



Report to the Chairman, Committee on
Energy and Commerce, House of
Representatives

October 2020

TELECOMMUNICATIONS

FCC Should Enhance Performance Goals and Measures for Its Program to Support Broadband Service in High-Cost Areas

GAO Highlights

Highlights of [GAO-21-24](#), a report to the Chairman, Committee on Energy and Commerce, House of Representatives

Why GAO Did This Study

Millions of Americans do not have access to broadband. Within the Universal Service Fund, FCC's high-cost program provided about \$5 billion in 2019 to telecommunications carriers to support broadband deployment in unserved areas where the cost to provide broadband service is high. In 2011, FCC established five performance goals and related measures for the high-cost program.

GAO was asked to review the high-cost program's performance goals and measures. This report examines: (1) the extent to which the program's performance goals and measures align with leading practices to enable the effective use of performance information and (2) the key challenges selected stakeholders believe FCC faces in meeting the program's goals. GAO reviewed FCC's program goals and measures and assessed them against applicable criteria, including GAO's leading practices for successful performance measures. GAO interviewed FCC officials and representatives from industry, tribal carriers, consumer advocates, and other stakeholders, to obtain a variety of non-generalizable viewpoints.

What GAO Recommends

GAO is making four recommendations, including that FCC should ensure its high-cost program's performance goals and measures align with leading practices and publicly report on progress measured toward the goals. FCC concurred with all four recommendations.

View [GAO-21-24](#). For more information, contact Andrew Von Ah at (202) 512-2834 or vonaha@gao.gov.

October 2020

TELECOMMUNICATIONS

FCC Should Enhance Performance Goals and Measures for Its Program to Support Broadband Service in High-Cost Areas

What GAO Found

The Federal Communications Commission (FCC) has a program, known as the high-cost program, to promote broadband deployment in unserved areas. Although the performance goals for the high-cost program reflect principles in the Telecommunications Act of 1996, not all of the goals are expressed in a measurable or quantifiable manner and therefore do not align with leading practices. Furthermore, FCC's measures for its performance goals do not always align with leading practices, which call for measures to have linkage with the goal they measure and clarity, objectivity, and measurable targets, among other key attributes. For example, as shown below for two of FCC's five goals, GAO found that FCC's measures met most, but not all, of the key attributes. By establishing goals and measures that align with leading practices, FCC can improve the performance information it uses in its decision-making processes about how to allocate the program's finite resources. Leading practices also suggest that agencies publicly report on progress made toward performance goals. FCC does so, however, only in a limited fashion, which may lead to stakeholder uncertainty about the program's effectiveness.

Examples of FCC's Performance Measures Compared with a Selection of Key Attributes of Successful Performance Measures

Goal 1 & 2	Performance measure examples	Examples of key attributes of successful performance measures						
		Linkage	Clarity	Objectivity	Targets	Reliability	Limited overlap	Balance
Preserve and advance voice service	Telephone penetration rate, which measures subscription to telephone service	✗	✗	✓	✗	✓	✓	✓
Ensure universal availability of voice and broadband to homes, businesses, and community anchor institutions	Number of residential, business, and community anchor institution locations that newly gain access to broadband services	✓	✓	✓	✗	✗	✓	✓

✓ The measure fully met the key attribute
 ✗ The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

According to stakeholders GAO interviewed, FCC faces three key challenges to accomplish its high-cost program performance goals: (1) accuracy of FCC's broadband deployment data, (2) broadband availability on tribal lands, and (3) maintaining existing fixed-voice infrastructure and attaining universal mobile service. For example, although FCC adopted a more precise method of collecting and verifying broadband availability data, stakeholders expressed concern the revised data would remain inaccurate if carriers continue to overstate broadband coverage for marketing and competitive reasons. Overstating coverage impairs FCC's efforts to promote universal voice and broadband since an area can become ineligible for high-cost support if a carrier reports that service already exists in that area. FCC has also taken actions to address the lack of broadband availability on tribal lands, such as making some spectrum available to tribes for wireless broadband in rural areas. However, tribal stakeholders told GAO that some tribes are unable to secure funding to deploy the infrastructure necessary to make use of spectrum for wireless broadband purposes.

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Abbreviations

ARRA	American Recovery and Reinvestment Act
CAF	Connect America Fund
ETC	eligible telecommunications carrier
FCC	Federal Communications Commission
GPRA	Government Performance and Results Act
GPRAMA	GPRA Modernization Act of 2010
HUBB	High Cost Universal Broadband
PUC	public utility commission
the 1996 Act	Telecommunications Act of 1996
USF	Universal Service Fund

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October 1, 2020

The Honorable Frank Pallone
Chairman
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

The internet's ability to provide access to businesses, government, education, telemedicine, and other services while limiting in-person contact during the Coronavirus Disease 2019 (COVID-19) pandemic highlights how important access to broadband is for Americans.¹ However, millions of Americans do not have broadband access. Federal law directs the Federal Communications Commission (FCC) to encourage broadband deployment throughout the country.² To support broadband deployment in unserved areas, FCC provided \$4.98 billion in 2019 through the Universal Service Fund's (USF) high-cost program to telecommunications carriers that offer broadband and voice services in areas that are costly to serve.³ These areas are typically rural or remote and increase carriers' infrastructure costs due to challenges, such as difficult terrain and longer distances between consumers. These areas also often have fewer consumers overall, further limiting carriers' abilities to offset infrastructure costs with end-user revenue.

¹Broadband commonly refers to internet service with speeds generally faster than dial-up connections. In this report, we are using "broadband" to refer to the fixed speed benchmark for determining advanced services capability in FCC's Broadband Deployment Report, which is 25 megabits per second (Mbps) download and 3 Mbps upload. *In re Inquiry Concerning Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion*, 2020 Broadband Deployment Report, FCC 20-50 (Apr. 20, 2020) (2020 Broadband Deployment Report).

²Telecommunications Act of 1996, Pub. L. No. 104-104, § 706, 110 Stat. 56, 153 (1996) (codified, as amended, at 47 U.S.C. § 1302(a)-(b)).

³USF provides funding through four different programs, each with a specific focus on increasing access to voice and broadband services. In addition to the high-cost program, there are the following three programs: the Lifeline program provides subsidies to help lower income Americans afford voice and broadband service; the E-Rate program provides subsidies to help schools and libraries afford broadband; and the Rural Health Care program provides subsidies to help connect rural healthcare providers to voice and broadband services.

In its 2011 USF Transformation Order, FCC established five performance goals and associated measures for the high-cost program.⁴ The goals reflect principles set forth in the Telecommunications Act of 1996 (the 1996 Act).⁵ Having well-designed performance goals—with appropriate measures—is important because it better enables agencies to make data-driven decisions to more effectively use available funding. In FCC’s case, well-designed performance goals and appropriate measures would help the agency better use the high-cost program’s funds to meet the program’s aim of universal availability of voice and broadband.

In recent years, FCC has undertaken a variety of efforts to encourage broadband deployment, such as introducing new ways to allocate high-cost support to carriers and has made progress toward connecting Americans to broadband internet. However, FCC’s most recent broadband deployment report estimated that, in 2018, nearly 18.3-million Americans lacked access to fixed terrestrial broadband.⁶ Further, access to broadband on rural tribal lands, where carriers may face more challenges meeting FCC’s high-cost program eligibility requirements, continued to lag.⁷ Those without broadband access are especially disadvantaged during COVID-19: to minimize the spread of the disease, many care systems, government entities, businesses, educational institutions, restaurants, and other merchants have transitioned some or all operations online.

You asked us to review FCC’s performance goals and measures for the high-cost program. This report examines:

- the extent to which the high-cost program’s performance goals and measures align with leading practices to enable the effective use of performance information, and

⁴*In re Connect America Fund, Report and Order and Further Notice of Proposed Rulemaking*, FCC 11-161, para. 17 (Nov. 18, 2011) (“USF/ICC Transformation Order”), *aff’d sub nom In re: FCC 11-161*, 753 F.3d 1015 (10th Cir. 2014).

⁵Pub. L. No. 104-104, § 254(b), 110 Stat. at 71 (codified at 47 U.S.C. § 254).

⁶Our prior work has found that FCC’s current broadband deployment data lack accuracy and overstate the number of Americans with access to broadband, so the number without access might be higher. See GAO, *Broadband Internet: FCC’s Data Overstate Access on Tribal Lands*, GAO-18-630 (Washington, D.C.: Sept. 7, 2018).

⁷2020 Broadband Deployment Report 2020 WL 2013309, *34 para. 94, FCC 20-50 (2020).

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- the key challenges selected stakeholders believe FCC faces in meeting the high-cost program's goals.

To address these objectives, we reviewed and analyzed relevant federal and state statutes and regulations, including FCC orders.⁸ We also reviewed relevant documents, such as FCC documentation related to high-cost program goals and measures, and how that information is reported to the public, in addition to reports and comments written by industry and consumer associations in response to FCC filings and proposed rulemakings. We also met with a non-generalizable selection of telecommunications stakeholders to obtain their views on the challenges FCC faces in meeting the program's goals. The stakeholders include associations representing consumers and carriers; different types of carriers (including carriers participating and carriers not participating in the high-cost program, and carriers providing broadband service through a variety of technologies, such as coaxial cable, fiber optic cable, and satellite); tribal carriers and associations; state regulatory commissions; and industry consultants. We also interviewed economists who are knowledgeable about USF to obtain their views. In total, we interviewed 41 stakeholders to cover a range of viewpoints. We interviewed these stakeholders to also obtain their views on how the high-cost program's eligibility requirements affect the types of carriers that may participate in the high-cost program; this information is presented in appendix I.

We assessed how FCC's five goals and their seven measures⁹ for the high-cost program aligned with applicable leading practices.¹⁰ We also assessed whether FCC's measure related to the USF contribution factor aligned with applicable user-fee leading practices related to equity and revenue,¹¹ and whether FCC follows applicable leading practices for

⁸We reviewed the 2011 USF Transformation Order, in addition to other orders that implemented different support mechanisms within the high-cost program, as well as state-specific regulations. USF/ICC Transformation Order FCC 11-161 paras. 484, 489.

⁹One of the five goals has three measures.

¹⁰Our leading practices related to performance goals and measures are found in the following two reports: GAO, *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, [GAO/GGD-10.1.20](#) (Washington, D.C.: April 1998) and GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, [GAO-03-143](#) (Washington, D.C.: Nov. 22, 2002).

¹¹GAO, *Federal User Fees: A Design Guide*, [GAO-08-386SP](#) (Washington, D.C.: May 29, 2008).

reporting performance information to stakeholders.¹² We surveyed state public utility commissions to collect viewpoints on how effective certain eligibility requirement reforms would be; we received responses from 89 percent of survey recipients. Appendix II describes our scope and methodology in greater detail.

We conducted this performance audit from November 2019 to October 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The 1996 Act specifies that consumers in “rural, insular, and high-cost areas” should have access to telecommunication rates and services that are “reasonably comparable” to consumers in urban areas.¹³ Unless exempted by FCC, the 1996 Act requires telecommunications carriers providing interstate and international telecommunications services to contribute to the USF.¹⁴ The carriers generally pass these costs on to customers, and the costs may be a line item expense on customers’ bills. Revenues from the provision of broadband service are not assessed for contributions to the USF.

Within the USF, the high-cost program provides subsidies (referred to as “support”) to both fixed and mobile carriers that provide voice and broadband services in areas that carriers would otherwise not serve and where there is no competition from other unsubsidized carriers.¹⁵ The high-cost program has been the largest USF program based on disbursements and has been particularly important to rural areas. High-cost support is intended to offset the carriers’ higher costs, thereby

¹²GAO, *Managing for Results: A Guide for Using the GPRM Modernization Act to Help Inform Congressional Decision Making*, [GAO-12-621SP](#) (Washington, D.C.: June 15, 2012).

