BROADBAND NEEDS OF OUR ANCHOR INSTITUTIONS AND AN OPPORTUNITY

Rhode Island and South Coast, Massachusetts' non-profit CAIs have significant, unmet needs for broadband capacity. Commercial access simply does not meet their heavy demands. CAIs need a minimum of 1 GigE for basic functions and several are seeking up to 10 GigE for advanced applications. Unfortunately this amount of capacity is usually not affordable and, in some cases, not available. Founded in 1999, OSHEAN is a non-profit consortium and collaborator between private enterprise, government, and many CAIs including universities, community colleges, libraries, schools, hospitals, state police and emergency responders.

With Beacon 2.0, OSHEAN is positioned to help boost Rhode Island out of its recession and to implement an important program that will benefit the state's most vulnerable citizens. Our existing broadband service, Beacon 1.0, delivers broadband capability to our member CAIs utilizing dark fiber at affordable rates. The Beacon 2.0 infrastructure will leverage this infrastructure and will reach all Rhode Island counties and parts of South Coast, Massachusetts. The Beacon 2.0 project will offer substantially upgraded connections to 20 significant anchor institution partners representing 50 facilities. It will also provide middle mile fiber that passes approximately 349,000 households, 9,000 businesses, and nearly 500 CAIs including hospitals, community colleges, universities, non-profit research organizations, nursing homes, community health centers, public libraries, firehouses, police stations, over 70 K-12 schools, and the Narragansett Indian Tribe. Beyond the 20 institutions that have already committed, we expect to add other new subscribers and have provided a conservative estimate of 14 additional institutional subscribers in our pro-forma projections.

Rhode Island has one of the nation's highest unemployment rates (12.9%). Four of the state's five counties are classified as distressed by the Bureau of Economic Analysis and the Bureau of Labor Statistics. In addition to helping the anchor institutions that help our citizens, OSHEAN estimates that Beacon 2.0 will create 337 job-years, which consist of 160 direct job-years, 56 indirect job-years, and 121 induced job-years. AN ACTIVE PARTNERSHIP WITH THE COMMUNITY All of the anchor institutions to be passed by the Beacon 2.0 Network will now be able to obtain enhanced broadband service of 1 GigE to 10 GigE at rates significantly below those offered by commercial providers. The following CAIs are partnered with OSHEAN and all have signed letters of commitment to provide their own funding to connect to the Beacon 2.0 Network. They include: Brown University, Care New England, Butler and Kent Hospitals, Community College of Rhode Island, Newport and Warwick Campuses, CharterCARE, Roger Williams Medical Center and Fatima Hospital, City of Providence, Knowledge District, Save the Bay Organization, Botanical Center at Roger Williams Park, Providence Pier, City Hall, and Providence Public Works, State of RI, Division of IT, Dept. of
Environmental Mgt (TF Green Airport), Pastore Complex, Capitol Hill, State Data Center, Dept. of Transportation (Hope Valley and Maintenance Headquarters, and RI State Police (Scituate and Wickford Barracks) ' Lifespan ' Newport Hospital, Coro Building, Coro to Rhode Island Hospital, and Bradley Hospital ' Narragansett Indian Tribe ' New England Institute of Technology ' E. Greenwich & Warwick Campuses ' OSHEAN ' Headquarters, AP1, AP2, and AP3 ' Providence Community Health Centers ' Allen Berry and Chaffee Centers ' Rhode Island Administrative Office of State Courts ' Florence Murray and McGrath Courthouses ' Rhode Island Network for Educational Technology (RINET), representing 73 libraries and 383 K-12 schools ' Roger Williams University ' Salve Regina University ' Newport and Pawtucket Campuses ' South County Hospital ' Hospital, EGMOB, SCH Kenyon, and Surgical/VNS ' University of Massachusetts, Dartmouth ' Main, SMAST and Fairhaven Outreach Campuses ' University of Rhode Island ' Feinstein and Alton Jones Campuses ' United States Naval War College ' Westerly Hospital

