

NECA REPORTING GUIDELINE

Guideline: 8.11 **Providing Local Exchange Telephone Service Using Voice over Internet Protocol (VoIP) Technology**

Issue Date: 1/08 (Revised 02/19)

Description

As technology and competition have advanced, many companies have integrated IP technology into their local networks. Companies are investing in softswitches and IP gateway devices that have the capability either to augment the capacity of traditional circuit switches or bypass them entirely and route traffic directly to the Internet or some other private packet network.

This NECA Reporting Guideline examines how IP technology can be used to provide local exchange telephone service and provides guidance on whether associated cost and loop data are eligible for pooling, cost study and Universal Service reporting. In particular, this Guideline addresses whether use of IP technology by an ILEC to provide local exchange voice calling services automatically causes the ILEC's service to be treated as unregulated.¹

The status of voice telephony services as regulated or unregulated has traditionally been determined based on the manner in which the service is offered, not the technology used to provide the service. Accordingly, pending further FCC clarification, NECA will continue to accept cost and loop count data for voice telephony services offered on a common carriage basis, regardless of whether IP technology is used to provide the service.

Background

The 1996 Telecommunications Act codified distinctions between "telecommunications," "telecommunications service," and "information service." Telecommunications services are regulated under Title II of the Act. Information services are covered under Title I.

The traditional test for determining whether a service is offered on a common carriage basis (and therefore is a "telecommunications service" under the 1996 Act) primarily relates to the manner in which the service is offered. As the Commission recently explained in its 2017 *BDS Order*:

common carriage under the Act has two prerequisites: (1) an indifferent holding out of service to all potential users; and (2) the transmission by customers of "intelligence of their own design and choosing."²

¹ A related question is whether a line carrying VoIP-based voice service automatically qualifies as a line provided "without regulated local exchange service" for purposes of the FCC's definition of a Consumer Broadband-Only Line (CBOL). See NRG 8.17, CBOL for Pooling and USF Reporting (issued Jan. 2018, revised Aug. 2018).

² *Business Data Services in an Internet Protocol Environment*, WC Docket No. 16-143, *et al.*, Report and Order, 32 FCC Rcd. 3459 (2017).

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The 2017 *BDS Order* included an extensive, fact-intensive analysis of the manner in which certain providers offered their business data services. Ultimately, the Commission found that the services under review were offered on a “private” carriage rather than common carriage basis.

As incumbent providers of regulated basic local exchange service (“Plain Old Telephone Service” or “POTS”), ILECs (1) typically have a local tariff on file with the state PUC (where required) and provide local exchange service to retail customers under such tariffs;³ (2) charge end user customers an interstate SLC pursuant to an interstate access tariff;⁴ (3) determine jurisdiction of traffic;⁵ and (4) bill access charges for all non-local traffic.⁶ These factors are strongly indicative of services offered on a Title II, common carriage basis under traditional legal analyses.

Rules for distinguishing between Title II “telecommunications services” and Title I “information services” are less settled. In 2004, the Commission issued two “bookend” Orders addressing the classification of services provided using IP technology. On one end, the Commission found Pulver.com’s “Free World Dialup” (FWD) offering to be an unregulated information service⁷ largely because FWD did not include any transmission service or transmission capability; rather, users communicated via their own internet connections using SIP phones or software that enabled their personal computers to function as “soft phones.”⁸ On the other end, in its AT&T “IP in the Middle Order,” the Commission addressed an interconnected

³ A decision by a state to “deregulate” local exchange service does not necessarily mean the service is unregulated for interstate purposes. For example, in its 1987 *Reg/Nonreg Accounting Order*, the Commission determined that basic services that may be considered “deregulated” at the state level should still be classified as regulated activities under FCC accounting rules. (“We believe that the benefits to be derived from classifying state-deregulated basic services as regulated activities far exceed those from any alternative approach. Disputes regarding the definition of deregulated would create an administrative nightmare for this Commission in the event we were to require that state-deregulated basic services be classified as nonregulated activities.”) *Amendment of Part 31, the Uniform System of Accounts for Class A and Class B Telephone Companies to Provide for Nonregulated Activities and to Provide for Transactions Between Telephone Companies and Their Affiliates*, CC Docket No. 86–111, Report and Order, 2 FCC Rcd. 1298 (1987) ¶ 74 (*Reg/Nonreg Accounting Order*).

⁴ E.g., National Exchange Carrier Association, Inc., Tariff F.C.C. No. 5, § 4.

