



CALIFORNIA EMERGING TECHNOLOGY FUND

Economic and Environmental Benefits of Broadband Internet Access

The most rapidly adopted consumer product or service in U.S. history is household broadband Internet access. More than 200 million individuals gained access to home broadband service in less than one decade, far exceeding the previous record held by mobile telephones. Governments, non-profit organizations, private companies, and educational institutions have invested considerable resources into researching the economic and environmental impacts from broadband mass adoption, resulting in a tremendous amount of publically available material.

A lengthy document released by The American Consumer Institute reviewed industry and academic material, including 181 referenced items, to quantify the existing and future impacts of broadband. The paper stated that greenhouse gas reductions, resulting from the deployment and utilization of broadband Internet access, could exceed 1.1 billion tons over 10 years^[1]. Of these gas reductions, 60% was a direct result of telecommuting efficiencies, 18% from Business-To-Business (B2B) and Business-To-Consumer (B2C) electronic commerce simplified processes and distribution, 17% from meeting participation replaced by teleconference applications, and 5% from electronic media previously distributed using paper and/or plastic products. The 1.1 billion tons of greenhouse gas reduction, in energy, equated to 11% of the total U.S. oil imports, and if realized, would be a significant contributor to the country's emission reduction goals.

The economic impact of broadband deployment and adoption is expressed by the value of change to GDP, amount of jobs created, payroll growth rate, and business establishment rate.

In 2006, a U.S. Department of Commerce funded paper quantified the impacts of broadband adoption from 1998 to 2002 across multiple business and employment indicators. Communities that gained access to broadband Internet service during the study period experienced a net employment growth rate addition of 1% to 1.4%, a net business establishment rate addition of 0.51% to 1.2%, and a housing rent value increase of 6%^[2].

A 2002 study by TeleNomic Research for the New Millennium Council found that universal broadband service across the U.S. would create 1.2 million new jobs: 166,000 in telecommunications; 71,700 in the manufacturing of network equipment; and 974,000 indirect positions^[3]. Subscriber online habits such as health care, entertainment, online shopping, and commuting could contribute over \$500 billion in GDP by 2006.

Lastly, a recent report by the Sacramento Regional Research Institute stated that, from 2001 to 2006, for every 1% of adult population that utilized broadband Internet access the employment growth rate rose by 0.075% and the payroll growth rate increased by 0.088%^[4].

It is clear that broadband Internet access improves the economic situation of communities by spurring job creation and improving business efficiencies. Telecommuting, material avoidance, and teleconferencing are broadband uses that can heavily reduce our impact to the environment.

Environmental Benefits of Broadband – Quick Facts

- Broadband deployment and adoption has the potential to reduce greenhouse gas emissions by more than 1.1 billion tons over the next 10 years ^[1].
- Electronic commerce, as compared to conventional shopping, generates 36% less air pollutants, 23% less hazardous waste, and 9% less greenhouse gases ^[5].
- Electronic grocery shopping with e-delivery generates 18% to 87% less greenhouse gases than conventional grocery shopping ^[5].

Economic Benefits of Broadband – Quick Facts

- For every \$1 U.S. consumers spend online, information available on the Internet influences a further \$3.45 spent in stores ^[6]. Broadband leads to well-informed purchase decisions, travel reduction by pre-locating the product, and facilitating cost comparisons between vendors.
- From 1998 to 2002 communities with mass-market broadband service experienced greater growth in overall employment, an increase in the total number of businesses, and more IT-intensive businesses than communities without broadband service ^[2].
- Live videoconferencing at 115 health facilities reduced the cost of follow-up care by 42%, with overall care cost reduced by 6% ^[7].

Sources

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