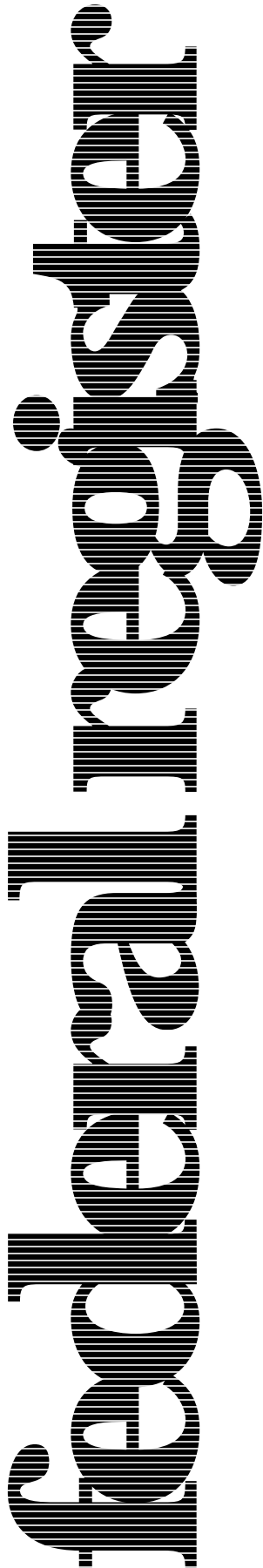

Tuesday
June 17, 1997



Part II

**Federal
Communications
Commission**

47 CFR Parts 36, 54, and 69
Universal Service; Final Rule

**FEDERAL COMMUNICATIONS
COMMISSION**
47 CFR Part 36, 54, and 69
[CC Docket No. 96-45; FCC 97-157]
Universal Service
AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: The Report and Order released May 8, 1997, promulgates rules implementing the statutory requirements of the Telecommunications Act of 1996 relating to universal service. The rules adopted in this Order are intended to promote affordable access to telecommunications and information services to low-income consumers and consumers residing in high cost, rural, and insular regions of the nation. The Order establishes the definition of services to be supported by Federal universal service support mechanisms, carriers eligible for universal service support, and the specific timetable for implementation. The Order modifies existing federal universal service support in the interstate high cost fund, the dial equipment minutes weighting program, long term support, and the Lifeline and Link-Up program. In addition, this Order establishes new universal service support mechanisms for eligible schools and libraries to purchase telecommunications services at discounted rates and eligible rural health care providers to have access to telecommunications services at rates comparable to those in urban areas.

EFFECTIVE DATES: July 17, 1997, except for Subpart E of Part 54 which will become effective on January 1, 1998.

FOR FURTHER INFORMATION CONTACT: Timothy Peterson, Legal Counsel, Common Carrier Bureau, (202) 418-1500, or Sheryl Todd, Common Carrier Bureau, (202) 418-7400.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Report and Order adopted May 7, 1997, and released May 8, 1997. The full text of the Report and Order is available for inspection and copying during normal business hours in the FCC Reference Center (Room 239), 1919 M St., NW., Washington, DC. Pursuant to the Telecommunications Act of 1996, the Commission released a Notice of Proposed Rulemaking and Order Establishing Joint Board, Federal-State Joint Board on Universal Service, CC Docket No. 96-45 on March 8, 1996 (61 FR 10499 (March 14, 1996)), a Recommended Decision on November 8,

1996 (61 FR 63778 (December 2, 1996)), and a Public Notice on November 18, 1996 (61 FR 63778 (December 2, 1996)) seeking comment on rules to implement sections 254 and 214(e) of the Act relating to universal service. As required by the Regulatory Flexibility Act (RFA), the Report and Order contains a Final Regulatory Flexibility Analysis. Pursuant to section 604 of the RFA, the Commission performed a comprehensive analysis of the Report and Order with regard to small entities and small incumbent LECs. The Report and Order also contains new information collection requirements subject to the Paperwork Reduction Act (PRA). The Commission has published a separate notice in the **Federal Register** relating to these information collection requirements (62 FR 28024 (May 22, 1997)).

Summary of the Report and Order:
Principles

1. Pursuant to section 254(b)(7) and consistent with the Joint Board's recommendation, we establish "competitive neutrality" as an additional principle upon which we base policies for the preservation and advancement of universal service. Consistent with the Joint Board's recommendation, we define this principle, in the context of determining universal service support, as:

Competitive Neutrality—Universal service support mechanisms and rules should be competitively neutral. In this context, competitive neutrality means that universal service support mechanisms and rules neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another.

2. We agree with the Joint Board that, as a guiding principle, competitive neutrality is consistent with several provisions of section 254 including the explicit requirement of equitable and nondiscriminatory contributions. We also note that section 254(h)(2) requires the Commission to establish competitively neutral rules relating to access to advanced telecommunications and information services for eligible schools, health care providers, and libraries. In addition, we agree that an explicit recognition of competitive neutrality in the collection and distribution of funds and determination of eligibility in universal service support mechanisms is consistent with congressional intent and necessary to promote "a pro-competitive, de-regulatory national policy framework."

3. We concur in the Joint Board's recommendation that the principle of

competitive neutrality in this context should include technological neutrality. Technological neutrality will allow the marketplace to direct the advancement of technology and all citizens to benefit from such development. By following the principle of technological neutrality, we will avoid limiting providers of universal service to modes of delivering that service that are obsolete or not cost effective. We also agree that the principle of competitive neutrality, including the concept of technological neutrality, should be considered in formulating universal service policies relating to each and every recipient and contributor to the universal service support mechanisms, regardless of size, status, or geographic location. We agree with the Joint Board that promoting competition is an underlying goal of the 1996 Act and that the principle of competitive neutrality is consistent with that goal. Accordingly, we conclude that the principle of competitive neutrality is "necessary and appropriate for the protection of the public interest" and is "consistent with this Act" as required by section 254(b)(7).

4. We agree with the Joint Board's recommendation that our universal service policies should strike a fair and reasonable balance among all of the principles identified in section 254(b) and the additional principle of competitive neutrality to preserve and advance universal service. Consistent with the recommendations of the Joint Board, we find that promotion of any one goal or principle should be tempered by a commitment to ensuring the advancement of each of the principles enumerated above.

5. We agree with the Joint Board's conclusion that Congress specifically addressed issues relating to individuals with disabilities in section 255 and, therefore, do not establish, at this time, additional principles related to individuals with disabilities for purposes of section 254. In the *Notice of Inquiry* adopted pursuant to section 255 (61 FR 50465 (September 26, 1996)), the Commission sought comment on the implementation and enforcement of section 255. The Commission also recently released a *Notice of Inquiry* seeking comment on improving telecommunications relay service (TRS) for individuals with hearing and speech disabilities (CC Docket No. 90-571). Although we are mindful of the commenters' concerns regarding the affordability of, and access to, telecommunications services by individuals with disabilities, we find that those concerns are more appropriately addressed in the context of the Commission's implementation of

section 255. Therefore, we do not adopt principles related to telecommunications users with disabilities in this proceeding.

6. We have considered the requests to promote access to affordable telecommunications services to other groups and organizations, including minorities and community-oriented organizations, but we decline to adopt these proposals as additional principles. We decline at this time to adopt additional principles the purpose of which would be to extend universal service support to individuals, groups, or locations other than those identified in section 254.

Definition of Universal Service: What Services To Support

7. Designated Services

We generally adopt the Joint Board's recommendation and define the "core" or "designated" services that will be supported by universal service support mechanisms as: Single-party service; voice grade access to the public switched network; DTMF signaling or its functional equivalent; access to emergency services; access to operator services; access to interexchange service; access to directory assistance; and toll limitation services for qualifying low-income consumers. In arriving at this definition, we have adopted the Joint Board's analysis and recommendation that, for purposes of section 254(c)(1), the Commission define "telecommunications services" in a functional sense, rather than on the basis of tariffed services. We find that this definition of core universal services promotes competitive neutrality because it is technology neutral, and provides more flexibility for defining universal service than would a services-only approach. We also find that all four criteria enumerated in section 254(c)(1) must be considered, but not each necessarily met, before a service may be included within the general definition of universal service, should it be in the public interest. We interpret the statutory language, particularly the word "consider," as providing flexibility for the Commission to establish a definition of services to be supported, after it considers the criteria enumerated in section 254(c)(1) (A) through (D). We conclude that the core services that we have designated to receive universal service support are consistent with the statutory criteria in section 254(c)(1).

8. Single-Party Service

We agree with and adopt the Joint Board's conclusion that single-party

service is widely available and that a majority of residential customers subscribe to it, consistent with section 254(c)(1)(B). Moreover, we concur with the Joint Board's conclusion that single-party service is essential to public health and safety in that it allows residential consumers access to emergency services without delay. Single-party service also is generally consistent with the public interest, convenience, and necessity because, by eliminating the sharing required by multi-party service, single-party service significantly increases the consumer's ability to place calls irrespective of the actions of other network users and with greater privacy than party line service can assure. In addition, single-party service is being deployed in public telecommunications networks by telecommunications carriers. We adopt the finding that the term "single-party service" means that only one customer will be served by each subscriber loop or access line. Eligible carriers must offer single-party service in order to receive support regardless of whether consumers choose to subscribe to single- or multi-party service. In addition, to the extent that wireless providers use spectrum shared among users to provide service, we find that wireless providers offer the equivalent of single-party service when they offer a dedicated message path for the length of a user's particular transmission. We concur with the Joint Board's recommendation not to require wireless providers to offer a single channel dedicated to a particular user at all times.

9. Voice Grade Access to the Public Switched Network

We conclude that voice grade access includes the ability to place calls, and thus incorporates the ability to signal the network that the caller wishes to place a call. Voice grade access also includes the ability to receive calls, and thus incorporates the ability to signal the called party that an incoming call is coming. We agree that these components are necessary to make voice grade access fully beneficial to the consumer. We find that, consistent with section 254(c)(1), voice grade access to the public switched network is an essential element of telephone service, is subscribed to by a substantial majority of residential customers, and is being deployed in public telecommunications networks by telecommunications carriers. In addition, we find voice grade access to be essential to education, public health, and public safety because it allows consumers to contact essential services such as schools, health care providers,

and public safety providers. For this reason, it is also consistent with the public interest, convenience, and necessity.

10. We also adopt the Joint Board's recommendation that voice grade access should occur in the frequency range between approximately 500 Hertz and 4,000 Hertz for a bandwidth of approximately 3,500 Hertz. Although we conclude below that certain higher bandwidth services should be supported under section 254(c)(3) for eligible schools, libraries, and rural health care providers, we decline to adopt, pursuant to section 254(c)(1), a higher bandwidth than that recommended by the Joint Board. We conclude, except as further designated with respect to eligible schools, libraries and health care providers, that voice grade access, and not high speed data transmission, is the appropriate goal of universal service policies at this time because we are concerned that supporting an overly expansive definition of core services could adversely affect all consumers by increasing the expense of the universal service program and, thus, increasing the basic cost of telecommunications services for all.

11. Support for Local Usage

We agree with the Joint Board that the Commission should determine the level of local usage to be supported by federal universal service mechanisms and that the states are best positioned to determine the local usage component for purposes of state universal service mechanisms. Further, we agree that, in order for consumers in rural, insular, and high cost areas to realize the full benefits of affordable voice grade access, usage of, and not merely access to, the local network should be supported.

12. We find, consistent with the Joint Board's conclusion, that we have the authority to support a certain portion of local usage, pursuant to the universal service principles adopted above. In particular, section 254(b)(1) states that "[q]uality services should be available at just, reasonable, and affordable rates." As a result, ensuring affordable "access" to those services is not sufficient. Universal service must encompass the ability to use the network, including the ability to place calls at affordable rates.

13. We are also concerned, however, that consumers might not receive the benefits of universal service support unless we determine a minimum amount of local usage that must be included within the supported services. We intend to consider this issue in our Further Notice of Proposed Rulemaking ("FNPRM") on a forward-looking economic cost methodology, which will

be issued by June 1997. We are making various changes to the existing universal service support mechanisms—including making support portable to competing carriers—that will become effective on January 1, 1998. The Commission will also separately seek further information regarding, for example, local usage, and local usage patterns, in order to determine the appropriate amount of local usage that should be provided by carriers receiving universal service support. We will, by the end of 1997, quantify the amount of local usage that carriers receiving universal service support will be required to provide.

14. Defining minimum levels of usage is critical to the construction of a competitive bidding system for providing universal service to high cost areas. An auction for only the “access” portion of providing local service would be neither competitively nor technologically neutral, because competitors and technologies with low “access” costs yet high per-minute costs would be unduly favored in such an auction. This could result in awarding universal service support to a less efficient technology, which is the precise result that a competitive bidding system is meant to avoid. In addition, a carrier with low access costs could then charge high per-minute rates to consumers, which would increase consumers’ overall bills, rather than reducing them, as is the expected result of competition. Such a result is not consistent with the principle in section 254(b)(1) that these “services” are to be “affordable.”

15. DTMF Signaling

The Joint Board recommended including DTMF signaling or its digital functional equivalent among the supported services, and we adopt this recommendation. We find that the network benefit that emanates from DTMF signaling, primarily rapid call set-up, is consistent with the public interest, convenience, and necessity, pursuant to section 254(c)(1)(D). Although consumers do not elect to subscribe to DTMF signaling, we find that DTMF signaling provides network benefits, such as accelerated call set-up, that are essential to a modern telecommunications network. In addition, we agree with NENA’s characterization of DTMF signaling as a potential life- and property-saving mechanism because it speeds access to emergency services. Thus, we find that supporting DTMF signaling is essential to public health and public safety, consistent with section 254(c)(1)(A), and is being deployed in public telecommunications networks by

telecommunications carriers, consistent with section 254(c)(1)(C). We also adopt the Joint Board’s conclusion that other methods of signaling, such as digital signaling, can provide network benefits equivalent to those of DTMF signaling. In particular, we note that wireless carriers use out-of-band digital signaling mechanisms for call set-up, rather than DTMF signaling. Consistent with the principle of competitive neutrality, we find it is appropriate to support out-of-band digital signaling mechanisms as an alternative to DTMF signaling. Accordingly, we include DTMF signaling and equivalent digital signaling mechanisms among the services supported by federal universal service mechanisms.

16. Access to Emergency Services

In addition, we concur with the Joint Board’s conclusion that access to emergency services, including access to 911 service, be supported by universal service mechanisms. We agree with the conclusion that access to emergency service i.e., the ability to reach a public emergency service provider, is “widely recognized as essential to * * * public safety,” consistent with section 254(c)(1)(A). Due to its obvious public safety benefits, including access to emergency services among the core services is also consistent with the public interest, convenience, and necessity. Further, consistent with the Joint Board’s recommendation and NENA’s comments in favor of supporting access to 911 service, we define access to emergency services to include access to 911 service. Noting that nearly 90 percent of lines today have access to 911 service capability, the Joint Board found that access to 911 service is widely deployed and available to a majority of residential subscribers. For these reasons, we include telecommunications network components necessary for access to emergency services, including access to 911, among the supported services.

17. We also include the telecommunications network components necessary for access to E911 service among the services designated for universal service support. Access to E911 is essential to public health and safety because it facilitates the determination of the approximate geographic location of the calling party. We recognize, however, that the Commission does not currently require wireless carriers to provide access to E911 service. As set forth in the Commission’s *Wireless E911 Decision* (61 FR 40348 (August 2, 1996)), access to E911 includes the ability to provide Automatic Numbering Information

(“ANI”), which permits that the PSAP have call back capability if the call is disconnected, and Automatic Location Information (“ALI”), which permits emergency service providers to identify the geographic location of the calling party. We recognize that wireless carriers are currently on a timetable, established in the *Wireless E911 Decision*, for implementing both aspects of access to E911. For universal service purposes, we define access to E911 as the capability of providing both ANI and ALI. We note, however, that wireless carriers are not required to provide ALI until October 1, 2001. Nevertheless, we conclude that, because of the public health and safety benefits provided by access to E911 services the telecommunications network components necessary for such access will be supported by federal universal service mechanisms for those carriers that are providing it. We recognize that wireless providers will be providing access to E911 in the future to the extent that the relevant locality has implemented E911 service. In addition, because the *Wireless E911 Decision* establishes that wireless carriers are required to provide access to E911 only if a mechanism for the recovery of costs relating to the provision of such services is in place, there is at least the possibility that wireless carriers receiving universal service support will be compensated twice for providing access to E911. We intend to explore whether the possibility is in fact being realized and, if so, what steps we should take to avoid such over-recovery in a Further Notice of Proposed Rulemaking.

18. We support the telecommunications network components necessary for access to 911 service and access to E911 service, but not the underlying services themselves, which combine telecommunications service and the operation of the PSAP and, in the case of E911 service, a centralized database containing information identifying approximate end user locations. The telecommunications network represents only one component of 911 and E911 services; local governments provide the PSAP and generally support the operation of the PSAP through local tax revenues. We conclude that both 911 service and E911 service include information service components that cannot be supported under section 254(c)(1), which describes universal service as “an evolving level of telecommunications services.” Accordingly, we include only the telecommunications network components necessary for access to 911

and E911 services among the services that are supported by federal universal service mechanisms.

19. Access to Operator Services

In addition, we adopt the Joint Board's recommendation to include access to operator services in the general definition of universal service. Access to operator services is widely deployed and used by a majority of residential customers. For purposes of defining the core section 254(c)(1) services and consistent with the Joint Board's recommendation, we base our definition of "operator services" on the definition the Commission used to define the duties imposed upon LECs by section 251(b)(3), namely, "any automatic or live assistance to a consumer to arrange for billing or completion, or both, of a telephone call." Contrary to the suggestion of CWA, there is no evidence on the record to suggest that automated systems provide inadequate access to operator services for consumers in emergency situations. We also do not require initial contact with a live operator for purposes of operator services because we expect that most consumers will more appropriately rely upon their local 911 service in an emergency situation. To the extent that access to operator services enables callers to place collect, third-party billed, and person-to-person calls, among other things, we find that such access may be essential to public health and is consistent with the public interest, convenience, and necessity.

20. Access to Interexchange Service

We adopt the Joint Board's recommendation to include access to interexchange service among the services supported by federal universal service mechanisms. We conclude that access to interexchange service means the use of the loop, as well as that portion of the switch that is paid for by the end user, or the functional equivalent of these network elements in the case of a wireless carrier, necessary to access an interexchange carrier's network. This decision is consistent with the principle set forth in section 254(b)(3) that "consumers * * * should have access to telecommunications and information services including interexchange services." In addition, we agree that the majority of residential customers currently have access to interexchange service, thus satisfying a criterion set forth in section 254(c)(1)(B). Access to interexchange service also is widely deployed in public telecommunications networks by telecommunications carriers. Further, as observed by the Joint Board and

commenters, access to interexchange service is essential for education, public health, and public safety, particularly for customers who live in rural areas and require access to interexchange service to reach medical and emergency services, schools, and local government offices. For these reasons, access to interexchange service also meets the public interest, convenience, and necessity criterion of section 254(c)(1)(D).

21. We emphasize that universal service support will be available for access to interexchange service, but not for the interexchange or toll service. We find that the record does not support including toll service among the services designated for support, although, as discussed below, we find that the extent to which rural consumers must place toll calls to reach essential services should be considered when assessing affordability. Nevertheless, universal service should not be limited only to "non-competitive" services. One of the fundamental purposes of universal service is to ensure that rates are affordable regardless of whether rates are set by regulatory action or through the competitive marketplace. We note that section 254(k), which forbids telecommunications carriers from using services that are not competitive to subsidize competitive services, is not inconsistent with our conclusion that it is permissible to support competitive services.

22. We do not include equal access to interexchange service among the services supported by universal service mechanisms. Equal access to interexchange service permits consumers to access the long-distance carrier to which the consumer is presubscribed by dialing a 1+ number. As discussed below, including equal access to interexchange service among the services supported by universal service mechanisms would require a Commercial Mobile Radio Service (CMRS) provider to provide equal access in order to receive universal service support. We find that such an outcome would be contrary to the mandate of section 332(c)(8), which prohibits any requirement that CMRS providers offer "equal access to common carriers for the provision of toll services." Accordingly, we decline to include equal access to interexchange service among the services supported under section 254(c)(1).

23. We note that the Commission has not required CMRS providers to provide dialing parity to competing providers under section 251(b)(3) because the Commission has not yet determined that any CMRS provider is a LEC. We seek

to implement the universal service provisions of section 254 in a manner that is not "biased toward any particular technologies," consistent with the Joint Board's recommendation. In light of the provision of section 332(c)(8) stating that non-LEC CMRS providers are statutorily exempt from providing equal access and because the Commission has not determined that any CMRS providers should be considered LECs, we find that supporting equal access would undercut local competition and reduce consumer choice and, thus, would undermine one of Congress' overriding goals in adopting the 1996 Act. Accordingly, we do not include equal access to interexchange carriers in the definition of universal service at this time.

24. Access to Directory Assistance and White Pages Directories

We also adopt the Joint Board's recommendation to include access to directory assistance, specifically, the ability to place a call to directory assistance, among the core services pursuant to section 254(c)(1). Access to directory assistance enables customers to obtain essential information, such as the telephone numbers of government, business, and residential subscribers. We agree that directory assistance is used by a substantial majority of residential customers, is widely available, is essential for education, public health, and safety, and is consistent with the public interest, convenience, and necessity. Accordingly, we conclude that providing universal service support for access to directory assistance is consistent with the statutory criteria of section 254(c)(1).

25. We further agree with the Joint Board's recommendation not to support white pages directories and listings. We concur with the Joint Board's determination that white pages listings are not "telecommunications services" as that term is defined in the Act. As the Joint Board recognized, unlike white pages directories and listings, access to directory assistance is a functionality of the loop and, therefore, is a service in the functional sense.

26. Toll Limitation Services

Additionally, we include the toll limitation services for qualifying low-income consumers among those that will be supported pursuant to section 254(c). We find that including these services within the supported services is essential to the public health and safety because, as discussed below, toll limitation services will help prevent subscribership levels for low-income

consumers from declining. Thus, we find that toll limitation services will promote access to the public switched network for low-income consumers and, therefore, are in the public interest, consistent with the criteria of section 254(c)(1).

27. Access to Internet Services

We agree with the Joint Board's determination that Internet access consists of more than one component. Specifically, we recognize that Internet access includes a network transmission component, which is the connection over a LEC network from a subscriber to an Internet Service Provider, in addition to the underlying information service. We also concur with the Joint Board's observation that voice grade access to the public switched network usually enables customers to secure access to an Internet Service Provider, and, thus, to the Internet. We conclude that the information service component of Internet access cannot be supported under section 254(c)(1), which describes universal service as "an evolving level of telecommunications services." Furthermore, to the extent customers find that voice grade access to the public switched network is inadequate to provide a sufficient telecommunications link to an Internet service provider, we conclude that such higher quality access links should not yet be included among the services designated for support pursuant to section 254(c)(1). We find that a network transmission component of Internet access beyond voice grade access should not be supported separately from voice grade access to the public switched network because the record does not indicate that a substantial majority of residential customers currently subscribe to Internet access by using access links that provide higher quality than voice grade access. In addition, although access to Internet services offers benefits that contribute to education and public health, we conclude that it is not "essential to education, public health, or public safety" as set forth in section 254(c)(1)(A). Under the more expansive authority granted in section 254(h), however, we agree that supporting Internet access under that section is consistent with Congress' intent to support Internet access for eligible schools, libraries, and rural health care providers.

28. Other Services

We conclude that, at this time, no other services that commenters have proposed to include in the general definition of universal service

substantially meet the criteria set forth in section 254(c)(1). We emphasize that this section also defines universal service as "evolving" and, therefore, as described below, the Commission will review the services supported by universal service mechanisms no later than January 1, 2001. In addition, as discussed below, we find that the issues relating to the telecommunications needs of individuals with disabilities, including accessibility and affordability of services, will be addressed in the context of the Commission's implementation of section 255.

29. We are mindful of the concern expressed by commenters that an overly broad definition of universal service might have the unintended effect of creating a barrier to entry for some carriers because carriers must provide each of the core services in order to be eligible for universal service support. We concur with the Joint Board's conclusion that conditioning a carrier's eligibility for support upon its provision of the core services will not impose an anti-competitive barrier to entry. We note that other services proposed by commenters, at a later time, may become more widely deployed than they are at present, or otherwise satisfy the statutory criteria by which we and the Joint Board are guided.

30. Feasibility of Providing Designated Service

We conclude that eligible carriers must provide each of the designated services in order to receive universal service support. In three limited instances, however, we conclude that the public interest requires that we allow a reasonable period during which otherwise eligible carriers may complete network upgrades required for them to begin offering certain services that they are currently incapable of providing. Given the Joint Board's finding that not all incumbent carriers are currently able to offer single-party service, we find that excluding such carriers from eligibility for universal service support might leave some service areas without an eligible carrier, especially in areas where there currently is no evidence of competitive entry. Therefore, as to single-party service, we will permit state commissions, upon a finding of "exceptional circumstances," to grant an otherwise eligible carrier's request that, for a designated period, the carrier will receive universal service support while it completes the specified network upgrades necessary to provide single-party service. This is consistent with the Joint Board's recommendation that state commissions be permitted to grant requests by otherwise eligible

carriers for a period to make necessary upgrades if they currently are unable to provide single-party service.

31. We conclude, consistent with the Joint Board's finding that some carriers are not currently capable of providing access to E911 service, that it may be warranted to provide universal service support to carriers that are not required under Commission rules to provide E911 service and to carriers that are completing the network upgrades required for them to provide access to E911 service. Access to E911 will be supported only to the extent that the relevant locality has implemented E911 service. If the relevant locality has not implemented E911 service, otherwise eligible carriers that are covered by the Commission's *Wireless E911 Decision* are not required to provide such access at this time to qualify for universal service support. Even in cases in which the locality has implemented E911 service, some wireless carriers are not currently capable of providing access to E911 service. Although we have directed cellular, broadband PCS, and certain SMR carriers to provide access to E911 service, we set a five-year period during which these carriers must make the technical upgrades necessary to offer access to E911 service. Consequently, requiring carriers to provide access to E911 service at this time may prevent many wireless carriers from receiving universal service support during the period that we have already determined to be appropriate for wireless carriers to complete preparations for their offering E911 service. We find that this would be contrary to the principle that universal service policies and rules be competitively neutral. In light of these considerations, we will make some accommodation during the period in which these carriers are upgrading their systems.

32. The Joint Board envisioned granting a period to make upgrades while still receiving support only if a carrier could meet a "heavy burden that such a * * * period is necessary and in the public interest" and if "exceptional circumstances" warranted the granting of support during that period. We find that the Joint Board's recommendation provides a reasoned and reasonable approach to ensuring access to single-party service while, at the same time, recognizing that "exceptional circumstances" may prevent certain carriers serving rural areas from offering single-party service. We conclude that this approach also makes sense in the context of toll limitation service and access to E911 when a locality has implemented E911 service. Accordingly,

we conclude that a carrier that is otherwise eligible to receive universal service support but is currently incapable of providing single-party service, toll limitation service, or access to E911 in the case where the locality has implemented E911 service may, if it provides each of the other designated services, petition its state commission for permission to receive universal service support for the designated period during which it is completing the network upgrades required so that it can offer these services. A carrier that is incapable of offering one or more of these three specific universal services must demonstrate to the state commission that "exceptional circumstances" exist with respect to each service for which the carrier desires a grant of additional time to make network upgrades.

33. We emphasize that this relief should be granted only upon a finding that "exceptional circumstances" prevent an otherwise eligible carrier from providing single-party service, toll limitation, or access to E911 when the locality has implemented E911 service. A carrier can show that exceptional circumstances exist if individualized hardship or inequity warrants a grant of additional time to comply with the general requirement that eligible carriers must provide single-party service, toll limitation service, and access to E911 when the locality has implemented E911 service and that a grant of additional time to comply with these requirements would better serve the public interest than strict adherence to the general requirement that an eligible telecommunications carrier must be able to provide these services to receive universal service support. The period during which a carrier could receive support while still completing essential upgrades should extend only as long as the relevant state commission finds that "exceptional circumstances" exist and should not extend beyond the time that the state commission deems necessary to complete network upgrades. We conclude that this is consistent with the intent of section 214(e) because it will ensure that ultimately all eligible telecommunications carriers offer all of the services designated for universal service support.

34. We recognize that some state commissions already may have mandated single-party service for telecommunications service providers serving their jurisdictions. If a state commission has adopted a timetable by which carriers must offer single-party service, a carrier may rely upon that previously established timetable and need not request another transition

period for federal universal service purposes. Specifically, where a state has ordered a carrier to provide single-party service within a specified period pursuant to a state order that precedes the release date of this Order, the carrier may rely upon the timetable established in that order and receive universal service support for the duration of that period.

35. *Extent of Universal Service*

The Joint Board recommended that support for designated services be limited to those carried on a single connection to a subscriber's primary residence and to businesses with only a single connection. In light of our determination, however, to adopt a modified version of the existing universal service support system for high cost areas, we conclude, consistent with the proposal of the state Joint Board members, that all residential and business connections in high cost areas that currently receive high cost support should continue to be supported for the periods set forth below. For rural telephone companies this means that both multiple business connections and multiple residential connections will continue to receive universal service support at least until January 1, 2001. We intend, however, to continue to evaluate the Joint Board's recommendation to limit support for primary residential connections and businesses with a single connection as we further develop a means of precisely calculating the forward-looking economic cost of providing universal service in areas currently served by non-rural telephone companies. As we determine how to calculate forward-looking economic cost, or as states do so in state-conducted cost studies, we necessarily will examine the forward-looking economic cost of supporting additional residential connections or multiple connection businesses. Depending on how we determine the forward-looking economic cost of the primary residential connection, for example, there may be little incremental cost to additional residential connections. In that case, for instance, there would be no need to support additional residential connections. We will consider the forward-looking cost of supporting designated services provided to multiple-connection businesses as well. We recognize the arguments raised by the several parties that commented on this aspect of the Joint Board's recommendation, but we do not address the merits of these arguments at this time. We intend to examine the record on this issue in our

FNRPM on a forward-looking economic cost methodology.

36. *Quality of Service*

We concur with the Joint Board's recommendation against the establishment of federal technical standards as a condition to receiving universal service support. Further, we agree with the Joint Board that the Commission should not adopt service quality standards "beyond the basic capabilities that carriers receiving universal service support must provide." Section 254(b)(1) establishes availability of quality services as one of the guiding principles of universal service, but, contrary to CWA's characterization of this section as a statutory requirement, section 254(b)(1) does not mandate specific measures designed to ensure service quality. Rather, section 254(b) sets forth the statutory principles that the Joint Board considered when making its recommendations and, similarly, must guide the Commission as it implements section 254.

