

# Issues in TECHNOLOGY Innovation

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## Universal Service Fund Reform: Expanding Broadband Internet Access in the United States

Jeffrey Rosen

### EXECUTIVE SUMMARY

**T**wo-thirds of Americans have broadband Internet access in their homes.<sup>1</sup> But because of poor infrastructure or high prices, the remaining third of Americans do not. In some areas, broadband Internet is plainly unavailable because of inadequate infrastructure: More than 14 million Americans – approximately 5 percent of the total population – live in areas where terrestrial (as opposed to mobile) fixed broadband connectivity is unavailable.<sup>2</sup> The effects of insufficient infrastructure development have contributed to racial and cultural disparities in broadband access; for example, terrestrial broadband is available to only 10 percent of residents on tribal lands.<sup>3</sup>



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Even where terrestrial broadband connectivity is available, however, the high price of broadband service can be prohibitive, especially to lower income Americans. While 93 percent of adults earning more than \$75,000 per year are wired for broadband at home, the terrestrial broadband adoption rate is only 40 percent among

<sup>1</sup>FEDERAL COMMUNICATIONS COMMISSION, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN 23 (2010) [hereinafter NATIONAL BROADBAND PLAN].

<sup>2</sup>*Id.* at 10.

<sup>3</sup>*Id.* at 23.

#### Issues in Technology Innovation

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adults earning less than \$20,000 annually.<sup>4</sup> These costs also contribute to racial disparities; almost 70 percent of whites have adopted terrestrial broadband at home, but only 59 percent of blacks and 49 percent of Hispanics have done the same.<sup>5</sup>

America's wireless infrastructure is better developed, but many Americans still lack wireless broadband coverage. According to a recent study, 3G wireless networks cover a good portion of the country, including 98 percent of the United States population,<sup>6</sup> but certain states have dramatically lower coverage rates than others. For example, only 71 percent of West Virginia's population is covered by a 3G network.<sup>7</sup> Wireless providers will likely use existing 3G infrastructure to enable the impending transition to 4G networks.<sup>8</sup> Unless wireless infrastructure expands quickly, those Americans that remain unconnected may be left behind.

Though America is responsible for the invention and development of Internet technology, the United States has fallen behind competing nations on a variety of important indicators, including broadband adoption rate and price. According to the Organization for Economic Cooperation and Development's survey of 31 developed nations, the United States is ranked fourteenth in broadband penetration rate (i.e. the number of subscribers per 100 inhabitants); only 27.1 percent of Americans have adopted wired broadband subscriptions, compared to 37.8 percent of residents of the Netherlands.<sup>9</sup>

America also trails in ensuring the affordability of broadband service. The average price for a medium-speed (2.5Mbps-10Mbps) Internet plan in America is the seventeenth lowest among its competitor nations. For a medium-speed plan, the average American must pay \$38 per month, while an average subscriber in Japan (ranked first) pays only \$22 for a connection of the same quality.<sup>10</sup>

The National Broadband Plan (NBP), drafted by the Federal Communication Commission and released in 2010, seeks to provide all Americans with affordable broadband Internet access.<sup>11</sup> Doing so will not be cheap; analysts project that developing the infrastructure necessary for full broadband penetration will require \$24 billion in subsidies and spending.<sup>12</sup> President Obama's stimulus package has already set aside \$4.9 billion to develop broadband infrastructure,<sup>13</sup> and some small ongoing federal programs receive an annual appropriation to promote broadband penetration.<sup>14</sup> However, these funding streams will only account for one-third of the

<sup>4</sup>*Id.*

<sup>5</sup>*Id.*

<sup>6</sup>*Id.* at 146.

<sup>7</sup>*Id.*

<sup>8</sup>*Id.*

<sup>9</sup> Organization for Economic Cooperation and Development, *OECD Broadband Portal*, OECD.ORG, (table 1d(1)) (last accessed Jan. 28, 2011).

<sup>10</sup>*Id.* (table 4m) (last accessed Jan. 28, 2011).

<sup>11</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 9-10.

<sup>12</sup>*Id.* at 136.

<sup>13</sup>*Id.* at 139.

<sup>14</sup>*Id.*



**Jeffrey Rosen** is a nonresident senior fellow in Governance Studies at Brookings. He is also a professor of law at The George Washington University and the legal affairs editor of *The New Republic*.

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\$24 billion necessary to achieve the FCC's goal of full broadband penetration.<sup>15</sup> Moreover, developing infrastructure alone is not enough; many low-income Americans are unable to afford Internet access, even if it is offered in their locality.

To close this funding gap and to make broadband more accessible, the National Broadband Plan proposes to transform the Universal Service Fund – a subsidy program that spends \$8.7 billion every year to develop infrastructure and improve affordability for telephone service – into a program that would do the same for broadband Internet.

## The Universal Service Fund

Universal Telecommunications Service has been a national goal for almost a century. In the early part of the last century, AT&T agreed that, in return for the government's acceptance of its monopoly status, it would provide service to all corners of the country, by charging extremely competitive rates for long distance – an implicit subsidy to support service in rural areas. For much of the twentieth century, AT&T served 80 to 90 percent of all lines in the country, until it was broken up in the 1980s. The modern system, created in the 1990s, uses the universal service fund to make explicit some of the cross subsidies that used to be implicit.