¹³Pub. L. No. 104-104, § 254(b)(3), 110 Stat. at 72 (codified at 47 U.S.C. § 254(b)(3)).

¹⁴47 U.S.C. § 254(d).

¹⁵Fixed carriers are providers of voice and broadband services with connections to fixed locations at customer premises, such as residences. Mobile carriers are providers of wireless telecommunications services outside of a fixed location, such as cellular phone service.

allowing them to provide services at rates that are reasonably comparable to those that consumers in lower cost, typically urban areas are offered.

The high-cost program was developed pursuant to the 1996 Act to promote the universal deployment of voice service. In the 2011 USF Transformation Order, FCC significantly reformed the high-cost program to focus support to carriers for broadband-capable networks.¹⁶ The order required carriers that receive support to meet broadband speed and quality deployment requirements, and also introduced performance goals for the high-cost program.¹⁷ The goals FCC introduced relate to maximizing voice and broadband availability, minimizing the amount contributors pay into the USF, and ensuring that the rates carriers offer to consumers in high-cost areas are reasonably comparable to rates in other areas. FCC developed seven measures to track progress toward these goals.

According to FCC, carriers receive about \$5 billion in annual support from the high-cost program to deploy voice and broadband infrastructure in the carriers' service areas. The high-cost program provided support to carriers through the following kinds of support mechanisms at the time of our review:

- Legacy rate-of-return: FCC provides support to some carriers, called rate-of-return carriers, in a manner that allows them to recover eligible costs of service and earn a predetermined rate of return on eligible investments. These carriers are traditionally small, rural carriers that serve 5 percent or less of U.S. households. For example, the Cheyenne River Sioux Telephone Authority is a tribally owned rate-of-return carrier in South Dakota. Funding mechanisms that support legacy rate-of-return carriers include inter-carrier compensation support and traditional cost-based support in exchange for defined deployment obligations.
- Model-based support: FCC provides model-based support to price cap carriers and other carriers, such as small rural carriers, in exchange for defined deployment obligations. Price cap carriers are typically large carriers that are subject to price-cap regulation, such as AT&T.¹⁸ This support to price cap carriers ends in 2021, at which

¹⁶USF/ICC Transformation Order, FCC 11-161, paras. 17, 22, 65, 145.

¹⁷USF/ICC Transformation Order, FCC 11-161, para. 17.

¹⁸Price cap regulation is a form of rate regulation wherein the carrier may charge rates for regulated services up to an allowable cap.

point FCC intends to allocate support using an auction instead. In addition, FCC uses the same cost model with different funding parameters for many of the small, rural carriers. These small rural carriers must deploy broadband to a specific number of high-cost locations. FCC will continue to provide this support until at least 2029. These support mechanisms are the Connect America Cost Model and the Alternative Connect America Cost Model for price cap carriers and rural carriers, respectively.

- Auction support: FCC also awards support to carriers through a competitive-bidding process referred to as a reverse auction. For this support, carriers commit to deploy broadband in eligible high-cost areas and meet defined deployment and service quality standards for the least amount of high-cost support bid at the auction. FCC conducted an auction that allocated \$1.5 billion in high cost funding in 2018 and FCC plans to conduct another auction in October 2020 that will allocate up to \$16 billion. These support mechanisms are the Connect America Fund Phase II auction and the forthcoming Rural Digital Opportunity Fund.

As summarized in table 1, the program’s support mechanisms have different timeframes and vary depending on the type of service provided, area served (e.g., price cap or rate-of-return), when the support mechanism was adopted, and how carriers are compensated (e.g., some prospectively support carriers’ planned deployment, while others retroactively offset carriers’ deployment costs).

Table 1: Summary of the Federal Communications Commission’s (FCC) Universal Service Fund High-Cost Program Support Mechanisms as of October 2020

Support mechanisms listed alphabetically ^a	Description of support mechanism	2018 support in millions
5G Fund for Rural America (in rule-making process)	In April 2020, FCC issued a Notice of Proposed Rulemaking proposing \$9 billion in support in two phases to promote 5G mobile service deployment. This fund will replace legacy frozen ^b high-cost support, which is listed below.	Not applicable (N/A)
Alternative Connect America Cost Model	Provides model-based support to legacy rate-of-return carriers over 10-year support terms based on estimates of future costs in exchange for specific deployment obligations. The model uses a variety of factors, including historical cost information and geographic features of service areas, to calculate support amounts for each eligible service area.	\$584
Connect America Cost Model	Provides model-based support to price cap carriers over 6 years to carriers based on estimates of future costs in exchange for specific deployment obligations. This model is slated to end at the end of 2020, and carriers may receive an optional 7th year of support.	\$1,544

Support mechanisms listed alphabetically ^a	Description of support mechanism	2018 support in millions
Connect America Fund Phase II auction	In 2019, this support mechanism began providing \$1.5 billion in support over 10 years with specific deployment obligations. This support mechanism first distributed support in 2019, and recipients were winners of a competitive-bidding process FCC refers to as a reverse auction.	N/A
Inter-carrier compensation support	Offsets revenue shortfalls legacy rate-of-return carriers incur in providing access to their networks to other carriers.	\$412
Legacy frozen ^b high-cost support	Provides 60 percent of the high-cost support level that mobile carriers were receiving when this support was frozen in the 2011 USF Transformation Order.	\$383
Rural Digital Opportunity Fund (pending)	Slated to provide \$20.4 billion in support over 10-year support terms in two phases for fixed broadband service targeting areas without access to broadband. To receive funds, carriers will participate in a competitive-bidding process, Phase I of which is scheduled to begin in October 2020. This fund will replace the Connect America Cost Model, listed above.	N/A
Traditional cost-based support	Provides the opportunity to recover a predetermined rate of return of 10.00 percent to legacy rate-of-return carriers based on eligible costs related to voice and broadband infrastructure deployment.	\$1,424

Source: GAO analysis of FCC documentation. | GAO-21-24

^aThis table does not include the following support mechanisms: (1) legacy frozen support provided to fixed competitive eligible telecommunications carriers, which is being phased out as Connect America Fund Phase II auction winners are authorized; (2) frozen support provided to carriers serving some of the non-contiguous areas of the United States, such as carriers serving Alaska, Puerto Rico, and the U.S. Virgin Islands.

^b"Frozen" support refers to a level of support that FCC has capped at a specified level and which does not increase.

The 1996 Act establishes that only carriers designated as eligible telecommunications carriers (ETC) may receive high-cost USF support.¹⁹ States generally have the responsibility of designating ETCs. States may establish their own ETC requirements as long as they supplement and are not otherwise inconsistent with the FCC's rules to preserve and advance universal service.²⁰ FCC designates ETCs in certain specified situations, including where the state lacks authority, such as for mobile carriers in some states or for some tribal lands. The 1996 Act, among

¹⁹47 U.S.C. § 254(e).

²⁰Further, a state may adopt regulations with additional definitions and standards to preserve and advance universal service within that state only to the extent that such regulations adopt additional specific, predictable, and sufficient mechanisms to support such definitions or standards that do not rely on or burden the federal universal service's support mechanism. 47 U.S.C. § 254(f).

other things, establishes that an ETC must offer an evolving level of telecommunications services throughout its designated service area.²¹

In addition to statutory and regulatory requirements associated with ETC designation, the high-cost program's support mechanisms also include specific features that FCC calls public interest obligations, which are unique to each mechanism, such as those related to meeting specific speed, service quality, and deployment timeframes. For example, the Connect America Fund (CAF)²² Phase II auction established minimum baseline quality parameters for the broadband services that carriers must offer.²³ CAF Phase II auction also required, among other things, carriers to obtain a letter of credit so that FCC could recover program funds in the event the carrier failed to meet its deployment obligations.

The High-Cost Program's Performance Goals, Measures, and Reporting Do Not Fully Align with Leading Practices

According to our leading practices, effective organizations implement two practices that help manage program performance.²⁴ First, effective organizations set performance goals that clearly define intended program outcomes. The Government Performance and Results Act (GPRA), as enhanced by the GPRA Modernization Act of 2010 (GPRAMA), states that performance goals should be objective, quantifiable, and

²¹47 U.S.C. § 214(e)(1).

²²CAF is a fund established by FCC to pair public funding with private investment to help expand broadband infrastructure nationwide.

²³These quality parameters include the requirements for speed and latency. Speed is the rate at which data are transferred, and is measured in Mbps. Latency refers to the amount of time it takes for data to travel from a computer to a server or other connection and back again. A high-latency network connection experiences long delay times, which can affect the performance of some services.

²⁴[GAO/GGD-10.1.20](#).

measurable.²⁵ Although GPRAMA's requirements apply at the departmental level (e.g., FCC), we have previously stated that they can serve as leading practices at the program level.²⁶ Second, effective organizations establish performance measures that clearly link with the performance goals. In addition, leading practices for the use of performance information include externally communicating performance information to stakeholders, including Congress.²⁷

FCC has established five broad goals for the high-cost program that reflect principles in the 1996 Act, but we found that the language of these goals and measures does not meet all of the leading practices for developing goals or measures. Additionally, in some cases we found FCC's high-cost program reporting lacks information related to progress made toward meeting the performance goals.

The 1996 Act set forth several principles applicable to the high-cost program, including promoting the universal availability of "advanced" voice and broadband services at reasonable rates throughout the country.²⁸ In the 2011 USF Transformation Order, FCC established the following five performance goals for the high-cost program:

- Preserve and advance universal availability of voice service.
- Ensure universal availability of voice and broadband to homes, businesses, and community anchor institutions.
- Ensure universal availability of mobile voice and broadband where Americans live, work, or travel.

²⁵Pub. L. No. 103-62, 107 Stat. 285 (1993), as enhanced by Pub. L. No. 111-352, § 3, 124 Stat. 3866, 3867 (2011) codified at 31 U.S.C. § 1115(b)(2), (6). See also, GAO, *Agencies' Strategic Plans under GPRA: Key Questions to Facilitate Congressional Review*, [GAO/GGD-10.1.16](#) (Washington, D.C.: May 1997) and GAO, *Executive Guide: Effectively Implementing the Government Performance and Results Act*, [GAO/GGD-96-118](#) (Washington, D.C.: June 1, 1996).

²⁶See, for example, GAO, *Environmental Justice: EPA Needs to Take Additional Actions to Help Ensure Effective Implementation*, [GAO-12-77](#) (Washington, D.C.: Oct. 6, 2011). See also, [GAO/GGD-10.1.16](#) and [GAO/GGD-96-118](#). In its 2011 USF Transformation Order, FCC acknowledged the relevance of GPRA to establishing clear performance goals and measures for the high-cost fund program.

²⁷[GAO-12-621SP](#); [GAO/GGD-96-118](#).

²⁸47 U.S.C. § 254(b).

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- Ensure that rates are reasonably comparable in all regions of the nation, for voice as well as broadband services.
 - Minimize the universal service contribution burden on consumers and businesses.

Although all of the FCC officials and most stakeholders we interviewed agreed that the goals generally reflect important and appropriate strategic objectives for the high-cost program, we found FCC's performance goals did not fully align with the leading practices described above. Although FCC officials told us that these performance goals directly link to the 1996 Act's principles, and FCC labels its five goals as performance goals, the goals, as written, are not expressed in quantifiable or measurable terms.²⁹ The goals contain overlapping language about the availability of voice service without differentiating how, if at all, each goal considers voice services differently. For example, one goal is to preserve and advance voice service, and another calls for universal availability of voice service. Further, these five goals are not expressed in a quantifiable or measurable manner. For example, FCC has a goal to ensure that rates are reasonably comparable in all regions of the nation, for voice as well as broadband services. This goal does not, however, quantify or otherwise state what it means for FCC to "ensure" this outcome. The lack of performance goals that are quantifiable and measurable might hinder FCC's ability to demonstrate whether it achieves desired high-cost program outcomes.