37. Based on the Joint Board's recommendation that the Commission not establish federal technical standards as a condition to receiving universal service support, we conclude that the Commission should rely upon existing data, rather than specific standards, to monitor service quality at this time. Several states currently have service quality reporting requirements in place for carriers serving their jurisdictions. We find, consistent with the Joint Board's recommendation, that imposing additional requirements at the federal level would largely duplicate states' efforts. In addition, imposing federal service quality reporting requirements could be overly burdensome for carriers, particularly small telecommunications providers that may lack the resources and staff needed to prepare and submit the necessary data. For this reason, we also decline to expand, solely for universal service purposes, the category of telecommunications providers required to file ARMIS service quality and infrastructure reporting data. Currently, ARMIS filing requirements apply to carriers subject to price cap regulation that collectively serve 95 percent of access lines. We will not extend ARMIS reporting requirements to all carriers because we find that additional reporting requirements would impose the greatest burdens on small telecommunications companies.

38. We will rely upon service quality data provided by the states in combination with those data that the Commission already gathers from price cap carriers through existing data

collection mechanisms in order to monitor service quality trends. We concur with the Joint Board's recommendation that state commissions share with the Commission, to the extent carriers provide such data, information regarding, for example, the number and type of service quality complaints filed with state agencies. We encourage state commissions to submit to the Commission the service quality data they receive from their telecommunications carriers.

39. We conclude that states may adopt and enforce service quality rules that are competitively neutral, pursuant to section 253(b), and that are not otherwise inconsistent with rules adopted herein. We concur with commenters that favor state implementation of carrier performance standards. Relying on data compiled by the National Association of Regulatory Utilities Commissioners, we note that 40 states and the District of Columbia have service quality standards in place for telecommunications companies. Because most states have established mechanisms designed to ensure service quality in their jurisdictions, we find that additional efforts undertaken at the federal level would be largely redundant. We conclude that state-imposed measures to monitor and enforce service quality standards will help "ensure the continued quality of telecommunications services, and safeguard the rights of consumers," consistent with section 253(b). In light of the existing state mechanisms designed to promote service quality, we conclude that state commissions are the appropriate fora for resolving consumers' specific grievances regarding service quality.

40. We agree with the Joint Board's conclusion that, to the extent the Joint Board recommended, and we adopt, specific definitions of the services designated for support, these basic capabilities establish minimum levels of service that carriers must provide in order to receive support. For example, we conclude above that voice grade access to the public switched network should occur in the frequency range between approximately 500 Hertz and 4,000 Hertz for a bandwidth of approximately 3,500 Hertz. Although not a service quality standard per se, this requirement will ensure that all consumers served by eligible carriers receive some minimum standard of service.

41. Reviewing the Definition of Universal Service

The Commission shall convene a Joint Board no later than January 1, 2001, to

revisit the definition of universal service, as section 254(c)(2) anticipates. In addition to relying upon existing data collection mechanisms, such as ARMIS reports, the Commission will conduct any surveys or statistical analysis that may be necessary to make the evaluations required by section 254(c)(1) to change the definition of universal service.

Affordability

42. We agree with and adopt the Joint Board's finding that the definition of affordability contains both an absolute component ("to have enough or the means for"), which takes into account an individual's means to subscribe to universal service, and a relative component ("to bear the cost of without serious detriment"), which takes into account whether consumers are spending a disproportionate amount of their income on telephone service. We adopt the recommendation that a determination of affordability take into consideration both rate levels and non-rate factors, such as consumer income levels, that can be used to assess the financial burden subscribing to universal service places on consumers.

43. Subscribership Levels

We also concur in the Joint Board's finding that subscribership levels provide relevant information regarding whether consumers have the means to subscribe to universal service and, thus, represent an important tool in evaluating the affordability of rates. Based on recent nationwide subscribership data, the Joint Board judged that existing local rates are generally affordable. We find that recent subscribership data, indicating that 94.2 percent of all American households subscribed to telephone service in 1996, and the record in this proceeding are consistent with the Joint Board's determination. We recognize that affordable rates are essential to inducing consumers to subscribe to telephone service, and also that increasing the number of people connected to the network increases the value of the telecommunications network. Further, we note that insular areas generally have subscribership levels that are lower than the national average, largely as a result of income disparity, compounded by the unique challenges these areas face by virtue of their locations.

44. We also agree with the Joint Board that subscribership levels are not dispositive of the issue of whether rates are affordable. As the Joint Board concluded, subscribership levels do not address the second component of

affordability, namely, whether paying the rates charged for services imposes a hardship for those who subscribe. Accordingly, we conclude that the Commission and states should use subscribership levels, in conjunction with rate levels and certain other non-rate factors, to identify those areas in which the services designated for support may not be affordable.

45. Non-Rate Factors

The record demonstrates that various other non-rate factors affect a consumer's ability to afford telephone service. We agree that the size of a customer's local calling area is one factor to consider when assessing affordability. Specifically, we concur with the Joint Board's finding that the scope of the local calling area "directly and significantly impacts affordability," and, thus, should be a factor to be weighed when determining the affordability of rates. We further agree with the Joint Board that an examination that would focus solely on the number of subscribers to which one has access for local service in a local calling area would be insufficient. Instead, a determination that the calling area reflects the pertinent "community of interest," allowing subscribers to call hospitals, schools, and other essential services without incurring a toll charge, is appropriate. In reaching this conclusion, we agree with commenters that affordability is affected by the amount of toll charges a consumer incurs to contact essential service providers such as hospitals, schools, and government offices that are located outside of the consumer's local calling area. Toll charges can greatly increase a consumer's expenditure on telecommunications services, mitigating the benefits of universal service support. In addition, rural consumers who must place toll calls to contact essential services that urban consumers may reach by placing a local call cannot be said to pay "reasonably comparable" rates for local telephone service when the base rates of the service are the same in both areas. Thus, we find that a determination of rate affordability should consider the range of a subscriber's local calling area, particularly whether the subscriber must incur toll charges to contact essential public service providers.

46. In addition, we agree with the Joint Board that consumer income levels should be among the factors considered when assessing rate affordability. We concur with the Joint Board's finding that a nexus exists between income level and the ability to afford universal service. A rate that is affordable to

affluent customers may not be affordable to lower-income customers. In light of the significant disparity in income levels throughout the country, per-capita income of a local or regional area, and not a national median, should be considered in determining affordability. As the Joint Board concluded, determining affordability based on a percentage of the national median income would be inequitable because of the significant disparities in income levels across the country. Specifically, we agree that such a standard would tend to overestimate the price at which services are affordable when applied to a service area where income level is significantly below the national median. Accordingly, we decline to adopt proposals to establish nationwide standards for measuring the impact of customer income levels on affordability.

47. We also agree with the Joint Board that cost of living and population density affect rate affordability. Like income levels, cost of living affects how much a consumer can afford to pay for universal services. The size of a consumer's calling area, which tends to be smaller in areas with low population density, affects affordability. In addition, given that cost of living and population density, like income levels, are factors that vary across local or regional areas, we find that these factors should be considered by region or locality.

48. Finally, we agree with and adopt the Joint Board's finding that legitimate local variations in rate design may affect affordability. Such variations include the proportion of fixed costs allocated between local services and intrastate toll services; proportions of local service revenue derived from per-minute charges and monthly recurring charges; and the imposition of mileage charges to recover additional revenues from customers located a significant distance from the wire center. We find that states, by virtue of their local rate-setting authority, are best qualified to assess these factors in the context of considering rate affordability.

49. *Determining Rate Affordability*

We agree with the Joint Board that states should exercise initial responsibility, consistent with the standards set forth above, for determining the affordability of rates. We further concur with the Joint Board's conclusion that state commissions, by virtue of their rate-setting roles, are the appropriate fora for consumers wishing to challenge the affordability of intrastate rates for both local and toll services. The unique characteristics of

each jurisdiction render the states better suited than the Commission to make determinations regarding rate affordability. Each of the factors proposed by parties and endorsed by the Joint Board with the exception of subscribership levels—namely, local calling area size, income levels, cost of living, and population density—represents data that state regulators, as opposed to the Commission, are best situated to obtain and analyze.

50. As the Joint Board recommended, the Commission will work in concert with states and U.S. territories and possessions informally to address instances of low or declining subscribership levels. Such informal cooperation may consist of sharing data or conducting joint inquiries in an attempt to determine the cause of low or declining subscribership rates in a given state, or providing other assistance requested by a state. We will defer to the states for guidance on how best to implement federal-state collaborative efforts to ensure affordability. We find that this dual approach in which both the states and the Commission play significant roles in ensuring affordability is consistent with the statutory mandate embodied in section 254(i).

51. In addition, where "necessary and appropriate," the Commission, working with the affected state or U.S. territory or possession, will open an inquiry to take such action as is necessary to fulfill the requirements of section 254. We conclude that such action is warranted with respect to insular areas. The record indicates that subscribership levels in insular areas are particularly low. Accordingly, we will issue a Public Notice to solicit further comment on the factors that contribute to the low subscribership levels that currently exist in insular areas, and to examine ways to improve subscribership in these areas.

52. Some commenters have suggested that the Commission provide universal service support for rates that are found to be unaffordable or where subscribership levels decline from current levels. We agree that, if subscribership levels begin to drop significantly from current levels, we may need to take further action. Among the benefits subscribership brings to individuals is access to essential services, such as emergency service providers, and access to entities such as schools, health care facilities and local governments. In addition, subscribers enjoy the increased value of the telephone network, i.e., the large numbers of people who can be reached via the network, that results from high subscribership levels. We agree with

Puerto Rico Tel. Co. that, because the Puerto Rico subscribership level remains significantly below the national average, it is not appropriate to delay action until a subscribership level that is already low declines further. As discussed above, we find that further action is warranted with respect to insular areas.

53. In addition, we will continue actively to monitor subscribership across a wide variety of income levels and demographic groups and encourage states to do likewise. The Commission currently uses Census Bureau data to publish reports that illustrate subscribership trends among households, including subscribership by state, as well as nationwide subscribership rates by categories including income level, race, and age of household members, and household size. We find that any response to a decline in subscribership revealed by our analysis of the relevant data should be tailored to those who need assistance to stay connected to the network.

54. We concur with the Joint Board's recommendation to implement a national benchmark to calculate the amount of support eligible telecommunications carriers will receive for serving rural, insular, and high cost areas. The Joint Board declined to establish a benchmark based on income or subscribership and specifically did not equate the benchmark support levels with affordability. We agree. Setting the rural, insular and high cost support benchmark based on income and subscribership would fail to target universal service assistance and could therefore needlessly increase the amount of universal service support. Recent data show that telephone subscribership was 96.2 percent in 1996 for households with annual incomes of at least \$15,175 and 85.4 percent for households with annual incomes below \$15,175. The Joint Board concluded that, because telephone penetration declines significantly for low-income households, the impact of household income is more appropriately addressed through programs designed to help low-income households obtain and retain telephone service, rather than as part of the high cost support mechanism. Accordingly, we adopt the Joint Board's recommendation to channel support designed to assist low-income consumers through the Lifeline and Link Up programs, rather than through the high cost support methodology.

Carriers Eligible for Universal Service Support

55. Adoption of Section 214(e)(1) Criteria

Consistent with the Joint Board's recommendation, we adopt the statutory criteria contained in section 214(e)(1) as the rules for determining whether a telecommunications carrier is eligible to receive universal service support. Pursuant to those criteria, only a common carrier may be designated as an eligible telecommunications carrier, and therefore may receive universal service support. In addition, each eligible carrier must, throughout its service area: (1) Offer the services that are supported by federal universal service support mechanisms under section 254(c); (2) offer such services using its own facilities or a combination of its own facilities and resale of another carrier's services, including the services offered by another eligible telecommunications carrier; and (3) advertise the availability of and charges for such services using media of general distribution.

56. Statutory Construction of Section 214(e)

We conclude that section 214(e)(2) does not permit the Commission or the states to adopt additional criteria for designation as an eligible telecommunications carrier. As noted by the Joint Board, "section 214 contemplates that any telecommunications carrier that meets the eligibility criteria of section 214(e)(1) shall be eligible to receive universal service support." Section 214(e)(2) states that "[a] state commission shall * * * designate a common carrier that meets the requirements of paragraph (1) as an eligible telecommunications carrier * * *." Section 214(e)(2) further states that "* * * the State commission may, in the case of an area served by a rural telephone company, and shall, in the case of all other areas, designate more than one common carrier as an eligible telecommunications carrier for a service area designated by the State commission, so long as each additional requesting carrier meets the requirements of paragraph (1)." Read together, we find that these provisions dictate that a state commission must designate a common carrier as an eligible carrier if it determines that the carrier has met the requirements of section 214(e)(1). Consistent with the Joint Board's finding, the discretion afforded a state commission under section 214(e)(2) is the discretion to decline to designate more than one eligible carrier in an area that is served

by a rural telephone company; in that context, the state commission must determine whether the designation of an additional eligible carrier is in the public interest. The statute does not permit this Commission or a state commission to supplement the section 214(e)(1) criteria that govern a carrier's eligibility to receive federal universal service support.

57. In addition, state discretion is further limited by section 253: A state's refusal to designate an additional eligible carrier on grounds other than the criteria in section 214(e) could "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service" and may not be "necessary to preserve universal service." Accordingly, we conclude that the section 253 precludes states from imposing additional prerequisites for designation as an eligible telecommunications carrier. Although section 214(e) precludes states from imposing additional eligibility criteria, it does not preclude states from imposing requirements on carriers within their jurisdictions, if these requirements are unrelated to a carrier's eligibility to receive federal universal service support and are otherwise consistent with federal statutory requirements. Further, section 214(e) does not prohibit a state from establishing criteria for designation of eligible carriers in connection with the operation of that state's universal service mechanism, consistent with section 254(f).

58. Consistent with the findings we make above, we disagree with GTE's assertion that the use of the phrases "a carrier that receives such support" and "any such support * * *" instead of the phrase "such eligible carrier" in section 254(e) indicates that Congress intended to require carriers to meet criteria in addition to the eligibility criteria in section 214(e). We conclude that the quoted language indicates only that a carrier is not entitled automatically to receive universal service support once designated as an eligible telecommunications carrier.

59. The terms of section 214(e) do not allow us to alter an eligible carrier's duty to serve an entire service area. Consequently, we cannot modify the requirements of section 214(e) for carriers whose technology limits their ability to provide service throughout a state-defined service area. We note, however, that any carrier may, for example, use resale to supplement its facilities-based offerings in any given service area.

60. Additional Obligations as a Condition of Eligibility

We reject proposals to impose additional obligations as a condition of being designated an eligible telecommunications carrier pursuant to section 214(e) because section 214(e) does not grant the Commission authority to impose additional eligibility criteria.

61. We emphasize that, even if we had the legal authority to impose additional obligations as a condition of being designated an eligible telecommunications carrier, we agree with the Joint Board that these additional criteria are unnecessary to protect against unreasonable practices by other carriers. As the Joint Board explained, section 214(e) prevents eligible carriers from attracting only the most desirable customers by limiting eligibility to common carriers and by requiring eligible carriers to offer the supported services and advertise the availability of these services "throughout the service area."

62. We further conclude that adopting the eligibility criteria imposed by the statute without elaboration is consistent with the Joint Board's recommended principle of competitive neutrality because, once the forward-looking and more precisely targeted high cost methodology is in place, all carriers will receive comparable support for performing comparable functions. Several ILECs assert that the Joint Board's recommendation not to impose additional criteria is in conflict with its recommended principle of competitive neutrality because some carriers, such as those subject to COLR obligations or service quality regulation, perform more burdensome and costly functions than other carriers that are eligible for the same amount of compensation. The statute itself, however, imposes obligations on ILECs that are greater than those imposed on other carriers, yet section 254 does not limit eligible telecommunications carrier designation only to those carriers that assume the responsibilities of ILECs. We find that the imposition of additional criteria, to the extent that they would preclude some carriers from being designated eligible pursuant to section 214(e), would violate the principle of competitive neutrality.

63. Treatment of Particular Classes of Carriers

We agree with the Joint Board's recommendation that any telecommunications carrier using any technology, including wireless technology, is eligible to receive

universal service support if it meets the criteria under section 214(e)(1). We agree that any wholesale exclusion of a class of carriers by the Commission would be inconsistent with the language of the statute and the pro-competitive goals of the 1996 Act. The treatment granted to certain wireless carriers under section 332(c)(3)(A) does not allow states to deny wireless carriers eligible status. We also agree that non-ILECs and carriers subject to price cap regulation should be eligible for support. We agree with the Joint Board that price cap regulation is an important tool for smoothing the transition to competition and that its use should not foreclose price cap companies from receiving universal service support. We find that requiring price cap carriers to cover their costs of providing universal service through internal cross-subsidies would violate the statutory directive that support for universal service be "explicit." Consequently, in our decision here and in the *Access Charge Reform Order*, we adopt a plan to eliminate implicit subsidies as we identify and make explicit universal service support. Because we have determined that we will not exclude price cap companies from eligibility, we agree with the Joint Board that we need not delineate the difference between price cap carriers and other carriers, as proposed in the Further Comment Public Notice.

64. We note that not all carriers are subject to the jurisdiction of a state commission. Nothing in section 214(e)(1), however, requires that a carrier be subject to the jurisdiction of a state commission in order to be designated an eligible telecommunications carrier. Thus tribal telephone companies, CMRS providers, and other carriers not subject to the full panoply of state regulation may still be designated as eligible telecommunications carriers.

65. Advertising

We agree with the Joint Board's analysis and recommendation that we not adopt, at this time, nationwide standards to interpret the requirement of section 214(e)(1)(B) that eligible carriers advertise, throughout their service areas, the availability of, and charges for, the supported services using media of general distribution. We agree that, in the first instance, states should establish any guidelines needed to govern such advertising. We agree that the states, as a corollary to their obligation to designate eligible telecommunications carriers, are in a better position to monitor the effectiveness of carriers' advertising throughout their service

areas. We also agree with the Joint Board that competition will help ensure that carriers inform potential customers of the services they offer. Although we decline to adopt nationwide standards for interpreting section 214(e)(1)(B), we encourage states, as they determine whether to establish guidelines pursuant to that section, to consider the suggestion that the section 214(e)(1)(B) requirement that carriers advertise in "media of general distribution" is not satisfied by placing advertisements in business publications alone, but instead compels carriers to advertise in publications targeted to the general residential market. We conclude that no further regulations are necessary to define the term "throughout." The dictionary definition—"in or through all parts; everywhere"—requires no further clarification.

66. Relinquishment of Eligible Carrier Designation

We conclude that no additional measures are needed to implement section 214(e)(4), the provision that reserves to the states the authority to act upon an eligible carrier's request to relinquish its designation as an eligible carrier.

67. Facilities Requirement

Section 214(e)(1) requires that, in order to be eligible for universal service support, a common carrier must offer the services supported by federal universal service support mechanisms throughout a service area "either using its own facilities or a combination of its own facilities and resale of another carrier's services (including the services offered by another eligible telecommunications carrier)." In interpreting the facilities requirement, we first address the meaning of the term "facilities" and then address the meaning of the phrase "own facilities."

68. Defining the Term "Facilities" in Section 214(e)(1)

We interpret the term "facilities," for purposes of section 214(e), to mean any physical components of the telecommunications network that are used in the transmission or routing of the services designated for support under section 254(c)(1). We conclude that this interpretation strikes a reasonable balance between adopting a more expansive definition of "facilities," which would undermine the Joint Board's recommendation to exclude resellers from eligible status, and adopting a more restrictive definition of "facilities," which we fear would thwart competitive entry into high cost areas.

69. We adopt this definition of "facilities," in part, to remain consistent with the Joint Board's recommendation that "a carrier that offers universal service solely through reselling another carrier's universal service package" should not be eligible to receive universal service support. By encompassing only physical components of the telecommunications network that are used to transmit or route the supported services, this definition, in effect, excludes from eligibility a "pure" reseller that claims to satisfy the facilities requirement by providing its own billing office or some other facility that is not a "physical component" of the network, as defined in this Order. We find that our determination to define "facilities" in this manner is consistent with congressional intent to require that at least some portion of the supported services offered by an eligible carrier be services that are not offered through "resale of another carrier's services."

70. Whether the Use of Unbundled Network Elements Qualifies as a Carrier's "Own Facilities"

We conclude that a carrier that offers any of the services designated for universal service support, either in whole or in part, over facilities that are obtained as unbundled network elements pursuant to section 251(c)(3) and that meet the definition of facilities set forth above, satisfies the facilities requirement of section 214(e)(1)(A).

71. In making this decision, we first look to the language of section 214(e)(1)(A), which references two classes of carriers that are eligible for support—carriers using their "own facilities" and carriers using "a combination of (their) own facilities and resale of another carrier's services." Neither the statute nor the legislative history defines the term "own" as that term appears within the phrase "own facilities" in section 214(e)(1)(A). In addition, neither category in section 214(e)(1)(A) explicitly refers to unbundled network elements. Notwithstanding the lack of an express reference to unbundled network elements in section 214(e), however, we conclude that it is unlikely that Congress intended to deny designation as eligible to a carrier that relies, even in part, on unbundled network elements to provide service, given the central role of unbundled network elements as a means of entry into local markets. Because the statute is ambiguous with respect to whether a carrier providing service through the use of unbundled network elements is providing service through its "own facilities" or through

the "resale of another carrier's services," we look to other sections of the Act and to legislative intent to resolve the ambiguity.

72. In so doing, we conclude that Congress did not intend to deny designation as eligible to a carrier that relies exclusively on unbundled network elements to provide service in a high cost area, given that the Act contemplates the use of unbundled network elements as one of the three primary paths of entry into local markets. We have consistently held that Congress did not intend to prefer one form of local entry over another. As we recognized in the *Local Competition Order* (61 FR 45476 (August 29, 1996)), "[t]he Act contemplates three paths of entry into the local market—the construction of new networks, the use of unbundled elements of the incumbent's network, and resale. The 1996 Act requires us to implement rules that eliminate statutory and regulatory barriers and remove economic impediments to each." In the Recommended Decision, the Joint Board explicitly stated that "[c]ompetitive neutrality" is "embodied in" section 214(e). Indeed, the Joint Board recommended "that the Commission reject arguments that only those telecommunications carriers that offer universal service wholly over their own facilities should be eligible for universal service [support]."

73. We conclude that the phrase "resale of another carrier's services" does not encompass the provision of service through unbundled network elements. The term "resale" used in section 251 refers to an ILEC's duty to offer, at wholesale rates, "any telecommunications service that the carrier provides at retail" as well as the duty of every LEC not to prohibit "the resale of its telecommunications services." Section 251 makes it clear that an ILEC's duty to offer retail services at wholesale rates is distinct from an ILEC's obligation to provide "nondiscriminatory access to network elements on an unbundled basis." We find that the statute's use, in section 214(e)(1), of the term used in sections 251(b)(1) and 251(c)(4)—"resale"—suggests that Congress contemplated that the provision of services via unbundled network elements was different from the "resale of another carrier's services." In addition, to interpret the phrase "resale of another carrier's services" to encompass the provision of a telecommunications service through use of unbundled network elements obtained from an ILEC would require the Commission to find that the provision of

nondiscriminatory access to an unbundled network element by an ILEC is the provision of a "telecommunications service"—an interpretation that is not consistent with the Act. A "network element" is defined as a "facility or equipment used in the provision of a telecommunications service" that also "includes features, functions, and capabilities that are provided by means of such facility or equipment * * *." A "network element" is not a "telecommunications service."

74. We conclude that, when a requesting carrier obtains an unbundled element, such element—if it is also a "facility"—is the requesting carrier's "own facilit[y]" for purposes of section 214(e)(1)(A) because the requesting carrier has the "exclusive use of that facility for a period of time." The courts have recognized many times that the word "own"—as well as its numerous derivations—is a "generic term" that "varies in its significance according to its use" and "designate[s] a great variety of interests in property." The word "ownership" is said to "var(y) in its significance according to the context and the subject matter with which it is used." The word "owner" is a broad and flexible word, applying not only to legal title holders, but to others enjoying the beneficial use of property. Indeed, property may have more than one "owner" at the same time, and such "ownership" does not merely involve title interest to that property.

75. Additionally, we note that section 214(e)(1) uses the term "own facilities" and does not refer to facilities "owned by" a carrier. We conclude that this distinction is salient based on our finding that, unlike the term "owned by," the term "own facilities" reasonably could refer to property that a carrier considers its own, such as unbundled network elements, but to which the carrier does not hold absolute title.

76. In the context of section 214(e)(1)(A), unbundled network elements are the requesting carrier's "own facilities" in that the carrier has obtained the "exclusive use" of the facility for its own use in providing services, and has paid the full cost of the facility, including a reasonable profit, to the ILEC. The opportunity to purchase access to unbundled network elements, as we explained in the *Local Competition Order*, provides carriers with greater control over the physical elements of the network, thus giving them opportunities to create service offerings that differ from services offered by an incumbent. This contrasts with the abilities of wholesale

purchasers, which are limited to offering the same services that an incumbent offers at retail. This greater control distinguishes carriers that provide service over unbundled network elements from carriers that provide service by reselling wholesale service and leads us to conclude that, as between the two terms, carriers that provide service using unbundled network elements are better characterized as providing service over their "own facilities" as opposed to providing "resale of another carrier's services."

77. Unlike a pure reseller, a carrier that provides service using unbundled network elements bears the full cost of providing that element, even in high cost areas. Section 252(d)(1)(A)(i) requires that the price of an unbundled network element be based on cost; a carrier that purchases access to an unbundled network element incurs all of the forward-looking costs associated with that element. We conclude that universal service support should be provided to the carrier that incurs the costs of providing service to a customer. Because a carrier that purchases access to an unbundled network element incurs the costs of providing service, it is reasonable for us to find that such a carrier should be entitled to universal service support for the elements it obtains.

78. We conclude that interpreting the term "own facilities" to include unbundled network elements is the most reasonable interpretation of the statute, given Congress's intent that all three forms of local entry must be treated in a competitively neutral manner. If the term "own facilities" is interpreted not to include service provided through unbundled network elements, however, a carrier providing service using unbundled network elements would suffer a substantial cost disadvantage compared with carriers using other entry strategies. In effect, excluding a competitive local exchange carrier (CLEC) that uses exclusively unbundled network elements from being designated an eligible carrier could make it cost-prohibitive for CLECs choosing this entry strategy to serve high cost areas because ILECs serving those areas will receive universal service support. We cannot reconcile these implications with the "pro-competitive" goals of the 1996 Act and the goals of universal service and section 254. As a result, the most reasonable interpretation of section 214(e)(1)(A) is that the phrase "own facilities" includes the provision of service through unbundled network elements, and that a carrier that uses

exclusively unbundled network elements to serve customers would be entitled to receive the support payment, subject to the cap that we describe below, that would allow it to compete with carriers utilizing other entry strategies.

79. To hold otherwise would threaten the central principles of the universal service system and the 1996 Act. In the *Local Competition Order*, we explicitly stated that, in enacting section 251(c)(3), Congress did not intend to restrict the entry of CLECs that use exclusively unbundled network elements. Indeed, entry by exclusive use of unbundled elements might be common in high cost areas—for example, a carrier considering providing service to a single high-volume customer or only to a portion of a high cost area might be encouraged to offer service using unbundled elements throughout an entire service area if it could compete with the incumbent and other entrants that may already be receiving a payment from the universal service fund.

80. If we interpreted the term “own facilities” not to include the use of unbundled network elements, the end result would be that the entry strategy that includes the exclusive use of unbundled network elements would be the only form of entry that would not benefit from, either directly or indirectly, universal service support. A carrier that has constructed all of its facilities would certainly be eligible for support under section 214(e)(1), as would an entrant that offers service through a mix of facilities that it had constructed and resold services. A pure reseller indirectly receives the benefit of the support payment, because, as discussed above, the retail rate of the resold service already incorporates the support paid to the underlying incumbent carrier. Such an environment—in which some forms of entry are eligible for support but one form of entry is not—is not “competitively neutral.” In addition, this outcome would create an artificial disincentive for carriers using unbundled elements to enter into high cost areas.

81. Several commenters urge us to adopt an interpretation of the term “own facilities” that would exclude the use of unbundled network elements. These commenters assert that, in light of the Joint Board’s recommendation that support be “portable,” a narrow interpretation of the section 214(e) facilities requirement is necessary to ensure that ILECs receive adequate funds to construct, maintain, and upgrade their telecommunications networks. We are not persuaded by

these arguments because we find that the pricing rule in section 252(d)(1) that applies to unbundled network elements assures that the costs associated with the construction, maintenance, and repair of an incumbent’s facilities, including a reasonable profit, would already be recovered through the payments made by the carrier purchasing access to unbundled network elements. The carrier purchasing access to those elements will, in turn, receive a universal service support payment. To the extent that these commenters’ arguments are premised on their contention that unbundled network element prices do not compensate ILECs for their embedded costs, and that ILECs are constitutionally entitled to recovery of their embedded costs, we will address that issue in a later proceeding in our *Access Charge Reform* docket.

82. Although the states have the ultimate responsibility under section 214(e) for deciding whether a particular carrier should be designated as eligible, we are fully authorized to interpret the statutory provisions that govern that determination. This language appears in a federal statute, establishing a federal universal service program. It is clearly appropriate for a federal agency to interpret the federal statute that it has been entrusted with implementing. Moreover, we believe it is particularly important for us to set out a federal interpretation of the “own facilities” language in section 214, particularly as it relates to the use of unbundled network elements. We note that the “own facilities” language in section 214(e)(1)(A) is very similar to language in section 271(c)(1)(A), governing Bell operating company (BOC) entry into interLATA services. While we are not interpreting the language in section 271 in this Order, given the similarity of the language in these two sections, we would find it particularly troubling to allow the states unfettered discretion in interpreting and applying the “own facilities” language in section 214(e). In order to avoid the potential for conflicting interpretations from different states, we believe it is important to set forth a single, federal interpretation, so that the “own facilities” language is consistently construed and applied.

83. Level of Facilities Required To Satisfy the Facilities Requirement

We adopt the Joint Board’s conclusion that a carrier need not offer universal service wholly over its own facilities in order to be designated as eligible because the statute allows an eligible carrier to offer the supported services through a combination of its own

facilities and resale. We find that the statute does not dictate that a carrier use a specific level of its “own facilities” in providing the services designated for universal service support given that the statute provides only that a carrier may use a “combination of its own facilities and resale” and does not qualify the term “own facilities” with respect to the amount of facilities a carrier must use. For the same reasons, we find that the statute does not require a carrier to use its own facilities to provide each of the designated services but, instead, permits a carrier to use its own facilities to provide at least one of the supported services. By including carriers relying on a combination of facilities and resale within the class of carriers eligible to receive universal service support, and by declining to specify the level of facilities required, we believe that Congress sought to accommodate the various entry strategies of common carriers seeking to compete in high cost areas. We conclude, therefore, that, if a carrier uses its own facilities to provide at least one of the designated services, and the carrier otherwise meets the definition of “facilities” adopted above, then the facilities requirement of section 214(e) is satisfied. For example, we conclude that a carrier could satisfy the facilities requirement by using its own facilities to provide access to operator services, while providing the remaining services designated for support through resale.