Since its creation, the Universal Service Fund has tried to create incentives for the development of telecommunications infrastructure and affordable telecommunications services to customers across the nation. However, the Universal Service Fund has long struggled to keep pace with developing technology. Moreover, inefficiencies and failures of oversight within the Universal Service Fund's High Cost Program have long provoked calls for its reform. The National Broadband Plan's proposed reforms would attempt to end these criticisms by updating and transforming the Universal Service Fund into an efficient mechanism to expand broadband infrastructure into remote areas and subsidize broadband service for low-income Americans.

The Universal Service Fund was created by the Federal Communications Commission in 1997 to give effect to a Congressional mandate to extend affordable telecommunications services to all residents.<sup>16</sup> The fund received \$4.6 billion in 2010.<sup>17</sup> The program is funded entirely by fees upon telecommunications companies, who typically pass the cost onto the consumer through flat charges on their monthly bill. The Fund is composed of four subsidy programs. The E-Rate Program subsidizes

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<sup>15</sup> *Id.*

<sup>16</sup> Telecommunications Act of 1996, 47 U.S.C. § 254(b)(3) (2010) (ordering the FCC to create an agency dedicated to “[c]onsumers in all regions of the Nation, including low-income consumers and those in rural, insular, and high cost areas, [to] have access to telecommunications and information services, including interexchange services and advanced telecommunications and information services, that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas”)

<sup>17</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 140.

connectivity for schools and libraries.<sup>18</sup> The Rural Health Care Program supports connectivity for rural health care providers.<sup>19</sup> The High-Cost Program subsidizes the development of telecommunications infrastructure in rural and other remote areas where the costs of installing such infrastructure would otherwise be prohibitive.<sup>20</sup> The Low Income Program subsidizes telephone service for low-income subscribers.<sup>21</sup>

Though the National Broadband Plan proposes alterations to all four Universal Service Fund programs, it is the reforms of the High Cost Program, Low Income Program, and the Fund's revenue acquisition system which are most substantial. The Plan proposes a fundamental transformation of the High Cost Program; it seeks slowly to transform the High Cost Program into two new programs that would use market-based mechanisms to subsidize the development of terrestrial and mobile broadband infrastructure. The proposed reforms of the Low Income Program would allow poorer families who subscribe to a broadband telecommunications package to pay a portion of their monthly broadband fees with money from the Universal Service Fund. The National Broadband Plan also suggests, but does not expressly endorse, a number of proposals to alter the way the Universal Service Fund's acquires revenue.

### *1. The High Cost Program*

The High Cost Program was intended to promote the development of legacy telephone network infrastructure in certain isolated communities. Some communities are so small or remote that any revenues derived from the provision of telecommunications service would be outweighed by the massive costs of installing the necessary infrastructure. To encourage the installation of that infrastructure, which connects small communities to the rest of the world, the program subsidizes the provision, maintenance, and upgrading of telecommunications services and infrastructure in these "high cost" areas.<sup>22</sup>

The High Cost Program has been criticized, however, for its inefficiencies and failures of oversight. Critics claim that the program is inefficient because it fails to consider non-traditional telecommunications solutions; for example, one Hawaiian company is paid \$13,345 per year per telephone line for terrestrial service even though satellite telephone service is available for about one-tenth of that price.<sup>23</sup>

The High Cost Program is also inefficient because of its distribution mechanism. So-called Rate-of-Return Carriers – which include 78 percent of subsidized carriers

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<sup>18</sup> 47 C.F.R. § 54.500 et seq. (2010).

<sup>19</sup> 47 C.F.R. § 54.601 et seq. (2010).

<sup>20</sup> 47 C.F.R. § 54.301 et seq. (2010).

<sup>21</sup> 47 C.F.R. § 54.400 et seq. (2010).

<sup>22</sup> See 47 C.F.R. § 54.7 (2010).

<sup>23</sup> THOMAS W. HAZLETT, "UNIVERSAL SERVICE" TELEPHONE SUBSIDIES: WHAT DOES \$7 BILLION BUY? (2006), available at <http://www.senior.org/Documents/USF.Master.6.13.06.pdf>.

and which receive about half of the High Cost Program's funds – are reimbursed on a “cost-plus” basis; in other words, the government reimburses these carriers for the full cost of infrastructure development plus 11.25 percent of those costs in profit.<sup>24</sup> Similar arrangements are common in competitive bidding systems, in which only the firm proposing to complete the job at the lowest cost is awarded the contract,<sup>25</sup> but the High Cost Program distributes these subsidies – regardless of cost – to any eligible telecommunication carrier willing to participate. One critic derided the system as “akin to awarding no-bid contracts that last forever.”<sup>26</sup> As these firms' costs increase, so do their profits, creating incentives to increase rather than decreasing costs.<sup>27</sup> As a result, firms in these “high-cost” areas provide “gold-plated” legacy telephone infrastructure in order to increase costs to the government and thereby increase profits to the telecommunications firm. One study argued that these perverse incentives cause the Universal Service Fund to provide rural carriers with twice as much financial support as would be necessary in an efficiently operated subsidy.<sup>28</sup>

Worse, the program provides these infrastructure development subsidies even if another telecommunications firm already serves the community. So long as the locality has been designated as a high cost area, additional firms may enter the market and receive subsidies for developing redundant infrastructure. For example, Hattiesburg, Mississippi, home to 45,000 residents, is served by twelve carriers, each receiving High Cost program subsidies.<sup>29</sup> Therefore, the High Cost program – designed to ensure affordable coverage in communities where market forces alone would not justify even a single firm's entry – has artificially stimulated a glut of “competition” in a marketplace full of firms that have entered the locality with the primary intention of obtaining taxpayers' dollars through a poorly designed government subsidy program.<sup>30</sup>

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<sup>24</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 141.

