# CARRIERS OF LAST RESORT, ELIGIBLE TELECOMMUNICATIONS CARRIERS, AND STATE ADMINISTRATIVE ROLES

**A White Paper To The**

**State Members**

**Of The**

**Federal-State Joint Board**

**On**

**Universal Service**

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# Carriers of Last Resort, Eligible Telecommunications Carriers, and State Administrative Roles

## I. The need for provider of last resort policies

The National Broadband Plan (NBP) recently published by the Federal Communications Commission (FCC) includes several broad policy goals. One is to provide every American with affordable access to robust broadband service, and the means and skills to subscribe if they so choose. The NBP also proposes that support would be provided to not more than one provider in each area.[1] Finally, the NBP proposes to limit support under the Connect America Fund (CAF) to areas where there is no private sector business case to provide broadband and high-quality voice-grade service (market failure areas).[2]

These policies do not explain how broadband service will become ubiquitous. The NBP is unlikely to succeed unless this concept of support for market failure areas is well integrated into some method to define service areas that covers all areas of the country. Market forces on their own demonstrably do not serve all high-cost areas. Unless the FCC also adopts policies to define a provider for the least desirable areas, there is a risk that those areas will be left unserved.

The NBP goal of ubiquitous broadband is similar to, although more ambitious than, the traditional "universal service" principles that the states, the FCC, and Congress have applied for decades to voice networks. For voice service, the principle of "carrier-of-last-resort" (COLR) has historically been a key element of state universal service policy. Indeed, the concept arose from even older common law principles that have been around for centuries. Long before telephones were invented, English and then American citizens had developed expectations about the conduct of certain kinds of businesses that "affect the public interest." Common law imposed "common carrier" duties on certain forms of business, such as coaches, ferries and inns. State law also gave special benefits and duties to "franchised" enterprises that made capital improvements, allowing them to benefit exclusively from the services produced by those improvements. These common law roots led to the COLR doctrine when states and the federal government began to regulate utilities.

The NBP indicates that the FCC will continue to recognize COLR policy in some form, asserting that "recipients of funding should be subject to a broadband provider-of-last-resort obligation" (POLR) that includes verifying widespread broadband availability, as well as meeting service quality and reporting requirements.[3] Defining the elements of POLR and

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[1] NBP at 145.

[2] NBP at 145.

[3] NBP at 145-46. *See also* NBP at 149. Hereafter, "POLR" will be used to describe a set of duties applicable to broadband Internet providers.

determining how they will be applied will be a key objective in achieving universal service goals for broadband.

In the future, POLR duties probably will be assigned to broadband providers using a different legal basis than applied historically to voice COLRs. Historically, COLR duties attached to telephone companies as a condition of their franchise. States imposed similar duties on all traditional telephone companies. In the future, although broadband POLR duties may have similar elements, those duties will most likely be imposed only on carriers receiving universal service support, not as a condition of a franchise to operate.

Administering broadband POLR duties will take several steps. First, the duties themselves must be defined. Then they must be assigned to particular carriers and particular areas. They must be enforced, and means must be found to supervise carrier exits from existing service areas. As the POLR duties are defined, it is important to recognize there may be a need for sufficient universal service support in order for the provider to meet its POLR duties.

## II. Federal preemption and state participation

Federalism will be a key issue in developing a workable universal service system for broadband Internet service. While the FCC might want to directly administer POLR duties, it might be more advisable for it to delegate some or all of that work to state commissions.

The FCC may anticipate a large role for itself, particularly given its past emphasis on declaring the Internet to be interstate communications. In the wireless industry, the FCC historically defined the size of market areas, and it imposed conditions prescribing build-out requirements. For universal service, however, the jurisdictional questions are more complex. They involve both wireline and wireless services, and they involve both voice and broadband Internet services, and a much different statutory structure.

The FCC has held that that broadband Internet access is an interstate "information service" subject to "Title I" regulation under its "ancillary" authority. In April of 2010, the D.C. Circuit issued a decision that rejected the last part of that claim. The court held that the FCC must show that "each and every assertion of jurisdiction over cable television must be independently justified as reasonably ancillary" to some specific power under another statute. The court held the FCC had not "independently justified" each of its assertions of authority over Comcast's network management practices.[4] The implications of the case were great, as it called into question the basis for the FCC's claim of authority over all forms of broadband Internet service.