84. In arriving at this conclusion, we compare Congress’s use of qualifying language in the section 271(c)(1)(A) facilities requirement with the absence of such language in the section 214(e) requirement. Section 271(c)(1)(A) provides that a BOC that is seeking authorization to originate in-region, interLATA services must enter into interconnection agreements with competitors that offer “telephone exchange service either exclusively over their own facilities or predominantly over their own telephone exchange service facilities in combination with the resale of the telecommunications services of another carrier.” By contrast, section 214(e) does not mandate the use of any particular level of a carrier’s own facilities.

85. Several ILECs assert that eligible carriers that furnish only a *de minimis* level of facilities should not be entitled to receive universal service support. ILECs are concerned that, unless a carrier is required to provide a substantial level of its own facilities throughout a service area, a CLEC may be able to receive a level of support in excess of its actual costs, and thereby gain a competitive advantage over

ILECs. For example, ILECs argue that, because the prices of unbundled network elements may be averaged over smaller geographic areas than universal service support, the cost that a competitive carrier will incur for serving a customer using unbundled network elements will not match the level of universal service support the CLEC will receive for serving that customer.

86. This asymmetry could arise because of the procedures currently used to calculate the cost of serving a customer. Because it is administratively infeasible to calculate the precise cost of providing service to each customer in a service area, and because rate averaging and the absence of competition generally have allowed it, the cost of providing service has been calculated over a geographic region, such as a study area, and the total cost of providing service in that area has been averaged over the number of customers in that area. This average cost provides the basis for calculating universal service support in that area. To illustrate, the average cost of providing service in a study area might be \$50.00 per customer, but the cost of providing service might be \$10.00 in urban portions of the area, \$40.00 in the suburban portions, and \$100.00 in outlying regions. Although the cost of providing the supported services will be calculated at the study area level in 1998, the cost of unbundled network elements is calculated by the states, possibly over geographic areas smaller than study areas. Thus, the total support given to a carrier per customer in a study area might be \$20.00, but the price of purchasing access to unbundled network elements to serve a customer in that study area might be \$10.00, \$60.00, or \$100.00, depending on where the customer is located. Consequently, a CLEC might pay \$10.00 to purchase access to an unbundled network element in order to serve a customer in a city, but receive \$20.00 in universal service support.

87. We emphasize that the uneconomic incentives described above are largely connected with the modified existing high cost mechanism that will be in place until January 1, 1999. We also conclude, based on the reasons set forth immediately below, that the situation described by the ILECs will occur, at most, infrequently during this period. We conclude that the ILECs' concerns should be significantly alleviated when the forward-looking and more precisely targeted methodology to calculate high cost support becomes effective. Specifically, in our forthcoming proceeding on the

high cost support mechanism that will take effect January 1, 1999, we intend to address fully any potential dissimilarities between the level of disaggregation of universal service support and the level of disaggregation of unbundled network element prices. Nevertheless, we agree with the ILECs that we should limit the ability of competitors to make decisions to enter local markets based on artificial economic incentives created under the modified existing mechanism.

88. To this end, we take the following actions to reduce the incentives that a CLEC may have to enter a rural or non-rural market in an attempt to exploit the asymmetry described above. First, we conclude that a carrier that serves customers by reselling wholesale service may not receive universal service support for those customers that it serves through resale alone. In addition, we conclude below that a CLEC using exclusively unbundled network elements to provide the supported services will receive a level of universal service support not exceeding the price of the unbundled network elements to which it purchases access.

89. In markets served by non-rural carriers, we conclude that the risk of the anticompetitive behavior described above is minimal because, as of January 1, 1999, universal service support for non-rural high cost carriers will be determined using a forward-looking methodology that will more precisely target support. We doubt that carriers will incur the costs necessary to meet the eligibility requirements of section 214(e) in order to exploit this opportunity when the support mechanisms will soon change. Further, the incentive for a CLEC to enter an area served by a non-rural carrier to gain an unfair advantage is diminished because the level of universal service support per customer in these areas is small relative to the start-up costs of attracting customers and the cost of providing service to those customers using unbundled network elements.

90. We also expect that state commissions, in the process of making eligibility determinations, will play an important part in minimizing the risk of anticompetitive behavior as described above. Under section 214(e)(3), a state commission must make a finding that designation of more than one eligible carrier is in the public interest in a service area that is served by a rural telephone company. Accordingly, under section 214(e)(3), a state commission may consider whether a competitive carrier seeking designation as an eligible carrier will be able to exploit unjustly the asymmetry between the price of

unbundled network elements and the level of universal service support. Under section 251(f), rural telephone companies are not required to provide nondiscriminatory access to unbundled network elements pursuant to section 251(c)(3) until the relevant state commission determines that a bona fide request under section 251(c) for such access "is not unduly economically burdensome, is technically feasible, and is consistent with section 254 (other than sections (b)(7) and (c)(1)(D) thereof)." Thus, state commissions may also consider whether a CLEC's request for nondiscriminatory access to unbundled network elements is consistent with universal service, and will be able to take into account the arguments of ILECs to the extent that they are not addressed by the measures discussed herein.

91. Location of Facilities for Purposes of Section 214(e)

Although we conclude above that the term "facilities" includes any physical components of the telecommunications network that are used in the transmission or routing of the supported services, we find that the statute does not mandate that the facilities be physically located in that service area. We find that it is reasonable to draw a distinction between particular facilities based on the relationship of those facilities to the provision of specific services as opposed to their physical location within a service area both for reasons of promoting economic efficiency as well as competitive neutrality. We conclude that our determination not to impose restrictions based solely on the location of facilities used to provide the supported services is competitively neutral in that it will accommodate the various technologies and entry strategies that carriers may employ as they seek to compete in high cost areas.

92. Eligibility of Resellers

We adopt the Joint Board's analysis and conclusion that section 214(e)(1) precludes a carrier that offers the supported services solely through resale from being designated eligible in light of the statutory requirement that a carrier provide universal service, at least in part, over its own facilities. Under any reasonable interpretation of the term "facilities," a "pure" reseller uses none of its own facilities to serve a customer. Rather, a reseller purchases service from a facilities owner and resells that service to a customer. As explained above, resellers should not be entitled to receive universal service support directly from federal universal service

mechanisms because the universal service support payment received by the underlying provider of resold services is reflected in the price paid by the reseller to the underlying provider.

93. We conclude that no party has demonstrated that the statutory criteria for forbearance have been met and therefore we agree with the Joint Board that we cannot exercise our forbearance authority to permit "pure" resellers to become eligible for universal service support. In order to exercise our authority under section 10(a) of the Act to forbear from applying a provision of the Act, we must determine that: (1) Enforcement of the provision "is not necessary to ensure that the charges, practices, classifications, or regulations by, for, or in connection with that telecommunications carrier or telecommunications service are just and reasonable and are not unjustly or unreasonably discriminatory;" (2) enforcement of such provision "is not necessary for the protection of consumers;" and (3) "forbearance from applying such provision * * * is consistent with the public interest." In addition, we must consider "whether forbearance * * * will promote competitive market conditions." If pure resellers could be designated eligible carriers and were entitled to receive support for providing resold services, they, in essence, would receive a double recovery of universal service support because they would recover the support incorporated into the wholesale price of the resold services in addition to receiving universal service support directly from federal universal service support mechanisms. Making no finding with respect to the first two criteria, we conclude that it is neither in the public interest nor would it promote competitive market conditions to allow resellers to receive a double recovery. Indeed, allowing such a double recovery would appear to favor resellers over other carriers, which would not promote competitive market conditions. Allowing resellers a double recovery also would be inconsistent with the principle of competitive neutrality because it would provide inefficient economic signals to resellers.

94. We adopt the Joint Board's recommendation that no additional guidelines are necessary to interpret section 254(e)'s requirement that a carrier that receives universal service support shall only use that support for the facilities and services for which it is intended. We agree with the Joint Board's conclusion that the optimal approach to minimizing misuse of universal service support is to adopt mechanisms that will set universal

support so that it reflects the costs of providing universal service efficiently. We conclude that we will adopt the Joint Board's recommended approach to minimizing the misuse of support by taking steps to implement forward-looking high cost support mechanisms and implementing the rules set forth in our accompanying *Access Charge Reform Order*. We adopt the Joint Board's recommendation that we rely upon state monitoring of the provision of supported services to ensure that universal service support is used as intended until competition develops. We agree with the Joint Board that, if it becomes evident that federal monitoring is necessary to prevent the misuse of universal service support because states are unable to undertake such monitoring, the Commission, in cooperation with the Joint Board, will consider the need for additional action. In addition, we agree with the Joint Board that no additional rules are necessary to ensure that only eligible carriers receive universal service support because a carrier must be designated as an eligible carrier by a state commission in order to receive funding. Finally, as discussed below, because the services included in the Lifeline program are supported services, we note that only eligible carriers may receive universal service support for these services, as required by section 254(e).

95. State Adoption of Non-Rural Service Areas

We adopt the Joint Board's finding that sections 214(e)(2) and 214(e)(5) require state commissions to designate the area throughout which a non-rural carrier must provide universal service in order to be eligible to receive universal service support. We agree with the Joint Board that, although this authority is explicitly delegated to the state commissions, states should exercise this authority in a manner that promotes the pro-competitive goals of the 1996 Act as well as the universal service principles of section 254. We also adopt the Joint Board's recommendation that states designate service areas that are not unreasonably large. Specifically, we conclude that service areas should be sufficiently small to ensure accurate targeting of high cost support and to encourage entry by competitors. We also agree that large service areas increase start-up costs for new entrants, which might discourage competitors from providing service throughout an area because start-up costs increase with the size of a service area and potential competitors may be discouraged from entering an area with high start-up

costs. As such, an unreasonably large service area effectively could prevent a potential competitor from offering the supported services, and thus would not be competitively neutral, would be inconsistent with section 254, and would not be necessary to preserve and advance universal service.

96. We agree with the Joint Board that, if a state commission adopts as a service area for its state the existing study area of a large ILEC, this action would erect significant barriers to entry insofar as study areas usually comprise most of the geographic area of a state, geographically varied terrain, and both urban and rural areas. We concur in the Joint Board's finding that a state's adoption of unreasonably large service areas might even violate several provisions of the Act. We also agree that, if a state adopts a service area that is simply structured to fit the contours of an incumbent's facilities, a new entrant, especially a CMRS-based provider, might find it difficult to conform its signal or service area to the precise contours of the incumbent's area, giving the incumbent an advantage. We therefore encourage state commissions not to adopt, as service areas, the study areas of large ILECs. In order to promote competition, we further encourage state commissions to consider designating service areas that require ILECs to serve areas that they have not traditionally served. We recognize that a service area cannot be tailored to the natural facilities-based service area of each entrant, we note that ILECs, like other carriers, may use resold wholesale service or unbundled network elements to provide service in the portions of a service area where they have not constructed facilities. Specifically, section 254(f) prohibits states from adopting regulations that are "inconsistent with the Commission's rules to preserve and advance universal service." State designation of an unreasonably large service area could also violate section 253 if it "prohibit[s] or ha[s] the effect of prohibiting the ability of an entity to provide any interstate or intrastate telecommunications service," and is not "competitively neutral" and "necessary to preserve and advance universal service."

97. Authority To Alter Rural Service Areas

We find that, in contrast with non-rural service areas, section 214(e)(5) requires the Commission and the states to act in concert to alter the service areas for areas served by rural carriers. We conclude that the plain language of section 214(e)(5) dictates that neither

the Commission nor the states may act alone to alter the definition of service areas served by rural carriers. In addition, we conclude that the language "taking into account" indicates that the Commission and the states must each give full consideration to the Joint Board's recommendation and must each explain why they are not adopting the recommendations included in the most recent Recommended Decision or the recommendations of any future Joint Board convened to provide recommendations with respect to federal universal service support mechanisms. Furthermore, we conclude that the "pro-competitive, de-regulatory" objectives of the 1996 Act would be furthered if we minimize any procedural delay caused by the need for federal-state coordination on this issue. Therefore, we conclude that we should determine, at this time, the procedure by which the state commissions, when proposing to redefine a rural service area, may obtain the agreement of the Commission.

98. Under the procedures we adopt, after a state has concluded that a service area definition different from a rural telephone company's study area would better serve the universal service principles found in section 254(b), either the state or a carrier must seek the agreement of the Commission. Upon the receipt of the proposal, the Commission will issue a public notice on the proposal within 14 days. If the Commission does not act upon the proposal within 90 days of the release date of the public notice, the proposal will be deemed approved by the Commission and may take effect according to the state procedure. If the Commission determines further consideration is necessary, it will notify the state commission and the relevant carriers and initiate a proceeding to determine whether it can agree to the proposal. A proposal subject to further consideration by the Commission may not take effect until both the state commission and this Commission agree to establish a different definition of a rural service area, as required by section 214(e)(5). Similarly, if the Commission initiates a proceeding to consider a definition of a rural service area that is different from the ILEC's study area, we shall seek the agreement of the relevant state commission by submitting a petition to the relevant state commission according to that state commission's procedure. No definition of a rural service area proposed by the Commission will take effect until both the state commission and this Commission agree to establish a

different definition. In keeping with our intent to use this procedure to minimize administrative delay, we intend to complete consideration of any proposed definition of a service area promptly.

99. Adoption of Study Areas

We find that retaining the study areas of rural telephone companies as the rural service areas is consistent with section 214(e)(5) and the policy objectives underlying section 254. We agree that, if competitors, as a condition of eligibility, must provide services throughout a rural telephone company's study area, the competitors will not be able to target only the customers that are the least expensive to serve and thus undercut the ILEC's ability to provide service throughout the area. In addition, we agree with the Joint Board that this decision is consistent with our decision to use a rural ILEC's embedded costs to determine, at least initially, that company's costs of providing universal service because rural telephone companies currently average such costs at the study-area level. Some wireless carriers have expressed concern that they might not be able to provide service throughout a rural telephone company's study area because that study area might be noncontiguous. In such a case, we note that this carrier could supplement its facilities-based service with service provided via resale. In response to the concerns expressed by wireless carriers, however, we also encourage states, as discussed more fully below, to consider designating rural service areas that consist of only the contiguous portions of ILEC study areas. Further, we agree that any change to a study area made by the Commission should result in a corresponding change to the corresponding rural service area. Thus, we encourage a carrier seeking to alter its study area to also request a corresponding change in its service area, preferably as a part of the same regulatory proceeding. If the carrier is not initiating any proceedings with this Commission, it should seek the approval of the relevant state commission first, and then either the state commission or the carrier should seek Commission agreement according to the procedures described above. We agree with the Joint Board that this differing treatment of rural carriers sufficiently protects smaller carriers and is consistent with the Act.

100. We also conclude that universal service policy objectives may be best served if a state defines rural service areas to consist only of the contiguous portion of a rural study area, rather than the entire rural study area. We conclude that requiring a carrier to serve a non-

contiguous service area as a prerequisite to eligibility might impose a serious barrier to entry, particularly for wireless carriers. We find that imposing additional burdens on wireless entrants would be particularly harmful to competition in rural areas, where wireless carriers could potentially offer service at much lower costs than traditional wireline service. Therefore, we encourage states to determine whether rural service areas should consist of only the contiguous portions of an ILEC's study area, and to submit such a determination to the Commission according to the procedures we describe above. We note that state commissions must make a special finding that the designation is in the public interest in order to designate more than one eligible carrier in a rural service area, and we anticipate that state commissions will be able to consider the issue of contiguous service areas as they make such special findings.

101. We agree with the Joint Board's analysis and conclusion that it would be consistent with the Act for the Commission to base the actual level of universal service support that carriers receive on the cost of providing service within sub-units of a state-defined service area, such as a wire center or a census block group (CBG). We reject Bell Atlantic's argument that the language in section 214(e)(5) gives the states exclusive authority to establish non-rural service areas "for the purpose of determining universal service obligations and support mechanisms." As the Joint Board concluded, the quoted language refers to the designation of the area throughout which a carrier is obligated to offer service and advertise the availability of that service, and defines the overall area for which the carrier may receive support from federal universal service support mechanisms. Bell Atlantic is therefore incorrect when it argues that the approach recommended by the Joint Board ignores the phrase "and support mechanisms." The universal service support a carrier will receive will be based on the Commission's determination of the cost of providing the supported services in the service area designated by a state commission.

102. We conclude that, consistent with our decision to use a modification of the existing high cost mechanisms until January 1, 1999, the Commission will continue to use study areas to calculate the level of high cost support that carriers receive. Because we are continuing to use study areas to calculate high cost support until January 1, 1999, if a state commission follows our admonition to designate a service

area that is not unreasonably large, that service area will likely be smaller than the federal support areas during that period. We conclude that the decision to continue to use study areas to calculate the level of high cost support is nonetheless consistent with the Act for two reasons. First, as the Joint Board found, the Act does not prohibit the Commission from calculating support over a geographic area that is different from a state-defined service area. Second, so long as a carrier does not receive support for customers located outside the service area for which a carrier has been designated eligible by a state commission, our decision is consistent with section 214(e)(5)'s requirement that the area for which a carrier should receive universal service support is a state-designated service area. We agree with the Joint Board, however, that calculating support over small geographic areas will promote efficient targeting of support. We therefore adopt the Joint Board's recommendation and conclude that, after January 1, 1999, we will calculate the amount of support that carriers receive over areas no larger than wire centers. We will further define support areas as part of our continuing effort to perfect the method by which we calculate forward-looking economic costs.

103. Unserved Areas

We agree with the Joint Board that we should not adopt rules at this time governing how to designate carriers for unserved areas. We conclude that the record remains inadequate for us to fashion a cooperative federal-state program to select carriers for unserved areas, as proposed in the NPRM. We conclude that, if, in the future, it appears that a cooperative federal-state program is needed, we will then revisit this issue and work with state commissions and the Joint Board to create a program. We seek information that will allow us to determine whether additional measures are needed. Therefore, we strongly encourage state commissions to file with the Common Carrier Bureau reports detailing the status of unserved areas in their states. In order to raise subscribership to the highest possible levels, we seek to determine how best to provide service to currently-unserved areas in a cost-effective manner. We seek the assistance of state commissions with respect to this issue.

104. Implementation

The administrator of the universal service support mechanisms shall not disburse funds to a carrier providing

service to customers until the carrier has provided, to the administrator, a true and correct copy of the decision of a state commission designating that carrier as an eligible telecommunications carrier. A state commission seeking to alter a rural service area has the choice of either filing itself, or requiring an affected eligible telecommunications carrier to file, a petition with the Commission seeking the latter's agreement with the newly defined rural service area. We delegate authority to the Common Carrier Bureau to propose and act upon state proposals to redefine a rural service area.

Rural, Insular, and High Cost

105. Use of Forward-Looking Economic Cost

We agree with the Joint Board's recommendation that the proper measure of cost for determining the level of universal service support is the forward-looking economic cost of constructing and operating the network facilities and functions used to provide the supported services as defined per section 254(c)(1). We agree that, in the long run, forward-looking economic cost best approximates the costs that would be incurred by an efficient carrier in the market. The use of forward-looking economic costs as the basis for determining support will send the correct signals for entry, investment, and innovation.

106. We agree with the Joint Board that the use of forward-looking economic cost will lead to support mechanisms that will ensure that universal service support corresponds to the cost of providing the supported services, and thus, will preserve and advance universal service and encourage efficiency because support levels will be based on the costs of an efficient carrier. Because forward-looking economic cost is sufficient for the provision of the supported services, setting support levels in excess of forward-looking economic cost would enable the carriers providing the supported services to use the excess to offset inefficient operations or for purposes other than "the provision, maintenance, and upgrading of facilities and services for which the support is intended."

107. We also agree that a forward-looking economic cost methodology is the best means for determining the level of universal service support. We find that a forward-looking economic cost methodology creates the incentive for carriers to operate efficiently and does not give carriers any incentive to inflate

their costs or to refrain from efficient cost-cutting. Moreover, a forward-looking economic cost methodology could be designed to target support more accurately by calculating costs over a smaller geographical area than the cost accounting systems that the ILECs currently use.

108. Embedded Cost

Several ILECs have asserted that only a universal service mechanism that calculates support based on a carrier's embedded cost will provide sufficient support. As we discussed, the use of forward-looking economic cost will provide sufficient support for an efficient provider to provide the supported services for a particular geographic area. Thus, we conclude that the universal service support mechanisms should be based on forward-looking economic cost, and we reject the arguments for basing the support mechanisms on a carrier's embedded cost.

109. To the extent that it differs from forward-looking economic cost, embedded cost provide the wrong signals to potential entrants and existing carriers. The use of embedded cost would discourage prudent investment planning because carriers could receive support for inefficient as well as efficient investments. The Joint Board explained that when "embedded costs are above forward-looking costs, support of embedded costs would direct carriers to make inefficient investments that may not be financially viable when there is competitive entry." The Joint Board also explained that if embedded cost is below forward-looking economic cost, support based on embedded costs would erect an entry barrier to new competitors, because revenue per customer and support, together, would be less than the forward-looking economic cost of providing the supported services. Consequently, we agree with the conclusion that support based on embedded cost could jeopardize the provision of universal service. We also agree that the use of embedded cost to calculate universal service support would lead to subsidization of inefficient carriers at the expense of efficient carriers and could create disincentives for carriers to operate efficiently.

110. "Legacy" Cost

Several commenters assert that the use of forward-looking economic cost necessitates the establishment of a separate mechanism to reimburse ILECs for their "legacy cost," which they define to include the under-depreciated portion of the plant and equipment.

Several ILECs contend that unless we explicitly provide a mechanism for them to recover their under-depreciated costs, the use of forward-looking economic cost to determine universal service support would constitute a taking under the Fifth Amendment. No carrier, however, has presented any specific evidence that the use of forward-looking economic cost to determine support amounts will deprive it of property without just compensation. Indeed, the mechanisms we are creating today provide support to carriers in addition to other revenues associated with the provision of service.

111. Construction Costs

US West proposes to establish a separate support mechanism for the cost of constructing facilities. Under US West's proposal, the carrier that first constructed the facility to serve an end user would receive support for its construction costs, even if the end user switched to another carrier. The second carrier to serve the end user would receive support only for its operational expenses. Under the US West proposal, only the carrier that constructed first, generally an ILEC, except in currently unserved areas, would receive support to cover the facilities' construction costs. We observe that allowing only the ILEC to receive support for the construction of the facilities used to provide universal service would, however, discourage new entrants from constructing additional facilities in high cost areas, thereby discouraging facilities-based competition, in contravention of Congress's explicit goals. Further investigation is needed to determine whether there are special circumstances, such as the need to attract carriers to unserved areas or to upgrade facilities, in which it may or may not be reasonable to compensate one-time costs with one-time payments. Because we believe this issue should be examined further, we will consider this proposal in a future proceeding.

112. Determination of Forward-Looking Economic Cost for Non-Rural Carriers

Having adopted the Joint Board recommendation that universal service support be based upon forward-looking economic cost, we next consider how such cost should be determined. The Joint Board found that cost models provide an "efficient method of determining forward-looking economic cost, and provide other benefits, such as the ability to determine costs at smaller geographic levels than would be practical using the existing cost accounting system." The Joint Board also found that because they are not

based on any individual company's costs, cost models provide a competitively neutral estimate of the cost of providing the supported services. Based on those conclusions, the Joint Board recommended that the amount of universal service support a carrier would receive should be calculated by subtracting a benchmark amount from the cost of service for a particular geographic area, as determined by the forward-looking economic cost model.

113. The Joint Board discussed the three cost models that had been presented to it during the proceeding, but did not endorse a specific model. The Joint Board concluded that, before a specific model could be selected, several issues would need to be resolved, including how the various assumptions among the models regarding basic input levels were determined, which input levels were reasonable, what were the relationships among the inputs, why certain functionalities included in one model were not present in the other models, and which of the unique set of engineering design principles for each model were most reasonable.

114. Three different forward-looking cost models were submitted to the Commission for consideration in response to the January 9 Public Notice: the BCPM; the Hatfield model; and the TECM. These three models use many different engineering assumptions and input values to determine the cost of providing universal service. For example, Hatfield 3.1 uses loading coils in its outside plant to permit the use of longer copper loops, thereby reducing the amount of fiber required for outside plant. In contrast, the BCPM relies more heavily on fiber and avoids the use of loading coils; this assumption increases the cost of service that BCPM predicts. Another example is that Hatfield designs the interoffice network required to provide local service in a multiple switch environment, while the BCPM accounts for this interoffice service by allowing the user to input a switch investment percentage.

115. There has been significant progress in the development of the two major models—the BCPM and Hatfield 3.1—since the Joint Board made its recommendation. For example, the ability of both models to identify which geographic areas are high cost for the provision of universal service has been improved. The BCPM uses seven different density groups, rather than the six zones used in the BCM2, to determine for a given CBG the mixture of aerial, buried, and underground plant, feeder fill factors, distribution fill factors, and the mix of activities in

placing plant, such as aerial placement or burying, and the cost per foot to install plant. Hatfield also increased the number of density zones, going from six density zones in Hatfield Version 2.2.2 to nine in Hatfield 3.1.

116. While acknowledging remaining problems with the models in their report to the Commission, the state members of the Joint Board recommend that the Commission reject the TECM and select in this Order one of the remaining models to determine the needed level of universal service support in order to focus the efforts of industry participants and regulators. Specifically, three of the state members recommend that the Commission select the BCPM as the platform from which to seek further refinement to the modeling process. The state members of the Joint Board recommend that the non-rural carriers move to the use of a model over a three-year period. According to the state members, such a period will allow for continued evaluation of the model's accuracy and permit any needed improvements to be made before non-rural carriers receive support based solely on the model. The state members of the Joint Board also recommend that the Commission and Joint Board members and staff work with the administrator to monitor the use of the model.

117. We agree with the state members that the TECM should be excluded from further consideration for use as the cost model because the proponents have never provided nationwide estimates of universal service support using that model. We also agree with the state members that there are many issues that still need to be resolved before a cost model can be used to determine support levels. In particular, the majority state members note that the model input values should not be accepted. Instead, they suggest specific input values for the cost of equity, the debt-equity ratio, depreciation lives, the cost of switches, the cost of digital loop carrier equipment and the percentage of structures that should be shared. The majority state members are also concerned with the models' logic for estimating building costs. They see no justification for tying building costs to the number of switched lines as Hatfield 3.1 does and they suggest that using BCPM's technique of estimating building costs as a percent of switch costs is not logical. In light of the wide divergence and frequent changes in data provided to us, we agree with the recommendation of the dissenting state members of the Joint Board that we cannot at this time reasonably apply either of the models currently before us

to calculate forward-looking economic costs of providing universal service.

118. The proposed cost models also use widely varying input values to determine the cost of universal service, and in many cases the proponents have not filed the underlying justification for the use of those values. For example, BCPM no longer uses ARMIS expenses as the basis for its expense estimates. Instead, BCPM bases expenses on a survey of eight ILECs. Neither the survey instrument nor the individual carrier responses to the survey have been filed with the Commission. The proponents have not provided supporting information underlying their determinations of expenses. This lack of support fails to meet the Joint Board's criterion for evaluation that the underlying data and computations should be available to all interested parties. We agree with the state members of the Joint Board that this lack of support makes it impossible to determine whether the estimated expenses are the minimum necessary to provide service. The Hatfield 3.1 model also is based on information that has not been fully made available to the Commission and all interested parties. For example, the Hatfield 3.1 model adjusts the number of supported lines assigned to a CBG on the basis of an undisclosed algorithm. This algorithm has not been filed with the Commission. The application of this algorithm, however, increased the number of households in one state by 34 percent. Moreover, in regard to the fiber/copper cross-over point, the proponents of the Hatfield 3.1 model have submitted no studies to show that the decision concerning the cross-over point between the use of copper and fiber that they chose represents the least-cost configuration, as required by the Joint Board.

119. Despite significant and sustained efforts by the commenters and the Commission, the versions of the models that we have reviewed to date have not provided dependable cost information to calculate the cost of providing service across the country. The majority state members emphasize that their recommendation to use the BCPM is not an endorsement of all aspects of the model, but rather that they regard the model as the best platform at this time from which the Commission, state commissions, and interested parties can make collective revisions. Indeed, the report finds that neither the Hatfield 3.1 model nor the BCPM meets the criteria set out by the Joint Board pertaining to openness, verifiability, and plausibility. The report also discusses several specific issues that the majority state

members of the Joint Board contend must be addressed before the BCPM can be considered for use in determining support levels, including the dispersion of population within a CBG, the plant-specific operating expenses used by the model, and interoffice local transport investment. We agree with the state members that there are significant unresolved problems with each of these cost models, such as the input values for switching costs, digital loop carrier equipment, depreciation rates, cost of capital, and structure sharing. We also agree with them that line count estimates should be more accurate and reflect actual ILEC counts.

120. Based on these problems with the models, we conclude that we cannot use any of the models at this time as a means to calculate the forward-looking economic cost of the network on which to base support for universal service in high cost areas. Consequently, we believe that it would be better to continue to review both the BCPM and Hatfield models. Further review will allow the Commission and interested parties to compare and contrast more fully the structure and the input values used in these models. We find that continuing to examine the various models will not delay our implementation of a forward-looking economic cost methodology for determining support for rural, insular, and high cost areas. As discussed above, we will issue a FNPRM on a forward-looking cost methodology for non-rural carriers by the end of June 1997. We anticipate that by the end of the year we will choose a specific model that we will use as the platform for developing that methodology. We anticipate that we will seek further comment on that selection and the refinements necessary to adopt a cost methodology by August 1998 that will be used for non-rural carriers starting on January 1, 1999. Consequently, as we explain below, we will continue using mechanisms currently in place to determine universal service support until January 1, 1999, while we resolve the issues related to the forward-looking economic cost models.

121. We also agree with the dissenting state members of the Joint Board that our actions are consistent with the requirements of section 254 because we have identified the services to be supported by federal universal service support mechanisms, and we are setting forth a specific timetable for implementation of our forward-looking cost methodology. Moreover, our actions here are consistent with section 254's requirement that support should be explicit. Making "implicit" universal

service subsidies "explicit" "to the extent possible" means that we have authority at our discretion to craft a phased-in plan that relies in part on prescription and in part on competition to eliminate subsidies in the prices for various products sold in the market for telecommunications services. Consequently, we reject the arguments that section 254 compels us immediately to remove all costs associated with the provision of universal service from interstate access charges. Under the timetable we have set forth here, we will over the next year identify implicit interstate universal support and make that support explicit, as further provided by section 254(e).

122. As the basis for calculating federal universal service support in their states, we will use forward-looking economic cost studies conducted by state commissions that choose to submit such cost studies to determine universal service support. As discussed further below, we today adopt criteria appropriate for determining federal universal service support to guide the states as they conduct those studies. We ask states to elect, by August 15, 1997, whether they will conduct their own forward-looking economic cost studies. States that elect to conduct such studies should file them with the Commission on or before February 6, 1998. We will then seek comment on those studies and determine whether they meet the criteria we set forth. The Commission will review the studies and comments received, and only if we find that the state has conducted a study that meets our criteria will we approve those studies for use in calculating federal support for non-rural eligible telecommunications carriers rural, insular, and high cost areas to be distributed beginning January 1, 1999. We intend to work closely with the states as they conduct these forward-looking economic cost studies. We will also work together with the states and the Joint Board to develop a uniform cost study review plan that would standardize the format for presentation of cost studies in order to facilitate review by interested parties and by the Commission.

