



FCC Form 477

Local Telephone Competition and
Broadband Reporting

Instructions

**for Filings as of
December 31, 2019
and Beyond**

OMB Control No. 3060-0816

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Instructions Notations

Internal and external links to additional reference material use different colors and underlines depending on whether the link has been visited or based on the format being accessed (e.g., PDF, eBook (.mobi), or iBook (.epub)).

- Links to external web-based references appear as: [Report and Order](#)
- *Italicized items* indicate terms that can be referenced in the Glossary of this document.
- Terms in **Green** refer to items on the Form 477 filing interface.

Note: These Instructions apply to Form 477 filings as of December 31, 2019 and beyond. Instructions for earlier filings can be found at [Form 477 Instructions \(through June 30, 2019\)](#).

1. Purpose

FCC Form 477 collects information about broadband connections to end-user locations, wired and wireless local telephone services, and interconnected Voice over Internet Protocol (VoIP) services in the 50 states, the District of Columbia, and the Territories and possessions (see [47 U.S.C. § 153\(58\)](#)). Data obtained from this form will be used to describe the deployment of broadband infrastructure and competition to provide local telecommunications services. For additional information about this data collection, see *Modernizing the FCC Form 477 Data Program*, WC Docket No. 11-10, [Report and Order](#), 28 FCC Rcd 9887 (2013); and *Establishing the Digital Opportunity Data Collection and Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195 and 11-10, [Report and Order and Second Further Notice of Proposed Rulemaking](#), 34 FCC Rcd 7505 (2019).

2. Who Must File This Form?

Four types of entities must file this form. For purposes of this information collection, the terms “entity” and “entities” include all *commonly controlled or commonly owned affiliates*. (See 47 U.S.C. § 153(2) (establishing a greater than 10% equity interest, or the equivalent thereof, as indicia of ownership.))

2.1 Facilities-based Providers of Broadband Connections to End Users

An entity that is a *facilities-based provider of broadband connections to end users* must complete and file the applicable portions of this form if it has one or more *broadband connection in service* to an *end user* on the as-of date associated with the form (either June 30 or December 31). The *italicized terms* are defined below and in the [Glossary](#). Additional information can be found in these separate documents: [Fixed Broadband Deployment Terms](#) and [Mobile Broadband Deployment Terms](#).

- ***Facilities-Based Provider***: 47 CFR §1.7001(a)(2) states that an entity is a *facilities-based provider* of a service if it supplies such service using facilities that satisfy any of the following criteria:
 - (i) Physical facilities that the entity owns and that terminate at the end-user premises;
 - (ii) Facilities that the entity has obtained the right to use from other entities, such as dark fiber or satellite transponder capacity as part of its own network, or has obtained
 - (iii) Unbundled network element (UNE) loops, special access lines, or other leased facilities that the entity uses to complete terminations to the end-user premises;
 - (iv) Wireless service for which the entity holds a license or that the entity manages or has obtained the right to use via a spectrum leasing arrangement or comparable arrangement pursuant to subpart X of this Part (47 CFR §§ 1.9001-1.9080); or
 - (v) Unlicensed spectrum.
- ***Broadband Connection***: A wired line or wireless channel that terminates at an end-user location or mobile device and enables the end user to receive information from and/or send information to the Internet at information transfer rates **exceeding 200 kilobits per second (kbps) in at least one direction**.

Note: The *facilities-based provider* that is obligated to report the *in-service broadband connection* may—or may not—sell the *end user* the Internet access service that is delivered over that *broadband connection*. Nevertheless, for convenience, the terms *broadband connection* and *broadband subscription* are used interchangeably in these instructions.

- ***End User***: A residential, business, institutional, or government entity that subscribes to a service, uses that service for its own purposes, and does not

resell such services to other entities. For the purposes of this form, an Internet Service Provider (ISP) is not an end user of a *broadband connection*.

- ***In Service:*** A *broadband connection* is *in service* to an end user if: (1) it is delivering Internet access service at the residential or non-residential premises of the end-user that has purchased Internet access service on a month-to-month or longer-term basis (*in-service fixed broadband*), or (2) it is delivering service to a terrestrial mobile wireless service subscriber whose device and data plan provide the ability to transfer, on a monthly basis, either a specified or unlimited amount of data to and from lawful Internet sites of the subscriber's choice (*in-service mobile broadband*).

A non-exhaustive list of examples of *facilities-based providers of broadband connections* **includes:** incumbent and competitive local exchange carriers (LECs), cable television system operators, terrestrial fixed wireless providers (including wireless ISPs, or WISPs) that provide service to end user premises, satellite network operators, terrestrial mobile wireless operators with owned network facilities, electric utilities, public utility districts, municipalities, and other entities.

However, *facilities-based providers of broadband connections* **do not include:** equipment suppliers unless the equipment supplier uses the equipment to provision a *broadband connection* that it offers to the public for sale; providers of air-to-ground service; providers of ship-to-shore service; or providers of terrestrial wireless “hot spot” services—whether offered for an occasional-use fee or offered free of charge—that only enable local distribution and sharing of a broadband connection within a residential or non-residential premises (for example, local-area Wi-Fi or Wi-Fi within public places such as libraries, schools, parks, shopping malls, coffee shops, hotels, and airports).

An entity is a *facilities-based provider of broadband connections* to end users if:

1. it owns the portion of the physical facility that terminates *broadband connections* at *end-user* premises; or
2. it obtains the right to use physical facilities, like dark fiber or satellite transponder capacity, as part of its own network to terminate *broadband connections* at *end-user* premises; or
3. it obtains unbundled network element (UNE) loops, special access lines, or other leased facilities that terminate at *end-user* premises and provisions/equips them as *broadband connections*; or
4. it provisions/equips wireless *broadband connections* to *end-user* premises using licensed or unlicensed spectrum; or
5. it provisions/equips terrestrial mobile wireless *broadband connections* using its own network facilities and (1) spectrum for which it holds a license; (2) spectrum it manages or leases from another licensee pursuant to our rules; or (3) unlicensed spectrum.

2.2 Providers of Wired or Fixed Wireless Local Exchange Telephone Service

Each *incumbent* or *competitive Local Exchange Carrier (LEC)* must complete and file the applicable portions of the form if it has one or more *end user customer of local exchange telephone service* on the as-of date associated with the form (either June 30 or December 31).

Note: A shared-tenant service provider is **not** required to file Form 477. The upstream provider is responsible for submitting Form 477 data for shared-tenant providers services.

The *italicized terms* are defined below and in the [Glossary](#). Additional information can be found in a separate document, [Fixed Voice Subscription Terms](#).

- **Incumbent Local Exchange Carrier (ILEC):** The entity that was providing *local exchange telephone service* (traditional local phone service) in a particular area on February 8, 1996, the date on which the Telecommunications Act of 1996 was enacted into law. See [47 CFR § 51.5](#). Each such area has a 6-digit *Study Area Code (SAC)*.
- **Competitive Local Exchange Carrier (CLEC):** An entity authorized, by the state regulatory authority (State commission), to provide *local exchange telephone service* within the *study areas* of one or more *ILECs* in that state.
- **Local Exchange Telephone Service:** Local exchange (local telephone) or exchange access service that allows *end users* to originate and/or terminate local telephone calls on the *public switched telephone network*, whether used by the *end user* for voice telephone calls or for other types of calls carried over *the public switched telephone network* (for example, lines connected to facsimile equipment or lines used occasionally or exclusively for dial-up connection to the Internet).
- **End-User Customer of Local Exchange Telephone Service:** A residential, business, institutional, or government entity that purchases *local exchange telephone service*, uses that service for its own purposes, and does not resell that service to other entities.

Note: The obligation to report information about *local exchange telephone service* does not depend on whether the entity owns any telecommunications network facilities.

