subsidiary of TDS Telecommunications Corp. (TDS Telecom), proposes a project that addresses the opportunity to bring high speed broadband service to remote, unserved establishments within Arvig Tel's rural franchise service territory. From a descriptive perspective, Arvig Tel is the certified incumbent local exchange carrier (ILEC) located in Minnesota. Within its rural service territory, there are 13 proposed funded service areas, which are one hundred percent rural, remote and unserved by definition, and include [REDACTED] establishments (residential households, businesses and community anchor institutions) that currently have no access to any broadband service, including Arvig Tel's DSL service

Absent stimulus funding, and given the cost-prohibitive nature of upgrading the network to provide broadband service to these establishments, Arvig Tel has no plans to build a network to provide these unserved establishments with broadband service. This project will build a broadband network that will pass these [REDACTED] rural, remote and unserved establishments affording them access to the broadband network at an overall infrastructure cost of \$7,358,993, and it can begin immediately and be completed within the required timeframe.

As envisioned, this project will stimulate job growth and retention; and will provide broadband service to customers in rural, remote areas who currently do not have such access, thereby increasing these customers' access to medical and public safety agencies as well as to educational opportunities. More specifically, Arvig Tel's proposed project will rely on TDS Telecom's financial, managerial and technical expertise to meet the following goals:

- Provide DSL broadband capability to [REDACTED] unserved establishments in rural, remote areas at prices comparable to those offered in the areas where Arvig Tel currently offers broadband service.
- Deliver dynamic broadband speed capabilities between 3-10Mbps and provide the capability to offer 20Mbps to select sites to meet specific customer needs, all of which mirror product offerings in the more populated portions of Arvig Tel's territory.
- Generate sufficient revenues (based on an estimated subscription take rate in year 5 of [REDACTED]% for residential households and [REDACTED]% for business) to operate and maintain this broadband network on a self-sustaining basis.
- Directly create or retain 145 jobs to build the network while indirectly stimulating jobs and economic development.
- Allow other providers access to this network so they can also offer these same [REDACTED] establishments competing broadband service.

Arvig Tel is operated by TDS Telecom's senior management team and is backed by TDS Telecom's managerial, technical, and financial strength (TDS Telecom's Vice President, Network Services is the project manager). As the 8th largest wireline telephone company in the United States, TDS Telecom has a long history of building and maintaining robust voice and data networks in over one-hundred rural ILEC, high-cost areas. Moreover, TDS Telecom has deployed DSL broadband networks capable of serving approximately 91 percent of its existing customers within these high cost areas, and has successfully maintained these broadband networks.

As the community's ILEC provider, Arvig Tel already is delivering telecommunications services to most of the establishments within its territory, and has already built a broadband network that currently is capable of serving the majority of these establishments in several of the core communities. As a result, numerous establishments and critical institutions that reside within Arvig Tel's territory already have access to broadband service. Yet the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost to build such a network. In addition, while broadband is generally offered in the more populated portions of Arvig Tel's territory, facilities-based terrestrial broadband service is not available to the [REDACTED] establishments in the proposed funded service areas.

As many individuals of these unserved establishments indicated recently in a survey, they need access to high speed broadband services at rates comparable to those available in other portions of Arvig Tel's service territory. Clearly, the availability of broadband services to the isolated, rural areas of Arvig Tel's service territory will provide these establishments with many new opportunities and the potential for economic growth similar to that currently being experienced in other areas of the territory that already enjoy broadband service. More specifically, this project will bring broadband service to these rural areas providing them access to distance learning, services provided by libraries, social services and health services agencies, and enable residents to telecommute to their jobs.

As engineered, the proposed network will:

- Deploy "Ethernet over copper" technology to its fullest potential.
- Provide VDSL2 access devices that are packaged in a "fiber to the node" configuration.
- Upgrade access in the central office to the extent necessary to support the extension of the broadband networks to these remote areas.
- Utilize PON (fiber to the home) where economically feasible and allow for future PON upgrades without having to rebuild the transport routes.
- Target speed to unserved customers at 3-10Mbps with the ability to offer 20Mbps or more DSL service to select sites where it is technologically feasible.

Arvig Tel, through TDS Telecom, already has engaged its RUS certified contractors to plan and construct this project upon receipt of funding. The network engineering, construction and service deployment, therefore, can commence immediately upon receipt of funding and would be constructed within the required timeframe. As a direct result of constructing this project, it is estimated that 145 jobs will be directly created or retained, and that numerous indirect jobs (e.g., equipment manufacturers, home businesses) will be stimulated as a result of constructing this project.

Arvig Tel today offers DSL service in the more densely-populated portions of its service territory at a competitive price [REDACTED] along with various other packages and services. Assuming similar take rates as in these more populated areas, Arvig Tel would offer its DSL service to the additional [REDACTED] establishments that are the subject of this application at this same price. Dependent upon state regulatory requirements, Arvig Tel intends to offer a [REDACTED] percent discount to any critical community facility located in these proposed funded service areas. Revenues generated from these new customers are expected to be sufficient to cover ongoing operating and maintenance expenses associated with serving these new customers because, if stimulus funding is provided, Arvig Tel will not need to recover capital expenditures. Arvig Tel's proposal, therefore, is financially sustainable.

Upon completion of this project, Arvig Tel will comply with the non-discrimination requirements and interconnection obligations required of all funding applicants as it currently does for provisioning broadband service in other areas of its service territory. These commitments, with which Arvig Tel already is familiar due to its status as an ILEC and provider of broadband Internet access service, will afford additional providers access to Arvig Tel's network on reasonable terms and conditions, allowing them to offer their own competing broadband services and applications to Arvig Tel's customers.

While the costs of deploying a broadband network to these remote unserved establishments is much higher than in other portions of its territory, Arvig Tel and its parent, TDS Telecom, have extensive experience in deploying networks to rural customers, and have the institutional capability to ensure that the network is designed and deployed as efficiently as possible in order to maximize consumer benefits. By building this network, this community of establishments will be connected, and will reap the benefits of increased employment, enhanced access to medical and public safety facilities, increased access to educational opportunities, and most importantly, the ability to become full participants in the broadband world of tomorrow.