123. If a state elects not to conduct its own forward-looking economic cost study or that the state-conducted study fails to meet the criteria we adopt today, the Commission will determine the forward-looking economic cost of providing universal service in that state according to the Commission's forward-looking cost methodology. We will seek the Joint Board's assistance in developing our method of calculating forward-looking economic cost, which

we intend to develop by building on the work already done by the Joint Board, its staff, and industry proponents of various cost models. We will issue a FNPRM by the end of June 1997 seeking additional information on which to base the development of a reliable means of determining the forward-looking economic cost of providing universal service. We shall also separately seek information on issues such as the actual cost of purchasing switches, the current cost of digital loop carriers, and the location of customers in the lowest density areas.

124. Criteria for Forward-Looking Economic Cost Determinations

Whether forward-looking economic cost is determined according to a state-conducted cost study or a Commission-determined methodology, we must prescribe certain criteria to ensure consistency in calculations of federal universal service support. Consistent with the eight criteria set out in the Joint Board recommendation, we agree that all methodologies used to calculate the forward-looking economic cost of providing universal service in rural, insular, and high cost areas must meet the following criteria:

(1) The technology assumed in the cost study or model must be the least-cost, most-efficient, and reasonable technology for providing the supported services that is currently being deployed. A model, however, must include the ILECs' wire centers as the center of the loop network and the outside plant should terminate at ILECs' current wire centers. The loop design incorporated into a forward-looking economic cost study or model should not impede the provision of advanced services. For example, loading coils should not be used because they impede the provision of advanced services. We note that the use of loading coils is inconsistent with the Rural Utilities Services guidelines for network deployment by its borrowers. Wire center line counts should equal actual ILEC wire center line counts, and the study's or model's average loop length should reflect the incumbent carrier's actual average loop length.

(2) Any network function or element, such as loop, switching, transport, or signaling, necessary to produce supported services must have an associated cost.

(3) Only long-run forward-looking economic cost may be included. The long-run period used must be a period long enough that all costs may be treated as variable and avoidable. The costs must not be the embedded cost of the facilities, functions, or elements.

The study or model, however, must be based upon an examination of the current cost of purchasing facilities and equipment, such as switches and digital loop carriers (rather than list prices).

(4) The rate of return must be either the authorized federal rate of return on interstate services, currently 11.25 percent, or the state's prescribed rate of return for intrastate services. We conclude that the current federal rate of return is a reasonable rate of return by which to determine forward looking costs. We realize that, with the passage of the 1996 Act, the level of local service competition may increase, and that this competition might increase the ILECs' cost of capital. There are other factors, however, that may mitigate or offset any potential increase in the cost of capital associated with additional competition. For example, until facilities-based competition occurs, the impact of competition on the ILEC's risks associated with the supported services will be minimal because the ILEC's facilities will still be used by competitors using either resale or purchasing access to the ILEC's unbundled network elements. In addition, the cost of debt has decreased since we last set the authorized rate of return. The reduction in the cost of borrowing caused the Common Carrier Bureau to institute a preliminary inquiry as to whether the currently authorized federal rate of return is too high, given the current marketplace cost of equity and debt. We will re-evaluate the cost of capital as needed to ensure that it accurately reflects the market situation for carriers.

(5) Economic lives and future net salvage percentages used in calculating depreciation expense must be within the FCC-authorized range. We agree with those commenters that argue that currently authorized lives should be used because the assets used to provide universal service in rural, insular, and high cost areas are unlikely to face serious competitive threat in the near term. To the extent that competition in the local exchange market changes the economic lives of the plant required to provide universal service, we will re-evaluate our authorized depreciation schedules. We intend shortly to issue a notice of proposed rule making to further examine the Commission's depreciation rules.

(6) The cost study or model must estimate the cost of providing service for all businesses and households within a geographic region. This includes the provision of multi-line business services, special access, private lines, and multiple residential lines. Such inclusion of multi-line business services

and multiple residential lines will permit the cost study or model to reflect the economies of scale associated with the provision of these services.

(7) A reasonable allocation of joint and common costs must be assigned to the cost of supported services. This allocation will ensure that the forward-looking economic cost does not include an unreasonable share of the joint and common costs for non-supported services.

(8) The cost study or model and all underlying data, formulae, computations, and software associated with the model must be available to all interested parties for review and comment. All underlying data should be verifiable, engineering assumptions reasonable, and outputs plausible.

(9) The cost study or model must include the capability to examine and modify the critical assumptions and engineering principles. These assumptions and principles include, but are not limited to, the cost of capital, depreciation rates, fill factors, input costs, overhead adjustments, retail costs, structure sharing percentages, fiber-copper cross-over points, and terrain factors.

(10) The cost study or model must deaverage support calculations to the wire center serving area level at least, and, if feasible, to even smaller areas such as a Census Block Group, Census Block, or grid cell. We agree with the Joint Board's recommendation that support areas should be smaller than the carrier's service area in order to target efficiently universal service support. Although we agree with the majority of the commenters that smaller support areas better target support, we are concerned that it becomes progressively more difficult to determine accurately where customers are located as the support areas grow smaller. As SBC notes, carriers currently keep records of the number of lines served at each wire center, but do not know which lines are associated with a particular CBG, CB, or grid cell. Carriers, however, would be required to provide verification of customer location when they request support funds from the administrator.

125. In order for the Commission to accept a state cost study submitted to us for the purposes of calculating federal universal service support, that study must be the same cost study that is used by the state to determine intrastate universal service support levels pursuant to section 254(f). A state need not perform a new cost study, but may submit a cost study that has already been performed for evaluation by the Commission. We also encourage a state, to the extent possible and consistent

with the above criteria, to use its ongoing proceedings to develop permanent unbundled network element prices as a basis for its universal service cost study. This would reduce duplication and diminish arbitrage opportunities that might arise from inconsistencies between the methodologies for setting unbundled network element prices and for determining universal service support levels. In particular, we wish to avoid situations in which, because of different methodologies used for pricing unbundled network elements and determining universal service support, a carrier could receive support for the provision of universal service that differs from the rate it pays to acquire access to the unbundled network elements needed to provide universal service. Consequently, to prevent differences between the pricing of unbundled network elements and the determination of universal service support, we urge states to coordinate the development of cost studies for the pricing of unbundled network elements and the determination of universal service support.

126. Development and Selection of a Suitable Forward-Looking Support Mechanism for Rural Carriers

Consistent with our plan for non-rural carriers, we shall commence a proceeding by October 1998 to establish forward-looking economic cost mechanisms for rural carriers. Although a precise means of determining forward-looking economic cost for non-rural carriers will be prescribed by August 1998 and will take effect on January 1, 1999, rural carriers will begin receiving support pursuant to support mechanisms incorporating forward-looking economic cost principles only when we have sufficient validation that forward-looking support mechanisms for rural carriers produce results that are sufficient and predictable. Consistent with the Joint Board's recommendation that mechanisms for determining support for rural carriers incorporate forward-looking cost principles, rather than embedded cost, we will work closely with the Joint Board, state commissions, and interested parties to develop support mechanisms that satisfy these principles.

127. To ensure that the concerns of rural carriers are thoroughly addressed, Pacific Telecom suggests that a task force be established specifically to study the development and impact of support mechanisms incorporating forward-looking economic cost principles for rural carriers. State Joint Board members and USTA have also recommended the

formation of a rural task force to study and develop a forward-looking economic cost methodology for rural carriers. The state Joint Board members contend that such a task force "should provide valuable assistance in identifying the issues unique to rural carriers and analyzing the appropriateness of proxy cost models for rural carriers." We support this suggestion. Such a task force should report its findings to the Joint Board. We encourage the Joint Board to establish the task force soon, so that its findings can be included in any Joint Board report to the Commission prior to our issuance of the FNPRM on a forward-looking economic cost methodology for rural carriers by October 1998. Although the Joint Board has the responsibility to appoint the members of the task force, we suggest that it include a broad representation of industry, including rural carriers, as well as a representative from remote and insular areas. We also suggest that the meetings and records of the task force be open to the public.

128. Specifically, through the FNPRM, we will seek to determine what mechanisms incorporating forward-looking economic cost principles would be appropriate for rural carriers. We require that mechanisms developed and selected for rural carriers reflect the higher operating and equipment costs attributable to lower subscriber density, small exchanges, and lack of economies of scale that characterize rural areas, particularly in insular and very remote areas, such as Alaska. We also require that cost inputs be selected so that the mechanisms account for the special characteristics of rural areas in its cost calculation outputs. We recognize the unique situation faced by carriers serving Alaska and insular areas may make selection of cost inputs for those carriers especially challenging. Thus, if the selected mechanisms include a cost model, the model should use flexible inputs to accommodate the variation in cost characteristics among rural study areas due to each study area's unique population distribution. Moreover, the Commission, working with the Joint Board, state commissions, and other interested parties, will determine whether calculating the support using geographic units other than CBGs would more accurately reflect a rural carrier's costs. The Commission will likewise consider whether such mechanisms should include a "maximum shift or change" feature to ensure that the amount of support each carrier receives will not fluctuate more than an established amount from one year to the next, similar to the provision in

§ 36.154(f)(1) of the Commission's rules to mitigate separations and high cost fund changes.

129. The Commission with the Joint Board's assistance will also consider whether a competitive bidding process could be used to set support levels for rural carriers. The record does not support adoption of competitive bidding as a support mechanism at this time. The FNPRM will examine the development of such a competitive bidding process that will meet the requirements of both sections 214(e) and 254.

130. Applicable Benchmarks

The Joint Board recommended that the Commission adopt a benchmark based on nationwide average revenue per line to calculate the support eligible telecommunications carriers would receive for serving rural, insular, and high cost areas. The Joint Board recommended that the support that an eligible telecommunications carrier receives for serving a supported line in a particular geographic area should be the cost of providing service calculated using forward-looking economic cost minus a benchmark amount. The benchmark is the amount subtracted from the cost of providing service that is the basis for determining the support provided from the federal universal service support mechanisms.

131. The Joint Board recommended setting the benchmark at the nationwide average revenue per line, because "that average reflects a reasonable expectation of the revenues that a telecommunications carrier would be reasonably expected to use to offset its costs, as estimated in the proxy model." Because it recommended that eligible residential and single-line business be supported, with single-line businesses receiving less support, the Joint Board recommended defining two benchmarks, one for residential service and a second for single-line business service. Because they found that a revenue-based benchmark will require periodic review and more administrative oversight than a cost-based benchmark, however, the majority state members of the Joint Board recommended, in their second report to the Commission the use of a benchmark based on the nationwide average cost of service as determined by the cost model.

132. We agree with the Joint Board's recommendation, and intend to establish a nationwide benchmark based on average revenues per line for local, discretionary, interstate^A and intrastate access services, and other telecommunications revenues that will be used with either a cost model or a

cost study to determine the level of support carriers will receive for lines in a particular geographic area. A non-rural eligible telecommunications carrier could draw from the federal universal service support mechanism for providing supported services to a subscriber only if the cost of serving the subscriber, as calculated by the forward-looking cost methodology, exceeds the benchmark. We note that a majority of the commenters support the use of a benchmark based on revenues per line. We also agree with the Joint Board that there should be separate benchmarks for residential service and single-line business service.

133. Consistent with the Joint Board's recommendation, we shall include revenues from discretionary services in the benchmark. We agree with Time Warner that a determination of the amount of support a carrier needs to serve a high cost area should reflect consideration of the revenues that the carrier receives from providing other local services, such as discretionary services. As the Joint Board noted, those revenues offset the costs of providing local service. Setting the benchmark at a level below the average revenue per line, including discretionary services, would allow a carrier to recover the costs of discretionary services from customers purchasing these discretionary services and from the universal service mechanisms. This unnecessary payment would increase the size of the universal service support mechanisms, and consequently require larger contributions from all telecommunications carriers. We agree that competition could reduce revenues from a particular service, we anticipate that the development of competition in the local market will also lead to the development of new services that will produce additional revenues per line and to reductions in the costs of providing the services generating those revenues. We will also review the benchmark at the same time we review the means for calculating forward-looking economic cost. Thus, at these periodic reviews, we can adjust both the forward-looking cost methodology and the benchmark to reflect the positive effects of competition.

134. We include revenues from discretionary services in the benchmark for additional reasons. The costs of those services are included in the cost of service estimates calculated by the forward-looking economic cost models that we will be evaluating further in the FNPRM. Revenues from services in addition to the supported services should, and do, contribute to the joint and common costs they share with the

supported services. Moreover, the former services also use the same facilities as the supported services, and it is often impractical, if not impossible, to allocate the costs of facilities between the supported services and other services. For example, the same switch is used to provide both supported services and discretionary services. Consequently, in modeling the network, the BCPM and the Hatfield 3.1 models use digital switches capable of providing both supported services and discretionary services. Therefore, it would be difficult for the models to extract the costs of the switch allocated to the provision of discretionary services.

135. We also include both interstate and intrastate access revenues in the benchmark, as recommended by the Joint Board. Access to IXCs and to other local wire centers is provided by a part of the switch known as the port. The methodologies filed in this proceeding include the costs of the port as costs of providing universal service. The BCPM, however, subtracts a portion of port costs allocated to toll calls. Hatfield 3.1, in contrast, includes all port costs in the costs of providing supported services. Both methodologies exclude per-minute costs of switching that are allocated to toll calls. Therefore, the methodologies filed in this proceeding do not include all access costs in the costs of providing universal service. Access charges to IXCs, however, have historically been set above costs as one implicit mechanism supporting local service. We therefore conclude that, unless and until both interstate and intrastate access charges have been reduced to recover only per-minute switch and transport costs, access revenues should be included in the benchmark. Accordingly, we reject the proposals by some commenters to exclude revenues from discretionary and access services in calculating the benchmark.

136. We also agree with the Joint Board that setting the benchmark at nationwide average revenue per line is reasonable because that average reflects a reasonable expectation of the revenues that a telecommunications carrier could use to cover its costs, as estimated by the forward-looking cost methodology we are adopting. A nationwide benchmark will also be easy to administer and will make the support levels more uniform and predictable than a benchmark set at a regional, state, or sub-state level would make them. A nationwide benchmark, as the Joint Board noted, will also encourage carriers to market and introduce new services in high costs areas as well as urban areas, because the benchmark will

vary depending upon the average revenues from carriers serving all areas. For that reason, contrary to the contentions of some commenters, we conclude that a nationwide benchmark will not harm carriers serving rural areas but rather encourage them to introduce new services. We note that support levels for rural carriers will be unaffected by the benchmark unless and until they begin to transition to a forward-looking cost methodology, which would occur no earlier than 2001. Further, we note that the states have discretion to provide universal service support beyond that included in the federal universal service support mechanism.

137. We agree the Joint Board's recommendation to adopt two separate benchmarks, one for residential service and a second for single-line business services. Because business service rates are higher than residential service rates, we consider those additional revenue derived from business services when developing the benchmark. We note that the only parties who have opposed adopting separate benchmarks contend that, because ILECs do not keep separate records for residential and business revenues, separate benchmarks would be administratively difficult. We do not believe, however, that using two revenue benchmarks will be administratively difficult. For purposes of universal service support, the eligible telecommunications carrier need not determine the exact revenues per service, but only the number of eligible residential and business connections it serves in a particular support area. To calculate support levels, the administrator will take the cost of service, as derived by the forward-looking cost methodology, and subtract the applicable benchmark and multiply that number by the number of eligible residential or business lines served by the carrier in that support area.

138. The majority state members depart from the Joint Board recommendation and now suggest the use of a cost-based benchmark. They contend that it may be difficult to match the revenue used in a benchmark with the cost of service included in the model. They also argue that a revenue benchmark would require periodic review and more regulatory oversight than a cost-based benchmark. Although we recognize there may be some difficulties in using a revenue-based benchmark, we agree with the Joint Board that a cost-based benchmark should not be relied upon at this time. As the Joint Board noted, it is best to compare the revenue to the cost to determine the needed support rather

than to examine only the cost side of the equation. A cost-based benchmark, as Time Warner states, does not reflect the revenue already available to a carrier for covering its costs for the supported services. Even in some areas with above average costs, revenue can offset high cost without resort to subsidies, resulting in maintenance of affordable rates. We also agree with the majority state members of the Joint Board that a cost-based benchmark will not completely satisfy the objective of ensuring that only a reasonable allocation of joint and common costs are assigned to the cost of the supported services. Although the majority state members of the Joint Board now express concern about the difficulty in matching the service revenue and the cost of services included in a model, we remain confident that we can do that. We also do not find that it will be administratively difficult to establish and maintain a revenue-based benchmark, and intend to review the benchmark when we review the forward-looking economic cost methodology. Consequently, we will not adopt a cost-based benchmark at this time, but will, as the majority state members of the Joint Board suggest, address in the FNPRM the specific benchmark that should be used.

139. As stated above, we have determined that the revenue benchmark should be calculated using local service, access, and other telecommunications revenues received by ILECs, including discretionary revenue. Based on the data we have received in response to the data request from the Federal-State Joint Board in CC Docket 80-286 (80-286 Joint Board) on universal service issues, it appears that the benchmark for residential services should be approximately \$31 and for single-line businesses should be approximately \$51. We recognize, as did the Joint Board, that the precise calculation of the level of the benchmark must be consistent with the means of calculating the forward-looking economic costs of constructing and operating the network. Thus, we do not adopt a precise calculation of the benchmark at this time, but will do so after we have had an opportunity to review state cost studies and the study or model that will serve as the methodology for determining forward looking economic costs in those states that do not conduct cost studies. We will also seek further information, particularly to clarify the appropriate amounts of access charge revenue and intraLATA toll revenue that should be included in the revenue benchmark.

140. We have determined to assess contributions for the universal service support mechanisms for rural, insular, and high cost areas solely from interstate revenues. We have adopted this approach because the Joint Board did not recommend that we should assess intrastate as well as interstate revenues for the high cost support mechanisms and because we have every reason to believe that the states will participate in the federal-state universal service partnership so that the high cost mechanisms will be sufficient to guarantee that rates are just, reasonable, and affordable. Support for rural, insular, and high cost areas served by non-rural carriers distributed through forward-looking economic cost based mechanisms need only support interstate costs. We will monitor the high cost mechanisms to determine whether additional federal support becomes necessary.

141. Accordingly, we must determine the federal and state shares of the costs of providing high cost service. We have concluded that the federal share of the difference between a carrier's forward looking economic cost of providing supported services and the national benchmark will be 25 percent. Twenty-five percent is the current interstate allocation factor applied to loop costs in the Part 36 separations process, and because loop costs will be the predominant cost that varies between high cost and non-high cost areas, this factor best approximates the interstate portion of universal service costs.

142. Prior to the adoption of the 25 percent interstate allocation factor for loop costs, the Commission allocated most non-traffic sensitive (NTS) plant costs on the basis of a usage-based measure, called the Subscriber Plant Factor (SPF). In 1984, the Commission and the 80-286 Joint Board recognized that there was no purely economic method of allocating NTS costs on a usage-sensitive basis. Therefore, the Commission adopted a fixed interstate allocation factor to separate loop costs between the interstate and intrastate jurisdictions. In establishing a 25 percent interstate allocation factor for loop costs, the Commission was guided by the following four principles adopted by the 80-286 Joint Board: "(1) Ensure the permanent protection of universal service; (2) provide certainty to all parties; (3) be administratively workable; and (4) be fair and equitable to all parties." Because we find that the four principles adopted by the 80-286 Joint Board are consistent with the principles set out in section 254(b) and because universal service support is largely attributable to high NTS loop

costs, we find that applying the 25 percent interstate allocation factor historically applied to loop costs in the Part 36 separations process is appropriate here.

143. We believe that the states will fulfill their role in providing for the high cost support mechanisms. Indeed, we note that there is evidence that such state support is substantial, as states have used a variety of techniques to maintain low residential basic service rates, including geographic rate averaging, higher rates for business customers, higher intrastate access rates, higher rates for intrastate toll service, and higher rates for discretionary services. The Commission does not have any authority over the local rate setting process or the implicit intrastate universal service support reflected in intrastate rates. We believe that it would be premature for the Commission to substitute explicit federal universal service support for implicit intrastate universal service support before states have completed their own universal service reforms through which they will identify the support implicit in existing intrastate rates and make that support explicit. Although we are not, at the outset, providing federal support for intrastate, as well as interstate, costs associated with providing universal services, we will monitor the high cost mechanisms to ensure that they are sufficient to ensure just, reasonable, and affordable rates. We expect that the Joint Board and the states will do the same and we hope to work with the states in further developing a unified approach to the high cost mechanisms.

144. Non-Rural Carriers

We will continue to use the existing high cost support mechanisms for non-rural carriers through December 31, 1998, by which time we will have a forward-looking cost methodology in place for non-rural carriers. We are also adopting rules that will make this support portable, or transferable, to competing eligible telecommunications carriers when they win customers from ILECs or serve previously unserved customers. We also shall limit the amount of corporate operations expenses that an ILEC can recover through high cost loop support. We shall also extend the indexed cap on the growth of the high cost loop fund. These modifications to the existing mechanisms shall take effect on January 1, 1998.

145. Although the Joint Board defined universal service to include support for single residential and business lines only, we join the state members of the Joint Board in recognizing that an

abrupt withdrawal of support for multiple lines may significantly affect the operations of carriers currently receiving support for businesses and residential customers using multiple lines. Again, because we will only continue to use the existing support mechanisms for 1998, we find that non-rural carriers should continue to receive high cost assistance and LTS for all lines. We shall continue to evaluate whether support for second residential lines, second residences, and multiple line businesses should be provided under the forward-looking economic cost methodology.

146. Alternative Options

We have considered different methods for calculating support until a forward-looking economic cost methodology for non-rural carriers becomes effective. First, we could extend application of the Joint Board's recommendation for rural carriers to non-rural carriers and provide high loop cost support and LTS benefits on a per-line basis for all high cost carriers, based on amounts received for each line that are set at previous years' embedded costs. We decline to take that approach, however, because we, like the state members of the Joint Board, are concerned that a set per-line support level may not provide carriers adequate support because such support does not take into consideration any necessary and efficient facility upgrades by the carrier.

147. A second alternative would be to calculate costs based on the models before us, either by choosing a model or taking an average from the results of the models. As we have stated, flaws in and unanswered questions about the models that have been submitted in this proceeding prevent us from choosing one now to determine universal service support levels. For example, the proponents use widely divergent input values for structure sharing and switch costs to determine the cost of providing service. We agree with the commenters that these variations account for a large part of the difference in results between the models. We also agree with the state members of the Joint Board that the current versions of the models are flawed in how they distribute households within a CBG. The BCPM and Hatfield models also inaccurately determine the wire centers serving many customers. These inaccuracies can create great variance in the costs of service determined by the models. For those reasons, we find that it would better serve the public interest not to use the current versions of the models, but to continue to work with the model

proponents, industry, and the state commissions to improve the models before we select one to determine universal service support.

148. At this point we conclude that we should not select one model over another because both models lack a compelling design algorithm that specifies where within a CBG customers are located. The BCPM model continues to uniformly distribute customers within the CBG, and therefore spreads customers across empty areas and generates lot sizes that appear to be larger than the actual lot sizes. On the other hand, the clustering algorithm used in the Hatfield 3.1 model requires that 85 percent of the population live within two or four clusters within a CBG. This requirement could misrepresent actual population locations when the population is clustered differently.

149. A third alternative is the proposal made by BANX to base universal support on prices for unbundled network elements. We reject this alternative because the record before us indicates that the states have yet to set prices for all of the unbundled network elements needed to provide universal service, including loop, inter-office transport, and switching.

150. We conclude that the public interest is best served by using high cost mechanisms that allow carriers to continue receiving support at current levels while we continue to work with state regulators to select a forward-looking economic cost methodology. This approach will ensure that carriers will not need to adjust their operations significantly in order to maintain universal service in their service areas pending adoption of a forward-looking economic cost methodology.

151. Indexed Cap

In order to allow an orderly conversion to the new universal service mechanisms, the Joint Board on June 19, 1996 recommended extending the interim cap limiting growth in the Universal Service Fund until the effective date of the rules the Commission adopts pursuant to section 254 and the Joint Board's recommendation. We adopted that recommendation on June 26, 1996. Because we will continue to use the existing universal service mechanisms, with only minor modifications, until the forward-looking economic cost mechanisms become effective, we clarify that the indexed cap on the Universal Service Fund will remain in effect until all carrier receive support based on a forward-looking economic cost mechanism. We anticipate that

non-rural carriers will begin receiving universal service support based on the forward-looking economic cost mechanisms on January 1, 1999.

152. Continued use of this indexed cap will prevent excessive growth in the size of the fund during the period preceding the implementation of a forward-looking support mechanisms. We find that a cap will encourage carriers to operate more efficiently by limiting the amount of support they receive. From our experience with the indexed cap on the current high cost support mechanisms, implemented pursuant to the recommendations of the Joint Board in the 80-286 proceeding, we find that the indexed cap effectively limits the overall growth of the fund, while protecting individual carriers from experiencing extreme reductions in support.

153. Corporate Operations Expense

In order to ensure that carriers use universal service support only to offer better service to their customers through prudent facility investment and maintenance consistent with their obligations under section 254(k), we shall limit the amount of corporate operations expense that may be recovered through the support mechanisms for high loop costs. A limitation on the inclusion of such expenses was proposed in the 80-286 NPRM. Commenters in this proceeding and the 80-286 proceeding generally support limiting the amount of corporate operations expense that can be recovered through the high cost mechanisms because costs not directly related to the provision of subscriber loops are not necessary for the provision of universal service. Most commenters suggest that there be a cap on the amount of corporate operations expense that a carrier is allowed to recover through the universal service mechanism, but some assert that these expenses should not be allowed at all. We agree with the commenters that these expenses do not appear to be costs inherent in providing telecommunications services, but rather may result from managerial priorities and discretionary spending. Consequently, we intend to limit universal service support for corporate operations expense to a reasonable per-line amount, recognizing that small study areas, based on the number of lines, may experience greater amounts of corporate operations expense per line than larger study areas.

154. We conclude that, for each carrier, the amount of corporate operations expense per line that is supported through our universal service

mechanisms should fall within a range of reasonableness. We shall define this range of reasonableness for each study area as including levels of reported corporate operations expense per line up to a maximum of 115 percent of the projected level of corporate operations expense per line. The projected corporate operations expense per line for each service area will be based on the number of access lines and calculated using a formula developed from a statistical study of data submitted by NECA in its annual filing.

155. Furthermore, we will grant study area waivers only for expenses that are consistent with the principle in section 254(e) that carriers should use universal service support for the "provision, maintenance, and upgrading of facilities and services for which the support is intended." Consistent with our limitation on corporate operations expense discussed above, we believe that corporate operations expense in excess of 115 percent of the projected levels are not necessary for the provision of universal service, and therefore, absent exceptional circumstances, we will not grant waivers to provide additional support for such expenses. To the extent a carrier's corporate operations expense is disallowed pursuant to these limitations, the national average unseparated cost per loop shall be adjusted accordingly.

156. Portability of Support

Under section 254(e), eligible telecommunications carriers are to use universal service support for the provision, maintenance, and upgrading of facilities and services for which the support is intended. When a line is served by an eligible telecommunications carrier, either an ILEC or a CLEC, through the carrier's owned and constructed facilities, the support flows to the carrier because that carrier is incurring the economic costs of serving that line.

157. In order not to discourage competition in high cost areas, we adopt the Joint Board's recommendation to make carriers' support payments portable to other eligible telecommunications carriers prior to the effective date of the forward-looking mechanism. A competitive carrier that has been designated as an eligible telecommunications carrier shall receive universal service support to the extent that it captures subscribers' lines formerly served by an ILEC receiving support or new customer lines in that ILEC's study area. At the same time, the ILEC will continue to receive support for the customer lines it continues to

serve. We conclude that paying the support to a CLEC that wins the customer's lines or adds new subscriber lines would aid the emergence of competition. Moreover, in order to avoid creating a competitive disadvantage for a CLEC using exclusively unbundled network elements, that carrier will receive the universal service support for the customer's line, not to exceed the cost of the unbundled network elements used to provide the supported services. The remainder of the support associated with that element, if any, will go the ILEC to cover the ILEC's economic costs of providing that element in the service area for universal service support.

158. During the period in which the existing mechanisms are still defining high cost support for non-rural carriers, we find that the least burdensome way to administer the support mechanism will be to calculate an ILEC's per-line support by dividing the ILEC's universal service support payment under the existing mechanisms by the number of loops served by that ILEC. That amount will be the support for all other eligible telecommunications carriers serving customers within that ILEC's study area.

159. As previously stated, we conclude that carriers that provide service throughout their service area solely through resale are not eligible for support. In addition, we clarify the Joint Board's recommendation on eligibility and find that carriers that provide service to some customer lines through their own facilities and to others through resale are eligible for support only for those lines they serve through their own facilities. The purpose of the support is to compensate carriers for serving high cost customers at below cost prices. When one carrier serves high cost lines by reselling a second carrier's services, the high costs are borne by the second carrier, not by the first, and under the resale pricing provision the second carrier receives revenues from the first carrier equal to end-user revenues less its avoidable costs. Therefore it is the second carrier, not the first, that will be reluctant to serve absent the support, and therefore it should receive the support.

160. Use of Embedded Cost to Set Support Levels for Rural Carriers

We adopt the Joint Board's recommendation that, after a reasonable period, support for rural carriers also should be based on their forward-looking economic cost of providing services designated for universal service support. Although it recommended using forward-looking economic cost calculated by using a cost model to

determine high cost support for all eligible telecommunications carriers, the Joint Board found that the proposed models could not at this time precisely model small, rural carriers' cost. The Joint Board expressed concern that, if the proposed models were applied to small, rural carriers, the models' imprecision could significantly change the support that such carriers receive, providing carriers with funds at levels insufficient to continue operations or, at the other extreme, a financial windfall. The Joint Board noted that, compared to the large ILECs, small, rural carriers generally serve fewer subscribers, serve more sparsely populated areas, and do not generally benefit from economies of scale and scope as much as non-rural carriers. Rural carriers often also cannot respond to changing operating circumstances as quickly as large carriers. We agree with the Joint Board that rural carriers not use a cost model or other means of determining forward-looking economic cost immediately to calculate their support for serving rural high cost areas, but we do support an eventual shift from the existing system.