SYSTEM OVERVIEW AND AFFORDABLE, SUSTAINABLE SERVICES TO BE OFFERED

OSHEAN will leverage existing dark fiber assets and, where needed, build new fiber to provide the affordable advanced optical infrastructure that our CAIs need. When compared to current commercial rates, Beacon 2.0 will save subscribers 150% at 1 GigE point-to-point levels. CAIs requiring very high capacity will benefit by our 10 GigE capacity offering, a service that is not commercially available to many of these institutions. Our solution also serves to 'future-proof' our CAIs. OSHEAN services will initially include broadband access at the 1 and 10 GigE capacities but will be scalable to 100 GigE, which is sure to be required by some CAIs within 8 years. We chose a 48-strand fiber build because a lesser amount would become insufficient within 5 years. Finally, our use of fiber optic networks will allow our CAIs to take advantage of future data exchange technologies that have not yet been commercialized, such as those beyond IP. OSHEAN will continue to provide full network management services, 24x7x365, all with industry standard service levels appropriate to the mission critical nature of our subscribers' enterprise systems. OSHEAN will abide by the FCC's non-discrimination and network interconnection obligations, specifically FCC's Broadband Policy Statement 05-151. To encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet, all OSHEAN institutional subscribers will be entitled to access the lawful Internet content, run applications, and use services of their choice. Subscribers will also be able to connect their choice of legal devices that do not harm the network.

SIGNIFICANT QUALIFICATIONS AND SOLID BUSINESS PARTNERSHIPS

OSHEAN has a record of success in implementing similar projects as a non-profit broadband service provider, having operated a fiber-based layer 3 ISP network for the last 10 years. Over that time the network has grown to a multi gigabit capacity network. To take advantage of favorable pricing from upstream ISPs in Boston, OSHEAN developed strategic agreements with dark fiber providers for low cost transport. Since then, OSHEAN has been steadily connecting 14 CAIs and 35 facilities at an average growth rate of 15% per year. OSHEAN also holds a maintenance contract on the Level 3 Rhode Island State Fiber. The Core Network Team was also responsible for the network design and maintenance of the NEREN Optical network which connects New England's most prestigious educational institutions. In addition to the anchor institutional partners listed above, OSHEAN's qualifications are complemented by the following significant commercial business partners: Fibertech Networks ' is a leader in building and operating fiber optic networks throughout cities in the Eastern and Central regions of the United States. It will lay the fiber in Rhode Island for Beacon 2.0 RCN Metro ' is a premier provider of high-capacity transport services for carriers as well as businesses and will lay the fiber in Massachusetts for Beacon 2.0. Atrion '
is a certified Cisco reseller and has been OSHEAN business partner for 10 years. Atrion will provide and install all Beacon 2.0 Network equipment, including Cisco Optical DWDM, routers and switches. Atrion will also extend its current OSHEAN maintenance and monitoring contract and act as the NOC for the Beacon 2.0 Network. Deepwater Wind is constructing an offshore wind energy project in RI and will run a submarine electrical transmission cable approximately 10 miles from the mainland to Block Island. OSHEAN is partnering with Deepwater Wind to include fiber optics as part of this cable. This will enable last mile service providers on the island, such as RINET, to provide augmented connected connectivity to CAIs via Beacon 2.0. Taunton Municipal Light Plant (TMLP) is a government-owned utility that will provide last mile broadband service to homes and businesses within the Southeast Massachusetts Beacon 2.0 service area. NEREN is a non-profit 502(c)3 consortium that provides a fiber-optic network connecting and unifying the research and education communities in New York and New England. Through NEREN, Beacon 2.0 CAIs to will have access to dedicated fiber throughout the northeast. OVER 30% MATCHING FUNDS OSHEAN is requesting $22,169,183 in this application. We will receive matching funds from our partners totaling $11,396,558 ($10,434,857 of which is cash), which represents 34% of the grant request. CAIs and Partners provided Letters of Commitment delineating matching funds.