Measuring performance allows organizations to track the progress they are making toward their goals and gives managers critical information upon which to base decisions for improving their programs.³⁰ For measures to be useful for performance management, they should reflect certain key attributes, summarized in table 2.

²⁹These performance goals link with the 1996 Act's principles; however, in formulating these goals FCC did not replicate the 1996 Act's principles verbatim. FCC retains the authority to revise these goals at its discretion.

³⁰[GAO-03-143](#).

Table 2: Key Attributes of Successful Performance Measures

Attributes	Definitions	Potentially adverse consequences of not meeting the attribute
Linkage	Measure is aligned with division and agency-wide goals and mission and clearly communicated throughout the organization.	Behaviors and incentives created by measures do not support achieving division or agency-wide goals or mission.
Clarity	Measure is clearly stated, and the name and definition are consistent with the methodology used to calculate it and does not contain extraneous data elements or omit key ones.	Data could be confusing and misleading to users.
Measurable target	Measure has a numerical goal.	Whether performance is meeting expectations is difficult to assess.
Objectivity	Measure is reasonably free from significant bias or manipulation and indicates what is to be observed, in which population or conditions, and in what timeframe, and to be free of opinion and judgment.	Performance assessments may be systematically over- or understated.
Reliability	Measure produces the same result under similar conditions.	Reported performance data are inconsistent and adds uncertainty.
Core program activities	Measure covers the activities that an entity is expected to perform to support the intent of the program.	Not enough information available in core program areas to managers and stakeholders.
Limited overlap	Measure should provide new information beyond that provided by other measures.	Manager may have to sort through redundant, costly information that does not add value.
Balance	Balance exists when a suite of measures ensures that an organization's various priorities are covered.	Lack of balance could create skewed incentives when measures over-emphasize some goals.
Government-wide priorities	Each measure should cover a priority such as quality, timeliness, and cost of service.	A program's overall success is at risk if all priorities are not addressed.

Source: GAO. | GAO-21-24

In assessing FCC's performance measures against these key attributes, we found that FCC's measures met most, but not all, of the attributes. For example, the performance measures address the high-cost program core activities (e.g., the measures pertain to the availability of relevant voice and broadband services at affordable rates) and government-wide priorities (i.e., the measures address concerns such as cost, affordability, and quality). Further, the measures balance competing considerations. For instance, expanding the availability of services is considered alongside measures of cost (e.g., FCC measures the expenditures of the program per American household). The measures also assess unique dimensions of performance and therefore are not redundant with one another. However, as described below, the measures for each of FCC's goals lacked some combination of linkage, clarity, and objectivity, and all lacked targets. FCC officials told us that FCC has other methods of

evaluating progress in areas related to the high-cost program’s activities, such as monitoring whether carriers are meeting infrastructure deployment obligations, and that these methods in some cases are sufficient for monitoring the program’s progress. While that may be true for certain funding mechanisms within the high-cost program, those specific measurements do not enable FCC to report publicly on its progress toward the overall goals of the program, as defined in the 2011 USF Transformation Order.³¹

As shown in figure 1, the performance measure for goal 1 aligns with six of nine key attributes for successful performance measures.

Figure 1: Federal Communication Commission’s High-Cost Program Goal 1 Performance Measure Compared with Key Attributes of Successful Performance Measures

Goal 1	Performance measure	Key attributes of successful performance measures								
		Linkage	Clarity	Objectivity	Targets	Reliability	Core program activities	Limited overlap	Balance	Government-wide priorities
Preserve and advance voice service	Telephone penetration rate, which measures subscription to telephone service									

The measure fully met the key attribute The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

Overall assessment for goal 1: While FCC’s measure of telephone service subscriptions links to the goal regarding advancing voice service, the measure does not link to or have clarity with respect to preserving voice service. Without such a measure, FCC lacks clear data on preserving voice infrastructure. Additionally, FCC has no targets related to this measure. Targets related to preserving and advancing voice service, such as specific percentages or annual increases of households with access to either mobile or fixed-voice service, would enable FCC to establish a threshold for determining when intervention may be required

³¹FCC defined the five performance goals and four of its measures in the 2011 USF Transformation Order. FCC defined measures for the high-cost program performance goals 2, 3, and 4 subsequent to the 2011 USF Transformation Order on its online progress portal.

to ensure consumers' continued access to acceptable levels of voice service.

As shown in figure 2, the performance measure for goal 2 aligns with seven of nine key attributes for successful performance measures.

Figure 2: Federal Communication Commission’s High-Cost Program Goal 2 Performance Measures Compared with Key Attributes of Successful Performance Measures

Goal 2	Performance measures	Key attributes of successful performance measures								
		Linkage	Clarity	Objectivity	Targets	Reliability	Core program activities	Limited overlap	Balance	Government-wide priorities
Ensure universal availability of voice and broadband to homes, businesses, and community anchor institutions	A) Number of residential, business, and community anchor institution locations that newly gain access to broadband services; B) Change in the number of homes, businesses, and community anchor institutions passed or covered per million Universal Service Fund dollars spent; C) High-speed internet penetration by state	✓	✓	✓	✗	✗	✓	✓	✓	✓

 The measure fully met the key attribute
  The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

Overall assessment for goal 2: FCC’s three measures all lack targets. For instance, the measure regarding the number of residential, business, and community anchor institution locations that gained new access to broadband service lacks a specified target number for each of those three categories that FCC seeks to connect in a given year or some other timeframe. Further, regarding the reliability of measures related to broadband availability, the mapping data FCC uses for its measure are self-reported by carriers. Accurate data about deployment are necessary to evaluate whether carriers are in fact meeting deployment obligations.

As shown in figure 3, the performance measure for goal 3 aligns with five of nine key attributes for successful performance measures.

Figure 3: Federal Communication Commission’s High-Cost Program Goal 3 Performance Measure Compared with Key Attributes of Successful Performance Measures

Goal 3	Performance measure	Key attributes of successful performance measures								
		Linkage	Clarity	Objectivity	Targets	Reliability	Core program activities	Limited overlap	Balance	Government-wide priorities
Ensure universal availability of mobile voice and broadband where americans live, work, or travel	Number of wireless-only voice households by state									

The measure fully met the key attribute
 The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

Overall assessment for goal 3: The current measure for this goal is the number of wireless-only voice households by state. This goal has little linkage with the goal’s intent of ensuring availability outside of the household—where people “work or travel”—since this measure does not address the extent to which mobile service is available outside of homes. Further, the measure does not have clarity because its focus on “wireless-only” households is extraneous and does not have objectivity because it may exhibit a preference for a particular outcome, such as the adoption of wireless-only service. Moreover, this measure does not have targets. Without clear measures that link to the intent of the goal, FCC lacks useful data on its efforts toward meeting this goal.

As shown in figure 4, the performance measure for goal 4 aligns with eight of nine key attributes for successful performance measures.

Figure 4: Federal Communication Commission’s High-Cost Program Goal 4 Performance Measure Compared with Key Attributes of Successful Performance Measures

Goal 4	Performance measure	Key attributes of successful performance measures								
		Linkage	Clarity	Objectivity	Targets	Reliability	Core program activities	Limited overlap	Balance	Government-wide priorities
Ensure reasonably comparable rates for broadband and voice services	Number of eligible telecommunications carriers certifying they are in compliance with voice or broadband reasonable comparability requirements	✓	✓	✓	✗	✓	✓	✓	✓	✓

 The measure fully met the key attribute
  The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

Overall assessment for goal 4: FCC collects information on rates offered by carriers for voice and broadband service through a survey of carriers. Based on this price information, FCC sets a “reasonably comparable” nation-wide range of acceptable rates for these services. FCC measures its goal of ensuring “reasonably comparable rates” by counting the total number of carriers who self-certified that they are meeting reasonable comparability requirements. FCC lacks any targets related to this measure. However, a target establishing a threshold, such as a specific percentage of total carriers charging within the acceptable range, may enable FCC to determine when intervention is required.

As shown in figure 5, the performance measure for goal 5 aligns with five of nine key attributes for successful performance measures.

Figure 5: Federal Communication Commission’s High-Cost Program Goal 5 Performance Measure Compared with Key Attributes of Successful Performance Measures

Goal 5	Performance measure	Key attributes of successful performance measures								
		Linkage	Clarity	Objectivity	Targets	Reliability	Core program activities	Limited overlap	Balance	Government-wide priorities
Minimize universal service contribution burden on consumers and businesses	The amount of the total inflation-adjusted expenditures of the high-cost program and Connect America Fund each year divided by the number of American households as a monthly dollar figure									

The measure fully met the key attribute The measure did not fully align with the key attribute

Source: GAO analysis of Federal Communications Commission documentation. | GAO-21-24

Overall assessment for goal 5: FCC has not set a target for this measure’s per-household expenditure amount. The USF is funded by contributions from telecommunications service providers and certain other providers of interstate telecommunications based upon a percentage of their interstate and international end-user revenues (the contribution factor). As mentioned, the cost of these contributions is typically passed on to consumers. FCC revises the contribution factor on a quarterly basis so that contributions are sufficient to cover the projected costs of the USF programs. Absent a target, this factor has grown from about 6 percent of interstate and international voice end-user revenues in 2000 to over 26 percent in 2020. Further, with no set target, contributors may continue to pay increasing rates in the future. Additionally, the measure does not properly link with the goal of minimizing the burden borne by contributors to the USF because the measure evaluates expenditures on a per-American household basis and does not specifically evaluate expenditures on those households that contribute to the fund. Therefore, the measure also lacks objectivity because it may misstate the contribution borne by actual contributors. Last, despite the goal’s focus on both consumers and businesses, the measure does not have clarity because it does not address the burden borne by businesses.

Our leading practices on user fees say, among other things, that agencies should take into account equity and sustainability considerations when

collecting fees to fund programs.³² However, it does not appear that FCC has taken equity and sustainability considerations into account for its goal and measure for minimizing the universal service contribution burden. For example, according to economists and stakeholders we interviewed, the way the contribution factor is assessed may raise equity concerns. For instance, a consumer advocacy group said the factor functions like a “regressive tax,” which is a tax that is not sensitive to the income levels of consumers and businesses.³³ Additionally, the high-cost program, according to various stakeholders, has focused relatively more on broadband than on voice services in recent years. According to some stakeholders, this situation raises equity concerns because those demographics paying into the USF—users of mobile and fixed-voice services—pay for USF’s support for broadband services, which they may not use. For example, an economist said lower income and older Americans may be more likely to rely solely on voice connections than other demographic groups.

Furthermore, because the factor is drawn from a diminishing base, an economist, and industry and consumer advocacy group stakeholders we interviewed expressed concerns about the sustainability of USF funding. As the base has diminished, FCC historically has increased the contribution factor to offset any decline in revenue. An economist we spoke with noted that these resulting higher charges might have the effect of incentivizing even more people to avoid paying into the fund by avoiding voice services. FCC officials told us they have received a 2019 recommendation from the state members of the Federal-State Joint Board on Universal Service³⁴ to expand the USF contribution base to include broadband, which some stakeholders believe may reduce the burden on consumers of voice services.³⁵ At the time of our review, FCC

³²[GAO-08-386SP](#).

³³Fees on telephone services are regressive because they are more likely to constitute a larger percentage of lower income households’ income than that of higher income households.

³⁴The Federal-State Joint Board on Universal Service makes recommendations to implement the universal service provisions of the Telecommunications Act. This Joint Board is comprised of FCC commissioners, state utility commissioners, and a consumer advocate representative.

³⁵State members of the Federal-State Joint Board on Universal Service, *In the Matter of Federal State Joint Board on Universal Service, Universal Service Contribution Methodology, A National Broadband Plan For Our Future* (Washington, D.C.: Oct. 15, 2019).

officials said there was a pending review of this contribution reform, but they did not provide a timeframe for completing it.

