



MONTANA SHOULD URGE SCRUTINY AND REFORM OF THE UNIVERSAL SERVICE FUND SUBSIDY PROGRAMS

BRENT SKORUP

Senior Research Fellow, Technology Policy Project, Mercatus Center at George Mason University

In the Matter of the Investigation into Improving Transparency, Fostering Accountability, and Maintaining Quality Services for High-Cost Support and Lifeline Services in Montana

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After providing some brief background about the Universal Service Fund (USF), this comment explains that the USF's High-Cost Fund appears to be subsidizing increasingly costly landline telephony, even as subscribers switch to wireless services. Every USF dollar transferred from a wireless customer to an unneeded landline generates waste. An exploration into whether and why landline costs are increasing is needed. Further, the PSC might consider identifying which households lack any services and prioritize those households. Hopefully the PSC will call for dramatic, consumer-centered reforms of the USF.

USF BACKGROUND AND EVIDENCE OF WASTE

For complex political reasons that are irrelevant for the present discussion, the FCC and state public utility commissions in the 1950s agreed to start subsidizing "local phone loops" with long-distance phone revenues.¹ Congress ratified the practice of subsidizing local telecommunications

¹ Milton Mueller, *Universal Service: Competition, Interconnection and Monopoly in the Making of the American Telephone System* (Cambridge, MA: MIT/AEI Press, 2013), 161.

For more information, contact
Canyon Brimhall, Outreach Associate, Technology Policy Program
703-993-8205, cbrimhall@mercatus.gmu.edu
Mercatus Center at George Mason University
3434 Washington Boulevard., 4th Floor, Arlington, VA 22201

services with the passage of the 1996 Telecommunications Act and urged the FCC to ensure that rural customers have “reasonably comparable” phone and broadband services at “reasonably comparable” rates to urban areas.² In 1995, however, when the USF provisions were added to the draft Telecommunications Act, drafters in the House and Senate, as well as the Congressional Budget Office (CBO), expected the cost of USF programs to decrease over time, as well as the need for such programs.³

Two decades later, the results are in: not good. Despite the increase in phone and broadband competition, the program has grown, and USF collections from consumers have increased rapidly, not fallen. In 1999, the USF programs distributed about \$4.9 billion.⁴ (All dollar amounts in this comment are in 2017 dollars.) In 2015, USF payments had ballooned to about \$8.8 billion.⁵ The largest USF program has always been the High-Cost Fund, which was recently renamed the Connect America Fund and is the focus of this comment. Like the USF as a whole, high-cost support is increasing, not falling. In 1999, the High-Cost Fund distributed about \$2.6 billion.⁶ By 2015, it was about \$4.8 billion.⁷

The USF reveals the difficulty of cutting back on programs when the benefits are concentrated among a relatively small group of people and the costs are widely diffused among taxpayers.⁸ Given the high telephone penetration rates in Montana and in the United States, which exceeded 90 percent even in 1970,⁹ the addition of a household to the national phone network since the creation of the USF has been costly.¹⁰ US carriers have received tens of billions of dollars of USF funds over two decades but increased phone penetration by only 2.4 percent.¹¹ (Montana saw a similarly small improvement in penetration.)¹² It’s unclear how much of the increased penetration can be attributed to USF subsidies since phone adoption rates are relatively insensitive to price changes.¹³

The costs of the program are diffuse, however. The USF payees (virtually every American household) are unorganized and unlikely to obtain reform. It has largely fallen to overworked

² 47 U.S.C. § 254; Mueller, *Universal Service*, 170.

³ “The Committee expects that competition and new technologies will greatly reduce the actual cost of providing universal service over time, thus reducing or eliminating the need for universal service support mechanisms as actual costs drop to a level that is at or below the affordable rate for such service in an area. . . .” S. Rep. No. 104-23 (1995); H. R. Rep. No. 104-204, pt. 1 at 60 (1995); “Over time, CBO expects . . . the total amount of [USF] subsidies necessary would decline.” Arnold & Porter Legislative History S. Rep. 104-104 at 60 (1995). This view was also expressed by Senator Ted Stevens during debate on the act: “In fact, I find it interesting that the Congressional Budget Office has said that this bill will reduce the cost of universal service from the existing system by at least \$3 billion over the next five years.” 141 Cong. Rec., S7881 (1995), Arnold & Porter Legislative History S. Rep 104-104 at 210 (1995).