<sup>25</sup> Rachel Grace Stabler, *Adding Insult to Injury: Opportunities for Fraud in the Katrina-Related Government Contracts Under the False Claims Act*, 58 Ala. L. Rev. 631 (2007) (“The cost-plus-fixed-fee contract is the most common type of cost-reimbursement contract.”) (citing DONALD P. ARNAVAS, GOVERNMENT CONTRACT GUIDEBOOK § 4.18(e), at 4-16 (3d ed. 2001 & Supp. 2005)).

<sup>26</sup> *Using Competitive Bidding to Reform the Universal Service High Cost Fund Before the Subcomm. on Communications, Technology, and the Internet of the S. Comm. On Energy and Commerce*, 111th Cong. 3 (2009) (statement of Scott Wallsten, Ph.D., V.P. for Research and Senior Fellow, Technology Policy Institute), available at [http://www.gcbpp.org/files/Wallsten\\_Testimony\\_Universal\\_Service.pdf](http://www.gcbpp.org/files/Wallsten_Testimony_Universal_Service.pdf).

<sup>27</sup> See generally Leon Courville, *Regulation and Efficiency in the Electric Utility Industry*, 5 BELL J. ECON. 53 (1974).

<sup>28</sup> ECONOMICS AND TECHNOLOGY, INC., LOST IN TRANSLATION: HOW RATE OF RETURN REGULATION TRANSFORMED THE UNIVERSAL SERVICE FUND (USF) FOR CONSUMERS INTO CORPORATE WELFARE FOR THE RURAL LOCAL EXCHANGE CARRIERS (RLECs) at 10 (2004).

<sup>29</sup> *Universal Service Reform Act of 2010: Hearing on H.R. 5828 Before the Subcomm. on Communications, Technology, and the Internet of the H. Comm. On Energy and Commerce*, 111th Cong. 3 (2010) (statement of Robert Steven Davis, Senior Vice President of Public Policy and Government Relationship, Qwest Communications International Inc.).

<sup>30</sup> ANGELE A. GILROY, CONG. RESEARCH SERV., UNIVERSAL SERVICE FUND: BACKGROUND AND OPTIONS FOR REFORM 11 (2009), available at <http://www.acuta.org/wcm/acuta/legreg/l153.pdf>.

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The High Cost Program's lack of oversight has also been criticized. Though the Universal Service Administration Company has the authority to audit subsidy recipients,<sup>31</sup> the FCC has failed to create a federal framework to collect information about the progress of the subsidized network infrastructure projects.<sup>32</sup> Similarly, the Program fails to provide “outcome measures” to enable analysis of the success and progress of the fund's subsidy allocation.<sup>33</sup>

Finally, the High Cost Program has failed to promote the development of broadband infrastructure because the program neither requires nor encourages providers to extend broadband services to high cost areas.<sup>34</sup> Rather, the program subsidizes only those costs related to providing legacy telecommunication services. For example, the program authorizes reimbursements for local loops and switching equipment (the circuits connecting the customer's telecommunications devices to the provider's local office and to the other caller, respectively), but the program does not reimburse firms for costs involved in providing middle-mile infrastructure (the technology connecting the provider's local office to its Internet point of presence, where the provider's Internet servers and routers are housed).<sup>35</sup> It provides no special financial assistance to those companies that install broadband infrastructure in high cost areas.<sup>36</sup> While some companies receiving High Cost Program support have installed broadband infrastructure, others have not.<sup>37</sup> Therefore, many telecommunications companies have installed antiquated infrastructure that provides outdated telecommunications services to high cost areas, thereby missing the opportunity to install broadband infrastructure instead that can provide speedy Internet connection along with voice service. The result is a rural divide, where pockets of rural America are served by small telephone companies building high-capacity fibers to the home with support from the federal government while in the next community, served by price-capped companies such as AT&T or Verizon, there is no incentive to build broadband and customers have to make due with ordinary phone service. Moreover, because the High Cost Program subsidizes only terrestrial infrastructure development, the program entirely fails to promote the development of mobile broadband infrastructure.

The National Broadband Plan urges the FCC to begin a ten-year process whereby the High Cost Program would be phased out and replaced by the newly created

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<sup>31</sup> See 47 C.F.R. § 54.516 (2010).

<sup>32</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 141.

<sup>33</sup> See generally *Performance Measures for the High Cost Universal Service Fund Before the Subcomm. on Communications, Technology, and the Internet of the H. Comm. On Energy and Commerce*, 111th Cong. (2009) (written testimony of Jerry Ellig, Ph.D., Senior Research Fellow, Mercatus Center at George Washington University), available at [http://mercatus.org/sites/default/files/publication/2009\\_03\\_High\\_Cost\\_Fund\\_testimony\\_House.pdf](http://mercatus.org/sites/default/files/publication/2009_03_High_Cost_Fund_testimony_House.pdf).

<sup>34</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 141.