As noted above, leading practices include externally communicating performance information to stakeholders, but we found that FCC does not report externally on how the performance information it collects pertains to all its stated performance goals. This situation may result in stakeholder uncertainty about whether FCC's efforts to promote access to voice and broadband service have been successful. FCC reports information related to the high-cost program, such as the total support it disburses and the change in the percentage of Americans with broadband access. FCC told us it has taken steps to increase the availability of deployment information through the High-Cost Universal Broadband (HUBB) portal. FCC officials told us this method is how FCC reports on the high-cost program's performance. FCC does not, however, report performance information related to all of the high-cost program's performance goals and measures through the HUBB, nor through other means of reporting. For example, a 2019 financial report for the high-cost program detailed support amounts but showed no linkage to the high-cost program's established goals or measures.³⁶ Similarly, neither FCC's 2020 Annual Broadband Deployment Report,³⁷ nor the 2019 Universal Service Monitoring Report,³⁸ nor the 2019 Annual Performance Report³⁹ discusses the high-cost program's five performance goals and related measures. As noted, FCC did establish a progress portal online for its performance goals, but, as of August 2020, FCC had not updated information published there since 2015.

Transparent and timely reporting on progress can assist external stakeholders in their decision-making. In the absence of publicly available performance information that speaks to FCC's progress on its performance goals, some stakeholders we interviewed were uncertain of the effectiveness of FCC's support mechanisms.

³⁶Universal Service Administrative Company, *2019 Annual Report*, (Washington, D.C.: Mar. 31, 2020).

³⁷*2020 Broadband Deployment Report*, FCC 20-50.

³⁸*2019 Universal Service Monitoring Report*, 2019 WL 7944817 F.C.C. (Feb. 4, 2020).

³⁹Federal Communications Commission, *Fiscal Year 2019 Annual Performance Report*, (Washington, D.C.: Feb. 10, 2020).

Selected Stakeholders Identified Key Challenges FCC Faces in Meeting Some High-Cost Program Performance Goals

When we asked stakeholders if FCC faces challenges to accomplish the high-cost program's performance goals, they identified three key challenges related to the program's aim of promoting universal voice and broadband service: (1) accuracy of FCC's broadband deployment data, (2) availability of broadband in tribal lands, and (3) maintaining existing fixed-voice infrastructure and attaining universal mobile service.

Accuracy of FCC's Broadband Deployment Data

As previously mentioned, we have reported concerns with FCC's ability to accurately report broadband availability based on FCC's reliance primarily on the Form 477 deployment data⁴⁰ to evaluate consumers' broadband options for fixed and mobile services.⁴¹ FCC's efforts to allocate broadband support require accurate broadband availability data to identify areas without broadband and where support is needed. To help improve data collection efforts, FCC adopted the Digital Opportunity Data Collection in August 2019.⁴² The Digital Opportunity Data Collection is intended to collect granular, precise data on the availability of fixed broadband service and to use crowdsourcing and feedback directly from state, local, and tribal government entities as tools to verify carrier-reported broadband deployment data.⁴³ Signed into law on March 23, 2020, the Broadband Deployment Accuracy and Technological Availability Act (Broadband Data Act) directs FCC to issue final rules within 180 days for collecting data on both fixed and mobile broadband

⁴⁰Form 477 is a standardized form with which FCC collects state-by-state information on local telephone service competition and broadband deployment.

⁴¹GAO, *FCC Should Take Additional Action to Manage Fraud Risks in Its Program to Support Broadband Service in High-Cost Areas*, [GAO-20-27](#) (Washington, D.C.: Oct. 23, 2019).

⁴²*In re Establishing the Digital Opportunity Data Collection Modernizing the FCC Form 477 Data Program*, Report and Order and Second Further Notice of Proposed Rulemaking, 2019 WL 3716422, 34 FCC Rcd. 7505 (Aug. 6, 2019).

⁴³This effort is subject to Paperwork Reduction Act approval and will take effect after FCC's Office of Economics and Analytics issues a public notice announcing the availability of the new data collection platform and filing deadlines.

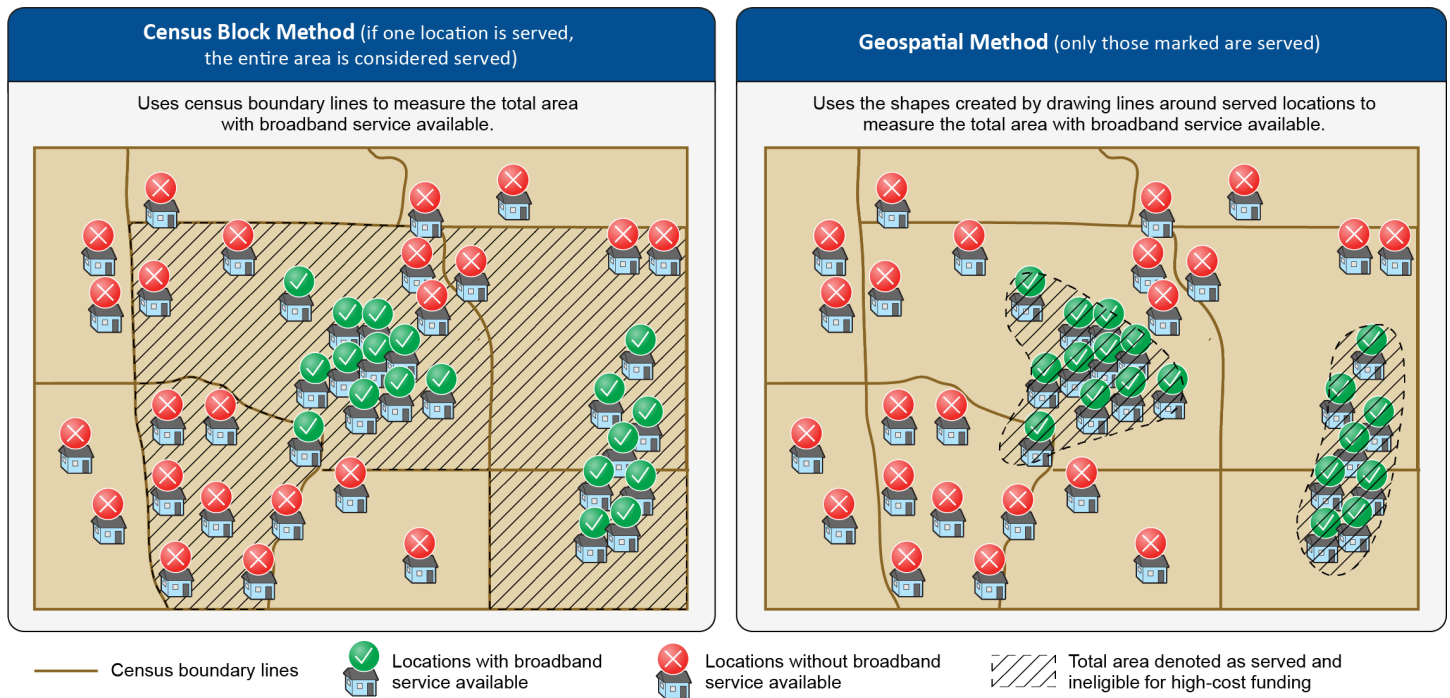
availability.⁴⁴ According to FCC officials, FCC was in the process of implementing the Broadband Data Act at the time of our review. However, the officials also noted that FCC could not begin collecting the new data until Congress appropriates funding for this work.

In July 2020, FCC adopted the Digital Opportunity Data Collection Second Report and Order and Third Notice of Proposed Rulemaking, requiring providers of fixed broadband service to submit either geospatial data showing the areas where they make broadband service available or lists of addresses or locations that fall within their broadband coverage.⁴⁵ As shown in figure 6, this method differs from FCC's previous method of collecting data at the census block level, which can overstate broadband availability by considering broadband to be "available" for an entire census block if the provider could serve at least one location in the census block.

⁴⁴Pub. L. No. 116-130, 134 Stat. 228, 229 (2020) (codified at 47 U.S.C. § 642(a)).

⁴⁵*In re Establishing the Digital Opportunity Data Collection*, Second Report and Order and Third Further Notice of Proposed Rulemaking, FCC 20-94, paras. 12-31 (July 17, 2020).

Figure 6: Comparison of the Census Block Method to the “Geospatial” Coverage Method for Collecting Broadband Deployment Data



Source: GAO illustration of Federal Communications Commission’s data collection methods. | GAO-21-24

Although FCC’s Digital Opportunity Data Collection seeks to collect more precise data on the availability of fixed service, stakeholders we interviewed expressed concerns that this reform may not fully resolve the mapping inaccuracies in the data that carriers report to FCC. For example, stakeholders we interviewed remained concerned that the data would not be fully accurate because carriers still report their own data and FCC does not verify the location or quality of service provided. Further, stakeholders told us that carriers have incentives to overstate their coverage for marketing and competitive reasons. When carriers overstate broadband coverage in areas that are not served, the overstatement prevents other carriers from obtaining high-cost support to deploy broadband to the unserved areas and consumers may be left without broadband service.⁴⁶ FCC has encountered challenges with carriers’ self-reported data in the past. In one case, FCC did not proceed with an

⁴⁶According to FCC officials, FCC generally does not make high-cost support available if an unsubsidized carrier reports serving the area with voice and broadband.

auction for high-cost support to mobile carriers after an FCC investigation found that the geospatial coverage maps reported by several mobile carriers were overstated.⁴⁷ However, FCC notes that it does currently verify Form 477 deployment data and that the measures introduced in connection with the Digital Opportunity Data Collection will include several new mechanisms to verify the accuracy of the data. FCC officials also said that FCC believes Form 477 data on areas that lack broadband entirely are reliable, and accordingly are sufficient for purposes of implementing the Rural Digital Opportunity Fund.

Stakeholders also expressed concerns about crowdsourcing data. While some viewed crowdsourcing as a good idea, some stakeholders told us FCC might have a low level of participation among consumers if consumers are generally unaware of FCC's crowdsourcing data-collection efforts. These stakeholders suggested FCC's crowdsourcing efforts could benefit from increasing awareness of consumers' ability to report on their broadband availability after FCC is able to begin collecting crowdsourced data.

Availability of Broadband on Tribal Lands

FCC reported that in 2018, an estimated 28 percent of Americans living on tribal lands lack access to broadband services, compared to 6 percent of all Americans.⁴⁸ Furthermore, the gap in broadband access between rural areas and rural tribal lands is larger. In particular, FCC reported in 2018 that 47.1 percent of Americans living on rural tribal lands nationwide lack fixed broadband and mobile access, compared to 22.6 percent of rural Americans overall.⁴⁹

FCC has taken and is considering further actions to improve broadband deployment on tribal lands,⁵⁰ including the following:

- 2.5 GHz rural tribal priority window: Adopted in 2019, in exchange for buildout requirements, tribes in rural areas are able to obtain

⁴⁷*Mobility Fund Phase II Staff Maps Investigation Staff Report*, 2019 WL 6681947, *2 para. 7, FCC GN Dkt. No. 19-367 (Jan. 1, 2019).

⁴⁸*2020 Broadband Deployment Report*, 2020 WL 2013309 at *34 para. 94, FCC 20-50.

⁴⁹*2020 Broadband Deployment Report*, 2020 WL 2013309 at *19 para. 47, FCC 20-50. These numbers account for rural access to fixed broadband of at least 25/3 Mbps and mobile internet service of at least 5/1 Mbps.

⁵⁰*In re Transforming the 2.5 GHz Band*, Report and Order, 2019 WL 3065514, FCC 19-62 (2019).

spectrum usage rights in the 2.5 GHz band.⁵¹ The 2.5 GHz band is suitable for both mobile and fixed wireless broadband.

