ConnectME Fund
Eleventh Round Grant Application
March 27, 2017

Due May 12, 2017

1. **Date: 5/12/17**

2. **Project Title: Islesford (Little Cranberry Island) Broadband**

3. **Submitting Entity: Town of Cranberry Isles**

4. **Grant Amount Requested: $69,066**

5. **Total Project Cost: $752,240**

6. **Project Contact Information:**
   Mark Ouellette, President
   Axiom Technologies
   3 Water St.
   Machias, ME 04654
   207-255-0679
   mark@connectwithaxiom.com

7. **Party Who Prepared Application:**
   James Fortune, Town Administrator
   P.O. Box 56
   18 Maple Ave.
   Islesford, ME 04646
   207-244-4475
   james@cranberryisles-me.gov

8. **Executive Summary of the Project:**

   The Town of Cranberry Isles and specifically the island of Little Cranberry Island (also known as Islesford) is under enormous pressure to have internet service restored. The only provider of internet to Islesford is withdrawing its service to Islesford in October of this year. This project will restore service and fully address the reliability and poor service levels that have been experienced by islanders for many years.
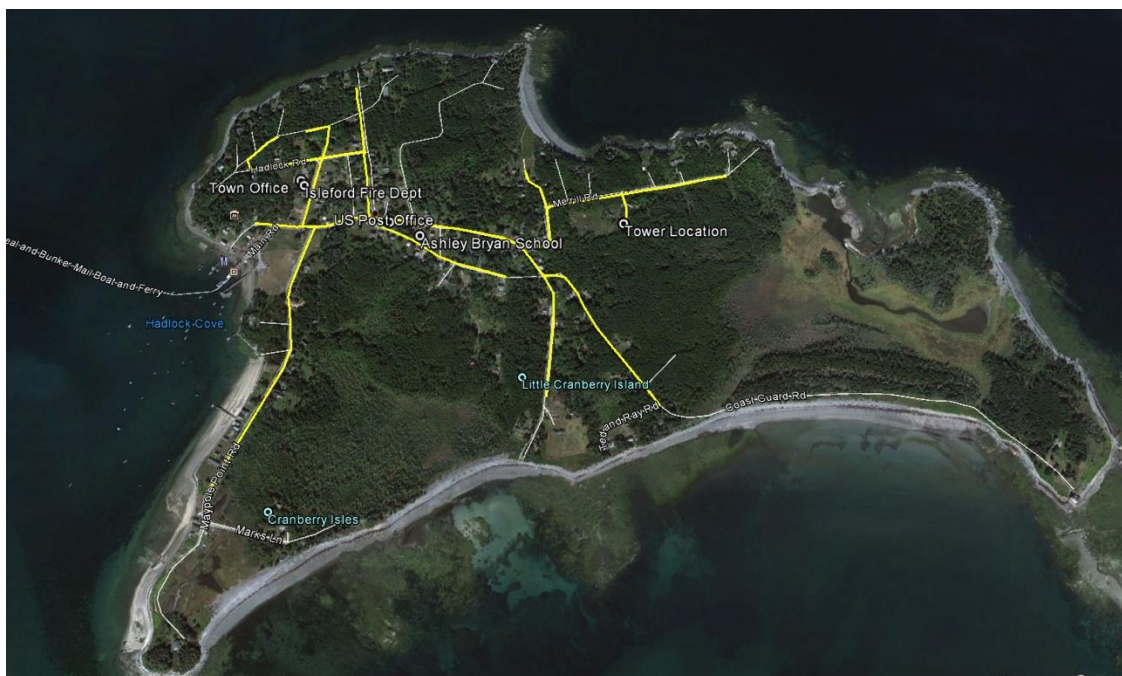
   Axiom was chosen to build and operate a fiber to the home project through an RFI that the Town issued in December of 2016. In order to provide service to Islesford, the project relies on a high capacity, licensed wireless link from Great Cranberry to Islesford. This application would support the two towers necessary to bring service to Islesford in October of this year and replace lost service that the current provider has promised would end that month.

9. **A description of the geographic area proposed to be served by the project:**

   The current relationship with the lone provider of internet to Islesford will end in October; this would leave Islesford with no internet at all. The current service cannot be reliably described as broadband, with islanders reporting significant interruptions in service, reliability issues and download speeds that do not reach advertised speeds of 3Mbps/1Mbps, especially during the summer months. Because of the equipment being used to connect the island, backhaul is restricted and service levels suffer when

the swell of summer residents and visitors come to the island. However, ongoing issues year-round have been problematic to year-round residents that call the Island home. On Islesford, estimates are 50 or so year-round residents and the plan is to bring service to 140 homes, which include seasonal homes, on the island with a high capacity, licensed link that will feed a fiber to the home project.