<sup>35</sup> *Id.*

<sup>36</sup> *Id.*

<sup>37</sup> *Id.*

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Connect America Fund and the Mobility Fund.<sup>38</sup>

Essentially, the Connect America Fund would be the broadband version of the High Cost Program but without the inefficiencies. The goal of the Connect America Fund would be to “enable all U.S. households to access a network that is capable of providing both high-quality voice-grade service and broadband.”<sup>39</sup> Like the High Cost Program, the Connect America Fund (CAF) would aim to subsidize infrastructure only in those geographic areas where infrastructure development costs would be so high that providing affordable broadband service would be impossible without the provision of subsidies.<sup>40</sup> However, to avoid stimulating needless and artificial competition, the CAF would subsidize only one provider of broadband per geographic area.<sup>41</sup> To determine which firm would be subsidized, the FCC would use “market-based mechanisms” to “determine the firms that will receive CAF support and the amount of support they will receive.”<sup>42</sup> (Presumably, these market-based mechanisms will include “reverse auctions,” whereby firms would bid by declaring the subsidy amount necessary for them to enter the geographical market in question. The government would then issue the subsidy to the firm that could provide service to that locality for the smallest subsidy.)<sup>43</sup> The Plan also suggests that, in order to build state support for its goals, the FCC might “focus first on those states that... provide matching funds for broadband construction.”<sup>44</sup> To promote accountability, the FCC would impose timelines, operational requirements, and price-reporting requirements on subsidized providers to ensure that those firms (and the Connect America Fund itself) effectively further the program's goals of providing affordable terrestrial broadband access.<sup>45</sup>

The Mobility Fund would be a temporary program that would serve a similar purpose; it would aim to support the development of mobile broadband infrastructure into those few areas where 3G coverage is unavailable.<sup>46</sup> The National Broadband Plan fails to provide many specifics in regards to the Mobility Fund's operation, but the Plan does urge the FCC to “select an efficient method, such as market-based mechanisms, for supporting mobility in targeted areas.”<sup>47</sup> Presumably, the program would subsidize the installation of cell towers and other mobile broadband infrastructure in high-cost areas.

During the ten year phase-out period, the High Cost Fund would go through three phases, at the end of which the program would dissolve. During the first phase, the

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<sup>38</sup> *Id.* at 144-51.

<sup>39</sup> *Id.* at 145.

<sup>40</sup> *Id.* (“CAF should only provide funding in geographic areas where there is no private sector business case to provide broadband and high-quality voice-grade service.”).

<sup>41</sup> *Id.*

<sup>42</sup> *Id.*

<sup>43</sup> *Hearings, supra* note 26, at 3 (statement of Scott Wallsten, Ph.D.).

<sup>44</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 149.

<sup>45</sup> *Id.* at 145-46.

<sup>46</sup> *Id.* at 146.

<sup>47</sup> *Id.*

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Mobility Fund and Connect America Funds would be created and a number of long-needed reforms – such as strict oversight, audit, and disclosure mechanisms – would be implemented into the current High Cost Program.<sup>48</sup> One notable reform would be a mandate that Rate-of-Return Carriers be shifted to a system of price-cap regulation, which would reduce the perverse incentives of the current regime's virtually unlimited cost-plus program.<sup>49</sup> Meanwhile, a good portion of the High Cost Program's funds – up to \$15.5 billion over the next decade – would be shifted to “new broadband programs,” particularly to the Connect America Fund.<sup>50</sup> During the second phase, the Connect America Fund would begin to make distributions, slowly replacing the High Cost Program.<sup>51</sup> Finally, during the Third Phase, the High Cost Program would entirely stop distributing subsidies for voice service, thereby freeing up to \$15.5 billion to spend on broadband development.<sup>52</sup>

## 2. *The Low Income Program*

The Universal Service Fund's Low Income Program is a fund designed to help low-income Americans afford local or cellular telephone service.<sup>53</sup> Though the program was originally intended to apply to telephone service alone, it sometimes allows the use of Low Income Program funds to pay for telecommunications service bundles – including plans that provide both voice and Internet service – that potentially increases broadband adoption rates.<sup>54</sup>

The Low Income Program operates two programs: Lifeline Assistance and Link-Up America. A customer is eligible for the programs if her income is below 135 percent of the Federal Poverty Guidelines or if she receives aid from Medicaid, Food Stamps, Public Housing Assistance, or a number of other federal assistance programs.<sup>55</sup> Lifeline reduces the cost of telecommunications services to low-income Americans by using Universal Service Fund revenues to pay a portion of eligible customers' land-line or cell phone bill.<sup>56</sup> Link-Up uses Universal Service Fund revenues to help eligible customers pay the initial installation fee for terrestrial telephone service.<sup>57</sup> In each instance, many states have decided to complement federal funds with state funds, increasing the aid to those Americans in need.<sup>58</sup> Together, these programs have helped defray the costs of phone service while the percentage of

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<sup>48</sup> *Id.* at 143-44.

<sup>49</sup> *Id.* at 147.

<sup>50</sup> *Id.* at 147-48.

<sup>51</sup> *Id.* at 149.

<sup>52</sup> *Id.* at 147-48.

<sup>53</sup> *Id.* at 172.

<sup>54</sup> *Id.*

<sup>55</sup> 47 C.F.R. § 54.409 (2010).

<sup>56</sup> 47 C.F.R. § 54.401 (2010).

<sup>57</sup> 47 C.F.R. § 54.411 (2010).