- Tribal operating expense relief: Adopted in 2018, to address the higher costs that legacy rate-of-return carriers typically face in serving tribal lands, FCC increased the amount of operating costs that the high-cost program will offset for carriers that predominantly serve tribal lands.⁵²
- Additional model-based support for locations on tribal lands: In 2018, FCC modified the Alternative Connect America Cost Model to increase support for carriers that serve tribal lands and qualify for funding from the model. It did so by lowering the model's estimates of expected carrier revenue in tribal lands relative to the model's estimates of revenues in other areas. FCC officials said FCC intended to increase the support offered to capture the unique challenges of deploying broadband to rural tribal lands by lowering this estimate specifically for carriers serving tribal lands.⁵³
- Request for comment: In October 2019, FCC issued a public notice seeking comment on the effectiveness of its guidance to facilitate coordination between tribal governments and ETCs.⁵⁴ Previously, in the 2011 USF Transformation Order, FCC adopted, among other things, an annual tribal engagement obligation for ETCs that receive high-cost funds in conjunction with service to tribal lands.⁵⁵

⁵¹FCC Public Notice, *Wireless Telecommunications Bureau Announces Procedures for 2.5 GHz Rural Tribal Priority Window*, 2020 WL 133090, WT Dkt.No. 18-120 (Jan. 6 2020).

⁵²*In re Connect America Fund*, 33 FCC Rcd 3602, 3603-04, para. 5 (Apr. 5, 2018).

⁵³See December 2018 Rate-of-Return Order, 33 FCC Rcd. at 11910-11 para 55.

⁵⁴FCC Public Notice, *Consumer and Governmental Affairs Bureau Seeks Comment on Effectiveness of Its Tribal Engagement Guidance and to Refresh the Record on Related Petitions for Reconsideration*, 2019 WL 5446387, DA-19-1055 (Oct. 21, 2019).

⁵⁵FCC determined that, at a minimum, the annual tribal engagement obligation for ETCs must include: (1) needs assessment and deployment planning; (2) feasibility and sustainability planning; (3) marketing services in a culturally sensitive manner; (4) rights-of-way processes, land-use permitting, facilities siting, environmental and cultural preservation and review processes; and (5) compliance with tribal business and licensing requirements. 47 C.F.R. § 54.313(a)(5). Covered ETCs are required to report annually on their engagement through an annual certification and summary of their compliance. USF/ICC Transformation Order, FCC 11-161 paras. 484, 487, & 489); 47 C.F.R. § 54.313(a)(5), (j). Annual filings are made on FCC Form 481.

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- Rural Digital Opportunity Fund to prioritize tribal lands: The fund prioritizes support going to carriers deploying broadband in rural tribal lands by having a \$10 per-location increased support cap for tribal areas. Similar to FCC's efforts to increase model-based support for serving tribal lands, FCC lowered revenue estimates for tribal lands for the Rural Digital Opportunity Fund as well, an action that increased support available for those areas included in the auction.⁵⁶ The fund also prioritizes areas lacking access to internet service faster than 10 Mbps download and 1 Mbps upload.⁵⁷ It also requires winning bidders to offer supported broadband and voice service to all eligible homes and small businesses within the awarded areas.⁵⁸
 - Tribal letter of credit waiver: Under certain circumstances, a tribal nation or tribally owned and controlled winning bidder that is unable to obtain a letter of credit can petition FCC to waive credit requirements normally required by other high-cost participants.⁵⁹

While FCC has made efforts to improve deployment of voice and broadband infrastructure on tribal lands,⁶⁰ stakeholders we spoke with expressed ongoing and unaddressed concerns about significant obstacles to deploy broadband infrastructure on tribal lands, including:

⁵⁶FC Public Notice, *Rural Digital Opportunity Fund Phase I Auction Scheduled For October 29, 2020; Notice and Filing Requirements and Other Procedures For Auction 904*, 2020 WL 3166244, *60 para. 220, FCC 20-77, (Jun. 11, 2020).

⁵⁷*In re Rural Digital Opportunity Fund Connect America Fund*, Report and Order, 2020 WL 756001, *2 para. 4, FCC 20-5 (Feb. 7, 2020) (*In Re Rural Digital Opportunity Fund*). The Rural Digital Opportunity Fund Phase I uses competitive bidding to target up to \$16 billion over 10 years to support up to gigabit speed broadband networks in areas that lack access to 25/3 Mbps broadband service.

⁵⁸*In re Rural Digital Opportunity Fund Connect America Fund*, Report and Order, 2020 WL 756001, at *16-17 paras. 45-48, FCC 20-5 (Feb. 7, 2020); 47 C.F.R. § 54.802(c). To account for the unique challenges of deploying in rural tribal communities, FCC stated it will use a funding threshold of \$30 per month that is consistent with the Tribal Broadband Factor for the Rural Digital Opportunity Fund Phase I auction. See *In re Connect America Fund.*, , Report and Order, Further Notice of Proposed Rulemaking, and Order on Reconsideration, 33 FCC Rcd. 11893, 11910-11, paras. 55-56 (Dec. 13, 2018) (December 2018 Rate-of-Return Order).

⁵⁹*In re Rural Digital Opportunity Fund*, 2020 WL 756001 at *36, para.109, FCC 20-5.

⁶⁰FCC aggregates federally recognized tribal lands into four categories: (1) the Lower 48 States, (2) Tribal Statistical Ares, (3) Alaskan Villages, and (4) Hawaiian Homelands. 2019 Broadband Deployment Report.

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- Overall geographic challenges: The extreme remoteness of some tribal lands makes even wireless broadband options cost prohibitive. Specifically, many rural tribal lands are more rugged, more remote, and more sparsely populated than non-tribal rural lands, which make construction of broadband infrastructure in these areas even more expensive. In addition, poor federal recordkeeping has left the location of other utilities on tribal lands, such as water lines and gas lines, poorly documented or entirely unknown.⁶¹ As a result, construction of communications infrastructure on tribal lands can cause inadvertent damage to these other utilities, requiring costly repairs and adding additional costs to survey the infrastructure for the exact location.
 - Lack of funding: Tribes often have limited access to credit. Consequently, even if tribal entities could gain access to spectrum in the 2.5 GHz band, they may still be unable to deploy infrastructure necessary to use this spectrum due to a lack of funding. To address funding constraints, several tribal entities we interviewed suggested that FCC establish a broadband fund specifically for tribal lands, by, for example, setting aside 5 percent of the USF to support and maintain broadband infrastructure on tribal lands.

Maintaining Existing Fixed-Voice Infrastructure and Attaining Universal Mobile Service

Stakeholders we interviewed also expressed concern about FCC's ability to maintain universal availability of fixed-voice service. They said that the high-cost program has shifted focus from voice to broadband, which may have contributed to declining voice network quality. Stakeholders identified several risks related to the availability and quality of fixed-voice service:

- Lack of carrier investment: Some industry stakeholders said that existing fixed-voice infrastructure—which is still essential for many consumers where mobile service is unavailable—is at risk of falling into disrepair. Specifically, a large carrier said that maintenance of existing fixed-voice networks is necessary in some of their high-cost areas, even though those areas were ineligible for support from the Connect America Cost Model or the CAF Phase II auction. Consequently, industry stakeholders told us that some carriers are effectively pushing more of their customers away from their landline networks and onto their mobile networks by not maintaining their landline networks. An official from a state's public utility commission expressed concerns about customers not having access to landline

⁶¹Report to the Federal Communications Commission from the Tribal Members of the Task Force, *Native Nations Communications Task Force: Improving and Increasing Broadband Deployment on Tribal Lands* (Adopted Nov. 5, 2019).

service because some medical equipment and accessibility equipment for deaf people is incompatible with mobile service.

- Shift to voice over internet technology: Some carriers shift consumers from traditional, copper-based fixed-voice connections to voice over internet alternatives. Stakeholders said some of these internet-based alternatives may provide significantly inferior service quality. For instance, if an internet-based voice service has high latency, there can be a significant delay between when a person speaks and when the audio is actually delivered.

Moreover, stakeholders we spoke with cited several challenges FCC faces in attaining universal availability of mobile service:

- Technological limitations: In April 2020, FCC proposed \$9 billion in funding to promote the deployment of 5G mobile service. The coverage area of some 5G antennas can be smaller than some 4G antennas. Accordingly, some of the highest speed 5G deployments will require a denser network of antennas. Several stakeholders believe the proposed 5G Fund for Rural America will not result in a sufficiently dense network of such higher speed antennas in rural areas. One stakeholder estimated that full deployment of 5G services in rural areas requires 300,000 towers. Currently, fewer than 120,000 towers are built in rural areas.⁶²
- Geographic challenges: Several representatives from rural carriers told us that deploying mobile service to the mountainous or remote areas where they provided service was difficult due to the costs and physical challenges associated with deploying in these areas.
- Inaccurate mobile-mapping data: Several representatives from rural carriers said that the mobile coverage data reported to FCC are inaccurate; one provider said that there are hours-long gaps in 4G or 3G service in areas that are reportedly served by carriers.

Regarding the challenges FCC faces with attaining universal mobile service, FCC officials noted that other 5G antenna with wider coverage

⁶²We previously reported that 5G deployment, especially high-band 5G networks, would likely widen the existing digital divide, particularly between urban and rural areas. Experts we convened told us that 5G networks that use high-band spectrum are likely to be first deployed in areas already equipped with much of the necessary infrastructure (i.e., fiber and power). These areas are generally more urban, densely populated, high-income areas as opposed to rural or low-income areas. GAO, *5G Deployment: FCC Needs Comprehensive Strategic Planning to Guide Its Efforts*, [GAO-20-468](#) (Washington, D.C.: Jun. 12, 2020).

areas are slated to be deployed to 90 percent of rural Americans by 2026. FCC also said it intends the Digital Opportunity Data Collection to improve the reliability and comparability of the mobile data submitted by carriers,⁶³ and FCC has sought comment on delaying the 5G Fund for Rural America until new mobile data are available from carriers.⁶⁴

Conclusions

The effective use of USF resources is critical given the importance of ensuring that Americans have access to voice and broadband services. Overall, FCC's high-cost program performance goals and measures are often not conducive to providing FCC with high-quality performance information. The performance goals lack measurable or quantifiable bases upon which numeric targets can be set. Further, while FCC's performance measures met most of the key attributes of effective measures, the measures often lacked linkage, clarity, and objectivity. Without such clarity and specific desired outcomes, FCC lacks performance information that could help FCC make better-informed decisions about how to allocate the program's resources to meet ongoing and emerging challenges to ensuring universal access to voice and broadband services. Furthermore, the absence of public reporting of this information leaves stakeholders, including Congress, uncertain about the program's effectiveness to deploy these services.

Recommendations for Executive Action

We are making the following four recommendations to FCC:

- The Chairman of FCC should revise the high-cost performance goals so that they are measurable and quantifiable. (Recommendation 1)
- The Chairman of FCC should ensure high-cost performance measures align with key attributes of successful performance measures, including ensuring that measures clearly link with performance goals and have specified targets. (Recommendation 2)
- The Chairman of FCC should ensure the high-cost performance measure for the goal of minimizing the universal service contribution burden on consumers and businesses takes into account user-fee leading practices, such as equity and sustainability considerations. (Recommendation 3)
- The Chairman of FCC should publicly and periodically report on the progress it has made for its high-cost program's performance goals,

⁶³*In re Establishing the Digital Opportunity Data Collection Modernizing the FCC Form 477 Data Program*, 2019 WL 3716422 at *24 para. 77, 34 FCC Rcd. 7505.

