

# CONNECTING VERMONT:

Cable's Impact on  
the State's Economy





This report was prepared by the University of Massachusetts Donahue Institute, the public service, outreach and economic development unit of the University of Massachusetts Office of the President.

Published September 2011



The New England Cable & Telecommunications Association, Inc. (NECTA) is a six-state regional trade association representing cable telecommunications companies in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont. NECTA retained the UMass Donahue Institute to conduct research, document the nature and scale of NECTA companies in each of the six New England states and analyze the contributions generated by its firms. NECTA represents the vast majority of cable companies in New England but is not representative of the entire industry. For this report, data were collected from various secondary sources as well as major NECTA member companies. Major NECTA member cable companies operating in Vermont include Charter Communications and Comcast.

#### **PARTICIPATING NECTA MEMBER COMPANIES:**



**Bee Line Cable**



#### **OTHER NECTA MEMBERS:**

Lincolnton Communications (Maine)  
 MetroCast Communications  
 NEPSK Inc./Polaris Cable Services (Maine)  
 Ski Sat (New Hampshire)  
 TDS Telecom (New Hampshire)  
 Trans Video, Inc. (Vermont)  
 Waitsfield Cable (Vermont)  
 White Mountain Cablevision (New Hampshire)



## SUMMARY OF KEY FINDINGS



**Vermont's cable companies contribute significantly to the state economy and to local communities.** In 2010, cable's capital investment in network infrastructure and operating and payroll expenses resulted in a total contribution of \$210.8 million in economic activity across the state. Further, between 2006 and 2010, when the state's overall economy slowed, Vermont's major cable companies added employees. Strong capital investments, growth in consumer demand for broadband, as well as diversified and emergent cable products and services have enabled this expansion. Finally, Vermont's cable companies also impact the communities they serve through philanthropic initiatives and by donating services to a wide variety of community institutions.

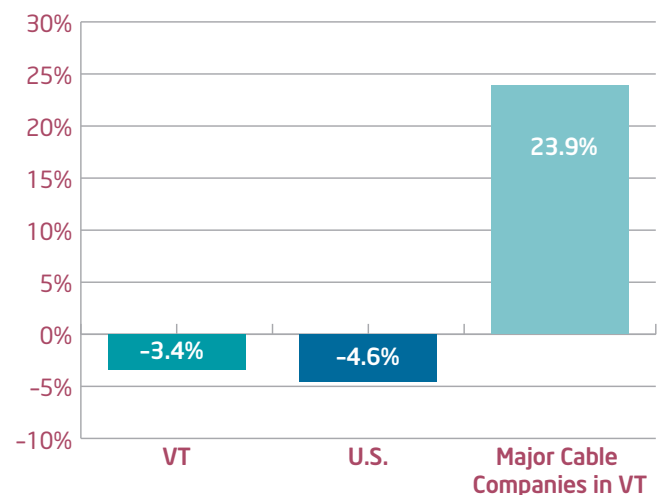
### Building the foundation for economic growth

- Vermont's cable companies are significant broadband providers within the state, contributing nearly half of all wired high-speed lines.
- In one year alone, high-speed cable broadband lines in Vermont grew more than 31 percent, from 71,000 in 2008 to 93,000 in 2010.
- From 2006 to 2010, Vermont's major cable companies spent more than \$157.4 million in capital improvements, \$20.5 million in 2010 alone, including investments in the network, head ends, customer premise equipment and vehicles. As of 2010, these investments helped support and create nearly 3,900 miles of broadband plant and almost 1,400 fiber strand miles across Vermont.

### Bolstering the regional economy

- During a period when the overall economy slowed, the state's major cable companies grew employment by almost 24 percent from 226 employees in 2006 to 280 in 2010. During this same period, Vermont's overall employment decreased by 3.4 percent and the nation's employment declined by 4.6 percent.

### Change in Total Employment, 2006-2010



United States Department of Labor, Bureau of Labor Statistics, Current Employment Statistics & Vermont Department of Labor; Data collected from major NECTA firms

- Along with their own employment, Vermont's major cable companies support more than nine-hundred jobs, including more than six-hundred positions in other industries throughout the state.