⁵ *Id.*, § 2.

⁶ 47 C.F.R. §69.3.

⁷ *Petition for Declaratory Ruling that pulver.com’s Free World Dialup is Neither Telecommunications Nor a Telecommunications Service*, WC Docket No. 03-45, Memorandum Opinion and Order, 19 FCC Rcd. 3307 (2004).

⁸ *Id.* n. 3. The FCC has subsequently defined two types of VoIP services. “Interconnected VoIP” is 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 (CPE); 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. 47 C.F.R. § 9.3 Definitions. “Non-interconnected VoIP” services are defined similarly, but do not interconnect with the public switched telephone network.

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service where the carrier converted traffic into IP format for transmission over its internet backbone, and then converted calls back to their original format for delivery to called parties through LEC local business lines. Despite claims the service involved “protocol conversion” and was therefore an information service, the Commission determined the service to be a telecommunications service because IP was only used to transport the call.⁹

Since 2004 the FCC has had many opportunities to address the regulatory classification of other interconnected VoIP services but has so far declined to do so.¹⁰ It has, however, issued several Orders applying Title II-type carrier obligations to interconnected VoIP providers, including: 911 obligations; the Communications Assistance for Law Enforcement requirements; USF contribution obligations; service discontinuance notification; and payment of access charges.¹¹

In 2017, in response to attempts by the Minnesota PUC to assert jurisdiction over Spectrum Voice, an interconnected VoIP service offered by Charter Advanced Services, the U.S. District Court for the District of Minnesota issued a declaratory ruling to the effect that Spectrum Voice was an information service and the PUC was therefore preempted from regulating it.¹² Spectrum Voice subscribers receive an embedded Multimedia Terminal Adapter from Charter that is combined with a modem (for broadband internet access service) into a single device. Spectrum Voice is an “interconnected” VoIP service because of its ability to interface with traditional or legacy telephone operations. It is also a “fixed” service because it is tethered to the user’s home.

On September 7, 2018, the Eighth Circuit Court of Appeals issued a decision affirming the District Court of Minnesota’s ruling that Charter’s VoIP service is an “information service” under the Telecommunications Act and that state regulation of Charter’s VoIP services was therefore preempted.¹³ It agreed that for these calls, because information enters Charter’s network “in one format (either IP or TDM, depending on who originated the call) and leaves in another,

⁹ *Petition for Declaratory Ruling that AT&T’s Phone-to-Phone IP Telephony Services are Exempt from Access Charges*, WC Docket No. 02-361, Order, 19 FCC Rcd. 7457 (2004).

¹⁰ *See, e.g., IP-Enabled Services*, WC Docket No. 04-26, Notice of Proposed Rulemaking, 19 FCC Rcd. 4863 (2004). *See also Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, WC Docket No. 03-211, Memorandum Opinion and Order, 19 FCC Rcd. 22404 (2004) ¶ 14 (*Vonage Order*).

¹¹ The 2011 Transformation Order determined “toll” VoIP PSTN traffic would be charged at interstate rates and all other VoIP-PSTN traffic would be charged at the applicable reciprocal compensation rates, on a prospective basis. *Connect America Fund*, WC Docket No. 10-90, *et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 17663 (2011) ¶ 40. *See generally, IP-Enabled Services*, WC Docket No. 04-36, Report and Order, 24 FCC Rcd. 6039 (2009) ¶ 15.

¹² *Charter Advanced Services, et al. v. Nancy Lange, et al.*, 259 F.Supp.3d 980 (D. Minn. 2017).

¹³ *Charter Advanced Services, et al. v. Nancy Lange, et al.*, No. 17-2290 (8th Cir. Sept. 7, 2018).

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Charter's system offers net protocol conversion, which the FCC has defined as occurring when an end-user [can] send information into a network in one protocol and have it exit the network in a different protocol."¹⁴

Analysis

NECA member companies may provide a variety of voice service offerings that involve the use of VoIP technology. The following descriptions outline three common scenarios, which are further illustrated in diagrams attached to this NRG:

