

Update Pennsylvania's Telecom Law

By Hance Haney and George Gilder

Executive Summary

Although the General Assembly recognized in 2004 that regulatory obligations imposed upon local exchange telecommunications companies (LECs) “should be reduced to levels more consistent with those imposed upon competing alternative service providers,”¹ LECs remain subject to unnecessary and anticompetitive regulation which depresses industry valuations and private investment.

Less than 19% of Pennsylvania voice connections were served by LECs subject to legacy utility regulation at the end of 2010, according to the Federal Communications Commission.² Compliance with obsolete regulation imposes unnecessary costs on service providers who offer legacy telephone services. Since neither new entrants nor intermodal broadband competitors that provide cable and wireless services have to bear similar costs, legacy regulation is anticompetitive.

Wherever consumers can choose between alternative providers of voice services, all providers of voice services should be subject to minimum regulation which does not discriminate on the basis of technology or history, just like in any competitive market.

From a state perspective, legacy utility regulation is one of the most critical factors affecting private investment in advanced networks. By removing unnecessary and asymmetrical regulations that afflict telecom, Pennsylvania can eliminate the possibility that broadband investment will be disrupted or even diverted to other states that have reformed outmoded telephone laws.

Pennsylvania can open up new technological opportunities and economic efficiencies with broadband that promise to create jobs not only in telecommunications equipment and services, but also in manufacturing and service industries (especially finance, education and health care). A 2007 Brookings Institution study concluded that 13,000 jobs are created throughout Pennsylvania's economy for every 1% increase in broadband penetration³ (70% of Pennsylvania households currently have a broadband connection over 200 kilobits per second (KB) in at least one direction).⁴

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Pennsylvania was one of a few visionary states that began a successful experiment allowing market forces to replace regulation of telecommunications services when, in 1993, it authorized the Public Utility Commission (PUC) to certify more than one local exchange telecommunications company (LEC) to provide local telecommunications service. Congress subsequently passed the Telecommunications Act of 1996 to “promote competition and reduce regulation nationwide in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.”⁵

The General Assembly updated Pennsylvania's telecommunications law in 2004. At that time, it recognized that

Regulatory obligations imposed upon the incumbent local exchange telecommunications companies should be reduced to levels more consistent with those imposed upon competing alternative service providers.⁶

The telecommunications market began to experience profound and unanticipated changes in the immediate aftermath of the 2004 amendment. More and more consumers began to rely on wireless and Voice-over Internet Protocol as substitutes for traditional landline telephone service. As a result, Verizon has lost approximately half of its access lines in Pennsylvania.⁷ By mid 2010, only 10.4% of Pennsylvania households were wire line-only.⁸

Regulation can have the unintended effect of inhibiting competition. This paper examines the following regulatory requirements as they still apply to traditional telephone service providers, but not to competing voice services:

- *Regulation of rates consumers pay for basic telephone services.* Retail pricing regulation, which includes hidden cross-subsidies, cannot be maintained in a competitive market where competing voice service providers can choose to serve profitable customers and areas and ignore others.
- *Rate schedules designed to ensure that the same terms of service are available to similarly situated consumers.* Filing requirements give rivals sensitive information about a competitor's new or improved services or products.
- *Public Utilities Commission jurisdiction for consumer protection.* Since compliance is mandatory for telephone service providers but non-existent for competing voice service providers, such as Voice-over-Internet Protocol (VoIP) providers, efforts by policymakers to protect consumers leads to inconsistency.
- *Quality of service regulation designed to ensure prompt, efficient and reliable telecommunications service.* Competition provides adequate incentives for service providers to meet and exceed consumer expectations. Service quality requirements for telephone services result in unequal regulatory burdens and skews incentives for investment.
- *Obligations to provide basic telephone service upon reasonable request.* The legal

requirement to maintain a telephone network capable of serving every residence or business in a defined service area imposes a significant cost on telephone service providers. Since competing voice service providers are under no such obligation, so-called “provider-of-last-resort” requirements are anticompetitive wherever consumers can choose between multiple providers. These obligations should be eliminated wherever there is competition.

Telecom Is Fully Competitive

Regulation of telephone utilities is premised on the fact these entities were once natural monopolies. Today, incumbent telecom providers face potent competition from VoIP services, wireless providers and from other certificated wireline providers.

VoIP. Competitive local exchange carriers (CLECs) and non-ILEC VoIP providers – a category dominated by cable operators providing competitive voice services, but also including other VoIP providers – were serving customers in 98% of Pennsylvania’s zip codes in mid 2011, according to the FCC.⁹ Comcast became the nation’s third largest phone services provider in 2009.¹⁰

Since the General Assembly updated Pennsylvania’s telecommunications law in 2004,

- Competition pushed down the rates for bundles of Internet, phone and TV service by 20% in 2008, to as low as \$80 per month, according to Consumer Reports.¹¹ More recently, the magazine reported that shopping for Internet, home phone, and TV service is increasingly a “buyer’s market.”¹²
- VoIP has become comparable, and in many cases superior, to wireline service in terms of network efficiency and sound quality. “It’s easy to take for granted the fact that Internet calls are now as clear as those on landlines,” according to a *New York Times* columnist.¹³
- Between 2008 and 2012, Pennsylvania

consumers of VoIP services saved almost \$800 million in the aggregate based on an estimated cost savings of \$11.70 per residential subscription per month and over \$55 million in savings to small businesses over the same period (\$19.70 per customer per month), according to a 2007 study.¹⁴

- This same study concluded that competition from VoIP has forced the incumbent telecom providers to cut prices. In Pennsylvania, the projected savings from competition in fixed-line voice services as a result of cable VoIP is in excess of \$4.8 billion over five years.¹⁵

Wireless. Besides VoIP, approximately 99.8% of the total U.S. population – and approximately 99.2% of the U.S. population living in rural census blocks – have one or more different operators offering mobile telephone service in the census blocks in which they live, according to the FCC.¹⁶ In Pennsylvania, there were 10,867,000 mobile phone connections at the end of 2009,¹⁷ enough for 86% of the population.¹⁸

Nationally, almost 32% of households had only wireless telephones in June 2011, according to a study conducted by the Centers for Disease Control of the U.S. Department of Health and Human Services.¹⁹ Over 16% of households received all or almost all calls on wireless telephones, even though they also had a landline phone.²⁰ Adding these two categories together, 48% of the nation’s households either don’t have a landline phone at all, or don’t use their landline phone for most of their calls.

