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# Annual Report on the Activities of the ConnectME Authority, 2013

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**Annual Report on the Activities of the  
ConnectME Authority**

**Report to the Maine State Legislature  
Joint Standing Committee on Energy, Utilities and  
Technology**



**January 15, 2013**

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## EXECUTIVE SUMMARY

In recognition of the critical importance of technology for education, health and business success in Maine, the Legislature created the ConnectME Authority (Authority) in 2006 to develop and implement its broadband strategy for Maine.<sup>1</sup> In 2007, the Legislature approved the Authority's major substantive rule that defines the state's broadband strategy and implementation process.

The goal of the Authority is to facilitate universal availability of broadband service and to increase the "take rate" or adoption to greater than the national average. Increasing access and take rates is critical to Maine's education and economic prosperity. Nearly five years ago, approximately 86% of the state had access to high-speed Internet service with an adoption rate of approximately 40%. In the five years since the Authority was established, broadband access or availability has risen to over 91% with 73% of Maine households subscribing to some type of broadband service (compared to 68% nationally).<sup>2,3</sup>

The Authority increased access and take rates through its efforts to identify areas that do not have broadband access, and then selecting projects for broadband expansion; administering the projects; and providing funding, resources and incentives for the projects.

During 2012, the Authority continued to manage four major projects; with total funding of \$5 million from the National Telecommunications and Information Administration's (NTIA) State Broadband Initiative (SBI).

- The Broadband Mapping and Inventory project facilitates a more proactive approach to funding infrastructure projects by designating those parts of the state that are unserved.
- The Planning Project provides benchmarking of the uses of broadband, the benefits and the drivers for greater adoption of broadband with a particular focus on the telemedicine industry sector.
- The Capacity Building Project increases the use of broadband through growth and adoption by businesses, residents and local support organizations.
- The Technical Assistance Project provides Maine citizens across the state assistance and training necessary to promote broadband education through community presentations, workshops and coursework making 21st century skills available to all.

These projects, in conjunction with broadband projects being managed by other Maine Recovery Act awardees, adhere to the Authority's commitment to avoid duplication and encourage cooperative efforts. The Authority's NTIA funding will expire in December of 2014.

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<sup>1</sup> PL 2005, c. 665, and PL 2008, c. 698.

<sup>2</sup> "Developing Broadband in Maine: Needs Assessment Volume I" ConnectME Authority, June 2011, (1-2).

<sup>3</sup> New Commerce Department Report Shows Broadband Adoption Rises but Digital Divide Persists  
<http://www.esa.doc.gov/news/2011/11/09/new-commerce-depart-report-shows-broadband-adoption-rises-digital-divide-persists>

“Broadband access is vital to doing business in today’s world. This new network opens the gate to making Maine more competitive in attracting new businesses, expanding current businesses and creating new jobs,” said Governor LePage.<sup>4</sup> As important, continued work needs to be done to bring all levels of government and agencies together to work collaboratively to get the best results for Maine’s future.

Senator Olympia Snowe invited Google to Maine for a one-day seminar assisting over 100 state small businesses in beginning or expanding their online presence. “I am pleased to welcome Google to Maine for this critical event, which promises to enlighten our state’s small business owners as they look to attract new customers from within Maine and across the country and the world,” said Senator Snowe. “Indeed, while 97 percent of Americans look online for local products and services, a full 59 percent of Maine small businesses do not presently have a website.”<sup>5</sup> The Authority’s needs assessment identified that 39% of Maine’s businesses find the greatest single barrier to broadband adoption for Maine businesses is lack of perceived value.<sup>6</sup>

In 2012, the Authority awarded its seventh round of grants from the ConnectME Fund, emphasizing relatively small and more focused proposals. The Authority suggested grant limits of \$100,000 per project, funding no more than 50% of the total project although many of the recent grants have been above those levels.

The following table summarizes the Authority’s grant activities to date:

Grant Round/ Year	# of Grants	Grant Range In Thousands	Total Grants	Total Project Amount In Millions	Household Broadband Availability <sup>7</sup>	Increased Broadband Availability <sup>8</sup>
1/2007	6	\$38 - \$370	\$739 K	\$1.53	13,836	2.5%
2/2008	5	\$45 - \$533	\$1.19 MM	\$3.89	8,678	1.6%
3/2009	8	\$43 - \$232	\$610 K	\$1.23	4,227	.7%
4/ 2010	22	\$23 - \$114	\$788 K	\$1.5 1	2,957	.5%
5/2010	12	\$7- \$191	\$1.09 MM	\$1.66	1545	.6%
6/2011	23	\$5 - \$242	\$1.55 MM	\$2.34	2,296	.4%
7/2012	23	\$23 - \$284	\$2.08 MM	\$3.16	2,049	.3%
<b>Total</b>	<b>99</b>	<b>\$5 - \$533</b>	<b>\$8.0 MM</b>	<b>\$15.32</b>	<b>35,581</b>	<b>6.6%</b>

<sup>4</sup> Maine Businesses Poised for Growth with Expansion of Broadband  
[http://www.maine.gov/tools/whatsnew/index.php?topic=DECD\\_News&id=442169&v=article-decd](http://www.maine.gov/tools/whatsnew/index.php?topic=DECD_News&id=442169&v=article-decd)

<sup>5</sup> Snowe Invites Google to Maine to Help Small Businesses Get Online  
[http://www.snowe.senate.gov/public/index.cfm/pressreleases?ContentRecord\\_id=97288625-df4a-45f0-be6d-4cd6908db484](http://www.snowe.senate.gov/public/index.cfm/pressreleases?ContentRecord_id=97288625-df4a-45f0-be6d-4cd6908db484)

<sup>6</sup> “Developing Broadband in Maine: Needs Assessment Volume I” ConnectME Authority, June 2011, (1-2).

<sup>7</sup> Household broadband availability is defined as those houses offered the option of acquiring broadband services from a provider and is also referred to as houses passed.

<sup>8</sup> Based on the 2010 Census for estimates of population and number of households in Maine, obtained from the State Planning Office. Total est. occupied housing units = 562,873, population = 1.328 MM, 2.36 = average household size.

The grant dollars per household availability is higher for the last four rounds and is expected to continue to rise, because the areas seeking broadband are becoming more difficult to serve and the projects are smaller. A complete list of grants awarded can be found on the Authority's website:

<http://maine.gov/connectme/connectgrants/docs/GrantsAwardedSevenRounds.pdf> .

In 2013, the Authority will:

- Prioritize and implement the Developing Broadband in Maine: Strategic Plan to increase broadband availability and adoption. The plan acknowledges the critical economic and social role broadband plays in Maine;
- Monitor the Broadband Sustainability Fund that was created to support "last mile" high-speed Internet expansion in unserved areas;
- Continue the NTIA BTOP funded comprehensive Broadband Mapping and Inventory Project which defines served and unserved areas of the state through an online interactive map;
- Manage the NTIA BTOP funded Planning Project to provide updated benchmarking indices that measure uses of broadband, the benefits and drivers for greater adoption and barriers to adoption;
- Direct the NTIA BTOP Broadband Capacity Building Project to increase the use of broadband through growth and adoption by businesses, residents and local support organizations;
- Provide oversight to the NTIA BTOP Technical Assistance project designed to increase digital literacy among Maine's adult learners;
- Continually refine the Authority's goals, minimum performance criteria for broadband service and areas eligible for Authority support, with guidance from the Legislature and the Authority Advisory Council (Council);
- Serve as an information conduit for Maine's broadband initiatives at all levels and as a point of contact and broadband resource clearing house for communities, businesses and communications service providers;
- Monitor and assist the, the twenty three seventh round grantees to ensure that they have the resources necessary and that they meet grant requirements;
- Seek recommendations from the Council on tracking grants, reverse auctions, underserved areas and grant scoring guidelines; and
- Conduct an eighth grant round in early 2013.

