Ulster County Community Wireless, a division of Intelligent Information Technology Solutions, Inc. (IITS, Inc.), will provide a unique last mile approach to extend broadband internet access to areas of Ulster County abandoned by traditional cable, DSL and fiber internet service (FiOS). By utilizing state-of-the-art, military-proven technology for deploying micro towers in remote areas Community Wireless can wirelessly provide internet access to areas where the cable company or phone company cannot reach due to lack of power and utility poles, steep elevations, or prohibitively few subscribers to carry the maintenance costs. Ulster County Community Wireless subscribers will enjoy a typical speed of 2-3 MB download/1-2 MB upload speeds to access the internet or to connect securely to their local office. Ulster County Community Wireless can provide up to 1 GB connection to users who need higher bandwidth with 99.999% uptime. IITS, Inc., a Hudson Valley firm expert in system planning and infrastructure services with a track record of working with governments, corporations, mid-sized companies, banks, colleges, and not-for-profit organizations on various projects for the past 15 years. In particular, IITS has focused on successfully deploying private wireless WAN links to non-serviced areas over the past 3 years. IITS has been honored by Motorola, the City of Poughkeepsie and Business Solutions Magazine for deploying nLOS wireless connections effectively. IITS proposes to establish a separate division, Ulster County Community Wireless, in order to implement the proposed wireless broadband project for rural unserved and underserved parts of Ulster County. Ulster County Community Wireless, a source for much needed on-net and last mile solutions, will solve the connectivity problem for rural Ulster County and provide a model for service in other unserved and underserved parts of New York State and the country. IITS, the Ulster County Community Wireless parent, is already proud to partner with Motorola whose world-class technology has been military proven, world-wide deployed and already serves as a part of America’s best core wireless infrastructure. Ulster County Community Wireless’ custom designed micro towers are built to be deployed anywhere, and the Ulster County Community Wireless plan will specifically avoid protected open space and wetland areas. Mountainsides, back yards and remote wooded areas are typical deployment locations. The proposed micro towers are significantly smaller than cell towers and stand at an average of 35 ft in elevated areas. Ulster County Community Wireless’ micro tower range is typically limited to 1-3 miles so as to provide better service in focused areas rather than taking a one tower fits all approach. To blanket an area, Community Wireless will spread multiple micro-towers out 6 miles apart and aim the “subscribers unit” to the best possible micro tower. The towers provide self sustaining power through solar charging cells and advanced battery technology to power up the access points and network equipment. Community Wireless’s approach to infrastructure development is to blend with nature rather than create a “bald
spot” on the mountain or carve up hundreds of miles just to provide grid-connected power. The Ulster County Community Wireless technician can use an ATV or a snow mobile when necessary to install and service a tower. The meshed network design proposed by Community Wireless provides the best of both worlds when it comes to providing a reliable and fully integrated network. For residents and businesses that need to telecommute and work from rural households, Ulster County Community Wireless can provide a reliable, cost-effective and secure “on-net” solution. With Ulster County Community Wireless information for local hospitals to local doctors, professionals who access critical data who need reliable, secure solutions can look to the Ulster County Community Wireless service to provide access in areas that are underserved or not served at all. Meanwhile citizens and businesses who desperately need access to broadband internet will be able to obtain it. The network design for the Ulster County Community Wireless’ meshed network is designed to create interconnects with existing CLEC’s & ILEC providers. The core interconnect from our data center will include “piped” TCP/IP connections from bonded T1’s, and OC3 interconnects as our core infrastructure is built out. The Ulster County Community Wireless’ goal is a non-discriminatory interconnect with other providers to provide last mile solutions. QoS, Private VLAN, WAN – WLAN, & WMAX interconnects. This core solution is an on-net local approach, which is needed to fuel the technologies needed in today’s environment. IITS, Inc., the Community Wireless parent company, has consistently worked with CLEC’s and ILEC & ISP locally in New York with such companies as Paetec, Cornerstone Telephone, One Communications, Light Tower, Verizon and Time Warner Cable. Over the past 9 years, IITS has successfully interconnected business and city governments for WAN access. Community Wireless will rely on the local community to build out infrastructure in back yards. For those who assist by providing micro tower leased space or labor for tower maintenance, Community Wireless will provide free service. Community Wireless will provide last mile service to homes, businesses, community anchor institutions and public safety first responders in areas of Ulster County that lack broadband coverage. Furthermore, Community Wireless will do so in a cost competitive, business sustainable way and using wireless micro tower transmission will provide rural service with no environmental impact. The Community Wireless proposal meets the last mile goal of the Broadband Infrastructure Program and the many goals of the Broadband Technology Opportunity Program. This federal grant funding under the American Recovery and Reinvestment Act will provide citizens access, create business opportunities and jobs for rural businesses and enhance public safety and community organizations ability to communicate. Technical Summary Specs: Number of micro towers in Ulster County: 25 Number of subscribers (year 3 estimates): 1400+ Coverage Areas: 90-100% current non served areas in Ulster County Data Speeds: 2-3 MB Download / 1-2 MB Upload[Consumer] 2-20 MB Download/2-20 MB Upload[Commercial] Estimated Cost to consumer: $40-$50 per month / $150 initial one time install $100 plus for commercial / Install fee waived Contract Terms: no long term contract, monthly service available Rate of build per year: Average 8 + towers per year Location Determination: Non-serviced area Overall Infrastructure Costs: $4.8 million over 3 years Number of jobs created: 17 + Full time / 10 Contractor