1. The ILEC provides voice telephone exchange service to the end user using VoIP technology between the switch and the customer premises. Except for the use of VoIP technology in the loop, no change is made in the way the service is offered to end users. The ILEC bills the end user its local exchange service tariff rate as well as an interstate SLC charge, and assesses originating and terminating access charges on non-local (interexchange) traffic. (Attachment, Figure 1)
2. The ILEC provides a CBOL (Consumer Broadband Only Loop) to the end user or to an ISP (could be an ILEC affiliate). The end user purchases VoIP service from an over-the-top (OTT) voice service provider, which could be an unaffiliated provider (e.g., Vonage) or an ILEC affiliate. The end user uses the VoIP service for all incoming and outgoing telephone calls. All calls are routed to the VoIP service provider over broadband facilities and do not utilize the public switched telephone network of the originating ILEC. The ILEC bills the CBOL service but does not bill local exchange tariff rates, an interstate SLC, or switched access charges. (Attachment, Figure 2)
3. Scenario 3 is a variation on Scenario 2. While in Scenario 2, the ISP or OTT provider switches the voice traffic and sends it to the PSTN, in Scenario 3, the ISP or OTT provider sends the voice traffic back to the local ILEC switch for routing. The ILEC again bills the CBOL service, but does not bill local exchange tariff rates, an interstate SLC, or switched access charges. However, the unregulated ISP or OTT provider does use a portion of the regulated ILEC switch to route traffic. (Attachment, Figure 3)

In Scenario 1, the ILEC is providing traditional POTS service to the end user out of an approved local exchange tariff. The ILEC is billing its end user an interstate SLC and it can determine the jurisdiction of traffic and bill access charges for non-local traffic. There is nothing precluding an ILEC from using IP technology to provision basic local exchange service. The service continues to be considered regulated, and costs associated with providing it qualify for pool reporting and universal service support.

¹⁴ *Id.* at 6. One of the judges on the panel dissented, arguing that Charter is avoiding the IP-in-the-middle precedent based on a technicality regarding where the protocol conversion occurs. According to the dissent, the "only practical difference between Charter's network and AT&T's (IP in the middle) network is whether the first converter box is inside or outside customers' homes." *Id.* at 11.

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In Scenario 2, the ILEC provides only a transmission path, i.e., CBOL access service to the end user or an ISP rather than local exchange voice service. Costs incurred by the OTT VoIP provider in provisioning IP voice service do not qualify for pool reporting or universal service support. Costs related to the CBOL access service would continue to be reported for pooling purposes.

In Scenario 3, the ILEC also provides only a transmission path, but also utilizes a portion of its network to provide the unregulated OTT VoIP service either directly or indirectly, via an unregulated affiliate or separate operation. In this case, the service continues to be unregulated, and normal Part 64 accounting rules would apply. That is, the ILEC would need to allocate costs associated with the unregulated use of the switch to separate unregulated accounts.

This area continues to evolve. Under the 8th Circuit ruling described above, it appears the courts determined a service to be a non-regulated information service based primarily on the technological configuration employed by the provider, without pursuing an in-depth examination of the offering from the end user's perspective. This case arose, however, when a state PUC attempted to assert traditional common carrier regulatory authority over a service that was offered in a manner similar to other non-regulated OTT voice services. It is unclear whether the court would reach the same conclusion if an ILEC currently providing regulated basic local exchange service as described in Scenario 1 were to claim that its service was "unregulated" simply because IP technology was being used at specific points in the network.

Pending further FCC clarification or further court decisions in response to the 8th Circuit's decision, it appears reasonable to assume that services provided in a manner consistent with Scenario 1 above can continue to be treated as regulated even though some or all of the service is provided using IP technology in the network. Conversely, it may not be reasonable to assume that use of IP technology in the network automatically transforms regulated basic local exchange service into an unregulated information service without substantial changes in the manner in which the service is offered to end users.

Conclusion

The conclusions reached in this NECA Reporting Guideline are that cost treatment under Parts 32, 64, 36 and 69 of the Commission's rules is based on the manner in which service is provided by the ILEC rather than what technology is employed. Where the ILEC is providing regulated basic local exchange service to its end users in compliance with FCC rules and State law, the costs of providing such services qualify for pool reporting and universal service support regardless of the technology used.