⁶⁴Establishing a 5G Fund for Rural America, 85 Fed. Reg. 31616, 31617 (May 26, 2020).

for example, by including relevant performance information in its Annual Broadband Deployment Report or the USF Monitoring Report. (Recommendation 4)

Agency Comments

We provided a draft of this report to FCC for review and comment. In written comments, reprinted in appendix III, FCC concurred with our recommendations. FCC stated that it is committed to closing the digital divide and that FCC appreciates our recommendations as it continues to make measurable and significant progress toward achieving that goal. Separately, FCC also provided technical comments, which we incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Chairman of FCC, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or vonaha@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

Sincerely yours,



Andrew Von Ah
Director
Physical Infrastructure

Appendix I: Selected Stakeholders Views on the High-Cost Program's Eligibility Requirements

Carriers are required by statute to be designated as an eligible telecommunications carrier (ETC) to receive high-cost support. To the extent carriers are unable to meet eligibility requirements, there may be high-cost areas that remain unserved. In this appendix, we present stakeholder views on the ETC designation process. Specifically, we present their views on whether the designation process is necessary, whether the process treats different kinds of carriers equitably, and whether the current statutory state-by-state designation process—versus a centralized, federal one—is preferable.

Stakeholders Generally Agreed Carrier Eligibility Requirements Are Necessary

Most stakeholders we interviewed believe that the requirements for ETC designation to participate in the high-cost program are reasonable and necessary. Some stakeholders said that the statutory and regulatory requirements associated with becoming an ETC help ensure the accountable use of federal funds and lead to better protections for consumers. Some stakeholders from industry said the public nature of Universal Service Fund (USF) support warrants requirements for ETC designation to help assure accountability. For example, one small, rural carrier told us that service and quality obligations for carriers are necessary. This carrier expressed concerns over the accountability of support from other broadband deployment programs. Specifically, the carrier said that broadband support from the American Recovery and Reinvestment Act (ARRA),¹ which did not include eligibility requirements similar to those associated with ETC designation, was not as effectively used as support from the high-cost program.² Another carrier, a nationwide price-cap carrier, told us that ETC requirements protect consumers by helping to ensure that the broadband services they receive meet baseline quality standards. A consumer advocacy group likewise said that each state uses its ETC designation requirements as a means to help protect consumers.

Similarly, economists we interviewed said that requirements for ETC designation are necessary safeguards that provide the Federal Communications Commission (FCC) with greater assurance that recipients of high-cost support are qualified. Such assurance, according to one economist, is especially important for high-cost support that is allocated in competitive-bidding processes, such as the Connect America

¹Pub. L. No. 111-5, § 6001(k)(1), 123 Stat. 115, 515-16 (2009).

²We reported on several challenges associated with overseeing ARRA's broadband funding. See GAO, *Recovery Act: Further Opportunities Exist to Strengthen Oversight of Broadband Stimulus Programs*, [GAO-10-823](#) (Washington, D.C.: Aug. 4, 2010).

Fund (CAF) Phase II auction and the forthcoming Rural Digital Opportunity Fund auctions. The economist said assurance is particularly important for auctions because auctions have high transaction costs associated with the administration of the auction and the submission and review of bids. FCC officials said that while it does not always mandate prior ETC designations in the pre-qualification process for FCC auctions, rigorous financial, ownership, and technical information must be provided in a pre-auction application prior to auction participation. Winning bidders in FCC USF auctions must also become designated ETCs prior to receiving authorization to receive support. An economist said that without any qualification process, FCC might face a higher likelihood that auction winners would be unqualified, potentially necessitating additional and costly auction rounds. Further, some economists told us that an approach that only includes penalties to ensure the accountable use of support would be weaker than an approach that includes an upfront qualification process, such as ETC designation. An economist stated that penalties, such as rescinding support provided to carriers, are often difficult in practice to impose since companies can, among other things, declare bankruptcy or pursue litigation to avoid repayment. Additionally, proving non-compliance with deployment and service quality obligations can also be challenging, further underscoring the importance of ensuring recipients of high-cost support are reliable and accountable prior to their receipt of support.

Some economists we interviewed noted that a drawback of the ETC designation requirement is that it may result in fewer participants in the high-cost program or disadvantage entrants, given some carriers may decline to adjust businesses practices to conform to the requirements for ETC designation. However, these economists noted that any costs associated with less competition and participation in the high-cost program are likely offset by benefits associated with greater assurance that support recipients will meet deployment and quality obligations. For example, one economist noted that such assurance is especially vital for those support mechanisms that operate over long periods, such as 10 years in the case of the CAF Phase II auction. Customers that are unserved or receive lower quality services in areas supported by such mechanisms may receive inadequate service for the duration of the support mechanism's operation, and therefore may have to wait for a subsequent support mechanism to receive broadband services.

Some Potential Program Participants Identified Challenges to Obtaining Support

The federal requirements for ETC designation in both statute³ and regulation⁴ do not impose restrictions on which kinds of facilities-based providers may receive ETC designation. FCC and many industry stakeholders we interviewed believe that the requirements are generally impartial with respect to which types of carriers or entities can gain ETC status. However, stakeholders from specific segments of the telecommunications industry do not believe that the federal requirements for ETC designation are impartial. In particular, representatives from the cable⁵ and satellite segments and tribal representatives believe that the requirements for ETC designation present barriers to their ability to participate in the high-cost program. Additionally, representatives from the satellite industry cited additional, satellite-specific requirements for CAF Phase II auction as examples of further barriers to satellite industry participation.

Cable. Representatives from a cable industry association and a cable company said that the requirements for ETC designation favor the incumbent traditional carriers of voice services. These representatives also noted that becoming an ETC subjects cable companies to state government regulatory requirements similar to the regulatory requirements for traditional telephone carriers, which are not well suited for their cable-based services. Additionally, a cable industry association wrote in a 2011 FCC filing that voice-related ETC requirements, such as those that require a carrier to provide voice service using the carrier's own facilities, are barriers to entry for cable companies. The filing said the requirements constitute barriers because some cable companies, instead of deploying their own voice network infrastructure, affiliate with other companies for the provision of voice services.⁶ Further, according to the cable company, the voice requirements associated with ETC designation are generally unnecessary. The representative stated that voice networks are already almost universally available in the nation, and therefore voice-related ETC requirements are no longer necessary. The cable industry association said that only one of the association's members is currently receiving high-cost support.

³47 U.S.C. § 214(e).

⁴47 C.F.R. § 54.202.

⁵Broadband service from cable companies is generally provided through the same coaxial cables that deliver television programming.

⁶*Ex Parte In re Connect America Fund*, FCC, WC Dkt. No. 10-90, (Oct. 21, 2011).

Satellite. Although two satellite companies successfully secured CAF Phase II auction support, representatives from satellite companies told us that satellite companies also face challenges to participating in the high-cost program, similarly to cable companies. With respect to the requirements for ETC designation, a satellite company told us that also providing voice services is costly because providing voice service introduces additional regulatory requirements similar to those for traditional telephone carriers. The representative from the company further noted that these additional regulatory requirements come with high compliance costs and are more burdensome than the regulatory requirements for broadband services.

Additionally, a satellite company and satellite association we spoke with stated that the CAF Phase II auction favored the participation of wired carriers such as fiber-based providers. For example, these companies cited a CAF Phase II auction penalty that lowered the overall score of satellite companies' bids due to FCC concerns over satellite networks' latencies.⁷ According to the association, this penalty made it more difficult for satellite companies to win when they faced competing terrestrial bids, and no satellite companies won where there was a terrestrial competitor. Another satellite company and the association said that the penalty led to less participation in the CAF Phase II auction support mechanism for the satellite industry overall. Further, according to a satellite industry association, the support mechanism's additional requirements that satellite companies conduct voice quality testing and meet minimum score requirements also posed an obstacle to participation. The association noted that this requirement in particular resulted in several potential satellite companies' decisions not to submit bids to the CAF Phase II auction. However, other stakeholders, such as an economist and industry representatives we interviewed, said that they believe satellite broadband and voice services historically have been relatively lower in quality than other types of services, so the weighting system the CAF Phase II auction used to lower the scores associated with a satellite company's bid was reasonable.

Carriers operating on tribal land. In addition to concerns raised by representatives from the cable and satellite industries, some tribal stakeholders also identified challenges with gaining high-cost program support. Due to the requirements for ETC designation, several tribal

⁷FCC Public Notice, *Connect America Fund Phase II Auction Scheduled for July 24, 2018, Notice and Filing Requirements and Other Procedures for Auction 903*, FCC 18-6 (Feb. 1, 2018).

stakeholders we spoke with said they faced barriers to participating in the high-cost program. A tribal stakeholder told us the statutory requirement that an ETC provide voice service may be difficult for some tribes or carriers serving tribal lands to meet. For example, service quality requirements related to latency can be difficult to meet if tribes rely on internet technology to provide voice service due to rugged terrain in some tribes' service areas. Further, in 2019 the Native Nations Communications Task Force recommended that FCC should support a statutory change to either allow ETC designations for tribal entities lacking voice services, or to eliminate the ETC designation as a requirement for receiving high-cost support altogether for tribal entities.⁸ The Native Nations Communications Task Force also asserts, similarly to some cable and satellite industry representatives, that the ETC regulatory requirements are costly and complex. A tribal association and a tribal representative also commented that working with states to obtain ETC designation can be challenging. The association said that although some states have established good processes to work with tribes seeking ETC designation, other states have not. Similarly, the tribal representative told us that some tribes do not have good working relationships with state governments and that these relationships can serve as barriers to obtaining ETC designation. At the time of this report, we had an additional review in progress examining USF support to tribal entities and carriers serving tribal lands.

State-By-State Basis for
ETC Designation Presents
Higher Regulatory Costs
for Companies That
Operate in Multiple States

Carriers generally apply for ETC designation in each state in which they receive high-cost support. Representatives from some carriers that provide service in multiple states said that each state might have its own ETC requirements, which result in a patchwork of regulations with which the carrier needs to comply. Certain states, according to some carriers we spoke with, have more burdensome state-specific requirements for ETC designation. For example, California's ETC designation requirements require ETCs to submit 2-year plans instead of the FCC's requirement for a single 5-year plan.⁹ These 2-year plans further include requirements for detailed maps illustrating planned deployment. One carrier said it avoided seeking ETC designation in certain states due to the higher burdens associated with regulatory oversight.

⁸Native Nations Communications Task Force, *Improving and Increasing Broadband Deployment on Tribal Lands: Report to the Federal Communications Commission*, (Washington, D.C.: November 2019).

⁹Adopting Comprehensive Procedures and Guidelines for Eligible Telecommunications Carrier Designation and Requirements for Eligible Telecommunications Carriers, Resolution T- 17002, (Cal. Pub. Util. Comm'n, May 25, 2006).

**Appendix I: Selected Stakeholders Views on
the High-Cost Program's Eligibility
Requirements**

According to some economists and carriers we interviewed, the compliance costs for carriers to participate in the high-cost program would decrease if a single FCC-administered federal ETC application process replaced the current state-by-state system. For instance, a satellite company told us that it would have to apply for ETC designation in dozens of states if the company were to seek ETC designation, a process that would result in high application costs. Another satellite company that has ETC status stated that working with state officials during the ETC designation process was challenging due to varying levels of expertise across the states. For example, the satellite company noted that some states understood satellite-based technologies but that other states needed guidance from the company to explain how satellite services would be able to conform to requirements for ETC designation.

Officials from state regulatory commissions expressed a variety of opinions on whether an FCC-administered federal ETC application process may lead to improvements to the current state-by-state ETC application process, but most thought that the current system's benefits outweighed its drawbacks. According to our state survey results, almost half of those respondents who replied to our questions about ETC designation indicated that federalizing the ETC application process would not likely increase efficiencies for state regulatory commissions. Seven respondents indicated that it would likely lead to efficiencies, 18 indicated it likely would not, 9 indicated it would likely have no impact one way or the other, and 6 did not know. Similarly, 40 percent of respondents indicated that federalizing the ETC application process would not likely increase efficiencies for applicants either. That is, 8 respondents indicated that it would likely lead to efficiencies, 16 indicated it likely would not, 8 indicated it would likely have no impact one way or the other, and 8 did not know.