2.3 Providers of Interconnected Voice over Internet Protocol (VoIP) Service

Each provider of *interconnected VoIP service* must complete and file the applicable portions of the form if it has one or more revenue-generating *end-user customer of interconnected VoIP service* on the as-of date associated with the form (either June 30 or December 31).

Note: A shared-tenant service provider is **not** required to file Form 477. The upstream provider is responsible for submitting Form 477 data for shared-tenant providers services.

The *italicized terms* are defined below and in the [Glossary](#). Additional information can be found in a separate document, [Fixed Voice Subscription Terms](#).

- ***Interconnected VoIP Service:*** A service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet-protocol compatible customer premises equipment; and (4) permits users generally to receive calls that originate on the *public switched telephone network* and to terminate calls to the *public switched telephone network*. See 47 CFR § 9.3.

Note: A service must meet all four elements of the definition of *interconnected VoIP service* to be considered interconnected VoIP. *Local exchange telephone service* that is converted to IP format for transport within the telecommunications network does not meet this definition.

- ***End-User Customer of Interconnected VoIP Service:*** A residential, business, institutional, or government entity that subscribes to *interconnected VoIP service*, uses that service for its own purposes, does not resell that service to other entities.

Note: The obligation to report information about *interconnected VoIP service* does not depend on whether the entity owns any telecommunications network facilities.

2.4 Facilities-based Providers of Mobile Telephony (Mobile Voice) Service:

Each *facilities-based provider of mobile telephony service* must complete and file the applicable portions of this form if its network serves one or more *mobile telephony subscriber* on the as-of date associated with the form (either June 30 or December 31). The *subscriber* served may be a customer of the *facilities-based provider* or a customer of a mobile voice service reseller. The *italicized terms* are defined below and in the

Glossary. Additional information can be found in these separate documents: [Mobile Voice Deployment Terms](#) and [Mobile Voice Subscription Terms](#).

- **Mobile Telephony (Mobile Voice) Service:** A real-time, two-way switched voice service that is interconnected with the public switched network using an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls. (See [47 CFR § 20.15\(b\)\(1\)](#))
- **Mobile Telephony (Mobile Voice) Subscriber:** A mobile handset, car-phone, or other revenue-generating, active, voice unit that has a unique phone number and that can place calls to and receive calls from the *public switched telephone network*.
- **Facilities-Based Mobile Voice Provider:** A mobile voice provider is considered facilities-based if it serves a subscriber using its own network facilities and spectrum for which it holds a license, manages, or for which it has obtained the right to use via a spectrum leasing arrangement.

Note: Mobile voice service resellers—including entities that have filed Lifeline Compliance Plans with the Commission—are not facilities-based providers for Form 477 purposes.

2.5 Form Sections to Be Completed by Each Type of Provider

Section	Provider Type				
	<i>Facilities-based Providers of Broadband Connections to End-user Premises</i>	<i>Facilities-based Providers of Terrestrial Mobile Wireless Broadband</i>	<i>Providers of Wired or Fixed Wireless Local Exchange Telephone Service</i>	<i>Providers of Interconnected VoIP Service</i>	<i>Facilities-based Providers of Mobile Voice Service</i>
Filer Identification	✓	✓	✓	✓	✓
Fixed Services					
Fixed Broadband Deployment	✓				
Fixed Broadband Subscription	✓				
Fixed Voice Subscription (Tract Data)			✓	✓	
Local Exchange Telephone Subscriptions (State Data)			✓		
Interconnected VoIP Subscription (State Data)				✓	
Mobile Services					
Mobile Broadband Deployment		✓			
Mobile Broadband Subscription		✓			
Mobile Voice Deployment					✓
Mobile Voice Subscription					✓
Explanations and Comments	As needed	As needed	As needed	As needed	As needed

3. Notes on Interface Mechanics

Using the Form 477 Filing Interface

How to ...	
Submit data over multiple sessions...	The interface allows you to enter data or upload data files, in accordance with the instructions for Completing Each Section of Form 477, over multiple work sessions. The Dashboard screen will generally show the submission's status as Original – In Progress during these sessions.
Save data entered...	To save data entered in via Interactive Data Entry , select the Save Row button on the interface screen prior to closing the modal and logging out of a work session.
Logout of a session...	The interface should be closed between sessions by selecting Logout in the upper right corner of the submission interface.
Return to a submission in progress...	Login to the interface and on the Dashboard , select the View/Edit button in the View/Edit column to open the Submission Menu .
Edit Filer Identification information...	Select the Filer Identification link on the Submission Menu to open the Filer Identification page.
Submit a completed form...	Once you have entered or uploaded all data for a particular submission, you must officially submit the data to the FCC for that filing to be complete. To do this, either (a) select the Submit button in the Revise/Submit column on the Dashboard or (b) select the Submit button that appears at the bottom of the Submission Menu . Either option will ask you whether you are sure you want to submit the filing. If so, select Confirm . If not, select Cancel .
Revise a Submitted filing...	Once a submission is accepted, its Status on the Dashboard will be Original – Submitted . At this point, the submission will be locked for editing unless you reopen it for revision. You can do that by selecting the Revise button in the Revise/Submit column on the Dashboard .
Confirm a Submission...	Once you have completed your filing and select the Submit button, a Submission Confirmation page will appear. This page will confirm your submission, provide the date and time of submission, and allow you to view, save and print a detailed summary of your filing.

The system will evaluate the completeness and internal consistency of the data and return an error message if additional sections of the form must be completed or if data must be modified in order for the submission to be accepted.

4. Submitting Data via File Upload or Interactive Data Entry

The chart below lists the sections of the form, in the order in which they appear in the **Submission Menu** interface, and how the data will be submitted. A filer’s **census block-** or **census tract-**level data for the entire nation can be uploaded in a single delimited, plain text file (CSV, or comma-separated values, is a file format used to store tabular data in plain-text form, so we use the term CSV in the table below) for each section of the form. The sections of the form that require interactive data entry are those in which fixed and mobile voice subscribership information is submitted at the state level.

Section of Form 477 Filing Interface	Geography	Method of Data Submission
Filer Identification	NA	Interactive Data Entry
<i>Fixed Services</i>		
Fixed Broadband Deployment	Census block	CSV File Upload
Fixed Broadband Subscription	Census tract	CSV File Upload or Interactive Data Entry
Fixed Voice Subscription (Tract Data)	Census tract	CSV File Upload or Interactive Data Entry
Local Exchange Telephone Subscriptions (State Data)	State	Interactive Data Entry
Interconnected VoIP Subscription (State Data)	State	Interactive Data Entry
<i>Mobile Services</i>		
Mobile Broadband Deployment	Coverage area	Shapefile Upload
Mobile Broadband Subscription	State	CSV File Upload or Interactive Data Entry
Mobile Voice Deployment	Coverage area	Shapefile Upload
Mobile Voice Subscription	State	Interactive Data Entry
<i>Explanations and Comments</i>	NA	Interactive Text Entry

In the Fixed Broadband Subscription, Fixed Voice Subscription – Tract Data, and Mobile Broadband Subscription sections, information may be submitted by interactive data entry or by uploading a delimited plain text / CSV file.

Note: Regardless of size, files can take a while to upload and process, especially at times of peak usage. We recommend starting the upload and then moving to another part of the form and returning to the page at a later time. You can also log out without interrupting the upload.

5. Completing Each Section of FCC Form 477

5.1 Log In & Dashboard

You can access the Form 477 filing interface using different modern web browsers, including Chrome, Firefox, Internet Explorer, and Safari. Chrome or Firefox is preferred and filers using Internet Explorer must use version 10 or higher.