In addition, Authority staff will:

- Assist Networkmaine (a consortium including the Maine Department of Education, Maine State Library, Office of Information Technology and University of Maine System) with efforts for the Maine School and Library Network to connect every K-12 public school and public library to the internet with high-speed fiber-based access;<sup>9</sup>
- Participate in the State's Health Information Technology (HIT) initiatives to integrate health care through the use of Electronic Health Records (EHR) including the use of broadband to provide high speed exchange of data and medical tests which brings more efficient health care and better health outcomes;
- The Executive Director will submit comments to the FCC for the many dockets and cases needed to implement the Connect America Fund and other changes to the FCC's Universal Service Fund. The Authority will continue to ensure that its activities are coordinated with and compliment the FCC's:
- Examine low-cost broadband internet and computer ownership programs being offered by various Internet Service Providers (ISP) and PCs for Maine<sup>10</sup>; and
- Conduct community forums around the state designed to enlighten citizens and businesses in the following focus areas; online learning, accessing government, small business startup, web marketing, and personal/recreational use.

This report summarizes the Authority's activities; describes federal activities and initiatives; and outlines the Authority's ongoing activities.

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<sup>9</sup> The Maine School and Library Network (MSLN) began in 1996. MSLN provides internet access to approximately 950 schools and libraries statewide. MSLN is funded from the Federal E-Rate program (approximately 60% of the cost) and the Maine Telecommunications Education Access Fund (MTEAF) (approximately 40% of the cost). Funds are generated through an assessment on interstate phone bills for the Federal E-Rate portion and on intrastate bills for the MTEAF portion (0.6%).

<sup>10</sup> [http://www.itec3.org/pcs\\_for\\_maine](http://www.itec3.org/pcs_for_maine)

## INTRODUCTION

The ConnectME Authority 2012 annual report is divided into five sections: I. Background; II. Summary of Authority and Broadband Activities; III. Federal Broadband Activities and Initiatives; IV. Ongoing Authority Activities; and V. Conclusion and Attachments.

### I. BACKGROUND

#### A. The Importance of Broadband

The Internet has transformed commerce, brought new education opportunities, enhanced financial services, facilitated medical treatments across great distances, and even offered a strengthened sense of community. Those who do not have access to the capability of broadband are effectively not able to participate in something that accounts for a growing share of the American standard of living.<sup>11</sup>

Broadband serves as a key engine of economic growth and opportunity.

- By leveraging the internet, start-up entrepreneurs can save \$16,000 in the first year.<sup>12</sup>
- Consumers with broadband at home can save more than \$9,000 a year.<sup>13</sup>
- Annual revenues of broadband-connected small businesses are \$200k higher than those without broadband<sup>14</sup>

In the near-term, investments in broadband infrastructure will create jobs by supporting the installation and upgrade of fiber-optic networks and other high-tech components. Sustainable broadband adoption efforts will help low-income and other vulnerable populations learn about the benefits of broadband technologies and become proficient in computer-related skills. In the long-term, expanding broadband access and adoption will facilitate small business growth and innovation, enhance health care delivery, promote

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<sup>11</sup> "Broadband for Rural America: Economic Impacts and Economic Opportunities" Hudson Institute, Oct. 2012 (18).

<sup>12</sup> "Start-Up Savings: Boosting Entrepreneurship through Broadband Internet" Internet Innovation Alliance. <http://internetinnovation.org/small-biz/Start-Up-Savings-IIA-SBE-documentation.pdf> April 2012.

<sup>13</sup> 10 Ways Being Online Saves You Money, <http://internetinnovation.org/library/special-reports/start-up-savings-top-%2010-ways-broadband-saves-american-entrepreneurs-money/favicon.ico> 2012.

<sup>14</sup> FCC Daily Press Releases [http://www.maine.gov/connectme/resourceinfo/doc/113011fccbb\[1\].pdf](http://www.maine.gov/connectme/resourceinfo/doc/113011fccbb[1].pdf) Nov. 2011.



energy independence, improve public safety, and lay a foundation for long-term economic development in communities throughout the United States.<sup>15</sup>

*"Today, high speed Internet is transforming the landscape of America more rapidly and more pervasively than earlier infrastructure networks. Like railroads and highways, broadband accelerates the velocity of commerce, reducing the costs of distance. Like electricity, it creates a platform for America's creativity to lead in developing better ways to solve old problems. Like telephony and broadcasting, it expands our ability to communicate, inform and entertain."*

*Federal Communications Commission  
National Broadband Plan  
March 2010*

The Authority's experience and research shows that broadband access is important to Maine because it enables economic development, distance learning, telemedicine, and access to and participation in government services. Grant monies from the Authority enable Internet Service Providers (ISPs) serving rural Mainers to address their most challenging hurdles: household density limitations and/or technical difficulties related to the infrastructure.

One of the Authority's principal objectives is to expand the availability and use of broadband in Maine so that Maine businesses and citizens can reap the benefits.

- Worldwide: 21% of economic growth in developed countries from 2004 to 2009 occurred due to the internet.<sup>16</sup>
- Maine: 59% of Maine's 141,000 small businesses do not have a website.
- Worldwide: 97% of American consumers look online for goods and services.
- Maine: 30% of Maine's small businesses see no need for using the internet.

LL Bean introduced online retailing in 1996. By 2009 its sales had grown by 50% and over half of all sales were achieved online. Black Dinah sells its award-winning chocolates from Isle au Haut worldwide. Even a Maine island is not too far removed from customers when broadband is available. Overall, the academic literature suggests very large economic gains are to be had for a state with a robust broadband infrastructure having both breadth (coverage) and depth (capacity/speed).<sup>17</sup>

At a recent news conference announcing a \$60 million Harvard-MIT partnership in online education, university leaders speak of reaching millions of new students in India, China

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<sup>15</sup> "Testimony of Assistant Secretary Strickling regarding H.R. \_\_\_\_, a Bill to Clarify NITA and RUS Authority to Return Reclaimed Stimulus Funds to the U.S. Treasury"  
<http://www.ntia.doc.gov/speechtestimony/2011/testimony-assistant-secretary-strickling-regarding-hr-bill-clarify-ntia-and-rus>, April 2011.

<sup>16</sup> Case for Broadband in Maine <http://maine.gov/connectme/arragrants/docs/caseforbroadband.pdf> Sept. 2012.

<sup>17</sup> The Maine View , <http://www.mainepolicy.org/wp-content/uploads/The-Maine-View-Broadband-111511.pdf> November 14, 2011.

and around the globe. They talked of the “revolutionary” potential of online learning, hailing it as the single biggest challenge in education since the printing press.<sup>18</sup>

Dr. James Page, Chancellor of the University of Maine System, stresses the importance of distance learning and online course work to the future of the university system. The growing number of online degrees offered nationwide means UMaine not only competes with state schools such as the University of New Hampshire, but “now it’s going to be competing with Stanford.”<sup>19</sup>

Broadband networks of rural and urban providers can save lives by providing rural Americans with instant access to specialized services that are not available in rural areas, saving time that is critical in stroke care and other emergencies. High-speed broadband networks capable of supporting telemedicine and telehealth applications also provide rural patients access to more routine telehealth consultations with medical specialists, efficiently transmit health records, and facilitate training of nurses and doctors.

Dr. Chip Teel of Damariscotta has used broadband to help dozens of frail elderly to stay in their homes for about \$5,000 a year.<sup>20</sup> For the last four years, Teel and his company, called Elder Power, have signed up more than 40 patients for a unique health care service that monitors their lives by a remote computer camera system. Teel explains by sitting down in front of a large computer screen and booting up a computer program he bought off the shelf, a program he says is mostly used by hardware stores to record video images of their back parking lots. Instead of putting people in hospitals, nursing homes and assisted living facilities, Teel is trying to keep his patients at home.<sup>21</sup>

Today, citizens and businesses expect service delivery in Internet time. Broadband enables eGovernment’s electronic transactions from citizens to government, business to government, and government to government. State of Maine eGovernment service offerings total over 400 and include renewing a driver’s license, filing an annual report, and rapid renewal service. eGovernment is not just eBusiness, it’s about our relationships with our civic institutions and the foundation of our next generation communities. It’s about extending the social contract to provide better services to all citizens and businesses.<sup>22</sup>

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<sup>18</sup> EdX: Harvard’s New Domain <http://www.thecrimson.com/article/2012/10/4/edx-scrutiny-online-learning/>

<sup>19</sup> One month into the job, UMS chancellor says Maine’s universities have catching up to do <http://bangordailynews.com/2012/04/25/news/bangor/one-month-into-the-job-ums-chancellor-says-maines-universities-have-catching-up-to-do/>

<sup>20</sup> Case for Broadband in Maine <http://maine.gov/connectme/arragrants/docs/caseforbroadband.pdf> Sept. 2012.

