

## Broadband USA Applications Database

**Applicant Name:** Eastlight, LLC

**Project Title:** Southeast Iowa Rural Wireless Broadband

**Project Type:** Last Mile Non-Remote

---

### Executive Summary

---

We are proposing 1) ACCESS where it is truly needed; 2) LOW PRICES so that rural families can afford it, and 3) EDUCATION to bring new users into the 21st century quickly. We're proposing to reach 12 Iowa counties with 6,226 square miles and 111 communities with 144,000 residents including UNSERVED and UNDERSERVED areas. Some households in some of these communities have access to some sort of broadband, but the approximately 1/2 of the households outside of these communities are unserved. We propose to reach them all. The SE Iowa Rural Wireless Broadband project will extend high-speed broadband coverage into villages, towns and unincorporated collections of farms, businesses and homes in 12 Iowa counties covering 6,226 square miles where traditional terrestrial-based Internet service providers have offered limited or no service. These communities are separated by 5 to 10 miles of rolling farm land populated by farms whose houses are spaced typically 0.5 to 1 mile apart. Eastlight, LLC currently provides high-speed wireless broadband services to just such communities in Jefferson, Van Buren and Henry Counties under the brand name of "Natel" on infrastructure that it has deployed over the past four years. Eastlight, LLC will acquire the capital equipment, expand its terrestrial wireless network model and manage the ongoing service under this project. The terrain in these 12 counties varies from relatively broad and flat farmland to segments with rolling hills and river valleys that are quite unlike the often perceived flat farmland of central Iowa. Communities typically are located near historical water sources in valleys or along rivers surrounded by rolling land. There are 4 larger communities in this region, Ottumwa, Fairfield, Oskaloosa, and Mount Pleasant that are EXCLUDED from this proposal due to their size and/or existence of broadband service. Ottumwa is considered to be urban by the definition in the NOFA, and is NOT part of the proposed service area.

HOUSEHOLDS/BUSINESSES: The project will serve 111 small communities located in 12 Iowa counties, including 52 towns and 39 unincorporated communities. The number of households ranges from 44 to 3,939 per community, resulting in a total number of households to potentially be served (passed) of 61236. According to the Census information, the total number of businesses in the proposed service area is 32,014. Ranging in size from single persons, small local services, national chain retail, medium-size farm-related grain, fertilizer and farm implement businesses, specialty manufacturing, regional transportation and warehousing, and 11,485 farms (the life-blood of the economy in these communities). ANCHOR ENTITIES: It has been Natel's business practice to work with communities that it serves to enable the local governments and public institutions to obtain broadband Internet services on a no or low-cost basis to facilitate both public access and improved public services. There are over 370 public institutions including town and village halls, police departments, volunteer and community-funded fire departments, EMS and local health care centers, day care and pre-schools and libraries,

many of which are unserved or underserved with broadband Internet. As part of this proposal, we will actively engage with these critical entities to leverage new high-speed access to improve public services. We currently provide free or cost-basis service to Fairfield Community School District, Centerville Community School District, Jefferson County Courthouse, Jefferson County Health and Human Services, Maharishi University of Management, Fairfield Public Library, and the Community Center and City Hall of Lockridge. Interest from community leaders in the proposed area is high, and we anticipate providing free or nominal cost ongoing service to critical anchor and other public support entities for approximately 64 institutions in the twelve counties.

**SERVICES:** This project will provide delivery of high-speed Internet services to small rural communities. Two Internet services will be provided – residential and business. Pricing will be competitive, and equivalent to prices offered by Natel in nearby service areas. In addition, low or no-cost services will be provided to local governmental bodies, public safety, medical and emergency services, libraries and other community service delivery anchor institutions. Experience in communities where we currently provide service indicates that providing broadband access will not, in itself, dramatically increase Internet use without educating the new users to broadband in the “art” of using the Internet for business and educational purposes. Therefore, as part of this proposal Natel will work in conjunction with regional community colleges to provide education to upgrade the basic digital literacy and skills in using the Internet for job hunting, web-based education and electronic commerce. In addition, we will work with the regional managers of 911 service in each county to improve access by public safety and emergency services.

