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Fairness and Equity of USF Contributions: A Balanced Approach

50+ Americans Transition to 21st Century Telecom Technologies

An Overview of Changes to FCC's Universal Service Contribution Approach

The FCC's 2011 *Connect America Fund* Order reoriented the universal service program to explicitly support broadband. In addition, the FCC capped the support for broadband deployment in high-cost areas at $4.5 billion per year. The FCC currently collects monies for the universal service program through surcharges that appear on customer bills. These surcharges apply to wireline and wireless voice services (local and long distance calls), but do not apply to many services that will benefit from the expanded broadband that the FCC will now explicitly support. Because the size of the fund is now fixed, the main issue is who will contribute to the fund.[1]

FAIRNESS

Older Americans and Contribution Under the Current Regime

Older Americans subscribe to both wireline and wireless telephones at higher combined rates than other age groups. As a result, older Americans are more likely to shoulder a disproportionate share of the contribution burden under the FCC's current approach to funding universal service.

Older Americans subscribe to broadband services at a lower rate than other age groups. As a result, older Americans have not benefited from the implicit support for broadband associated with the FCC's current approach to funding universal service. Broadening the contribution base will help to correct the inequities borne disproportionately by older Americans associated with the current contribution system.

Older Americans continue to rely heavily on wireline telephones, however, they also subscribe to wireless technology in large numbers. Figure 1, below, reports data regarding the presence of both wireline and wireless telephones in households by age group, based on the National Health Interview Survey.[2] The data in Figure 1 shows that older Americans in the 50 and above age groups rely on both wireline and wireless to a greater extent than other age groups. Figure 2, based on the same data source, shows the trend over time.

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[1] This summary was drawn from AARP's Comments and Reply Comments that were filed with the FCC on July 9, 2012 and August 6, 2012 in the matter of Universal Service Contribution Methodology and WC Docket No. 06-122 and A National Broadband Plan For Our Future GN Docket No. 09-51

[2] Figure 1 is based on the microdata for 2011released with the NHIS wireless survey. That data is available at: http://www.cdc.gov/nchs/nhis/quest_data_related_1997_forward.htm

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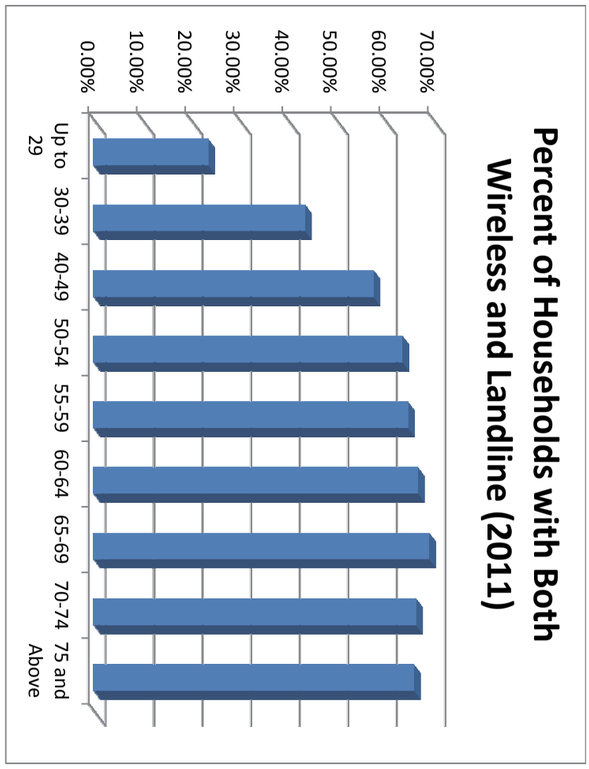