161. Use of a Forward-Looking Economic Cost Methodology by Small Rural Carriers

We acknowledge commenters' concerns that the proposed mechanisms incorporating forward-looking economic cost methodologies filed in this proceeding should not in their present form be used to calculate high cost support for small, rural carriers. At present, we recognize that these mechanisms cannot presently predict the cost of serving rural areas with sufficient accuracy. Consistent with the Joint Board's recommendation, we anticipate, however, that forward-looking support mechanisms that could be used for rural carriers within the continental United States will be developed within three years of release of this Order. We conclude that a forward-looking economic cost methodology consistent with the principles we set forth in this section should be able to predict rural carriers' forward-looking economic cost with sufficient accuracy that carriers serving rural areas could continue to make infrastructure improvements and charge affordable rates. We conclude that calculating support using such a forward-looking economic cost methodology would comply with the Act's requirements that support be specific, predictable, and sufficient and that rates for consumers in rural and high cost areas be affordable and reasonably comparable to rates charged for similar services in urban areas.

Moreover, such a mechanism could target support by calculating costs over a smaller geographical area than the study areas currently used. In addition, we find that the use of mechanisms incorporating forward-looking economic cost principles would promote competition in rural study areas by providing more accurate investment signals to potential competitors. Accordingly, we find that, rather than causing rural economies to decline, as some commenters contend, the use of such a forward-looking economic cost methodology could bring greater economic opportunities to rural areas by encouraging competitive entry and the provision of new services as well as supporting the provision of designated services. Because support will be calculated and then distributed in predictable and consistent amounts, such a forward-looking economic cost methodology would compel carriers to be more disciplined in planning their investment decisions.

162. Conversion to a Forward-Looking Economic Cost Methodology

Consistent with the Joint Board, we recognize that new universal service funding mechanisms could significantly change (but not necessarily diminish) the amount of support rural carriers receive. Moreover, we agree that compared to large ILECs, rural carriers generally serve fewer subscribers, serve more sparsely populated areas, and do not generally benefit as much from economies of scale and scope. For many rural carriers, universal service support provides a large share of the carriers' revenues, and thus, any sudden change in the support mechanisms may disproportionately affect rural carriers' operations. Accordingly, we adopt the Joint Board's recommendation to allow rural carriers to continue to receive support based on embedded cost for at least three years. Once a forward-looking economic cost methodology for non-rural carriers is in place, we shall evaluate mechanisms for rural carriers. Rural carriers will shift gradually to a forward-looking economic cost methodology to allow them ample time to adjust to any changes in the support calculation.

163. Treatment of Rural Carriers

We conclude that a gradual shift to a forward-looking economic cost methodology for small, rural carriers is consistent with the Act and our access charge reform proceeding. Section 251(f)(1) grants rural telephone companies an exemption from section 251(c)'s interconnection requirements, under specific circumstances, because

Congress recognized that it might be unfair to both the carriers and the subscribers they serve to impose all of section 251's requirements upon rural companies. Furthermore, the companion *Access Charge Reform Order* limits application of the rules adopted in that proceeding to price-cap ILECs. The *Access Charge Reform Order* concludes that access reform for non-price-cap ILECs, which tend to be small, rural carriers, will occur separately from reform for price-cap ILECs because small, rural ILECs, which generally are under rate-of-return regulation, may not be subject to some of the duties under section 251 (b) and (c) and will likely not have competitive entry into their markets as quickly as price cap ILECs will experience. Because the Commission's access reform proceeding does not propose generally to change access charge rules for non-price-cap ILECs, we find without merit Minnesota Coalition's argument that the current embedded-cost support mechanisms must be maintained because changes to part 69 may cause rural carriers' revenues to decrease. Consistent with our approach towards non-price-cap ILECs in access charge reform, we conclude that rural carriers' unique circumstances warrant our implementation of separate mechanisms.

164. Supported Lines

In the process of selecting a forward-looking economic cost methodology for calculating universal service support for carriers serving high cost areas, we will determine whether lines other than primary residential and single business connections should be eligible for support. For this reason, we conclude that rural carriers should continue to receive high cost loop assistance, DEM weighting, and LTS support for all their working loops until they move to a forward-looking economic cost methodology. State members of the Joint Board concur with this determination.

165. Modifications to Existing Support Mechanisms

The Joint Board recommended that for the three years beginning January 1, 1998, high cost support for rural ILECs be calculated based on high cost loop support, DEM weighting, and LTS benefits for each line based on historic support amounts. We are persuaded, however, by the commenters and the recent State High Cost Report that, even in the absence of new plant construction, this may not provide rural carriers adequate support for providing universal service because support to offset cost increases in maintenance

expenses due to natural disasters or inflation would not be available. We also find that, in order to maintain the quality of the service they offer their customers, carriers may not be able to avoid upgrading their facilities. We find that, consistent with the State High Cost Report, the level of support recommended by the Joint Board may not permit carriers to afford prudent facility upgrades.

166. The state members recommend that the Commission adopt an industry proposal regarding the determination of the needed amount of support for rural carriers rather than the recommendation of the Joint Board. Expressing concern that setting high cost support, DEM weighting, and LTS at the current per-line amount could discourage carriers from investing in their networks, the state members endorse a proposal that would: (1) Use a carrier's embedded costs as compared to the 1995 nationwide average loop cost, adjusted annually to reflect inflation, to determine whether a carrier receives high cost support; (2) use the 1995 interstate allocation factor for DEM weighting; and (3) freeze the percentage of the NECA pool that is associated with LTS at 1996 levels. The state Joint Board members further recommend that, during the period before rural carriers begin to draw support based solely on a forward-looking cost methodology, each carrier continue to receive support based on all of the carrier's working lines, not just the eligible residential and single-line business lines. The state members of the Joint Board also depart from the Joint Board's recommendation that rural carriers not be allowed to elect to draw support solely based on forward-looking economic costs until January 1, 2001, when all rural carriers would begin using a forward-looking cost study for calculating their high cost support.

167. We are persuaded by commenters stating that rural carriers require more time to adjust to any change in universal service support than large carriers do. While giving rural carriers ample time to plan for changes from the current methodology, we shall retain many features of the current support mechanisms for them until they move to a forward-looking economic cost methodology. Because we believe that rural carriers must begin immediately to plan their network maintenance and development more carefully, we will use some attributes of the ILEC Associations' proposal to limit the growth of the size of the current high cost support mechanisms beginning in 2000. We will use those mechanisms until they are replaced by

the forward-looking economic cost methodology. The ILEC Associations' proposal would control the growth in support received by the carriers but still leave support to cover, at least partially, costs of essential plant investment. Because they find this proposal to offer a better initial mechanism for rural carriers than the Joint Board's recommendations, state Joint Board members also support the ILEC Associations' proposal. Starting on January 1, 1998, rural carriers shall receive high cost loop support, DEM weighting assistance, and LTS benefits on the basis of the modification of the existing support mechanism, described below. In addition, the other modifications to the existing mechanisms set forth shall also take effect on January 1, 1998.

168. High Cost Loop Support

We agree with the state members of the Joint Board that rural carriers may require a greater amount of support than fixed support mechanisms would provide. Consequently, we decline to adopt the Joint Board's recommendation to base support for high cost loops on costs reported in 1995. In order to maintain existing facilities and make prudent facility upgrades until such time as forward-looking support mechanisms are in place, we direct that the use of the current formula to calculate high cost loops for rural ILECs continue for two years. Thus from January 1, 1998 through December 31, 1999, rural carriers will calculate support using the current formulas.

169. Beginning January 1, 2000, however, rural carriers shall receive high loop cost support for their average loop costs that exceed 115 percent of an inflation-adjusted nationwide average loop cost. The inflation-adjusted nationwide average cost per loop shall be the 1997 nationwide average cost per loop as increased by the percentage in change in Gross Domestic Product Chained Price Index (GDP-CPI) from 1997 to 1998. We index loop costs to inflation in order to limit the growth in the fund because, historically, small carriers' costs have risen faster than the national average cost per loop. As a result, small carriers have drawn increased support from the fund. We are using the GDP-CPI of the year for which costs are reported because the support mechanisms reflect a two-year lag between the time when the costs on which support is based are incurred and the distribution of support. We are using the 1997 nationwide average loop cost per loop as the benchmark because the 1998 nationwide average loop costs would not be calculated until

September 1999. The percentage of the above-average loop cost that rural carriers may recover from the support mechanisms during 2000 will remain consistent with the current provisions concerning support for high loop costs in the Commission's rules. We note that this modification to the existing benchmark for calculating high cost loop support enjoys wide support among ILEC commenters and is supported by the state Joint Board members in their report. We also conclude that rural carriers should continue to receive this support through the jurisdictional separations process, by allocating to the interstate jurisdiction the amount of a recipient's universal service support for loop costs.

170. Indexed Cap

Until rural carriers calculate their support using a forward-looking economic cost methodology, we shall continue to prescribe a cap on the growth of the fund to support high cost loops served by either non-rural and rural carriers equal to the annual average growth in lines. Because beginning January 1, 1999, non-rural carriers will no longer receive support under the existing universal service mechanisms, it is necessary to recalculate the cap based on the costs of the rural carriers that will remain under the modified existing support mechanisms. This overall cap will prevent excessive growth in the size of the fund during the period preceding the implementation of a forward-looking support mechanisms. We conclude that a cap will encourage carriers to operate more efficiently by limiting the amount of support they receive. We also conclude that excessive growth in high loop cost support would make the change to forward-looking support mechanisms more difficult for rural carriers if those support mechanisms provide significantly different levels of support. From our experience with the indexed cap on the current high cost support mechanisms, implemented pursuant to the recommendations of the 80-286 Joint Board proceeding, we conclude that the indexed cap effectively limits the overall growth of the fund, while protecting individual carriers from experiencing extreme reductions in support.

171. DEM Weighting Support

We adopt the Joint Board's recommendation that a subsidy corresponding in amount to that generated formerly by DEM weighting be recovered from the new universal service support mechanisms. Accordingly, the local switching costs

assigned to the interstate jurisdiction beginning in 1998 will include an amount based on the modified DEM weighting factor. We will not, however, set DEM weighting support on a per-line basis and calculate support for high switching costs based on the amount by which revenues collected by each carrier exceed what would be collected without DEM weighting for calendar year 1996. We conclude that setting support at those levels may not provide rural carriers with sufficient resources to enable the carriers to make prudent upgrades to their switching facilities so that they may continue to offer quality service to their customers. As we have discussed above, we do not believe that the fixed per-line support recommended by the Joint Board would provide rural carriers adequate support for providing universal service because support to offset increases in maintenance expenses due to natural disasters or inflation would not be available. We adopt a modified version of the ILEC Associations' proposal to provide DEM weighting benefits prior to the conversion to a forward-looking economic cost methodology.

172. Beginning on January 1, 1998, and continuing until a forward-looking economic cost methodology for them becomes effective, rural carriers will receive local switching support based on weighting of their interstate DEM factors. Assistance for the local switching costs of a qualifying carrier will be calculated by multiplying the carrier's annual unseparated local switching revenue requirement by a local switching support factor, where the local switching support factor is the difference between the 1996 weighted and unweighted interstate DEM factors. If the number of a carrier's lines increases during 1997 or any successive year, either through the purchase of exchanges or through other growth in lines, such that the current DEM weighting factor would be reduced, the carrier must apply the lower weighting factor to the 1996 unweighted interstate DEM factor in order to derive the local switching support factor used to calculate universal service support. We conclude that this mechanism will provide support for carriers to make prudent upgrades to their switching equipment needed to maintain, if not improve, the quality of service to their customers.

173. Long Term Support (LTS)

Consistent with the Joint Board's recommendation, beginning in 1998, rural carriers will recover from the new universal service support mechanisms LTS at a level sufficient to protect their

customers from the effects of abrupt increases in the NECA CCL rates. We agree with those commenters contending that the Joint Board's recommendation that the mechanisms compensate each common line pool member on the basis of its interstate common line revenue requirement relative to the total interstate common line revenue requirement does not consider each carrier's revenues from other sources, such as SLCs and CCL charges. Accordingly, we decline to adopt the Joint Board's recommendation to calculate the support for LTS on a fixed per-line basis. Instead, we adopt a modified per-line support mechanisms for providing LTS.

174. Beginning on January 1, 1998, we shall allow a rural carrier's annual LTS to increase from its support for the preceding calendar year based on the percentage of increase of the nationwide average loop cost. LTS is a carrier's total common line revenue requirement less revenues received from SLCs and CCL charges. This approach ties increases in LTS to changes in common line revenue requirements. Alternative options suggested are not sufficient because they depend on an ability to determine a nationwide CCL charge, which will no longer be possible if the non-pooling carriers switch to a per-line rather than a per-minute CCL charge.

175. Corporate Operations Expense

As we described earlier, for universal service support, we will not prescribe support for corporate operations expense for each carrier study area, as measured on an average monthly per-line basis, in excess of 115 percent of an amount projected for a service area of its sizes. The projected amount will be defined by a formula based upon a statistical study that predicts corporate operations expense based on the number of access lines.

176. Sale of Exchanges

Until support for all carriers is based on a forward-looking economic cost methodology, we conclude that potential universal service support payments may influence unduly a carrier's decision to purchase exchanges from other carriers. In order to discourage carriers from placing unreasonable reliance upon potential universal service support in deciding whether to purchase exchanges from other carriers, we conclude that a carrier making a binding commitment on or after May 7, 1997 to purchase a high cost exchange should receive the same level of support per line as the seller received prior to the sale. For example, if a rural carrier purchases an exchange

from a non-rural carrier that receives support based on the forward-looking economic cost methodology, the loops of the acquired exchange shall receive per-line support based on the forward-looking economic cost methodology of the non-rural carrier prior to the sale, regardless of the support the rural carrier purchasing the lines may receive for any other exchanges. Likewise, if a rural carrier acquires an exchange from another rural carrier, the acquired lines will continue to receive per-line support of the selling company prior to the sale. If a carrier has entered into a binding commitment to buy exchanges prior to May 7, 1997, that carrier will receive support for the newly acquired lines based upon an analysis of the average cost of all its lines, both those newly acquired and those it had prior to execution of the sales agreement. This approach reflects the reasonable expectations of such purchasers when they entered into the purchase and sale agreements. After support for all carriers is based on the forward-looking economic cost methodology, carriers shall receive support for all exchanges, including exchanges acquired from other carriers, based on the forward-looking economic cost methodology.

177. Early Use of Forward-Looking Economic Cost Methodology

Consistent with the recommendations in the State High Cost Report, at this time, we find that, because of the current methodologies' high margin of error for rural areas, we should not permit rural carriers to begin to use the forward-looking economic cost methodology when the non-rural ILECs do. We conclude that a forward-looking economic cost methodology developed for non-rural carriers will require further review before being applied to rural carriers. We conclude that a forward-looking economic cost methodology for rural carriers should not be implemented until there is greater certainty that the mechanisms account reasonably for the cost differences in rural study areas.

178. Certification as a Rural Carrier

Consistent with the Joint Board's recommendation, we define "rural carriers" as those carriers that meet the statutory definition of a "rural telephone company." (47 U.S.C. 153(37)). In order for the administrator to calculate support payments, a carrier must notify the Commission and its state commission, that for purposes of universal service support determinations, it meets the definition of a "rural carrier." Carriers should make such a notification each year prior

to the beginning of the payout period for that year. We find that a self-certification process, coupled with random verification by the Commission and the availability of the section 208 compliance process, would ensure that support is distributed to a carrier without delay and still provide adequate protection against abuse.

179. Portability of Support

We adopt the Joint Board's recommendation to make rural carriers' support payments portable. A CLEC that qualifies as an eligible telecommunications carrier shall receive universal service support to the extent that it captures subscribers formerly served by carriers receiving support based on the modified existing support mechanisms or adds new customers in the ILEC's study area. We conclude that paying the support to a competitive eligible telecommunications carrier that wins the customer or adds a new subscriber would aid the entry of competition in rural study areas.

180. We shall calculate an ILEC's per-line support by dividing the ILEC's universal service support payment by the number of loops in the ILEC's most recent annual loop count to calculate universal service support for all eligible telecommunications carriers serving customers within that ILEC's study area. Moreover, in order to avoid creating a competitive disadvantage for an eligible CLEC using exclusively unbundled network elements to provide service, that carrier will receive the universal service support for the customer, not to exceed the cost of the unbundled network elements used to provide the supported services. If the service is provided in part through facilities constructed and deployed by the CLEC and in part through unbundled network elements, then support will be allocated between the ILEC and the CLEC depending on the amount of support assigned to each element and whether the carrier constructed the facilities used to provide service or purchased access to an unbundled network element.

181. We conclude that determining a rural ILEC's per-line support by dividing the ILECs' universal service support payment by the number of loops served by that ILEC to calculate universal service support for all eligible telecommunications carriers serving customers within that rural ILEC's study area will be the least burdensome way to administer the support mechanisms and will provide the competing carrier with an incentive to operate efficiently. Besides using a forward-looking or embedded costs system, the alternative

for calculating support levels for competing eligible telecommunications carriers consists of requiring the CLECs to submit cost studies. Compelling a CLEC to use a forward-looking economic cost methodology without requiring the ILEC's support to be calculated in the same manner, however, could place either the ILEC or the CLEC at a competitive disadvantage. We thus disagree with commenters that assert that providing support to eligible CLECs based on the incumbents' embedded costs would violate section 254(e).

182. *Alaska and Insular Areas*

The Joint Board recommended that, because of the unique circumstances faced by rural carriers providing service in Alaska and insular areas, those carriers should not be required to shift to support mechanisms based on the forward-looking economic cost at the same time that other rural carriers are so required. The Joint Board noted that carriers serving insular areas have higher shipping costs for equipment and damage caused by tropical storms, while carriers serving Alaska have limited construction periods and serve extremely remote rural communities. Therefore, the Joint Board recommended that rural carriers in Alaska and insular areas continue to receive support based on the fixed support amounts. The Joint Board further recommended that the Commission revisit at a future date the issue of when to move such carriers to a forward-looking economic cost methodology. Given the plan we adopt in this Order, we find that we do not need to resolve the issue of rural carriers serving Alaska and insular areas at this time because we have not set a timeframe for rural carriers to move to the forward-looking economic cost methodology. We will revisit this question when we decide the schedule for other rural carriers moving to the forward-looking economic cost methodology. We agree with the Joint Board that non-rural carriers serving Alaska and insular areas should move to the forward-looking economic cost methodology at the same time as other non-rural carriers. We note, however, that we retain the ability to grant waivers of this requirement in appropriate cases.

183. We note that the forward-looking economic cost models that have been presented to us so far do not include any information on Alaska or the insular areas. We anticipate that information for non-rural carriers serving Alaska and insular areas will be included in future versions of the models. If such

information is not available in a timely manner, we recognize that we may need to adjust the schedule for non-rural carriers serving Alaska and insular areas to move to support based forward-looking economic cost. We will evaluate that situation as we proceed with our determination of a forward-looking economic cost methodology through the FNPRM. We also note that, in the absence of such information in the models, the commissions for Alaska and the insular areas may still submit a state cost study to the Commission.

184. We agree with Guam Tel. Authority that, under the principle set out in section 254(b)(3) this carrier should be eligible for universal service support and clarify the procedures to be used for any carriers, such as Guam Tel. Authority, that may not have historical costs studies on which to base the set support amounts. Guam Tel. Authority, or any other carrier serving an insular area that is not currently included in the existing universal service mechanism, shall receive support based on an estimate of annual amount of their embedded costs. Such carriers must submit verifiable embedded-cost data to the fund administrator.

185. *Use of Competitive Bidding Mechanisms*

In the NPRM, the Commission sought comment on whether competitive bidding could be used to determine universal service support in rural, insular, and high cost areas. Specifically, the Commission asked whether relying on competitive bidding would be consistent with section 214(e), the provision of the statute that specifies the circumstances under which telecommunications carriers are eligible to receive universal service support. Under a competitive bidding mechanism eligible telecommunications carriers would bid on the amount of support per line that they would receive for serving a particular geographic area.

186. The Joint Board identified many advantages arising from the use of a competitive bidding system. We agree with the Joint Board and the commenters that a compelling reason to use competitive bidding is its potential as a market-based approach to determining universal service support, if any, for any given area. The Joint Board and some commenters also noted that by encouraging more efficient carriers to submit bids reflecting their lower costs, another advantage of a properly structured competitive bidding system would be its ability to reduce the amount of support needed for universal service. In that regard, the bidding process should also capture the

efficiency gains from new technologies or improved productivity, converting them into cost savings for universal service. We find that competitive bidding warrants further consideration.

187. We agree with the commenters that suggest we issue a notice to examine issues related to the use of competitive bidding to set universal service support levels for rural, insular, and high cost areas. We find that the record in this proceeding does not contain discussion of those issues adequate for us to define at this time a competitive bidding mechanism that is also consistent with the requirements of sections 214(e) and 254. Overall, there is even less discussion in the comments on the Recommended Decision addressing the use of competitive bidding by the Commission than in the comments filed in response to the NPRM and the Common Carrier Bureau's Public Notice.

188. It is unlikely that there will be competition in a significant number of rural, insular, or high cost areas in the near future. Consequently, it is unlikely that competitive bidding mechanisms would be useful in many areas in the near future. Given the limited utility of a competitive bidding process in the near term, it is important that we not rush to adopt competitive bidding procedures before we complete a thorough and complete examination of the complex and unique issues involved with developing bidding mechanisms for awarding of universal service support. Furthermore, as envisioned in the proposals made to the Commission thus far, competitive bidding will be a complement to, not a substitute for, an alternative forward-looking economic cost methodology. We will seek to define a role for a competitive bidding mechanism as part of the forward-looking economic cost methodology by which support to non-rural carriers for their provision of universal service is defined after December 31, 1998.

189. We shall therefore issue a FNPRM examining specifically the use of competitive bidding to define universal service support for rural, insular, and high cost areas. Our goal will be to develop a record on specific competitive bidding mechanisms sufficient to enable us to adopt one, if we also find it to be in the public interest. A separate proceeding will allow commenters to focus on the issues posed by a decision to use competitive bidding for universal service support in light of our actions in this Order.

Support for Low-Income Consumers*190. Authority to Revise Lifeline and Link Up Programs*

We agree with the Joint Board that section 254(j) allows us to adopt certain changes to the Lifeline program in order to make it consistent with the goals of the 1996 Act. We thus concur with the Joint Board's finding that Congress did not intend for section 254(j) to codify every detail of the existing Lifeline program, but that it intended to give the Joint Board and the Commission permission to leave the Lifeline program in place without modification, despite Lifeline's inconsistency with other portions of the 1996 Act.

191. Our authority to alter the existing low-income assistance programs must be understood in light of our general authority to preserve and advance universal service under section 254. We find that section 254 clarifies the scope of the Commission's universal service responsibilities in several fundamental respects. Most notably, universal service as defined by section 254 is both intrastate and interstate in nature. This feature of universal service is evident, for example, in the case of low-income support programs. Affordability of basic telephone service is necessary to ensure that low-income consumers have access not only to intrastate services but to interstate telecommunications as well.

192. Thus, we agree with the Joint Board that state and federal governments have overlapping obligations to strengthen and advance universal service. We further conclude that section 254 grants us authority to ensure that states satisfy these obligations. That authority is reflected, among other places, in Congress's directive that the Commission ensure that support is "sufficient" to meet universal service obligations. Although states also must ensure that their support mechanisms are "sufficient," they may only do so to the extent that such mechanisms are not "inconsistent with the Commission's rules to preserve and advance universal service."

193. In fulfilling our responsibility to preserve and advance universal service, we find that the 1996 Act clarifies not only the scope of the Commission's authority, but also the specific nature of our obligations. With respect to the Lifeline and Link-Up programs, we observe that the Act evinces a renewed concern for the needs of low-income citizens. Thus, for the first time, Congress expresses the principle that rates should be "affordable," and that access should be provided to "low-income consumers" in all regions of the nation. These principles strengthen and

reinforce the Commission's preexisting interest in ensuring that telecommunications service is available "to all the people of the United States." Under these directives, all consumers, including low-income consumers, are equally entitled to universal service as defined by this Commission under section 254(c)(1).

194. We adopt the recommendation of the Joint Board to reject the view offered by some commenters that section 254(j) prevents the Commission from making any change to the Lifeline program. We find that Congress did not intend to codify the existing Lifeline program so as to immunize it from any future changes or improvements. We therefore conclude that Congress intended section 254(j) to permit the Commission to leave the Lifeline program in place, notwithstanding that the program may conflict with the pro-competitive provisions of the 1996 Act.

195. Moreover, by its own terms, section 254(j) applies only to changes made pursuant to section 254 itself. Our authority to restrict, expand, or otherwise modify the Lifeline program through provisions other than section 254 has been well established over the past decade. In 1985, we created Lifeline under the general authority of sections 1, 4(i), 201, and 205 of the Act. Since then, we have relied on those provisions to modify the program on several occasions. We must assume that Congress was aware of the Commission's authority under Titles I and II to amend Lifeline. Consequently, we agree with the Joint Board that we retain the authority to revise the Lifeline program.

196. We also agree with the Joint Board that we are not barred from relying on the authority of section 254 itself when modifying the Lifeline program. Although section 254(j) provides that nothing in section 254 "shall affect" the Lifeline program, nonetheless, like the Joint Board, we do not believe that section 254(j) can reasonably be read to prevent us from changing Lifeline to bring it into conformity with the principles of section 254. Section 254 clearly gives the Commission independent statutory authority to establish federal mechanisms to provide universal service support to low-income consumers, and section 254(j) in no way can be read to usurp the Commission's authority under section 254 to establish such mechanisms. Were section 254 to be interpreted to prohibit us from revising our rules establishing the Lifeline program, we could, pursuant to section 254, establish new low-income universal service support mechanisms

and then, acting pursuant to sections 1, 4(i), and 201, simply abolish the Lifeline program as duplicative.

197. Section 254(j) indicates that Congress did not intend to require a change to the Lifeline program in adopting the new universal service principles. Presumably, Congress did not want to be viewed as mandating modifications to this worthy and popular program. Congress did not intend, however, to prevent the Commission from making changes to Lifeline that are sensible and clearly in the public interest. Thus, we agree with the Joint Board that it "has the authority to recommend, and the Commission has authority to adopt, changes to the Lifeline program to make it more consistent with Congress's mandates in section 254 if such changes would serve the public interest."

198. In this section, we make changes to the Lifeline program that we believe are necessary, are in the public interest, and advance universal service. We emphasize that, in doing so, we are relying principally upon our preexisting authority under Titles I and II of the Communications Act (particularly sections 1, 4(i), 201, and 205). To the extent that we act on the basis of the principles of section 254(b), however, we rely on the authority of that section as well.

199. We share the Joint Board's concern over the low subscribership levels among low-income consumers and agree that changes in the current Lifeline program are warranted. We are particularly concerned that two factors deter subscribership among low-income consumers. First, several states do not participate in the Lifeline program, and therefore low-income consumers in those regions do not have access to Lifeline. Second, some low-income consumers in states that participate in the Lifeline program receive no assistance because not all carriers in those areas are obligated to offer Lifeline. We find that the unavailability of Lifeline to low-income consumers in these areas runs counter to our duty to "make available, so far as possible, to all the people of the United States * * * a rapid, efficient Nationwide * * * wire and radio communication service." The unavailability of Lifeline to many low-income consumers also conflicts with the statutory principle that access to telecommunications services should be extended to "(c)onsumers in all regions of the Nation, including low-income consumers." For these reasons, we revise the Lifeline program pursuant to our authority under sections 1, 4(i), 201, 205, and 254 to promote access to

telecommunications service for all consumers.

200. Carriers' Obligation to Offer Lifeline

We concur with the Joint Board's conclusion that, to increase subscribership among low-income consumers, we should modify the Lifeline program so that qualifying low-income consumers can receive Lifeline service from all eligible telecommunications carriers. Our determination arises from a concern that, in certain regions of the nation, carriers may not offer Lifeline service unless compelled to do so. In requiring all eligible telecommunications carriers to offer Lifeline service to qualifying low-income consumers, we make Lifeline part of our universal service support mechanisms. We emphasize that in imposing this obligation, we are acting under our general authority in sections 1, 4(i), 201, and 205 of the Act, as well as our authority under section 254.

201. Expanding Lifeline to Every State and Modifying Matching Requirements

We also agree with the Joint Board that the Lifeline program should be amended so that qualifying low-income consumers throughout the nation can receive Lifeline service. Presently, only 44 states (including the District of Columbia and the U.S. Virgin Islands) participate in Lifeline. Because the Lifeline program currently requires states to make a matching reduction in intrastate rates in order to qualify for the SLC waiver, a state's decision not to participate means that federal support will not be available in that state. We agree with the Joint Board that a baseline amount of federal support should be available in all states irrespective of whether the state generates support from the intrastate jurisdiction. We agree with the Joint Board, however, that state participation in Lifeline historically has been an important aspect of the program. As a result, we agree with the Joint Board that matching incentives should not be eliminated entirely. We will provide a baseline federal support amount to qualifying low-income consumers in all states, with a matching component above the baseline level.

202. Lifeline Support Amount

In determining the appropriate amount of support for Lifeline, the Joint Board indicated that it was uncertain whether a federal support amount equal to the level of the SLC (currently a maximum of \$3.50), absent any state support, would be a sufficient baseline

federal support amount. Although the Lifeline program currently provides federal support in the form of a SLC waiver (i.e., up to \$3.50), that support must be matched by equal or greater reductions in intrastate rates. Thus, Lifeline customers currently receive overall reductions in their charges of \$7.00 or more, depending upon state participation. Our revised Lifeline program will be available in all states, irrespective of state participation. Thus, the baseline support must provide a sufficient level of support even in states that generate no support from the intrastate jurisdiction. The Joint Board therefore proposed a baseline amount of \$5.25 in federal support, which is half-way between the current maximum federal support level of \$3.50 and the \$7.00 reduction in charges that a Lifeline customer would receive assuming full state matching. In general, we believe that the record supports adopting the Joint Board's proposal. We conclude that the \$5.25 amount represents a sound compromise and a pragmatic balancing of the goals of extending Lifeline to states that currently do not participate and maintaining incentives for states to provide matching funds.

203. Lifeline consumers will continue to receive the \$3.50 in federal support that is currently available. Further, we will provide for additional federal support in the amount of \$1.75 above the current \$3.50 level. For Lifeline consumers in a given state to receive the additional \$1.75 in federal support, that state need only approve the reduction in the portion of the intrastate rate paid by the end user; no state matching is required. The requirement of state consent before we make available federal Lifeline support in excess of the federal SLC is consistent with our overall deference to the states in areas of traditional state expertise and authority. Because the states need not provide matching funds to receive this amount, but only approve the reduction of \$1.75 in the portion of the intrastate rate that is paid by the end user, we believe that the states will participate in this aspect of the program.

204. We also adopt the Joint Board's recommendation that we "provide for additional federal support equal to one half of any support generated from the intrastate jurisdiction, up to a maximum of \$7.00 in federal support." Thus, if a state provides the minimum amount of matching support to receive the full federal support amount, the total reduction in end user charges would increase from \$7.00 under the current system to \$10.50. We believe that this increase in total support will affect

positively the low subscribership levels among low-income consumers that concerned the Joint Board. As with the \$1.75 in federal support above \$3.50, states will have to approve this reduction in intrastate rates provided by the additional federal support amount.

