



**Broadband Infrastructure Application
Submission to RUS (BIP) and NTIA (BTOP)**

Submitted Date: 8/17/2009 11:15:00 AM	Easygrants ID: 1202
Funding Opportunity: Broadband Initiatives Program and Broadband Technology Opportunities Program	Applicant Organization: Iniciativa Tecnológica Centro Oriental, Inc.(INTECO, Inc. by its Spanish acronym)
Task: Submit Application - Infrastructure Programs	Applicant Name: Mr. Oscar Jiménez-Mártir

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A. General Application Information

1. Applicant Information

1-A. Name, Address, and Federal ID for Applicant

i. Legal Name:	Iniciativa Tecnológica Centro Oriental, Inc.(INTECO, Inc. by its Spanish acronym)
ii. Employer/Taxpayer Identification Number (EIN/TIN):	660630634
Street 1:	#65 Betances Street, First Floor
Street 2:	
City:	Caguas
County:	US-PR
State:	PR
Country	United States
Zip/Postal Code:	00725

1-B. Name and Contact Information of Person to be Contacted on Matters Involving this Application:

Prefix:	Mr.
First Name:	Oscar
Middle Name:	
Last Name:	Jiménez-Mártir
Suffix:	
Telephone Number:	787-961-2001
Fax Number:	787-653-5172
Email:	josean@prtc.net



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Title:	Executive President
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1-C. Other Required Identification Numbers	
i. Organizational DUNS:	141249124
ii. CCR # (CAGE):	9267695
iii. Funding Opportunity Number:	1
iv. Catalog of Federal Domestic Assistance Number:	BTOP CFDA Number: 11.557 BIP CFDA Number: 10.787 BTOP CFDA Title: Broadband Technology Opportunities Program BIP CFDA Title: Broadband Initiatives Program

1-D Eligible Entities
Please classify your organization. (Note: If there are multiple organizations involved in the project, designate the lead applicant that would enter into a Loan or Grant agreement with the Agency and assume operational and financial responsibility should an award be made). **Non-Profit Corporation**

1-E. RUS Borrower Status
No

1-F. Applicant Federal Debt Delinquency Explanation
Is the Applicant Delinquent On Any Federal Debt? **No**
Federal debt delinquency Explanation:
NOT APPLICABLE.

2. Project Description & Project Title

2-A. Project Title: Construction of Broadband Infrastructure for the Central East Region of Puerto Rico

2-B. Project Description: The INTECO Regional Broadband Project proposes a middle mile broadband network consisting of three primary components: 1) Microwave Core Redundant Ring Topology utilizing 11GHz spectrum; 2) Point to Multipoint Connection to Anchor Institutions via 2.5 GHz and 3.65 GHz



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spectrum based on the IEEE 802.16 Standard; 3) Local Access Coverage tier provided by Wi-Fi compliant IEEE 802.11g Standard.

3. Application ID for Multiple Submissions for Identified Service Areas:
Funding Type: BTOP Public Computer Center Name of the project: Expansion of Innovation Technology Centers for the Central East Region of Puerto Rico Application ID/Project ID: EIN #66-0630634

4. Rural Area Determination
At least 75 percent of the proposed service area to be funded falls within <u>rural areas</u> that are unserved or underserved. No

5. Applications for Rural Areas: Please choose the funding program(s) to which you are submitting this application.
--

a) BIP broadband infrastructure category to which you are applying:

b) Would you like this Application for Rural Areas to also be considered for BTOP funding?

c) BTOP Infrastructure category for which you are applying.
Middle Mile

6. Applications for All Other Areas: Per the NOFA, all applications to fund broadband infrastructure projects in areas that are less than 75% rural must be submitted to NTIA for consideration under BTOP.
--

BTOP broadband infrastructure category to which you are applying: **Middle Mile**

B. Eligibility Factors

7. Application Submission

BIP and BTOP Factors Selected By Applicant:
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Applicant has submitted a completed application and provided all supporting documentation required for



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<p>the application.</p>
<p>The Project will be substantially complete within 2nd year from the award date, and the project will be fully complete by the end of the 3rd year from the award date.</p>
<p>For projects seeking more than \$1 million funding, the Applicant agrees to submit a certification, from a Professional Engineer, that attests that a) the system will deliver the stated performance; and b) the projected project will be substantially completed within two years, and fully completed within three years.</p>
<p>The Applicant provides two-way data transmission with advertised speeds of at least 768 kbps downstream and 200 kbps upstream.</p>
<p>Applicant understands and agrees to comply with the nondiscrimination and interconnection obligations outlined in the NOFA.</p>

Additional Factors for BIP Selected By Applicant

Additional BTOP Factors Selected By Applicant
<ul style="list-style-type: none"> • Conformity with Statutory Purposes • Cost Sharing/Matching • Reasonableness of Project Budget
<p>The project advances at least one of the statutory purposes for BTOP</p>
<p>Applicant has provided documentation that the project would not have been implemented during the grant period without federal grant assistance.</p>



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Applicant has provided a budget that is appropriate to the proposed technical solution and only includes eligible costs.

- **Demonstration the Project Could not be Implemented But For Federal Grant Assistance**
Applicant is providing matching funds of at least 20 percent towards the total eligible project costs?
No

7-k. Cost Sharing/Matching Fund Explanation

Please refer to Other Attachments Required by NOFA Section; ATTACHMENT Z Certification or Request for Waiver.

C. Executive Summary

Executive Summary of Project for BIP and BTOP:

8. Infrastructure Projects Executive Summary

a) Opportunity the proposed system seeks to address.

The INTECO region is located in the middle and southeaster portions of Puerto Rico. INTECO's mission is to drive economic development through technology initiatives, and the non-profit organization has helped bring household incomes in the region to near parity with San Juan.

Through its regular work and a study INTECO performed in 2009 through a leading national consulting firm, INTECO concluded that lack of affordable broadband is a major inhibitor to increased economic development, productivity, social inclusion, education, regionalization, healthcare, and other important community concerns. Puerto Rico's demographic data for internet users and fixed lines per capita are widely recognized as lagging behind the US as a whole. Examples include the following from a July 10, 2009 report published by Paul Budde Communications:

- Internet penetration rate of 36% of the population
- Broadband penetration rate of 20% of the population

The deployment of the INTECO Regional Broadband Network will provide numerous



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opportunities and benefits for its constituents.

Municipalities will see an increase in the rate of economic growth in the region, as defined by tax revenues and property values, increased worker productivity for the municipalities resulting from both the increase in Internet connectivity speeds and the efficiency gains from regionalized applications (e.g. business permitting, etc.), improvements to public safety in the region through having the bandwidth to support applications like remote video capture and surveillance, and cost reduction or cost avoidance resulting from lower-priced advanced communications services.

Education institutions will benefit from an improved communication platform for both primary and higher education. The regional network will provide an infrastructure to support distance learning, video distribution and other educational enhancements. An additional benefit realized will be cost reduction or cost avoidance resulting from lower-priced advanced communications services.

The economic climate in the region will be improved through a platform to support the development of knowledge-based employees and cost reduction or cost avoidance for industry resulting from lower-priced advanced communications services.

The region's general community will benefit from improvements in the quality of the region's healthcare – particularly through the ability to use higher-speed connectivity for large diagnostic (MRI, X-Ray) scans, remote specialized care, etc. A valuable amenity for the community will be provided through public access to Wi-Fi in each of the municipal city-centers.

b) A general description of the proposed funded service areas (location, number of communities, etc.)