Figure 1: Use of Wireless and Landline Phone by Age Group

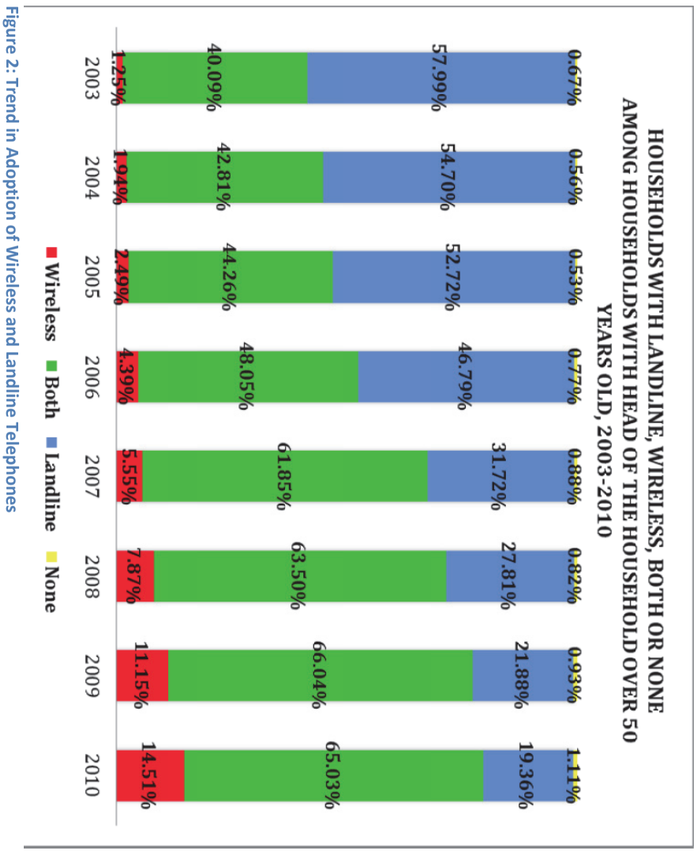

Figure 2: Trend in Adoption of Wireless and Landline Telephones

Overview of Published Research on Broadband Elasticity		
Study	**Method and Data**	**Broadband Own Price Elasticity. Source Year for Data in Parenthesis**
Cadman, R. & Dineen, C. (2008) Price and Income Elasticity of Demand for Broadband Subscriptions: A Cross-Sectional Model of OECD Countries. Mimeo. Available at: http://spcnetwork.eu/uploads/Broadband_Elasticity_Paper_2008.pdf	Ordinary Least Squares OECD Country Level Data	-0.43 (2007)
Flamm, K. & Chaudhuri, A. (2007). An analysis of the determinants of broadband access. *Telecommunications Policy*, 31(6-7), 312-326.	Logit Consumer Level Data	-0.22 (2002)
Goolsbee, A. (2006) The Value of Broadband and the Deadweight Loss of Taxing New Technology, 5 B.E. J. Econ. Analysis & Policy 1505.	Quadratic Linear Model Consumer Level Data	-2.75 (average) (1998-1999)
Goel, R. K., Hsieh, E. T., Nelson, M. A., & Ram, R. (2006). Demand elasticities for Internet services. *Applied Economics*, 38, 975–980.	Log-linear Model Country Level Data	-0.25 to -0.7 (2002)
Duffy-Deno, K. T. (2003). Business demand for broadband access capacity. *Journal of Regulatory Economics,* 24(3), 359–372.	Two-stage Model Firm Level Data	Overall: -0.4 Small Firms: -.056 Medium Firms: -.035 Large Firms: -0.26 (2000-2001)

For more information on "Fairness and Equity of USF Contributions: A Balanced Approach" Contact AARP Government Affairs, Federal Financial Security and Consumer Affairs Team, Marti T. Doneghy, mdoneghy@aarp.org (202) 434-3804

"Broadband adoption appears to have been largely immune to the effects of the current economic recession. In the April survey, more than twice as many respondents said they had cut back or cancelled a cell phone plan or cable TV service than said the same about their internet service."

(Home Broadband Adoption 2009, Pew Internet and American Life Project.)