It is not clear whether the FCC's (and the courts') jurisdictional rulings will eventually produce a sensible basis for administering POLR duties. At the moment, it seems fairly clear that the FCC continues to view broadband service as an "information service" that is "interstate." Under current law, this places the FCC's "ancillary jurisdiction" in considerable doubt. Nevertheless, the implications for POLR duties are largely undecided. The FCC also has explicit

[4] *Comcast Corp. v. FCC*, 600 F.3d 642, 651 (D.C.Cir. 2010).

authority under Section 254 of the Telecommunications Act of 1996 (TA96 or Act) to use universal service funding to advance both telecommunications and "information services."[5] This may also be a possible legal basis for asserting authority to impose POLR duties.

The Pennsylvania PUC (PaPUC) filed comments encouraging the FCC to allow states to set priorities for their respective deployments of broadband facilities and services that are and will be supported by both the federal universal service fund (USF) and other sources. The PaPUC said that individual states are in a better position to know and to manage their respective broadband deployment needs. Second, the PaPUC noted the value of states managing the flow of the federal USF support in conjunction with a periodic re-examination of the COLR duties.[6]

Staff urges the State Members of the Joint Board to advocate for a broad state role in defining and administering POLR duties. The states have unique capabilities that suit them well to administer the definition, assignment and enforcement of POLR duties. State commissions can hold local hearings in areas affected and hear from customers, something for which the FCC lacks sufficient resources to adequately address. State commissions also hear more frequently from local citizens when service is not right or is not available at all. State commissions are also held more accountable to local legislators who, in recent years, have been quite sensitive to the needs of unserved areas. Given the resource limitations of the FCC and the manner in which it conducts its business, it is hard to imagine the FCC effectively administering a nationwide POLR system. If the states do not audibly volunteer as POLR administrators, and if the FCC wrongly concludes that federal officials can perform all the necessary work, in staff's opinion the resulting system would be unlikely to meet universal service goals for broadband in a viable and sustainable manner.

It is also staff's opinion that the states should not be deterred from this advocacy by past jurisdictional rulings from the FCC. In the past, the voice network carried both intrastate and interstate switched traffic, yet states were the authors of COLR duties that most state commissions still enforce today. Those COLR policies advanced universal service, rather than creating conflicts. Even under TA96 – under which the concept of an Eligible Telecommunications Carrier (ETC) is analogous to COLR – the Congress assigned many of the decisions involving local participants and local effects to the states. The fact that the network is shifting to packets does not change the logic. State commissions are still the bodies most aware of local conditions in communications and are in the best position to determine which carriers are providing adequate service.

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[5] 47 U.S.C. § 254(b)(2).

[6] FCC, *Connect America Fund*, WC Docket No. 10-90, Initial Comments of the Pennsylvania Public Utility Commission, filed July 12, 2010, at 38.

## III. Defining POLR/ETC duties

### A. The duty to serve

The preeminent duty of a voice COLR has been the "duty to serve." The NBP defines "carrier of last resort" as:

> The carrier that commits (or is required by law) to provide service to any customer in a service area that requests it, even if serving that customer would not be economically viable at prevailing rates.[7]

Construction charges are an important limitation on the duty to serve. A carrier that can impose high construction charges on any line extension effectively has a duty to serve only areas where it has already built facilities. In addition, states sometimes have allowed recapture of construction charges from later-arriving-customers who connect within a fixed period of time to a new line paid for by another customer.

A broadband POLR requirement should be explicit about when carriers are authorized to impose construction charges on end users, and in what amounts. In may also be appropriate for a broadband POLR requirement, to specify a distance or cost limit beyond which a provider is exempt from its duty to serve without sufficient construction payment from end users.