⁴ FCC, *Universal Service Monitoring Report*, September 2000, 1 - 25, table 1.9a.

⁵ FCC, *Universal Service Monitoring Report*, 2016, 19, table 1.10.

⁶ FCC, *Universal Service Monitoring Report*, 2000, 1 - 25, table 1.9a.

⁷ FCC, *Universal Service Monitoring Report*, 2016, 18, table 1.9.

⁸ James Buchanan and Gordon Tullock, *The Calculus of Consent: Logical Foundations of Constitutional Democracy* (Ann Arbor, MI: University of Michigan Press, 1962).

⁹ FCC, *Universal Service Monitoring Report*, 2013, 43, table 3.4.

¹⁰ Former FCC economists Thomas Hazlett and Scott Wallsten estimate that “each additional household is added to voice networks at an annual USF cost of about \$25,000.” Thomas W. Hazlett and Scott J. Wallsten, *Unrepentant Policy Failure: Universal Service Subsidies in Voice & Broadband* (Arlington, VA: Arlington Economics, 2013), 25.

¹¹ FCC, *Universal Service Monitoring Report*, 2016, 52, table 6.7.

¹² In 1996, when the USF was established, 94.3 percent of Montana households had telephones. In 2015, telephone penetration in Montana had risen to 96.5 percent. See FCC, *Universal Service Monitoring Report*, 2016, 52, table 6.7.

¹³ After reviewing the literature, economist Jerry Ellig noted that there is “very little evidence that the cost of monthly service affects telephone penetration rates, even for low-income households.” Jerry Ellig, “Intercarrier Compensation and Consumer Welfare,” *University of Illinois Journal of Law, Technology & Policy* 1 (2005): 97, 101.

public officials, like commissioners at the FCC and the Montana PSC, to protect the public from excessive or unnecessary payments to telecommunications companies, schools, libraries, and hospitals.

FEWER SUBSCRIBERS, YET MORE MONEY

The PSC asks whether the USF “subsidies, by reducing incentives to innovate and economize, actually inhibit effective buildout of rural, insular, or high-cost areas. . . .”¹⁴

USF subsidies to Montana are increasing, but the subsidies appear to be poorly targeted. Telecom companies in Montana in 2015 received reimbursement from at least seven High-Cost Fund support programs,¹⁵ so generalization is necessary, but the ultimate effect of these programs is to subsidize rural telecom providers in order to provide their customers lower phone rates. The following analyzes high-cost support as a whole, which is increasing even as the number of subsidized lines falls.

Per-line subsidies in Montana appear to be increasing substantially. In 1999, Montana telephone companies were supporting about 540,000 local loops.¹⁶ Those telephone companies received about \$65.0 million for high-cost support,¹⁷ or \$120 per line. Ten years later, in 2009, Montana telecom companies were supporting about 354,000 local loops.¹⁸ Despite this loss of one-third of local loops since 1999, in 2009, USF funding to Montana companies had increased by over 40 percent. In 2009, Montana telephone companies received about \$93.3 million for high-cost support,¹⁹ or \$264 per line.

In 2015, Montana telephone companies received about \$100 million for high-cost support.²⁰ The FCC’s annual *USF Monitoring Report* reports post-2009 data differently than data from before 2009, but the data suggest that subsidized carriers are serving fewer customers at higher per-line cost. Local landline phone companies received over 90 percent of high-cost support in 2016.²¹ In 2016, these companies received about \$92 million in high-cost support and collectively served 233,000 landline customers,²² which comes to about \$395 per line.

In short, the USF program as currently structured is sending more public money to maintain increasingly expensive legacy networks used by fewer subscribers. Why is this occurring? There may be good reasons (such as increased compliance costs or increased equipment costs

¹⁴ Montana Public Service Commission, *Notice of Investigation and Opportunity for Comments*, Docket No. N2017.10.82, November 9, 2017.

¹⁵ These are high-cost loop support, safety net additive support, interstate common line support, forward-looking high-cost model support for CETCs, CAF Intercarrier Compensation support, Mobility Fund Phase I support, and Connect America Cost Model support.

¹⁶ FCC, *Universal Service Monitoring Report*, 2005, 3 - 32, table 3.20.

¹⁷ FCC, *Universal Service Monitoring Report*, 2005, 3 - 27, table 3.15.