<sup>58</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 172.



low-income Americans who subscribed to telephone service has risen from 80.1 percent in 1984 to 89.7 percent in 2008.<sup>59</sup>

Though these programs may have helped to improve telecommunications adoption rates, some matters relating to the administration of the program deserve attention. First, though many Americans are eligible for Program funds, few capitalize on its benefits. An estimated 24.5 million households are eligible for Lifeline, but, in 2008, only about 7 million (less than 29 percent) were enrolled in the program.<sup>60</sup> In some states, less than 10 percent of eligible households received the Program's benefits.<sup>61</sup> This relatively low participation rate may be credited to the fact that the customer's telephone carrier – not the state or federal government – is often responsible for reaching out to consumers and informing them of their right to Low Income Program funds.<sup>62</sup> This is not the most efficient allocation of duties because many Americans who are eligible but not enrolled in the plan are often in contact with members of state or federal social service agencies who could easily inform the customers of the Program's benefits.

Another important criticism is that the Low Income Program's eligibility verification mechanism compromises the financial privacy of its participants, which might thereby reduce enrollment. Under the program, the telephone company – not the government – is responsible for verifying the customer's eligibility, meaning that customers must hand over “documentation of their household income” in order to prove eligibility<sup>63</sup> and “may be required to verify continued eligibility on an annual basis.”<sup>64</sup> This may reduce enrollment, as some eligible customers interested in receiving the program's aid might be afraid or embarrassed to hand their personal financial information over to their utility company.

Also, the Low Income Program's policies fail to aid eligible customers who wish to receive broadband Internet service alone or a broadband service package that provides both voice and Internet services.<sup>65</sup> Under the current plan, if a state supplements federal Low Income Program aid with state aid, that state may establish its own criteria for determining which plans those participating customers may purchase with government funds.<sup>66</sup> Using this authority, some states have allowed Low Income Program customers to choose from a broad range of service packages, including broadband packages that bundle voice service with Internet service.<sup>67</sup> However, the FCC's default eligibility criteria limits qualifying service plans, and many states have chosen to follow the federal default criteria or to impose further

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<sup>59</sup> *Id.*

<sup>60</sup> *Id.*

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> 47 C.F.R. § 54.410(a) (2010).

<sup>64</sup> 47 C.F.R. § 54.410(c) (2010).

<sup>65</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 172.

<sup>66</sup> *Id.*

<sup>67</sup> *Id.*

limitations on the services that may be purchased with Low Income Program funds.<sup>68</sup> Therefore, though Low Income Program funds are technically available to many Americans who wish to acquire broadband services, the regulations are not explicit in endorsing this kind of spending.

The National Broadband Plan proposes solutions designed to ameliorate each of these issues, thereby increasing adoption, preserving privacy, and broadening the range of services eligible for Low Income Program payment assistance.<sup>69</sup>

To increase outreach and protect privacy, the National Broadband Plan proposes that state social service agencies – not telecommunications firms – should be responsible for promoting the program and confirming participants' eligibility.<sup>70</sup> The Plan encourages employees of state social service agencies to inform eligible customers of the Low Income Program when they discuss other assistance programs.<sup>71</sup> The Plan also encourages states to streamline enrollment by including Lifeline and Link-Up in unified online applications for social services.<sup>72</sup>

To help aid broadband penetration, the National Broadband Plan proposes a reform that would liberalize those state and federal policies that limit the program's potential to increase broadband adoption rates.<sup>73</sup> The proposal would alter the default program eligibility criteria to enable customers to apply Low Income Program funds to any service or package that includes basic voice service, including plans that bundle voice and data service together.<sup>74</sup> This reform would provide low-income customers with more freedom to choose their own telecommunications plan.<sup>75</sup> Additionally, by allowing customers to use Low Income Program funds to purchase bundles that provide both voice and data service, the reform would make broadband more affordable to the low-income population.<sup>76</sup>

Though the proposed reforms would indeed solve the more bureaucratic criticisms of the Low Income Program, a more serious theoretical question remains: Does the policy actually increase adoption? A series of studies have suggested that it does not, at least not by justifiable amounts. For example, one study concluded that creating one new subscription cost the program \$1,581-\$2,200 of revenue.<sup>77</sup> The reason for the program's ineffectiveness, the authors suggest, is that “a high proportion of program monies go to households that are already on the network and do not plan to leave. How to target those not on the network, while denying payments to those already on the network who are in no danger of leaving, is a

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<sup>68</sup> *Id.*

<sup>69</sup> *Id.* at 171-73.

<sup>70</sup> *Id.* at 172-73.

<sup>71</sup> *Id.* at 173.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.* at 172.

<sup>74</sup> *Id.*

<sup>75</sup> *Id.*

<sup>76</sup> *Id.*

<sup>77</sup> Christopher Garbacz & Herbert G. Thompson, *Estimating Telephone Demand with State Decennial Census Data from 1970-1990: Update with 2000 Data*, 24 J. REGULATORY ECON. 377 (2003).