- In 2010, spending by Vermont's major cable companies and their employees generated \$210.8 million in economic activity across the state. Direct spending by major cable companies (capital investment, operations and employee compensation) accounted for \$121.5 million of that total, and that direct spending catalyzed an additional \$89.3 million in spending by other industries throughout the state.
- Along with spending within the telecommunications industry, major cable companies in Vermont support a variety of important regional sectors, including cable programming; advertising and related services; and professional, scientific and technical services.
- In 2010, Vermont's major cable companies contributed \$9.8 million in state and local taxes and \$5.4 million in franchise fees.

### Supporting local communities

- Vermont's major cable companies annually donate cable and broadband services worth nearly \$327,000 to more than three-hundred schools, libraries, nonprofits, government facilities and other community institutions in their service areas.
- Additionally, in 2010 alone, Vermont's major cable companies contributed nearly \$110,000 in cash and other in-kind support to nonprofit organizations in their local communities.

### Total Economic Contributions of Major Cable Companies in Vermont, 2010

Direct Spending	Additional Indirect Contributions	Total Economic Contributions
\$121.5M	\$89.3M	\$210.8M

Source: Data collected from major NECTA firms, calculations by UMDI; MIG, Inc., IMPLAN System



## INTRODUCTION

Vermont's cable companies provide the foundation for economic growth in an increasingly sophisticated economy. Connecting more than 125,000 residential and business subscribers, major cable companies<sup>1</sup> in Vermont are expanding technologies to provide a diverse range of video, data and voice communication products and services. Through investments in an increasingly expansive communications network, cable companies play a major role in growing broadband connectivity throughout the state. Major investment in the communications backbone is accompanied by ongoing investment in human capital to support the operations of the sector.

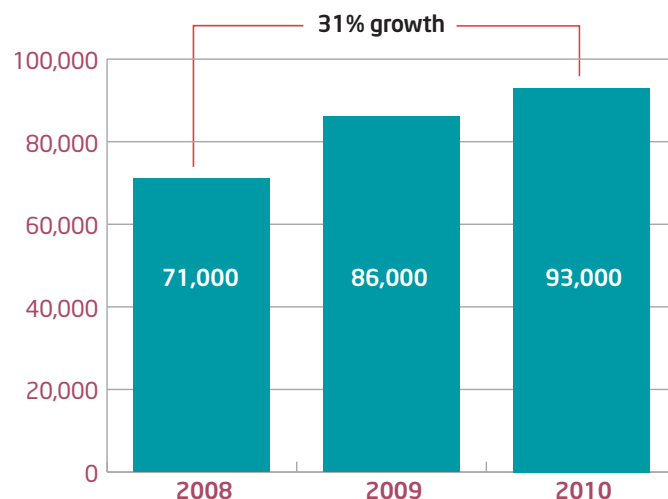
Day-to-day operations and capital investment activities have a major effect on the Vermont economy, contributing \$210.8 million to the state's economy in 2010. In that same year, major cable companies employed hundreds of workers across Vermont and, in the last five years, their employment numbers grew significantly despite a struggling state and national economy. While making significant economic contributions, cable companies also provide ongoing service and charitable contributions to community institutions, promoting better access to broadband and other technologies. Through their uniquely extensive and advanced broadband infrastructure, and as providers of essential communications technologies, Vermont's cable companies are indeed at the cutting edge, driving economic growth throughout the region.

## BUILDING THE FOUNDATION FOR ECONOMIC GROWTH

### Vermont relies on cable to connect

Broadband has revolutionized the way people live and work in New England, and cable companies in Vermont are significant players in providing this crucial infrastructure to the state's economy. In response to consumer demand, the number of high-speed Internet lines in Vermont (including cable, DSL, mobile and FTTH) has grown explosively over the past decade, with year-over-year growth in the double digits. In 2009, there were 250,000 high-speed lines, more than a third of which were cable. When considering high-speed lines supplied by strictly wired providers (without mobile), the cable sector makes up nearly half of the total.<sup>2</sup> In just two years, high-speed cable broadband lines in Vermont grew more than 31 percent from 71,000 in 2008 to 93,000 in 2010.