The area served by the proposed network includes the east-central region of Puerto Rico consisting of nine main municipalities (Caguas, Gurabo, Juncos, Naguabo, Ceiba, Cayey, San Lorenzo, Las Piedras, and Humacao). The coverage area will include an area of 413 square miles and serve a population of more than 416,000 citizens (based on year 2000 census data). This represents approximately eleven percent of both the land area and population of Puerto.

c) Number of households and businesses passed.

The proposed network is a middle mile project designed to pass 605 businesses and industrial centers, and 136,844 households.

d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with project (e.g., health care, education, libraries, etc.).



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Anchor institutions and critical community organizations passed or served by the network will include (216) K-12 schools, (37) universities, (27) hospitals, (23) municipal facilities, (10) Police Stations, and (9) Libraries for a total of (323) anchor and community tenants.

e) Proposed services and applications for the proposed funded service areas and users. The proposed network will provide internet and metro Ethernet products with service tiers ranging from 2 to 9 Mbps of bandwidth. These services will be offered to community anchor tenants as well as third-party service providers.

f) Approach to addressing the non-discrimination and interconnection obligations
The proposed INTECO network will be free of restrictions on legal content or platforms, on the kinds of equipment that may be attached, and on the modes of communication allowed, provided that certain applications or modes of communication do not unreasonably degrade overall service or cause damage to the network. Interconnection obligations will be met through wholesale data transport service offering which allow third-party service providers to offer broadband products to consumers in the region.

Any network management policies that don't adhere to recognized "standard best efforts Internet delivery" will be noted, so as to allow potential users of the network the knowledge of how their data might be affected by these non-standard policies.

g) Type of broadband system that will be deployed (network type and technology standard).

The three network tiers will include: 1) A FCC part 101 Microwave Core Redundant Ring Topology utilizing 11GHz spectrum, 2) A Point to Multipoint Connection to Anchor Institutions via 2.5 GHz and 3.65 GHz spectrum based on the IEEE 802.16 Standard, and 3) Local Access Coverage tier provided by Wi-Fi compliant IEEE 802.11g Standard.

The network will utilize four separate fiber egress points to provide further redundancy and increased capacity.

h) Qualifications of the applicant that demonstrate the ability to implement and operate a broadband infrastructure, and/or be a sustainable broadband services provider.

The marvelous and extraordinary characteristic of INTECO to guaranty efficiency and effectiveness execution diversification of assets for development and deepness of execution for long term endeavours resides in its governance and the corporation inception process as a special regional development non profit corporation under and amendment made to the Puerto Rico's Autonomous Municipalities Act. The outstanding fact is that INTECO Board of Directors must be conformed and is actually composed of one third representatives of the Honorable Mayors of the Region (As of this date 8 Mayors); one third representatives of the



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higher education institutions and one third representatives of private entrepreneurs located within the Region. This multisectorial governance is also reinforce for executions by INTECO Partners which serves as executive and strategic assessors to the Board and donors for INTECO. INTECO have 55 partners (39 from the industrial sector, 9 from academia and 8 Mayors, which are also members of the Board). Within the industrial sector partners are Centennial, AVANT Technologies, Microsoft, AMGEN, Popular Bank of PR, SONY and St. Jude Medical.

As we closed INTECO's fifth anniversary we can say that the goals we have proposed for ourselves and that were set forth in 2004 strategic plan have begun to render the fruits of the efforts to achieve INTECO managed an operational budget of \$7.75M and a total of \$4M for the Construction of the School of Science, Mathematics and Technology and \$9M for the Metropolitan Regional Train Design (TODOS by its Spanish acronym). On going INTECO projects are Workforce Innovation in Regional Development (WIRED Program under the US Department of Labor) a \$5M grant, Innovation Technology Centers (already in operations 3 centers) and Regional Office for Processing of Permits among others. Finally a well trained and committed senior personnel as for example engineers Jiménez and García as Executive President and Operations Vice President respectively.

i) Overall infrastructure cost of the broadband system.

The financial model will show infrastructure costs totaling \$8,771,609.00 – WORKING WITH PDC TO RECONCILE

j) Overall expected subscriber projections for the project.

Total expected subscriber accounts for direct middle mile customers are roughly 430 at steady state. The number of people who will benefit from this network is much more. For example, the schools this network will connect serve over 60,000 students.

k) Number of jobs estimated to be created or saved as result of this project.

Direct full time jobs created for network operation are forecast at 8.5. We anticipate over 30 jobs during network construction.

The broader impact to the region is more important. Employment in INTECO numbers 128,900. Numerous studies cite the impact of increased broadband usage and adoption on overall employment numbers and economic output. It is difficult to predict at the outset of the INTECO middle mile project and its coordinated sustainable adoption and public computing center projects the final impact on the economy over time

Based upon the July 2007 study "The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data, by Robert Crandall, William Lehr and



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Robert Litan, the impact of increased broadband penetration can be estimated using the following formula: “for every one percentage point increase in broadband penetration in a state, employment is projected to increase by 0.2 to 0.3 percent per year.” In the case of INTECO, we believe we can achieve at least a 10% increase in last mile broadband penetration. If current numbers are approximately 30%, then INTECO should see a 3% increase in broadband penetration resulting in 0.6% to 0.9% increase in employment or 768 to 1152 jobs.

Description of BTOP Project Purpose (BTOP Applicants Only Next Three Questions)

9. BTOP Statutory Purpose:

Provide improved access to broadband service to consumers residing in “underserved” areas of the United States.
Provide broadband education, awareness, training, access, equipment, and support to schools, libraries, medical and healthcare providers, community colleges and other institutions of higher education, and other community support organizations by or through these organizations.
Provide broadband education, awareness, training, access, equipment, and support to organizations and agencies that provide outreach, access, equipment and support services to facilitate greater use of broadband service by low-income, unemployed, aged, and otherwise vulnerable populations.
Provide broadband education, awareness, training, access, equipment, and support to job-creating strategic facilities located within a defined economic zone, or community as designated by a State authority, Department of Commerce , HUD or USDA.
Improve access to, and use of, broadband service by public safety agencies.
Stimulate the demand for broadband, economic growth, and job creation.

10. Description of BTOP Project Purpose:

a) Project addresses compelling problem or presents an opportunity consistent with the BTOP statutory goals.

We believe there are few projects in the US that are aligned as well as this one with the goals



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of BTOP. This project and its associated sustainability and computing center projects, led by an experienced and successful non-profit entity for technology based economic development and education, focuses on holistic improvements to broadband education, awareness, training, usage, and equipment among nearly all BTOP constituencies including children, vulnerable populations, schools, public safety, business incubators, and industrial parks.

INTECO already operates a STEM school for advanced math and science primary and secondary education, a business incubator for start ups, and numerous public computing centers that provide adults, children, and teens with digital literacy skills and positive role models.

Puerto Rico is an economically disadvantaged area with median family incomes in the INTECO region reported \$12,941 by the US Census in 2000. We believe all regions of Puerto Rico need non-profits like INTECO to further goals

The project will address the problem of limited availability and reliability of broadband services in the region. Upon deployment of the network, the region will experience significantly improved access to these services in an area that is overall classified as “underserved”. Additionally, the free community public access tier provided by the deployment of Wi-Fi infrastructure to the region’s city centers creates an opportunity for businesses and citizens who are not current broadband subscribers to have access to advanced Internet and broadband applications and begin to understand the economic power of broadband.

b) Project offers an effective solution to that problem or addresses the opportunity. The deployment of the INTECO broadband network will provide the middle mile infrastructure that will effectively serve the anchor facilities and critical community facilities with high-bandwidth and reliable broadband service at minimum cost due to the use of licensed wireless facilities.