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conundrum.”<sup>78</sup>

On the other hand, the pricing of long-distance phone service is vastly different than the pricing of broadband Internet service. Subsequent studies have suggested that the true reason why low income people refrain from signing up for telephone service is because long-distance charges, often charged on a per-minute basis, can be difficult to limit.<sup>79</sup> Since broadband Internet service is always on, and usually charged at a flat-rate (rather than a variable rate based on minutes connected or the amount of data transferred), the reformed policy may be more effective at increasing broadband service adoption than the previous policy was at increasing telephone service adoption. Moreover, if we assume that the customers receiving the program's benefits are truly impoverished, then the policy might be justified as a means to provide discounts to poorer communities and thereby redistribute wealth. However, a policy that redistributes wealth to only 29 percent of eligible customers<sup>80</sup> is not a particularly fair redistribution measure.

Clearly, the Low Income Program requires further study. The proposed reforms will increase the uniformity of adoption, but if the policy is intended solely as a measure to increase broadband adoption, it may be more appropriate to rethink the Plan entirely before relying on it as an effective aid to broadband penetration in low-income communities.

### *3. The Universal Service Fund's Fee Mechanism*

The National Broadband Plan also suggests altering the mechanisms by which the Universal Service Fund receives its capital. Reform of this mechanism requires a careful balancing of interests; capping the fund will decrease the amount of subsidies available to help low income families acquire telecommunications services, but extending the funding base to include information-only plans (such as broadband Internet without voice service) might diminish broadband adoption by increasing the price of broadband services. Reflecting this difficult balancing decision, the Plan suggests – but does not endorse – some controversial reforms regarding the Universal Service Fund's fee system.

Monetary support for the Universal Service Fund derives entirely from assessments imposed on telecommunications service providers, who typically forward these costs on to their consumers as flat fees on their customers' monthly bill.<sup>81</sup> However, not all telecommunications providers are charged this fee – only firms that provide particular types of voice services – namely long-distance or Voice

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<sup>78</sup> *Id.* at 328.

<sup>79</sup> See Milton L. Mueller & Jorge Reina Schement, *Universal Service from the Bottom Up: A Study of Telephone Penetration in Camden, New Jersey*, 12 INFO. SOC'Y 287 (1996).

<sup>80</sup> NATIONAL BROADBAND PLAN, *supra* note 1, at 172.

<sup>81</sup> *Id.* at 149.

over Internet Protocol (VoIP) phone services.<sup>82</sup> Firms providing only “information” services, such as broadband or other data plans, are excused from paying that fee.<sup>83</sup> This has led some service providers to offer packages that include both voice and data plans while falsely claiming that the program is exclusively an “information service” – a way of improperly avoiding the assessment.<sup>84</sup>

Another concern is the growth of the Universal Service Fund. Each year, the Universal Service Fund fee is recalculated to ensure that the Fund will be able to afford the obligations under its various programs. Because of the recent growth in spending by the High-Cost and the Low Income Programs, the Universal Service Fund has grown from approximately \$4.5 billion in 2000 to a projected \$8.7 billion in 2010.<sup>85</sup> Though the High Cost Program has been capped since 2008, the Low Income Program continues to grow, therefore increasing the assessment on telecommunications firms and, as a result, increasing the fees passed on to consumers.<sup>86</sup>

To solve this problem, the National Broadband Plan supports a “broadening” of the Universal Service Fund contribution base.<sup>87</sup> Though the FCC does not explain exactly how this broadening would occur, it does suggest that Universal Service Fund fees might be imposed on data services, subjecting Internet-only plans to the Universal Service Fund assessment.<sup>88</sup> Though this would increase the price of broadband, that higher price might be justified if those added fees promote the development of further broadband infrastructure in remote areas (through the reformed High Cost Program) or assist lower-income families attain affordable access to broadband (through the reformed Low Income Program).

The National Broadband Plan declares that the FCC “should manage the total size of the USF to remain close to its current size in order to minimize the burden of increasing universal service contributions on consumers.”<sup>89</sup> Though the Plan does not expressly choose any particular method by which the FCC might manage the Fund's size, the Plan does suggest that, if Congress does not provide additional public funding, the FCC may have to cap “the only significant parts of the fund that remain[] uncapped,” namely the Low Income Program.<sup>90</sup> Of course, doing so would reduce the funds available to assist low-income families who wish to acquire but cannot afford broadband services.

Therefore, in seeking to reform the Fund's fee mechanism, the FCC proposes two recommendations – limit the Fund's size and broaden the Fund's base – either of which would compromise one of the fundamental purposes of the National

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<sup>82</sup> *Id.*

<sup>83</sup> *Id.* at 149.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.* at 150.

<sup>86</sup> *Id.*

<sup>87</sup> *Id.* at 148.

<sup>88</sup> *See id.*

<sup>89</sup> *Id.* at 149.

<sup>90</sup> *Id.*

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Broadband Plan: to ensure that low-income families have reliable and affordable broadband access.

However, this balancing of interests is the same challenge that has confronted the Low Income Program – essentially a wealth redistribution program – since its inception. Assessing the Universal Service Fee to data services will surely lead to slightly higher fees, but the increase in price should be slight, not prohibitive. Capping the Low Income Program, on the other hand, will diminish the assistance available to low-income families and therefore hamper their ability to acquire broadband services. After further study the FCC should identify and apply the policy that maximizes broadband adoption rates.

## The Politics

The Universal Service Fund has long maintained political support due to a careful balancing of interests. Red state residents, particularly those living in rural areas, are more likely to receive funds from the High Cost Program,<sup>91</sup> which subsidizes telecommunications service in remote rural areas.<sup>92</sup> Blue state residents, particularly those living in urban areas, are more likely to receive funds from the Low Income Program, which assists low-income consumers with installation fees and monthly services fees.<sup>93</sup> Though the proposed reforms to the Universal Service Fund would generally maintain this balance, the recent change in the nation's political climate might complicate adoption of the proposed reforms.