¹⁸ FCC, *Universal Service Monitoring Report*, 2010, 3 - 31, table 3.17.

¹⁹ FCC, *Universal Service Monitoring Report*, 2010, 3 - 29, table 3.15.

²⁰ FCC, *Universal Service Monitoring Report*, 2016, 18, table 1.9.

²¹ These are known as “incumbent local exchange carriers” in telecommunications policy.

²² *Federal Universal Service Support Mechanisms Fund Size Projections for First Quarter 2016* (Washington, DC: Universal Service Administrative Company, 2015); *Federal Universal Service Support Mechanisms Quarterly Contribution Base for the First Quarter 2016* (Washington, DC: Universal Service Administrative Company, 2015); FCC, “Voice Telephone Services Report,” accessed January 18, 2018, <https://www.fcc.gov/voice-telephone-services-report>, Supplemental Table 1. Voice Subscriptions (in Thousands) - Montana.

or increased labor costs) for the increased per-line costs, but more PSC scrutiny may be appropriate in order to protect public and FCC trust in the high-cost support program. The PSC should examine these costs and determine whether the current payments are in fact advancing universal service objectives.

SUBSCRIBERS HAVE MOSTLY MOVED TO WIRELESS; USF SUBSIDIES HAVE NOT

The PSC asks if there are “market-based alternatives, or technologies other than fiber-based broadband, that more effectively accomplish the goals of” the universal service programs.²³

The current program requires examination in light of future trends, where consumers will increasingly substitute wireless services for wireline services. Wayne Gretzky once counseled, “Skate to where the puck is going, not where it has been.” USF funding is largely directed to where regulators spotted the “puck” long ago: landline telephony. 2016 was a landmark year in US telecommunications history: the CDC for the first time found that most households only had wireless phone service.²⁴ Subsidizing landline phone service distorts the marketplace more every year as consumers “cut the cord” on phone and broadband.

In 2016, Montana telecom companies received about \$100 million from High-Cost Fund support programs.²⁵ Over 90 percent of that \$100 million went to companies offering landline phones.²⁶ In 1996, when nearly every household was landline only, this made sense. But in 2016 only about 10 percent of Montana households were landline only.²⁷ The vast majority of Montanans use mobile phones at home, and nearly half of Montana households (46.4 percent) are wireless only.²⁸ Wireless-only households will only continue to increase in number. Most Montana households with children under 18 are wireless only, and under 4 percent of those households are landline only.²⁹

Only about 8 percent of high-cost support went to wireless providers in 2016. In most of Montana, unsubsidized cellular carriers are competing with, and even winning customers from, subsidized landline phone companies. The FCC’s most recent wireless competition report finds that cellular networks cover nearly every household in the United States. Among rural census blocks, 99.8 percent have some cellular coverage, and over 90 percent of rural census blocks have three or more providers.³⁰ Given Montana’s size and geography, cellular coverage is likely lower (but still high).

The FCC does not report cellular coverage at the household level, and identifying households without wireless or landline service would be a valuable inquiry for the PSC to ensure that USF funds are prioritized for those households that still lack services.

²³ Montana Public Service Commission, *Notice of Investigation and Opportunity for Comments*.

²⁴ CDC, National Center for Health Statistics, *National Health Interview Survey Early Release Program*, 2016, 2.

²⁵ FCC, *Universal Service Monitoring Report*, 2016, 18, table 1.9.

²⁶ *Federal Universal Service Support Mechanisms Fund Size Projections for First Quarter 2016; Federal Universal Service Support Mechanisms Quarterly Contribution Base for the First Quarter 2016*.

²⁷ CDC, National Center for Health Statistics, *National Health Interview Survey Early Release Program*, 2017, 1, table 1.

²⁸ CDC, National Center for Health Statistics, *National Health Interview Survey Early Release Program*, 2017.

²⁹ CDC, National Center for Health Statistics, *National Health Interview Survey Early Release Program*, 2017, 3, table 2.

³⁰ FCC, *Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, Including Commercial Mobile Services*, September 27, 2017.

Finally, the PSC should embrace an all-of-the-above strategy when it comes to communications services, not a “fiber-only” policy. A “fiber-only” policy commits taxpayers to inordinate expense, especially when fiber broadband is extended to rural customers in mountainous areas. GAO examined federal broadband projects and found that, while laying fiber in “plowed” dirt could cost as little as \$12,000 per mile, laying fiber through solid rock raises costs to over \$500,000 per mile.³¹ Given Montana’s mountainous terrain and low population density, improving wireless deployment will give ratepayers (and the PSC) more bang for their buck.