**FIGURE 1**  
Growth in High-Speed Cable Broadband Lines in Vermont, 2008-2010

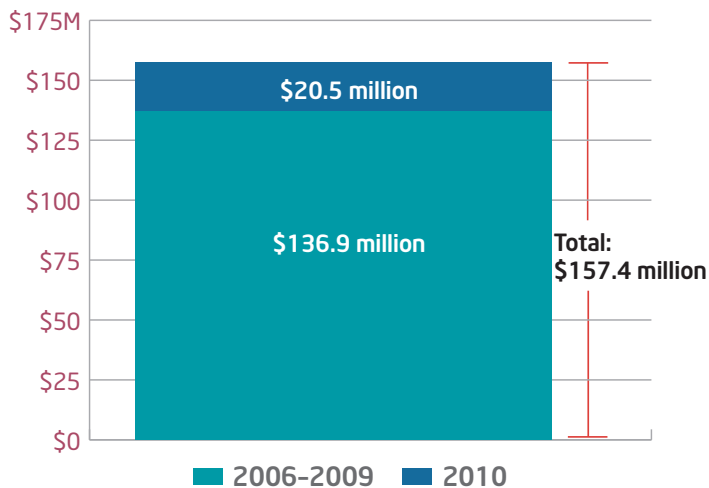


Source: Federal Communications Commission, *Internet Access Services Status as of June 30, 2010*, Table 22, <http://www.fcc.gov/wcb/iatd/comp.html>  
Note: Due to data suppression in previous years by the FCC, only data for 2008, 2009 and 2010 are available.

## Investing in the region's broadband infrastructure

In response to increasing consumer demand for broadband capacity, the cable sector has been investing in critical communications infrastructure throughout the region. From 2006 to 2010, major cable companies in Vermont invested more than \$157.0 million in capital improvements, \$20.5 million in 2010 alone, including investments in the network, head ends, customer premise equipment and vehicles. Investments accelerated through 2008 and 2009. As of 2010, these investments helped support and create nearly 3,900 miles of broadband plant and almost 1,400 fiber strand miles across Vermont.

**FIGURE 2**  
Capital Investment in Vermont by  
Major Cable Companies, 2006–2010



Source: Data from major NECTA firms; adjusted to 2010 dollars by UMDI

## Cable supports the Vermont IT industry

With more than \$157.4 million in capital spending over the last five years, major Vermont cable companies depend heavily on other information technology firms within the state to support the infrastructure so integral to their industry and the economy. Analysis of capital investment spending shows that cable companies invest heavily in all other information technology sectors. Capital spending is particularly focused on IT firms for communications, computer and plant hardware, and equipment. Major Vermont cable companies spend significantly on communications infrastructure firms within the network communications sector that help build and maintain the broadband network and provide service to customers.

**FIGURE 3**  
Top Sectors Supported by Cable Capital  
Investment Spending, 2010

Industry	IT Sector
Broadcast and wireless communications equipment	Hardware
Telecommunications	Network Communications
Wholesale trade businesses	**
Custom computer programming services	IT Services
Software publishers	Software
Semiconductor and related device manufacturing	Hardware
Electricity and signal testing instruments manufacturing	**
Computer terminals and other computer peripheral equipment manufacturing	Hardware

Source: MIG, Inc., IMPLAN System;<sup>3</sup> UMDI \*\*Not an IT sector





## BRIDGING THE DIGITAL DIVIDE: PROMOTING BROADBAND ADOPTION IN VERMONT

### Broadband subscribership in Vermont is above the national average

In Vermont in 2009, there were more than 160,000 high-speed lines serving residential customers—about 0.65 high-speed broadband connections for every household in the state, compared to 0.63 in the nation overall.<sup>4</sup>

**FIGURE 4**  
Residential Broadband Connections per Household, 2009



Source: FCC, *Internet Access Services: Status as of 12/31/2009*, Table 16, <http://www.fcc.gov/wcb/iatd/comp.html>

### Promoting adoption of broadband in low-income communities in Vermont

Despite high levels of subscribership and the continuous development of the extensive broadband infrastructure by Vermont's cable companies and their competitors, the adoption of broadband remains an important public policy and economic development goal. National policy focus has been given to ensuring that all residents are able to access the economic and social benefits of broadband connectivity, particularly underserved groups like the economically disadvantaged and the elderly. In service of this broader effort, in April 2010, Vermont companies Charter Communications and Comcast joined other national cable providers as part of **One Economy's<sup>5</sup> Digital Adoption Coalition**. The coalition is a public-private collaborative effort to bring broadband to low-income families across the United States. As the largest provider in New England, Comcast already supports several sustainable adoption programs. In Burlington, Vermont, the **Comcast Digital Connectors Program** provides digital literacy training to high school students who in turn train others in their communities. Additionally, Comcast has established **Internet Essentials<sup>SM</sup> from Comcast** to boost the number of low-income students using broadband in Comcast service areas. This national program will work with local school districts to offer low-income families high-speed Internet service for \$9.95 per month, computer equipment for less than \$150 and access to basic digital literacy training.