Overview of Published Research on Broadband Elasticity

Study	Method and Data	Broadband Own Price Elasticity. (Source Year for Data in Parenthesis.)
Rosston, G. Savage, S. & Waldman, D. (2010). Household Demand for Broadband Internet Service in 2010. *B. E. Journal of Economic Analysis & Policy: Advances,* 10(1).	Probit Consumer Level Data	-0.44 (2010)
Glass, V. & Stefanova, S. (2010). An empirical study of broadband diffusion in rural America. *Journal of Regulatory Economics,* 38(1), 70-85. **"The low price elasticity found in the 2009 study indicates that broadband access has become more of a necessity than it used to be in 2005."**	Ordinary Least Squares Consumer Level Demographic Data, Advertised Prices	-0.66 (2005) -0.21 (2009)
Liu, H., Chintaguanta, P., Zhu, T. (2010). Complementarities and the Demand for Home Broadband Internet Services. *Marketing Science,* 29(4), 701–720.	Logit Consumer Level Data	DSL -1.21 (2003-2005) Cable Modem -1.50 (2003-2005)
Dutz, M., Orszag, J., & Willig, R. (2009). The Substantial Consumer Benefits of Broadband Connectivity for U.S. Households. Mimeo. Available at: http://internetinnovation.org/library/consumer_benefits_broadband_study/ **"This result indicates that broadband is progressively being perceived by those who are using it as a household necessity."**	Nested Logit Consumer Level Data	-1.53 (2005) -1.17 (2006) -0.88 (2007) -0.69 (2008)
Cardona, M., Schwarz, A., Yurtoglu, B., & Zulehner, C. (2009). Demand Estimation and Market Definition for Broadband Internet Services. *Journal of Regulatory Economics,* 35(1), 70-95.	Nested Logit Consumer Level Data (Austria)	Areas where cable and DSL are Available -2.61 to -2.48 (2006) Areas where only DSL and Dialup are Available -0.97 (2006)

An Expanded Contribution Base for an Expanded Suite of Telecom Technologies

Expanding Broadband Benefits Requires a Broad Contribution Base

There are two general "ends" to the broadband Internet—mass-market broadband connections utilized by residential end-users and small businesses, and connections utilized by the firms that provide or sell content and/or services over the Internet. These firms connect through high-speed dedicated access services, data center services, and/or content delivery networks. Under the FCC's new approach to universal service funding, last-mile broadband connections will receive support, and benefits will emerge for mass-market broadband customers. However, large businesses will gain new opportunities to provide their content or services to end users over the Internet, and the services that they utilize to connect should be assessed.

When defining the contribution base, all of the services that utilize the broadband Internet should be assessed.That is, all mass-market broadband services should be assessed, and all telecommunications and information services associated with the delivery of content and services should be assessed. The result of this approach will be a broad contribution base, and a smaller assessment factor.

AARP Supports the Potential Assessment Targets Identified in the FCC's FNPRM

With regard to the specific case-by-case services that the FCC identifies as candidates for assessment, AARP believes that each should be assessed:

Broadband Internet Access

The FCC will now support broadband, as specified in the *Connect America Fund Order*. Given this shift in support, it is absolutely essential that broadband services are assessed. It is highly inequitable for broadband services to receive support while broadband customers do not contribute to the fund. *Furthermore, failure to assess broadband will make the fund more difficult to sustain*. If the envisioned transition away from the public switched telecommunications network (PSTN) comes to pass, and the FCC fails to assess broadband access services, the contribution base will be constrained, and the achievement of the FCC's broadband deployment goals, particularly for the 50+, will be undermined.

Broadband adoption among older Americans continues to lag the adoption rates of other demographic groups. Increased availability of broadband at affordable rates will help close this gap. Table 1 shows the most recent data on broadband adoption from the Pew Internet Project:[3]

Table 1: Age Demographic Information from Pew Internet Project on Broadband Adoption

Age Range	Broadband Adoption Rate
18-29	80%
30-49	75%
50-64	65%
65+	31%

[3] Pew Internet, "Home Broadband 2010," p. 7. http://pewinternet.org/Reports/2010/Home-Broadband-2010.aspx

One-Way VoIP

The FCC has already recognized, in its *Interconnected VoIP Order*, that an interconnected VoIP firm, like Vonage, provides interstate telecommunications and should be assessed. The FCC found that this was the case whether the interconnected VoIP provider actually terminated any calls on the PSTN. The FCC should assess one-way VoIP providers that terminate calls on the PSTN.