URGE USF FLEXIBILITY FROM THE FCC

The USF program should be reformed and retargeted to maximize consumer choice and minimize top-down distortions to the market. Economists have long criticized the USF for its distortionary financing and waste.³² As Jerry Hausman and Howard Shelanski have said, “It is well established that targeted subsidies paid from general income tax revenues are often the most efficient way to fund specific activities.”³³

The program is far from ideal in its current structure, but the Montana PSC and legislature cannot rewrite federal statutes and regulations, of course. However, the PSC could use its influential position to urge flexibility from the FCC about how states may allocate USF funds within the state. The Telecommunications Act does not require the current complex system, and other interpretations are permissible. In particular, the FCC might consider allowing for a more voucher-like program as a way to increase broadband and phone adoption more transparently and efficiently than can be done with the present USF system. Jonathan Chambers, a former FCC official, recently outlined a plan to turn the existing high-cost support into a consumer-focused program.³⁴

Regulators might look abroad for alternative models. For example, lawmakers in the United Kingdom have implemented a broadband voucher scheme for households in rural areas in recent years.³⁵ Eligible households receive up to £350 (about \$430) annually to defray the cost of broadband service.³⁶ (Small and medium-sized businesses in rural areas receive larger vouchers.³⁷) Entire neighborhoods have organized to pool their subsidies, thereby inducing wireline providers

³¹ GAO, *Planning and Flexibility Are Key to Effectively Deploying Broadband Conduit through Federal Highway Projects 5*, GAO: 12-687R *Broadband Conduit Deployment*, 2012.

³² Scott Wallsten, *The Universal Service Fund: What Do High-Cost Subsidies Subsidize?* (Washington, DC: Technology Policy Institute, 2011); Jerry Ellig, “Intercarrier Compensation and Consumer Welfare,” 97, 101; Gregory L. Rosston and Bradley S. Wimmer, “The ‘State’ of Universal Service,” *Information Economics and Policy* 12, no. 261 (2000): 261-83; Jerry Hausman and Howard Shelanski, “Economic Welfare and Telecommunications Regulation: The E-Rate Policy for Universal-Service Subsidies,” *Yale Journal on Regulation* 16, no. 1 (1999): 19-51.

³³ Hausman and Shelanski, “Economic Welfare and Telecommunications Regulation,” 19, 33; Octavian Carare et al. find that “subscription discounts targeted at low-income households might have a significant impact on increasing adoption among low-income households.” “The Willingness to Pay for Broadband of Non-Adopters in the US: Estimates from a Multi-State Survey,” *Information Economics and Policy* 30 (2015): 19, 24.

³⁴ Jonathan Chambers, “To Jumpstart Broadband Buildout, Let Consumers Decide Who Gets FCC Subsidies,” *Daily Yonder*, March 29, 2017.

³⁵ UK Department for Culture, Media and Sport, *Guide to the Better Broadband Subsidy Scheme*, 2017.

³⁶ UK Department for Culture, Media and Sport, *Guide to the Better Broadband Subsidy Scheme*.

³⁷ Mark Jackson, “UK Government Preps New Rural Business Broadband Voucher Scheme,” *ISP Review*, February 27, 2017.

to build new, high-capacity networks.³⁸ Vouchers can simultaneously be generous and less costly than the current programs because vouchers are targeted.

USF's defects are mitigated or absent when consumer subsidies—vouchers—are used. Vouchers make transfers more transparent, which increases oversight and accountability. Since vouchers enhance consumer control, the government is not funding duplicative broadband networks and “gold-plated” services.³⁹ This avoids building duplicative networks that the vast majority of broadband nonadopters are uninterested in using.⁴⁰

³⁸ Mark Jackson, “UPD BT Make Use of 2Mb USC Subsidy to Rollout Rural FTTC Broadband,” *ISP Review*, November 7, 2016.

³⁹ Wallsten finds that about 60 percent of rural telephone subsidies go to “general and administrative expenses.” “The Universal Service Fund.”

⁴⁰ Pew Research finds that about 70 percent of nonsubscribers have no interest in subscribing. See John B. Horrigan and Maeve Duggan, *Home Broadband 2015* (Washington, DC: Pew Research Center, 2015), 7.