- Enter the following URL into a web browser: <https://form477mod-ui.fcc.gov/home>;
or
- At the FCC’s [Form 477 Resources](http://www.fcc.gov/form477) webpage (at <http://www.fcc.gov/form477>), click on the link to [file Form 477](#), or
- On the [FCC Forms](#) webpage, scroll down the “Form No.” column until you reach “477,” then click on the link for [Electronic Filing](#).

Log In: Once you have accessed the Form 477 filing interface homepage, click the link that says, “Click here to sign in and select your FRN”. Enter in your [CORES](#) username and password. Select the FCC Registration Number ([FRN](#)) from the drop-down box that will be used for this submission and click the [Submit](#) button.

Dashboard: After logging in, the Form 477 filing interface presents a [Dashboard](#) screen, where you will [Create a New Form 477 Filing](#), either Non-ILEC or ILEC, for the entity(ies) associated with the FRN. The [Dashboard](#) also tracks the status of submissions as they are created, edited, and officially submitted.

*[Note on ILEC / Non-ILEC Filings:](#) A filer (including affiliates) may submit a single file to report information for all areas of the nation in which it operates—**except that** information about ILEC fixed voice services (local exchange telephone service and interconnected VoIP service) sold within the filer’s ILEC Study Area(s), if any, must be reported on a filing for ILEC operations, and information about fixed voice services sold outside the filer’s ILEC Study Area(s) must be reported on a filing for Non-ILEC operations. Filers may—at their convenience—submit more than one file for ILEC operations and/or more than one file for Non-ILEC operations, but a single FRN may be used to create no more than one ILEC operations file and one Non-ILEC operations file.*

To start a new Form 477 submission, first use the [Dashboard](#) drop-down list to specify the [Data as of](#) date for the data to be reported in the submission. Next, use the option buttons to [Create New Non-ILEC Filing](#) or to [Create New ILEC Filing](#).

5.2 Filer Identification

The interface will then present a [Filer Identification](#) screen where you will complete the required information that was not automatically populated and correct information as appropriate. Below is a list of fields to be entered on the Filer Identification page:

- (1) **Operation:** Non-ILEC or ILEC is automatically populated in the **Create New Filing** step.
- (2) **FRN:** The FRN is automatically populated by the Log In step.
- (3) **Company Name:** The business entity name associated with the FRN is automatically populated by the Log In step.
- (4) **Holding Company / Common Control Name:** Use a single name, such as the Holding Company Name, to identify **all** commonly owned or commonly controlled entities that are filing Form 477 data. (See [47 U.S.C. § 153\(2\)](#), which establishes a greater than 10% equity interest, or the equivalent thereof, as indicia of ownership.) If your Holding Company Name is available in the list, select it; otherwise, if not, type it in. Filers that are not affiliated with any other Form 477 filer and that do not have a Holding Company Name should use the company name entered in (3) as the Holding Company Name. Filers that do not have a Holding Company but are controlled by the same owners should decide on a single name to use for this entry. You can update the Holding Company Name by clicking on the **Change** button.
- (5) **Company Website:** Enter the website for the company. If the company does not have a website, check the box that says, **The company does not have a website.**
- (6) **Study Area Codes:** Voice providers eligible for Universal Service Fund support (Eligible Telecommunications Carriers, or ETCs) have a 6-digit Study Area Code. This includes all *ILECs* as well as some other fixed voice and some mobile voice providers. Each fixed or mobile voice provider covered by this filing that is an ETC must enter its Study Area Code(s). You can search for your *study area* codes [here](#). If the company does not have a Study Area Code, check the box that says, **The company does not have an assigned Study Area Code.**
- (7) **Form 499 Filer IDs:** Providers of telecommunications services will have had a 499A Filer ID issued to them after fulfilling the FCC's registration requirement at [47 CFR § 64.1195](#). Enter the 6-digit Form 499A Filer IDs for all providers that are entirely or partially covered by this filing. You can search for your Form 499A Filer IDs [here](#). If the company does not have a Form 499 Filer ID, check the box that says, **The company does not have an assigned Form 499 Filer ID.**
- (8) **Form 477 Data Contact Information:** Enter the requested information for the filer's contact person who should receive any follow-up questions about the data submitted in the filing.

- (9) **Emergency Operations Contact Information:** Enter the requested contact information for the individual who can be contacted to provide network status information in a natural disaster or other emergency.
- (10) **Certifying Official Contact Information:** Enter the requested information for the person (corporate officer, managing partner, or sole proprietor) whose signature certifies that he/she has examined the information contained in this Form 477 and that, to the best of his/her knowledge, information and belief, all statements of fact contained in this Form 477 are true and correct. For purposes of this Form 477, the entry of the official's name on this line shall constitute that official's electronic signature to this certification. Persons making willful false statements in a Form 477 can be punished by fine or imprisonment under the Communications Act, [47 U.S.C. § 220\(e\)](#).
- (11) **Non-disclosure Check Box:** Use this check box to indicate whether nondisclosure is requested for some or all of the subscription (broadband connections or voice service subscribers) information in this submission because the filer believes that this information is privileged and confidential and public disclosure of such information would likely cause substantial harm to the competitive position of the filer.

After completing the **Filer Identification** information, click **Save** to go to the **Submission Menu** screen. The Submission Menu contains links to submit data for each section of the form.

5.3 Fixed Broadband Deployment

Information in this section is reported by *facilities-based providers* of fixed *broadband connections* to *end users*. For more information on these terms, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Fixed Broadband Deployment Terms](#). Note that, for convenience, the terms *broadband connection* and *broadband service* are used interchangeably in these instructions.

These Instructions reflect changes to the Fixed Broadband Deployment section that apply to Form 477 filings as of December 31, 2019 and beyond. Instructions for earlier filings can be found at [Form 477 Instructions \(through June 30, 2019\)](#).

Report a list – uploaded as a delimited, plain text / CSV file – of all [census blocks](#) in which the filer (including affiliates) makes *broadband connections available* to *end-user premises*, along with the associated information on technology of transmission (see Technology of Transmission Codes for Deployment of Fixed Services table in Codes to Use in Data Upload Files section), maximum upload and download speeds (in Mbps, with a maximum of 3 decimal places), and consumer versus business/government service, as specified in a separate document, [How Should I Format My Fixed Broadband](#)

Deployment Data? This document provides detailed information on the required fields and how to format them in a delimited, plain text / CSV file for upload. A [Sample Fixed Broadband Deployment CSV File](#) and an [Excel Template](#) are also available for download.

- **Available:** For purposes of this form, fixed *broadband connections* are *available* in a *census block* if the provider does, or could, within a service interval that is typical for that type of connection—that is, without an extraordinary commitment of resources—provision two-way data transmission to and from the Internet with *advertised speeds* exceeding 200 kbps in at least one direction to *end-user premises* in the census block. ***Clarification Notes, added September 10, 2014:*** (1) Companies that would rely on the ordering or installation of a not-yet leased circuit (including unbundled network elements defined in [47 CFR § 51.319](#), TDM-based connections, or packet-based connections) to provide service in a census block not currently served should **not** treat that census block as having service available. (2) Dark fiber acquired under an Indefeasible Right of Use (IRU) should be considered the “owned” facilities of the company that acquired the IRU when the dark fiber is used as part of that entity’s own system.

Satellite Providers: Satellite providers that believe their deployment footprint can be best represented by every block in a particular state or set of states may abbreviate their upload file by submitting only one block-level record for each state included in the footprint and providing a note in the Explanations and Comments section. For more information, see the separate document, [How Should I Format My Fixed Broadband Deployment Data?](#) (section 4).

Terrestrial Fixed Wireless Providers: Terrestrial Fixed Wireless provider’s footprint and reported maximum advertised speeds must be based upon existing towers and / or radio access network equipment rather than future or anticipated installations. That is, service at the reported maximum speeds must be available to residential end users within the reported footprint without needing to install additional non-terminal equipment.