## The FCC Commission

The five FCC Commissioners have each declared that reforming the Universal Service Fund is necessary. Republican Robert McDowell noted that, “[i]f we have been able to agree on only one thing at the FCC, it is that the Universal Service subsidy system is antiquated, arcane, inefficient and just downright broken.”<sup>94</sup> Democrat Michael Copps recognized that Universal Service Fund reform is “integral to getting broadband ubiquitously deployed and adopted.”<sup>95</sup> Chairman Julius Genachowski called the National Broadband Plan “an important milestone in our deeply important effort to ensure that every American, no matter where they live or what they earn, has

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<sup>91</sup> According to the Universal Service Administration Company, approximately 70 percent of High Cost Program funding was directed at rural areas. UNIVERSAL SERVICE ADMINISTRATIVE COMPANY, 2009 ANNUAL REPORT at 41 (2010), available at <http://www.usac.org/about/universal-service/fund-facts-charts/hc-Disbursements-by-Rural-NonRural.pdf>.

<sup>92</sup> 47 C.F.R. § 54.201 et seq. (2010).

<sup>93</sup> 47 C.F.R. § 54.400 et seq. (2010).

<sup>94</sup> *Connect America Fund*, GN Docket No. 09-51, Notice of Inquiry (2010) (statement of Commissioner Robert M. McDowell), available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-10-58A4.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-10-58A4.pdf).

<sup>95</sup> *Id.* (statement of Commissioner Michael J. Copps).

access to affordable, high-quality broadband communications service.”<sup>96</sup> Republican Meredith Atwell Baker declared that reform of the Universal Service Fund is “critical” because “we need to transition to a support mechanism that is effective, efficient, and sustainable for areas where market forces are not sufficient to drive broadband services to America’s consumers.”<sup>97</sup> Democrat Mignon Clyburn called reforming the Universal Service Fund an “ambitious and long-overdue mission.”<sup>98</sup>

Though the Commissioners eagerly embraced the idea of reform, their statements were tentative; no commissioner expressly endorsed the proposed reforms to the Universal Service Fund. However, insiders believe that the FCC Commissioners are likely to adopt the reforms unanimously. While the three Democratic Commissioners are pleased with the proposal’s efforts to extend broadband to rural America, the two Republican Commissioners are satisfied to see efforts to control the size of the Fund and to impose oversight, thus eliminating waste and abuse.<sup>99</sup>

## Private Groups

Trade groups and other private organizations have given mixed reviews to the proposed reforms. Unsurprisingly, these groups have endorsed the reforms that would forward their own financial interests and have criticized those that would not.

Generally, the leading opponents of Universal Service Fund reform are small rural Rate-of-Return Carriers. These small, often family owned businesses – some 800 or so – are dependent for up to two-thirds of their revenues on universal service fund subsidies and another implicit subsidy called the inter-carrier compensation system, a complicated system of payment where several billion dollars a year change hands as long distance carriers like AT&T have to pay access or termination charges to the local phone companies for the privilege of terminating traffic on their networks. The opponents of reform are viable businesses only because of their tremendous subsidy from the American taxpayer, and they are hardly sympathetic mom and pop operations; some use their earnings to buy corporate jets and to fund lavish overhead. Nevertheless, the reform opponents are represented by trade groups such as the National Telecommunications Cooperative Association (NTCA) and the Organization for the Promotion and Advancement of Small Telephone Companies (OPASTCO). While these groups have previously endorsed efforts to reform the Universal Service

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<sup>96</sup> *Id.* (statement of Chairman Julis Genachowski).

<sup>97</sup> *Id.* (statement of Chairman Meredith A. Baker).

<sup>98</sup> *Id.* (statement of Chairman Mignon L. Clyburn).

<sup>99</sup> Indeed, both Republican Commissioners have expressed support for the plan’s proposal to limit the size of the Universal Service Fund. Commissioner McDowell noted that “contain[ing] the growth of the Fund” was the first of “five basic principles” of comprehensive Universal Service reform. *Id.* (statement of Commissioner Robert M. McDowell). Commissioner Baker reminded her fellow commissioners that “I have expressed concerns about the ballooning size of the Fund and I am convinced that some hard choices will have to be made to keep it under control.” *Id.* (statement of Commissioner Meredith A. Baker).

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[B]ecause the new Universal Service Fund will be funded exactly like the old Universal Service Fund – through minor fees on telecommunication s bills – the program, as always, is deficit neutral.

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Fund, they have only done so when the reform preserves the cost-plus system for Rate-of-Return Carriers.<sup>100</sup> These groups would prefer to maintain control of the stream of government funds that the current regime currently gives them. Naturally, these carriers would also oppose the Connect America Fund's policy to allow only one subsidized broadband provider per geographic area; though subsidizing competition drives prices down, the reform would likely mean that competing telecommunications firms would lose their subsidies and thus suffer a dramatic hit to their profitability in that locality. One survey of OPASTCO member carriers claimed that the elimination of no-bid policies would lead to reduced network investment, layoffs, reduced services, and increased prices.<sup>101</sup> When a similar reform was proposed in the late 1990s, the pro-business CATO Institute argued that the policy would reduce competition.<sup>102</sup> And when Chairman Martin proposed to end the inter-carrier compensation system during the Bush administration, he failed to mollify the mid-sized carriers whose revenue was threatened and the plan went down to defeat.