Officials from some other states and a consumer advocacy organization expressed doubt that federal oversight would have as much vision into the operations of ETCs that states do, given that states may be more familiar with the operations of carriers within their boundaries. For example, one state official wrote in response to our survey that during the state's annual review of ETCs, the state works "with the providers to review their broadband expansion plans and make sure that adequate progress is being made by each company." FCC officials said federalizing the ETC designation process may have a limited effect since carriers would still have to work with state jurisdictions to get rights-of-way permits and other certifications necessary to deploy infrastructure.

Appendix II: Objectives, Scope, and Methodology

This report discusses: (1) the extent to which the high-cost program's performance goals and measures align with leading practices to enable the effective use of performance information, and (2) the key challenges selected stakeholders believe the Federal Communications Commission (FCC) faces in meeting the high-cost program's goals.

To determine the extent to which FCC has high-cost program performance goals and measures that align with leading practices to enable the effective use of performance information, we assessed whether the performance goals aligned with the Government Performance and Results Act (GPRA), as enhanced by the GPRA Modernization Act of 2010 (GPRAMA).¹ Although GPRAMA's requirements apply at the departmental level, we have previously stated that they can serve as leading practices at the program level.² We also compared FCC's measures for the high-cost program with our applicable leading practices for successful performance measurements.³ The leading practices have nine key attributes of successful performance measures: linkage, clarity, measurable targets, objectivity, reliability, core program activities, limited overlap, balance, and government-wide priorities. We evaluated the performance measures as worded in FCC's 2011 Universal Service Fund (USF) Transformation Order and on FCC's online progress portal against these key attributes. We also assessed whether one measure aligned with our applicable user-fee leading practices related to equity and revenue.⁴ We also determined that the risk assessment and information and communication components of internal control were significant to the objective, along with the underlying principles that management should define objectives clearly to identify

¹Pub. L. No. 103-62, 107 Stat. 285 (1993), as enhanced by Pub. L. No. 111-352, § 3, 124 Stat. 3866, 3867 (2011) codified at 31 U.S.C. § 1115(b)(2), (6). See also, GAO, *Agencies' Strategic Plans under GPRA: Key Questions to Facilitate Congressional Review*, [GAO/GGD-10.1.16](#) (Washington, D.C.: May 1997) and GAO, *Executive Guide: Effectively Implementing the Government Performance and Results Act*, [GAO/GGD-96-118](#) (Washington, D.C.: June 1, 1996).

²See, for example, GAO, *Environmental Justice: EPA Needs to Take Additional Actions to Help Ensure Effective Implementation*, [GAO-12-77](#) (Washington, D.C.: Oct. 6, 2011).

³GAO, *Tax Administration: IRS Needs to Further Refine Its Tax Filing Season Performance Measures*, [GAO-03-143](#) (Washington, D.C.: Nov. 22, 2002); GAO, *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, [GAO/GGD-10.1.20](#) (Washington, D.C.: April 1998).

⁴GAO, *Federal User Fees: A Design Guide*, [GAO-08-386SP](#) (Washington, D.C.: May 29, 2008).

risks, and use and communicate the necessary quality information to achieve objectives.⁵ We assessed the performance goals and measures to determine whether they were clearly communicated to stakeholders. We interviewed officials from FCC on the high-cost performance goals and measures outlined in the FCC's 2011 USF Transformation Order.⁶ We also interviewed FCC officials and other knowledgeable individuals about the program's goals and efforts to measure progress toward those goals.

To obtain stakeholders' views on challenges FCC faces in meeting the high-cost program goals, we conducted semi-structured interviews with a non-generalizable selection of telecommunications stakeholders, including associations representing consumers and industry, small and large telecommunications carriers, tribal carriers and associations, state regulatory commissions and associations representing them, and consultants. We identified stakeholders based on prior published literature, including filings with FCC, and other stakeholders' recommendations. We selected stakeholders to represent different types of carriers, including companies of different sizes (number of states in which the companies operate, number of subscribers); different types of technologies used for deploying broadband (including fiber, satellite, cable, Digital Subscriber Line, fixed-wireless, and mobile); different subsidy eligibility statuses; and different types of funding mechanisms (e.g., support provided to carriers based on estimates of future costs in exchange for specific deployment obligations, a predetermined rate-of-return of 10 percent to carriers based on eligible costs related to voice and broadband infrastructure deployment, and winning bids to deploy service in areas without service).

To develop the questions for these semi-structured interviews, we reviewed FCC's Broadband Deployment Report and Universal Service

⁵GAO, *Standards for Internal Control in the Federal Government*. [GAO-14-704G](#) (Washington, D.C.: Sep. 2014).

⁶USF/ICC Transformation Order, FCC 11-161.

Monitoring Report,⁷ and our prior reports.⁸ Additionally, we reviewed FCC’s orders establishing funding initiatives, such as the Rural Digital Opportunity Fund.⁹ We also conducted semi-structured interviews with economists from academia and the telecommunications industry, who are recognized for their thorough knowledge of and studies focused on universal service and equity issues. We selected these economists based on (1) whether they had published on these issues within the last 5 years, and (2) recommendations from other telecommunications stakeholders, including associations representing carriers, consumers, and state regulatory commissions.¹⁰ The results of these interviews are not generalizable to all stakeholders but provide insight on universal service issues. We also interviewed these stakeholders to obtain their views on how high-cost program eligibility requirements affect the types of carriers that may participate in the high-cost program (see app. I). Table 3 lists the stakeholders we interviewed.

Table 3: List of Interviewees

Stakeholder groups	Stakeholders
Associations representing telecommunications carriers	CTIA – The Wireless Association
	NCTA – The Internet & Television Association
	NTCA – The Rural Broadband Association
	Satellite Industry Association (SIA)

⁷In re Inquiry Concerning Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion, 2020 WL 2013309, FCC 20-50 (2020); FCC, *Universal Service Monitoring Report*, 2019 WL 7944817 F.C.C. (Sept. 1, 2019).

⁸GAO, *Telecommunications FCC Should Take Additional Action to Manage Fraud Risks in Its Program to Support Broadband Service in High-Cost Areas*, [GAO-20-27](#) (Washington, D.C.: Oct. 23, 2019); GAO, *Broadband Internet: FCC’s Data Overstate Access on Tribal Lands*, [GAO-18-630](#) (Washington, D.C.: Sep. 7, 2018); GAO, *Telecommunications: FCC Should Improve Monitoring of Industry Efforts to Strengthen Wireless Network Resiliency*, [GAO-18-198](#) (Washington, D.C.: Dec. 12, 2017); and GAO, *Tribal Broadband: Few Partnerships Exist and the Rural Utilities Service Needs to Identify and Address Any Funding Barriers Tribes Face*, [GAO-18-682](#) (Washington, D.C.: Sept. 28, 2018).

⁹In re Rural Digital Opportunity Fund Connect America Fund, Report and Order, FCC 20-5 (Feb. 7, 2020)

¹⁰Ackerberg, Daniel A., et al., “*Estimating the impact of low-income universal service program*”, *International Journal of Industrial Organization* 37 (2014); Glass, Victor and Tardiff, Timothy, “*The Federal Communications Commission’s rural infrastructure auction: What is hidden in the weeds?*”, *Telecommunications Policy* 43 (2019); Lyons, Daniel, “*Narrowing the Digital Divide: A Better Broadband Universal Service Program*,” *UC Davis Law Review* 52, no.2 (2019): 803-853.

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Stakeholder groups	Stakeholders
	USTelecom – The Broadband Association
	Wireless Internet Service Providers Association (WISPA)
Telecommunications carriers	Alpine Communications
	AMG Technology Investment Group LLC (dba NextLink)
	AT&T
	CenturyLink
	Comcast Corporation
	Frontier Communications
	Hughes Network Systems, LLC
	Midco Communications
	Mountain Rural Telephone Cooperative
	SpaceX
	U.S. Cellular
	Viasat, Inc.
	Windstream Communications
Consumer advocates	Free Press
	National Association of State Utility Consumer Advocates (NAUCA)
	Next Century Cities
	Public Knowledge
Tribal carriers and associations	Cheyenne River Sioux Telephone Authority
	Gila River Telecommunications, Inc.
	National Congress of American Indians (NCAI)
	National Tribal Telecommunications Associations (NTTA)
	Nez Perce Tribe Department of Technology Services
State regulatory commissions	California Public Utilities Commission
	Minnesota Public Utilities Commission
	New York Department of Public Services
Association representing state regulatory commissions	National Association of Regulatory Utility Commissioners (NARUC)
	NARUC Staff Subcommittee on State Universal Service Fund Administrators
Consultants	Moss Adams
	Jackson Thornton
Economists	Victor Glass, Rutgers University Business School
	Leslie M. Marx, Duke University, Fuqua School of Business
	Sarah Oh, Technology Policy Institute
	Timothy Tardiff, Advanced Analytical Consulting Group

Appendix II: Objectives, Scope, and Methodology

Stakeholder groups	Stakeholders
	Scott Wallsten, Technology Policy Institute
	Lawrence J. White, New York University, Stern School of Business

Source: GAO. | GAO-21-24

To determine how high-cost program eligibility requirements affect the types of carriers that may participate in the high-cost program, we reviewed and analyzed relevant federal laws and statutes, including the Telecommunications Act of 1996,¹¹ FCC regulations,¹² 2011 USF Transformation Order,¹³ and court rulings.¹⁴ We interviewed the stakeholders listed in table 4 to obtain their perspectives on the extent that existing eligibility requirements contribute to parts of the country remaining without access to any service.

We also obtained state perspectives on the contribution factor used to fund the USF and high-cost program eligibility requirements through a survey administered to public utility commissions (PUC) in all 50 states, 5 U.S. territories, and the District of Columbia. We included five questions at the end of a larger survey developed for a separate review of FCC's implementation of the Lifeline National Verifier.¹⁵ The additional questions asked PUC representatives for their views about the USF program. The specific questions we asked and the responses are displayed below.

We received responses from 50 of the 56 PUC representatives (or 89 percent) as of September 2020. Of the 50 respondents, 36 respondents (or 72 percent) had experience working with other USF programs besides Lifeline, 13 respondents had no experience, and one PUC representative did not provide a response (see result of question 14). The PUC

¹¹Pub. L. No. 104-104, 110 Stat. 56 (1996); 47 U.S.C. § 254(b); 47 U.S.C. § 214(e).

¹²47 CFR § 54.706; and 47 CFR § 54.202.

¹³*In re Connect America Fund*, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161 (Nov. 18, 2011), *aff'd sub nom In re: FCC 11-161*, 753 F.3d 1015 (10th. Cir. 2014). USF/ICC Transformation Order, 26 FCC Rcd, at 17663; FCC, *Universal Service Monitoring Report* (Washington, D.C.: September 2019).

¹⁴See, e.g., *Texas Office of Public Util. Counsel v FCC*, 183 F.3d 393, 447-448 (5th Cir. 1999).

¹⁵We plan to issue a public report in early 2021 that includes the other survey results.

Appendix II: Objectives, Scope, and Methodology

representative who did not answer question 14 provided answers to the remaining question and we included those responses in the summary.

14. Do you have any experience working with other USF programs besides Lifeline (i.e., the high-cost, e-rate, or rural health care programs)?

Response choice	Number of respondents
Yes	36
No	13
No response	1
Total	50

Source: GAO. | GAO-21-24

15. How supportive, if at all, is your agency of expanding the federal USF contribution base to include broadband companies not currently contributing to the USF? Please select one answer.