The map below indicates the island topography and road layout, as well as the location of the proposed tower that would accept the signal from Great Cranberry. As previously noted, Islesford will have no internet in October of this year, and Axiom and the town are working closely to address this urgent and significant project.

10. **A description of the proposed project, including:**

➤ **Public-private partnerships and collaborations that have been established:**

The town and Axiom are developing a public-private franchise document that has several elements included:

- o A revenue sharing model that would return up to 10% of gross profits back to the community once build out is complete
- o The establishment of a Technology Fund that could be used to provide subsidies for needy families, Digital Literacy classes or other technology upgrades to the plan, such as Wi-Fi HotSpots
    - ▪ Axiom is providing 3 months of free digital literacy classes for the residents of Great Cranberry, Islesford and Sutton Islands.
- o Unimpeded Right of Way access for Axiom and leveraging of town equipment or other assets to help defray cost of project
- o Working together to market and promote new service to drive awareness and take rate levels
- o Agreement to review service levels and technology performance every three years

➢ **Sufficient information that allows the Authority to determine that without the Authority's action, the installation of advanced communications technology infrastructure in an unserved area would not otherwise occur:**

The town recently voted for the town to spend up to $1.2 million dollars to fully complete the project on Great Cranberry, Islesford and Sutton Island. This is a significant taxpayer burden, if the town foots the entire build. Axiom has pledged up to $195,582 in labor cost to the project. The project on Islesford is expected to be $752,240 of which we are asking the Authority for $69,066, 9% of the total project cost.

➢ **The type of service to be provided, indicating the technology used and the upstream and downstream speeds of the service to be provided:**

The portion of the project proposed for this grant will to build a 100-foot tower on Little Cranberry. The tower on Islesford will receive the signal from a 30-foot tower on Great Cranberry and then distribute internet service to Islesford homes through a fiber to the home connection that runs from the tower to each of the 140 homes located on Islesford. The tower on Great Cranberry will be fed from an undersea fiber cable that FairPoint owns and operates. Axiom will purchase a 1 Gig service through that fiber line that head ends on Great Cranberry and will connect through fiber to the tower. That 30 Foot tower on Great Cranberry will then shoot a wireless signal to the tower on Islesford.

We are working with a technology partner, SAF Tehnika (SAF) to engineer a licensed wireless link to connect the two islands. This technology is very reliable and known to Axiom who has used a similar SAF link to connect Chebeague Island to an internet connection 7 miles away at One City Center in Portland. This particular link will be less than a mile and engineering confirms 100% confidence that this link will deliver a strong, uninterrupted signal to Islesford. The budget for this grant submission includes all of the equipment necessary to light service between the two islands and meet the October deadline for service that the town has asked for.

Service levels proposed are:

Residential 25M/25M for $59.99
Residential 50M/50M for $69.99
Business 100M/100M for $99.99

➢ **Estimate of the time required to complete the proposed project:**

Project must be completed in October 2017 to restore lost service and citizens who will be without internet service. In addition, it is important that the project be completed in the construction window that will close for the winter with temperature and weather considerations which makes island construction nearly impossible after November 1. If successful with this grant, construction activity will commence immediately and all logistics of moving tower construction to the island via barge will be coordinated.

➢ **The number and percentage of households and businesses within the area to be served by the project (i.e. who can be served given technical limitations):**

This project will cover 100% of 140 homes on Islesford with a symmetrical fiber to the home solution.

We are expecting near 100% take rate on the Islesford, as the island will have no service options except Axiom's. No other fees will be incurred except the monthly fee of service described in the section. In other words, Axiom is working with the town to eliminate any installation fees for service if homeowners take service during the marketing and installation phase over the first year of service provided.

➢ **A map (preferably GIS compatible) or list of municipalities or parts of municipalities that may be covered by the proposed project with GEO Codes:**

We have provided a map of the Islesford in a previous section. All locations on the island will be covered with a fiber to the home solution that can be expanded over time to offer speeds of up to 1Gig and beyond as community needs increase.

11. **The applicant's financial commitment to the project in addition to the funding requested from the Authority (additional funds and in-kind contributions):**

Total Budget for the Islesford Broadband project with Cash Match and In-Kind Match is listed below. Please see attached Town Warrant approving funds.