Less than 19% of Pennsylvania voice connections were served by LECs subject to legacy utility regulation at the end of 2010.²¹ *The Economist* recently predicted that if consumers discontinue landline telephone service at the current rate, “the last cord will be cut sometime in 2025.”²²

The late Professor Alfred E. Kahn, a former chairman of the New York Public Service Commission and top official in the Carter administration, observed that the industry has fundamentally changed and that regulation designed

for a bygone era can be harmful.

The industry is obviously no longer a natural monopoly, and wherever there is effective competition—typically and most powerfully, between competing platforms—land-line telephony, cable and wireless—regulation of the historical variety is both unnecessary and likely to be anticompetitive—in particular, to discourage the heavy investment in both the development and competitive offerings of new platforms, and to increase the capacity of the Internet to handle the likely astronomical increase in demands on it for such uses as on-line medical diagnoses and gaming.²³

Regulation Is Costly

The cost of maintaining a circuit-switched wireline network ready and able to provide service to any consumer upon reasonable request does not proportionately decrease as subscribers move to other providers. There are high fixed costs. One analyst estimated that the average annual cost of maintaining the legacy network rose from \$43 per line in 2003 to \$52 in 2009.²⁴

If telephone service becomes uncompetitive, employment and investment will be jeopardized. Regulatory reform will help sustain billions of investment dollars and tens of thousands of jobs and ultimately lead to lower prices.

As the number of subscribers dwindles, local phone companies must find new efficiencies and new sources of revenue to sustain their businesses. For example, voice service can be provided via an Internet Protocol network along with other applications much more efficiently than it can be provided via the traditional circuit-switched telephone network. Yet legacy utility regulation is pushing telephone service providers to maintain single-purpose voice networks when multifunctional broadband platforms could deliver voice service at lower cost.²⁵

The National Broadband Plan proposes that the traditional circuit-switched telephone network be replaced with an IP-enabled network, and notes that legacy telephone regulation is an impediment to a smooth transition.

Regulations require certain carriers to maintain POTS—a requirement that is not sustainable—and lead to investments in assets that could be stranded. These regulations can have a number of unintended consequences, including siphoning investments away from new networks and services. The challenge for the country is to ensure that as IP-based services replace circuit-switched services, there is a smooth transition for Americans who use traditional phone service and for the businesses that provide it. (footnote omitted.)²⁶

Aside from limiting the flexibility of incumbent telecom providers to compete, legacy regulation acts like an umbrella for rivals, who merely have to set their own prices at or below the telecom provider's prices to attract customers. The prices consumers pay will therefore reflect the cost of maintaining a legacy telephone network, not the lower costs of efficient new technologies that might otherwise render the traditional network obsolete in a free market.

Reforming legacy regulation not only offer less protection to competitors and facilitate investment that will enable providers to charge lower prices.

Competition Protects Consumers

Ultimately, the way to ensure affordable voice service is to remove barriers to broadband investment. The history of the cable and wireless industries prove that competition works better than regulation.

Regulatory reform of landline phone service is lagging far behind wireless²⁷ and cable,²⁸ both of which were largely deregulated during the Clinton

administration when they faced far less actual competition than the telecommunications providers have now.

Even in the absence of market share losses, preemption of state regulation of wireless services in 1993 came with the auctioning of additional spectrum because Congress reasonably assumed competitors would materialize. The average cost per minute of cell phone use has fallen from 47 cents in 1994 to 5 cents in 2009.²⁹

The elimination of cable rate regulation in 1996 occurred while cable operators still retained 91% of all subscribers, because Congress saw that new entrants such as Direct Broadcast Satellite service providers were attracting customers at a rapid rate.³⁰ Video service offerings expanded as the result of a \$173 billion investment by the cable industry since 1996 to build fiber optic networks.³¹ This investment was a direct result of regulatory reform and enabled the cable industry to become the leading provider of high-speed broadband service and pioneer combined full-scale broadband video, Internet and digital phone service packages.

Necessary Reforms

Eliminate Price Regulation

Faced with competition from wireless and VoIP services, incumbent telephone service providers have little, if any, freedom to raise rates.

In a monopoly environment, price regulation prevents a service provider from charging excessive rates and creates opportunities for cross-subsidization, but price regulation is incompatible with competition. Consumers ultimately dictate prices and terms in a market with competitive alternatives by choosing from whom they will purchase a product or service. Price-setting is one of the ways commercial rivals seek a competitive advantage over one another. In a competitive market, providers either satisfy consumer expectations or risk losing sales.

A regulated basic service offering is unnecessary wherever consumers can choose between two or more providers of voice services. It should be eliminated wherever there is competition so all providers have an opportunity to compete.

Basic telephone service is “protected,” i.e., subject to price caps adjusted for inflation,³² unless the PUC determines the service to be competitive based on the demonstrated availability of like or substitute services.³³ The PUC makes a determination within 60 or 150 days after it receives a petition from a LEC providing evidence of competitive alternatives. Subsequently, any party may file a petition whereupon the PUC can reclassify a competitive service as noncompetitive.³⁴

This is a cumbersome and overly-bureaucratic process in the present circumstances, considering that nearly all consumers have a choice between voice services provided by LECs, cable operators and wireless providers. Policymakers should consider that, for those consumers who do not have an option, the culprit may be pricing regulation which sets LEC prices below cost and makes it uneconomic for competitors to offer substitute services. Moreover, traditional circuit-switched wireline telephone service may not be the most efficient service arrangement for consumers who do not have competitive options.