Response choice	Number of respondents
Very supportive	12
Moderately supportive	4
Slightly supportive	0
Not at all supportive	2
Don't know	22
Total	40

Source: GAO. | GAO-21-24

16. How much would the number of customers adopting broadband increase or decrease if the federal USF contribution base was expanded to include broadband companies not currently contributing to USF? Please select on answer.

Response choice	Number of respondents
Large increase	2
Small increase	5
Neither increase nor decrease	4
Small decrease	3
Large decrease	0
Don't know	26
Total	40

Source: GAO. | GAO-21-24

17. How likely or unlikely is it that shifting the management of the eligible telecommunications carrier (ETC) designation process from state governments to FCC could result in efficiencies for state governments? Please select one answer.

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Response choice	Number of respondents
Extremely likely	2
Likely	5
Neither likely nor unlikely	9
Unlikely	10
Very unlikely	8
Don't know	6
Total	40

Source: GAO. | GAO-21-24

18. How likely or unlikely is it that shifting the management of the ETC designation process from state governments to FCC could result in efficiencies for ETC applicants? Please select one answer.

Response choice	Number of respondents
Extremely likely	1
Likely	7
Neither likely nor unlikely	8
Unlikely	8
Very unlikely	8
Don't know	8
Total	40

Source: GAO. | GAO-21-24

Appendix III: Comments from the Federal Communications Commission



Federal Communications Commission
Washington, D.C. 20554

September 17, 2020

Andrew Von Ah
Director, Physical Infrastructure Issues
Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Director Von Ah:

Thank you for the opportunity to review GAO's draft report, "FCC Should Enhance Performance Goals and Measures for its Program to Support Broadband Service in High-Cost Areas." The Federal Communications Commission is committed to closing the digital divide and bringing digital opportunity to all Americans. We appreciate your recommendations as we continue to make measurable and significant progress towards achieving that goal.

The high-cost universal service program is designed to ensure that consumers in rural and other high-cost areas of the country have access to voice and broadband services that are reasonably comparable to those in urban areas, at reasonably comparable rates.¹ In modernizing the high-cost fund in 2011, the Commission established goals and performance measures to track its progress in closing the digital divide.² Over the last decade, the Commission has maintained its focus on these goals and measures as it continued to refine and improve the program's various support mechanisms to be more effective, efficient, and accountable.³ While each of the individual support mechanisms includes specific, measurable performance obligations that are monitored and reported, GAO notes that the Commission could better align its overall performance goals and measures with leading practices to more effectively track, use, and report on performance information for the high-cost program as a whole.

In the draft report, GAO makes four recommendations to improve the Commission's performance goals and measures for the high-cost program. GAO's recommendations include: (1) revising the high-cost performance goals so that they are measurable and quantifiable; (2) ensuring that high-cost

¹ 47 U.S.C. § 254.

² *Connect America Fund et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17679-17683, paras. 46-69 (2011) (*USF/ICC Transformation Order*). The goals include: (1) preserve and advance voice service; (2) ensure universal availability of voice and broadband to homes, businesses, and community anchor institutions; (3) ensure universal availability of mobile voice and broadband where Americans live, work, or travel; (4) ensure reasonably comparable rates for broadband and voice services; and (5) minimize the universal service contribution burden on consumers and businesses.

³ See *USF/ICC Transformation Order*; *Connect America Fund et al.*, Report and Order et al., 29 FCC Rcd 7051 (2014); *Connect America Fund et al.*, Report and Order, 29 FCC Rcd 15644 (2014); *Connect America Fund et al.*, Report and Order, Order on Reconsideration, and Further Notice of Proposed Rulemaking, 31 FCC Rcd 3087 (2016) (*Rate-of-Return Reform Order*); *Connect America Fund et al.*, Report and Order, Order on Reconsideration, 31 FCC Rcd 5949 (2016) (*CAF II Auction Order*); *Connect America Fund et al.*, Report and Order, Third Order on Reconsideration, and Notice of Proposed Rulemaking, 33 FCC 2990 (2018) (*March 2018 Rate-of-Return Reform Order and NPRM*); *Connect America Fund et al.*, Report and Order, Further Notice of Proposed Rulemaking and Order on Reconsideration, 33 FCC Rcd 11893 (2018) (*December 2018 Rate-of-Return Reform Order*); *Rural Digital Opportunity Fund et al.*, Report and Order, 35 FCC Rcd 686 (2020) (*RDOF Report and Order*); *Establishing a 5G Fund for Rural America*, Notice of Proposed Rulemaking and Order, 35 FCC Rcd 3994 (2020) (*5G Fund NPRM*).

Appendix III: Comments from the Federal Communications Commission

performance measures align with performance goals and have specified targets; (3) ensuring that the high-cost performance measure for the Commission's goal of minimizing the universal service contribution burden on consumers and businesses takes into account user fee leading practices, such as equity and sustainability considerations; and (4) publicly and periodically reporting on the progress the Commission has made in meeting high-cost program performance goals. While our ongoing modernization and reform efforts have included targeted performance goals and measures consistent with our overarching goal of closing the digital divide, we concur with GAO's recommendations.

As GAO acknowledges, the Commission has established overarching goals and performance measures, as well as rigorous performance requirements for each of the individual support mechanisms for fixed services included in the high-cost program. For example, support recipients are required to deploy voice and broadband services to a specified number of locations as a condition of receiving support—and must report location-specific deployment data.⁴ In addition, the Commission has established performance testing and reporting obligations to ensure that support recipients deploy voice and broadband networks that meet required speed and latency metrics.⁵ Finally, the Commission conducts an annual Urban Rate Survey to establish benchmarks for ensuring the rates charged by support recipients are reasonably comparable. In short, the Commission is able to track its progress—in measurable ways—to meet its goal of ensuring ubiquitous voice and broadband availability for fixed services, at reasonably comparable rates. Deployment and performance data are publicly reported in the Broadband Deployment Report, the Universal Service Monitoring Report, and the Connect America Fund map, which reflects deployment reported through the High Cost Universal Broadband portal. Additionally, rate data is published as part of the Urban Rate Survey.⁶

The Commission is considering similar deployment and performance obligations for mobile carriers through its 5G Fund, the replacement for Phase II of the Mobility Fund. Since 2011, the Commission has sought to reform mobile ongoing high-cost support to focus funding on areas most in need of support. This effort has been delayed, most recently by the submission of overstated mobile coverage maps by multiple mobile wireless carriers, among other things. In the Notice of Proposed Rulemaking on Establishing a 5G Fund for Rural America, the Commission proposed specific public interest obligations for legacy support recipients. The Commission also proposed rules to target support in exchange for 5G deployment to a specified area, with reportable compliance metrics—similar to what has been adopted for fixed services.

Although the metrics for each of the high-cost support mechanisms for fixed service are defined, measured, and reported, GAO recommends that the Commission modify its goals and measures for the high-cost program to better measure overall program performance. We agree that the performance goals and measures that were adopted almost 10 years ago may not align with GAO's leading practices or how we evaluate performance today. Since those goals and measures were first adopted, the Commission has gained valuable experience in administering the program and assessing the performance of the various support mechanisms. We will recommend that the Commission revisit the overarching performance measures as part of ongoing and future proceedings involving the high-cost program. We note, however, that the GAO's recommendation regarding contributions and its characterization of the high-cost fund as

⁴ See 47 CFR § 54.316(a)(4); *CAF II Auction Order*, 31 FCC Rcd at 6010-11, paras. 172-73; *2016 Rate-of-Return Reform Order*, 31 FCC Rcd 3087, 3163-69, paras. 209-17; *Connect America Fund et al.*, Public Notice, 35 FCC Rcd 459 (2020).

⁵ See *Connect America Fund*, Order, 33 FCC Rcd 6509; *Connect America Fund*, Order on Reconsideration, 34 FCC Rcd 10109.

⁶ See *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 19-285, 2020 Broadband Deployment Report, FCC 20-50 (2020); FCC, Federal-State Joint Board Monitoring Reports; FCC, Urban Rate Survey Data & Resources, <https://www.fcc.gov/economics-analytics/industry-analysis-division/urban-rate-survey-data-resources>

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the primary driver of the rising contribution factor is incorrect, as total spending in that program has only increased 10% over the past four years whereas the contribution factor has increased 35%. Nonetheless, we are mindful of the burdens that the contribution factor may have on consumers and will continue to examine ways to pay for universal service efficiently and fairly.⁷

In addition to its recommendations for improving the Commission's high-cost performance goals and measures, GAO also highlighted three stakeholder-identified challenges in meeting those goals, including: (1) the accuracy of the Commission's broadband deployment data; (2) the availability of broadband in Tribal lands; and (3) maintaining existing fixed voice infrastructure and attaining universal mobile service. Although GAO did not include specific recommendations or analysis, work is already underway to address each of those challenges, both in the context of the universal service program and through other policy initiatives. We note, for example, that the Commission adopted rules in August 2019 and revised them in July 2020 to improve the collection and mapping of broadband availability data through the Digital Opportunity Data Collection in order to better identify connectivity gaps across the country and help to close the digital divide.⁸ When Congress enacted the Broadband DATA Act earlier this year, it ratified the Commission's core approach to broadband mapping adopted in the Digital Opportunity Data Collection. Additionally, as GAO acknowledged, the Commission has undertaken a number of efforts through the Universal Service Fund, the Rural Tribal Priority Window for 2.5 GHz spectrum, and other efforts to promote broadband deployment on Tribal lands—and we will continue to do so.⁹ Finally, as noted above, the Commission has established fixed and mobile service requirements for recipients of high-cost support and is in the process of implementing a new support mechanism for mobile services through the 5G Fund.

Thank you for the opportunity to review GAO's recommendations. We look forward to working with GAO in the future.

Sincerely,



Mark Stephens
Managing Director
Office of Managing Director



Kris Anne Monteith
Chief
Wireline Competition Bureau

⁷ See, e.g., *Comments Sought to Refresh the Record in the 2012 Contribution Methodology Reform Proceeding with Regard to One-Way VoIP Service Providers*, WC Docket No. 06-122, GN Docket No. 09-51, Public Notice, 35 FCC Rcd 5832 (WCB 2020).

⁸ *Establishing the Digital Opportunity Data Collection et al.*, Second Report and Order and Third Notice of Proposed Rulemaking, 35 FCC Rcd 7460 (2020).

⁹ *Transforming the 2.5 GHz Band*, Report and Order, 34 FCC Rcd 5446, 5463-69, paras. 47-65 (establishing a Tribal priority window in the 2.5 GHz band); *Connect America Fund*, Order, 33 FCC Rcd 3602 (increasing the amount of operating expenses that carriers serving predominantly Tribal lands can recover); *December 2018 Rate-of-Return Order*, 33 FCC Rcd at 11910-11, para. 55 (increasing model-based support available to rate-of-return carriers serving Tribal lands to address unique deployment challenges); *Connect America Fund et al.*, Public Notice, 34 FCC Rcd 9508 (seeking comment on the effectiveness of Tribal engagement obligations); *Rural Digital Opportunity Fund*, Public Notice, 35 FCC Rcd 6077, 6148, para. 220 (prioritizing support to Tribal lands eligible for support through the Rural Digital Opportunity Fund); *RDOF Report and Order*, 35 FCC Rcd at 733, para. 109 (providing greater flexibility to Tribal applicants seeking to participate in Rural Digital Opportunity Fund auction).

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Andrew Von Ah, (202) 512-2834 or vonaha@gao.gov

Staff Acknowledgments

In addition to the individual named above, Sally Moino (Assistant Director); Sean Standley (Analyst in Charge); Oluwaseun Ajayi; Philip Farah; Ben Licht; Thanh Lu; Malika Rice; Andrew Stavisky; Friendly Vang-Johnson; and Michelle Weathers made key contributions to this report.

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