Public Safety institutions will benefit through improved access to the bandwidth necessary to support applications such as remote video capture and surveillance, and cost reduction or cost avoidance resulting from lower-priced advanced communications services. In the city of Caguas for example, only 40% of its almost 150 video cameras currently transmit information. Education institutions will benefit from an infrastructure to support distance learning, video



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distribution and other educational enhancements. An additional benefit realized will be cost reduction or cost avoidance resulting from access to lower-priced advanced communications services.

Healthcare institutions will have the ability to use higher-speed connectivity for large diagnostic (MRI, X-Ray) scans, remote specialized care, and networked facility interconnection.

The general community of the region will benefit from free public Internet access through Wi-Fi coverage in each of the municipal city-centers.

c) Proposed solution demonstrates broad significance and includes development that can be replicated to improve future projects.

The past achievements of INTECO and its plans for a broadband network are already providing inspiration for other communities. Delegations from the states have travelled to Puerto Rico to understand its model and successes. Other economic development entities throughout Puerto Rico are asking what they can learn from INTECO and how they might be able to emulate its successes. Central Puerto Rican government is well aware of the project and is currently considering how the INTECO project could work with future island wide efforts.

INTECO as an organization was started only after an extensive worldwide analysis of other technology based economic development entities.

d) Whether the proposed funded service area is in an unserved or underserved area.

The proposed funded service area being served by the INTECO Regional Broadband Project is classified as an “underserved” area. Details of the analysis for this determination are included in response to question 17.

e) The extent to which the project addresses more than one statutory purpose. See above. This project addresses almost all of the statutory purposes.

11. BTOP Enhanced Services for Health Care Delivery, Education, and Children:

Education is a primary focus for INTECO. Its experience operating a STEM school and numerous public computing centers has provided firsthand knowledge of the challenges educators face today.

This project goes beyond simply providing a “pipe” to schools. Integration of the after school



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digital literacy programs INTECO currently operates and intends to expand through BTOP provides additional experience, motivation, and value to broadband access for children. The centers allow students to work collaboratively together and provide particular value to the many students who simply can't afford their own laptops and broadband connections to use at home.

The STEM (Science, Technology, Engineering, and Math) magnet school that INTECO operates allows motivated students to focus in these disciplines at an early age. In addition to providing improved broadband access for healthcare institutions and education facilities, the network will provide for interconnection between facilities. This interconnection capability and bandwidth will improve the region's healthcare environment and allow facilities to streamline the transfer of medical records, large diagnostic (MRI, X-Ray) scans, and provide remote specialized care, while maintaining HIPAA compliance.

The Central East Region consists of 9 Municipalities over an Area of 378 sq. miles with a population of 437,341. A recent preliminary research identified 28 hospitals in the Region. It is observed a high demand for health specialized services, a growing trend for MRI, CT and specialized laboratories and related. Also the existence of a School of Medicine; high education institutions offering nursing, paramedic and pharmaceutical degrees. INTECO is short term strategy is to conformed a Regional Health Corridor Plan to tackle the opportunity of international markets and capture the demand of health tourism related visits and treatments in the Caribbean. The Broadband infrastructure will be needed to provide proper communication facilities for distant learning telemedicine and teleworking health related services. Broadband enables students of all ages and from any geographic location to take advantage of health related educational opportunities. A preliminary survey indicates that 37 universities and 254 schools are established on the Region. There are also existing airports, seaports and highways interconnecting health and education institutions with international and local markets.

D. Proposed Funded Service Area

12. Proposed Funded Service Area Maps:

12-A. Service Area Map (Reference Number): **0E9E-2FE0-4BDF-A33C**

12-B. Is the applicant is seeking a waiver for providing less than 100% coverage of a census block. **No**



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13. Proposed Funded Service Area (BIP - Last Mile Projects):

Please refer to section M at the end of document.

14. Proposed Funded Service Area (BTOP - Middle Mile Project):

Please refer to section M at the end of document.

15. Non-Funded Service Area(BIP Only):

NOT APPLICABLE.

16. Coverage Waiver:

Applicant is seeking a waiver for providing less than 100% coverage of a census block.

No

For Response of "Yes" please refer to upload section for additional supporting documentation.

17. Methodology for Area Status:

The analytical approach used to define the Proposed Funded Service Area status as "underserved" draws upon the data published by the FCC. Puerto Rico does not currently have broadband deployments mapped.

From the FCC's newest analysis of high speed subscriber lines, published in July 09, Puerto Rico has an estimated 41% broadband penetration overall. This calculation is supported by:

- 582,155 broadband subscriber lines identified by the FCC
- 1,413,744 households as estimated through the US Census population estimates of 3,900,000 citizens multiplied by the established ratio of households to population of 2.76 determined in the 2000 Census.

The Pew Internet and American Life project has evaluated any ties between income levels and broadband adoption. Its most recent findings show that household income levels between \$20,000 and \$30,000 typically have a 53% broadband adoption rate and that incomes over \$75,000 have an 85% adoption rate.

If we look at the most recent decennial census data for household income, the INTECO region reported \$12,491 per household compared to \$16,543 for Puerto Rico as a whole. Given these low income rates and the data above from the FCC and from Pew, we believe NTIA can be confident that the INTECO region does not subscribe to broadband at 40% of households.

In fact, Puerto Rico's incumbent DSL operator recognized the challenges the territory faces in their commentary (<http://www.ntia.doc.gov/broadbandgrants/comments/7A93.pdf>) to BTOP and BIP April 13, 2009 on page 2: Indeed, unique characteristics, including intense poverty and



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the challenges inherent in serving an island population, warrant giving particular attention to the broadband access needs of Puerto Rico’s “unserved” and “underserved” populations. Currently, the Commonwealth has less than half the broadband penetration of most other states in the Nation, including other insular areas.⁵ This low rate of broadband penetration results from a combination of an extremely poor population and, as the FCC has recognized, high development costs for telecommunications infrastructure given the increased costs associated with serving an insular area with mountainous, tropical terrain. Accordingly, Puerto Rico is the poster child for need based federal funding for the development of broadband infrastructure. Data from 3 primary sources. These sources define broadband penetration and subscribership rates for the entire island of Puerto Rico. Currently, no known sources contain data focused on the particular geographic area that comprises the Proposed Funded Service Area.

18. Middle Mile Benefits

The INTECO broadband project will provide extensive benefits to a region that makes up ten percent of all of Puerto Rico’s land mass and more than 10% of its population with well over 400,000 residents.

The network is already planned to interconnect with PREPANet and the Ana G Mendez University System. As a condition of utilizing the University’s 2.5 GHz spectrum, INTECO is committed to making the university’s educational programming freely available to the region’s residents.

