

The Illinois Century Network (ICN) is the largest state broadband network in the nation, serving nearly 8,000 K-12 schools, libraries, museums, colleges and universities, community colleges, local and state government, health care and other non-profit entities throughout all 102 counties in Illinois. The ICN is built on a model of leasing point-to-point connections between 14 Point of Presence (POP) sites. With constituent demand for bandwidth increasing at a rate of 8% per month, the current model of leasing carrier lines is no longer economical. The increase in demand also makes it challenging, if not impossible, to attain the physical route diversity necessary for the reliability required by today's critical community facilities and to sustain the high-bandwidth that next generation applications will demand (e.g. telemedicine, real-time videoconferencing, video monitoring of critical infrastructure, etc.).

The proposed project, ICN BIG (Bringing Illinois Gigaspeeds), will create a State-owned fiber network that goes beyond merely solving the problems detailed above; this project will expand ICN's capabilities and service offerings well into the future. Last mile providers will use the new infrastructure to expand their service offerings and reach unserved and underserved communities, finally extending ICN's resources to the private sector. ICN BIG promises lower prices, faster speeds, and comprehensive, equitable access, not piecemeal availability. It will provide up to 16 times more bandwidth than the current backbone at the same or lower operating costs!

In addition to increasing speeds for the nearly 8,000 current constituents, ICN BIG will provide middle mile transport for last mile providers. ICN has identified 65 unserved and 122 underserved communities that will be directly impacted by the proposed network. These communities are distributed among 69 counties and have a total population of 104,803 and 39,072 households. Within these 69 counties there are 3,838 community anchor institutions (2,225 K-12 schools, 224 higher education sites, 288 libraries, 34 hospitals and health care centers, 956 government facilities, 20 museums, and 91 social service/non-profit entities).

ICN currently serves 4,892 K-12 schools, 313 higher education institutions, 467 libraries, 58 health care providers, 1,639 government offices, and 429 public safety agencies. This includes connectivity to 239 Illinois WorkNet Centers which provide a wide variety of employment counseling, training and support. Our constituents are not just customers; these key partners and stakeholders help to plot the course for the network's continuing development. ICN BIG will deliver better service to these stakeholders and provide the capacity to reach out to thousands more across Illinois.

ICN BIG is a statewide approach to building a fiber infrastructure which can serve all areas of the state. The fiber infrastructure will link together disparate public and private networks throughout the state to provide affordable access to commodity Internet, private peering locations, and research networks. This fiber infrastructure levels the playing field for all networks and service providers by providing economical access to critical broadband facilities located in Chicago, IL.

We will offer services at multiple layers of the network including: dark fiber, Lambdas or light waves, Ethernet ports, and Internet egress. At the low end, a 10 Mb point-to-point connection will cost [REDACTED]/year, while a 100 Mb point-to-point connection will cost [REDACTED]/year. These rates equate to [REDACTED] per Mb compared with [REDACTED] per Mb from ICN's current service providers.

We embrace the BTOP/BIP non-discrimination and interconnection obligations and the objectives they support. All last mile providers and customers will have equal access and cost under this system.

The ICN staff and project management team have proven themselves qualified to implement and operate a broadband infrastructure. Over the past 10 years, our team has advanced the network from T1 lines connecting 40+ Regional Offices of Education to an OC48 MPLS network servicing nearly 8,000 constituents throughout all 102 Illinois counties. The team successfully managed the migration of 1,800 state agency sites from a vendor-owned and managed frame relay network to the ICN.

ICN BIG will cost \$130M to deploy and light a statewide fiber network that includes ~1,700 miles of fiber optic cabling. The network will bring immediate relief to ICN's existing constituents and the many last-mile providers

struggling to meet bandwidth demands in their local service areas. ICN estimates that, in five years, ICN BIG will serve an additional 386,411 households and 26,319 businesses.

According to projections performed by the Information Technology & Innovation Foundation specifically for the Illinois Department of Central Management Services, the ICN BIG project is expected to create and or retain almost 945 direct jobs plus another 2,001 induced jobs. That number jumps up to 6,392 when the Network Multiplier Effect is factored in.

Recent history has shown us that these projections are thoroughly attainable. Last year, the National Electronic Warranty Corporation announced the creation of 700 jobs in southern Illinois, a rural region of the state plagued by economic hardship. NEW Corp chose the area because of the work ICN BIG-partner Connect SI (Southern Illinois) had done to expand broadband availability, improve services and increase adoption in the region.

The State of Illinois is advancing the ICN BIG initiative for ARRA funding because we believe that the creation - not leasing - of additional State-owned infrastructure will create jobs, provide a more equitable distribution of that infrastructure to last mile providers, and result in better service to rural, low-income, and/or low-population-density communities historically overlooked by the commercial carriers.