5.4 Fixed Broadband Subscription

Information in this section is reported by *facilities-based providers* of *in-service* fixed *broadband connections* to *end users*. For more information on these terms, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Fixed Broadband Subscription Terms](#). Note that, for convenience, the terms *broadband connection*, *broadband subscription*, and *broadband subscriber* are used interchangeably in these instructions.

Information in this section may be submitted by uploading a delimited plain text / CSV file or by entering data interactively one row at a time. Data for upload should be formatted in accordance with the directions provided in a separate document, [How](#)

[Should I Format My Fixed Broadband Subscription Data?](#) To assist with uploading, a [Sample Fixed Broadband Subscription CSV File](#) and an [Excel Template](#) are available for download.

Report connections to *end-user premises* by [census tract](#) that you (including affiliates) equip to enable the *end user* to receive information from and/or send information to the Internet at information transfer rates exceeding 200 kbps in at least one direction.

Report connections that are delivering Internet access service that the *end user* purchased on a month-to-month or longer-term basis. That Internet access service may be purchased from you (including affiliates) or from an unaffiliated entity.

Do not report anywhere on this form high-capacity connections between two or more locations of the same end-user customer, Internet Service Provider (ISP), or communications carrier.

Report the total number of *in-service connections*—and **report** the number of *in-service connections* that are in *consumer service plans*—for each unique combination of [census tract](#) and service characteristic. For this section of the form, a service characteristic is a unique combination of technology of transmission (based on the Technology of Transmission Codes for Subscription to Fixed Services table in Codes to Use in Data Upload Files section below), downstream bandwidth as sold in Mbps, and upstream bandwidth as sold in Mbps (with a maximum of 3 decimal places).

- *Consumer Service Plan (or Mass Market / Consumer Service Plan)*: A service plan designed for, marketed to, or purchased by primarily residential *end users*.

5.5 Fixed Voice Subscription (Tract Data)

This section of the form collects information about voice services to *end-user premises*. Information in this section is reported by *local exchange carriers* that have *end-user* customers and by providers of *interconnected VoIP service* that have *end-user* customers. For more information on these and the other *italicized* terms in this section, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Fixed Voice Subscription Terms](#).

Information in this section may be submitted by uploading a delimited plain text / CSV file or by entering data interactively one row at a time. Data for upload should be formatted in accordance with the directions provided in a separate document, [How Should I Format My Fixed Voice Subscription Data?](#) To assist with uploading, a [Sample Fixed Voice Subscription CSV File](#) and an [Excel Template](#) are also available for download. Once you have uploaded or entered the required [census tract](#)-level data on fixed voice subscribership, you will be able to enter interactively the required state-level totals

related to Local Exchange Telephone Subscriptions (State Data) and Interconnected VoIP Subscription (State Data).

Local exchange carriers shall **report** the number of *local exchange telephone service* lines in service to their own *end-user* customers by **census tract** and, for each census tract, shall provide the number of lines provided under *consumer service plans*. The census tract shall be identified by the end-user customer's service address rather than billing address, if the two addresses differ.

Interconnected VoIP service providers shall **report** the number of *interconnected VoIP service subscriptions* sold to their own *end-user* customers by **census tract** and, for each census tract, shall provide the number of subscriptions provided under *consumer service plans*. For *over-the-top interconnected VoIP* customers, the census tract shall be identified by the customer's *Registered Location*. For other customers, the census tract shall be identified by the service location of the broadband connection to the end user.

- *Consumer Service Plan (or Mass Market / Consumer Service Plan)*: A service plan designed for, marketed to, or purchased by primarily residential *end users*.

Do not report voice transmission capacity (or other transmission capacity) between two or more locations of the same end-user customer, ISP, or communications service provider.

Report *local exchange telephone service* lines in *voice-grade equivalents (VGEs)* based on how they are **charged to the end-user customer** rather than on how they are physically provisioned.

- **Single-line and channelized local exchange telephone service**: A traditional analog POTS line, Centrex-CO extension, or Centrex-CU trunk is one VGE. A Basic Rate Integrated (BRI) Services Digital Network (ISDN) lines is two VGEs. A fully channelized PRI circuit is 23 VGEs. An end-user customer charged for 8 trunks—for example—that happen to be provisioned over a DS1 circuit is 8 VGEs. However, an end-user customer charged for a fully channelized DS1 circuit is 24 VGEs.
- **Do not report**: lines not yet in service, lines used for interoffice trunking, company official lines, or lines used for special access (toll bypass) service. Where you are already reporting the portion of a circuit between the end-user customer and your switching center, do not separately count the portion of that circuit between your switching center and a circuit-switched, IP, or other communications network—irrespective of whether you multiplexed the circuit onto a higher-capacity facility between your switching center and that network.

Report *interconnected VoIP subscriptions* based on the maximum number of interconnected VoIP calls that customers may have active—at the same time—between their physical location and the *public switched telephone network* (for more information on these italicized terms, see the [Glossary](#)). The maximum number of such calls may be set out under the terms of service agreements with business, institutional, or government customers, or it may be determined by some other method that best reflects customer needs and requirements. For example, providers that market against traditional business telephone systems should be able reliably to estimate what their customers' requirements would be for trunks between a traditional PBX and the telephone company. Please describe the method used in the Explanations and Comments section of the form.

- **Do not report:** interconnected VoIP service plans for wireless devices unless the wireless device is affixed to or otherwise dedicated to use at the *end-user premises*—that is, unless wireless interconnected VoIP is used in a fixed-services deployment. Also, do not count as a separate subscription any add-on charge for the added capability of signing into the subscription over broadband connections away from the end-user premises.

5.6 Local Exchange Telephone Subscriptions (State Data)

Information in this section is reported by *incumbent local exchange carriers (ILECs)* and by *competitive local exchange carriers (CLECs)*. For more information on these and the other *italicized* terms in this section, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Fixed Voice Subscription Terms](#). The state-level information reported in this section is in addition to, but partially based on, the [census tract](#)-level information reported in the Fixed Voice Subscription (Tract Data) section of the form.

Information in this section must be entered interactively. You will be presented with a page for each state for which you reported census-tract level subscription data in the Fixed Voice Subscription (Tract Data) section of the form. You must fill in each box on each state page with either a positive whole number or zero.

Note: If you enter state data and then make changes to your tract data, you will need to re-enter all of your state data.

Lines Provided to Unaffiliated Providers: Report the number of wholesale-service lines and the number of unbundled network element loops (UNE-L) that you (including affiliates) provided to **unaffiliated** service providers:

- **Wholesale:** Count *VGEs* provided to unaffiliated service providers under resale arrangements including, among others, commercial agreements that replaced

UNE-Platform and resold services such as local exchange, Centrex, and channelized special access.

- **UNE-L:** Count lines provided under any UNE loop arrangement where you did not also provide UNE switching for the line. **Do not convert UNEs to VGEs.** (Local loop UNEs are defined in the FCC Rules at [47 CFR § 51.319\(a\)-\(b\)](#).)

Lines Provided to End Users: Report the service characteristics listed below for the end-user lines in service (*VGEs*) in each state. To assist filers in this process, the filing interface will add up [census tract](#)-level information reported in the Fixed Voice Subscription (Tract Data) section of the form and will use that information to prepopulate, in this section, state-level total end-user lines, state-level Consumer end-user lines, and state-level Business/Government end-user lines. Each state-level service characteristic breakdown listed below must add up to these respective totals.