The uses and support for the network are wide ranging and difficult to list in their entirety. Examples already planned include:

- Students at 216 K-12 schools (80,000 students) will benefit from the network directly by using it in their daily education.
- With a regional median household income of only \$12,941 in the last full census, 698 persons per 120 hours business week received the benefits from high speed service at the free public computing facilities and educational training conducted by INTECO’s daily operations in its 3 current facilities. INTECO’s educational programs help those of all ages with critical digital literacy skills that are a must for productive employment in today’s economy.
- Residents in the largest municipality in the region (140,000 thousand), Caguas, will benefit from improved video surveillance and the public safety it provides. Caguas has deployed approximately 150 video cameras but 40% of them are currently able to connect over a limited proprietary network.



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- A new Center for Science and Technology (C3TEC) is in construction at a cost of \$13M to LEED standards through the reconstruction of a closed Sears retail store and managed by INTECO, will be able to host capabilities such as telepresence meeting and remote learning, through this network.
- Tourists and residents alike will benefit from free Wi-Fi access and Ana G Mendez educational content in town squares.
- Visitors to the region's 9 libraries will benefit from high speed service.
- 27 hospitals and healthcare facilities will be able to improve care for over 400,000 residents with advanced imaging capabilities and electronic patient medical records.
- 37 higher educational facilities will connect to the network and better serve their students.
- 23 governmental facilities will be able to streamline their operations and reduce their operating costs through improved broadband connectivity. The mayors of the INTECO region have already committed to support the network and will ensure it is well utilized.

As a community nonprofit organization, INTECO already enjoys excellent working relationships with all of entities above. Broadband networks are only useful if they are well utilized. Capacity without utilization has little value. INTECO is uniquely able to help the region realize the benefits of broadband access through the entities above as well as many others.

E. Proposed Service Offering

19. Broadband Service Offerings for Last Mile Project:

Please refer to upload section at the end of the document.

20. Service Offerings for Middle Mile Project:

Please refer to upload section at the end of the document.

Competing Service Providers



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21. Existing Broadband Service Providers and Services Offered:

Please refer to upload section at the end of the document.

Non-Discrimination, Interconnection

22. Description of Network Openness:

INTECO believes that access and utilization of technology is fundamental to its mission of technology enabled economic development. INTECO's end goal is not operate a network but to see the region grow economically. The network is one of several means to this end. Because of these core values and perspectives, INTECO's interest and goals in terms of network non-discrimination and network interconnection are directly in line with NOFA. The proposed network will adhere to the principles contained in the FCC's Internet Policy Statement (FCC 05-151) in that it will be open, affordable, and accessible to all consumers and third-party service providers. Consumers will be provided the ability to access lawful content, run applications, and use services of their choice that do not harm the network. Interconnection opportunities will be provided through wholesale transport service offerings which will foster competition among application, service, and content providers. INTECO will make every effort to adhere to recognized "standard best efforts Internet delivery." Any network management policies that do not adhere to recognized "standard best efforts Internet delivery" will only be put in place in the case of any needs for network and bandwidth management for the betterment of the overall network performance. Any such policies will be posted prominently online to provide potential users of the network with the knowledge of how their data might be affected by such non-standard policies.

Non-Discrimination and Interconnection (BTOP applicants only for next three questions)



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23. Non-Discrimination Obligations (applicable to Last Mile and Middle Mile Applicants):

Adhere to the minimum non-discrimination requirements as set forth in the NOFA.
Display the nondiscrimination practices in a prominent location on the service provider's web page, and provide notice to customers of changes to these policies.

24. Interconnection Obligations (applicable to Last Mile Applicants):

--

25. Interconnection Obligations Middle Mile Applicants:

Adhere to the minimum interconnection requirements as set forth in the NOFA.
Display the interconnection policies in a prominent location on the service provider's web page, and provide notice to customers of changes to these policies.
Commit to offering wholesale access to network components and services such as wavelength or fibers at reasonable rates and terms.
Commit to binding private arbitration of disputes concerning interconnection obligations.

Cost Effectiveness and Affordability

26. Cost per Household (BTOP only):

NOT APPLICABLE PROJECT PRIMARILY MIDDLE MILE.

27. Affordability

Puerto Rico has a persistent poverty challenge as described in this application already.



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INTECO’s mission is to address this issue through increased technology industry investment and the catalyzing of technology-based commercial activities. This increase requires an increase in digital literacy among the entire population. The proposed network will provide free Wi-Fi in the region’s city centers. INTECO is also requesting a sustainable broadband adoption grant to further the goal of increased digital literacy.

In terms of specific price points and their affordability, INTECO’s model for fee-based broadband service is to charge those who must purchase commercial quality services for their operations. These are the anchor institutions the network is primarily designed to serve. INTECO has priced the services delivered on its network to be attractive to such customers and to compete favorably with any existing service as shown in the attachments.

F. Technology Strategy

28. Technology Type:

Wireline - Fiber-optic Cable
Wireless - Terrestrial Fixed

Other:

29. System Design System Design

The system design for the INTECO region of Eastern Puerto Rico consists of fiber, point to point licensed common carrier microwave and licensed point to multi-point microwave systems. A point to point microwave “ring” around the region will provide the backbone network throughout the region. At various points around the microwave network there will be fiber connections to provide connectivity to the public Internet. From the tower sites containing the point to point links there will also be a point to multi-point base station to provide access to anchor tenants.



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Figure 1: Microwave Network with Fiber Egress Points

The point to point microwave network will consist of high capacity Ethernet radios capable of throughput speeds of 200+ Mbps and sub 2 ms latency. The radios will be operating in the licensed common carrier frequencies of 11 GHz. There are 23 tower sites from which the point to point microwave network will be installed. Of these tower sites, 15 of them are existing tower sites and 8 of them are new build sites. Land owners for the new sites have been contacted and are agreeable to working out arrangements with INTECO for the new towers to be built.

Figure 2: Towers Designated as New or Existing

To provide Internet access connectivity to the point to point microwave network, four fiber POP facility locations owned by PREPANet have been identified. PREPANet will provide a minimum of 100 Mbps, and up to 1 Gbps of capacity at these POP facilities with a fiber connection from the POP facility to the INTECO tower site facility.

For connectivity from to the anchor tenant institutions, 6 MHz of licensed EBS/BRS 2.5 GHz spectrum has been obtained for a WiMAX point to multi-point network throughout the service area. This will be a fixed network providing access to schools, government facilities, universities and industrial and commercial businesses with future applications for public safety and smart grid technology. Propagation modeling for this tier of the network is shown in Figure 3.

Figure 3: 2.5 GHz Propagation Model

The point to point microwave network can provide high capacity, high reliability and low latency and be implemented in a fraction of the time and cost it takes to implement a fiber network. The four fiber egress points throughout the network will provide for redundancy, path diversity and network load balancing, making the network extremely resilient to network outages. Since the microwave network is using licensed frequencies and high gain antennas, there is little to no impact from interference. The point to point radios are both software and hardware upgradeable to allow for higher capacity as the network needs grow.



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The point to multi-point network also uses licensed frequencies in the EBS/BRS 2.5 GHz band. WiMAX, or equivalent technology, is the technology used for this part of the network since it is a spectrally efficient and high bandwidth 4G technology. The point to multi-point base stations are software upgradeable to newer technologies like LTE to allow the network to change and grow over time.

30. Network Diagram:

Please refer to upload section at the end of document.

31. Certification by Professional Engineer:

Please refer to upload section at the end of document.

32. Buy American Waiver Request:

Is the applicant seeking an individual waiver of the Buy American provision? **No**

Buy American Waiver Request – Legal Justification

NOT APPLICABLE.