<sup>21</sup> A New Approach To Elder Care <http://lincolncountynewsonline.com/main.asp?SectionID=1&SubSectionID=75&ArticleID=47305> Jan. 2010.

<sup>22</sup> About eGovernment. [http://www.maine.gov/informe/about\\_egov/index.htm](http://www.maine.gov/informe/about_egov/index.htm)

## B. The ConnectME Initiative

As early as 1995, the Maine Legislature recognized the value of broadband when it stated:

The Legislature further declares and finds that computer-based information services and information networks are important economic and educational resources that should be available to all Maine citizens at affordable rates. It is the policy of the State that affordable access to those information services that require a computer and rely on the use of the telecommunications network should be made available in all communities of the State without regard to geographic location.<sup>23</sup>

In 2006, the Legislature created the ConnectME Authority to develop and carry out its broadband strategy by identifying unserved areas of the state; developing proposals for broadband expansion projects, demonstration projects and other initiatives; administering the process for selecting specific broadband projects; and providing funding, resources and incentives.<sup>24</sup> In 2007, the Legislature also approved the Authority's major substantive rule that defines the state's broadband strategy and describes how that strategy is to be implemented. The Authority consists of a board of five members, an Executive Director, Associate Executive Director, Program Director, and a Council.  
Attachment C - Authority and Council members

## II. SUMMARY OF AUTHORITY AND BROADBAND ACTIVITIES

The ConnectME Authority statute requires the Authority to report on four components: Budget; Investments; Activities; and Market Conditions. This Section covers the first three items. Market Conditions are reported on in Section IV.

### A. Budget

The funding mechanism for the Authority is a 0.25% (one quarter of one percent) surcharge on all communications, video and internet service bills for retail in-state service.<sup>25</sup> It is expected to generate between \$1.25 million and \$1.4 million per year.

The 99 grants awarded in 2007 through 2012 total \$8 million. The seventh grant rounds were awarded in June 2012 and totaled \$2,078,569. The actual ConnectME fund balance on November 30, 2012, was \$2,598,729. Going forward, from that amount, plus upcoming assessments (approximately \$1.25 M/YR), \$2.2 million is committed for awarded grants not yet completely funded; \$1.0 million for the eighth grant round; matching funds for

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<sup>23</sup> Title 35-A M.R.S.A. §7101(4). <http://www.mainelegislature.org/legis/statutes/35-a/title35-Asec7101.html>

<sup>24</sup> PL 2005, c. 665.

<sup>25</sup> Also included are retail revenues received or collected from mobile communications services (i.e. cellular telephone) that voluntarily agree to be assessed by the Authority.

NTIA grants; and Authority operating expenses. Attachment E reflects the Authority's financial status as of 6/30/2012.

A new fund and program begun in 2009 as a result of the Three Ring Binder project is beginning to generate funding resources for broadband projects in unserved areas. The Broadband Sustainability Fund (BBSF) is funded by the broadband sustainability fee, a three dollar surcharge on the sale or lease of federally supported dark fiber strands in Maine (\$3 per strand, per mile, per month). The fee decreases to two dollars after five years and sunsets December 31, 2017. The Three Ring Binder project by the Maine Fiber Company is the only federally supported dark fiber project in Maine. To date, nearly \$10,000 has been disbursed and currently the fund balance is approximately \$32,000. There is a potential for a much higher balance as the Three Ring Binder project sells more dark fibers over its 1,100 mile system. Incumbent local exchange carriers (ILEC) have the right of first refusal to access the BBSF to fund broadband projects in the ILEC's territory. The ConnectME fund receives 5% of the BBSF for administrative purposes.<sup>26</sup>

## **B. Investments**

The ConnectME Fund is administered by an independent fiscal agent who manages the assessment process, invests the unused funds and makes payments as directed by the Authority. The fund administrator operates under contract at the direction of the Executive Director.<sup>27</sup> Interest generated by the fund is added to the fund balance.

## **C. Grant Activities**

### **Awarding Process and Grants Awarded**

The Maine Legislature established the Authority "to stimulate investment in advanced communications technology infrastructure in unserved or underserved areas."<sup>28</sup> The Authority believes that to expand broadband access in the most rural, unserved areas that have little prospect of broadband service from a traditional or existing provider is a high priority. The Authority accomplishes that goal primarily by awarding broadband expansion grants for projects that target unserved areas.

Grant applications are reviewed by three non-industry members of the Council, the Executive Director and the Associate Executive Director. The applications are scored on the four criteria specified in the statute and rule: cost-benefit; community support; project scope; and project value. The public-private partnership concept is considered in the review, yet

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<sup>26</sup> Title 35-A, §9216: Broadband Sustainability fee <http://www.mainelegislature.org/legis/statutes/35-A/title35-Asec9216.html>

<sup>27</sup> The quarterly assessments are paid to an independent fund administrator the month after the end of each quarter. Rolka Loube Saltzer Associates (RLSA) is the fund administrator for the ConnectME Fund as well as the Maine Universal Service Fund and the Maine Telecommunications Education Access Fund.

<sup>28</sup> 35-A, M.R.S.A. §9203(1). See also 9202(2)(C).

“getting the most for the money” is also a high priority because of the limited funds available. The Authority developed grant scoring guidelines to assist applicants.  
Attachment B – Broadband Grant Scoring Guide

In the seventh round of grant funding the Authority was presented with a total of thirty applications. Twenty three projects were funded for \$2 million with a total project value of \$3.1 million; this funding is about 2/3 of total project cost. These Authority awards go to eight of Maine’s service providers ranging in size from small, one office operations to those with a New England or national based footprint. All the providers have implemented broadband projects through the ConnectME grant process in the past.

## **Oversight**

Authority staff will continue to work closely with grantees to ensure they have the resources they need to accomplish their project goals as efficiently and effectively as possible. The progress of the projects supported by the Authority is tracked through a monitoring and reporting process. The grant recipients document the expenditure of Authority funds to ensure that the funds are used only for appropriate purposes. Three reporting forms were developed with the assistance of the Council:

- Notice of Commencement – This requires a schedule of project milestones and the expected completion date. Each vendor for the funded project is identified on the form along with appropriate reports and documentation such as invoices and purchase orders.
- Progress Report – This provides a project update to demonstrate to the Authority that the funded project is on track. The Executive Director monitors each project’s progress and use of funds.
- Final Completion Report – This is a final report that documents the completion of the project with attached financial spreadsheets and a listing of the communities newly served with broadband service as a result of the project.

## **Attachment D – Seventh Round ConnectME Grant Awards**

The ConnectME Authority is a component unit of the State of Maine and as such falls under Title 5 Section 1547 requirements to provide audited financial statements to the State of Maine Controller’s office. The ConnectME Authority contracted with Macpage LLC of Augusta to perform the required audits for fiscal year ending June 30, 2010 through November 7, 2013 with two optional successive one-year terms, beginning November 8, 2013 and November 8, 2014.

Macpage LLC’s Single Audit Report 2012 does not identify any deficiencies in internal control over financial reporting considered to be material weaknesses as stated in the:

1. Report on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with Government Accounting Standards.

2. Report on Compliance with Requirements that could have a Direct and Material Effect on Each Major Program and on Internal Control over Compliance and the Schedule of Expenditures of Federal Awards in Accordance with OMB Circular A-133.