Little Cranberry Island (Islesford)
Materials Cost

100 ft. Tower (Little Cranberry Island/Islesford)			$	180,000
Tower Installation Hardware			$	18,000
Tower Site Prep & Hardware Installation	20	$360.00	$	7,200
			$	**205,200**

Great Cranberry Island (Host)
Materials Cost

30' Tower (Great Cranberry Island)		$	30,000
Wireless Bridging Hardware		$	20,000
Installation Hardware		$	10,000
Fiber Hardware		$	128,000
		$	**188,000**

Subscriber Cost

CPE Hardware	**$**	**167,000**

Labor Costs

Wireless Bridge Installation	4	$360.00	$	1,440
Fiber Installation			$	76,000
CPE Installation			$	105,000
			$	**182,440**

Other Costs

Engineering Studies including Mapping	$	4,800
Grant Preparation & Writing	$	4,800
	$	**9,600**

Town of Cranberry Isles Cash Match			$	477,992
Axiom Cash Match			$	195,582
Axiom In-Kind Match			$	9,600
ConnectME Grant Funding			$	69,066
Subscribers	Per Subscriber:	140 $		477 per home
	Match %			9%

12. **The estimated number of customers/households who will directly benefit from the project:**

   A strong vote of confidence and desire for this project at town meeting and antidotal evidence from islanders interested in when service will arrive, coupled with the urgency of losing internet service altogether on Islesford, indicates a near 100% take rate. In addition, the ability to keep year-round residents of the island are considered essential to island life and the vibrancy of Islesford and all of the Cranberries. Keeping the school open and functioning and giving potential new families the ability to live their lives on island while remaining connected, is seen as a vital ingredient to increased year-round residency on the islands. In addition, many summer residents would stay longer and add economic activity to the island, when this service allows them to digitally stay connected with work and other activities by eliminating reliability and speed issues that have plagued the island for many years.

13. **Evidence of community support for the proposed project, which may include letters or signatures of residents or businesses located within the area of the proposed project (also, provide letters of interest from landowners for placement of facilities and support commitments from municipalities or community groups):**

   See attached Letters of Support.

14. **A description of the applicant's (Broadband Partner) experience relevant to the proposed project:**

   Axiom is a pioneer in rural broadband deployment and is headquartered in Machias, Maine that has been creating and developing solutions for rural broadband deployment since 2005. From its roots, from the first wireless Broadband connection in Washington County in 2005, Axiom has grown to be a full-service engineering, planning and deployment, management and professional services team that assists communities to get connected or upgrade connectivity, while maintaining a network both in Washington County and Chebeague Island. Many of their team has been with Axiom between 5 and 10 years, and some from the company's beginning, 12 years ago.

   The recipient of 18 State of Maine ConnectME grant awards, including 4 Community Broadband Planning Grants, Axiom has installed over 100 Wireless Access Points in Washington County, delivers DSL service and has built and manages over 50 miles of fiber, including a 30-mile-high-capacity fiber-optics link capable of transporting or delivering 10 Gigabytes. In addition, Axiom has deployed a number of cutting edge technologies including TV White Space, 3.6GHz licensed LTE and a high capacity link utilizing 11 GHz.

   In July 2014, Axiom established the Axiom Education & Training Center (AETC), a non-profit 501(c)(3) corporation. Since its establishment in 2014, AETC has trained over 6,000 residents and over 600 businesses in Maine, and has established itself as a nationally recognized Digital Inclusion expert. AETC advises numerous groups and regions in Maine on establishing Digital Inclusion programs in their

Broadband and Community Technology Plans. Axiom's CEO, Susan Corbett, speaks at several national conferences across the country on the importance of Digital Inclusion to help close the "homework gap" and create low-cost products to serve the disadvantaged and helping them participate in the economy through digital connectivity.

Axiom's mission is "to deliver strategic and customized rural broadband deployment solutions to remote communities everywhere", a mission that closely aligns with the Town of Bowdoin's broadband goals.

15. **A demonstration of financial viability provided by pro-forma financial statements for the project and company financial statements. Confidential information may be submitted and should be so marked and submitted in a separate file:**

Financial documents will be sent to the ConnectME Authority directly from Axiom Technologies.

Financial Analysis and Budget

The budget will be reviewed on reasonableness and accuracy. Provide the following financial information with as much detail as possible:

	ConnectME Grant Funding	Cash Match	In-Kind Match	Other Funding Sources	TOTAL
Project Build-Out Costs:					
100 ft. Tower (Great Cranberry Island)		$ 180,000			$ 180,000
Tower Installation Hardware	$ 11,866	$ 6,134			$ 18,000
Tower Site Prep & Hardware Installation	$ 7,200	$			$ 7,200
30' Tower (Little Cranberry Island) (Islesford)	$ 30,000				$ 30,000
Wireless Bridging Hardware	$ 20,000				$ 20,000
Installation Hardware		$ 10,000			$ 10,000
Fiber Hardware		$ 128,000			$ 128,000
New Subscriber Costs:					
CPE Hardware		$ 167,000			$ 167,000
Labor Costs:					
Wireless Bridge Installation		$ 1,440			$ 1,440
Fiber Installation		$ 76,000			$ 76,000
CPE Installation		$ 105,000			$ 105,000
Other Costs:					
Engineering Studies including Mapping			$ 4,800		$ 4,800
Grant Preparation & Writing			$ 4,800		$ 4,800
TOTAL	$ 69,066	$ 673,574	$ 9,600	$ -	$ 752,240