33. Choice of Service Provider:

Does the project’s Infrastructure and the Company’s business plan allow more than one provider to serve end users in the proposed funded service area?

Yes

G. Project Milestones and Completion Factors

Timeline & Milestones



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34. Infrastructure Build-out Timeline:

Please refer to upload section at the end of the document.

35. Licenses, Regulatory Approvals and Agreements:

A completed Environmental Questionnaire, other documentation requests, and required environmental authorizations and permits, including those required by the National Environmental Policy Act of 1969, as amended (42 U.S.C. § 4321 et seq.) (NEPA), the National Historic Preservation Act of 1966, as amended (16 U.S.C. § 470 et seq.) (NHPA), and the Endangered Species Act of 1973, as amended (16 U.S.C. § 1534 et seq.) (ESA) as applicable will be included in step 2 of the grant application process.

INTECO has access to all of the frequencies it requires.

The following are regulatory requirement approvals established by the Puerto Rico; Planning Board and the Regulations and Permits Administration for all construction to take place in Puerto Rico, specifically and/or principally applicable to new towers construction.

- First State: Land Site Use Approval by PR Planning Board;
- Second State: Pre project design approval by Regulations and Permits Administration;
- Third Stage: Urbanization and Construction Permits by Regulations and Permits Administration.

Between second and third stages studies shall take place (Ex. Soil, etc.) and also requests for endorsements of other government agencies (Ex. Communications Regulatory Board, Electric Energy Authority, etc.) for Federal Funds additional endorsement must be obtained (Ex. SHPO, Fish and Wildlife, etc.).

36. Construction and Vendor Contracts

INTECO intend to rely on contracts and/or vendors to deploy the network facilities. One of the vendors is PREPAnet a state public corporation that is part of the PR Electric Power Authority. This vendor will be in charge of the provision of fiber to 4 egress points locations of the BB project for connection to the inter exchange of the network. Several meetings with PREPAnet were made and their quotation for the fiber to egress points was included in the



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project budget. A written draft copy of the agreement is in process.

Also a signed Letter of Intents was executed with the Ana G. Méndez University System (AGMUS). The Letter of Intents, included in Item 41 Government and Other Key Partnerships, established, among other important partnership activities for BB, that INTECO will have access and use of an existing radio frequency channel in the 2.5 GHz in the EBS band licensed to AGMUS for deployment. AGMUS is an INTECO Partner and its President and CEO is the actual VP (Academia) of INTECO's Board of Directors. AGMUS is composed of 3 universities, 14 off campus centers including one in Orlando and one at Braver Country (FL), within overall of 40,000 students.

In addition, a signed MOU was executed with PDC Telecom, Inc. (PDC). The MOU included in Item 41 Government and Other Key Partnerships, established, among other important partnership activities for BB that PDC is set up and willing to built and/or operate the BB Communication in partnership with INTECO.

PDC was established in 1995 to cover the Caribbean and Central America in the telecommunications Industry. A wide spread of projects has been executed by PDC on time and within budget. References of PDC clients; with respect to installation, project management, configuration and integration, engineering and cabling of telecommunications projects; includes Verizon Dominicana (CLARO); Municipality of San Juan, PR State Office of Management and Budget, PR Police Department among others. Please refer to Company Profile and MOU included in Key Partners.

Finally INTECO's Board of Directors, Partners and Experience in complex project execution along with its staff team and on board consultants and/or project team allows it to manage NTIA's Broadband deployment and operations efficiently and effectively.

Qualification of Management Team and Organizational Readiness



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37. Management Team Resumes:

Please refer to upload section at the end of the document.

38. Organizational Readiness:

Experience—FY 6/30/08 was our organization’s most productive one. As we closed fifth anniversary we can say that the goals we have proposed and that were set forth in 2004 strategic plan have achieve a budget of \$7.75M and a total of \$4.0M for the Construction of the School of Science, and \$9.0M for the Metropolitan Regional Train Design. Ongoing Projects: WIRED; US Department of Labor, obtained a \$5M grant eligible activities and secured the approval for the implementation plan. Incubation and Innovation Entrepreneurs Center, in 9/2007 INTECO opened an Incubator in Humacao; also, opened a second incubator, Science Multitenant Bldg. constructed with the financing of the EDA (#01-01-07970) in Caguas. Innovation Technology Centers, for the fourth consecutive year, INTECO offered the Smart Teens program, with 75 high school youths; Program was financed with; WIA, BPPR, Medtronics and Amgen Foundations. Regional Office for Processing of Permits, completed: the design phase and the launching of the business locator. CIMATEC, INTECO began and completed the construction; started operations on 8/2008 enrolling 80 7th grade students; investment was of \$5.3M. Plasma and Renewable Energy Center, construction began, located at Turabo University. Creole Center for Science and Technology, construction started in 10/2008, cost of \$13M; the interactive center will have an impact on the creation of a culture geared towards the study of science. Inter-metropolitan and Regional Urban Train, commissioned the final design of the civil works to A/E firm at a cost of \$8.7M, financing for the design by the PR Highway Authority. Proposed Projects: Regional Health Corridor Plan, pre application submitted to the CEDS Committee according to the required process by the EDA; a formal application will be submitted. Regional Business Financing; Disaster Relief RLF, pre application was submitted to the CEDS Committee according to the required process by the EDA; a formal application will be submitted seeking Disaster Relief Appropriation for serving 6 Municipalities of the Region included in #FEMA-1798-DR-PR. BB Project, secured (FY 2007-08) with the EDA a Short Term Planning Grant for a BB infrastructure in the Region; the Plan was successfully completed. Personnel—Well trained and committed senior personnel of INTECO as for eg. Engs. Jiménez and García as Executive President and VP of Operations respectively. INTECO Partners—INTECO have 55 partners (39 from the Industry sector, 9 from Academia and 8 Mayors of the Region. These partners belongs to INTECO



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General Assembly and apportioned resources to INTECO. GOVERNANCE AND MANAGEMENT: Extraordinary characteristic of INTECO to guaranty efficiency and effectiveness execution in reside in its governance and the inception process as a special non profit corporation as follows. INTECO was born under an Amendment made to the PR Autonomous Municipalities Act. A rational based and multisectorial non profit corporation will lead the region's economic development in science and technology. The outstanding fact is that INTECO Board of Director must be and is conformed of: one third representatives of the Mayors of the Region (8); one third representatives of the higher education institutions and one third of entrepreneurs. The Autonomous Municipalities Act amendment requires that the Board of Directors of INTECO be representative of the three sectors. HOW THE ORGANIZATION WILL ENSURE NECESSARY SALES, OPERATIONAL AND BILLING: Actually, INTECO possess a basic organizational platform for sales, operational and billing support. A full time sales person is on board; basic billing systems are established for attending Partners Donations. Also filling and office processes for sales are in place. For BB growth of sales, operation and billing we will be back up by INTECO Partners and by INTECO incubation enterprises such as Eagle Processing Inc. for accounts-payables-receivables, billing and related.

Other

39. Organizational Chart:

Please refer to upload section at the end of document.