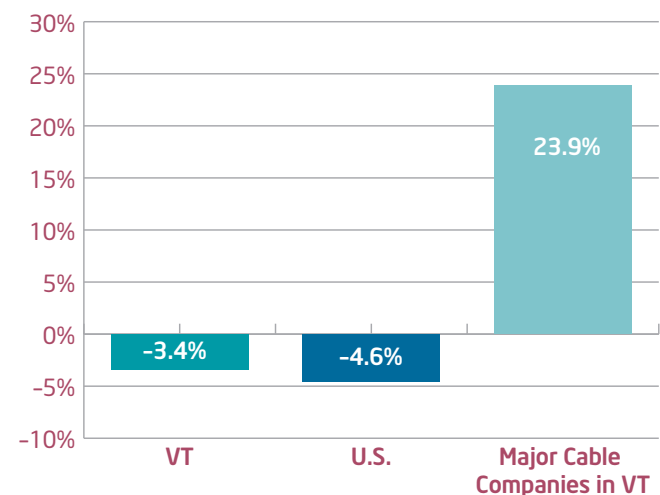
## BOLSTERING THE REGIONAL ECONOMY

### Cable is creating jobs

Cable companies compete as a part of a larger telecommunications industry, which includes firms that provide cable, wireline telephone and satellite distribution of voice, data, text, sound and video. In 2009, there were 1,533 Vermont workers in the larger wired telecommunications industry and one in five of these workers was employed by Vermont's major cable companies.

During a period when Vermont's overall economy experienced a slowdown, employment by major cable companies within the state grew almost 24 percent, from 226 employees in 2006 to 280 in 2010. During this same period, the state and the nation overall endured substantial employment losses (–3.4 and –4.6 percent, respectively). Strong capital investments, growth in consumer demand for broadband, and diversified and emergent cable products and services, including a growing business market, have enabled cable companies to expand.

**FIGURE 5**  
Change in Total Employment, 2006–2010



Source: United States Department of Labor, Bureau of Labor Statistics, *Current Employment Statistics* & Vermont Department of Labor; data collected from major NECTA firms



## Cable has a measurable impact

The cable sector contributes to the regional economy both directly and indirectly: through their spending on goods and services and ongoing capital investments; by hiring and paying employees; and through multiple forms of compensation to state and local governments. The value of major cable companies to the Vermont economy is illustrated by examining these key areas of spending and estimating their effects.

### *Total economic contributions*

Major cable companies have an impressive impact on Vermont. Through their spending on everyday operations, capital investments and the household spending of their employees combined, these companies contributed \$210.8 million in 2010 in economic activity across the state. Additionally, major Vermont cable companies reported franchise fees and taxes to state and local governments of \$15.2 million. Along with their own employment, major cable companies support more than nine-hundred jobs, including more than six-hundred in industries throughout the region.

FIGURE 6

### Economic Contributions of Major Cable Companies in Vermont, 2010

	Direct Spending	Additional Indirect Contributions	Total Economic Contributions
Operations and capital investments	\$101.5M	\$75.2M	\$176.7M
Employee compensation	\$20.1M	\$14.1M	\$34.1M
<b>Total</b>	<b>\$121.5M</b>	<b>\$89.3M</b>	<b>\$210.8M</b>

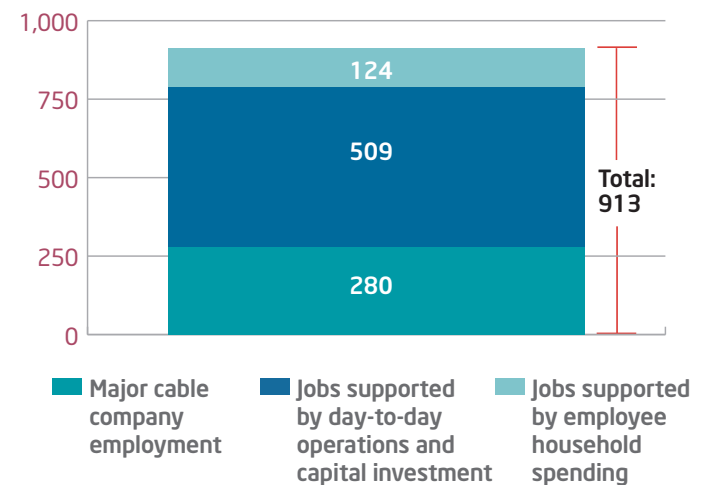
	Franchise Fees	State and Local Taxes	Total
State and Local Taxes and Fees*	\$5.4M	\$9.8M	<b>\$15.2M</b>

Source: Data collected from major NECTA firms, calculations by UMDI; MIG, Inc., IMPLAN System

Note: Numbers may not add due to rounding. \*Includes subscriber-paid taxes.