However, other telecommunications companies support the proposal. Wireless companies, for example, have long supported the proposed reforms. As cell phone technology requires less infrastructure development to provide service, wireless companies are often an alternative to Rate-of-Return carriers in rural communities. When relatively inexpensive subsidized wired service firms move in to a high cost market to compete, wireless providers may have to decrease prices to compete or else lose a good deal of their market share in that locality.

Broadly, companies supporting Universal Service Fund Reform include large cable companies who pay into the system and get nothing out of it because their money subsidizes local competitors. Mid-sized carriers also want to see reform of the intercarrier compensation system because they seek stability and certainty; Satellite companies support reform because they would like Universal Service Fund money, and telecom unions support reform because more network building means more union jobs.

In Congress, Democratic support seems likely. The development of the plan was overseen by FCC Chairman Genachowski, and President Obama praised Genachowski and his proposal immediately upon release.<sup>103</sup> The positions of the Republicans in Congress, on the other hand, are more difficult to predict. The newly reformed High Cost program would endorse free-market mechanisms to determine eligible subsidy recipients, thereby allowing the Fund to operate more efficiently.

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<sup>100</sup> See, e.g., Press Release, OPASTCO, OPASTCO Endorses Universal Service Reform Act of 2010, (July 22, 2010), available at <http://www.opastco.org/doclibrary/2050/072210BoucherTerryEndorse.pdf>.

<sup>101</sup> See, e.g., Press Release, OPATSCO, OPASTCO Survey Finds National Broadband Plan USF Proposals Stifle Network Investment and Raise Rural Consumer Broadband Prices, (May 18, 2010), available at <http://opastco.org/doclibrary/1996/051810NetworkInvestmentSurveyRelease.pdf>.

<sup>102</sup> Peter K. Pitsch, *Reforming Universal Service: Competitive Bidding Or Consumer Choice?*, CATO BRIEFING PAPER NO. 29 (May 7, 1997), available at <http://www.cato.org/pubs/briefs/bp-029.html>.

<sup>103</sup> Barack Obama, Office of the Press Secretary, White House, *Statement from the President on the National Broadband Plan*, March 16, 2010, available at <http://www.whitehouse.gov/the-press-office/statement-president-national-broadband-plan>.

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Also, because the new Universal Service Fund will be funded exactly like the old Universal Service Fund – through minor fees on telecommunications bills – the program, as always, is deficit neutral. Moreover, the newly proposed Connect America Fund would aim to extend broadband infrastructure into rural areas, which are predominantly Republican-leaning. The CAF would also enable rural small businesses to connect to the Internet, giving them access to the global marketplace and encouraging their growth.

However, the reform proposal essentially renews the Universal Service Fund, perpetuating a system of government subsidies and the imposition of a tax-like fee on the telecommunications bills of American consumers. At an April 2010 hearing, Republican Senator John Kyl expressed his concerns that government assistance in this area is unnecessary; he declared that the broadband industry has, thus far, been successful without government intervention, and that the proposed reforms would lead to “a lot more federal spending, a lot more FCC regulation and a lot more government involvement in broadband.”<sup>104</sup> Republicans might also adopt the position – advanced by the small rural telecommunication companies – that ending the High Cost Program's “all-comers” subsidy policy would diminish telecommunications competition in rural areas – reducing customer choice and harming consumers. Moreover, many firms that currently “compete” in High Cost areas would likely go out of business – or at least abandon the locality – once the federal government commits to providing subsidies to only one firm per locality. Republicans might therefore criticize the reform proposal as a policy that would kill jobs in rural areas struggling to recover from an economic crisis.

Predicting the position of Tea Party Republicans is particularly difficult. The small-government movement might oppose the Universal Service Fund along with the proposed Connect America Fund and Mobility Fund because their revenues derive from fees imposed upon the consumer. The Tea Party might therefore agree with the Republican Commissioners that the size of the Fund should be limited in order to lighten the burden upon consumers. On the other hand, many Tea Party Republicans represent rural districts, which is where the High Cost Program directs most of its subsidies and service. As the newly proposed funds would attract even more infrastructure development to rural areas, rural Tea Party Republicans might support the reform effort in order to encourage infrastructure development for their own constituencies. The FCC is looking forward to informing Tea Party Republicans of the benefits that they might reap from Universal Service Fund reform. But, if the judicial reception of net neutrality proposals are a harbinger, the main opposition to Universal Service Fund reform is likely to come not from Congress but from the courts.

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<sup>104</sup> Grant Gross, *FCC to Take First Steps Toward Broadband Plan*, PCWORLD.COM (April 6 2010) available at [http://www.pcworld.com/article/194422/fcc\\_to\\_take\\_first\\_steps\\_toward\\_broadband\\_plan.html](http://www.pcworld.com/article/194422/fcc_to_take_first_steps_toward_broadband_plan.html).



**The Center for Technology Innovation**

The Brookings Institution  
1775 Massachusetts Ave., NW  
Washington, DC 20036  
Tel: 202.797.6090  
Fax: 202.797.6144  
<http://www.brookings.edu/techinnovation>

**Editor**

Christine Jacobs

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John S Seo

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