COLR duties are broader than the duty to serve. COLRs have a variety of service quality requirements, public safety requirements and carrier-to-carrier requirements. These functions must be equally important in a broadband environment, and each should be evaluated on a case-by-case basis when defining the duties of broadband POLRs. For instance, a provider should not be awarded a service area and the associated support simply because it offers the least expensive alternative to serving the area. The provider should be required to submit service quality improvement plans and should be required to commit to similar COLR customer service quality commitments. Similarly, broadband POLR requirements should include carrier-to-carrier obligations such as providing direct and indirect physical connections with the ability to send packets to all end users. In other words, POLR duties must include many of the same obligations as current COLR requirements.

### B. Comparing state COLR and federal ETC duties

The duties of ETCs under the Act restate many traditional COLR duties, and overlook others. Possibly the most important difference is that the ETC's duty to serve is qualified. Under the statute and current FCC rules, a carrier can be designated where it provides services through a combination of some of its own facilities, resale of another carrier's services, and use of unbundled network elements.[8] These provisions have allowed Competitive ETCs (CETCs) be designated as ETCs without constructing a ubiquitous network.

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[7] NBP at 351.

[8] 47 U.S.C. § 214(e)(1)(A); 47 C.F.R. § 54.205(e), (f).

No similar opportunities were historically presented to COLRs. When telephone service was being built in rural areas in the 1950s, there was simply no other carrier whose services could be resold. Until TA96, support was provided solely to COLRs. The existing ETC rules, therefore, are a kind of "COLR-lite" in which many COLR duties were redefined or eliminated in order to broaden support eligibility.

Although the FCC's rules are less rigorous than typical COLR obligations, the FCC has had second thoughts on that score. In 2004, the FCC decided two ETC cases, *Virginia Cellular*[9] and *Highland Cellular*.[10] These cases revealed that the FCC had evolved to view ETC designation issues as converging on traditional COLR policies. Several FCC commissioners said outright that compliance with state COLR obligations should be a precondition of ETC designation.[11] That, however, has never been an explicit requirement of FCC rules. Staff agrees with these past FCC commissioners who stated that compliance with state COLR obligations should be a precondition of ETC designation.[12]

In 2005, the FCC issued another order that moved closer to replicating COLR requirements. The order established the requirements for carriers seeking ETC designations from the FCC itself, and it suggested that states use similar standards in their own ETC proceedings. In several ways these 2005 changes converged on traditional COLR policies.

- States may now inquire about and impose conditions regarding an applicant's plans to build out its network, much as a state commission traditionally required COLRs to serve their entire service areas.

- States now may inquire about and impose conditions regarding service quality, once again paralleling state COLR policies.

- States may now consider the economic effects of competition on the incumbents, by authorizing an examination of cream skimming and the effects on the demand for universal service funding.

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[9] *Virginia Cellular, LLC Petition for Designation as an Eligible Telecommunications Carrier for the Commonwealth of Virginia,* CC Docket No. 96-45, Memorandum Opinion and Order, 19 FCC Rcd 1563 (2004) ("*Virginia Cellular"*).

[10] *Federal-State Joint Board on Universal Service; Highland Cellular, Inc. Petition for Designation as an Eligible Telecommunications Carrier for the Commonwealth of Virginia,* CC Docket No. 96-45, Memorandum Opinion and Order, 19 FCC Rcd 6422 (2004) ("*Highland Cellular"*).

[11] *Virginia Cellular*, Separate statement of Chairman Michael K. Powell; Separate statement of Commissioner Kathleen Q. Abernathy (wireless networks must be "ready, willing, and able" to serve as carriers of last resort); *Highland Cellular*, Separate statement of Commissioner Kevin J. Martin (CETCs should have the same COLR obligations as incumbent service providers).

[12] *Virginia Cellular*, Separate statement of Chairman Michael K. Powell; Separate statement of Commissioner Kathleen Q. Abernathy (wireless networks must be "ready, willing, and able" to serve as carriers of last resort); *Highland Cellular*, Separate statement of Commissioner Kevin J. Martin (CETCs should have the same COLR obligations as incumbent service providers).

### C. The bundle of POLR duties

For wireline voice services, the states have historically been primarily responsible for assigning COLR duties. While states have not consistently codified the scope of these COLR duties, the duties themselves are extensive. The following table describes elements of voice COLR duties and describes corresponding FCC ETC duties, to the extent they exist. The last column proposes for discussion an analogous set of broadband POLR duties.