**OBLIGATIONS:** Natel’s business policies and practices are currently in full compliance with non discrimination obligations and will continue to be in the new service areas. Natel will provide access to its network under reasonable & competitive terms. Our approach to addressing both the non-discrimination and interconnection obligations is to continue our present policies and practices, all of which already comply with the FCC policies and other policies described in the NOFA.

**TECHNOLOGY:** The system we are proposing will be Terrestrial Fixed Wireless using available and proven point-to-point and point-to-multi-point industry standard components on a combination of licensed and unlicensed frequencies. Components will be sourced from vendors which the company has found to provide durable, reliable, upgradable and easily installed equipment. Frequencies to be used will include unlicensed 900 Mhz, 2.4 & 5.8 Ghz and licensed 3.6 Ghz bands. Equipment will be mounted at the top of existing structures, typically water towers, grain storage towers and farm silos which will reduce the time and cost of deployment vs. installing special-purpose new towers. Backhaul reliability will be strengthened by use of a ring architecture as well as back-up capability on alternative frequencies. Network management will be on equipment & software of the kind currently deployed by the company and found to be reliable, effective and scalable.

**QUALIFICATIONS:** With our experience serving our existing customer base in this area of Southeast Iowa, Eastlight has built competence and experience in successfully designing, installing and managing a wireless broadband network as well as in installing and supporting individual customers. Eastlight grew from a single community provider to serving multiple communities in less than four years and currently operates a growing and sustainable business. Our success is built on our network design, choosing highly reliable hardware, and on installing & tuning to a high degree of quality. Those customers who have had experience with a previous provider constantly tell us that that their service with us is faster and more reliable than what they experienced before at prices that are the same or lower, and they appreciate our prompt and courteous customer service. We receive many requests for service per month from

households outside of areas we currently serve. We have management and staff with experience and capability in all the key business functions, including network design, network management, outside plant (tower) installation and maintenance, sales and customer installation, customer service, billing, accounting, and supply management. Upon successful acceptance of this proposal we will augment our team by hiring competent staff from local college programs and locally available technical business workers. We will hire selective consulting support for project management, engineering, administration and accounting functions. We already have a list of specific individuals with competencies and work-ethic who have indicated interest in being part of the team.

**COST & SUBSCRIBERS:** The total cost for deploying this infrastructure will be \$4,796,158. Of the 61,236 homes passed and 32,014 businesses in these served counties. We will add 5,652 subscribers during the 3 years from the start of deployment and 8,180 by end of year 5. Once access is available, the drivers of subscription will be education, affordable price, and word of mouth from our satisfied customers. Our proposed price point is among the lowest in the region. Our education program will provide the comfort, confidence and demand for broadband service. We will have an educational outreach component to improve penetration in rural areas.

**JOBS:** The job environment in this region has been challenging over the past decade. Many of the small local manufacturing plants serving auto, electronics, printing, and other industries have gone out of business as major corporations have consolidated operations. A key challenge for remaining businesses is being able to be part of the supply-chain, enabled by electronic commerce systems. We estimate that jobs in jeopardy that can be saved and the new jobs that can be created to be 255. We will have 40 direct hires as a result of the Southeast Iowa Rural Wireless project. Depending on the multiplier used, which the literature states between 1.6 and 6.0, with a likely multiplier of at least greater than 2.0, according to Pociak, <http://www.newmillenniumresearch.org/event-02-25-2002/jobpaper.pdf>, who suggests 4.1 as a likely multiplier. This multiplier yields 165 indirect jobs, and that does not include the spinoff effect of jobs saved or gained in support services, adding another 50 jobs for a total of over 255 jobs.