Any pricing uniformity requirements should also be eliminated. Providers should have full pricing flexibility for all retail services, without the necessity for demonstrating in advance to the commission’s satisfaction that rates which they must charge to remain competitive are “reasonable.”

Price regulation is unfair to taxpayers – who must cover the costs incurred by the PUC enforcing unnecessary mandates – and to consumers – who have to cover the compliance costs incurred by the regulated entities. There is no reason telecom providers should not have full flexibility in setting rates wherever there is competition. Allowing the market to set prices would generate new efficiencies for taxpayers and consumers.

Eliminate Notice Requirements

LECs file tariffs setting out applicable rates, terms and conditions for protected services.³⁵ Any party has standing to object, and with certain exceptions the PUC has up to nine months to consider the reasonableness of a tariff or to establish the rates itself.³⁶ The PUC may require LECs to maintain price lists with the PUC applicable to their competitive services, with price changes taking effect on one day's notice.³⁷

Tariffs were appropriate during the monopoly era, but in a competitive market mandatory disclosure ensures that rivals receive detailed information about a competitor's new or improved products and services. For example, if a telecom company wants to run a sales promotion for a basic service, it must file a new schedule in order to deviate temporarily from a preexisting schedule. A rate schedule provides commercial rivals with competitively sensitive information to which they otherwise should not have access. They learn exactly what a promotion will consist of, including where it will be offered and when it will begin and end.

A requirement to furnish commercial rivals with valuable competitive intelligence reduces the incentive for market contestants to continually strive to offer a superior value proposition as the best defense against competitive surprises which may cause them to lose sales.

The FCC concluded during the Clinton administration that it would be pro-competitive to neither require *nor allow* long-distance carriers to file tariffs, noting that an absence of any tariffs would increase incentives for innovation, make it easier to offer discounts and customized service arrangements as a way of retaining lucrative customers – who contribute to the joint and common costs of maintaining the network for the benefit of all consumers – and reduce the possibility of tacit coordination in price-setting.³⁸

Tariffs – whether mandatory or voluntary, and in whatever form – have limited consumer value

and are potentially anticompetitive. Accordingly, these notice requirements should be eliminated.

Consolidate Consumer Protection

The Attorney General or a District Attorney is authorized to bring an action in the name of the Commonwealth against any business thought to be in violation of the Pennsylvania Unfair Trade Practices and Consumer Protection Law.³⁹ There is a Bureau of Consumer Protection in the Attorney General's office that receives "more than 50,000 complaints from consumers - ranging from shoddy home remodeling work to violations of Pennsylvania's Do Not Call law."⁴⁰

There is a separate and redundant Bureau of Consumer Services within the PUC that receives consumer complaints concerning LECs but not their intermodal competitors.⁴¹ Divided or shared jurisdiction between multiple agencies can lead to inconsistent consumer protection enforcement according to the type of service or provider. This could have anticompetitive implications. Also, different sets of rules for different providers based on the different technology they use to deliver their services can lead to confusion for consumers.

Consumers are not captive ratepayers like they were many years ago during the monopoly era. Today all providers of voice service compete to retain and win customers, striving to offer the best customer satisfaction overall taking into account, price, service quality, customer care and innovation.

PUC jurisdiction to act on consumer complaints concerning local exchange telecommunications companies is a vestige of a bygone era that should be eliminated so that competitors are treated the same.

Eliminate Service Quality Regulation

The PUC retains the power to review and revise quality of service standards that address the safety, adequacy, reliability and privacy of telecommunications services, etc.⁴²

Today the market penalty for failure to satisfy consumer expectations – customer losses—is more severe for LECs than any fear of regulatory action. Service quality rules are unnecessary as a result of the widespread competition that exists today.

It is worth noting that the reliability and quality of wireless and VoIP have steadily improved even though these services are not subject to any quality of service regulation.

Service quality regulation does not prevent deteriorating service quality, which may occur when service providers are deprived of proper incentives to invest. Why would a service provider make an investment with the expectation of a lower rate of return than it could expect to receive somewhere else?

Providers have every incentive to compete on price and quality in the fully competitive market that exists today, provided that regulation does not deny some firms an equal opportunity to compete. Service quality regulation is unnecessary, if not counter-productive and should be eliminated.

Reform Obligations to Serve

The quid pro quo for a monopoly franchise was an obligation to provide timely service upon reasonable request to anyone, subject to regulated rates, terms and conditions.⁴³ The Telecommunications Act of 1996 eliminated the monopoly franchise, but LECs retain the obligation to serve.

An obligation to serve imposes costs on some providers that do not have to be borne by others, therefore it is anticompetitive and should be eliminated wherever the market is competitive and consumers can choose between multiple providers.

The duty to furnish service upon request is also becoming increasingly problematic as more and more consumers are “cutting the cord” in favor of wireless or VoIP services. Although Verizon, for example, has lost nearly half of its switched access lines most of the loops, switches, cables and other infrastructure which comprise the telephone network must be maintained if telecom providers

must furnish telephone service to anyone who wants it within days. The high fixed costs that manifest in the telephone business do not vary in direct proportion to the number of consumers who choose to pay for telephone service. When millions of consumers cut the cord, there are far fewer customers to share the substantial fixed costs. The legacy telephone network is unsustainable.

“The challenge for the country,” according to the National Broadband Plan, “is to ensure that as [Internet Protocol]-based services replace circuit-switched services, there is a smooth transition for Americans who use traditional phone service and for the businesses that provide it.”⁴⁴ Where consumers have a choice between voice service providers, no provider should be saddled with a monopoly-era duty to provide service. If it is necessary to require LECs to serve as carriers of last resort, they should be free to choose the technology(ies) they will use to serve their customers. It might be cheaper, for example, to serve consumers in some remote areas by satellite than by other means.

Protect Broadband and VoIP From Regulation

The definition of a LEC under current law is extremely broad, and includes any firm that conveys or transmits messages or communications, except mobile domestic cellular radio telecommunications service.⁴⁵ The express statutory protection for wireless services is appropriate given the competitive nature of the market.