*Table 1. COLR and ETC Duties and Possible Broadband POLR Duties*

| **Topic** | **Sample State COLR Requirement** | **Current FCC ETC Rules** | **Possible Broadband POLR Requirement** |
|---|---|---|---|
| Facilities | | | |
| Geographic duty to serve | Offers retail and carrier-to-carrier services throughout the service area. | Offers retail service throughout the entire service area. | Retail and carrier-to-carrier services are offered throughout the service area. |
| | Construction contributions can be required, subject to limits. Later-arriving-customers can be required to reimburse first-customers for recently paid construction charges of mutual benefit. | | Construction contributions can be required, subject to limits. Later-arriving-customers can be required to reimburse first-customers for recently paid construction charges of mutual benefit. |
| Facilities Ownership | COLRs generally must serve customers with their own facilities. | Facilities can be owned, rented (UNEs) or resold, so long as some are owned. § 54.201(d)(1). | POLRs must offer services using facilities that are either: 1) owned, 2) under long-term lease, or 3) under sufficient insurance or bonds to ensure continued availability if the provider fails. |
| Duty in unserved and abandoned areas | State commission may order common carrier to serve unserved areas. | FCC and state commission may order common carrier to serve unserved areas. 47 U.S.C. § 214(e)(3) | Same as ETC. |

| Topic | Sample State COLR Requirement | Current FCC ETC Rules | Possible Broadband POLR Requirement |
|---|---|---|---|
| | | Where one of two or more ETCs relinquishes designation, state commission may order remaining ETC to build facilities. 47 U.S.C. § 214(e)(4) | Same as ETC. |
| Adequate distribution facilities | Single line service (no party lines) | Single line service (no party lines). § (a)(4) | Meets minimum speed requirements as periodically reviewed and determined by the FCC |
| Network Functions and Services | | | |
| Network adequacy | Accurate voice reproduction. | Transmits 300 to 3,000 Hertz audio range. § (a)(1) | Meets minimum speed requirements as periodically reviewed and determined by the FCC |
| | Equal access to IXCs (most states) | Access to IXCs.§ (a)(7) | |
| | Offers vertical services such as call waiting, call forwarding, 3-way calling. | Touch-tone (DTMF) dialing. § (a)(3) | |
| | Infrequent call blocking and call drops | | Limited jitter and packet dropping. |
| | Limited network downtime due to internal problems | Reporting of network outages (2005 order) | Same as ETC |
| Network compatibility | No network features that are incompatible with service to persons with disabilities. (47 U.S.C. § 255) | | No network features that are incompatible with service to persons with disabilities. |
| | No network features that are incompatible with interconnectivity requirements. (47 U.S.C. § 256) | | No network features that are incompatible with interconnectivity requirements. |

| Topic | Sample State COLR Requirement | Current FCC ETC Rules | Possible Broadband POLR Requirement |
|---|---|---|---|
| Services | | | |
| Basic service | Voice service | Transmits and receives voice communications (including signaling and ringing). § (a)(1) | Transmits and receives IP data stream between subscriber and Internet |
| Fully interconnected Network | Subscriber can reach and receive calls from all working NANPA numbers. | | Subscriber can send packets to and receive packets from all locations generally available on the Internet. |
| Emergency services | | Offers subscribers access to emergency services § (a)(5). | Offers subscribers access to emergency services. |
| | Coordination with E-911 authorities, including providing required customer information. | | Coordination with E-911 authorities, including providing required customer information. |
| | Maintains emergency service continuity plan. | | Maintains emergency service continuity plan. |
| Hearing impaired | "Relay" ("711") services for the hearing impaired | | "Relay" ("711") services for the hearing impaired. |
| Ancillary services | Directory assistance | Directory assistance. § (a)(8) | N/A |
| | Operator services | Operator services. § (a)(6) | N/A |
| Pricing | | | |
| Rate designs | Offers switched voice or equivalent service without requiring purchase of any other service. | Offers "local usage," meaning " an amount of minutes of use of exchange service, prescribed by the Commission, provided free of charge to end users." § (a)(2). The FCC never did prescribe that minimum. | Offers broadband Internet service without requiring purchase of any other service. |