ILECs are required to comply with a number of conditions, including the four (4) FCC Parts mentioned above. To the extent that ILECs seek to offer voice services that are not in compliance with these requirements, they may not report associated costs to NECA for pooling

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purposes or federal high cost universal service support programs¹⁵

The FCC has authorized NECA to interpret FCC rules where necessary.¹⁶ Pursuant to this authorization, NECA has published this Reporting Guideline Paper. Notwithstanding NECA's recommended interpretation, the FCC retains the full authority to review NECA's Reporting Guideline Papers. In the event of such review, the FCC's findings, if contrary to NECA's position, will take precedence.¹⁷

¹⁵ ILECs may wish to provide VoIP services either directly or indirectly (e.g., through a VoIP affiliate). Provisioning of services that are the functional equivalent of local exchange service on a non-tariffed basis (or that otherwise fail to comply with federal and state regulatory requirements including the criteria described above) raises potentially serious legal questions not addressed in this NECA Reporting Guideline. Companies should be aware, however, that to the extent such services are provided to or purchased from and affiliate, the Commission's Part 32 rules apply. To the extent such services are provided directly by the ILEC, cost allocation proceedings as specified in Part 64 need to be followed to assure related costs and revenues are not included in NECA pool or USF reports.

¹⁶ *Safeguards to Improve the Interstate Access Tariff and Revenue Distribution Processes*, CC Docket 93-6, Report and Order to Show Cause, 10 FCC Rcd. 6243 (1995).

¹⁷ The FCC's list of supported services is contained in 47 C.F.R. § 54.101. These services include (1) voice grade access to the public switched network; (2) local usage; (3) dual tone multi-frequency signaling or its functional equivalent; (4) single-party service or its functional equivalent; (5) access to emergency services; (6) access to operator services; (7) access to interexchange services; (8) access to directory assistance; and (9) toll limitation for qualifying low-income consumers. In establishing the list, the FCC is required to consider whether the services are essential to education, health, or public safety, have been subscribed to by a substantial majority of residential subscribers, are being deployed in the public telecommunications networks by telecommunications carriers; and are in the public interest.

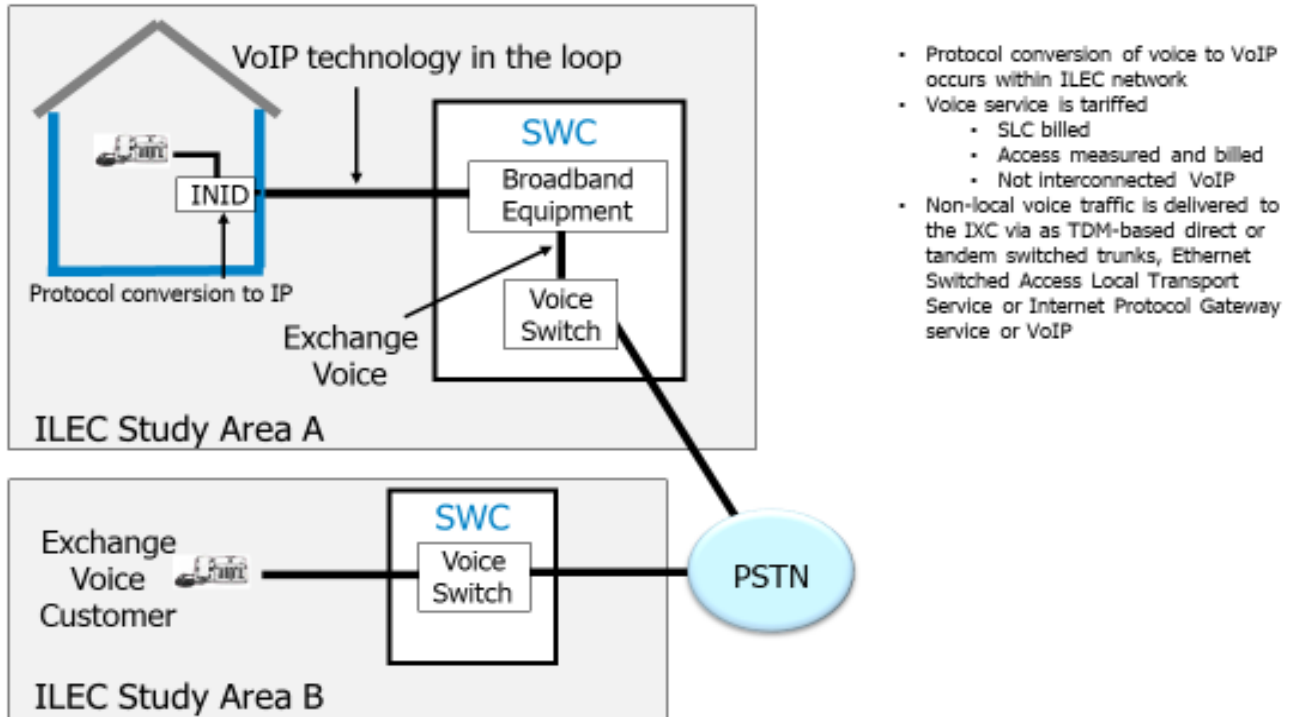
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Figure 1