The Voice-over-Internet Protocol Freedom Act of 2008 exempts the rates, terms and conditions of VoIP service or IP-enabled service from regulation, because the General Assembly realized that that regulation could jeopardize the benefits of VoIP.⁴⁶

The proliferation of new technologies and applications and a growing number of providers developing and offering innovative services using Internet protocol is due in large part to little regulation,

including freedom from regulations governing traditional telephone service that these new technologies and the companies that offer them have enjoyed in this Commonwealth. The economic benefits, including consumer choice, new jobs and significant capital investment, will be jeopardized and competition minimized by the imposition of traditional State entry and rate regulation on voice-over-Internet protocol and Internet protocol-enabled services.⁴⁷

However, the 2008 law did not prevent the PUC from treating VoIP or IP-enabled services as plain old telecommunications for purposes of subsidizing the legacy telephone network via Universal Service Fund fees, switched network access rates and other intercarrier compensation rates for interexchange services provided by LECs.⁴⁸ The PUC recently exploited this opportunity to force a VoIP provider to subsidize below-cost rates for customers of a LEC rather than allow the carrier to recover its costs from its own customers.⁴⁹

Cost-shifting is unfair for millions of consumers who have to pay the corresponding hidden, inefficient charges on their wireless and VoIP bills. It discourages competition in rural areas. And it diminishes incentives for the deployment of all-IP networks, which will create “long-term benefits for consumers, businesses and the nation.”⁵⁰ Under the FCC’s new intercarrier regime, all traffic will ultimately be subject to a bill-and-keep framework, in which providers recover their costs from their own customers.⁵¹

The PUC’s VoIP misstep illustrates the fact that it is subject to political pressure to the extent that competitive services are not expressly exempted from utility regulation, the commission is a target for commercial rivals seeking protection or a regulatory advantage over their competitors.

Current law also requires LECs to accelerate the availability of broadband (defined as 1.544 megabits per second [MB]) to 100% of their total retail

access lines by 2013 or 2015.⁵² This requirement is inherently anticompetitive, since it does not apply to cable and wireless providers of broadband. It is also completely unnecessary, since cable, wireless and LEC providers of broadband are all racing to expand and upgrade their networks. Ultimately, private investment in advance networks depends on the willingness of investors, not artificial targets set by policymakers. With appropriate investment incentives, mandates are superfluous.

According to FCC data, by mid 2011, the percentage of residential premises in Pennsylvania that had access to broadband service of at least 200 kilobits per second or higher that was provided by a LEC subject to PUC oversight was significantly less than the national average (75% versus 84%).⁵³ Meanwhile, the percentage that had access to *unregulated* cable company-provided broadband of at least the same speed was the same as the national average (97%).⁵⁴

The traditional tools that regulators have used to ensure ubiquitous service are inappropriate in today’s competitive environment, inefficient or both. Traditionally, for example, regulators have ordered firms to provide service to anyone upon reasonable request in exchange for a guaranteed profit obtained as a result of legal barriers to competition. A monopoly provider may require low-cost consumers to cross-subsidize high-cost consumers by setting rates so as to make service more affordable for some by over-charging others. Cross-subsidies cannot be sustained in a competitive market, because competitors can offer savings to consumers who generate the subsidies and not serve the consumers who receive the subsidies.

Utility commissions traditionally have guaranteed that telephone service providers earn a profit by authorizing them to charge rates that recover reasonably and prudently incurred expenses along with a profit margin (i.e., 11.25%). If a firm is subject to competition, the market will dictate how much it can charge, and an authorized rate of return is meaningless as a practical matter. “Cost-plus” or “rate-of-return” regulation rewards firms for spending money, not for operating efficiently. This

form of regulation has been replaced with “price caps” or complete pricing freedom in nearly every jurisdiction, except for small firms serving remote areas.

A utility commission could also subsidize broadband by collecting and redistributing user fees; however, a universal service fund is anticompetitive if it imposes costs on some providers but not others, or if it requires efficient providers to subsidize inefficient competitors. These subsidy mechanisms are also prone to waste, fraud and abuse. The federal Universal Service Fund has been criticized for years as wasteful and inefficient. A report by the U.S. Government Accountability Office (GAO) noted that Congress anticipated that competition and new technologies would eliminate the need for universal service support mechanisms, but the explicit fund grew nearly 153% between 1998 and 2007.⁵⁵

As far as adoption is concerned, state economic development and education departments can play a valuable role promoting broadband adoption. The goal of ubiquitous broadband does not provide a justification for the PUC to retain any ability to regulate competitive communications services.

Investment and Innovation Linked to Regulatory Reform

Broadband investment is vital to promote equal opportunity, create jobs in an uncertain economy as well as improve education and health care.

Experts foresee the need for continuing massive investment by network operators in current and next generation broadband capability. The first goal of the National Broadband Plan is for at least 100 million homes to have affordable access to download speeds of at least 100 megabits per second by 2020.⁵⁶ The overall investment needed to make broadband at the fastest speeds (100+ MB) ubiquitous would be \$350 billion, according to FCC staff.⁵⁷ This estimate does not take into account the total investment that multiple facilities-based competitors would incur building alternative networks. Therefore, actual investment could be

much higher.

Historically, monopoly franchises ensured that investments in telephone and cable networks could be recovered. Today, with vibrant competition and rapidly evolving technology, there is no guarantee that investments in broadband will be profitable.