- **by Services Sold:** For **Voice with Internet**, enter the number of *VGE* lines where you (including affiliates) sell voice and broadband Internet access service to the same end-user customer. It does not matter if the two services are billed separately or if they are billed by different affiliates. The filing interface will then calculate the number of *VGE* lines for **Voice without Internet**—that is, without the end user **also** purchasing broadband Internet access service—as a residual.
- **by Product Type, Consumer:** Count the consumer-grade *VGE* as **Consumer & No PIC** if you (including affiliates) **do not** automatically carry interstate long-distance calls made by the end user. Count the *VGE* as **Consumer & PIC** if you (including affiliates) are the service provider (either facilities-based or reseller) to which an interstate long-distance call is routed automatically, without the use of any access code by the end user.
- **by Product Type, Business/Government:** Count the business/government-grade *VGE* as **Business/Government & No PIC** if you (including affiliates) **do not** automatically carry interstate long-distance calls made by the end user. Count the *VGE* as **Business/Government & PIC** if you (including affiliates) are the service provider (either facilities-based or reseller) to which an interstate long-distance call is routed automatically, without the use of any access code by the end user.
- **by Ownership:** Count as **Owned** those *VGE* that terminate at the *end user's premises* over last-mile facilities that you (including affiliates) own or have obtained the right to use as dark fiber within your own system, or that you (including affiliates) have deployed over spectrum for which you hold a license, manage, or have obtained the right to use via a spectrum leasing arrangement. Count as **UNE-L** those *VGE* that terminate at the *end user's premises* over

unbundled network element loops obtained from an unaffiliated carrier without also obtaining that carrier's unbundled network element switching for that line. All VGE that do not count as **Owned** or **UNE-L** shall be counted as **Resale**. Any VGE deployed as *UNE-Platform* and not yet converted to a commercial agreement shall be counted as **Resale**.

- **by Last-mile Medium:** Count VGE by the technology in use at the termination at the *end-user's premises*.

Note on Technology/Last-Mile Medium for Local Telephone Subscriptions: Fiber-to-the-Premises (FTTP) requires an optical termination at the end-user premises; Coaxial Cable is the typical infrastructure used by cable television system operators, and it includes hybrid fiber-coax distribution plant; and Fixed Wireless, in this context, includes any type of wireless spectrum equipped to deliver fixed voice service to the end user's premises.

5.7 Interconnected VoIP Subscription (State Data)

Information in this section is reported by *interconnected VoIP service* providers. For more information on the *italicized* terms in this section, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Fixed Voice Subscription Terms](#). The state-level information reported in this section is in addition to, but partially based on, the [census tract](#)-level information reported in the Fixed Voice Subscription (Tract Data) section of the form.

Information in this section must be entered interactively. You will be presented with a page for each state for which you reported census-tract level subscription data in the Fixed Voice Subscription (Tract Data) section of the form. You must fill in each box on each state page with either a positive whole number or zero.

Report the service characteristics listed below for *interconnected VoIP subscriptions* in each state. To assist filers in this process, the filing interface will add up the [census tract](#)-level subscription information reported in the Fixed Voice Subscription (Tract Data) section of the form and will use that information to pre-populate, in this section, state-level total subscriptions, state-level consumer-grade subscriptions, and state-level business/government-grade subscriptions. Each state-level service characteristic breakdown listed below must add up to these respective totals.

Over-the-top Subscriptions and **All Other Subscriptions:** By definition (in [47 CFR § 9.3](#)), *interconnected VoIP service* requires a high-capacity, or broadband, connection from the end user's location. That high-capacity connection may, or may not, also be delivering Internet access service to the *end user*. In this section of the form, count a subscription as an **Over-the-top Subscription** if you (including affiliates) **do not** supply (that is, do not

sell to the end user) the high-capacity connection that terminates at the end user's premises and delivers the *interconnected VoIP service*. If a subscription is **not** an **Over-the-top Subscription**, count it among **All Other Subscriptions**.

- **Over-the-top Subscriptions:** Report **Total** and **Consumer** subscriptions. The filing interface will then calculate the number of **Business/Government** subscriptions as a residual.
- **All Other Subscriptions:** Report **Total** and **Consumer** subscriptions. The filing interface will then calculate the number of **Business/Government** subscriptions as a residual. You also need to distribute **All Other Subscriptions** in the following ways:
 - **by Service Sold:** For **Voice with Internet**, enter the number of subscriptions where you (including affiliates) sell voice and broadband Internet access service to the same end-user customer. It does not matter if the two services are billed separately or if they are billed by different affiliates. The filing interface will then calculate the number of subscriptions for **Voice without Internet**—that is, without the end user also purchasing broadband Internet access service—as a residual.
 - **by Last-mile Medium:** As explained above, **All Other Subscriptions** are subscriptions for which you (including affiliates) also supply the end user with the high-capacity connection that delivers the *interconnected VoIP service*. Count these subscriptions according to the technology of the high-capacity connection that terminates at the end user's premises.

Note on Technology/Last-Mile Medium for Interconnected VoIP Subscriptions: Fiber-to-the-Premises (FTTP) requires an optical termination at the end-user premises; Coaxial Cable is the typical infrastructure used by cable television system operators, and it includes hybrid fiber-coax distribution plant; and Fixed Wireless, in this context, includes any type of wireless spectrum equipped to deliver fixed voice service to the end user's premises.

5.8 Mobile Broadband Deployment

Information in this section is reported by *facilities-based providers* of mobile wireless *broadband connections*. For more information on these terms, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Mobile Broadband Deployment Terms](#). Note that, for convenience, the terms *broadband connection* and *broadband service* are used interchangeably in these instructions.

These Instructions reflect changes to the Mobile Broadband Deployment section that apply to Form 477 filings as of December 31, 2019 and beyond. Instructions for earlier filings can be found at [Form 477 Instructions \(through June 30, 2019\)](#).

Mobile broadband providers shall submit polygons in a shapefile format representing geographic coverage nationwide (including the 50 states, District of Columbia, Puerto Rico, and the Territories and possessions) for each mobile broadband transmission technology (as specified in Technology of Transmission Codes for Mobile Wireless Services table in Codes to Use in Data Upload Files section). The data associated with each polygon should indicate the minimum advertised upload and download data speeds associated with that network technology (in Mbps, with a maximum of 3 decimal places), and the coverage area polygon should depict the boundaries where, according to providers, users should expect to receive those *advertised speeds*. If a provider advertises different minimum upload and download speeds in different areas of the country using the same technology, then the provider should submit separate polygons showing the coverage area for each speed. A variation in technology or speed would require the submission of a separate polygon. If a provider does not advertise the minimum upload and/or download data speeds, the provider must indicate the minimum upload/download data speeds that users should expect to receive within the polygon depicting the geographic coverage area of the deployed technology. For more information, see [Mobile Broadband Deployment Terms](#).

The shapefiles must be formatted in accordance with the directions provided in a separate document, [How Should I Format My Mobile Broadband Deployment Data?](#), and uploaded as a .zip file to the Form 477 filing interface. A [Mobile Broadband Deployment Shapefile Template](#) is available for download.

Note on Shapefiles (New!): All geometries must be well-formed in 2D according to the OGC (Open Geospatial Consortium) rules. Invalid geometries will be reported to the user, but maps containing invalid geometries will not be accepted by the system. Check your maps for geometry errors before uploading by running a repair algorithm (like QGIS's "Fix Geometries" algorithm or ArcPro's "Repair Geometries" with validation_method=OGC) over the maps to ensure the geometries are OGC spec. Note that ArcGIS Desktop does not currently support this functionality and depending on the size and complexity of the features, repairing geometries may require significant machine time.

5.9 Mobile Broadband Subscription

Information in this section is reported by *facilities-based providers* of mobile wireless *broadband connections*. For more information on these terms, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Mobile Broadband Subscription Terms](#). Note that, for convenience, the terms *broadband connection* and *broadband subscription* are used interchangeably in these instructions.