Attachment E - ConnectME Authority Balance Sheet

### **Monitoring the Seventh Round Grants**

For the seventh grant round, the review team felt the need to be more objectively critical of each application due to the amount requested, which was more than the estimated available funds. Authority staff will work with those applicants not funded to improve their scores for the next grant round possibly by increasing the local/provider contribution, increasing the number of households served, or lowering the total project cost. The Authority strongly encourages parties to work together in crafting solutions that would provide the best expansion project while minimizing the impact on existing service providers. The Authority will continue to work with grant recipients to ensure they get the most “bang for the buck” with the limited resources available.

Two high cost special installations proposals to subsidize high cost, difficult to serve locations within each company’s service territory were not granted. The Authority did fund a similar pilot project for Axiom in the fourth grant round. While both of these applications address a recognized problem in providing broadband service, the review team recommended not funding these at this time for two reasons. One, the Authority’s focus for funding projects continues to be for last mile infrastructure projects in defined unserved areas of Maine. Two, if all recommended projects were funded, the proposed allotment for this round would have been exhausted.

The grant review team recommended that the Authority continue to explore a program for all providers that could assist with high cost, difficult installations. The Council offered the recommendation that providers exercise due diligence in determining the amount of capital expenditure and high cost installation issues such as line conditioning and include these expenses in project proposals. Should a provider realize that the capital expenditure is greater than expected, they may approach the Authority and seek an amendment to the project and grant amount.

The Authority will monitor and assist the 23 seventh round grant awardees to ensure that they have the resources necessary to complete their projects as required by the grant award.<sup>29</sup>

### **Implementing the 2013 Eighth Grant Round**

For the eighth grant round, the Authority estimates that \$1 million will be available and is again requesting smaller, focused proposals. A suggested grant limit for each project is \$100,000, funding no more than 50% of the total project, while recognizing flexibility exists for exceptional proposals. The Authority looks for creative solutions for expanding affordable

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<sup>29</sup> Complete list ConnectME Authority Awards.  
<http://maine.gov/connectme/connectgrants/docs/GrantsAwardedSevenRounds.pdf>

broadband service to the unserved areas of Maine, encouraging more targeted solutions, making projects more manageable and easing oversight.

#### **D. ConnectME Authority Advisory Council**

The ConnectME Advisory Council (Council) provides advice and guidance to the Authority on technical, policy, financial and economic issues. The Council also performs limited functions assigned to it by the Authority or as provided by rule adopted by the Authority. The Council members include appointees who have experience with issues concerning advanced communications technology infrastructure; or experience with issues concerning the telecommunications and technology infrastructure implemented by the State's education community; and are industry and government experts in their field that can advise the Authority on the many technical or policy issues it faces. Members are appointed by the Governor, the Authority, or are designated in the Authority's statute.<sup>30</sup>

In 2012 the Council reviewed [Developing Broadband in Maine: Strategic Plan 2012](#). Six areas were examined: households, businesses; healthcare industry; education community; government services; and the broadband industry. The Council found that supporting broadband development directly through current targeted efforts in health care, education, and government will yield useful results while driving adoption by households and businesses invigorating the service provider's business model.

Broadband providers around the state are facing increased costs to bring broadband to those locations that remain unserved in Maine. High cost installs are a challenge due to their level of complexity in planning and associated increased capital expense costs. The Council suggested that providers continue their research and due diligence in ascertaining the capital expense required to bring service to last mile residents and businesses. Should providers realize increased costs such as line conditioning that drive grant project costs above expectations; the provider should revisit the Authority for an amendment.

The Council advanced a preliminary process for tracking grant progress on a multi-year basis. In the interim, Authority staff will be collecting statistics from pass grant rounds measuring adoption to date. This data will aid the Council in creating a more formalized, relevant process for the Authority measuring effectiveness through adoption rates.

#### **E. Maine Fiber Company Advisory Board**

The Authority's Executive Director, representing the ConnectME Authority, sits as one of nine members on the Maine Fiber Company (MFC) Advisory Board. The Advisory Board provides advice to MFC with the respect to the construction and operation of Three Ring Binder, including; the choice of appropriate anchor institutions to which the project should connect in order to meet federal grant obligations and promote the broadband goals of the State; how to maximize the economic benefits of the project to the State; ensure the project is constructed in a manner consistent with federal grant obligations and public purposes.

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<sup>30</sup> 35-A, M.R.S.A. §9206

In September of 2012 the 1100 mile network was completed, ahead of schedule and on budget. Dwight Allison, Maine Fiber Company CEO stated “any qualified company that wants access to fiber optic infrastructure to expand true high-speed internet service to consumers and businesses across Maine can get access to fiber at affordable, non-discriminatory rates.” At the completion ceremony, Congressman Mike Michaud shared “The Three Ring Binder Project will be remembered as the initiative that helped truly connect Maine to the world. It has already directly connected so many critical Maine institutions, health centers, business hubs, community centers, and universities. There is no doubt that this project’s completion will help position our state for future growth.”<sup>31</sup>

### III. FEDERAL BROADBAND ACTIVITIES AND INITIATIVES

The FCC released \$115 million of the \$300 million Connect America Funds (CAF) Phase I funding to price cap carriers nationwide, leaving \$185 million in reserve. In November of 2012 the FCC released a Federal Notice of Proposed Rule Making (FNPRM) seeking input on how to disburse the remaining funding. The FNPRM puts forward two proposals. One proposal would add funds to a future Phase 1 program and another would put the remaining funds into the CAF II program.

Another major change detailed in the FNPRM is expanding the speed parameters for funding based on original CAF I parameters of 768 kbps downstream and 200 kbps upstream. The data collected through the Authority’s federally funded State Broadband Initiative mapping project provides Maine speed and location data to the National Broadband map. “We propose to designate an area as unserved by broadband with speeds of 4 Mbps downstream and 1 Mbps upstream if it is shown on the National Broadband Map as unserved by fixed terrestrial broadband with an advertised speed of at least 3 Mbps downstream and 768 kbps upstream,” the FNPRM states.<sup>32</sup>

CAF Phase II, the high cost program, aims to distribute \$1.8 billion per year for five years to price cap territories based on a new cost model currently under development, with the goal of making broadband available to all homes in those territories that cannot get broadband today. Funding for the programs is to be redirected from today’s voice-focused Universal Service program.<sup>33</sup>

With an annual budget set at no more than \$4.5 billion, the same as the current high-cost universal service funding level—is expected to help connect 7 million Americans to high-speed Internet and voice in rural America over the next six years, generating approximately 500,000 jobs and \$50 billion in economic growth over this period. Main Street businesses across the country will benefit from the opportunity to sell to new customers throughout the U.S.

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<sup>31</sup> Maine’s 1,100 Mile Three Ring Binder High-Speed Internet Network is Complete <http://www.maineiberco.com/news-scroll1/mfc-announces-completion-of-3-ring-binder/>

<sup>32</sup> FCC Offers Two Proposals for Unclaimed Connect America Funds <http://www.telecompetitor.com/fcc-offers-two-proposals-for-unclaimed-connect-america-funds/>

<sup>33</sup> FCC Offers Two Proposals for Unclaimed Connect America Funds <http://www.telecompetitor.com/fcc-offers-two-proposals-for-unclaimed-connect-america-funds/>



The FCC Wireline Competition Bureau released a Public Notice in December 2012 announcing the availability of version one of the Connect America Cost Model. Version one of the Connect America Cost Model will provide the ability to calculate costs using a variety of network deployments to serve funded locations, different assumptions about the amount of existing facilities assumed to exist, as well as different assumptions about unit costs for capital and operating expenses.

The Bureau emphasizes it has not adopted this version of the Connect America Cost Model, and the inclusion of various capabilities does not represent a preliminary finding about the approach the Bureau will ultimately adopt in this proceeding. The Bureau will continue to develop the cost model platform and inputs before finalizing and adopting a forward-looking cost model for Connect America Phase II. The Bureau anticipates that a second version of the Connect America Cost Model will be available in the coming weeks and will include an update to 2010 census geographies and updated State Broadband Initiative (SBI) data.<sup>34</sup> The potential for Maine from these changes at the FCC is to provide better funding possibilities for broadband infrastructure in the most rural areas of the state.