The investments necessary to build broadband infrastructure are “inherently risky by their very nature,” according to Debra J. Aron and Robert W. Crandall, who caution that “[p]rojects with inherently significant risk, as these are, would be especially sensitive to regulatory risk.”⁵⁸

Redundant legacy regulation creates artificial competitive advantages and disadvantages, because communications providers are subject to different regulation depending on the technology they use and their history. Regulatory uncertainty – whether the prospect of unanticipated regulatory intervention in the future, or the possibility that even well-intentioned regulation can have unintended consequences – is another obstacle to private investment in broadband. According to Robert W. Crandall, Robert E. Litan and William Lehr,

The virtuous cycle of capacity investments leading to new services and competition which in turn helps drive increased demand and traffic which in turn leads to still more investment in facilities risks being derailed if the firms investing in such infrastructure cannot reasonably expect to recover their economic costs, including earning a fair, risk-adjusted return on investment.⁵⁹

Larry Cohen of the Communications Workers of America has also said, “We depend on private capital to invest in next-generation wireless and wireless networks, and create and maintain jobs in the industry.”⁶⁰ Citing the \$63 billion in investments made by the top network providers in 2008, Cohen noted in reaction to proposed new regulation at the federal level that it is crucial that policymakers “support the right mix of incentives to sustain and enhance these investments that are so critical to America’s future.”

Regulatory reform is necessary for broadband providers to maintain stock valuations necessary to attract sufficient investment capital for broadband expansion.

Investors funded wireless expansion by the incumbent telecommunications providers on the strength of their landline business. Now telecommunications providers require competitive market returns from both their wireline and wireless operations so investors will back their broadband expansion. Investors will support broadband if they perceive it has the potential to make money, rather than be forced to subsidize local services.

Create and Maintain Jobs

The main reason policymakers should undertake regulatory reform is to attract new investment to the communications sector so consumers can receive the services they want at competitive prices. New investment in telecom is necessary to deliver this result, and the states that attract it will also reap the added rewards of job creation and economic growth.

The Communications Workers of America have calculated on the basis of a Department of Commerce model that \$5 billion invested in broadband infrastructure creates 100,000 new jobs in the telecommunications and information technology industries in the year in which the spending occurs.⁶¹

Researchers at the Information Technology & Innovation Foundation project that \$10 billion of investment in one year in broadband networks will support an estimated 498,000 new or retained jobs throughout the entire U.S. economy for a year.⁶² These include direct jobs, such as technicians to deploy broadband cable and equipment; indirect jobs created to supply the materials; and induced jobs, such as jobs in restaurants and retail stores created as the newly employed or retained workers spend their paychecks.

A study by the Brookings Institution found that 300,000 private non-farm jobs are created throughout the entire economy for every one

percentage point increase in broadband penetration.⁶³ The authors conclude that employment in both manufacturing and services industries (especially finance, education and health care) is positively related to broadband penetration.

A subsequent report by Connected Nation employs the findings of the Brookings Institution study to predict how many jobs would be created on the basis of a reasonably-achievable estimate of increased broadband penetration. At present, 70% of Pennsylvania households have a broadband connection over 200 kbps in at least one direction, and 51% have a connection at least 3 mbps downstream and 768 kbps upstream.⁶⁴

Nationwide, 16% of households have a broadband connection of at least 100 mbps in both directions.⁶⁵ Connected Nation concluded in 2008, when the FCC defined broadband as over 200 kbps in at least one direction, that a 7% increase in broadband adoption (similar to the household broadband adoption achieved in Kentucky, above the national average, by addressing local supply and demand issues) would create or save over 100,000 new jobs per year in Pennsylvania.⁶⁶

The Connected Nation study also projects the following additional benefits assuming a 7% increase in broadband in Pennsylvania:

- \$3,905,168,316 in direct annual income growth
- \$27,558,567 in average annual health care costs saved
- 156,124,817 in average annual hours saved
- \$1,410,587,724 in annual value of hours saved
- \$274,060,290 in average annual mileage costs saved
- 138,819,542 in average annual lbs. of carbon dioxide emissions cut.⁶⁷

The total economic impact of accelerating broadband access and use by just 7% in Pennsylvania is over \$5 billion, according Connected

Nation.⁶⁸ There will be additional benefits for the economy as broadband providers continue to improve their services to deliver faster speeds.

Regulatory reform is necessary for stimulating private investment and creating competitive pressure for broadband providers to upgrade their services, reduce prices or both. Conversely, the absence of regulatory reform will make it harder to achieve these benefits through other means, such as public subsidies.

Promote Economic Development and New Efficiencies

Economists have found higher residential property values and more jobs and businesses in communities with broadband, particularly in smaller, more rural and economically distressed areas.⁶⁹ Wage and salary jobs, as well as the number of proprietors, grew faster in counties with early broadband and Internet access.⁷⁰

Predicted savings in health care are major and mounting as an effect of broadband monitoring and other health care services.⁷¹ Broadband can be used in a variety of new ways, including the monitoring of elderly, infirm or individuals with disabilities at their current residences or less expensive community health care centers, and the delivery of medical care directly through “telemedicine,” or two-way interactive video communication between patients and health care providers. These benefits are estimated to accumulate to at least \$927 billion over 25 years (measured in 2005 dollars), which is equivalent to half of what the United States currently spends annually for medical care for all its citizens (\$1.8 trillion).⁷²

Estimates of the net consumer benefits from home broadband are on the order of \$32 billion per year.⁷³

Empower Underserved Communities

A report by the U.S. Department of Commerce points out that broadband use at home varies

significantly across demographic groups.

Persons with high incomes, those who are younger, Asians and Whites, the more highly-educated, married couples, and the employed tend to have higher rates of broadband use at home. Conversely, persons with low incomes, seniors, minorities, the less-educated, non-family households, and the non-employed tend to lag behind other groups in home broadband use.⁷⁴

A recent Pew Internet survey also finds demographic variances in broadband adoption.⁷⁵ It shows that 63% of white households have broadband, compared to 52% black and 47% Hispanic (English- and Spanish-speaking) households.⁷⁶ Meanwhile, it also reveals that those who have accessed the Internet wirelessly via their laptop or handheld device were 62% Hispanic (English- and Spanish-speaking) 59% black (non-Hispanic) and 52% white (non-Hispanic).⁷⁷

The foregoing research tracks the findings of the National Center for Health Statistics concerning wireless substitution. It found that adults living in poverty (43%) and adults living near poverty (35%) were more likely than higher income adults (24%) to be living in households with only wireless telephones.⁷⁸ And Hispanic adults (38%) and non-Hispanic black adults (28.5%) were more likely than non-Hispanic white adults (25%) or non-Hispanic black adults (31%) to be living in households with only wireless telephones.⁷⁹

The popularity of mobile Internet access among minority groups is helping to “close a looming digital divide stemming from the high cost of in-home Internet access, which can be prohibitive for some,” according to a *New York Times* report.⁸⁰

Another recent Pew survey found that from 2006 to 2008, internet use among Latino adults rose by 10 percentage points, from 54% to 64%. In comparison, the rates for whites rose four percentage points, and the rates for blacks rose only two percentage points during that time period. Though Latinos continue to lag behind whites, the gap in Internet use has shrunk

considerably.⁸¹

Access to broadband is becoming increasingly important for employment, education, news, health care and consumer welfare purposes, as FCC Commissioner Mignon Clyburn recently noted.