Information in this section may be submitted by uploading a delimited plain text / CSV file or by entering data interactively one row at a time. Data for upload should be formatted in accordance with the directions provided in a separate document, [How Should I Format My Mobile Broadband Subscription Data?](#) To assist with uploading, a [Sample Mobile Broadband Subscription CSV File](#) and an [Excel Template](#) are available for download.

Report the number of connections in each state in which the subscriber's device and subscription permit access to lawful Internet content of the subscriber's choice at information transfer rates exceeding 200 kbps in at least one direction. Of the total number of connections in each state, **report** the number of *consumer connections*. In addition, report the minimum upload and download bandwidth/speed (in Mbps, with up to 3 decimal places) associated with the connections in each state.

- *Consumer Connection*: With respect to mobile broadband, a connection not billed to a corporate, non-corporate business, government, or institutional customer account.

Do not report connections in which the subscriber's choice of content is restricted to only customized-for-mobile content.

Include subscriptions to data plans purchased either on a standalone basis, as an add-on feature to a voice subscription, or bundled with a voice subscription, and which provide the ability to transfer, on a monthly basis, either a specified or an unlimited amount of data to and from the Internet.

Include directly billed subscribers, pre-paid subscribers, and subscribers served via resellers.

5.10 Mobile Voice Deployment

Information in this section is reported by *facilities-based mobile voice providers*, as defined in [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Mobile Voice Deployment Terms](#).

These Instructions reflect changes to the Mobile Broadband Deployment section that apply to Form 477 filings as of December 31, 2019 and beyond. Instructions for earlier filings can be found at [Form 477 Instructions \(through June 30, 2019\)](#).

Mobile voice providers shall submit polygons in a shapefile format representing geographic coverage nationwide (including the 50 states, District of Columbia, Puerto Rico, and the Territories and possessions) for each mobile voice transmission technology (as specified in Technology of Transmission Codes for Mobile Wireless Services table in

Codes to Use in Data Upload Files section). A variation in technology would require the submission of a separate polygon.

The shapefiles should be formatted in accordance with the instructions provided in a separate document, [How Should I Format My Mobile Voice Deployment Data?](#), and uploaded as a .zip file to the Form 477 filing interface. A [Mobile Voice Deployment Shapefile Template](#) is also available for download.

Note on Shapefiles (New!): All geometries must be well-formed in 2D according to the OGC (Open Geospatial Consortium) rules. Invalid geometries will be reported to the user, but maps containing invalid geometries will not be accepted by the system. Check your maps for geometry errors before uploading by running a repair algorithm (like QGIS's "Fix Geometries" algorithm or ArcPro's "Repair Geometries" with validation_method=OGC) over the maps to ensure the geometries are OGC spec. Note that ArcGIS Desktop does not currently support this functionality and depending on the size and complexity of the features, repairing geometries may require significant machine time.

5.11 Mobile Voice Subscription

Information in this section is reported by *facilities-based providers of mobile telephony (mobile voice) service*. For more information on these and other blue bolded terms used in this section, see [Who Must File This Form?](#) and the [Glossary](#). Additional information can be found in a separate document, [Mobile Voice Subscription Terms](#).

Information in this section must be entered interactively. You must fill in each box for each record with either a positive whole number or zero.

Report the following information for each state in which you serve one or more *mobile telephony (mobile voice) subscribers* using your own network facilities and spectrum for which you hold a license, manage, or have obtained the right to use via a spectrum leasing arrangement:

- **Subscribers:** The number of *mobile telephony (mobile voice) subscribers* in service—including subscribers that you (including affiliates) bill directly (including through agents), pre-paid subscribers, and subscribers served via unaffiliated mobile voice service resellers. **Count as a subscriber** a mobile handset, car-phone, or other revenue-generating, active, voice unit that has a unique phone number and that can place calls to and receive calls from the *public switched telephone network*. Subscribers can be assigned to a state based on the area code of the device's phone number or by using some other method that best reflects the subscriber's location, such as billing address or place of primary use address. Please describe the method used in the **Error! Reference source not found.** section of the form.

- **Direct Subscribers:** The number of *mobile telephony (mobile voice) subscribers* in service that are directly billed or prepaid subscribers of the facilities-based provider.

5.12 Explanations and Comments

You may include explanatory comments in the Explanations and Comments section about any information in the filing. Additionally, we require or recommend that you provide information on the topics below if they relate to your filing. Topics marked with an asterisk (*) require an explanation in this section.

- **Holding Company / Common Control Name.** If you enter a new Holding Company / Common Control Name on the Filer Identification page, please provide any additional information about this new entry.
- **Emergency Contact Information.** If you wish to provide additional information about your emergency contact, beyond what is included on the Filer Identification page, please enter in this section. This could include, for example, additional phone numbers or a back-up contact person.
- ***Satellite Providers Filing Abbreviated Fixed Broadband Deployment Data.** Satellite providers that filed abbreviated fixed broadband deployment data must provide an explanation in this section. Specifically, satellite providers that filed a single block record of fixed broadband deployment data for a state or group of state in which provider’s deployment can be represented by identical records for every block in that state or group of state, must indicate that is was their intent. For more information, see [How Should I Format My Fixed Broadband Deployment Data?](#), section 4.
- ***Use of “All Other” or “Other” Technology Codes.** If you used the technology code “All Other” or “0” (see [Codes to Use in Data Upload Files](#) below) in your fixed broadband deployment or fixed broadband subscription data, please provide an explanation of the technology here. However, please consider that we expect that each widely deployed fixed broadband technology will fit into one of the specified technology categories. If you used the “Terrestrial Mobile Wireless – Other” or “0” code in your mobile broadband deployment or mobile voice deployment shapefiles, please provide an explanation of the technology here.
- ***Method for Determining the Number of Interconnected VoIP Subscriptions.** Please explain the methodology used to determine the number of interconnected VoIP subscriptions reported in the Fixed Voice Subscription (Tract Data) section. This number must be based on the maximum number of interconnected VoIP calls that customers may have active – at the same time –

between their physical location and the public switched telephone network (for more information on these italicized terms, see the [Glossary](#)). The maximum number of such calls may be set out under the terms of service agreements with business, institutional, or government customers, or it may be determined by some other method that best reflects customer needs and requirements. For example, providers that market against traditional business telephone systems should be able to estimate reliably what their customers' requirements would be for trunks between a traditional PBX and the telephone company.

- ***Method for Assigning Mobile Subscriptions to States.** Mobile broadband and mobile voice subscribers can be assigned to a state based on the area code or the device's phone number or by using some other method that best reflects the subscriber's locations, such as billing address or place of primary use address. Please explain the methodology used to assign mobile broadband and mobile voice subscribers to a state in the [Mobile Broadband Subscription](#) and [Mobile Voice Subscription](#) sections of the form, respectively.
- **Substantial Changes.** If your subscriber counts or bandwidth entries have changed substantially from your previous submission, please provide an explanation of those changes on this page.