| Topic | Sample State COLR Requirement | Current FCC ETC Rules | Possible Broadband POLR Requirement |
|---|---|---|---|
| | Basic package is flat rated within local calling area for fixed monthly rate. | | Basic package (at qualifying speed) is flat rated with either no bit limit or a reasonable upper limit on bits per month. |
| | | Rates in all areas are reasonably comparable to national average urban rate (§ 254(b)(3)) | Rate for the basic package is reasonably comparable to national average urban rate. |
| | Providers may impose higher rates for higher capacity service such as ISDN and T-1 lines. | | Providers may impose higher rates for service with higher flow capacity or higher bits per month limit. |
| Programs for low-income customers | Offers Lifeline and Link-Up programs, using state-defined parameters for eligibility and benefits<br><br>"Toll blocking," of outgoing direct-dialed toll calls | Offers Lifeline and Link-Up<br><br>Toll limitation § (a)(9) | Participates in FCC and state programs for low-income broadband benefits. |
| Nondiscrimination | | | |
| Nondiscrim-ination | No unreasonable price discrimination | | No unreasonable price discrimination |
| | No discrimination against lawful content | | No blocking of lawful content, applications, services, or non-harmful devices, subject to reasonable network management (2010 order).<br><br>No blocking of lawful websites, subject to reasonable network management.<br><br>No unreasonable discrimination in transmitting lawful network traffic. |

| Topic | Sample State COLR Requirement | Current FCC ETC Rules | Possible Broadband POLR Requirement |
|---|---|---|---|
| C2C | | | |
| Inter-connection | On request, interconnects with and trades traffic with other carriers | | On request, interconnects with and trades traffic with other carriers and Internet service providers |
| | Offers physical access to poles and conduits (47 U.S.C. § 224). | | Offers physical access to poles and conduits (47 U.S.C. § 224). |
| Carrier-to-carrier services and rates | Offers direct or indirect physical connections to all other telecommunications carriers at feasible points of interconnection within the POLR service area (47 U.S.C. § 251(a)) | | Offers direct or indirect physical connections to all other Internet service providers at feasible points of interconnection within the POLR service area |
| | Offers interconnecting carriers ability to terminate calls to all end users with dial tone lines | | Offers interconnecting service providers ability to send packets to all end users |
| | Offers digital point-to-point lines to other carriers, including T-1 and T-3 | | Offers capacity-rated middle-mile services to other service providers, such as gigabit Ethernet |
| | Interconnection and transport rates are just and reasonable. | | C2C rates are just and reasonable. |
| Management and customer service | | | |
| Advertising | | Advertise that services are available. § 214(e)(1)(B) | Advertise that services are available. |
| | Comply with state and federal truth-in-advertising rules. | | Comply with state and federal truth-in-advertising rules. |
| | | | Publicly disclose accurate information regarding network management practices, performance, and commercial terms. |

| Topic | Sample State COLR Requirement | Current FCC ETC Rules | Possible Broadband POLR Requirement |
|---|---|---|---|
| Capital planning | | Submit five-year service quality improvement plan. (2005 Order) | Submit five-year service quality improvement plan. |
| Customer service quality | Goals for new service installation | | Goals for new service installation |
| | | Reporting of unfulfilled service requests (2005 Order) | Same as ETC |
| | Limits on unscheduled outage times | | Limits on unscheduled outage times |
| | Reporting of network downtime | Reporting of network outages (2005 Order) | Same as ETC |
| | Limits on customer trouble occurrence rates | | Limits on customer trouble occurrence rates |
| | Maximum average response time for trouble calls | | Maximum average response time for trouble calls |
| | | Reporting of complaints per 1,000 handsets or lines (2005 Order) | Same as ETC |
| Mapping | Develop maps of service area. | | Develop and files GIS maps of service area. |
| Privacy | Protect privacy of customer information (47 U.S.C. § 222) | | Protect privacy of customer information (47 U.S.C. § 222) |
| Exit | Follows state mass migration rules | Before relinquishing ETC, gives adequate notice to customers and state commission, engages in joint planning of exit with other carriers, and obtains advance approval of state commission. 47 U.S.C. § 214(e)(4) | Same as voice ETC.<br>Follows state mass migration rules. |

Staff recommends that the FCC should set a minimum set of POLR duties by rule, similar to the ETC standards now found in 47 C.F.R. § 54.101. The current list should be updated to reflect the fact that supported networks will and must offer both voice and broadband.