40. Legal Opinion:

Please refer to upload section at the end of document

41. Government and other Key Partnerships:

Summary

The extraordinary fact that makes INTECO's special non profit organization and performance competitive in regional economic development based on science and technology are its partners. First: The legal nature of the corporation mandate that one third of its Board of Directors be the Mayors within the Central East Region (8 Mayors as of June 30, 2009); one third be representatives of the higher education institutions and one third be representatives of



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enterprises-entrepreneurs. As of June 30, 2008 INTECO's partners were 55 (38 from the industrial sector, 9 from academia and 8 municipalities; 15 of those joined the organization as new partners during the last Fiscal Year.

Each partners signed a Resources Contribution Agreement which provides for the on going and/or future projects of INTECO and also for its basic operational costs. Among our partners are: Centennial, Four Points Sheraton, Microsoft, Sony, Amgen, Medtronic and St. Jude Medical, among others.

Attached is a list of INTECO's Partners and evidence of the Resources Contribution Agreements and support and/or intention-commitment letters. Please refer to Organization Readiness and Organizational Chart for more information.

42. Recovery Act and Other Governmental Collaboration.

As of June 30, 2008 INTECO obtained:

1. Disbursement of \$2.5M from a total approved grant of \$5M under the Work Innovation in Regional Economic Development (WIRED), of the US Department of Labor.
2. Offering Smart Teen Programs during the last 4 consecutive years with US Department of Labor WIA Program in matching with investments from INTECO Partners as of Popular Bank of Puerto Rico (\$10,000), Medtronics (\$15,000) and Amgen (\$75,000) Foundations.
3. Construction and habilitation of the School of Science and Mathematics with a total investment of \$5.3M in matching 75% Autonomous Municipality of Caguas and 25% Puerto Rico Industrial Development Company; both INTECO partners.
4. Start the construction (October 2008) of the Creole Center for Science and Technology at an estimated cost of \$20M with a matching from the Autonomous Municipality of Caguas, federal, state and/or private funds.
5. Partnership with private developers, the Autonomous Municipality of Cayey and the Puerto Rico Highway Authority for the design and construction of Cayey Technological Park envisioned to provide a 100 acre facility, mainly with private capital, to develop industries that produce intellectual knowledge.



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6. Obtained \$900,000 from the Autonomous Municipality of Caguas to habilitate the planning and management office for the design and construction of the Inter-metropolitan and Regional Train (TODOS). In addition INTECO partnership with the PR Highway Authority commissioned the final design of the civil work for the Train at a cost of \$8.7M. NOTE: For more information please refer to the Organizational Readiness Section.

All these project and partnerships will serve to sustain the Broadband infrastructure operations in the future. Please refer to Key Partnerships Section for more information and supporting documentation.

In addition, specifically for Broadband infrastructure and sustainability, INTECO obtained a Short Planning Grant from the US EDA (Department of Commerce [Project #01-87-08553 FY 2007-2008]). The Plan was successfully completed and clearly established the need and sustainability models for the long term.

Finally, INTECO submitted a Pre Application to the CEDS Committee for the construction of Broadband infrastructure according to the application process established by the US EDA. It is foreseen that on or before the EDA established due date (September 2010) INTECO will submit a formal application to the EDA. But necessarily the Pre Application to the CEDS Committee is part of the process. An efficiency could be to finance the INTECO Broadband by combined funds of NTIA and EDA.

Community Involvement (BTOP Applicants Only)

43. Partnering with Disadvantaged Businesses

INTECO partnering with Disadvantaged Small Business follows:

Onopa Management Corporation has been a partner of INTECO since 2003. Onopa Management was founded in 1997 and certified 8(a) / SDB by the US Small Business Administration in 2006. A signed partnership agreement is included in the Key Partnership Section (Item 41). Below are primary duties for the BTOP projects.



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Partnership Purposes:

Track 1: Provide project management services to implement the regional broadband technology plan.

Track 2: To continue providing adult and youth entrepreneurship trainings (FOAMSHIP®, Green-Ship™ and E-Plosion) at each ITC.

Track 3: To design and deploy a broadband technology adoption platform using social media and open source tools to stimulate usage by youth and adults.

CORPORATE PROFILE: Onopa Management Corporation (OMC) is a business consulting firm founded by Mr. R. David Bermúdez in July 1997. The firm’s primary objective is to assist public and private firms align the necessary resources to achieve strategic goals. Mr. Bermúdez is a Puerto Rico-licensed engineer with a Master in Business Administration. Mr. Bermúdez is also author of the book The FOAMSHIP® Guide to Building More Entrepreneurial Firms.

Please also consider that INTECO offers its services and provide for projects benefitting Hispanic Americans in Puerto Rico. According to the SBA 124.103 socially disadvantaged within the members of designate groups with quote “a rebuttable presumption that the following individuals are socially disadvantage...Hispanic Americans”.

H. Project Budget

44. General Overall Budget



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Budget	Loan Request	Grant Request	Equity	Debt	Bond	Other
Network & Access Equipment (switching, routing, transport, access)		5,205,351				
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)		1,254,004				
Buildings and Land – (new construction, improvements, renovations, lease)		2,026,650				
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)		371,250				
Billing and Operational Support Systems (IT systems, software, etc.)		270,846				
Operating Equipment		307,050				



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(vehicles, office equipment, other)						
Engineering/ Professional Services (engineering design, project management, consulting, etc.)		581,000				
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)		395,507				
Site Preparation		1,790,700				
Other		728,816				
TOTAL BROADBAND SYSTEM		12,931,174				



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Total Budget: \$ 12,931,174

45. Detailed Budget:

Please refer to upload section at the end of the document.

Sustainability

46. Reasonableness

The budget for INTECO is the result of a six-month planning process. INTECO retained the services of an outside consulting firm, CIVITIUM, with experience advising more than 100 public and private organizations on similar communications initiatives, including five of the top six U.S. cities. INTECO’s consultant worked closely with the overall project team to develop a budget that balanced the need to produce a comprehensive, efficient plan with the need to be conservative and avoid future cost overruns. The three-step process used by the project team is described below:

- Project engineers first developed detailed specifications for all major network elements including fiber optic cabling, microwave wireless systems, multipoint base stations, customer premise installations, network electronics, and towers. A bill-of-materials (BOM) approach was used to define “assemblies” for these major elements. Once developed, these assemblies were combined into an overall “project inventory.”
- Interviews were conducted with candidate vendors to review components used in the network and to validate their associated costs. List prices were used to insure that all costs estimates were conservative, with an assumption that discounts are likely to result from the competitive procurement process.
- Finally, a separate quote process was conducted by INTECO. During this process, INTECO requested full system quotes based on the design specification from multiple vendors. Adjustments were made as required throughout this review process.

Throughout the project, engineers and business analysts engaged in a collaborative process to maintain linkages between technical, business and policy factors.



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An integrated software environment was used to produce the final project budget. This environment allowed engineers to produce assemblies and component costs that were visible in real-time to the business analysts working on estimates for capital costs, operating expenses, revenue and other aspects of the financial model. A screen shot of this environment is shown below for a tower assembly.

47. Historical Financial Statements:

Please refer to upload section at the end of the document.

48. Broadband Subscriber Estimates:

Please refer to upload section at the end of the document.

49. Other Services:

Please refer to upload section at the end of the document.

50. Pro Forma 5-Year Financial Forecast and Assumptions:

Please refer to upload section at the end of the document.

51. Commitment of Capital Funding Support

NOT APPLICABLE. A WAIVER REQUEST FINANCIAL NEED ADDRESS TO THE ASSISTANT SECRETARY OF COMMERCE. PLEASE REFER TO SECTION III OTHER ATTACHMENTS; ATTACHMENT Z.