205. The Joint Board observed that many states currently generate their matching funds through the state rate-regulation process. These states allow incumbent LECs to recover the revenue the carriers lose from charging Lifeline customers less by charging other subscribers more. Florida PSC points out that this method of generating Lifeline support from the intrastate jurisdiction could result in some carriers (i.e., ILECs) bearing an unreasonable share of the program's costs. We see no reason at this time to intrude in the first instance on states' decisions about how to generate intrastate support for Lifeline. We do not currently prescribe the methods states must use to generate intrastate Lifeline support, nor does this Order contain any such prescriptions. Many methods exist, including competitively neutral surcharges on all carriers or the use of general revenues, that would not place the burden on any single group of carriers. We note, however, that states must meet the requirements of section 254(e) in providing equitable and non-discriminatory support for state universal service support mechanisms.

206. We conclude that we must seek further guidance from the Joint Board on how to ensure the integrity of the Lifeline program in light of changes we make today to our access charge rules. In the *Access Charge Reform Order*, as part of our effort to implement the Joint Board's suggestion that the current per-minute CCL charge be modified to reflect the non-traffic sensitive nature of loop costs, we implement a flat charge per primary residential line that is to be assessed against the PIC. If the customer does not select a PIC, however, the presubscribed interexchange carrier charge (PICC) will be assessed against the end user.

207. We wish to ensure that these changes to our Part 69 rules, which were not contemplated when the Joint Board made its recommendations, will not have an adverse impact on Lifeline customers. Specifically, we are concerned that the PICC may be assessed against Lifeline customers who elect to receive toll blocking (for which federal support will now be provided) because they will have no PIC associated with their lines. Accordingly, we seek further guidance from the Joint Board on how to maintain the integrity of the Lifeline program and ensure

competitive neutrality in light of these changes to our part 69 rules.

208. Making Lifeline Competitively Neutral

In this Order, we endorse the Joint Board's recommendation that we adopt the principle of "competitive neutrality" and conclude that universal service support mechanisms and rules should not unfairly advantage one provider, nor favor one technology. Consistent with this principle, we agree that the funding mechanisms for Lifeline should be made more competitively neutral. We find no statutory justification for continuing to fund the federal Lifeline program through charges levied only on some IXCs. As required by section 254, all carriers that provide interstate telecommunications service now will contribute on an equitable and nondiscriminatory basis.

209. In addition, we concur with the Joint Board's recommendation that all eligible telecommunications carriers, not just ILECs, should be able to receive support for serving qualifying low-income consumers. Currently, only ILECs, which charge SLCs and waive such charges for low-income consumers, can receive support under most circumstances. We find, however, that eligible telecommunications carriers other than ILECs also should have the opportunity to compete to offer Lifeline service to low-income consumers and in turn receive support in a manner similar to the current program. Support will be provided directly to carriers under administrative procedures determined by the universal service administrator in direct consultation with the Commission.

210. We acknowledge that the distribution of support to non-ILEC carriers cannot be achieved simply by waiving the SLC. Carriers other than ILECs do not participate in the formal separations process that our rules mandate for ILECs and hence do not charge SLCs nor distinguish between the interstate and intrastate portion of their charges and costs. With respect to these carriers, we conclude that Lifeline support must be passed through directly to the consumer in the form of a reduction in the total amount due. Indeed, sections 254(e) and (k) require eligible telecommunications carriers to pass through Lifeline support directly to consumers. Furthermore, we do not believe that requiring carriers to pass through the support amount conflicts with our desire to establish mechanisms that are respectful of traditional state authority. Rather, we note that a portion of every carrier's charge can be

attributed to the interstate jurisdiction, whether or not the carrier formally participates in the separations procedure.

211. The interstate portion of ILECs' rates to recover loop costs is, almost without exception, greater than the amount of the SLC cap for residential subscribers; we are therefore confident that this amount is a reasonable proxy for the interstate portion of other eligible telecommunications carriers' costs. Thus, we conclude that we may require an amount equal to the SLC cap for primary residential and single-line business connections to be deducted from carriers' end-user charges without infringing on state ratemaking authority. Furthermore, we find that providing the same amount of Lifeline support to all eligible telecommunications carriers, including those that do not charge SLCs, advances competitive neutrality. In sum, we conclude that breaking the link between Lifeline and the Commission's part 69 rules will promote competitive neutrality by allowing eligible carriers that are not required to charge SLCs, such as CLECs and wireless providers, to receive federal support for providing Lifeline.

212. The precise mechanisms for distributing and collecting Lifeline funds will be determined by the universal service administrator in direct consultation with the Commission. In general, however, any carrier seeking to receive Lifeline support will be required to demonstrate to the public utility commission of the state in which it operates that it offers Lifeline service in compliance with the rules we adopt today. These rules require that carriers offer qualified low-income consumers the services that must be included within Lifeline service, as discussed more fully below, including toll-limitation service. ILECs providing Lifeline service will be required to waive Lifeline customers' federal SLCs and, conditioned on state approval, to pass through to Lifeline consumers an additional \$1.75 in federal support. ILECs will then receive a corresponding amount of support from the new support mechanisms. Other eligible telecommunications carriers will receive, for each qualifying low-income consumer served, support equal to the federal SLC cap for primary residential and single-line business connections, plus \$1.75 in additional federal support conditioned on state approval. The federal support amount must be passed through to the consumer in its entirety. In addition, all carriers providing Lifeline service will be reimbursed from the new universal service support mechanisms for their incremental cost

of providing toll-limitation services to Lifeline customers who elect to receive them. The remaining services included in Lifeline must be provided to qualifying low-income consumers at the carrier's lowest tariffed (or otherwise generally available) rate for those services, or at the state's mandated Lifeline rate, if the state mandates such a rate for low-income consumers.

213. We believe that we have the authority under sections 1, 4(i), 201, 205, and 254 to extend Lifeline to include carriers other than eligible telecommunications carriers. We agree with the Joint Board, however, and decline to do so at the present time. Elsewhere in this Order, we express our intention to incorporate Lifeline into our broader universal service mechanisms adopted in this proceeding. We believe that a single support mechanism with a single administrator following similar rules will have significant advantages in terms of administrative convenience and efficiency. Furthermore, in deciding which carriers may participate in Lifeline, we note that section 254(e) allows universal service support to be provided only to carriers deemed eligible pursuant to section 214(e).

214. We further observe that a large class of carriers that will not be eligible to receive universal service support—those providing service purely by reselling another carrier's services purchased on a wholesale basis pursuant to section 251(c)(4)—will nevertheless be able to offer Lifeline service. The *Local Competition Order* provides that all retail services, including below-cost and residential services, are subject to wholesale rate obligations under section 251(c)(4). Resellers therefore could obtain Lifeline service at wholesale rates that include the Lifeline support amounts and can pass these discounts through to qualifying low-income consumers. We are hopeful that states will take the steps required to ensure that low-income consumers can receive Lifeline service from resellers. Further, we find that we can rely on the states to ensure that at least one eligible telecommunications carrier is certified in all areas. As a result, low-income consumers always will have access to a Lifeline program from at least one carrier. We will reassess this approach in the future if it appears that the revised Lifeline program is not being made available to low-income consumers nationwide.

215. *Consumer Qualifications for Lifeline.*

We agree with the Joint Board that the Commission should maintain this basic framework for administering Lifeline qualification in states that provide intrastate support for the Lifeline program. State agencies or telephone companies currently determine consumer qualifications for Lifeline pursuant to standards set by narrowly targeted programs approved by the Commission. We believe such criteria leave states sufficient flexibility to target support based on that state's particular needs and circumstances. We also concur with the recommendation that the Commission require states that provide intrastate matching funds to base eligibility criteria solely on income or factors directly related to income (such as participation in a low-income assistance program). Currently, some states only make Lifeline assistance available to low-income individuals who, for example, are elderly or have disabilities. We agree that the goal of increasing low-income subscribership will best be met if the qualifications to receive Lifeline assistance are based solely on income or factors directly related to income.

216. We also adopt the Joint Board's recommendation that the Commission apply a specific means-tested eligibility standard, such as participation in a low-income assistance program, in states that choose not to provide matching support from the intrastate jurisdiction. Specifically, we find that the default Lifeline eligibility standard in non-participating states will be participation in Medicaid, food stamps, Supplementary Security Income (SSI), federal public housing assistance or section 8, or Low Income Home Energy Assistance Program (LIHEAP). We find that, in the interest of administrative ease and avoiding fraud, waste, and abuse, the named subscriber to the local telecommunications service must participate in one of these assistance programs to qualify for Lifeline. We specifically decline to base eligibility solely on a program, such as Aid to Families with Dependent Children (AFDC), that will be altered significantly by the recently-enacted welfare reform law. Because we agree that individuals who are eligible for assistance from low-income assistance programs also should be eligible for Lifeline, participation in at least one of the programs mentioned above shall be the federal eligibility standard applied in states that do not participate in Lifeline. We conclude that basing Lifeline eligibility on participation in any of these low-income

assistance programs will achieve our goal of wide Lifeline participation by low-income consumers, because the eligibility criteria for several of these programs vary. Therefore, basing Lifeline eligibility on participation in any of these programs will reach more low-income consumers than basing Lifeline eligibility solely on one of the programs. We further conclude that if participation in Medicaid, food stamps, SSI, public housing assistance or section 8, or LIHEAP becomes an unworkable standard, as evidenced, for instance, by a disproportionately low number of Lifeline consumers in states where such a standard is used, the Commission shall revise the standard.

217. We clarify that the Joint Board's recommendation, which we adopt, requires states to base eligibility on income or factors directly related to income and merely suggests using participation in a low-income assistance program as the criterion. Thus, states may choose their eligibility criteria as long as those criteria measure income or factors directly related to income. We have no reason to conclude, at this time, that states will not take the required steps to reconcile Lifeline qualification with changes in welfare laws. We have tied the default Lifeline qualification standards (which will apply in states that do not provide intrastate funds) to programs that commenters believe to be unaffected or minimally affected by the new welfare legislation. We will, however, continue to monitor the situation and may make further changes in the future if it appears that changes to other programs unduly limit Lifeline eligibility.

218. We agree that states providing matching intrastate Lifeline support should continue to have the discretion to determine the appropriateness of verification of Lifeline customers' qualification for the program. Because these states are generating support from the intrastate jurisdiction, they have an incentive to control fraud, waste, and abuse of the support mechanism. Because states that are generating matching intrastate support have a strong interest in controlling the size of the support mechanism, we do not find at this time that imposing stricter federal verification requirements is necessary to ensure that the size of the support mechanisms remains at reasonable levels. We will revisit this conclusion, however, to ensure the sustainability and predictability of the sizing of the support mechanisms. In light of these conclusions, we find it no longer necessary to reduce the level of Lifeline support in states that choose

not to require that consumer qualification be verified.

219. With respect to verification in states in which the federal default qualification criteria apply, we will require carriers to obtain customers' signatures on a document certifying under penalty of perjury that the customer is receiving benefits from one of the programs included in the default standard, identifying the program or programs from which the customer receives benefits, and agreeing to notify the carrier if the customer ceases to participate in such program or programs.

220. *Link Up*

We agree with the Joint Board that the Link Up funding mechanisms should be removed from the jurisdictional separations rules and that the program should be funded through equitable and non-discriminatory contributions from all interstate telecommunications carriers. Funding the program through contributions from all interstate carriers will allow for explicit and competitively neutral support mechanisms.

221. We also adopt the Joint Board's recommendation that we amend our Link Up program so that any eligible telecommunications carrier may draw support from the new Link Up support mechanism if that carrier offers to qualifying low-income consumers a reduction of its service connection charges equal to one half of the carrier's customary connection charge or \$30.00, whichever is less. Support shall be available only for the primary residential connection. When the carrier offers eligible customers a deferred payment plan for connection charges, we agree with the Joint Board that we should preserve the current rule providing support to reimburse carriers for waiving interest on the deferred charges. In the absence of evidence that increasing the level of Link Up support for connecting each eligible customer would significantly promote universal service goals, we will maintain the present level of support for Link Up, as the Joint Board recommended. To ensure that the opportunity for carrier participation is competitively neutral, we adopt the Joint Board's recommendation to eliminate the requirement that the commencement-of-service charges eligible for support be filed in a state tariff.

222. For the sake of administrative simplicity, we revise our rules to require that the same qualification requirements that apply to Lifeline in each state, including its verification standards, also shall apply to Link Up in that state. This step will advance administrative

simplicity while states assess their approaches to universal service and while we seek further recommendations from the Joint Board. We further observe that this rule will change nothing in the majority of states, which already use the same eligibility criteria for both programs. This change, however, will base states' ability to set Link Up eligibility criteria on whether they participate in Lifeline. Accordingly, we eliminate the requirement that states verify Link Up customers' qualifications for the program and instead rely on the states to determine whether the costs of verification outweigh the potential for fraud, waste, and abuse. Because only those states generating intrastate Lifeline support will make this determination, they will have an independent incentive to control fraud, waste, and abuse. In states that do not participate in Lifeline, the federal default Lifeline qualifications also will apply to Link Up.

223. We also adopt the Joint Board's recommendation that states shall be prohibited from restricting the number of service connections per year for which low-income consumers who relocate can receive Link Up support. Commenters observe that this rule is vital for migrant farmworkers and low-income individuals who have difficulty maintaining a permanent residence, and we agree that this rule will help ensure that consumers in all regions of the nation have access to affordable telecommunications services and that rates for such services are reasonable.

224. Services for Low-Income Consumers

We agree with the Joint Board that we should ensure, through universal service support mechanisms, that low-income consumers have access to certain services. The current Lifeline program does not require that low-income consumers receive a particular level of telecommunications services. Thus, we amend the Lifeline program to provide that Lifeline service must include the following services: Single-party service; voice grade access to the public switched telephone network; DTMF or its functional digital equivalent; access to emergency services; access to operator services; access to interexchange service; access to directory assistance; and toll-limitation services. In determining the specific services to be provided to low-income consumers, we adopt the Joint Board's reasoning that section 254(b)(3) calls for access to services for "[c]onsumers in all regions of the Nation, including low-income consumers" and that universal service

principles may not be realized if low-income support is provided for service inferior to those supported for other subscribers. All these services, with the exception of toll limitation, also will be supported by universal service support mechanisms for rural, insular, and high cost areas, and we therefore find that low-income consumers should receive support for these services.

225. We further agree with the Joint Board's recommendation that Lifeline consumers also should receive, without charge, toll-limitation services. Studies demonstrate that a primary reason subscribers lose access to telecommunications services is failure to pay long distance bills. Because voluntary toll blocking allows customers to block toll calls, and toll control allows customers to limit in advance their toll usage per month or billing cycle, these services assist customers in avoiding involuntary termination of their access to telecommunications services. The Joint Board concluded, however, that low-income consumers may not be able to afford voluntary toll-limitation services in a number of jurisdictions. Therefore, we are confident that providing voluntary toll limitation without charge to low-income consumers, should encourage subscribership among low-income consumers. Furthermore, we find that toll-limitation services are "essential to education, public health or public safety" and "consistent with the public interest, convenience, and necessity" for low-income consumers in that they maximize the opportunity of those consumers to remain connected to the telecommunications network.

226. We also adopt the Joint Board's recommendation that carriers providing voluntary toll limitation should be compensated from universal service support mechanisms for the incremental cost of providing toll-limitation services. We find that recovery of the incremental costs of toll-limitation services is adequate cost recovery that does not place an unreasonable burden on the support mechanisms. By definition, incremental costs include the costs that carriers otherwise would not incur if they did not provide toll-limitation service to a given customer, and carriers will be compensated for their costs in providing such service. Because low-income consumers may otherwise be unlikely to purchase toll-limitation services, we do not find it is necessary to support the full retail charge for toll-limitation services the carrier would charge other consumers. We therefore also conclude that universal service support should not contribute to the service's joint and

common costs. We require that Lifeline subscribers receive toll-limitation services without charge.

227. We emphasize that Lifeline consumers' acceptance of toll blocking is voluntary, and that Lifeline consumers are free to select toll control, which limits rather than prevents consumers' ability to place toll calls from carriers providing such a service. Both toll blocking and toll control are forms of toll-limitation service that would be supported by federal universal service mechanisms.

228. We will authorize state commissions to grant carriers that are technically incapable of providing toll-limitation services a period of time during which they may receive universal service support for serving Lifeline consumers while they complete upgrading their switches so that they can offer such services. The Joint Board observed that most carriers currently are capable of providing toll-blocking service, and some carriers are capable of providing toll control. Eligible telecommunications carriers with deployed switches that are incapable of providing toll-limitation services, however, shall not be required to provide such services to customers served by those switches until those switches are upgraded. We adopt the Joint Board's recommendation, however, that, when they make any switch upgrades, eligible telecommunications carriers currently incapable of providing toll-limitation services must add the capability to their switches to provide at least toll blocking in any switch upgrades (but Lifeline support in excess of the incremental cost of providing toll blocking shall not be provided for such switch upgrades). This is not an exception to eligible telecommunications carriers' general obligation to provide toll-limitation services; rather, it is a transitional mechanism to allow eligible telecommunications carriers a reasonable time in which to replace existing equipment that technically prevents the provision of the service.

229. We concur with the Joint Board that support should not be provided for toll-limitation services for consumers other than low-income consumers. Subscribership levels fall well below the national average only among low-income consumers, and, as the Joint Board observed, a principal reason for this disparity appears to be service termination due to failure to pay toll charges. Therefore, to the extent carriers are capable of providing them, toll-limitation services should be supported only for low-income consumers at this time.

230. No Disconnection of Local Service for Non-Payment of Toll Charges

We also adopt the Joint Board's recommendation that we should prohibit eligible telecommunications carriers from disconnecting Lifeline service for non-payment of toll charges. Studies suggest that disconnection for non-payment of toll charges is a significant cause of low subscribership rates among low-income consumers. Furthermore, the no-disconnect rule advances the principles of section 254 that "quality services should be available at just, reasonable, and affordable rates" and that access to telecommunications services should be provided to "consumers in all regions of the nation, including low-income consumers." We therefore believe that such a rule is within the ambit of our authority in section 254. We further find, consistent with these principles, that an eligible telecommunications carrier may not deny a Lifeline consumer's request for re-establishment of local service on the basis that the consumer was previously disconnected for non-payment of toll charges.

231. We also find that our adoption of a no-disconnect rule will make the market for billing and collection of toll charges more competitively neutral. Currently, the ILEC is the only toll charge collection agent that can offer the penalty of disconnecting a customer's local telephone service for non-payment of other charges. ILECs have maintained this special prerogative, although the interstate long distance market and the local exchange markets legally have been separated for over a decade, and interstate billing and collection activities have been deregulated since 1986. Because the practice of disconnecting local service for non-payment of toll charges essentially is a vestige of the monopoly era, we find our rule prohibiting that practice will further advance the pro-competitive, deregulatory goals of the 1996 Act.

232. We agree with several commenters and limit the federal rule to Lifeline subscribers at this time, because only low-income consumers experience dramatically lower subscribership levels that can be attributed to toll charges. If we subsequently find that subscribership levels among non-Lifeline subscribers begin to decrease, we will consider whether this rule should apply to all consumers. In the interest of comity, however, we leave to the states' discretion whether such a rule should apply to other consumers at this time.

233. We further conclude that carriers offering Lifeline service must apply

partial payments received from Lifeline consumers first to local service charges and then to toll charges, in keeping with our goal of maintaining low-income consumers' access to local telecommunications services. We find that this rule furthers the principle in section 254 that access to telecommunications services should be provided to "consumers in all regions of the nation, including low-income consumers" and is within our authority in section 1 to make communications services available to as many people as possible. Whether a Lifeline consumer's long distance and local service providers are the same or different entities shall not affect the application of this rule. While a carrier providing both local and long distance service to the same consumer must be able to distinguish between the services' respective charges to comply with our rule, we find that any administrative burden this initially may cause is outweighed by the benefit of maintaining Lifeline consumers' access to local telecommunications services.

234. We also do not condition the rule prohibiting disconnection of local service for non-payment of toll charges on the consumer's agreement to accept toll-limitation services. Proponents of this condition essentially argue that without this condition carriers will experience higher levels of uncollectible toll expenses. We are not convinced that toll limitation is necessary, however, because toll-service providers already have available the functional equivalent of toll limitation. That is, we observe that our rule prohibiting disconnection of Lifeline service will not prevent toll-service providers from discontinuing toll service to customers, including Lifeline customers, who fail to pay their bills. Although this may have been impossible with the switching technology used in the past, it is achievable now. In virtually all cases, IXCs receive calling party information with each call routed to them and could refuse to complete calls from subscriber connections with arrearages.

235. Despite the benefits of a no-disconnect rule for Lifeline consumers, we agree with the Joint Board that state utilities regulators should have the ability, in the first instance, to grant carriers a limited waiver of the requirement under limited, special circumstances. Accordingly, we adopt the Joint Board's recommendation that carriers may file waiver requests with their state commissions. To obtain a waiver, the carrier must make a three-pronged showing. First, the carrier must show that it would incur substantial costs in complying with such a

requirement. Such costs could relate to burdens associated with technical or administrative issues, for example. For example, some carriers providing both local and long distance service to the same consumer may find it particularly burdensome to distinguish between local and long distance charges. Second, the carrier must demonstrate that it offers toll-limitation services to its Lifeline subscribers. We find that, if a carrier is permitted by its state commission to disconnect local service for non-payment of toll bills, its Lifeline consumers should at least be able to control their toll bills through toll limitation. Third, the carrier must show that telephone subscribership among low-income consumers in its service area in the state from which it seeks the waiver, is at least as high as the national subscribership level for low-income consumers. Carriers must make this showing because, we conclude, applying a no-disconnect policy to carriers serving areas with subscribership levels below the national average will help to improve such particularly low subscribership levels. This waiver standard is therefore extremely limited, and a carrier must meet a heavy burden to obtain a waiver. Furthermore, such waivers should be for no more than two years, but they may be renewed. If a party believes that a state commission has made an incorrect decision regarding a waiver request, or if a state commission does not make a decision regarding a waiver request within 30 days of its submission, such party may file an appeal with the Commission. The party must file the appeal with the Commission within 30 days of either the state commission's decision or the date on which the state commission should have rendered its decision. Furthermore, a state commission choosing not to act on waiver requests promptly should refer any such requests to the Commission. We agree with the Joint Board that carriers must offer Lifeline customers toll limitation without charge and without time restrictions in order to meet the second prong of the waiver requirement.

236. Prohibition on Service Deposits

Pursuant to the Joint Board's recommendation and many commenters' urging, we adopt a rule prohibiting eligible telecommunications carriers from requiring a Lifeline subscriber to pay service deposits in order to initiate service if the subscriber voluntarily elects to receive toll blocking. We find that eliminating service deposits for Lifeline customers upon their acceptance of toll blocking is

consistent with section 254(b) and within our general authority under sections 1, 4(i), 201, and 205 of the Act. Section 201 of the Act gives the Commission authority to regulate common carriers' rates and service offerings, and section 1 directs that the Commission's regulations provide as many people as possible with the ability to obtain telecommunications services at reasonable rates. We find that, because carriers' high service deposits deter subscribership among low-income consumers, it is within our authority to prohibit carriers from charging service deposits for Lifeline consumers who accept toll blocking. Research suggests that carriers often require customers to pay high service deposits in order to initiate service, particularly when customers have had their service disconnected previously. Therefore, we prohibit eligible telecommunications carriers from requiring Lifeline service subscribers to pay service deposits in order to initiate service if the subscriber voluntarily chooses to receive toll blocking. As we have stated, universal service support shall be provided so that toll blocking is made available to all Lifeline consumers at no additional charge. During the period of time when carriers incapable of providing toll-limitation services are permitted to upgrade their switches to become capable of providing such services, however, Lifeline subscribers may be required to pay service deposits.

237. Carriers may protect themselves against consumers' failure to pay local charges by requesting advance payments in the amount of one month's charges, as most ILECs currently do. We would consider an advance-payment requirement exceeding one month to be an improper deposit requirement, however. That is, while carriers could charge one month's advance payment, they may take action against consumers only after such charges have been incurred (through disconnection or collection efforts, for example). Assessing charges on consumers before any overdue payments are owed could make access to telecommunications services prohibitively expensive for low-income consumers.

238. Other Services

In response to the NPRM, some commenters suggest that low-income consumers should receive free access to information about telephone service and that compensation for providing such information should come from support mechanisms. These commenters appear to be concerned that low-income consumers will be unable to place calls to gain telephone service information if

the calls otherwise would be an in-region toll call, or if the state's Lifeline program allows only a limited number of free calls. Similarly, NAD suggests that universal service support mechanisms should provide support so that TTY users can make free relay calls to numbers providing LEC service information. We agree with the Joint Board's recommendation that the states are able to determine, pursuant to section 254(f), whether to require carriers to provide Lifeline customers with free access to information about telephone service. The states are most familiar with the number of consumers in their respective states affected by charges for these calls and may impose such a requirement on carriers pursuant to section 254(f) through state universal service support mechanisms. Additionally, we find that the record on free access to telephone service information does not adequately explain how to support access to such information in a competitively neutral way, so that consumers are assured access to such information from all eligible service providers. We agree with the Joint Board that the same concerns militate against providing federal support for low-income consumers with disabilities making relay calls to gain access to LEC service information.

239. We concur with the Joint Board that, given the present structure of residential interexchange rates, the record does not support providing universal service support for usage of interexchange and advanced services for low-income consumers. We will, however, continue to monitor the interexchange services market to determine whether additional measures are necessary for low-income consumers. We observe that Lifeline services will be provided by telecommunications carriers that have been certified as eligible for universal service support pursuant to section 214(e). Such carriers will be obligated to provide certain services, including access to interexchange service, to consumers in rural, insular, and high cost areas, and we decline to specify a different level of service for low-income consumers.

240. Some commenters disagree with the Joint Board's recommendation that issues relating to special-needs equipment for consumers with disabilities should not be addressed in this proceeding because Congress provided for disabled individuals' access to telecommunications services separately in section 255. We agree with the Joint Board, however, that these matters are best addressed in a proceeding to implement section 255.

We observe that we have taken a first step toward the implementation of section 255 with the release of a *Notice of Inquiry* on September 19, 1996 and January 14, 1997. Congress specifically identified other categories of users for whom support should be provided pursuant to section 254, such as low-income consumers, consumers in rural, insular, and high cost areas, schools and libraries, and rural health care providers. Similarly, Congress clearly addressed access by disabled individuals in section 255.

241. We generally agree with commenters that argue that low-income subscribership levels might increase if there were more information available to low-income consumers about the existence of assistance programs. We agree with the Joint Board, however, that the states are in a better position than the Commission to supply such information, particularly given the flexibility states have to target low-income universal service programs to the particular needs of their residents. Furthermore, while we conclude that support from federal universal service support mechanisms will not be given to carriers distributing such information, we note that eligible telecommunications carriers will be required to advertise the availability of, and charges for, Lifeline pursuant to their obligations under section 214(e)(1).

242. Implementation of Revised Lifeline and Link Up Programs

Although we find that the changes to Lifeline and Link Up we now adopt will make both programs consistent with the Act and our objective of increasing subscribership among low-income consumers, we find that the public interest would not be served by disrupting the existing Lifeline and Link Up services that ILECs currently offer in most areas of the country. We therefore must select a date on which the current Lifeline and Link Up programs will terminate and the new programs begin.

243. Because the new universal service support mechanisms must be in place in order to fund the revised Lifeline and Link Up programs, we conclude that the new Lifeline and Link Up funding mechanisms will commence on January 1, 1998. Additionally, support for toll limitation for Lifeline subscribers shall begin at that same time, because support for this service also should come from the new support mechanisms.

Issues Unique to Insular

244. In the Recommended Decision, the Joint Board recognized the special circumstances faced by carriers and

consumers in the insular areas of the United States, particularly the Pacific Island territories. The Joint Board recommended that all of the universal service mechanisms adopted in this proceeding should be available in those areas. Thus, low-income residents living in insular areas, such as American Samoa and the U.S. Virgin Islands, would benefit from the Lifeline and Link-up programs, and schools, libraries, and rural health care providers in insular areas would benefit from the programs the Joint Board recommended for providing services to those institutions pursuant to section 254(h). Likewise, carriers in insular areas would be potentially eligible for universal service support if they serve high cost areas. We agree and adopt these recommendations of the Joint Board and conclude, in accordance with section 254, that insular areas shall be eligible for the universal service programs adopted in this Order.

245. The Joint Board also recommended that the Commission work with an affected state if subscribership levels in that state fall from the current levels on a statewide basis. The record indicates that subscribership levels in insular areas are particularly low. Accordingly, we will issue a Public Notice to solicit further comment on the factors that contribute to the low subscribership levels that currently exist in insular areas, and to examine ways to improve subscribership in these areas.

246. Regarding support for toll-free access and access to information services in insular areas, the Joint Board recommended that the Commission take no specific action at this time, but revisit this issue at a later date. The Joint Board's recommendation reflects the fact that Guam and CNMI will be included in the NANP by July 1, 1997, and that the Commission will require interstate carriers serving the Pacific Island territories to integrate their rates with the rates for services that they provide to other states no later than August 1, 1997. The Joint Board noted that those changes will affect decisions by the carriers' business customers and information service providers on whether to locate in a certain area or to provide toll-free access to that area.

247. We agree with the Joint Board's recommendation that we take no action regarding support for toll-free access and access to information services for the Pacific Island territories now, but revisit whether we should provide such support after those islands are included in NANP and interexchange carriers have integrated the islands into their rate structures. We agree with the Joint

Board that it is too early to assess whether there should be universal service support for toll-free access and information services in the Pacific Island territories or whether a decision not to provide support for these services would violate either section 202 or section 254(b)(3).

248. We anticipate that, when final rate-integration plans are filed, on or before June 1, 1997, the Pacific Island territories will be included in the nationwide service offerings of toll-free access service providers. Because they will be part of the NANP by the time that the rate integration plans become effective in August, these islands should be included in any nationwide service offering made after that time. Subscribers to toll-free access service will, of course, continue to be able to offer their customers toll-free access to the subscribers' businesses on less than a nationwide basis, such as in regional or statewide toll-free service areas. Thus we do not find it necessary to adopt a specific requirement that carriers providing toll-free access service include the Pacific Island territories in their "nation-wide" service area, as suggested by the Governor of Guam.

249. We agree with the commenters that there should be some period in which residents of CNMI and Guam can continue to have access to toll-free numbers while the market adjusts to the inclusion of those islands in the NANP and rate integration. We note that under the industry plan for introducing the new numbering plan areas (NPAs) for CNMI and Guam there is a twelve-month "permissive dialing" period during which callers may use either the NANP numbers or continue to use the international numbering plan to place calls to and from the islands. We find it in the public interest to permit the continued use of 880 and 881 numbers by end users in the Pacific Island territories to place toll-free calls during that "permissive dialing" period—until July 1, 1998. We believe that such a period provides ample time for toll-free access customers to evaluate the costs and benefits of including the Pacific Island territories in their toll-free access service areas and to decide whether to include the islands in their area covered by the toll-free dialing service agreements with their service providers. We also note that the islands will be included in the NANP a month before the rate-integration plans must become effective. Without this transition period, there would be a month during which consumers could not use 880 or 881 numbers and during which toll-free access customers might not have the benefit of integrated rates to the islands.