6. Codes to Use in Data Upload Files

The following codes are referenced in these instructions:

Technology Code	Description	Details
10	Asymmetric xDSL	Asymmetric xDSL other than ADSL2 and VDSL
11	ADSL2	For example: ADSL2, ADSL2+
12	VDSL	For example: VHDSL, VDSL2
20	Symmetric xDSL	For example: SDSL, HDSL2, HDSL4
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T-1 are examples)
40	Cable Modem	Cable modem other than DOCSIS 1, 1.1, 2.0, 3.0, 3.1 or 4.0
41	Cable Modem – DOCSIS 1, 1.1, and 2.0	
42	Cable Modem – DOCSIS 3.0	
43	Cable Modem – DOCSIS 3.1	
44	Cable Modem – DOCSIS 4.0	
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include “fiber to the curb”)
60	Satellite	
70	Terrestrial Fixed Wireless	
90	Electric Power Line	
0	All Other	Any specific technology not listed above

Technology Code	Description	Details
10	Asymmetric xDSL	
20	Symmetric xDSL	For example: SDSL, HDSL2, HDSL4
30	Other Copper Wireline	All copper-wire based technologies other than xDSL (Ethernet over copper and T-1 are examples)
40	Cable Modem	
50	Optical Carrier/Fiber to the End User	Fiber to the home or business end user (does not include “fiber to the curb”)
60	Satellite	
70	Terrestrial Fixed Wireless	
90	Electric Power Line	

0	All Other	Any specific technology not listed above
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Table 3: Technology of Transmission Codes for Mobile Wireless Services

Technology Code	Description	Details
0	Other	
83	LTE	
85	CDMA-based	includes CDMA and EVDO/EVDO Rev A
86	GSM-based	includes GSM, WCDMA/UMTS/HSPA, and HSPA+
89	5G-NR	

7. General Information

7.1 When to File

March 1st of each year: providers must file data as of December 31 of the preceding year.

September 1st of each year: providers must file data as of June 30 of the same year.

Note on “Holidays”: FCC rules provide that, if the filing date falls on a holiday, the filing is due the next business day. The term “holiday” means Saturday, Sunday, officially recognized Federal legal holidays and any other day on which the Commission’s offices are closed and not reopened prior to 5:30 p.m. The term “business day” means all days which are not “holidays” as defined above.

7.2 Where and How to File

FCC Form 477 must be filed electronically using the Form 477 filing interface that is available on the Internet at the following address:

<https://form477mod-ui.fcc.gov/home>. (The interface also may be reached via the “Filing Interface” link on the [Form 477 Resources](#) webpage at <http://www.fcc.gov/form477>.) See Log In & Dashboard and Notes on Interface Mechanics.

7.3 Certification of Filing Accuracy

Each Form 477 submission must include, in the Filer Identification information, the name of the official (corporate officer, managing partner, or sole proprietor) whose signature certifies that he/she has examined the information contained in this Form 477 and that, to the best of his/her knowledge, information and belief, all statements of fact contained in this Form 477 are true and correct. For purposes of this Form 477, the entry of the official’s name on this line shall constitute that official’s electronic signature to this certification. Persons making willful false statements in a Form 477 can be punished by fine or imprisonment under the Communications Act, [47 U.S.C. 220\(e\)](#).

7.4 Requesting Confidentiality

Filers may submit a request that certain information in a Form 477 submission not be made routinely available for public inspection by so indicating in the Filer Identification information for that submission. See also 47 CFR §§ [0.457](#), [0.459](#), [1.7001\(d\)](#), [43.11\(c\)](#); *Examination of the Current Policy Concerning the Treatment of Confidential Information Submitted to the Commission*, GC Docket No. 96-55, [Report and Order](#), 13 FCC Rcd 24816 (1998).

7.5 Obligation to File Revisions

Filers must submit revised data if errors are discovered.

7.6 Compliance

Service providers that are required to file the Form 477 but fail to do so may be subject to enforcement action under sections 502 and 503 of the Communications Act and any other applicable law. *See* 47 U.S.C. §§ 502, 503.

8. Glossary

The following terms are as defined for the specific purposes of this information collection. The filer must interpret these terms in the context of the detailed reporting instructions above.

Advertised speeds: For purposes of this form, the terms “advertised speeds” or “advertised bandwidths” are to be distinguished from “theoretical capacity” or other engineering-based concepts that do not represent the downstream and upstream bandwidths that the end user reasonably may expect to receive. “Advertising” is not restricted to “on the web,” “in print,” “by broadcast,” “in person,” or any other specific format. Among other methods, a service is “advertised” to the end user when it is described at point of sale or when the end user is charged at a rate associated with a particular grade of service in the end user’s area. The grade of service may be characterized by, among other features, the downstream and upstream bandwidths that the end user may reasonably expect to receive. (*Clarification added December 5, 2016.*)

Available: For purposes of this form, broadband connections are available in a census block if the provider does, or could, within a service interval that is typical for that type of connection—that is, without an extraordinary commitment of resources—provision two-way data transmission to and from the Internet with advertised speeds exceeding 200 kbps in at least one direction to end-user premises in the census block. *Clarification Notes, added September 10, 2014:* (1) Companies that would rely on the ordering or installation of a not-yet leased circuit (including unbundled network elements defined in [47 CFR § 51.319](#), TDM-based connections, or packet-based connections) to provide service in a census block not currently served should **not** treat that census block as having service available. (2) Dark fiber acquired under an Indefeasible Right of Use (IRU) should be considered the “owned” facilities of the company that acquired the IRU when the dark fiber is used as part of that entity’s own system.

Broadband connections: Lines (or wireless channels) that terminate at an end-user location and enable the end user to receive information from and/or send information to the Internet at information-transfer rates exceeding 200 kbps in at least one direction. See 47 CFR §1.7001(a)(1).

Competitive local exchange carrier (CLEC): An entity authorized, by the state regulatory authority (State commission), to provide local exchange telephone service within the Study Areas of one or more incumbent local exchange carriers in that state.

Consumer Connection: With respect to mobile broadband, a connection not billed to a corporate, non-corporate business, government, or institutional customer account.

Consumer Service Plan (or Mass Market / Consumer Service Plan): A service plan that is designed for, marketed to, or purchased by primarily residential end users.

End user: A residential, business, institutional, or government entity that uses services for its own purposes and does not resell such services to other entities. For the purposes of this form, an Internet Service Provider (ISP) is not an end user of a broadband connection. *See* 47 CFR §1.7001(a)(3).

End-user premises: A building, store, shop, apartment, or other structure, or group of structures, occupied by or under the control of an end user.

Facilities-based provider: An entity is a facilities-based provider of a service if it supplies such service using facilities that satisfy any of the following criteria:

- (i) Physical facilities that the entity owns and that terminate at the end-user premises;
- (ii) Facilities that the entity has obtained the right to use from other entities, such as dark fiber or satellite transponder capacity as part of its own network, or has obtained
- (iii) Unbundled network element (UNE) loops, special access lines, or other leased facilities that the entity uses to complete terminations to the end-user premises;
- (iv) Wireless service for which the entity holds a license or that the entity manages or has obtained the right to use via a spectrum leasing arrangement or comparable arrangement pursuant to subpart X of this Part (47 CFR §§ 1.9001-1.9080); or
- (v) Unlicensed spectrum.

See 47 CFR §1.7001(a)(2).

(Mobile voice service resellers— including entities that have filed Lifeline Compliance Plans— are not facilities-based providers for purposes of Form 477.)

Incumbent local exchange carrier (incumbent LEC, or ILEC): The company that was providing telephone exchange service (local phone service) in a particular area on February 8, 1996, the date on which the Telecommunications Act of 1996 was enacted into law. *See* 47 CFR § 51.5.

In-service broadband: A connection with information-transfer rates above 200 kbps in at least one direction that is (1) delivering Internet access service at the residential or non-residential premises of the end user that has purchased Internet access service on a month-to-month or longer-term basis (**in-service fixed broadband**), or (2) is service to a terrestrial mobile wireless service subscriber whose device and data plan provide the ability to transfer, on a monthly basis, either a specified or unlimited amount of data to and from lawful Internet sites of the subscriber's choice (**in-service mobile broadband**).