Eventually, it may be possible to drop voice-only requirements, but that day has not yet arrived. For the foreseeable future, ETCs should provide both broadband Internet service and voice service at rates reasonably comparable to urban areas. States should be able to add non-conflicting requirements. At minimum, states should be able to adopt specific supplementary rules regarding construction charges, service quality, rate designs, advertising, and exit.

## IV. Which providers will be ETCs?

### A. Designating ETCs

After POLR duties are defined, the next question is to which providers will they be assigned? Restated, the question is which providers will be designated as ETCs.

TA96 imposes some constraints on the FCC's federalism options. Section 214(e) of TA96 offers the states the opportunity to designate Eligible Telecommunications Carriers (ETCs). For their own reasons, some states have declined to exercise this role at all, or exercise it only for limited subsets of telecommunications providers. [13] The Act also recognizes states' authority in situations involving unserved areas and ETCs withdrawing from service.[14]

The FCC cannot prohibit states from imposing additional requirements on carriers otherwise eligible for ETC designations. Instead, courts have held that section 241(e) speaks to the question of how many carriers a state commission may designate, but the Act does not prohibit states from imposing their own eligibility requirements.[15]

In 2005, the FCC suggested additional criteria that the states should review when conducting ETC cases. States have generally complied with those suggestions, although there have been variations from state to state. Staff recommends that the Joint Board endorse this method of proceeding for broadband ETCs.

### B. Defining service areas

TA 96 allows states to define individual service areas for ETCs.[16] Staff recommends that the Joint Board say that states are not only legally authorized but best positioned to define individual service areas. States have the best local knowledge and expertise to understand what

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[13] 47 U.S.C. § 214(e). A few states, like Virginia, have declined the offered delegation to designate ETCs, but they are still apparently responsible under the Act to handle carrier exit issues. 47 U.S.C. § 214(e)(3) and (4). Largely due to limitations of state laws, other states have declined to designate wireless carriers (including AL, CT, DE, NH). Some states have changed their minds and now handle ETC cases for wireless carriers (including Florida, Massachusetts and Pennsylvania).

[14] See 47 U.S.C. § 214(e)(3), (e)(4).

[15] *Texas Of'c of Public Util. Counsel v. FCC*, 183 F.3d 393, 418 (5th Cir. 1999), *cert. dismissed sub nom. GTE Serv. Corp. v. FCC*, 531 U.S. 975, 121 S.Ct. 423, 148 L.Ed.2d 327 (2000).

[16] 47 U.S.C. § 214(e)(2).

areas are unserved. States are also better positioned than the FCC to evaluate whether a proposed ETC is financially and technically qualified to serve as an ETC. As has been true in the past, even where the states are free to make a discretionary decision, advice from the FCC can be very useful.

As recognized by the Act, states are best positioned to balance the proper size of service areas. The task requires a difficult balancing of local factors. On the one hand, the desire to conserve resources suggests that support should be "targeted," meaning that the amount of support should be calculated after giving consideration only to the needs of a number of relatively small high-cost areas. The idea here is that by disregarding the economics of low-cost areas, support can be focused on truly needy areas, and perhaps the total amount of support can be reduced. Small service areas also make it easier for competitors to make offers to be substituted as ETCs, since less capital is needed to contest an ETC designation in a small area than a large area.

On the other hand, there are reasons to assign larger service areas. First, larger areas generate economies of scale. For example, if the FCC were to use a model to determine the cost of providing independent broadband service separately in every census block, several kinds of cost would increase, including transport and administrative overhead.[17] The model would overstate true network cost because it would ignore actual economies of scale available to larger networks. Basing support on larger service areas therefore reduces the apparent need for support, reducing the demand on universal service funds.

