

Broadband USA Applications Database

Applicant Name: Biddeford Internet Corp. (d.b.a. GWI)

Project Title: Three Ring Binder

Project Type: Middle Mile

Executive Summary

For the last five years, there has been an informal group of consumer-side advocates, Maine telecommunications providers and state agencies working on expanding rural broadband in Maine. In 2007, work from that group resulted in the ConnectME Authority being established by the State to promote rural broadband in Maine. Over the last two years, the ConnectME Authority has researched the issues involved in deploying broadband to rural unserved and underserved areas and provided grants for the deployment of rural broadband. All of those grants have gone to small, Maine broadband providers. Beginning in February, 2009, a group of four broadband providers led by Pioneer Broadband and GWI met frequently with representatives of the ConnectME authority and the University of Maine to discuss Federal monies that might be available to promote rural broadband and how Maine might best take advantage of them. The group noted: 1) for all recipients of ConnectME grants, a common theme has been that their projects have been impeded by lack of affordable middle-mile backhaul, 2) Anchor institutions, such as the University of Maine, suffer from lack of high-speed middle mile facilities to connect to the Internet, Internet2 and their facilities and campuses, 3) Maine telecommunications providers, such as Pioneer and GWI, who are trying to expand to rural areas, suffer from lack access to high-speed, affordable middle-mile backhaul. After five months of meetings, it also became clear that: 1) Maine needs three fiber optic rings throughout rural Maine providing affordable high-speed backhaul to telecommunications providers and anchor institutions. 2) The lack of dark fiber transport available for carriers is the primary cause of the low availability of rural broadband services. 3) Due to the fiscal crisis, neither the State nor the University has funds available to put toward the matching funds to build the rings. 4) Private telecommunications providers were concerned that the rings might be constructed in such a way as to give one or a small group of providers a competitive advantage. For these reasons, the group decided to form a new entity, Maine Fiber Company (MFC) to raise matching funds, to build and to operate the three dark fiber optic rings. This entity will not be controlled by any carrier. MFC will construct sufficient fiber to meet foreseeable demand and will sell dark fiber to all carriers and institutions at a standard, cost-based rate on "just, reasonable and not unreasonably discriminatory" terms. Because MFC will be partially funded privately, investors will be permitted the opportunity to earn a reasonable return on the investment of matching funds. GWI has taken the lead in the necessary matching funds and submitting the application. However, GWI will have no control over MFC and will have no additional privileges with respect to dark fiber. GWI will have access on the same terms and conditions as any other provider. One member of the group came up with the project name "Three Ring Binder" as descriptive of its three rings that will bind rural Maine together with a modern communications network. MFC's primary goal is to build and operate the Three Ring

Binder. The Three Ring Binder is a \$32 million project that will create an open access fiber optic network extending into the most rural and disadvantaged areas of the state of Maine; from the Saint John Valley in the north, to the rocky coast line of downeast Maine, to the mountainous regions of western Maine. The benefits of the project align with key benefits envisioned by ARRA. 1. The project will make middle mile fiber available for broadband service providers to bring cost effective, high-speed broadband services to areas that do not have access to it today. To maximize the availability of this new middle mile infrastructure, the project will be installed to existing Central Offices with additional huts and frequent splice points being installed as needed to ensure convenient access and connectivity to existing last mile facilities. 2. The project will expand the reach of Maine's DWDM based research and education network, MaineREN, to ten (10) campuses and outreach centers of the University of Maine System not currently optically connected to MaineREN and to three (3) of Maine's Community Colleges. In addition, the fiber optic infrastructure will be extended to provide service to 38 government facilities including thirteen (13) of Maine's county courthouses, eleven (11) county jails and fourteen (14) Maine Department of Health and Human Services district offices where they can choose to participate in MaineREN or receive broadband services from a variety of service providers. 3. The project will create the geographically diverse fiber optic routes necessary to attract 21st century businesses to Maine. Currently all long-haul connectivity enters/leaves the State through southern Maine. By establishing fiber optic routes through western Maine to northern New Hampshire and Vermont and through eastern and Northern Maine to New Brunswick, Maine's broadband infrastructure will have the same type of geographic diversity as other States that are more centrally located along the US long haul backbones. 4. The project will create the 21st century infrastructure necessary to support Maine's existing industries. Maine's forestry industry is struggling as demonstrated by the curtailments and shutdowns of many of its pulp and paper mills. With the infrastructure created by this project, Maine's mills will be able to diversify. As demonstrated by the recently announce data center projects in Holyoke, MA and Google's acquisition of a paper mill in Finland, the hi-tech industry has found the economic value of co-locating data centers at power generation facilities, especially those in colder climates and access to water for natural cooling. Maine's pulp and paper mills have huge power generation and cooling abilities that could be tapped for co-located data centers if only they had access to a robust fiber optic infrastructure. 5. The project will greatly improve the reach and effectiveness of Maine's rural health care by providing facilities that benefit clinics and hospitals. It will improve health awareness for poor, impoverished, communities in Maine, allow more immediate contact with clinical health care specialists, and increase the collaboration of local community-based health-care providers with specialists in major metropolitan areas -- allowing quicker, more accurate diagnoses and care for health-related problems. 6. The fiber project will enable and promote interconnection of local fire, police, safety, and emergency management agencies. The redundancy of the fiber project will allow reliable crisis management at both local and statewide levels. The Three Ring Binder project will pass through over 100 communities containing over 110,000 households and over 600 community anchor institutions. In addition, this infrastructure will be able to be leveraged by New England TeleHealth Consortium (NETC) and the Franklin County Healthcare Network (FCHN) as they implement their plans to establish advanced healthcare networks as part of the FCC's Rural Healthcare Pilot Program. The Three Ring Binder project is being executed as a public/private collaborative effort between the GWI, multiple other commercial service providers (including Pioneer Broadband) and the University of Maine System. Multiple levels of service will be

provided by the various entities involved. The higher education and government locations will receive 100 Mbit or Gigabit level services from NetworkMaine (a collaborative partnership recently created between Maine State government and the University of Maine System to operate the MaineREN backbone and the Maine School and Library Network). Commercial broadband providers will be able to gain access to dark fiber optic strands via Indefeasible Right to Use (IRU) agreements or other leasing arrangements. These agreements will be made without bias to any interested party in complete compliance with the nondiscrimination and interconnection obligations outlined in the NOFA. The Three Ring Binder Project will also partner with Maine InfoNet on its Maine Library Learning Network Public Computer Center project and Internet 2 on its Catalyst@Edu Sustainable Broadband Adoption Project to ensure the fiber optic infrastructure installed as part of the Three Ring Binder middle-mile infrastructure project is used to its maximum potential. As demonstrated by the letters of support submitted herewith, the Three Ring Binder project enjoys broad support from potential carriers and from suppliers of end-use broadband services. It is likely that the project, if constructed, will be heavily used and will improve the levels of broadband service throughout rural Maine.