BTOP Requirements

52. Matching Funds:

- a. Cash: \$.00
- b. In-Kind: \$.00
- c. Percent of Total Project Cost: 0

53. Demonstration of Financial Need:

Please refer to Attachment AA in Upload Section 43) Supplemental Information 1; Section III Other Attachments (.pdf).

54. Unjust Enrichment



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During FY 2007-2008 the US Department of Commerce's Economic Development Administration (EDA) approved to INTECO a Short Term Planning Grant (Program 11.303) EDA Project #01-87-08553 for the Elaboration of a Broadband, Telecommunication and Satellite Plan for the Central East Region of Puerto Rico. Budget approved \$150,000 (Matching 80% EDA and 20% in kind from INTECO). The Plan was completed and the project was successfully closed. The plan clearly established the need and impacts of a Broadband Network for the Region.

On June 26, 2009 INTECO submitted a Pre Application to the Comprehensive Economic Development Strategy Committee (Puerto Rico Planning Board) for the Construction of Broadband Infrastructure in the Central East Region for their evaluation and future consideration by the US Economic Development Administration (EDA). According to EDA's established procedures the Pre Application to the CEDS Committee and its evaluation and recommendations is the first step to further submit a formal application for funds directly to the EDA. As of this date INTECO have not received notice from the PR CEDS Committee, thus a formal application to the EDA have not been submitted.

55. Disclosure of Federal and/or State Funding Sources

All ongoing and future INTECO projects and initiatives and all received requested and/or foresee to be requested federal, state and private funding relates directly or indirectly with the BTOP application for Broadband Infrastructure and services to anchor and not anchor institutions. The Broadband platform is a valuable and must needed instrument to accelerate the Regional Development and global businesses initiatives. Disclose of sources and amounts of other federal, state and/or private funding received requested r foresee to be requested. Partnership with State Government and US Department of Labor's Workforce Innovation in Regional Economic Development (WIRED). Budget \$5M for eligible activities.

Partnership with AMSI and Al Sureste (WIA Funds) and the BPPR, Medtronics and Amgen Foundations. Offered Smart Teens and Foamship to 75 high school youths at INTECO's Centers for Technological Innovation. Budget \$150,000.

Partnership with Autonomous Municipality of Caguas and PR State Industrial Development Company for Construction of the School of Science, Mathematics and Technology. Budget \$5.3M.



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Partnership with Autonomous Municipality of Caguas for Construction of the Creole Center for Science, and Technology started on Third Quarter 2008. Pursuing the study of science and preservation of the environment. Budget \$20M.

Partnership with Autonomous Municipality of Caguas and PR Highway Authority for the design, establishment of management offices and economic viability of the Inter Metropolitan and Regional Train (TODOS). Budget \$9.35M.

Broadband Project. INTECO secured (FY 2007-2008) with the US Department of Commerce's EDA a Short Term Planning Grant for a Broadband infrastructure in the Region. The Plan was successfully completed and clearly established the need and positive economic development impacts of the construction and operation of a Broadband infrastructure. Budget \$150,000 (80% EDA, 20% INTECO in kind).

Proposed Future Projects

Regional Health Corridor Plan. Submitted to the CEDS Committee of Puerto Rico according to the required process by the US Economic Development Administration. A formal application directly to EDA is foreseen to be in the future. Budget \$180,000.

Regional Business Financing; Disaster Relief Revolving Loan Fund. Pre Application for Economic Development Adjustment was submitted to the CEDS Committee of Puerto Rico according to the required process by the US Economic Development Administration. A formal Application will be submitted to the EDA seeking Disaster Relief Supplemental Appropriation Funds for a Revolving Loan Fund serving the 6 Municipalities of the Region included in #FEMA-1798-DR-PR. Budget \$5.0M.

I. Self Scoring – BIP Only Self Scoring

56. Self Scoring Sheet



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Criteria	Method	Points	Self Scores
<u>PROJECT PURPOSE</u>			
Proportion of Rural Residents Served in Unserved Areas	1 point for every 10,000 unserved households	Up to 5	
Rural Area Targeting	1 point for every 5% increase in the rural service area up the minimum 75% rural area requirement	Up to 5	
Remote Area targeting	1 point for every 50 miles a service area is located from a non-rural area	Up to 5	
Title II Borrower	If you are or were a Title II borrower	5	
Recovery Act and other governmental collaboration	1 point will be awarded for each governmental or Recovery program the applicant is partnering with	Up to 5	
<u>PROJECT BENEFITS</u>			
Performance of the offered services	If a last mile wireline project delivers 20M to household – if a last mile wireless projects delivers 2M to end-user – if a middle mile projects delivers 100M to end points	10	
Affordable of services offered	Points awarded based on the proposed rate structure and the logistics of the proposed service area	Up to 5	



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Choice of service provider	If the proposed infrastructure is available to be used by multiple service providers	5	
Critical Community Facilities	If discounted rate packages at least 25% lower than advertise rates are available to critical facilities	5	
<u>PROJECT VIABILITY</u>			
Applicant's organizational capability	Points will be awarded on the strengths and accomplishments of key management	Up to 12	
Community Support	If a letter of support has been received from a designated representative of the community for every community in the proposed service territory	2	
Ability to promptly start project	If the applicant can demonstrate that all licenses and regulatory approvals have been received, contractors and vendors are ready to enter into contracts, and equity has been deposited into applicant accounts	10	
Socially and economically disadvantaged small businesses (SDB), as defined by section 8(a) of the Small Business Act, 15 U.S.C. §637.	If the applicant is a Section 8(a) entity	1	
<u>PROJECT BUDGET AND SUSTAINABILITY</u>			
Reasonableness of the budget	Points will be awarded based the	Up to 5	



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	adequacy of the proposed budget		
Leverage of outside resources (outside funding/financing requested)	(i) 10 points if this ratio is greater than 100% (ii) 7 points if this ratio is between 100% and 75% (iii) 5 points if this ratio is between 75% and 50% (iv) 3 points if this ratio is between 50% and 25% (v) 1 points if this ratio is lower than 25%	10	
Extent of grant funding (Grant funds/loan funds)	(i) 0 points if this ratio equals 100% (ii) 1 points if this ratio is between 100% and 75% (iii) 3 points if this ratio is between 75% and 50% (iv) 5 points if this ratio is lower than 50% (v) 10 points if no grant funds are requested	10	
Total Points		100	



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J. BTOP Certification Requirements

Certification (Requested for BTOP)

Please refer to upload section at the end of the document regarding following uploads.

1. U.S. Department of Commerce, Broadband Technology Opportunities Program
2. SF-424D Assurances—Construction Programs (Schedule N)
3. CD-511, Certification Regarding Lobbying (Attachment O)
4. SF-LLL, Disclosure of Lobbying Activities (Attachment P)
5. CD-512, Certification Regarding Lobbying—Lower-Tier Covered Transactions (Attachment Q) This certification will not be required until the time of the grant award, because it applies to subcontractors, etc.

K. BIP Certification Requirements

Certification (Requested for BIP)

Please refer to upload section at the end of the document regarding following uploads.