Scenario 1

Regulated voice service provisioned using VoIP



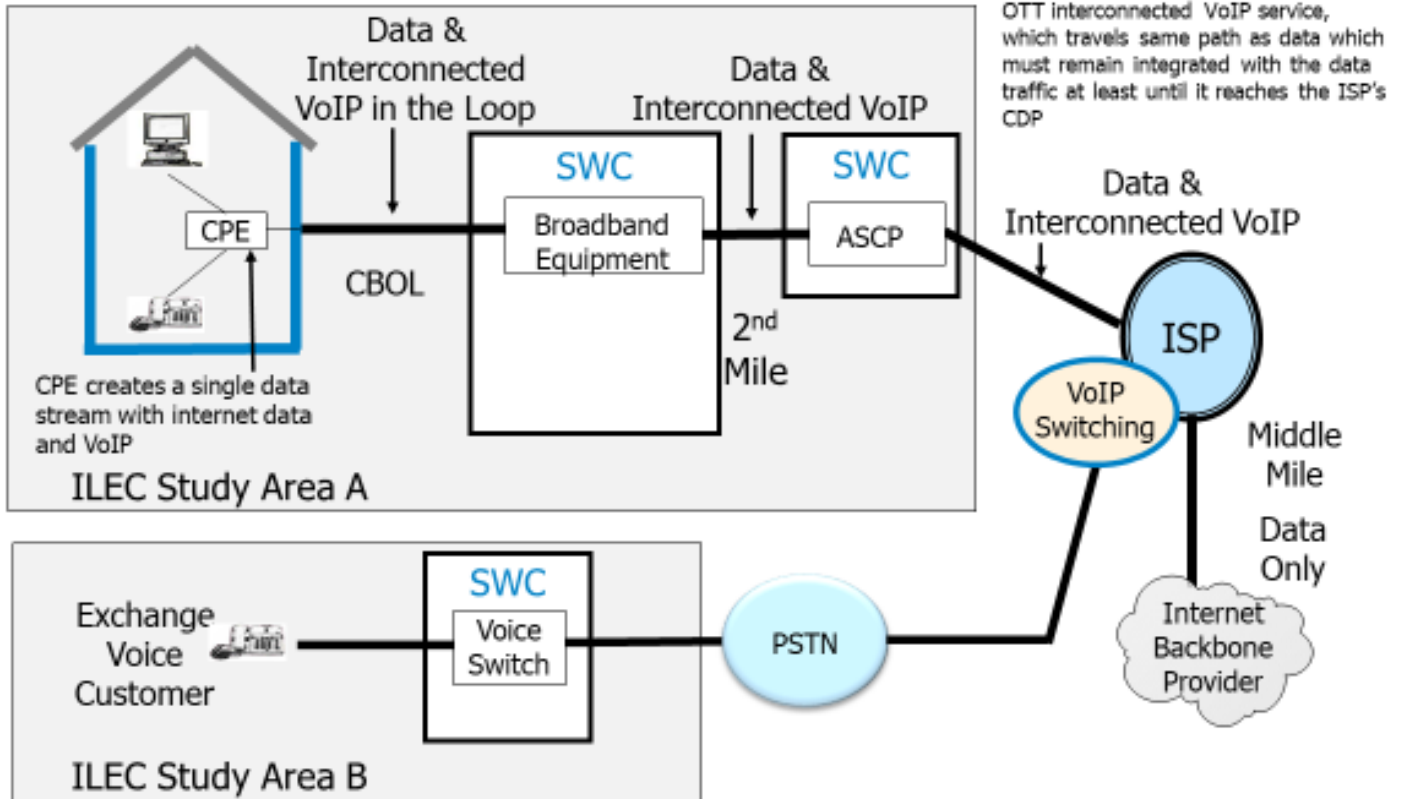
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Figure 2

Scenario 2

CBOL service with nonregulated, interconnected VoIP



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Figure 3

Scenario 3

CBOL service with nonregulated, interconnected VoIP using ILEC switch

- Protocol conversion of voice to VoIP occurs at end user CPE
- End User subscribes to non-regulated OTT interconnected VoIP service, which travels same path as data which must remain integrated with the data traffic at least until it reaches the ISP's CDP
- ISP separates voice traffic from data; voice is sent to ILEC switch for routing (non-reg allocation of switch required)