250. Toll-free service is currently provided in CNMI and Guam as inbound foreign-billed service. This service allows a calling party who is in another NANP country to pay for a call from his or her location to the United States, where the call is linked to the toll-free service. For customers in CNMI and Guam, it means that they pay the portion of the 880/881 call from their location to Hawaii, where it is linked to the toll-free service.

251. According to a resolution of the Industry Numbering Committee (INC), however, the use of 880 and 881 numbers for inbound foreign-billed 800-type service was to be restricted to calls placed from foreign locations within the NANP to toll-free dialing numbers in the United States. Thus, consumers in CNMI and Guam would be unable to make 880/881 calls once those territories are included in the NANP. We find that the circumstances in these territories warrant exercise of our regulatory powers over numbering pursuant to section 251(e) of the Act to supersede this industry agreement by providing for the transition period described above that will allow end users in CNMI and Guam the continued use of 880/881 numbers to place toll-free calls. This action is related to the implementation of the 1996 Act, and is extremely limited in scope—applying only to 880 and 881 calls from CNMI and Guam and only until July 1, 1998, which will coincide with the permissive dialing period established by the Administrator of the NANP. We also note that none of the parties that filed comments in this proceeding have objected to the proposal made by the Governor of Guam and CNMI to continue the use of the 880/881 numbers from CNMI and Guam during this period. We also find that this action is in keeping with the Joint Board's intent that we allow the telecommunications markets in CNMI and Guam time to adjust to the inclusion of the islands in the NANP before we revisit whether to provide universal service support for toll-free access services from those areas.

252. We also find that the use of 880 and 881 numbers for a limited transition period does not violate section 228 of our rules regarding pay-per-call services. Calls using 880 and 881 do not fall within the definition of "pay-per-call" because they are not accessed through a 900 number, and the calling party is only charged for the transmission, or part of the transmission, of the call. Although the 880 or 881 number provides a link to a toll-free number, it is not a toll-free number itself. Those numbers are not

advertised as toll-free numbers and it is understood, particularly by consumers in the Pacific Island territories who have been using the numbers over the past few years, that there is a charge associated with the use of the numbers. Therefore, we conclude that the use of an 880 or 881 number does not violate the restrictions on the use of toll-free numbers in section 228 or our rules.

253. We thus agree with CNMI that there is no legal restriction on using 880 and 881 numbers for calls from CNMI and Guam to toll-free access numbers within the NANP. Indeed, because we find the temporary use of those numbers for access to toll-free services in the Pacific Island territories to be in the public interest, at least for a short period, we shall permit carriers originating calls from the Pacific Island territories to toll-free access services within the NANP to continue using 880 and 881 numbers to provide access to those services until July 1, 1998. Consumers on those islands should thus be able to continue to use 880/881 to access toll-free numbers during that period. We anticipate that by July 1, 1998, the businesses subscribing to toll-free access services will have made a business decision as to whether to include the Pacific Island territories in their toll-free access service plans. As recommended by the Joint Board, we will then revisit the issue of whether universal service support is needed for toll-free access and access to information services from the Pacific Island territories.

Schools and Libraries

254. Telecommunications Services

We adopt the Joint Board's recommendation to provide schools and libraries with the maximum flexibility to purchase from telecommunications carriers whatever package of commercially available telecommunications services they believe will meet their telecommunications service needs most effectively and efficiently.

255. The establishment of a single set of priorities for all schools and libraries would substitute our judgment for that of individual school administrators throughout the nation, preventing some schools and libraries from using the services that they find to be the most efficient and effective means for providing the educational applications they seek to secure. Given the varying needs and preferences of different schools and libraries and the relative advantages and disadvantages of different technologies, we agree that individual schools and libraries are in

the best position to evaluate the relative costs and benefits of different services and technologies. We also agree that our actions should not disadvantage schools and libraries in states that have already aggressively invested in telecommunications technologies in their state schools and libraries. Because we will require schools and libraries to pay a portion of the costs of the services they select, we agree with the Joint Board that allowing schools and libraries to choose the services for which they will receive discounts is most likely to maximize the value to them of universal service support and to minimize inefficient uses of services.

256. Permitting schools and libraries full flexibility to choose among telecommunications services also eliminates the potential risk that new technologies will remain unavailable to schools and libraries until the Commission has completed a subsequent proceeding to review evolving technological needs. Thus, in an environment of rapidly changing and improving technologies, empowering schools and libraries, regardless of wealth and location, to choose the telecommunications services they will use as tools for educating their students will enable them to use and teach students to use state-of-the-art telecommunications technologies as those technologies become available.

257. We limit section 254(c)(3) telecommunications services to those that are commercially available, and we find no reason to interpret section 254(c)(3) to require us to adopt a more narrow definition of eligible services. We observe that a state preferring a program that targets a narrower or broader set of services may make state funds available to schools or libraries that purchase those services.

258. Eligible Services

We also follow the Joint Board's recommendation that schools and libraries receive rate discounts from telecommunications carriers for basic "conduit" access to the Internet. We conclude that sections 254(c)(3) and 254(h)(1), in the context of the broad policies set forth in section 254(h)(2), authorize us to permit schools and libraries to receive the telecommunications and information services provided by telecommunications carriers needed to use the Internet at discounted rates.

259. We observe that section 254(c)(3) grants us authority to "designate additional services for support" and section 254(h)(1)(B) authorizes us to fund any section 254(c)(3) services. The generic universal service definition in

section 254(c)(1) and the rate provision regarding special services for rural health care providers in section 254(h)(1)(A) are both explicitly limited to telecommunications services. In the education context, however, the statutory references are to the broad class of "services," rather than the narrower class of "telecommunications services." Specifically, section 254(c)(3) refers to "additional services," while section 254(h)(1)(B) refers to "any of its services"; neither provision refers to the narrower class of telecommunications services. In addition, sections 254(a)(1) and (a)(2) mandate that the Commission define the "services that are supported by Federal universal service support mechanisms" but does not limit support to telecommunications services. The use of the broader term "services" in section 254(a) provides further validation for the inclusion of services in addition to telecommunications services in sections 254(c)(3) and 254(h)(1)(B).

260. We reject BellSouth's argument that the fact that section 254(h) is entitled "Telecommunications Services for Certain Providers" leads to the conclusion that the only services covered by that section are telecommunications services. To the contrary, within section 254(h) Congress specified which services must be "telecommunications services" in order to be eligible for support. As noted above, the rate provision regarding special services for rural health care providers, section 254(h)(1)(A), is explicitly limited to "telecommunications services." Thus, the term used in section 254(h)(1)(B), "any of its services that are within the definition of universal service under section (c)(3)," cannot be read as a generic reference to the heading of that section. Rather, the varying use of the terms "telecommunications services" and "services" in sections 254(h)(1)(A) and 254(h)(1)(B) suggests that the terms were used consciously to signify different meanings. In addition, the mandate in section 254(h)(2)(A) to enhance access to "advanced telecommunications and information services," particularly when read in conjunction with the legislative history as discussed below, suggests that Congress did not intend to limit the support provided under section 254(h) to telecommunications services. We conclude, therefore, that we can include the "information services," e.g., protocol conversion and information storage, that are needed to access the Internet, as well as internal connections, as "additional services" that section

254(h)(1)(B), through section 254(c)(3), authorizes us to support.

261. In this regard, section 254(h)(2)(A), which directs the Commission to establish competitively neutral rules to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services, informs our interpretation of sections 254(c)(3) and 254(h)(1)(B) as allowing schools and libraries to receive discounts on rates from telecommunications carriers for Internet access. Given the directive of section 254(h)(2)(A) that the Commission enhance the access that schools and libraries have to "information services," as described in the legislative history, i.e., actual educational content, we conclude that there should be discounts for access to these services provided by telecommunications carriers under the broad provisions of sections 254(c)(3) and 254(h)(1)(B).

262. We conclude that we are authorized to provide discounts on the data links and associated services necessary to provide classrooms with access to those educational materials, even though these functions meet the statutory definition of "information services" because of their inclusion of protocol conversion and information storage. Without the use of these "information service" data links, schools and libraries would not be able to obtain access to the "research information, (and) statistics" available free of charge on the Internet. We note that these information services are essential for effective transmission service, i.e., "conduit" service; they are not elements of the content services provided by information publishers. We conclude that our authority under sections 254(c)(3) and 254(h)(1)(B) is broad enough to achieve these section 254(h)(2)(A) goals.

263. We find that this approach of providing discounts for basic conduit access to the Internet should not favor Internet access when provided as pure conduit versus Internet access bundled with minimal content; rather, this approach should simply encourage schools and libraries to select the most cost-effective form of transmission access, separate of content.

264. We also offer a more precise definition of what "information services" will be eligible for discounts under this program in response to commenters who challenge the feasibility of using the "basic, conduit" Internet access terminology that the Joint Board used to describe what aspects of Internet access are eligible for support. We note that Congress

described the conduit services we seek to cover in another context in the 1996 Act. That is, in listing exceptions to the definition of "electronic publishing" in section 274 of the Act, Congress described certain services that are precisely the types of "conduit" services that we agree with the Joint Board should be available to eligible schools and libraries at a discount. We adopt the descriptions of those services here because we find that they provide the additional clarification of conduit services that commenters request. We conclude that eligible schools and libraries will be permitted to apply their relevant discounts to information services provided by entities that consist of:

(i) The transmission of information as a common carrier;

(ii) The transmission of information as part of a gateway to an information service, where that transmission does not involve the generation or alteration of the content of information but may include data transmission, address translation, protocol conversion, billing management, introductory information content, and navigational systems that enable users to access information services that do not affect the presentation of such information services to users; and

(iii) Electronic mail services [e-mail]. As recommended by the Joint Board, other information services, such as voice mail, shall not be eligible for support at this time.

265. We also follow the Joint Board's recommendation to grant schools and libraries discounts on access to the Internet but not on separate charges for particular proprietary content or other information services. The Joint Board recommended that we solve the problem of bundling content and "conduit" (access) to the Internet by not permitting schools and libraries to purchase a package including content and conduit, unless the bundled package included minimal content and provided a more cost-effective means of securing non-content access to the Internet than other non-content alternatives. We agree with this approach.

266. Therefore, consistent with the Joint Board's recommendation, schools and libraries that purchase, from a telecommunications carrier, access to the Internet including nothing more than the services listed above will be eligible for support based on the purchase price. In addition, if it is more cost-effective for it to purchase Internet access provided by a telecommunications carrier that bundles

a minimal amount of content with such Internet access, a school or library may purchase that bundled package and receive support for the portion of the package price that represents the price for the services listed above.

267. This approach will create three possible scenarios for schools and libraries. First, if the telecommunications carrier bundles access with a package of content that is otherwise available free of charge on the Internet because the content is advertiser-supported, bundling that content with Internet access will not permit the telecommunications carrier to recover any additional remuneration other than the fee for the access. Second, if the telecommunications carrier offers other Internet users access to its proprietary content for a price, it may treat the difference between that price and the price it charges for its access only package as the price of non-content Internet access. Third, if a telecommunications carrier providing Internet access offers a bundled package of content that it does not offer on an unbundled basis and thus, the fair price of the conduit element cannot be ascertained readily, the school or library may receive support for such an Internet access package only if it can affirmatively show that the price of the carrier's Internet access package was still the most cost-effective manner for the school or library to secure basic, conduit access to the Internet.

268. Eligible Providers

Section 254(e) states that only an "eligible telecommunications carrier" under section 214(e) may receive universal service support. Section 254(h)(1)(B)(ii), however, states that telecommunications carriers providing services to schools and libraries may receive reimbursement from universal service support mechanisms, notwithstanding the provisions of section 254(e). Consequently, we agree in concluding that Congress intended that any telecommunications carrier, even one that does not qualify as an "eligible telecommunications carrier," should be eligible for support for services provided to schools and libraries.

269. Support for Internal Connections

Congress intended that telecommunications and other services be provided directly to classrooms. Therefore, eligible schools and libraries may, under sections 254(c)(3) and 254(h)(1), secure support for installation and maintenance of internal connections, among other services and

functionalities provided by telecommunications carriers.

270. We find that the Act permits universal service support for an expanded range of services beyond telecommunications services. Specifically, we conclude that the installation and maintenance of internal connections fall within the broad scope of the universal service support provisions of sections 254(c)(3) and (h)(1)(B), in the context of the broad goals of section 254(h)(2)(A). Nothing in section 254 excludes internal connections from the scope of "additional services" for schools and libraries that can be designated for support under section 254(c)(3) or the corresponding services for which schools and libraries can receive discounts under section 254(h)(1)(B). Consistent with our finding that a broad set of services should be supported, we also find that we should not limit support to just those services that are offered on a common carrier basis.

271. We agree with the Joint Board's response to those parties arguing that the physical facilities providing intraschool and intralibrary connections are "goods" or "facilities" rather than section 254(c)(3) "services." The Joint Board observed that not only are the installation and maintenance of such facilities services, but the cost of the actual facilities may be relatively small compared to the cost of labor involved in installing and maintaining internal connections. The Joint Board noted that the D.C. Circuit has repeatedly referred to the installation and maintenance of inside wiring as services. The Joint Board also noted that adopting the opposite view would treat internal connections as a facility ineligible for support if a school purchased it but as a service eligible for support if a school leased the facility from a third party. Given that the provision of internal connections is a service, we conclude that we have authority to provide discounts on the installation and maintenance of internal connections under sections 254(c)(3) and 254(h)(1)(B).

272. We find further that the broad purposes of section 254(h)(2) support our authority for providing discounts for the installation and maintenance of internal connections by telecommunications carriers under sections 254(c)(3) and 254(h)(1)(B). As the Joint Board explained, section 254(h)(2)(A) states that "[t]he Commission shall establish competitively neutral rules * * * to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications

and information services for all public and nonprofit elementary and secondary school classrooms * * * and libraries." The Joint Board recognized that a primary way to give "classrooms" access to advanced telecommunications and information services is to connect computers in each classroom to a telecommunications network. We interpret the scope of sections 254(c)(3) and 254(h)(1)(B) as broad enough to cover the provision of discounts on internal connections provided by telecommunications carriers. Telecommunications carriers might well, of course, subcontract this business to non-telecommunications carriers.

273. We also agree with the Joint Board that the legislative history supports our finding that the installation and maintenance of internal connections are eligible for support. We note that, in its Joint Explanatory Statement, Congress explicitly refers repeatedly to "classrooms." Reading these references, we conclude that Congress contemplated extending discounted service all the way to the individual classrooms of a school, not merely to a single computer lab in each school or merely to the schoolhouse door.

274. As the Joint Board recognized, finding internal connections ineligible for support would skew the choices of schools and libraries to favor technologies such as wireless, in which internal connections are inseparable from external connection, over technologies such as conventional wireline, in which a distinction can be (and for unrelated reasons sometimes is) drawn, even when the latter would be the more economically efficient choice. We conclude that schools, school districts, and libraries are in the best position and should, therefore, be empowered to make their own decisions regarding which technologies would best accommodate their needs, how to deploy those technologies, and how to best integrate these new opportunities into their curriculum. Moreover, a situation in which certain technologies were favored over others would violate the overall principle of competitive neutrality adopted for purposes of section 254. Of course, we by no means wish to discourage wireless technologies where they are the efficient solution; data suggest that wireless connections would already be the more efficient eligible "telecommunications service" for connecting schools to telephone carrier offices or Internet service providers for more than 25 percent of public schools.

275. In addition to our direct coverage of non-telecommunications carriers below, we expect non-telecommunications carriers to compete to provide internal connections to schools and libraries by entering partnerships and joint ventures with telecommunications carriers. Thus, without regard to our decision below to provide discounts for services to eligible schools and libraries provided by non-telecommunications carriers, we conclude that our decision to provide discounts for services to eligible schools and libraries provided by telecommunications carriers is competitively neutral and will facilitate, not impede, the development of the internal connections market.

276. Extent of Support for Internal Connections

We agree that it is often difficult to distinguish between "internal connections," which would be eligible for discounts, and computers and other peripheral equipment, which would not be eligible. We find that a given service is eligible for support as a component of the institution's internal connections only if it is necessary to transport information all the way to individual classrooms. That is, if the service is an essential element in the transmission of information within the school or library, we will classify it as an element of internal connections and will permit schools and libraries to receive a discount on its installation and maintenance for which the telecommunications carrier may be compensated from universal service support mechanisms.

277. Applying this standard, we find that support should be available to fund discounts on such items as routers, hubs, network file servers, and wireless LANs and their installation and basic maintenance because all are needed to switch and route messages within a school or library. Their function is solely to transmit information over the distance from the classroom to the Internet service provider, when multiple classrooms share the use of a single channel to the Internet service provider. We also find that "internal connections" would include the software that file servers need to operate and that we should place no specific restrictions on the size, i.e., type, of the internal connections network covered. We conclude that support should be available to fund discounts on basic installation and maintenance services necessary to the operation of the internal connections network. We expressly deny support, however, to finance the purchase of equipment that

is not needed to transport information to individual classrooms. A personal computer in the classroom, for example, does not provide such a necessary transmission function and would not be supported, consistent with the Joint Board's recommendation. A personal computer is not intended to transmit information over a distance, unless it is programmed to operate as a network switch or network file server.

278. We recognize that some providers may offer a bundled package of services and facilities, only some of which are eligible for support. For example, some file servers may also be built to provide storage functions to supplement personal computers on the network. We do not intend to provide a discount on such CPE capabilities. We could address the issue of bundling by allowing the bundling of eligible and ineligible services, but requiring that reimbursement not be requested for more than the fair market value of the eligible services. Such an approach would be similar to our handling of discounts when eligible schools and libraries and other, ineligible entities form consortia through which to receive their telecommunications services. In the case of service bundling, however, neither party to the transaction would have any incentive to ensure that the allocation of costs established in the contract was fair and nonarbitrary. In consortia, by contrast, the members each have an incentive to ensure that they are assigned a fair allocation of costs.

279. We conclude that eligible schools and libraries may not receive support for contracts that provide only a single price for a package that bundles services eligible for support with those that are not eligible for support. Schools and libraries may contract with the same entity for both supported and unsupported services and still receive support only if any purchasing agreement covering eligible services specifically prices those services separately from ineligible services so that it will be easy to identify the purchase amount that is eligible for a discount. Consequently, where the service provider indicates separately what the prices of the eligible and ineligible offerings would be if offered on an unbundled basis, the service provider must indicate the "price reduction" that would apply if the services are purchased together. The provider would then be able to apply the appropriate universal service support discount to the price for the eligible services after reducing the price to reflect a proportional amount of the "price reduction" the provider applied.

280. Finally, we agree with those commenters asserting that schools and libraries should not be forced by the provider of internal connections to select a particular provider for other services. With respect to wireline internal connections, or inside wiring, we have previously addressed the rights of carriers and customers to carrier-installed inside wiring. In the *Detariffing Recon. Order* (51 FR 8498 (March 12, 1986)), we restricted the carriers' ability to interfere with customer access to inside wiring. We observe that the federal antitrust laws prohibit any provider of internal connections with monopoly power from using that power to distort competition in related markets. Similarly, we agree with WinStar that, if a carrier does not currently charge for the use of internal connections, it should not be entitled to begin charging for such use if the school or library selects an alternate service provider, because that would distort the competitive neutrality supported strongly by both Congress and the Joint Board.

281. Pre-Discount Price

The pre-discount price is the price of services to schools and libraries prior to the application of a discount. That is, the pre-discount price is the total amount that carriers will receive for the services they sell to schools and libraries: the sum of the discounted price paid by a school or library and the discount amount that the carrier can recover from universal service support mechanisms for providing such services.

282. Competitive Environment

As the Joint Board recognized, in a competitive marketplace, schools and libraries will have both the opportunity and the incentive to secure the lowest price charged to similarly situated non-residential customers for similar services, and providers of telecommunications services, Internet access, and internal connections will face competitive pressures to provide that price.

283. We agree with the Joint Board that we should encourage schools and libraries to aggregate their demand with others to create a consortium with sufficient demand to attract competitors and thereby negotiate lower rates or at least secure efficiencies, particularly in lower density regions. We concur with the Joint Board's finding that aggregation into consortia can also promote more efficient shared use of facilities to which each school or library might need access.

284. Thus, we agree with the Joint Board's objectives in recommending that eligible schools and libraries be permitted to aggregate their telecommunications needs with those of both eligible and ineligible entities, including health care providers and commercial banks, because the benefits from such aggregation outweigh the administrative difficulties. We are concerned, however, that permitting large private sector firms to join with eligible schools and libraries to seek prices below tariffed rates could compromise both the federal and state policies of non-discriminatory pricing. Thus, although we find congressional support for permitting eligible schools and libraries to secure prices below tariffed rates, we find no basis for extending that exception to enable all private sector firms to secure such prices.

285. For this reason, we adopt a slightly modified version of the Joint Board's recommendation. We conclude that eligible schools and libraries will generally qualify for universal service discounts and prices below tariffed rates for interstate services, only if any consortia they join include only other eligible schools and libraries, rural health care providers, and public sector (governmental) customers. Eligible schools and libraries participating in consortia that include ineligible private sector members will not be eligible to receive universal service discounts unless the pre-discount prices of any interstate services that such consortia receive from ILECs are generally tariffed rates. We conclude that this approach satisfies both the purpose and the intent of the Joint Board's recommendation because it should allow the consortia containing eligible schools and libraries to aggregate sufficient demand to influence existing carriers to lower their prices and should promote efficient use of shared facilities. This approach also includes the large state networks upon which many schools and libraries rely for their telecommunications needs among the entities eligible to participate in consortia. We recognize that state laws may differ from federal law with respect to non-discriminatory pricing requirements.

286. We adopt the Joint Board's finding that fiscal responsibility compels us to require that eligible schools and libraries seek competitive bids for all services eligible for section 254(h) discounts. Competitive bidding is the most efficient means for ensuring that eligible schools and libraries are informed about all of the choices available to them. Absent competitive bidding, prices charged to schools and

libraries may be needlessly high, with the result that fewer eligible schools and libraries would be able to participate in the program or the demand on universal service support mechanisms would be needlessly great. We discuss, in greater detail below, the procedures for undertaking the competitive bidding process.

287. Some commenters ask us to clarify a number of points regarding competitive bidding. First, in response to a number of commenters, we note that the Joint Board intentionally did not recommend that the Commission require schools and libraries to select the lowest bids offered but rather recommended that the Commission permit schools and libraries "maximum flexibility" to take service quality into account and to choose the offering or offerings that meets their needs "most effectively and efficiently," where this is consistent with other procurement rules under which they are obligated to operate. We concur with this policy, noting only that price should be the primary factor in selecting a bid. When it specifically addressed this issue in the context of Internet access, the Joint Board only recommended that the Commission require schools and libraries to select the most cost-effective supplier of access. By way of example, we also note that the federal procurement regulations (which are inapplicable here) specify that in addition to price, federal contract administrators may take into account factors including the following: prior experience, including past performance; personnel qualifications, including technical excellence; management capability, including schedule compliance; and environmental objectives. We find that these factors form a reasonable basis on which to evaluate whether an offering is cost-effective.

288. Although we do not impose bidding requirements, neither do we exempt eligible schools or libraries from compliance with any state or local procurement rules, such as competitive bidding specifications, with which they must otherwise comply.

289. In response to the concerns of GTE and SBC that existing Commission rules concerning interstate service prevent them from offering rates below their generally available tariffed rates in competitive bidding situations to establish pre-discount rates, we make the following clarifications. First, our policies on ILEC pricing flexibility apply only to interstate services. The ILECs' abilities to offer intrastate services in competitive bidding situations will be governed by the

relevant state public utility commission policies. Second, we find that ILECs will be free under sections 201(b) and 254 to participate in certain competitive bidding opportunities with rates other than those in their generally tariffed offerings. More specifically, they will be free, under sections 201(b) of the Act, to offer different rates to consortia that consist solely of governmental entities, eligible health care providers, and schools and libraries eligible for preferential rates under section 254. Thus, we hereby designate communications to organizations, such as schools and libraries and eligible health care providers, eligible for preferential rates under section 254 as a class of communications eligible for different rates, notwithstanding the nondiscrimination requirements of section 202(a). Congress has expressly granted an exemption to section 202(a)'s prohibition against discrimination for these classes of communications. Thus, ILECs will be free to offer differing, including lower, rates to consortia consisting of section 254-eligible schools and libraries, eligible health care providers, state schools and universities, and state and local governments. These pre-discount rates will be generally available to all eligible members of these classes under tariffs filed with this Commission. The schools and libraries eligible for discounts under section 254 would then receive the appropriate universal service discount off these rates. Third, ILECs may obtain further freedom to participate in competitive bidding situations as a result of decisions we make in the *Access Charge Reform Proceeding*. In the *Third Report and Order* in the *Access Charge Reform Proceeding*, we will determine whether to permit ILECs to provide targeted offerings in response to competitive bidding situations once certain competitive thresholds are met. We conclude that this regime, which includes a prohibition against resale of these services, best furthers the explicit congressional directive of providing preferential rates to eligible schools and libraries with a minimum of public interest harm arising from limiting the availability of prediscount rates to these classes.

290. Lowest Price Charged to Similarly Situated Non-Residential Customers for Similar Services

In competitive markets, we anticipate that schools and libraries will be offered competitive, cost-based prices that will match or beat the cost-based prices paid by similarly situated customers for similar services. We concur, however,

with the Joint Board that, to ensure that a lack of experience in negotiating in a competitive telecommunications service market does not prevent some schools and libraries from receiving such offers, we should require that a carrier offer services to eligible schools and libraries at prices no higher than the lowest price it charges to similarly situated non-residential customers for similar services (hereinafter "lowest corresponding price").

291. We also adopt the Joint Board's recommendation to use the lowest corresponding price as an upper limit on the price that carriers can charge schools and libraries in non-competitive markets, as well as competitive markets, so that eligible schools and libraries can take advantage of any cost-based rates that other customers may have negotiated with carriers during a period when the market was subject to actual, or even potential, competition. We conclude that requiring providers to charge their lowest corresponding price would impose no unreasonable burden, even on non-dominant carriers, because all carriers would be able to receive a remunerative price for their services. We clarify that, for the purpose of determining the lowest corresponding price, similar services would include those provided under contract as well as those provided under tariff.

292. Section 254(h)(1)(B) requires telecommunications carriers to make services available to all schools and libraries in any geographic area the carriers serve. We share the Joint Board's concern that, if "geographic area" were interpreted to mean the entire state, any firm providing telecommunications services to any school or library in a state would have to be willing to serve any other school or library in the state. We also agree with the Joint Board that an expansive interpretation of geographic area might discourage new firms beginning to offer service in one portion of a state from doing so due to concern that they would have to serve all other areas in that state.

293. We concur, therefore, with the Joint Board's recommendation that geographic area (hereinafter referred to as geographic service area) be defined as the area in which a telecommunications carrier is seeking to serve customers with any of its services covered by section 254(h)(1)(B). We do not limit here the area in which a telecommunications carrier or a subsidiary or affiliate owned or controlled by it can choose to provide service. We also agree with the Joint Board that telecommunications carriers be required to offer schools and libraries services at their lowest corresponding

prices throughout their geographic service areas. Moreover, we agree with the Joint Board's recommendation that, as a condition of receiving support, carriers be required to certify that the price they offer to schools and libraries is no greater than the lowest corresponding price based on the prices the carrier has previously charged or is currently charging in the market. This obligation would extend, for example, to competitive LECs, wireless carriers, or cable companies, to the extent that they offer telecommunications for a fee to the public. We share the Joint Board's conclusion that Congress intended schools and libraries to receive the services they need from the most efficient provider of those services.

294. We clarify that a provider of telecommunications services, Internet access, and internal connections need not offer the same lowest corresponding price to different schools and libraries in the same geographic service area if they are not similarly situated and subscribing to a similar set of services. Providers may not avoid the obligation to offer the lowest corresponding price to schools and libraries for interstate services, however, by arguing that none of their non-residential customers are identically situated to a school or library or that none of their service contracts cover services identical to those sought by a school or library. Rather, we will only permit providers to offer schools and libraries prices above the prices charged to other similarly situated customers when those providers can show that they face demonstrably and significantly higher costs to serve the school or library seeking service.

295. If the services sought by a school or library include significantly lower traffic volumes or their provision is significantly different from that of another customer with respect to any other factor that the state public service commission has recognized as being a significant cost factor, then the provider will be able to adjust its price above the level charged to the other customer to recover the additional cost incurred so that it is able to recover a compensatory pre-discount price. We also recognize that costs change over time and thus, compensatory rates would not necessarily result if a provider were required to charge the same price it had charged many years ago. We will establish a rebuttable presumption that rates offered within the previous three years are still compensatory. We also would not require a provider to match a price it offered to a customer who is receiving a special regulatory subsidy or that appeared in a contract negotiated under very different conditions, if that

would force the provider to offer services at a rate below Total-Service Long-Run Incremental Cost (TSLRIC).

296. We also adopt the Joint Board's recommendation that, if they believe that the lowest corresponding price is unfairly high or low, schools, libraries, and carriers should be permitted to seek recourse from the Commission, regarding interstate rates, and from state commissions, regarding intrastate rates. Eligible schools and libraries may request a lower rate if they believe the rate offered by the carrier is not the lowest corresponding price. Carriers may request higher rates if they believe that the lowest corresponding price is not compensatory.

297. We agree with the Joint Board's analysis that using TSLRIC would not be practical, given the limited resources of schools and libraries to participate in lengthy negotiations, arbitration, or litigation. We also clarify that the tariffed rate would represent a carrier's lowest corresponding price in a geographic area in which that carrier has not negotiated rates that differ from the tariffed rate, and that we are not requiring carriers to file new tariffs to reflect the discounts we adopt here for schools and libraries.

298. Discounts

The Act requires the Commission, with respect to interstate services, and the states, with respect to intrastate services, to establish a discount on designated services provided to eligible schools and libraries. Pursuant to section 254(h)(1)(B), the discount must be an amount that is "appropriate and necessary to ensure affordable access to and use of" the services pursuant to section 254(c)(3). The discount must take into account the principle set forth in section 254(b)(5) and mandated in section 254(d) that the federal universal service support mechanisms must be "specific, predictable, and sufficient." We agree with the Joint Board's recommendation that we adopt a percentage discount mechanism, adjusted for schools and libraries that are defined as economically disadvantaged and those schools and libraries located in areas facing particularly high prices for telecommunications service. In particular, we concur with the Joint Board's recommendation that we adopt discounts from 20 percent to 90 percent for all telecommunications services, Internet access, and internal connections, with the range of discounts correlated to indicators of economic disadvantage and high prices for schools and libraries.