FIGURE 7

### Employment Contributions of Major Cable Companies in Vermont, 2010



Source: Data collected from major NECTA firms, calculations by UMDI; MIG, Inc., IMPLAN System



## Major areas of spending

### Spending to Vermont firms

In 2010, major Vermont cable companies spent \$101.5 million on day-to-day operations and investing in telecommunications infrastructure projects across Vermont. This operating and capital spending catalyzed nearly \$75.2 million of additional economic activity in firms throughout the region. In addition to spending within the telecommunications industry, major effects are also seen in cable and other subscription programming; advertising and related services; and professional, scientific and technical services, as shown in the table to the right. This spending also supported more than five-hundred jobs in these and other sectors.

### Employee spending

In 2010, major Vermont cable companies employed 280 people across Vermont, with a combined payroll of \$20.1 million. The household spending of these employees contributed to an additional \$14.1 million in economic activity and supported an estimated 120 additional jobs in other industries throughout the region.

FIGURE 8

Top Sectors Supported by Major Cable Company Spending on Operations and Capital Investment, 2010

Telecommunications	\$16.5M
Cable and other subscription programming	\$3.3M
Advertising and related services	\$2.9M
All other miscellaneous professional, scientific and technical services	\$2.7M
Real estate establishments	\$2.6M
Architectural, engineering and related services	\$2.4M
Motion picture and video industries	\$2.1M
Maintenance and repair construction of non-residential structures	\$1.8M
Semiconductor and related device manufacturing	\$1.5M
Accounting, tax preparation, bookkeeping and payroll services	\$1.3M

Source: Data collected from major NECTA firms, calculations by UMDI; MIG, Inc., IMPLAN System

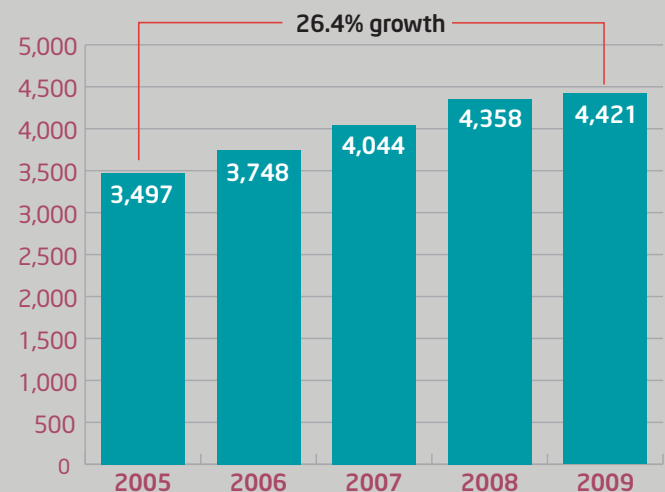
## NEW ENGLAND'S MAJOR CABLE COMPANIES SUPPORT KEY INDUSTRIES

New England has a small but robust cable programming and production sector, and major cable companies across New England spent nearly \$130 million in this sector. In 2009, this sector had 4,421 jobs across the region and grew by more than 25 percent in the last five years.



FIGURE 9

New England Employment in Cable and Other Subscription Programming Firms, 2005–2009



Source: United States Bureau of Labor Statistics, Quarterly Census of Employment and Wages for NAICS Industry 515210, the Cable Programming Industry

## Contribution to state and local revenues

The cable sector contributes to government coffers, through not only state and local taxes, but also through franchise fees. In 2010, major cable companies paid \$9.8 million in state and local taxes (this includes subscriber-paid sales tax). They also generated \$5.4 million in franchise fees across Vermont, for a total of \$15.2 million directly supporting state and local governments.