In today's fast-changing world, broadband is not a luxury; but rather, it is a necessity, a must-have. Need a job? You'll have to go on-line for that. Want to manage your energy consumption at home? You'll have to go on-line for that. Applying for government benefits? Before long, you will have to go exclusively on-line for that too Broadband's key promise for people of color in particular is economic empowerment. For the first time, there are no immediate and overwhelming barriers to entry for upstart businessmen and women or "cyberpreneurs." Broadband has opened avenues never dreamed possible by those in challenged communities.⁸²

"We firmly believe that ubiquitous broadband access, adoption, and use, stand to be great equalizers in our society," notes a joint policy statement of the National Asian-Pacific American Caucus of State Legislators, National Black Caucus of State Legislators, National Caucus of Native American State Legislators and the National Hispanic Caucus of State Legislators. "As such, we must ensure that Internet adoption and use via a broadband connection becomes engrained as a social, cultural norm in our communities."⁸³

Every Pennsylvania resident should have access to broadband. Telephone service providers, cable operators, wireless providers and others are all anxious to invest in broadband if investors will provide the funding. Investors will decide whether firms can buy the necessary equipment and employ the highly-skilled people who can make it all work.

Of all the calculations that affect private investment, regulation is the most critical from a state perspective. If legacy telephone regulation is not reformed – and the possibility that other market

participants could face similar regulation is not eliminated – private investment needed to make broadband a practical reality for every household is at risk.

Conclusion

Anticompetitive tariffs, pricing regulation, hidden cross subsidies, unequal consumer protection and service quality regulation and are not in the public interest. These outmoded mandates prevent telecommunications providers from offering competitive services and generating revenues for broadband expansion. They serve chiefly as obstacles to investment that reduce asset values of all telecom suppliers.

Wherever consumers can choose between alternative providers of voice services, the following reforms are recommended:

- Allow full pricing freedom so all providers have an equal chance to compete.
- Eliminate filing requirements that give rivals detailed information about a competitor's new or improved services or products.
- PUC jurisdiction for consumer protection should be eliminated so that telephone service providers and their competitors are treated just the same as other commercial entities.
- Eliminate service quality regulation, which is both anticompetitive when applied only to telephone service providers, and unnecessary whenever providers have appropriate incentives to invest.
- Terminate obligations to serve, which impose significant costs on telephone service providers but not their competitors.

By embracing regulatory reform, legislators will expand customer choice, decrease prices, and ignite the broadband expansion necessary to economic growth and technological progress.

This is a golden opportunity for Pennsylvania to open up new technological opportunities and

economic efficiencies. Ensuring that consumers reap the full benefits of competition will require further revision of telecommunications law in Pennsylvania to remove the legacy restraints on telephone service providers.

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The views expressed herein are those of the authors and do not necessarily reflect the views of the Discovery Institute, its directors or staff.

Notes

¹ 66 Pa. C.S. §3011(13).

² “Local Telephone Competition: Status as of Jun. 3, 2011,” *Federal Communications Commission* (Jun. 2012) available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0614/DOC-314631A1.pdf (“Local Telephone Competition”) at Tables 9, 17.

³ Robert W. Crandall, Robert E. Litan and William Lehr, “The Effects of Broadband Deployment on Output and Employment: A Cross-sectional Analysis of U.S. Data,” *Brookings Institution* (Jun. 2007) available at http://www.brookings.edu/papers/2007/06labor_crandall.aspx, at 14-15.

⁴ Internet Access Services: Status as of Jun. 30, 2011, *Federal Communications Commission* (Jun. 2012) available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0614/DOC-314630A1.pdf, at Table 5.

⁵ Pub. L. No. 104-104, 110 Stat. 56.

⁶ Act of Nov. 30, 2004, P.L. 1398, No. 183, sec. 2.

⁷ Testimony of Frank P. Buzydlowski, Director of State Government Relations, Verizon Communications, before the Consumer Affairs Committee, Pennsylvania House of Representatives (Feb. 23, 2011) available at http://www.legis.state.pa.us/cfdocs/legis/TR/transcripts/2011_0113_0003_TSTMNY.pdf, at 2.

⁸ Stephen J. Blumberg and Julian V. Luke, et al. Wireless Substitution: State-level Estimates From the National Health Interview Survey, January 2007–June 2010, *U.S. Department of Health and Human Services* (Apr. 20, 2011) available at <http://www.cdc.gov/nchs/data/nhsr/nhsr039.pdf>, at Table 3.

⁹ Local Telephone Competition, *supra* note 2, at Table 21.

¹⁰ “Comcast Now the Third Largest Residential Phone Services Provider in the U.S.” *Comcast* (Mar. 11, 2009) available at <http://www.comcast.com/About/PressRelease/PressReleaseDetail.aspx?PRID=844>. Subsequent to the 2011 merger between CenturyLink and Qwest, Comcast became the fourth largest telecommunications provider.