#### **IV. ONGOING AUTHORITY ACTIVITIES**

There are many opportunities and responsibilities for the Authority in 2013 including expanded participation in federal and state initiatives, additional grant rounds, mapping served and unserved areas, address file development, building broadband capacity, improving digital literacy through technical assistance, working with local governmental organizations and assisting broadband stakeholders with initiatives that benefit Maine's broadband landscape.

##### **A. Coordinate Broadband Initiatives**

Looking at the mid and long term, perhaps the most important role for the Authority will be to continue to serve as a conduit for Maine's broadband initiatives at all levels and across state agencies. The Executive Director participates and contributes to efforts which identify and coordinate solutions to regulatory, policy and structural challenges to expanding the availability of advanced communications infrastructure in Maine.

The Authority participates in the Networkmaine Coordinating Council, a newly established unit within the University of Maine System created by the restructuring of its communications and network services group. It was created in 2009 to provide the public entities served with greater involvement in shaping the future of Maine's research and education network and the Maine School and Library Network (MSLN).

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<sup>34</sup> Public Notice Wireline Competition Bureau Announces Availability of Version One of the Connect America Fund Phase II Cost Model. [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2012/db1211/DA-12-2011A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db1211/DA-12-2011A1.pdf)

## B. Broadband Mapping and Inventory Project

The Authority's activities confirm that not only are communications services, especially broadband services, in Maine not "reasonably comparable" with services provided regionally and nationally, but are not reasonably comparable within the state. A primary goal of the Authority is to expand broadband access in the most rural, unserved areas of the state. It would be very difficult for unsupported projects to be financially viable in these areas. The support from Authority grants alters the financial equations enough to allow the services to be offered. To meet this goal, the Authority must determine with the highest degree of certainty it can where broadband is available and, more importantly, is not.

The Authority is required to collect, aggregate, coordinate and disseminate information and data concerning communications services and advance communications technology infrastructure in the state.<sup>35</sup> For many years, the FCC has provided broadband reports that allow a reasonable comparison picture across the states. However, the FCC reports tend to seriously overstate the availability of broadband services in each state, because if one broadband subscriber was located in a particular zip code, the FCC considers the entire zip code to have broadband. This overstatement is particularly important in a rural state like Maine.

In 2009, the Authority began a comprehensive mapping and inventory project to obtain more granular, Maine-specific information regarding broadband availability. In 2010, the Authority was awarded approximately \$1.3 million for broadband data collection and mapping activities grant from NTIA as part of its BTOP program funded under the Recovery Act. The grant funds facilitate a much more detailed and complete analysis of broadband than would have been possible with only the Authority's modest resources. We are working with the Office of Information Technology, Maine Office of GIS and the James W. Sewall Company to conduct a mapping project that will use a combination of provider and public data to refine our understanding of unserved areas of Maine.

As part of the mapping award, the Authority was also granted funding to implement address file development. A two-stage process will conflate existing E-911, Authority and Department of Transportation centerline files, and then use dynamic segmentation to generate an address file for the majority of communities and a traditional assignment approach for the few communities that did participate in the previous address normalization process.

In collaboration with industry service providers, state and federal agencies and local communities, the Authority developed a searchable geographic map.<sup>36</sup> The map indicates where broadband service is available from one or more technology platforms: fixed wire, fixed or point-to-point wireless and mobile or satellite wireless systems. The end product enables community leaders, consumers and businesses to access information on service options and potential service providers for their locations of interest. The Authority has leveraged the same geographic data to also implement an online static map gallery which

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<sup>35</sup> 35-A, M.R.S.A. §9204(3)(A). <http://www.mainelegislature.org/legis/statutes/35-a/title35-Asec9204.html>

<sup>36</sup> Maine Broadband Availability Map: <http://www.maine.gov/connectme/broadbandmapping/index1.htm>.

offers high density PDF layered broadband maps that are created to address specific needs.<sup>37</sup> All states received mapping and inventory Recovery Act funding to create online geographic maps. Data from each state is sent to the NTIA for populating a nationwide broadband map.<sup>38</sup>

### C. Broadband Planning Project

The Authority is managing a statewide comprehensive planning project that was funded through a \$440,000 BTOP grant. Contractor James W. Sewall Company is teaming with Packard Judd Kaye Strategic Marketing Group; broadband expert Jeff Letourneau, Executive Director of Networkmaine; and Todd Gabe, Associate Professor of Economics at the University of Maine, to form the Sewall planning team.

A major concern of the Authority beyond the simple availability of broadband service is the low take-rate or adoption and subscribership to available broadband services. Factors contributing to a lower than average adoption rate include socio-economic (low income consumers cannot afford the computer or the cost of subscribing to broadband service); educational (consumers are not aware of the services available online); and perceptual (consumers do not see value in being online). Increasing the adoption rate for broadband services changes the economic “tipping point” for investment by service providers, leading to more rapid and comprehensive deployment.

This project provides benchmarking of uses of broadband, the benefits, the drivers for greater adoption of broadband and the barriers to adoption focused on household and on business establishments in Maine. One particular focus, although not exclusive to the focus area, will be on the telemedicine industry sector.

In June of 2011 the [Developing Broadband in Maine: Needs Assessment Vol. I](#) was released.<sup>39</sup> This Needs Assessment is one deliverable in the Authority's Broadband Planning Project. It establishes a baseline measure of broadband availability and use in Maine, and identifies barriers to the adoption of broadband technologies throughout the state. It will be used to plan the Authority's strategies for increasing broadband awareness and uptake, and to provide the baseline against which such implemented strategies can be evaluated. Data in this assessment has two planned updates through 2014. In the winter of 2012, the Authority circulated 10,600 residential, 3,526 business surveys and approximately 8,000 health provider surveys. Results will inform next year's annual report and broadband adoption figures overall.

The [Developing Broadband in Maine: Strategic Plan](#) was released in spring 2012 and was derived from the information gathered and published in the Needs Assessment Vol. I, 2011. The primary objective of the Strategic Broadband Plan is to recommend strategies to

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<sup>37</sup> Maine Broadband Static Map Gallery: <http://www.maine.gov/connectme/broadbandmapping/staticgallery.htm>.

<sup>38</sup> National Broadband Map: <http://broadbandmap.gov/>.

<sup>39</sup> Developing Broadband in Maine: Needs Assessment Vol. I: <http://www.maine.gov/connectme/arragrants/needsassessment.shtml>.

the Authority Board for increasing Maine broadband availability and adoption. The Strategic Plan acknowledges the critical economic and social role broadband plays in Maine and presents six general categories within which the Authority should organize its efforts.

1. *For the general public:* The Authority will work to increase broadband adoption in homes by launching sustained public awareness campaigns on the benefits of broadband to the general public and by leveraging the Authority's various planning and implementation projects now under way.<sup>40</sup> The Authority's Broadband Technical Assistance program implemented through the Maine Department of Education and the Office of Adult Education and Family Literacy is particularly relevant to this effort.<sup>41</sup>
2. *For businesses:* The Authority will work to increase broadband adoption in businesses by launching sustained public awareness campaigns on the benefits to businesses and by leveraging the Authority's Broadband Capacity Building project, which, by including business leaders from around the state, focuses on increasing adoption in businesses.<sup>42</sup>
3. *For the healthcare industry:* The Authority will work with decision makers of the Health Information Technology (HIT) initiatives and the healthcare community to increase broadband use to improve the efficiency and quality of healthcare and health outcomes.
4. *For the educational community:* The Authority will support educational and library organizations in their efforts to expand the availability and use of higher-tiered broadband services.
5. *For government services:* The Authority will support e-government efforts to facilitate citizen engagement through increased broadband use.
6. *For the broadband industry:* The Authority will promote the expansion of higher-tiered broadband services to encourage use and investment, and to foster competition in the marketplace in order to lower costs.<sup>43</sup>

#### **D. Broadband Capacity Building Project**

Additional opportunities were funded by the NTIA through the original State Broadband Initiative (SBI) BTOP program. The Authority carefully examined the opportunities available and submitted applications in two categories: broadband capacity building and technical assistance. The Authority has been awarded a total of \$4.98 million over five years under the

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<sup>40</sup> The Authority may not have the resources to implement all of the recommendations presented here. They are therefore presented in outline only and will be developed in detail according to the Authority's priorities.