Interconnected VoIP Service: A service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet-protocol compatible customer premises equipment; and (4) permits users generally to receive calls that originate on the *public switched telephone network* and to terminate calls to the *public switched telephone network*. See 47 CFR § 9.3. Interconnected VoIP service uses IP packet format to transmit voice calls **between** the end-user customer's specialized equipment (such as an IP telephone, IP PBX, or TDM-to-IP converter device that is attached to an ordinary telephone or conventional PBX) and the telecommunications network. **By contrast**, local exchange telephone service uses analog or Time Division Multiplexing (TDM) to transmit voice calls **between** the end-user customer's device and the *public switched telephone network*. Note that some end-user customer devices (such as an IP PBX or conventional PBX) can be configured to connect to both local exchange telephone service and interconnected VoIP service, but the two types of service connections are distinct. A single end-user service connection **cannot be both** interconnected VoIP service and local exchange telephone service at the same time.

Interconnected VoIP Subscription: Interconnected VoIP service purchased by an end user (that is, by an entity that does not resell the VoIP service to other entities).

Local exchange telephone service: Local exchange (local telephone) or exchange access service that allows end users to originate and/or terminate local telephone calls on the *public switched telephone network*, whether used by the end user for voice telephone calls or for other types of calls carried over the *public switched telephone network* (for example, lines connected to facsimile equipment or lines used occasionally or exclusively for dial-up connection to the Internet). Local exchange telephone service uses analog or Time Division Multiplexing (TDM) format to transmit voice calls **between** the end-user customer's device and the telecommunications network. Commonly, the end-user device is an ordinary dial pulse or touch-tone (wired or cordless) telephone or a conventional PBX, but the device also could be an IP PBX to the extent that the PBX connects to TDM service at the end user's premises. **By contrast**, interconnected VoIP service requires, among other things, the end-user customer to have specialized equipment (such as an IP telephone or a TDM-to-IP converter device attached to an ordinary telephone), and it uses IP packet format to transmit voice calls **between** that specialized equipment and the telecommunications network. Note that a single end-user service connection **cannot be both** local exchange telephone service and interconnected VoIP service at the same time.

Mobile telephony (mobile voice) service: A real-time, two-way switched voice service that is interconnected with the public switched network using an in-network switching facility that enables the provider to reuse frequencies and accomplish seamless handoff of subscriber calls.

Mobile telephony (mobile voice) subscriber: A mobile handset, car-phone, or other revenue-generating, active, voice unit that has a unique phone number and that can place and receive calls from the *public switched telephone network*.

Over-the-top interconnected VoIP: Service delivered to the end-user customer over a high-capacity connection that the customer obtains from an entity **not affiliated** with the interconnected VoIP service provider. (Colloquially, “bring-your-own-broadband.”)

Owned local exchange service line: A local exchange service line that terminate at the end user’s premises over last-mile facilities that the filer (including affiliates) owns or has obtained the right to use as dark fiber within its own system.

Place of Primary Use: The street address representative of where the customer’s use of the mobile telecommunications service primarily occurs, which must be—

- (a) the residential street address or the primary business street address of the customer; and
- (b) within the licensed service area of the home service provider.

See [4 U.S.C. § 124\(8\)](#).

Presubscribed interstate long distance carrier: The (facilities-based or reseller) carrier to which an interstate long distance call is routed automatically, without the use of any access code by the end user.

Public switched telephone network: The interconnected set of telecommunications networks that use analog or Time Division Multiplexing (TDM) format to transmit voice calls **between** end-user customers and the telecommunications network. The modern public switched telephone network frequently converts these voice calls into IP packet format for transport within and among networks (“IP-in-the-middle”). However, such **within-network** format conversion is not relevant to the definitions of—and distinction between—local exchange telephone service and interconnected VoIP service.

Registered location: The most recent information obtained by an interconnected VoIP service provider that identifies the physical location of an end user. See [47 CFR § 9.3](#).

Residential end-user premises: Residential living units (e.g., single family dwellings and individual households in multiple dwelling units such as apartments, condominiums, mobile home parks, etc.) and individual living units in institutional settings such as college dormitories and nursing homes. (**Clarification added March 23, 2016.**)

Residential lines: Lines (**Clarification added March 23, 2016:** that is, local exchange telephone service lines or interconnected VoIP service subscriptions) provided to residential end-user

premises. Also includes any lines the filer provides to a shared-tenant service provider in an apartment building or similar residential setting.

Study Area: The particular area within which an incumbent local exchange carrier was providing local exchange telephone service (traditional local phone service) on February 8, 1996, the date on which the Telecommunications Act of 1996 was enacted into law. [See 47 CFR § 51.5](#). Each such area has a 6-digit Study Area Code (SAC). Additionally, some other voice service providers are eligible for Universal Service Fund support and therefore have a 6digit SAC.

UNE-Platform: The combination of loop UNE, switching UNE, and transport UNE. (UNEs are defined in the FCC Rules. [See 47 CFR § 51.319](#).) UNE-P no longer exists as a required unbundling obligation.

Voice-grade equivalent (VGE): Generally, the number of DS0 (64 kbps) lines/channels in a higher-capacity circuit. In Form 477, the VGEs in a higher-capacity circuit must be counted **according to how the end user is charged** rather than on how the service is physically provisioned.

9. Disclosure, Privacy Act, Paperwork Reduction Act Notice

The Privacy Act of 1974 and the Paperwork Reduction Act of 1995 require that, when we ask you for information, we must first tell you our legal right to ask for the information, why we are asking for it, and how it will be used. We must also tell you what could happen if we do not receive it and whether your response is voluntary, required to obtain a benefit, or mandatory under the law. See Privacy Act of 1974, P.L. 93-579, December 31, 1974, 5 U.S.C. § 552a (e)(3), and the Paperwork Reduction Act of 1995, P.L. No. 104-13, 44 U.S.C. § 3501, *et seq.*

Our legal right to ask for this information is sections 1.7000-1.7002, 20.15, 43.01, 43.11 of the Federal Communications Commission's rules. 47 CFR §§ 1.7000-1.7002, 20.15, 43.01, 43.11. Your response is mandatory.

This collection of information stems from the Commission's authority under sections 1-5, 11, 201-205, 211, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-155, 161, 201-205, 211, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503, and section 706 of the Telecommunications Act of 1996, as amended, 47 U.S.C. § 157nt. The data in the Form 477 will be used to monitor the deployment of broadband services and the development of local telephone service competition. Summary information derived from the form will be made available to the public in a manner consistent with the Commission's rules and orders.

The Commission is authorized under the Communications Act of 1934, as amended, to collect the personal information we request in this form. If we believe there may be a violation or potential violation of a statute or a Commission regulation, rule, or order, your filing may be referred to the Federal, state, or local agency responsible for investigating, prosecuting, enforcing, or implementing the statute, rule, regulation, or order. In certain cases, the information in your filing may be disclosed to the Department of Justice, court, or other adjudicative body when (a) the Commission; or (b) any employee of the Commission; or (c) the United States government, is a party to a proceeding before the body or has an interest in the proceeding.

Reporting entities failing to file Form 477 in a timely fashion may be subject to penalties under the Communications Act, including sections 502 and 503(b).

We have estimated that each response to this collection of information will take approximately 348 hours per response. Our estimate includes the time to read the instructions, look through existing records, gather and maintain the required data, and actually complete and review the form or response. If you have any comments on this estimate, or on how we can improve the collection and reduce the burden it causes you, please write the Federal Communications Commission, AMD-PERM, Paperwork Reduction Project (3060-0816), Washington, DC 20554.

We will also accept your comments via the Internet if you send them to pra@fcc.gov. Please DO NOT SEND COMPLETED APPLICATIONS TO THIS ADDRESS. Remember - you are not required to respond to a collection of information sponsored by the Federal government, and the government may not conduct or sponsor this collection, unless it displays a currently valid OMB control number or if we fail to provide you with this notice. This collection has been assigned an OMB control number of 3060-0816.

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