Second, aggregating service areas into larger blocks reduces the variation in costs. Larger service areas are often criticized as relying on implicit contribution flows from low-cost to high-cost customers. It is true that a system that relies on measuring costs over a larger area necessarily assumes different levels of contribution to common costs from different customers. Nevertheless, such implicit contribution flows are inherent in any system in which uniform rates are set over areas with non-uniform costs.[18] Moreover, the cost averaging within a larger service area reduces the apparent demand for support.[19]

Staff also recommends that the Joint Board conclude that such implicit contribution flows do not violate the prohibition against implicit support. Rate averaging within a service area is not necessarily a form of implicit support prohibited by the statute.

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[17] The FCC's wireless auctions have tended to apply to large areas, often comprising entire metropolitan areas, entire states, and sometimes multistate areas. Therefore, wireless auction service areas have included both high-cost and low-cost areas.

[18] Many wireless carriers offer nationwide rate designs, regardless of cost variations among states, regions and localities.

[19] We note that in the NBP the FCC calculated a financial "gap" at the census block level, but then aggregated the results at the county level. The result was to allow cost averaging within counties. In some counties with some high-gap census blocks and some low-gap census blocks, the average gap came out to be zero or negative.

States are best positioned to make the actual decisions about service areas, although states would benefit from FCC guidance as to the criteria for defining service area sizes. As noted above, the NBP states that only one ETC per area should receive support. Once a new high-cost mechanism goes into effect for broadband, states will need to decide which carriers should receive the single ETC designation in each geographic area. Staff recommends that the Joint Board recommend to the states that when this new system is implemented, the states in most cases should initially designate the incumbent LEC and should define that LEC's study area as its service area for universal service purposes. This initial definition will fairly balance the factors discussed above in most cases, although some adjustments may be needed.

- In a very few cases where a CETC has overbuilt Incumbent Local Exchange Carrier (ILEC) facilities over a wide area, the state commission should, on petition, conduct a fact-specific proceeding to determine whether the ILEC or the CETC should be designated as the single supported carrier.

- In the future, a provider using a different technology (such as a wireless carrier or a cable voice provider) might want to be designated as the single supported ETC, thereby disqualifying the ILEC from further support in some or all of its existing service area. The state commission should, on petition, conduct a fact-specific proceeding to determine whether ILEC should be disqualified and replaced as the supported ETC. The details of how such a proceeding would work, and how such a transition might work, are details beyond the scope of this paper.

The existing statute allows state commissions to consider broad questions of public interest in these proceedings. In exercising its discretion in both kinds of cases, state commissions should consider, at minimum, the likely effect on the size of the federal and state universal service funds. In either case, dividing an existing study area could decrease the support demand in the overbuilt or challenged area, but increase the total support demand by cream skimming the high-profit customers from an existing study area.

### C. Mapping Service Areas

Staff recommends that the Joint Board say that states should be actively involved in requiring ETCs to develop service area maps and ensuring they are filed with the FCC. Mapping of POLR areas would be useful for several purposes, at least if done with sufficient precision. Maps would allow state commissions to avoid service holes on the one hand and costly overlaps on the other. Maps would allow the FCC to better assess the national availability of broadband service. If the FCC wishes to use national models to calculate support or place upper limits on embedded costs, maps will facilitate using public GIS data for that purpose. Accurate maps will also allow state commissions to make better decisions about which service providers should be designated as ETCs. Finally, should the FCC pursue that course, maps will facilitate the administration of auctions.

To make maps as useful as possible, they should be GIS compatible and be prepared with accuracy matching that of modern GIS sources for roads and landmarks.

In sum, staff recommends that the Joint Board say that states remain best positioned to define service areas of ETCs. In addition, ETCs should be required to map their service areas to a specified level of precision and submit those maps in GIS format to the FCC and to state commissions.

## V. Enforcing POLR violations, carrier exits

Once ETCs have been designated for defined service areas; someone must enforce the ETC's obligations. In the past, the FCC has relied on the states for this, requiring annual certifications that support has been used for the purposes intended. Staff believes this basic model is fundamentally sound, although it should be made more specific for particular POLR duties.

In the event the provider fails to meet its obligations, the FCC will need a mechanism to terminate POLR designation and assign ETC status to a new provider. Many states have adopted "mass migration" rules in the last 15 years to handle similar problems with exiting voice providers. This topic may require further discussion.