<sup>41</sup> <http://www.maine.gov/connectme/arragrants/technicalassist.shtml>

<sup>42</sup> <http://www.maine.gov/connectme/arragrants/capacitybuilding.shtml>

<sup>43</sup> It is important to note that the strategic recommendations promote public-private investment in unserved and underserved areas where public funds are crucial. They do not promote public investment in areas where private funds are successfully driving expansion and uptake.

SBI grant. The Authority administers the Broadband Capacity Building Project as well as the Technical Assistance Project.

A task force has been convened to create a Broadband Capacity Building Plan to be implemented throughout the state. Statistics and demographics collected through the planning portion of the SBDD Program have determined focus areas for the Broadband Capacity Building Project. The two initiatives will work together with the planning project, providing data and information to the broadband capacity building project.

The task force is developing a Broadband Capacity Building Plan to support broadband growth and adoption. In addition to using the broadband needs assessment (June 2011) and the broadband strategic plan (April 2012), the task force will utilize statewide forums and meetings intended to both disseminate technical information about broadband availability and collect information relative to user needs and desires. Additionally, programs which currently exist to support broadband growth and adoption will be assessed. Included with this is the gathering of state and local capacity benchmark data to determine the success of the Broadband Capacity Building Project over time.

The Broadband Capacity Building Project will supplement the State of Maine's intent, systematic and consistent approach to planning regional and statewide asset-based community and economic development strategies. The Project will, among other things, help to stimulate the health of business in Maine and the Maine economy through:

- supporting broadband growth and adoption in the private sector, from which skilled workers and entrepreneurs who can live anywhere but want to live in Maine because of its distinctive quality of place can ; and
- increasing the quality and efficiency of health care service delivery.

#### **E. Technical Assistance Project**

The second opportunity that was funded with additional BTOP Recovery Act grant monies was the Technical Assistance Project. In fulfilling the requirements of the NTIA Technical Assistance grant, the Authority and Maine Department of Education Office of Adult Education and Family Literacy are collaborating on two multi-year projects for Maine citizens.

The first project is to provide Maine citizens information on the importance of broadband internet access for education, enrichment, economic and community development, health and access to governmental services. Seventy adult education programs across the state are providing informational presentations on the impact of broadband connectivity at meetings of civic and social organizations, school boards and other public forums. The brief presentations are designed to encourage audience members to think about how expanding high-speed networks can enhance personal and business communications. Using resources developed by the Authority, the adult education programs also provide the information in academic classes and personal enrichment courses. Fifty community broadband technical assistance presentations have already reached 1124 people and the phase of the work is just getting underway!

The second project is the expansion of a highly successful professional development program for adult educators statewide known as MARTI, or the Maine Adult Regional Technology Initiative. This initiative combines the support of professional learning communities with extensive learning opportunities for adult educators comprised of regional meetings and one-on-one classroom visits by the skilled trainer/mentors along with two extended courses. The blended course work, live presentations and online training, focuses on strategies for integrating technology in teaching and learning universal design for learning emphasizing differentiated instruction. Key project goals are to train 250 teachers and reach thousands of citizens over the life of the project. As the project enters its second year 76 teachers and 30 adult education directors have enrolled in courses. Thirty three people have already earned a MARTI certificate indicating they have completed the 70 hour professional development program.

## F. Access to Facilities and Rights of Way

An ongoing challenge for broadband service providers, especially fixed-wireless providers, is obtaining access to existing towers, bridges, high points, roadways for conduit and public buildings for the location of equipment. The issue of access to existing utility poles and the cost and time for make-ready work is a major challenge for independent wired broadband service providers, both for last-mile and middle-mile facilities. These two issues cause unnecessary delay and higher cost for the expansion of infrastructure to serve the most unserved areas of the state.

The Center for American Progress reports that a recent study by the New America Foundation suggests that road construction and repair can be an enormous help for the broadband middle mile problem. Construction costs for highways are generally at least \$3 million per lane, per mile. By contrast, it only costs between \$10,000 and \$30,000 per mile to install conduit pipe that can hold the fiber-optic lines used for high-speed Internet purposes. Thus, “adding fiber would increase highway construction costs by as little as one percent on average.”<sup>44</sup>

President Obama signed [Executive Order 13616](#)<sup>45</sup>, entitled Accelerating Broadband Infrastructure Deployment. The EO announces a policy that broadband access is essential to the nation’s competitiveness and public safety, and mandates several actions to promote broadband infrastructure deployment. By developing a consistent process for broadband project sponsors to follow, many bureaucratic hurdles will be cleared, and there is no doubt that projects will take less time to complete. Specifically, the executive order will require the Departments of Agriculture, Commerce, Defense, Interior, Transportation, Veterans Affairs and the US Postal Service to offer broadband providers carriers a single approach to leasing

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<sup>44</sup> “Smart Grid, Smart Broadband, Smart Infrastructure” April 2009 (3). [http://www.americanprogress.org/wp-content/uploads/issues/2009/04/pdf/smart\\_infrastructure.pdf](http://www.americanprogress.org/wp-content/uploads/issues/2009/04/pdf/smart_infrastructure.pdf)

<sup>45</sup> “Obama Executive Order Targets Broadband Deployment and Spurs High Speed Access” <https://www.federalregister.gov/articles/2012/06/20/2012-15183/accelerating-broadband-infrastructure-deployment> June 2012.

Federal assets for broadband deployment. The executive order also requires that Federal assets and lease requirements be listed on departmental websites. In addition, regional broadband deployment projects will be listed and tracked on the government's Federal Infrastructure Projects Dashboard ([permits.performance.gov](http://permits.performance.gov)).<sup>46</sup>

The Authority's Broadband Capacity Building Project will explore and develop a white paper that focuses on the challenges presented to private and public entities for navigating the expansion of broadband when rights-of-way issues arise in Maine.

### **G. Health Information Technology**

The Authority collaborates with the Maine Office of the State Coordinator for Health Information Technology (HIT) in the state's HIT initiatives. A healthy citizenry and workforce are central to Maine's quality of place. High speed internet availability allows instantaneous, interactive contact between health professionals and patients, permitting remote monitoring, efficient chronic disease management and more effective responses to emergencies. High speed Internet can help senior citizens and people with disabilities live independently, improve their quality of life and reduce costs of care. High speed internet is also a means for transferring patient health information among providers, diagnosticians, patients, and health care facilities.

Since the inception of the MaineCare electronic health records (EHR) program in October 2011, Maine has disbursed more than \$61 million dollars to professionals and facilities. The program has two components; one to encourage adoption, implementation, or upgrade (AIU) of an EHR program and a second for acknowledgement of meaningful use of an established EHR system.

For the period of October 2011 through December 14, 2012, payments under the AIU portion of the program were:

- \$35.77M to 1,686 MaineCare professionals
- \$18.68M to 36 hospitals

For the period of October 2011 through December 14, 2012, payments under the meaningful use portion of the program were:

- \$1.62M to 190 MaineCare professionals
- \$5.26M to 12 hospitals

Along with disbursing grant funds to incentivize professionals and hospitals, the HIT program is working with the ConnectME Authority to ensure efficient and cost-effective technology and the "pipe" to carry critical medical information and data to and from the rural health care community. To this end, a survey is being created and will be sent to professionals and hospitals to determine adequacy of existing infrastructure to support an EHR program. Survey results will be used to identify and target areas where broadband

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<sup>46</sup> Executive Order 13616 <http://broadband.about.com/od/federalbroadbandissues/a/Obama-Executive-Order-Targets-Broadband-Deployment-And-Spurs-High-Speed-Access.htm> June 2012.

availability is inadequate to support EHR programs. Once those deficient areas have been identified, the Authority will work with providers to create capacity in these areas in order to maximize the opportunity for provider/facility participation.