## Responding to the demands of a new economy: Cable innovation in New England

Home and business uses of data are proliferating, and the demand for lightning-fast connection speeds and capacity is growing in step, spurring cable innovation. Regional speeds are some of the nation's best, invigorating business and home uses that push economic advancement. Ongoing infrastructure investments by New England's major cable companies have contributed to the region's enviable data speed capacity. Collectively, New England states consistently rank in the top 10 for connection speeds according to Akamai Technology's quarterly *State of the Internet* report.<sup>6</sup> Recent data show that on average, the United States had a measured connection speed of 5.0 mbps. Vermont averaged 6.2 mbps, ranking fifth in the United States overall, above both New Hampshire and Massachusetts. The improved speed and capacity allow for additional innovation at work and in the home. While enabling cable's traditional entertainment market to expand with new technologies such as high-definition television, digital video recording and 3D television, cable companies are also leveraging broadband's new speeds to foster groundbreaking new services and products that launch businesses and residential consumers into the new economy.

## Growing markets for cable companies

The increasing needs of residential and business customers for connectivity and customized services are leading to growth in new markets for cable companies.

### Telecommuters

Cable broadband increasingly connects employers to their employees and contractors remotely. According to the United States Census Bureau,<sup>7</sup> nearly 4.3 percent of New Englanders work from home, in contrast to the national share of 4.1 percent of workers. This share is even higher in Vermont at a rate of 6.8 percent. Increased broadband availability, along with other business-focused cable innovations, are helping to support this wave of home offices for the self-employed and telecommuters. Select cable companies in New England are also taking advantage of their networks' speed and remote access technologies and, increasingly, are giving employees, like customer care representatives, the opportunity to work from home.

### Small businesses and microbusinesses

Small businesses drive regional economies. A November 2010 survey<sup>8</sup> for the United States Small Business Administration revealed that for the majority of small business respondents (54.7 percent) in the Northeast (New England with New York, New Jersey and Pennsylvania), high-speed cable is the dominant means for the provision of broadband services. In contrast to the rest of the nation, where high-speed cable connects only between a quarter and a third of small businesses, small businesses in the Northeast are highly reliant on the services of cable operators.

Further, recent work suggests that microbusinesses<sup>9</sup> are essential to regional economic growth<sup>10</sup> and, no doubt, these businesses have been highly impacted by broadband expansion. These businesses are especially important in states like Vermont, where, in 2008, more than one in five workers (22.2 percent) was employed by a microbusiness, a rate higher than in New England (17.9 percent) and the United States overall (18.1 percent). Given the general reliance of small business on cable broadband in New England, it is clear that these extra-small businesses are relying heavily on cable companies to help connect them to their customers.





### Large and institutional customers

Cable companies are tailoring products and services to large business clients with industry-specific customization needs. Growing emphasis on increasing health care efficiencies has led to strong relationships in that industry. Cable is customizing private networks that connect hospitals, doctors' offices and labs with increased bandwidth and greater data speeds to meet the growing needs of its users.

### *Innovative products and services*

Building on faster speeds and increased broadband capacity, the following are examples of new products and services provided to residential and large and small business customers.

#### Mobile and wireless

Consumers are demanding access to products and services on the go, and the cable sector is responding with new mobile and wireless options. Cable companies in New England are entering new product markets by adding additional services to the bundling trend, like wireless phones, as well as upgrading their established markets by providing online and portable access to their bread-and-butter digital subscription television services.

### Home security

Advancing technologies have enabled cable companies to enter entirely new markets. Home security products are being tested in select New England markets by major cable companies, which include a Web portal, mobile applications, and text and e-mail alerts, and utilize both broadband and cellular technology.

### VoIP

A significant share of New Englanders use Voice over Internet Protocol, or VoIP, for their residential voice service (28.1 percent), and businesses are starting to convert to this technology. The most recent Federal Communications Commission report<sup>11</sup> finds 2.6 percent of New England businesses have migrated to digital phone service from their traditional switched service, a rate slightly lower than the United States overall (3.1 percent).

### Data storage services

Beyond voice and data, new technology innovations like cloud computing are enabling cable companies to provide more comprehensive and sophisticated data storage solutions for businesses, including disaster recovery, data backup, data protection, security and connectivity to accompany their growing suite of business products and services.





## SUPPORTING LOCAL COMMUNITIES

Through philanthropic giving, unique local programming and targeted educational initiatives, major cable companies are helping to build stronger communities in Vermont.