¹¹ “Fiber-Optic Providers Are Leading Choices for Internet, Television, and Telephone Service,” *Consumer Reports* (Jan. 5, 2009) available at <http://pressroom.consumerreports.org/pressroom/2009/01/consumer-reports-fiber-optic-providers-are-leading-choices-for-internet-television-and-telephone-service.html> (“intense competition for cable and satellite customers between AT&T U-verse and Verizon FiOS high speed fiber providers has driven down rates for Internet, phone and TV service and is likely the reason that companies allow these savings to continue past the promotional period. In the past year, bundles of the three services have dropped in price by up to 20 percent, to as low as \$80 a month.”). *See also*: “Price War Erupts for High-Speed Internet Service,” by Vishesh Kumar, *Wall Street Journal* (Sept. 2, 2008) available at <http://online.wsj.com/article/SB122031009737388555.html>.

¹² “Save a bundle: How to piece together a great deal for TV, phone, and Internet service,” *Consumer Reports* (Feb. 2010) available at <http://www.consumerreports.org/cro/magazine-archive/2010/february/electronics-and-computers/bundling/overview/bundling-ov.htm>.

¹³ Bob Tedeschi, “Better Calling for Less, by Skipping the Cell Network,” *New York Times* (Feb. 10, 2010) available at <http://www.nytimes.com/2010/02/11/technology/personaltech/11smart.html>; *see also* “Save a bundle: How to piece together a great deal for TV, phone, and Internet service,” *note 18* (“The best Voice over Internet Protocol (VoIP) services, which came from providers of all types, rivaled fiber in offering the best phone service.”).

- ¹⁴ “Consumer Benefits from Cable-Telco Competition,” by Michael D. Pelcovits, Ph.D. and Daniel E. Haar (Nov. 2007) available at http://www.micradc.com/news/publications/pdfs/Updated_MiCRA_Report_FINAL.pdf at 29.
- ¹⁵ Id.
- ¹⁶ Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services (Fifteenth Wireless Competition Report), *Federal Communications Commission* (rel. Jun. 27, 2011) available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-11-103A1.pdf, at Tables 5, 40
- ¹⁷ Id., at Table C-2.
- ¹⁸ The population of Pennsylvania was 12,604,767 in 2009, according to the Department of Health. See: Pennsylvania Vital Statistics 2009, available at <http://www.portal.state.pa.us/portal/server.pt?open=514&objID=596032&mode=2>.
- ¹⁹ Stephen J. Blumberg and Julian V. Luke, “Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, Jan.-Jun. 2011 (Dec. 21, 2011) available at <http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201112.pdf>.
- ²⁰ Id.
- ²¹ Local Telephone Competition, *supra* note 2, at Tables 9, 17.
- ²² “Cutting the cord,” *The Economist* (Aug. 13, 2009) available at http://www.economist.com/opinion/displaystory.cfm?story_id=14214847.
- ²³ Remarks of Alfred E. Kahn before the Federal Trade Commission (Feb. 13, 2007) available at <http://www.ftc.gov/opp/workshops/broadband/presentations/kahn.pdf>. Kahn is the Robert Julius Thorne Professor of Political Economy (Emeritus) at Cornell University who has also served as chairman of the New York Public Service Commission, chairman of the Civil Aeronautics Board, Advisor to the President (Carter) on Inflation, and chairman of the Council on Wage and Price Stability.
- ²⁴ Saul Hansell, “Will the Phone Industry Need a Bailout, Too?” *New York Times* (May 8, 2009) available at <http://bits.blogs.nytimes.com/2009/05/08/will-the-phone-industry-need-a-bailout-too/>.
- ²⁵ Connecting America: The National Broadband Plan, *Federal Communications Commission* (Mar. 16, 2010) available at <http://download.broadband.gov/plan/national-broadband-plan.pdf>, at 138, 141 and 150.
- ²⁶ Id., at 59.
- ²⁷ Hundt, Reed E. *You Say You Want a Revolution: A Story of Information Age Politics* (Yale Univ. 2000) at 15 (“in the Omnibus Budget Reconciliation Act, passed by Al Gore’s tie-breaking Senate vote, the Democratic Congress gave the FCC authority to dissolve this oligopoly by auctioning new licenses”) and 98 (“by auctioning spectrum with no rules attached and preempting all state regulation, we had totally deregulated the wireless industry.”)
- ²⁸ Id., 170 (“Our intent was to communicate our great support for cable’s investment in renovating its systems. The 1996 law had repealed rate regulation, effective in two years. That topic was behind us. Now cable had to take on the telephone industry.”).
- ²⁹ Fifteenth Wireless Competition Report, *supra* note 14, at 12.
- ³⁰ “Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming (Second Annual Report),” *Federal Communications Commission* (Dec. 11, 1995) (“We conclude that cable television systems remain the primary distributors of multichannel video programming services and continue to enjoy market power in local markets, although some progress has begun toward a competitive marketplace for the distribution of video programming. In the last year, DBS systems have attracted many subscribers to newly available services ... In sum, while subscribership for distributors using alternative technologies has generally increased over the last year, overall subscribership for all distributors using alternative technologies is just 9% of total multichannel video programming distributor (“MVPD”) subscribership, whereas cable systems account for

91% of the total.”).

³¹ Testimony of Michael K. Powell, President and CEO, National Cable & Telecommunications Association, before the Committee on Commerce, Science & Transportation, *United States Senate* (Oct. 12, 2011) available at http://commerce.senate.gov/public/index.cfm?p=Hearings&ContentRecord_id=106c5f06-326f-4808-a316-14ed516b6e43&Statement_id=f3cdc7cb-3afe-4584-9462-a4bc9f409aad&ContentType_id=14f995b9-dfa5-407a-9d35-56cc7152a7ed&Group_id=b06c39af-e033-4cba-9221-de668ca1978a&MonthDisplay=10&YearDisplay=2011.

³² Pa.C.S. §3015.

³³ 66 Pa.C.S. §3016.

³⁴ Id.

³⁵ 66 Pa.C.S. §1302.

³⁶ 66 Pa.C.S. §1309.

³⁷ 66 Pa.C.S. §3016.