In 2012, the State of Maine Office of the State Coordinator for Health Information Technology was one of only three states to be recognized for efforts to expand the effective use of EHR systems, health information exchange, and other technology tools to improve patient care and health outcomes in Maine. The Authority appreciates the opportunity to assist the citizens, businesses, and government of the State of Maine through this important initiative.

## **V. CONCLUSION**

The short history of the Authority has shown that supporting small public-private initiatives and partnerships to expand broadband has been and will continue to be the best strategy. Much has been accomplished in the past five years to better position Maine as a state that embraces what technology can offer.

In the report *Making Maine Work: Critical Investments for the Maine Economy* one of the top recommendations made is to make high speed internet service available at reasonable costs to businesses throughout Maine by:

- Encouraging on-going private investment in communications infrastructure to increase access to and availability of high-capacity broadband.
- Working with communications providers and Maine's Congressional Delegation to modernize federal communications regulations.
- Supporting ConnectME's efforts to identify and fill gaps in the communications network.<sup>47</sup>

Maine is on its way to realize its universal broadband availability goals. Yet much work remains for Maine to become a leader and to gain from the benefits of broadband including employment opportunities, education, healthcare and public safety. We also need to coordinate state and federal activities to ensure that we take advantage of all opportunities for funding and collaboration. The Authority commits to working with all levels of government and public and private stakeholders to bring broadband advantages to fruition in Maine.

### **Attachments:**

- Attachment A – Glossary
- Attachment B – Broadband Grant Scoring Guide
- Attachment C – ConnectME Authority and Advisory Council Members
- Attachment D – ConnectME Seventh Round Grant Awards
- Attachment E – ConnectME Balance Sheet

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<sup>47</sup> "Making Maine Work: Critical Investments for the Maine Economy" Maine Development Foundation, July 2010 (17).



## Attachment A – Glossary

**BPL (broadband over power lines)**, a technique for delivering high-speed Internet access over electrical power lines, with the ability to use house wiring to connect to computers.

**Broadband**, an elastic term describing high-bandwidth, two-way, always-on data connections. The wider the pipe, the more data can be moved at the same time and hence the higher the effective speed. The FCC has seven broadband tiers with “basic broadband tier 1” referring to services equal to or greater than 768 kbps but less than 1.5 Mbps in the faster direction. A typical home user broadband connection today usually is 512 kbps upstream and 2-7 Mbps downstream. In a few years, those numbers are likely to be significantly higher. The term “broadband” is often used as shorthand for “high-speed Internet access.”

**BTOP** – Broadband Technology Opportunity Program

**business user**, a user in a business setting constituting a broad “middle class” in terms of bandwidth, reliability, and security needs. See also *home user*, *enterprise user*.

**cable internet**, or cable modem service, a means of delivering broadband via coaxial cables, almost always simultaneously with cable television service and VoIP telephone service.

**Central Office (CO)**, a switching station maintained by an ILEC where DSLAMs are generally deployed and from which the maximum range of DSL service (reckoned in “circuit feet,” distances over twisted-pair copper lines, not “as the crow flies”) can be determined.

**CLEC**, Competitive Local Exchange Carrier.

**DS3**, a fiber-based digital signal carrier with a rate of 44.736 Mbps.

**DSL**, digital subscriber line. There are many subtypes of DSL (xDSL, ADSL2, SDSL, etc.) of varying speed, range and technical characteristics.

**dark fiber**, the optical fiber infrastructure (cabling and repeaters) that is currently in place but is not being used. Optical fiber conveys information in the form of light pulses so the “dark” means no light pulses are being sent.

**DSLAM**, digital subscriber access multiplexer.

**enterprise user**, the most demanding, industrial strength broadband consumer that usually represents large, technology-intensive organizations.

**fixed wireless**, a non-mobile method of delivering broadband service to homes and businesses using line of sight radios.

**FTTH/FTTP**, fiber to the premises, home, et al. a method of connectivity using fiber optic cabling direct to the end user.

**home user**, the class of broadband consumer with the least demanding broadband needs but which also faces total unavailability of service in many areas.

**ILEC**, Incumbent Local Exchange Carrier.

**ISP**, internet service provider.

**last mile**, a term for connection to the end user, also known as the “local loop” for telecommunications services that makes the final connection to the premises.

**middle mile**, also known as backhaul, connects the last mile internet service provider with an Internet backbone service provider.

**municipal network**, a broadband network owned and operated by a city or town, often by lease arrangement with an ILEC/CLEC.

**Narrowband**, low-speed data connections (such as dialup Internet access, a typical maximum of 56kbps and is generally even lower in real-world applications).

**NTIA** – National Telecommunications Information Administration

**PON (passive optical networking)**, a family of networking standards using a point-to-multi-point architecture for delivering last-mile connectivity without any active (i.e., powered) components in the distribution network. PON may provide hope for a last-mile solution because it involves fewer upgrades to the current infrastructure than competing technologies.

**Remote Terminal**, a remote switching station, or “sub-station” maintained by an ILEC where DSLAMs are generally deployed and from which the maximum range of DSL service (reckoned in “circuit feet,” distances over twisted-pair copper lines, not “as the crow flies”) can be determined.

**SBI** – State Broadband Initiative

**symmetrical/asymmetrical**, describes whether a data connection operates at the same speed or bandwidth when traveling upstream as it does when traveling downstream. A symmetrical connection is the same speed up or down; an asymmetrical connection is usually much slower on the upload than on the download.

**T-1**, trunk level digital carrier, originally provided over copper facilities, with a signaling speed of 1.544 Mbps.

**take rate or penetration rate or adoption rate**, a measure of the ratio of potential subscribers to whom service is available to those who actually sign up for that service.

**triple play**, the application of broadband that delivers voice, data, and video service over the same transport pipe.

**VoIP**, voice over internet protocol. Voice “telephone” service provided over a data connection such as DSL or cable internet service.

**WiFi (wireless fidelity)**, a form of wireless networking in the IEEE 802.11x family of standards that is generally used for connectivity of wireless large-area networks (WLANs) inside buildings and small outdoor areas, but which has shown remarkable usefulness as a way of providing high-speed Internet over wider distances via towers, high-gain antennae and mesh-network technologies that significant exceeds what WiFi was originally intended to do.

**WiMAX (Wireless Interoperability for Microwave Access)**, an emerging form of fixed wireless broadband access in the IEEE 802.16x family of standards. The licensed version has a theoretical range and distance of up to 30 miles and 50Mbps or higher but is only available to the larger carriers. WiMAX is able to overcome some of the topographical issues faced by other forms of wireless broadband.

**WISP**, wireless internet service provider.

## Attachment B – Broadband Grant Scoring Guide

The grant application evaluation process will allow the ConnectME Authority to evaluate all applications submitted during a particular application period that has been set by the Authority. The scoring of applications is based on a 100-point scale. A project with a total score of less than 50 points may not be funded. Applications will be judged using the following four scoring categories, as described in the Authority rule:

Cost-Benefit. This category is worth **35** points.

The cost-benefit scoring is based on relevant factors, **including, but not limited to, the amount of funding requested from the Authority per customer eligible to be served by the project, with lower funding per customer receiving a higher cost-benefit score.** Applicants should demonstrate financial viability by providing pro-forma financial statements and detailed business plans.

Grant dollars requested/customer eligible to be served	Points
Less than or equal to \$500	25
\$501-\$1,000	20
\$1,001-\$1,500	15
\$1,501-\$2,000	10
\$2,000-\$2,500	5
Greater than \$2,500	0

**A maximum of ten additional points** will be added to the C-B score for any application requesting a 50% or less grant for the proposed project. A sliding scale will be used for those grant applications above 50% ( $\leq 50\%$  = 10pts; 51% - 60% = 5pts;  $>60\%$  = 0 pts.)

Community Support. This category is worth **20** points.

The community support score is based on relevant factors, including, but not limited to, evidence of community support for the project and the percentage of the geographic area to be covered by the proposal that will be served by the proposed project. Strong consideration (and higher point value as shown in the table below) will be given to those applications that include petitions or listings of a significant number of the available households and businesses expressing a strong desire to subscribe to broadband service provided from the proposed project.