### Philanthropic giving

In 2010, major Vermont cable companies provided more than 300 schools, libraries, nonprofits, government facilities and other community institutions in their service areas with donated cable and broadband services with an estimated value of more than \$325,000. Additionally, in 2010, Vermont's major cable companies report contributions of nearly \$110,000 in cash and in-kind support to nonprofit organizations in their local communities. In a tight fiscal climate, cable companies are providing valuable support to help sustain critical community institutions.

**FIGURE 10**  
Philanthropic Activity by Major Cable Companies in Vermont, 2010

Cash contributions	\$83,340
In-kind contributions	\$26,236
Voice, video and data broadband services (estimated value)	\$326,680
<b>Total</b>	<b>\$436,256</b>

Source: Data collected from major NECTA firms; calculations by UMDI

### Serving local communities with regional programming

Almost universally, major cable companies provide unique local content to their customers in the form of sports coverage, regional politics and public interest programming through the traditional video medium and, increasingly, enhanced online content. **Comcast Sports Network New England** features New England-centric comprehensive sports programming for local, regional and national events of interest, including both college and professional coverage. Both on TV and online, Comcast has rolled out this regional sports-focused programming in 11 areas of the country, including New England. Also New England-wide,

**Comcast's New England Cable News (NECN)** is the largest 24-hour regional news network in the country and maintains a local news bureau in Burlington, Vermont.

### Connecting and engaging 21st-century learners and leaders

Vermont's major cable companies have established numerous programs to improve students' technological literacy and to prepare them to be future leaders and innovators in an information-based economy.

**Comcast's Digital Connectors** program provides digital literacy training to young people from low-income backgrounds to enable them to train others in their communities. **Charter's** national **Get Hooked on Education** initiative provides a resource for families on media literacy. Additionally, in its New England service areas, Charter sponsored events to provide the **DIGIKIDS® Child ID Program**, providing parents and authorities with the digital tools needed to respond quickly to a missing child.





## CONCLUSION

Cable companies in Vermont support the regional economy in many ways. They are significant employers, and through their day-to-day operations, their massive capital investment and the spending of their employees, these companies contribute \$210.8 million to Vermont's economy. Their diverse service offerings are expanding to meet the demands of hundreds of thousands of their residential and business customers. Major cable companies are leaders in building the region's broadband infrastructure, and their investments support IT and other industries across the state. No less important, they are making further contributions to the communities they are serving through their philanthropic initiatives and by donating services to hundreds of community institutions. As data demands change and increase, cable companies will continue to dynamically adapt, providing cutting-edge technology to residences and businesses and providing the connectivity to support and grow the region's economy.

## ENDNOTES

- <sup>1</sup> For the purposes of this study, major cable companies are defined as those NECTA cable companies that provided data for this study, and not necessarily all cable companies present in a region. Therefore, analysis of the employment and economic contributions of major cable companies to the region represents a conservative estimate. In Vermont, these companies include Charter Communications and Comcast.
- <sup>2</sup> Federal Communications Commission (FCC), *Internet Access Services Status as of 12/31/2009*, <http://www.fcc.gov/wcb/iatd/comp.html>.
- <sup>3</sup> MIG, Inc., IMPLAN System (2008 data and Version 2 software), 1725 Tower Drive West, Suite 140, Stillwater, MN 55082, [www.implan.com](http://www.implan.com), 1997.
- <sup>4</sup> This does not mean that 65 percent of all households have broadband service since some households may have more than one connection.
- <sup>5</sup> See <http://www.one-economy.com>.
- <sup>6</sup> Akamai Technologies, Inc. *The State of the Internet*, 3rd Quarter 2010, Vol.3, No.3, p.19.
- <sup>7</sup> U.S. Census Bureau, American Community Survey, New England Division, Selected Economic Characteristics, 2007–2009. <http://factfinder.census.gov>.
- <sup>8</sup> *The Impact of Broadband Speed and Price on Small Business*, Columbia Telecommunications Corporation, November 2010.
- <sup>9</sup> A microbusiness is defined as having five or fewer employees, minimal start-up capital and limited access to commercial loans.
- <sup>10</sup> *Number of Microbusinesses and Employment Levels by State, 2008*; compiled by James C. McConnon, Jr., Extension Business and Economics Specialist and Professor of Economics, University of Maine; <http://umaine.edu/soe/files/2010/08/Micro-business-Data-State2003.pdf>.
- <sup>11</sup> Federal Communications Commission, *Trends in Telephone Service, 2010*, Table 8.6, <http://www.fcc.gov/wcb/iatd/trends.html>.

# NECTA in New England