1. Equal Opportunity and Nondiscrimination Certification
2. Certification Regarding Architectural Barriers
3. Uniform Relocation Assistance and Real Property Acquisition - Policies Act of 1970 Certification
4. Certification Regarding Debarment, Suspension, and Other Responsibility Matters – Primary Covered Transactions
5. Certification Regarding Lobbying for Contracts, Grants, Loans, and Cooperative Agreements



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6. Network Design and Implementation Plan Certification (to be complete for projects requesting more than \$1 million in federal assistance)

L. Schedules

Schedule: A-1 Congressional Districts

1. State the Congressional District of the Applicant's headquarters

Puerto Rico - At-Large

2. State the Congressional District for each area covered by the Project.

Puerto Rico - At-Large

M. Proposed Funded Service Area Details (BIP & BTOP)

13. Proposed Funded Service Area (BIP - Last Mile Projects):

Proposed Funded Service Area Name:

Census Blocks in Proposed Funded Service Area:

Community Name:

Rural Classification of the Community:

BIP - Service Status:

BIP - If Service Status is "Underserved" please select at least one applicable option from this list.

BTOP – Service Status:

BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.

Total Square Miles of Community:



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Total Population :

Total Number of Households:

Total Number of Businesses:

Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities:

14. Proposed Service Area (BTOP - Middle Mile Project):

Middle Mile Span Name: INTECO

Census Blocks in Middle Mile Span: 720352601001

720252006002
720252026021
720851901021
720352601002
720252006003
720252026022
720851901022
720352601003
720252006004
720252026023
720851902011
720352601004
720252007001
720252027011
720851902012
720352602011
720252007002
720252027012
720851902013
720352602021
720252007003
720252027021



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720851902021
720352602022
720252008001
720252027022
720851902022
720352603001
720252008001
720252028001
720851903011
720352603002
720252008002
720252028002
720851903012
720352603003
720252008003
720632101001
720851903013
720352604001
720252009001
720632101002
720851903021
720352604002
720252009002
720632102001
720851903022
720352604003
720252010001
720632102002
721031701002
720352605001
720252010002
720632102003
721031701003
720352605002



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720252012001
720632102004
721031701004
720352605003
720252012002
720632103001
721031702001
720352605004
720252012003
720632103002
721031702002
720352606001
720252013001
720632103003
721031702003
720352606002
720252013002
720632103004
721031702004
720352606003
720252014001
720632104001
721031703001
720352606004
720252014002
720632104002
721031703004
720352607001
720252015001
720632104003
721031704001
720352607002
720252015002
720632104004



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721031704002
720352607003
720252015003
720632105011
721031704003
720352608001
720252015004
720632105012
721031704004
720352608002
720252016001
720632105013
720691801001
720352608003
720252016002
720632105014
720691801002
720352609001
720252016003
720632105021
720691801003
720352609002
720252017001
720632105022
720691801004
720352609003
720252017002
720775001001
720691802011
720252001001
720252018001
720775001002
720691802012
720252001002



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720252018002
720775001003
720691802022
720252002001
720252019001
720775001004
720691802023
720252002002
720252019002
720775001005
720691802024
720252002003
720252020001
720775002001
720691803011
720252003021
720252020002
720775002002
720691803012
720252003022
720252020003
720775002003
720691803022
720252003023
720252021001
720775002004
720691803023
720252003024
720252021002
720775002005
720691804001
720252003025
720252022001
720775002006



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720691804002
720252003031
720252023001
720775003011
720691804003
720252003032
720252023002
720775003012
720691805001
720252003033
720252024011
720775003013
720691805002
720252003041
720252024012
720775003021
720691805003
720252003042
720252024013
720775003022
720691806001
720252003043
720252024021
720775003023
720691806002
720252004001
720252024022
720775004011
720691806003
720252004002
720252024023
720775004012
720691806004
720252005001



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720252024024
720775004013
720691806005
720252005002
720252025001
720775004021
720691807001
720252005003
720252025002
720775004022
720691807002
720252005004
720252026011
720851901011
720691807003
720252005005
720252026012
720851901012
720691807004
720252006001
720252026013
720851901013
720691808001
720691808002
720691808003
720691809001
720691809002
720691809003
721292201001
721292201002
721292201003
721292202001
721292202002
721292203001



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- 721292203003
- 721292204011
- 721292204012
- 721292204021
- 721292204022
- 721292205001
- 721292205002
- 721292205003
- 721292206001
- 721292206002
- 721292207001
- 721292207002
- 721292207003

Last Mile Service Area Name: INTECO
Community Name: Central East Region Puerto Rico
Rural Classification of the Community: Non-Rural
BIP – Service Status: Underserved

BIP - If Service Status is "Underserved" please select at least one applicable option from this list.
No more than 50% of the households in the census-designated community [or other area] have access to facilities-based, terrestrial broadband service at greater than the minimum broadband transmission speed;
The rate of broadband subscribership for the census-designated community [or other area] is 40% of households or less.

BTOP - Service Status: Underserved

BTOP - If Service Status is "Underserved" please select at least one applicable option from this list.
No more than 50% of the households in the proposed funded service area have access to facilities-based, terrestrial broadband service at greater than the minimum broadband transmission speed;
The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

Total Square Miles of Service Area: 235
Total Population : 416,666
Total Number of Households: 59,733



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Total Number of Businesses: 605

Total Number of Critical Community Facilities, Anchor Institutions and Public Safety Entities: 303



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Uploads

The following pages contain the following uploads provided by the applicant:

Upload Name
01) Q07k Matching Funds Waiver
03) Q-19. Attachment A - Last Mile Offerings
04) Q-20. Attachment B - Middle Mile Offerings
05) Q-21. Attachment C - Competitor Tables
05) Q-21. Attachment C - Competitor Tables
08) Q-30. Network Diagram
09) Q-31. Attachment D - Engineer Certification*
10) Q-34. Attachment E - Build-Out Timeline
11) Q-37. Management Team Resumes
12) Q-39. Organization Chart
13) Q-40. Attachment F - Legal Opinion*



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14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
14) Q-41. Government and Other Key Partnerships
15) Q-44. JOINT APPS ONLY: Additional Budget
16) Q-45. Attachment G - Detailed Project Cost
17) Q-47. Historical Financial Statements
18) Q-48. Attachment H - Subscriber Estimates



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19) Q-49.Attachment I - Projects, Rates - Voice
20) Q-49.Attachment J - Projects, Rates - Video**
21) Q-50. Attachment K - Income Statement
22) Q-50. Attachment L - Balance Sheet
23) Q-50. Attachment M - Statement of Cash Flows
24) Q-50. Financial Assumptions
24) Q-50. Financial Assumptions
24) Q-50. Financial Assumptions
26) Pg-22. BTOP ONLY Certification Requirements*
27) Pg-23. BTOP ONLY Att. N - Assur-Construction*
28) Pg-24. BTOP ONLY Attachment O - Lobbying*
29) Pg-25. BTOP ONLY Attachment P - Disclosure*
30) Pg-26. BTOP ONLY Attachment Q - Lobbying*



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31) Pg-27. BIP ONLY Equal Opportunity*
32) Pg-28. BIP ONLY Architectural Barriers*
33) Pg-29. BIP ONLY Relocation and Real Property*
34) Pg-30. BIP ONLY Debarment and Suspension*
35) Pg-31. BIP ONLY Lobbying Certification*
38) Pg-35 - Step 2 Form - Detailed Network Design
38) Pg-35 - Step 2 Form - Detailed Network Design
43) Supplemental Information 1

To preserve the integrity of the uploaded document, headers, footers and page numbers have not been added by the system