Broadband USA Applications Database

**Applicant Name:** AXIOM TECHNOLOGIES, LLC

**Project Title:** Washington County Education and Employment through Sustainable Broadband Adoption

**Project Type:** Sustainable Broadband Adoption

_______________________ Executive Summary _____________________

Axiom Technologies, LLC, a telecommunications company headquartered in Machias, Maine has been creating and developing solutions for rural broadband deployment since 2005. The recipient of four State of Maine ConnectME grant awards ($750,034.00 in total grant funding), Axiom has brought high-speed Internet service to over 100 regions (46 towns) with over 80 Access Points in Washington County, creating an umbrella over 2,500 square miles in the area. Axiom identified wireless as the best candidate for rural last-mile service delivery, which previously had limited broadband connectivity, demonstrating significant advantages in cost and capability. Washington County has struggled with significant outmigration of its residents over the last eight years, losing an estimated 4.1% of its population, or 1,393 residents since 2000. A lack of available employment that pays livable wages, limited educational and training facilities which are located vast distances from the County's towns, have all contributed to this outmigration, as has its oftentimes harsh climate and poor road conditions, which makes traveling extremely difficult. It is clear that in order to stem the flow of outmigration and boost the local economy, efficient and effective use of available Broadband technology for educational, healthcare and business programs must be implemented immediately. The Washington County Education and Employment through Sustainable Broadband Adoption Project (EESBA) will take advantage of recently installed wireless broadband technology and provide educational and employment opportunities that will sustain and grow three of the largest industries in the County: blueberry farming, fishing and healthcare. Axiom will partner with the Central Maine Medical Center College of Nursing and Health Professions as Sub-Recipient, and Anchor Institutions: University of Maine at Machias, Downeast Community Hospital, Downeast Institute for Applied Marine Research and Education, Sunrise County Blueberry Cooperative and other collaborators. The Program will address the underserved, unemployed and underemployed resident by providing education and training opportunities in healthcare, computer and Internet technology skills and cost effective and efficient fishing and farming operating methods, all through the use of broadband technology. Currently, only a small percentage of businesses are taking advantage of this technology and as it has been proven to open doors to education and training opportunities and increase profitability, a dramatic increase in demand for broadband is expected, resulting in improved service adoption rates. The Vision of the Central Maine Medical Center College of Nursing and Health Professions (CONHP), established in 1891, is 'To develop leaders in nursing and healthcare whose actions, discoveries, and voices strengthen and transform the health of individuals and communities.' A Key Collaborator with Axiom on this Project, the CONHP currently provides Distance Learning Education (DLE) in the form of classroom instruction to three rural communities in Maine. The CONHP proposes to expand its outreach by adding a Remote Teaching site in Washington
County at the Downeast Community Hospital (DECH) for its RN Program. This facility will provide enrollment opportunities not currently available to Washington County residents, allowing them to obtain a degree without traveling great distances, thus saving both time and expenses; increase admittance to the CONHP RN Program (current rate of 1:4 applicants), and assist in addressing the severe nursing shortage in Maine (exceeding 2,500 nurses in 2010). The DLE Nursing Program will expand the reach of higher education into a rural area, offer educational and financial support for successful entry and upon completion of the degree program, provide skilled, high-paying jobs for area residents and supply a badly needed healthcare workforce in a Health Profession Shortage Area. Axiom Technologies will implement a program to prove the concept of leveraging new broadband technology use to bolster a dwindling natural resource-based economy and become a guide for other regions and States faced with similar 21st century challenges. Washington County produces more than 90% of the world’s blueberry crop and has 3,598 (23%) of Maine's small and medium-sized commercial fishing and marine harvesting operations, many of whom are small, economically and socially disadvantaged businesses. The Washington County EESBA economic metrics for subject businesses will include: 1) employee competency and capability; 2) new market access; 3) process automation; 4) effects on operating costs; 5) effects on gross revenue; and blending next generation technology with natural resource-based industry. A rugged laptop computer able to withstand field operations will be provided to each subject business and configured to utilize the high capacity data network. These machines will, in the course of the consulting and guidance process, be equipped with appropriate software and technology tools to support and enhance the subject businesses operation. Axiom personnel will install and configure these systems in conjunction with appropriate personnel from the subject business. The end result of this physical construction and installation period will be the creation of a high capacity, business oriented network throughout these communities. The subject businesses utilization of this network and adoption of new technology tools will be guided and supported throughout the project by Axiom and University of Maine personnel as outlined within the Narrative Sections. The EESBA will serve Washington County, Maine (population of 32,499), which contains two cities and 44 towns and over 80 populated 'Places' over a 2,568 square mile area. Its largest City is Calais, with a population of 3,184. According to the US Census 2008 Estimate, Washington County is Maine's poorest County, with only 13.2 people per square mile and has the largest minority population in the State (6.2%) with 4.4% of the State’s Native American population, nearly three times the size of any other County in Maine. The percentage of population living below the poverty level (20.1%) is more than 50% of the state average of 12.6% and the Median Household Income is $31,856, the lowest in the State and only 68% of the State's average of $46,419. Nearly 80% of the population in Washington County 25 years of age or older has a High School Diploma, only 14.2% have a Bachelor's Degree or higher. The area also has the State's highest unemployment for 2009 (11.5% compared to the State's average of 8.0% and the National average of 9.3%). Axiom will be providing broadband connections in both the subject's home and business; increased usage will include the subjects' families, employees and customers (average number ten per subject). In addition, the eight (8) nursing students will be using a new broadband connection through DECH, as well as possibly their homes (along with family members). In Year 1, it is estimated that a total of 250 new subscribers will be generated, which will increase exponentially each year. Axiom CEO Susan Corbett has extensive experience in large and complex project management as mentioned previously and has formed a cohesive team of experts that will help guide final program implementation
and results interpretation. Axiom has also created a working relationship with Maine Fiber Company, who believes that this project will leverage NTIA BTOP investment in the $25 million Three Ring Binder middle mile fiber project and provide connectivity to vital medical, educational and business development services. Axiom's staff is well respected throughout the area and highly engaged in economic and civic affairs throughout Washington County. In addition to the twenty pilot participants, we believe that dozens of businesses will ultimately realize the cost efficiencies and benefits of using the wireless technology and software, facilitating expansion, new employee hires and increased profitability and will create a minimum of 30 new jobs per year. Axiom is hiring four (4) FTE staff to train participants on computer and software usage and CONHP will hire one (1) new faculty instructor and a part-time clerical and technology technician. In addition, the DLE Program will graduate approximately eight (8) students per course, who will then be employed full-time. In total, initially 43 new jobs will be created, with an increase of at least 20% per year. In light of the downturn in the economy, it is difficult to estimate how many jobs will be retained as a result of program implementation, but it is estimated to be a minimum of 50 employees. The cost of the Washington County EESBA project is $1,875,044; $1,429,596 in Federal funding and $445,448 in match funding (23.8%).