Support as a percent of homes/businesses passed by project	Points
100%	20
50%	15
25%	10
<25%	5

Project Scope. This category is worth **30** points.

The project scope score is based on relevant factors prioritized below:

1. The technology, or type and “speed” of the broadband service to be offered by the proposed project. For example: Fiber to the home (FTTH) service will be scored highest; and projects will receive more points for service that provides up and down speeds in the higher FCC Broadband Tiers. <sup>48</sup>
2. The number of potential customers to be served or households passed by the project. For example; a project that proposes to provide broadband service to 300 households will receive more points that a project that will provide service to 50 households.
3. The grant applicant’s financial commitment to the project (cash, in-kind, donations, etc).

Project Value. This category is worth **15** points.

The project value score is based on relevant factors, including, but not limited to, the estimated retail price per customer to receive service from the proposed project and any other details of the project that may benefit customers in the area proposed to be served by the proposed project. For example; more points will be awarded for a higher number of businesses and/or health care facilities in the project area that do not have access to broadband service. Applicants should use this category to introduce elements of their project which may be significant and not incorporated in one of the other three categories.

**Note:** Legislative changes to the ConnectME Authority statute (to 35-A M.R.S.A. §9204) <sup>49</sup> state that, “(I)n awarding grants, the authority shall give priority to those proposals that, relative to other proposals, extend access to broadband service to a higher percentage of an unserved area within a municipality or other appropriate geographic area.”

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<sup>48</sup> Basic Broadband Tier 1, 768 kbps to 1.5 Mbps; Broadband Tier 2, 1.5 Mbps to 3 Mbps; Broadband Tier 3, 3 Mbps to 6 Mbps; Broadband Tier 4, 6 Mbps to 10 Mbps; Broadband Tier 5, 10 Mbps to 25 Mbps; Broadband Tier 6, 25 Mbps to 100 Mbps; Broadband Tier, 7 Greater than 100 Mbps. As defined by the Authority, May 12, 2011.

<sup>49</sup> See Public Law, Chapter 63, (LD 850, HP 0585), 124<sup>th</sup> Maine State Legislature, “An Act To Ensure Local Broadband Coverage.”

## **Attachment C - ConnectME Authority and Advisory Council Members**

### Authority Members:

1. Jean Wilson, Chair, Senior Vice President of Information Services at LL Bean
2. Greg McNeal, Chief Technology Officer for Maine State Government
3. Ralph Johnson, Chief Information Officer, Franklin Community Health Network
4. Dick Thompson, Chief Information Officer for University of Maine System
5. Thomas L. Welch, Chairman, Maine Public Utilities Commission

### Advisory Council:

1. Fletcher Kittredge, GWI, Chair
2. Ben Sanborn, Telecommunications Association of Maine
3. Paul Schonewolf, Time Warner Cable, Area Vice Pres. of Operations
4. Linda Lord, Maine State Librarian
5. Jeff Mao, Dept. of Education
6. Joshua Broder, President, Tilson Technology Management
7. Jeff Letourneau, Exec. Director, Network Maine (UMS)
8. Rob Kelley, MTI Technology Board
9. John Burns, Small Enterprise Growth Fund
10. Wayne Jortner, Office of the Public Advocate
11. Bruce Ballantyne, FairPoint Vice President of Operations

Attachment D - ConnectME Seventh Round Grant Awards

	A	B	C	D	E	F	G	H	I	J	
1	<b>ConnectME Authority: Seventh Grant Round Grant Awards</b>										
2	6/7/2012										
3											
4	<b>Applicant or Eligible Provider</b>	<b>Community Partner or Eligible Provider</b>	<b>Community(s) Served</b>	<b>Project Title</b>	<b>Potential Households</b>	<b>Project Grant</b>	<b>Grant</b>	<b>Percent Grant</b>	<b>Grant\$/Hshld</b>	<b>Total Points</b>	
5	Alna, Town of	Time Warner	Alna	Town of Alna	81	\$162,542	\$122,042	75%	\$1,507	70	
6	Axiom Technologies		East Machias	Hadleys Lake, East Machias Broadband Project	98	\$184,756	\$123,876	67%	\$1,264	80	
7	Axiom Technologies		Halls Mills	Halls Mills, Whiting Broadband Project	50	\$121,327	\$80,000	66%	\$1,600	75	
8	FairPoint		Robbinston	Robbinston, Maine Broadband Buildout	415	\$81,100	\$40,550	50%	\$98	100	
9	FairPoint		Sweden	Sweden, Maine Broadband Buildout	240	\$350,000	\$280,000	80%	\$1,167	75	
10	FairPoint		Vinalhaven	Vinalhaven, Maine Broadband Buildout	185	\$180,803	\$126,562	70%	\$684	85	
11	Lincolville Networks		Hope	Lincolville Networks #1	75	\$210,840	\$134,938	64%	\$1,799	75	
12	Lincolville Networks		Lincolville	Lincolville Networks #2	84	\$284,716	\$165,135	58%	\$1,966	80	
13	Lincolville Networks		Lincolville Beach	Lincolville Networks #3	21	\$49,856	\$30,911	62%	\$1,472	80	
14	Orland, Town of	Time Warner	Orland	Town of Orland	77	\$72,627	\$53,377	73%	\$693	80	
15	Oxford County Tel & Tel		Hartford	Broadband Expansion Hartford	86	\$130,000	\$97,500	75%	\$1,134	75	
16	Pioneer Broadband		Amity	Amity FTTH	25	\$23,146	\$11,573	50%	\$463	100	
17	Pioneer Broadband		Big Lake Township	Big Lake FTTH	40	\$152,100	\$76,050	50%	\$1,901	85	
18	Pioneer Broadband		Caribou	Caribou-Madawaska Rd RT	51	\$45,566	\$37,819	83%	\$742	75	
19	Pioneer Broadband		Mars Hill	Mars Hill-West Ridge Rd RT	40	\$60,350	\$54,315	90%	\$1,358	70	
20	Premium Choice		Grindstone	Grindstone Road	40	\$44,000	\$22,000	50%	\$550	85	
21	Premium Choice		Williamsburg	Williamsburg	80	\$70,000	\$35,000	50%	\$438	90	
22	Tidewater Telecom		Appleton	Tidewater Telecom #2	90	\$279,619	\$164,975	59%	\$1,833	80	
23	Tidewater Telecom		Bremen	Tidewater Telecom #5	82	\$168,007	\$112,565	67%	\$1,373	80	
24	Tidewater Telecom		Jefferson	Tidewater Telecom #1	58	\$173,601	\$105,896	61%	\$1,826	75	
25	Tidewater Telecom		New Harbor	Tidewater Telecom #3	57	\$102,235	\$69,520	68%	\$1,220	80	
26	Tidewater Telecom		Nobleboro	Tidewater Telecom #4	64	\$176,807	\$109,620	62%	\$1,713	75	
27	Tidewater Telecom		South Bristol	Tidewater Telecom #6	10	\$36,886	\$24,345	66%	\$2,435	70	
28											
29	<b>Totals</b>					<b>2,049</b>	<b>\$3,160,884</b>	<b>\$2,078,569</b>	<b>66%</b>	<b>\$1,014</b>	

## Attachment E – ConnectME Balance Sheet

### ConnectME Authority

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#### Balance Sheet – Government Fund

June 30, 2012

	<b>Special Revenue Fund</b>
<b>ASSETS</b>	
Cash and cash equivalents	\$ 3,335,298
Accounts receivable	334,485
Due from other governments	198,096
Other receivable	<u>28</u>
<b>Total Assets</b>	<b><u>\$ 3,867,907</u></b>
 <b>LIABILITIES AND FUND BALANCE</b>	
<b>Liabilities</b>	
Accounts Payable	\$ 330,803
Accrued Liabilities	463
Deferred Revenue	<u>14,272</u>
<b>Total Liabilities</b>	<b><u>345,538</u></b>
 <b>Fund Balance</b>	
Reserved for:	
Advanced communications technology Infrastructure	<u>3,522,369</u>
 <b>Total Liabilities and Fund Balance</b>	 <b><u>\$ 3,867,907</u></b>