³⁸ “In the Matter of Policy and Rules Concerning the Interstate, Interexchange Marketplace,” *Second Report and Order*, (rel. Oct. 31, 1996) available at http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1996/fcc96424.txt at paragraph 53 (“The record in this proceeding supports our tentative conclusion that not permitting nondominant interexchange carriers to file tariffs for interstate, domestic, interexchange services will promote competition in the market for such services. Even under existing streamlined tariff filing procedures, requiring nondominant interexchange carriers to file tariffs for interstate, domestic, interexchange services impedes vigorous competition in the market for such services by: (1) removing incentives for competitive price discounting; (2) reducing or taking away carriers’ ability to make rapid, efficient responses to changes in demand and cost; (3) imposing costs on carriers that attempt to make new offerings; and (4) preventing consumers from seeking out or obtaining service arrangements specifically tailored to their needs. Moreover, we believe that tacit coordination of prices for interstate, domestic, interexchange services, to the extent it exists, will be more difficult if we eliminate tariffs, because price and service information about such services provided by nondominant interexchange carriers would no longer be collected and available in one central location.”)

³⁹ 73 P.S. §§201-1 - 201-9.2

⁴⁰ Pennsylvania Attorney General, “Protecting Pennsylvania Consumers,” <http://www.attorneygeneral.gov/consumers.aspx> (accessed Apr. 10, 2012).

⁴¹ 66 Pa.C.S. §308(d).

⁴² 66 Pa.C.S. §3019(b)(2).

⁴³ 66 Pa.C.S. §1501.

⁴⁴ National Broadband Plan, *supra* note 22, at 59.

⁴⁵ 66 Pa.C.S. §102.

⁴⁶ Act of Jul. 4, 2008, P.L. 627, No. 52 (“Voice-Over-Internet Protocol Freedom Act”).

⁴⁷ Id., at §1(2).

⁴⁸ Id., at §6(1)(iii-iv).

⁴⁹ Palmerton Telephone Company v. Global NAPs South et al., Docket No. C-2009-2093336 (Feb. 11, 2010).

⁵⁰ National Broadband Plan, *supra* note 22, at 59; In the Matter of Connect America Fund, *Report and Order* (WC Docket No.

10-90), *Federal Communications Commission* (rel. Nov. 18, 2011) available at http://transition.fcc.gov/Daily_Releases/Daily_Business/2012/db0206/FCC-11-161A1.pdf, at paras. 648, 655.

⁵¹ Connect American Fund Order, *supra* note 38, at para. 741.

⁵² 66 Pa.C.S. §3014.

⁵³ Internet Access Services, *supra* note 4, at Table 24.

⁵⁴ *Id.*

⁵⁵ “FCC Needs to Improve Performance, Management and Strengthen Oversight of the High-Cost Program,” U.S. Government Accountability Office, GAO-08-633 (Jun. 2008) available at <http://www.gao.gov/new.items/do8633.pdf>, at 2-3.

⁵⁶ National Broadband Plan, *supra* note 22, at 9.

⁵⁷ Commission Open Meeting Presentation on the Status of the Commission's Processes for Development of a National Broadband Plan, *Federal Communications Commission* (Sept. 29, 2009) available at http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-293742A1.pdf.

⁵⁸ Robert W. Crandall and Debra J. Aron, Investment in Next Generation Networks and Wholesale Telecommunications Regulation (Nov. 03, 2008) available at <http://ssrn.com/abstract=1294910> at 27.

⁵⁹ Effects of Broadband Deployment on Output and Employment, *supra* note 3, at 14-15.

⁶⁰ Letter from Larry Cohen, President, Communications Workers of America to The Honorable Julius Genachowski, Chairman, Federal Communications Commission (Oct. 15, 2009) available at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020142161>; see also Prepared Remarks of Commissioner Mignon L. Clyburn, *note 42* (“While some government money is and will be available to help defray the cost of broadband and to support creative adoption programs, it is evident that we cannot do it all on our own.”).

⁶¹ National Broadband Strategy Call to Action, *Communications Workers of America* (Dec. 1, 2008) available at http://www.cwa-union.org/news/entry/national_broadband_strategy_call_to_action.

⁶² Robert D. Atkinson, Daniel Castro and Stephen J. Ezell “The Digital Road to Recovery: A Stimulus Plan to Create Jobs, Boost Productivity and Revitalize America,” *Information Technology & Innovation Foundation* (Jan. 2009) available at <http://www.itif.org/files/roadtorecovery.pdf>.

⁶³ “The Effects of Broadband Deployment on Output and Employment: A Cross-Sectional Analysis of U.S. Data,” *supra* note 54.

⁶⁴ Internet Access Services, *supra* note 4, at Tables 15-16.

⁶⁵ *Id.*, at Table 5.

⁶⁶ “The Economic Impact of Stimulating Broadband Nationally,” *Connected Nation* (Feb. 21, 2008) available at http://www.connectednation.org/documents/connected_nation_eis_study_executive_summary_02212008.pdf, at 9.

⁶⁷ *Id.*, at 7.

⁶⁸ “The Economic Impact of Stimulating Broadband Nationally,” *Connected Nation* (Feb. 2008) available at http://www.connectednation.com/research/economic_impact_study/.

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⁷¹ Robert E. Litan, “Great Expectations: Potential Economic Benefits to the Nation From Accelerated Broadband Deployment to Older Americans and Americans with Disabilities,” *New Millennium Research Council* (Dec. 2005) available at http://www.newmillenniumresearch.org/archive/Litan_FINAL_120805.pdf.

⁷² Id.

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⁷⁴ “Exploring the Digital Nation: Home Broadband Internet Adoption in the United States,” *U.S. Dept. of Commerce* (Nov. 2010) available at http://www.ntia.doc.gov/reports/2010/ESA_NTIA_US_Broadband_Adoption_Report_11082010.pdf, at 5.

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⁷⁷ Id., at 6.

⁷⁸ Supra note 17.

⁷⁹ Id.

⁸⁰ Jenna Wortham, “Mobile Internet Use Shrinks Digital Divide,” *New York Times* (Jul. 22, 2009) available at <http://bits.blogs.nytimes.com/2009/07/22/mobile-internet-use-shrinks-digital-divide>.

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