Text Messaging Services

Text messaging services represent a hybrid of PSTN and emerging broadband applications. Because text messaging relies on the North American Numbering Plan for addresses, text messaging is already a beneficiary of the network effects that have been generated to date from the FCC's legacy universal service policies. However, as technology has changed, text messaging has branched out to leverage broadband infrastructure that will now be supported due to the FCC's change in focus. Text messaging should be assessed.

Enterprise Services

Enterprise services, such as those identified by the FCC, benefit from the expanded network effects associated with supporting broadband and should be assessed. For example, virtual private network (VPN) services enable customers to establish secure connections utilizing broadband infrastructure, including supported last-mile broadband facilities. An employee of a company utilizing VPN services will be able to access the VPN over any broadband connection. Similarly, the user of a managed enterprise-grade dedicated IP hosting service will be able to reach more broadband end-users as a result of the FCC's new focus of expanding broadband access and improving broadband quality. Because enterprise services benefit from the expanded network effects arising from expanded broadband, they should be assessed.

The Assessment of Services Is Fair and Equitable

Assessment of Broadband Is Fair and Will Not Adversely Affect Broadband Demand

Evidence indicates that broadband services have inelastic demand, thus lessening the impact of universal service assessment on subscription. That broadband demand is inelastic is supported by academic research regarding broadband price elasticity. Furthermore, given the fixed size of the high-cost fund and an expanded contribution base, the contribution from currently-assessed services should be reduced. Consumers who already purchase voice and broadband services could see little change in their overall assessment.

Less Potential for Gaming When Revenues Continue as the Basis of Assessment

The use of a revenue-based method continues to be the best approach to assess contribution. Assessment based on revenues will promote administrative efficiency as identifying revenues associated with assessed services has less potential for gaming than connections-based or numbers-based alternatives. Assessing revenues will logically link the purchases made by consumers with the assessment, and will generate a more equitable outcome as those consumers who can afford to purchase more expensive services will contribute more than those consumers who cannot.

Using a connections-based or numbers-based approach is an unreasonable and patently unfair approach to assessment. Each of these alternatives has elements of a "head tax," which is regressive and fails to account for substantial differences in usage of services that are provided over supported facilities. Assessment based on connections ignores the qualitative differences in connections that are better captured in service prices, and thus in revenues. Furthermore, a numbers-based approach is based on a technological component (the North American Numbering Plan) that may not persist in its current importance.

Jurisdictional Issues

When reforming the universal service program, the FCC must take care to not adversely affect the ability of the states to separately establish universal service funding mechanisms, including mechanisms designed to extend the reach and quality of broadband. The FCC should not classify services or revenues as interstate unless there is compelling evidence that the services or revenues are associated with the interstate jurisdiction. It is appropriate for the FCC to establish an empirical basis for the jurisdictional division of traffic by using traffic studies, and to establish safe harbor provisions based on the evidence.

Transparent and Conspicuous Recovery of the Assessment from Consumers

AARP believes that it is appropriate to continue to require a separate line-item on consumer bills associated with the USF contribution. Should the contribution base be expanded, contributions will be reduced for current consumers of telecommunications services (who currently pay the USF surcharge), and will go up for other customers (those who currently do not pay a USF surcharge). It is not unreasonable to require service providers to flow-through these changes by allowing a line item. Allowing the line-item approach to continue would help ensure that service providers do not roll the decreased contribution into some other service charge that keeps the customer bill from decreasing, as it should. In addition, consumers who do not now pay the surcharge should be aware of the source of changes in their overall bill. AARP also supports the requirement of a dedicated area of the customer bill that identifies the assessable portion of the bill, the contribution factor, and the total assessment for the customer.

AARP addressed this and other issues in Comments filed with the FCC on July 9, 2012 and in Reply Comments filed on August 6, 2012. This summary is based on those comments.

For more information contact AARP Government Affairs, Federal Financial Security and Consumer Affairs Team, Marti T. Doneghy, mdoneghy@aarp.org (202) 434-3804