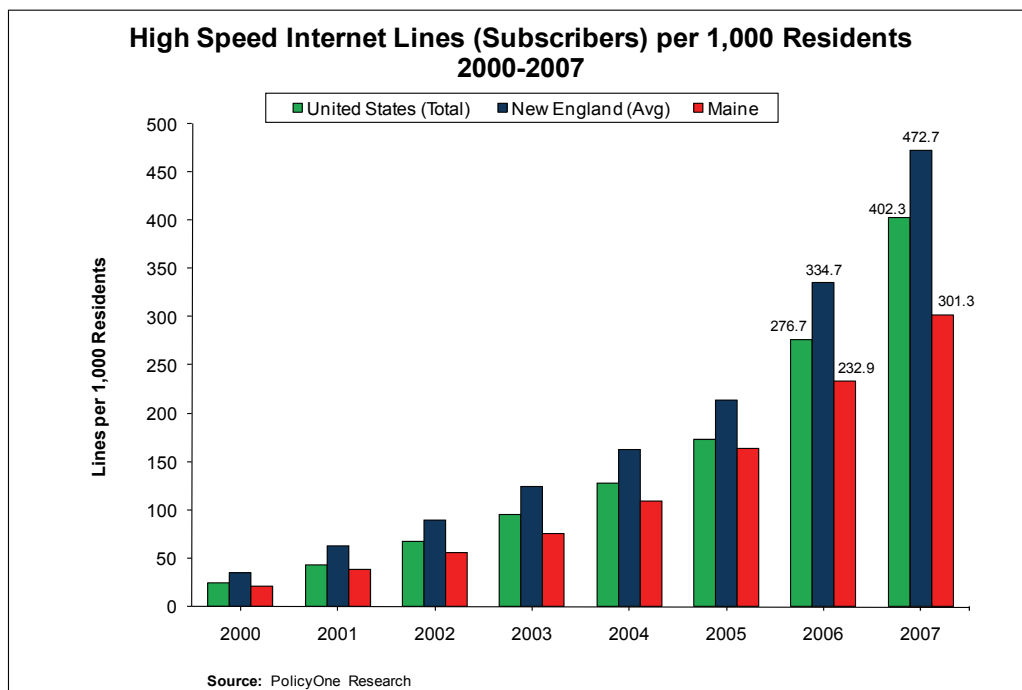


## Broadband Connectivity

*“The overwhelming consensus is that access to broadband services is a significant economic development tool for small businesses and home-based businesses, and enables telecommuting, rural education, and telemedicine.”*

ConnectME Authority,  
2010 Annual Report

Technological connectivity is essential for economic growth and the well being of Maine’s residents. This technology allows companies to compete in the greater global economy and enables entrepreneurs to live and work in communities across the state. It also expands our educational opportunities and improves the quality and efficiency of health care delivery. Just like our transportation network, our communications infrastructure links us to each other and the rest of the world. And, just like our transportation network, investment in Maine’s broadband infrastructure is an absolute necessity in the global economy.



As the above chart highlights, Maine has made great strides in connecting Maine people to high speed internet services. However, our subscribership rates remain well below national and regional rates, leaving us at a competitive disadvantage. This is a disadvantage both in attracting business investment and people to Maine.

In the modern economy, the ability to transmit large amounts of data quickly may be the difference between success and failure. Investing to create a top-notch communications infrastructure can open new markets and create efficiencies for Maine companies. On the other hand, a failure to invest will leave Maine fighting an uphill battle against other regions, both national and international, that have committed to investment in this area.

## Facts and Findings

### **Broadband access and availability of high capacity broadband are key to economic development in the modern economy.**

According to Mark Zandi, Manufacturing's Performance and Prospects, 2004:

- Expanded use of internet in the late 1990's and early 2000's coincided with increased productivity
- Business use of the internet greatly reduces transaction costs among businesses, households, government, and investors
- Lower transaction costs enhance productivity by expanding markets, prompting greater competition and specialization, and improving risk management and sharing
- Internet expands domestic and foreign markets, reduces barriers to industry entry, and reduces impacts of trade barriers across nations

### **Most of Maine has a robust fiber optic infrastructure in place; however, there are gaps, and the rate of adoption remains low due to high costs.**

According to the ConnectME Authority, Annual Report on the Activities of the ConnectME Authority, 2010:

- In 2008, 55% of all U.S. adults had broadband access at home; however, when only rural adults were considered, the number dropped to 41%
- In 2008, 86% of Maine had access to high speed internet access with an adoption rate of approximately 40%

According to the Maine Economic Growth Council, Measures of Growth in Focus, 2010:

- In 2007, there were 301 high speed internet subscribers per 1,000 residents in Maine whereas the U.S. had 402 per 1,000 residents (34% higher than Maine) and New England had 473 per 1,000 (57% higher than Maine)

According to the Federal Communications Commission, High-Speed Services for Internet Access: Status as of December 31, 2008:

- Maine's residential high-speed connectivity is mostly concentrated in southern and coastal regions with much more limited access in inland, northern and eastern Maine
- The highest density (7 or more) of providers of fixed high-speed connections are predominantly along the coastline

- The provider count is moderate (4 to 6) in most interior sections of the state and sparse (1 to 3) in the northeastern, largely unsettled regions

According to Melinda Poore, Vice President of Governmental Relations & Communications, Time Warner Cable of New England:

- One mile of fiber optic cable costs approximately \$25,000, meaning that 20 to 25 houses per mile are necessary to financially justify building the line
- Internet service is available to most people, but service may be costly

According to Eric Russell, reporter, Bangor Daily News:

- Private entities have been willing to connect customers to the fiber-optic network that carries broadband internet, but building a network between communities has been cost-prohibitive to the private sector

**Through the efforts of the ConnectME Authority, the Broadband Strategy Council (BSC), other agencies, and service providers, progress is being made.**

- The Legislature established ConnectME in 2006, and the BSC in 2009, to develop and implement a broadband strategy for Maine
- ConnectME reports that over the past three years, access has expanded from 86% to 90% and the adoption rate has grown from 40% to 60% (compared to 75% nationally)
- ConnectME is undertaking a comprehensive broadband mapping project to fill in gaps and help direct funding, resources and incentives
- A \$25.4 million grant has been awarded under the American Reinvestment and Recovery Act for a BSC-recommended middle-mile fiber ring project, known as the Three Ring Binder project, that is expected to assist providers in offering service to excluded communities
- The Three Ring Binder Project is expected to:
  - Create a 1,100 mile network passing through over 100 communities to make broadband more available to 110,000 households, 600 community anchor institutions, and a number of last mile service providers
  - Provide 100 Mbps broadband capabilities for University of Maine system campuses, Maine community colleges, government facilities, public safety facilities, Maine Research and Education Network, and rural health care facilities

According to Jeffrey Nevins, Manager of Public Relations, FairPoint Communications:

- FairPoint has completed the first phase of a new high-speed, high-capacity fiber-based network to bring broadband to northern New England

## Survey Says

MDF worked in partnership with several Maine trade and professional associations to distribute a survey to their members to understand their experiences with investment and policy issues in the state. 1,039 business leaders responded to the survey. The following is a summary of responses concerning broadband and connectivity.

**Of the 19 public policy issues examined in this survey, high speed internet service was seen as having the most positive influence on the respondents' businesses or organizations:**

- Over 50% said it has a positive impact

**When asked which of the 19 factors should be the priorities of the next Governor and Legislature:**

- Respondents ranked high speed internet service as the 13<sup>th</sup> most important issue
- Smaller businesses rated it as the 10<sup>th</sup> highest priority
- For some, likely those with limited service options, the issue is a strong negative

## Experts Recommend

The following is a summary of key recommendations from various reports, committees and efforts around broadband and connectivity.

Joint Select Committee on Future Maine Prosperity, Time for Change, 2008:

- Support ConnectME in using transportation corridors for information technology corridors
- Government, higher education and research institutions should work together to create internet and information technology capacity that is second to none

ConnectME Authority, Annual Report on the Activities of the ConnectME Authority, 2010:

- Continue to work towards goal of universal broadband availability
- Continue to support small public-private initiatives to expand broadband services
- Coordinate state and federal activities to capitalize on all opportunities for funding and collaboration
- Continue assistance and support of the Three Ring Binder Project, ensuring that the benefits of the federal investment are maximized for Maine residents and businesses
- Continue and explore further development of telemedicine opportunities
- Explore opportunities to expand broadband and cell phone access through private use of public facilities and right-of-ways
- Continue to work to improve the "take rate" of broadband services by providing training and low or no-cost computers to individuals, families and non-profits

Jeffrey Nevins, Manager of Public Relations, FairPoint Communications:

- State officials should work with Maine’s congressional delegation to update federal telecommunications laws in a manner that recognizes and keeps pace with the rapidly changing communications marketplace

## **Investment Imperatives**

Connectivity is critical in today’s economy. Maine people and businesses need to be able to share ideas and information in real time with the global market. The broadband providers in Maine have made significant strides in expanding availability to more rural areas in the state and are continuing to invest in their infrastructures to meet community and business needs. Maine now has a good network infrastructure with, for the most part, sufficient bandwidth set up around the state. Broadband services are available to the majority of the state but there is a cost to deliver these services and to build infrastructure, which is the biggest challenge.

Lowering costs and filling holes in coverage in rural regions where business development is possible and in gaps just outside of population areas are both challenges and priorities. At the same time, a long-term goal must be to anticipate the next generation of connectivity technology and begin to make the appropriate investments. With the advancement of handheld wireless technology, different communications platforms seem likely for the future.

## **Recommendations**

*Fill broadband gaps to allow for greater business activity statewide*

- Support the creation of middle-mile fiber networks working with government and private industry to connect more small businesses across rural Maine
- Support ConnectME mission and funding of projects to expand access and take rates
- Work with and provide financial support to communities to solve local broadband problems and create community networks
- Review the regulatory regime to determine if regulations impose undue burdens on activity in this sector
- Maintain upkeep and maintenance of underlying existing infrastructure

*Strengthen connections between institutions and within economic sectors*

- Invest to strengthen connections between public schools (Pre K-12), the public University System, and the Community College System
- Support the completion of the HealthInfoNet network of health care providers and hospitals

*Anticipate and identify the next wave of technology*

- Identify the next generation of connectivity technology and position Maine to take advantage of it by creating a statewide investment and implementation plan
- Explore wireless technology for “last mile” customers in rural areas where fiber optic networks are not financially viable

*Explore opportunities to lower costs and increase the subscribership rate*

- Encourage federal government to set up a program providing tax credits to providers and/or subscribers in high-cost areas
- Evaluate the costs and benefits of a similar tax program at the state level
- Work to support ongoing private investment in telecommunications infrastructure