299. We agree with the Joint Board's recommendation that we adopt rules that provide support to eligible schools and libraries through a percentage discount mechanism rather than providing a package of free services or block grants to states because we find that discounts would better assure efficiency and accountability. Requiring schools and libraries to pay a share of the cost should encourage them to avoid unnecessary and wasteful expenditures because they will be unlikely to commit their own funds for purchases that they cannot use effectively. A percentage discount also encourages schools and libraries to seek the best pre-discount price and to make informed, knowledgeable choices among their options, thereby building in effective fiscal constraints on the discount fund.

300. Discounts in High Cost Areas

We also adopt the Joint Board's recommendation that, to make service more affordable to schools and libraries, we offer greater support to those located in high cost areas than to those in low cost areas. Although the discount matrix we adopt do not make the prices schools and libraries pay for telecommunications services in high and low cost areas identical, we find that the matrix distribute substantially more funds, particularly on a per-capita basis, to reduce prices paid by schools and libraries in areas with higher telecommunications prices than they do to reduce prices in areas in which such prices are already relatively low. The greater price reduction in terms of total dollar amounts for schools and libraries in high cost areas results primarily because the discount rates are based on percentages that lead proportionally to more funds flowing to those schools and libraries facing proportionally higher prices.

301. Although the discount mechanism we adopt does not equalize prices in all areas nationwide, it makes telecommunications service in the areas with relatively high prices substantially more affordable to the schools and libraries in those areas. We find that a mechanism that may provide as much as 23 times more support per capita to a school or library in a high cost area than it does to one in a low cost area is providing substantially more of a discount to the former. We also note that some eligible schools and libraries in high cost areas will benefit, at least temporarily, from the high cost assistance that eligible telecommunications carriers serving them will receive. Although high cost support will only be targeted to a limited number of services, none of

which are advanced telecommunications and information services, many schools and libraries will connect to the Internet via voice-grade access to the PSTN. Furthermore, whereas the Joint Board presumed that such support would only be targeted to residential and single-line businesses, in the short term, our decision diverges from that result and permits support for multiline businesses. We agree with the Joint Board that this position on support for schools and libraries in high cost areas is consistent with our other goal of providing adequate support to disadvantaged schools while keeping the size of the total support fund no larger than necessary to achieve this goal. We agree that the nominal percentage discount levels should be more sensitive to how disadvantaged a school or library is than whether it is located in a high cost service area. We conclude, therefore, that the additional support for schools and libraries in high cost areas provided in the matrix we adopt is "appropriate and necessary to ensure affordable access" to schools and

libraries as directed by section 254(h)(1)(B).

302. Discounts for Economically Disadvantaged Schools and Libraries

We adopt the Joint Board's recommendation that we establish substantially greater discounts for the most economically disadvantaged schools and libraries. We recognize that such discounts are essential if we are to make advanced technologies equally accessible to all schools and libraries. We agree, however, with the Joint Board and several commenters that not even the most disadvantaged schools or libraries should receive a 100 percent discount. We recognize that even a 90 percent discount—and thus a 10 percent co-payment requirement—might create an impossible hurdle for disadvantaged schools and libraries that are unable to allocate any of their own funds toward the purchase of eligible discounted services, and thus could increase the resource disparity among schools. We conclude, however, that even if we were to exempt the poorest schools from any co-payment requirement for

telecommunications services, a 100 percent discount would not have a dramatically greater impact on access than would a 90 percent discount, because we are not providing discounts on the costs of the additional resources, including computers, software, training, and maintenance, which constitute more than 80 percent of the cost of connecting schools to the information superhighway. We share the Joint Board's belief that the discount program must be structured to maximize the opportunity for its cost-effective operation, and that, for the reasons noted above, requiring a minimal co-payment by all schools and libraries will help realize that goal.

303. Discount Matrix

The Joint Board considered the approximate size of the fund resulting from a matrix assigning discounts to a school or library based upon its level of economic disadvantage and its location. After substantial deliberation, the Joint Board recommended the following matrix of percentage discounts:

Discount matrix		Cost of service (estimated % in category)		
How disadvantaged?		Low cost (67%)	Mid-cost (27%)	Highest cost (5%)
Based on % of students in the national school lunch program	(Estimated % of U.S. schools in category)			
< 1	(3)	20	20	25
1-19	(31)	40	45	50
20-34	(19)	50	55	60
35-49	(15)	60	65	70
50-74	(16)	80	80	80
75-100	(16)	90	90	90

304. In fashioning a discount matrix, the Joint Board sought to ensure that the greatest discounts would go to the most economically disadvantaged schools and libraries, with an equitable progression of discounts being applied to the other categories within the parameters of 20 percent to 90 percent discounts.

305. Identifying High Price Areas

Recognizing that schools and libraries in high cost areas will confront relatively higher barriers to connecting to the Internet and maintaining other communications links, the Joint Board proposed a discount matrix that granted schools and libraries located in higher cost areas greater percentage discounts. Although its discount matrix used low, mid, and high cost categories based on embedded cost ARMIS data of carriers, the Joint Board did not recommend a

way to identify those schools and libraries facing higher costs, except to suggest that we might consider the unseparated loop costs collected under ARMIS. The Joint Board understood that, because such embedded cost data were already maintained by the Commission, it would be relatively easy to set thresholds that would divide areas into high and low cost based on the cost data of the ILEC serving the area. The Joint Board also recognized that unseparated loop costs were a good proxy for local service prices.

306. The Joint Board suggested that other methods for determining high cost might be appropriate and encouraged the Commission to seek additional comment on the issue, which we did in the Recommended Decision Public Notice. As a result, we have considered several alternative methods, which were not before the Joint Board at the time of

its deliberations. These methods include the use of cost data generated by the forward-looking cost methodologies that proponents have filed for use in determining support for high cost areas; density pricing zones; availability of advanced services; tariffed T-1 prices for connections to an Internet service provider; and whether schools and libraries are located in rural or urban areas. For the reasons discussed below, we conclude that we will classify eligible schools and libraries as high or low cost depending on whether they are located in a rural or an urban area, respectively.

307. Given this set of reasonable but imperfect approaches to determining high cost for schools and libraries, we conclude that we should select the classification system that is least burdensome to schools, libraries, and carriers. We will therefore identify high

cost schools and libraries as those located in rural, as opposed to urban, areas. After careful consideration, we conclude that identifying whether a school or library is located in a rural or urban area is a relatively easy method for schools and libraries to use, reasonably matches institutions facing the highest prices for telecommunications services with the highest discounts, and imposes no burden on carriers. Adoption of this approach is also consistent with the Joint Board's intention that the method selected for determining high cost should calibrate the cost of service in a "reasonable, practical, and minimally burdensome manner." We also conclude that, for purposes of the schools and libraries discount program, rural areas should be defined in accordance with the definition adopted by the Department of Health and Human Services' Office of Rural Health Policy (ORHP/HHS). ORHP/HHS uses the Office of Management and Budget's (OMB) Metropolitan Statistical Area (MSA) designation of metropolitan and non-metropolitan counties (or county equivalents), adjusted by the most currently available Goldsmith Modification, which identifies rural areas within large metropolitan counties.

308. Adoption of this definition of rural areas is consistent with the approach adopted in the health care section of this Order and represents a simple approach for schools and libraries to determine eligibility for an incremental high cost discount. OMB's list of metropolitan counties and the list of additional rural areas within those counties identified by the Goldsmith Modification are readily available to the public. Eligible schools and libraries will need only to consult those lists to determine whether they are located in rural areas for purposes of the universal service discount program. In addition to being simple to administer, basing the high cost discount on a school's or library's location in a rural area is a reasonable approach for determining which entities should receive the high cost discount. The distance between customers and central offices, and the lower volumes of traffic served by central offices in rural areas, combine to create less affordable telecommunications rates.

309. Because we adopt the use of categories of rural and urban to determine a school's or library's eligibility for a high cost discount, we conclude that there should be only two categories of schools and libraries. Because schools and libraries will be categorized as either rural (high cost) or

urban (low cost), the "mid-cost" category recommended by the Joint Board is no longer relevant. We find that a matrix of two columns is also somewhat simpler to use and thus, we modify the discount matrix recommended by the Joint Board to have two columns (i.e., "urban" and "rural") as opposed to three.

310. Identifying Economically Disadvantaged Schools

We agree with the Joint Board's recommendation that we measure a school's level of poverty in a manner that is minimally burdensome, ideally using data that most schools already collect. Although the Joint Board concluded that the national school lunch program meets this standard, it suggested that the Commission also consider other approaches that would be both minimally burdensome for schools and accurate measures of poverty.

311. Based on our review of the comments filed in response to the Recommended Decision Public Notice, we agree with the Joint Board that using eligibility for the national school lunch program to determine eligibility for a greater discount accurately fulfills the statutory requirement to ensure affordable access to and use of telecommunications and other supported services for schools. As noted by commenters, the national school lunch program determines students' eligibility for free or reduced-price lunches based on family income, which is a more accurate measure of a school's level of need than a model that considers general community income. In addition, the national school lunch program has a well-defined set of eligibility criteria, is in place nationwide, and has data-gathering requirements that are familiar to most schools. We agree that use of an existing and readily available model, such as the national school lunch program, will be both relatively simple and inexpensive to administer.

312. We conclude that a school may use either an actual count of students eligible for the national school lunch program or federally-approved alternative mechanisms to determine the level of poverty for purposes of the universal service discount program. Alternative mechanisms may prove useful for schools that do not participate in the national school lunch program or schools that participate in the lunch program but experience a problem with undercounting eligible students (e.g., high schools, rural schools, and urban schools with highly transient populations). Schools that choose not to

use an actual count of students eligible for the national school lunch program may use only the federally-approved alternative mechanisms contained in Title I of the Improving America's Schools Act, which equate one measure of poverty with another. These alternative mechanisms permit schools to choose from among existing sources of poverty data a surrogate for determining the number of students who would be eligible for the national school lunch program. A school relying upon one of these alternative mechanisms could, for example, conduct a survey of the income levels of its students' families. We conclude that only federally-approved alternative mechanisms, which rely upon actual counts of low-income children, provide more accurate measures of poverty and less risk of overcounting, than other methods suggested by some commenters that merely approximate the percentage of low-income children in a particular area.

313. Identifying Economically Disadvantaged Libraries

The Joint Board recommended that, in the absence of a better proposal, a library's degree of poverty should be measured based on how disadvantaged the schools are in the school district in which the library is located. Under this plan, a library would receive a level of discount representing the average discount, based on both public and non-public schools, offered to the schools in the school district in which it is located. Finding that this was "a reasonable method of calculation because libraries are likely to draw patrons from an entire school district and this method does not impose an unnecessary administrative burden on libraries," the Joint Board recommended that the Commission seek additional comment on this and other measures of poverty that would be minimally burdensome for libraries.

314. We adopt the Joint Board's recommendation and conclude that a library's level of poverty be calculated on the basis of school lunch eligibility in the school district in which the library is located, with one modification. We conclude that it would be less administratively burdensome and, therefore, would impose lower administrative costs, to base a library's level of poverty on the percentage of students eligible for the national school lunch program only in the public school district in which the library is located. To require the administrator to average the discounts applicable to both public and non-public schools would impose an unnecessary administrative burden without an offsetting benefit to libraries.

315. We agree with commenters that library service areas and school districts often are not identical, and that libraries may not have ready access to information that would allow them to coordinate their service areas with the applicable school district lunch data. We are not, however, requiring libraries to coordinate their service areas with school districts. The procurement officer responsible for ordering telecommunications and other supported services for a library or library system need only obtain from the school district's administrative office the percentage of students eligible for the national school lunch program in the district in which the library is located. We conclude, therefore, that adopting this approach will not impose an unnecessary administrative burden on libraries.

316. ALA notes that residents of towns that do not have schools generally must send their children to other towns to attend school. We find that the discount for a library in such a circumstance would be based on an average of the percentage of students eligible for the school lunch program in each of the school districts in which the town's children attend school.

317. We conclude that using school lunch eligibility to calculate the poverty level of both schools and libraries addresses the concern that equity exist between schools and libraries. That is,

because school lunch eligibility data measures the percentage of students within 185 percent of the poverty line, the program that we adopt herein will ensure that both schools and libraries are afforded discounts based on the same measure of poverty. Under ALA's proposal, however, libraries would have received discounts based on the percentage of families at or below the poverty line, while schools would have received discounts based on the percentage of students within 185 percent of the poverty line. We conclude, therefore, that libraries will not be disadvantaged by adoption of the Joint Board's recommendation to use school lunch eligibility to determine the level of poverty for both schools and libraries. We also conclude that using the same measure of poverty for both schools and libraries will lower the administrative costs associated with the discount program described herein.

318. Levels of Poverty

We agree with the Joint Board's recommendation that we adopt a step function to define the level of discount available to schools and libraries, based on the level of poverty in the areas they serve. A step function will define multiple levels of discount based on the percentage of students eligible for the national school lunch program. We also agree with the Joint Board's recommendation that the number of

steps for determining discounts applied to telecommunications and other supported services should be based principally on the existing Department of Education categorization of schools eligible for the national school lunch program. We conclude that this approach is reasonable because the national school lunch program is based on family income levels.

319. For purposes of administering the school lunch program, the Department of Education places schools in five categories, based on the percentage of students eligible for free or reduced-price lunches: 0-19 percent; 20-34 percent; 35-49 percent; 50-74 percent; and 75-100 percent. Consistent with the Joint Board's recommendation, we adopt the percentage categories used by the Department of Education for schools and libraries, and we also establish a separate category for the least economically disadvantaged schools and libraries, i.e., those with less than one percent of their students eligible for the national school lunch program. Schools and libraries in the "less than one percent" category should have comparatively greater resources within their existing budgets to secure affordable access to services even with lower discounted rates. We, therefore, adopt the following matrix for schools and libraries:

Schools and libraries discount matrix		Discount level	
How disadvantaged?		Urban discount (%)	Rural discount (%)
% of students eligible for national school lunch program	(Estimated % of U.S. schools in category)		
<1	3	20	25
1-19	31	40	50
20-34	19	50	60
35-49	15	60	70
50-74	16	80	80
75-100	16	90	90

320. Self-Certification Requirements

We agree with the Joint Board's recommendation that, when ordering telecommunications and other supported services, the procurement officer responsible for ordering such services for a school or library must certify its degree of poverty to the universal service administrator. For eligible schools ordering telecommunications and other supported services at the individual school level, which we anticipate will be primarily non-public schools, the procurement officer ordering such services must certify to the universal

service administrator the percentage of students eligible in that school for the national school lunch program. For eligible libraries ordering telecommunications and other supported services at the individual library level, which we anticipate will be primarily single-branch libraries, the procurement officer ordering such services must certify to the universal service administrator the percentage of students eligible for the national school lunch program in the school district in which the library is located.

321. For eligible schools ordering telecommunications and other

supported services at the school district or state level, we agree with the Joint Board's recommendation that we minimize the administrative burden on schools while at the same time ensuring that the individual schools with the highest percentages of economically disadvantaged students receive the deepest discounts for which they are eligible. We, therefore, adopt the Joint Board's recommendation to require the procurement officer for each school district or state applicant to certify to the universal service administrator the percentage of students in each of its schools that is eligible for the national

school lunch program, calculated either through an actual count of eligible students or through the use of a federally-approved alternative mechanism, as discussed above. If the level of discount were instead calculated for the entire school district, a school serving a large percentage of students eligible for the national school lunch program that was located in a school district comprised primarily of more affluent schools would not benefit from the level of discount to which it would be entitled if discounts had been calculated on an individual school basis. The school district or state may decide to compute the discounts on an individual school basis or it may decide to compute an average discount; in either case, the state or the district shall strive to ensure that each school receives the full benefit of the discount to which it is entitled.

322. For libraries ordering telecommunications and other supported services at the library system level, we agree with commenters asserting that library systems should be able to compute discounts on either an individual branch basis or based on an average of all branches within the system. Specifically, if individual branches within a library system are located in different school districts, we conclude that the procurement officer responsible for ordering telecommunications and other supported services for the library system must certify to the administrator the percentage of students eligible for the national school lunch program in each of the school districts in which its branches are located. The library system may decide to compute the discounts on an individual branch library basis or it may decide to compute an average discount; in either case, the library system shall strive to ensure that each library receives the full benefit of the discount to which it is entitled.

323. Similarly, for library consortia ordering telecommunications and other supported services, we conclude that each consortium's procurement officer must certify to the administrator the percentage of students eligible for the national school lunch program for the school district in which each of its members is located. Each library consortium may compute the discounts on the basis of the school district in which each consortium member is located or it may compute an average discount; in either case, each library consortium shall strive to ensure that each of its members receives the full benefit of the discount to which it is independently entitled.

324. *Additional Considerations*

We agree that our priority must be to establish the basic schools and libraries discount program. Whether a hardship appeals process is necessary can be addressed when the Joint Board reviews the discount program in 2001 or sooner, if necessary. In the interim, we are satisfied that the discount program that we adopt, reaching as high as 90 percent for the most disadvantaged schools and libraries, will provide sufficient support.

325. Finally, we adopt Ameritech's suggestion that information about the universal service discounts for which individual schools and libraries are eligible, based on their level of poverty and rural status, be posted on the same website as that on which schools' and libraries' RFPs will be posted, as discussed below. We conclude that posting this information on the website created by the universal service administrator for the schools and libraries discount program may assist providers seeking to provide eligible services to a school or library by providing potentially useful information about a prospective customer. If a school district submits school lunch eligibility information for each school, or a library system submits school lunch eligibility information for each branch, then the universal service administrator is instructed to post that information. If a school district chooses to submit only district-wide poverty information or a library system chooses to provide only system-wide poverty information, then that is the information that will be posted by the universal service administrator. We also adopt Ameritech's suggestion that the actual discounts be calculated and posted on the website, as discussed below.

326. *Cap Level*

We adopt the Joint Board's recommendation that there be an annual cap of \$2.25 billion on universal service support for schools and libraries at this time. We also adopt the Joint Board's determination that, if the annual cap is not reached due to limited demand from eligible schools and libraries, the unspent funds will be available to support discounts for schools and libraries in subsequent years. We modify the Joint Board's recommendation slightly, however, to limit collection and spending for the period through June 1998, in light of both the need to implement the necessary administrative processes and the need to make the fund sufficiently flexible to respond to demand. Thus, for the funding period beginning January 1,

1998 and ending June 1998, the administrator will only collect as much as required by demand, but in no case more than \$1 billion. Furthermore, if less than \$2.25 billion is spent in calendar year 1998, then no more than half of the unused portion of the funding authority for calendar year 1998 shall be spent in calendar year 1999. Similarly, if the amount allocated in calendar years 1998 and 1999 is not spent, no more than half of the unused portion of the funding authority for these two years shall be spent in calendar year 2000.

327. We lack sufficient historical data to estimate accurately demand for the first year of this program. In the past when the Commission has established similar funding mechanisms, the Commission or the administrator has had access to information upon which to base an estimate of necessary first-year contribution levels. We direct the administrator to report to the Commission on a quarterly basis, on both the total amount of payments made to entities providing services and facilities to schools and libraries to finance universal service support discounts, and its determination regarding contribution assessments for the next quarter.

328. *Timing of Funding Requests*

As discussed above, we adopt the Joint Board's recommendation that universal service spending for eligible schools and libraries be capped at \$2.25 billion annually. We also adopt the Joint Board's recommendation that such support be committed on a first-come-first-served basis. We further conclude that the funding year will be the calendar year and that requests for support will be accepted beginning on the first of July for the following year. For the first year only, requests for support will be accepted as soon as the schools and libraries website is open and applications are available. Eligible schools and libraries will be permitted to submit funding requests once they have made agreements for specific eligible services, and, as the Joint Board recommended, the administrator will commit funds based on those agreements until total payments committed during a funding year have exhausted any funds carried over from previous years and there are only \$250 million in funds available for the funding year. Thereafter, the Joint Board's proposed system of priorities will govern the distribution of the remaining \$250 million.

329. The administrator shall measure commitments against the funding caps and trigger points based on the

contractually-specified non-recurring expenditures, such as for internal connection services, and recurring flat-rate charges for telecommunications services and other supported services that a school or library has agreed to pay and the commitment of an estimated variable usage charge, based on documentation from the school or library of the estimated expenditures that it has budgeted to pay for its share of usage charges. Schools and libraries must file their contracts either electronically or by paper copy. Moreover, schools and libraries must file new funding requests for each funding year. Such requests will be placed in the funding queue based on the date and time they are received by the administrator.

330. We conclude that these rules will give schools the certainty they need for budgeting, while avoiding the need for the administrator to accumulate, prioritize, and allocate all discounts at the beginning of each funding year, as some commenters suggest. Some uncertainty may remain about whether an institution will receive the same level of discount from one year to the next because demand for funds may exceed the funds available. If that does occur, we cannot guarantee discounts in the subsequent year without placing institutions that have not formulated their telecommunications plans in the previous year at a disadvantage, possibly preventing such entities from receiving any universal service support—a concern raised by some commenters. We acknowledge that requiring annual refiling for recurring charges places an additional administrative burden on eligible institutions. We find, however, that allowing funding for recurring charges to carry forward from one funding year to the next would favor those who are already receiving funds and might deny any funding to those who had never received funding before.

331. Therefore, we find that, if the administrator estimates that the \$2.25 billion cap will be reached for the current funding year, it shall recommend to the Commission a reduction in the guaranteed percentage discounts necessary to permit all expected requests in the next funding year to be fully funded as discussed in more detail, below. Because educational institutions' funding needs will vary greatly, we find that a per-institution cap, as proposed by AT&T, is likely to lead to arbitrary results and be difficult to administer. For example, if the per-institution cap were tied to factors such as number of students and the level of discount for which the institution is

eligible, as AT&T suggests, this would limit eligible high schools to the same level of support as eligible elementary schools of equal size, even if the former had substantially greater needs for support. We are not aware of any practical way to make fair and equitable adjustments for such varying needs. We also agree with the Joint Board's decision and rationale for rejecting the concept of setting fund levels for each state, and thus reject BANX's proposal for establishing a cap on funds flowing to each state.

332. *Effect of the Trigger*

We adopt the Joint Board's recommendation that, once there is only \$250 million in funds available to be committed in a given funding year, "only those schools and libraries that are most economically disadvantaged and ha[ve] not yet received discounts from the universal service mechanism in the previous year would be granted guaranteed funds, until the cap [is] reached." The Joint Board recommended that "[o]ther economically disadvantaged schools and libraries" should have second priority, followed by "all other eligible schools and libraries." Although, as the Joint Board recommended, the priority system should give first priority to the most economically disadvantaged institutions that have received no discounts in the previous funding year, we are also concerned that the prioritization process not disrupt institutions' ongoing programs that depend upon the discounts.

333. To achieve the Joint Board's goals, we establish a priority system that will operate as follows. The administrator shall ensure, as explained below, that the total level of the administrator's commitments, as well as the day that only \$250 million remains available under the cap in a funding year, are made publicly available on the administrator's website on at least a weekly basis. If the trigger is reached, the administrator will ensure that a message is posted on the website, notify the Commission, and take reasonable steps to notify the educational and library communities that commitments for allocating the remaining \$250 million of support will be made only to the most disadvantaged eligible schools and libraries for the next 30 days (or the remainder of the funding year, whichever is shorter). That is, during the 30-day period, applications from schools and libraries will continue to be accepted and processed, but the administrator will only commit funds to support discount requests from schools and libraries that are in the two most-

disadvantaged categories on the discount matrix and that did not receive universal service supported discounts in the previous or current funding years. We provide, however, that schools and libraries that received discounts only for basic telephone service in the current or prior year shall not be deemed to have received discounts for purposes of the trigger mechanism. For this purpose, we will ignore support for basic telephone service, because we do not want to discourage disadvantaged schools and libraries from seeking support for this service to avoid forfeiting their priority status for securing support for more advanced services. After the initial 30-day period, if uncommitted funds remain, the administrator will process any requests it received during that period from eligible institutions in the two most disadvantaged categories that had previously received funds. If funds still remain, the administrator will allocate the remaining available funds to schools and libraries in the order that their requests were received until the \$250 million is exhausted or the funding year ends.

334. *Adjustments to Discount Matrix*

We have established the discount levels in this Order based on the Joint Board's estimate of the level of expenditures that schools and libraries are likely to have. We do not anticipate that the cost of funding discount requests will exceed the cap, and we do not want to create incentives for schools and libraries to file discount requests prematurely to ensure full funding. Furthermore, we will consider the need to revise the cap in our three-year review proceeding, but if estimated funding requests for the following funding year demonstrate that the funding cap will be exceeded, we will consider lowering the guaranteed percentage discounts available to all schools and libraries, except those in the two most disadvantaged categories, by the uniform percentage necessary to permit all requests in the next funding year to be fully funded. We will direct the administrator to determine the appropriate adjustments to the matrix based on the estimates schools and libraries make of the funding they will request in the following funding year. The administrator must then request the Commission's approval of the recommended adjustments. After seeking public comment on the administrator's recommendation, the Commission will then approve any reduction in such guaranteed percentage discounts that it finds to be in the public interest. If funds remain under the cap at the end of a funding year in

which discounts have been reduced below those set in the matrix, the administrator shall consult with the Commission to establish the best way to distribute those funds.

335. *Advance Payment for Multi-Year Contracts*

We conclude that providing funding in advance for multiple years of recurring charges could enable a wealthy school to guarantee that its full needs over a multi-year period were met, even if other schools and libraries that could not afford to prepay multi-year contracts were faced with reduced percentage discounts if the administrator estimated that the funding cap would be exceeded in a subsequent year. We are also concerned that funds would be wasted if a prepaid service provider's business failed before it had provided all of the prepaid services. At the same time, we recognize that educators often will be able to negotiate better rates for pre-paid/multi-year contracts, reducing the costs that both they and the universal service support mechanisms incur. Therefore, we conclude that while eligible schools and libraries should be able to enter into pre-paid/multi-year contracts for supported services, the administrator will only commit funds to cover the portion of a long-term contract that is scheduled to be delivered and installed during the funding year. Eligible schools and libraries may structure their contracts so that payment is required on at least a yearly basis, or they may enter into contracts requiring advance payment for multiple years of service. If they choose the advance payment method, eligible schools and libraries may use their own funds to pay full price for the portion of the contract exceeding one year (pro rata), and may request that the service provider seek universal service support for the pro rata annual share of the pre-payment. The eligible school or library may also request that the service provider rebate the payments from the support mechanisms that it receives in subsequent years to the school or library, to the extent that the school or library secures approval of discounts in subsequent years from the administrator.

336. *Existing Contracts*

We agree with the recommendation of the Joint Board and a number of commenters that we should permit schools and libraries to apply the relevant discounts we adopt in this order to contracts that they negotiated prior to the Joint Board's Recommended Decision for services that will be

delivered and used after the effective date of our rules, provided the expenditures are approved by the administrator according to the procedures set forth above. No discount would apply, however, to charges for any usage of telecommunications or information services or installation or maintenance of internal connections prior to the effective date of the rules promulgated pursuant to this Order. While we will not require schools or libraries to breach existing contracts to become eligible for discounts, this exemption from our competitive bidding requirements shall not apply to voluntary extensions of existing contracts.

337. We conclude that allowing discounts to be applied to existing contract rates for future covered services is appropriate and necessary to ensure schools and libraries affordable access to and use of the services supported by the universal service program. As discussed above and in the Recommended Decision, the concept of affordability contains not only an absolute component, which takes into account, in this case, a school or library's means to subscribe to certain services, but also a relative component, which takes into account whether the school or library is spending a disproportionate amount of its funds on those services. Thus, although a school or library might have chosen to devote funds to, for example, certain telecommunications services, it might have done so at considerable hardship and thus at a rate that is not truly affordable. Moreover, some schools and libraries might be bound by contracts negotiated by the state, even though an individual school or library in the state might not be able to afford to purchase any services under the contract unless it is able to apply universal service support discounts to the negotiated rate. Furthermore, allowing discounts to be applied to existing contract rates will ensure affordable access to and use of all the services Congress intended, not just whatever services, however minimal, an individual school or library might have contracted for before the discounts adopted herein were available at a cost that might preclude it from being able to afford to purchase other services now available at a discount.

338. We will not adopt, however, release schools and libraries from their current negotiated contracts, or adopt a "fresh look" requirement that would obligate carriers with existing service contracts with schools and libraries to participate in a competitive bidding process, or that we create a "rebuttable presumption" that existing rates for

telecommunications services are reasonable, allowing interested parties to submit objections to existing contracts based on assertions of unreasonable prices, improper cross-subsidization, or anti-competitive conduct by parties. We find that these proposals would be administratively burdensome, would create uncertainty for those service providers that had previously entered into contracts, and would delay delivery of services to those schools and libraries that took the initiative to enter into such contracts. In addition, we have no reason to believe that the terms of these contracts are unreasonable. Indeed, abrogating these contracts or adopting these other proposals would not necessarily lead to lower pre-discount prices, due to the incentives the states, schools, and libraries had when negotiating the contracts to minimize costs. Finally, we note that there is no suggestion in the statute or the legislative history that Congress anticipated abrogation of existing contracts in this context. We find equally unpersuasive the argument that we should deny schools and libraries the opportunity to apply the discounts we adopt herein to previously negotiated contract rates. Because schools and libraries are already bound to those contracts regardless of whether discounts are provided, we see no way in which ILECs will be unfairly advantaged.

339. We agree with the Joint Board that schools and libraries, constrained by budgetary limitations and the obligation to pay 100 percent of the contract price, had strong incentives to secure the lowest rates possible when they negotiated the contracts. Thus, we find it appropriate to apply discounts to these presumptively low rates rather than requiring negotiation of new rates. Furthermore, we conclude that it would not be in the public interest to penalize schools and libraries in states that have aggressively embraced educational technologies and have signed long-term contracts for service by refusing to allow them to apply discounts to their pre-existing contract rates.

340. *Interstate and Intrastate Discounts*

We concur with the Joint Board's recommendation that we exercise our authority to provide federal universal service support to fund intrastate discounts. We also agree with the Joint Board's recommendation that we adopt rules providing federal funding for discounts for eligible schools and libraries on both interstate and intrastate services to the levels discussed above and that we require states to establish intrastate discounts at least equal to the

discounts on interstate services as a condition of federal universal service support for schools and libraries in that state. While section 254(h)(1)(B) permits the states to determine the level of discount available to eligible schools and libraries with respect to intrastate services, the Act does nothing to prohibit the Commission from offering to fund intrastate discounts or conditioning that funding on action the Commission finds to be necessary to achieve the goal that the Snowe-Rockefeller-Exon-Kerrey amendment sought to accomplish under this section.

341. We agree that section 254(h)(1)(B) creates a partnership, insofar as that section permits a state that wants to provide greater discounts or discounts for additional services for schools to do so. We note that states retain full discretion to require providers to set pre-discount prices for intrastate services even lower than the market might produce and to provide the support required, if any, from intrastate support obligations. We would find such an arrangement consistent with section 254(f)'s directive that "[a] State may adopt regulations not inconsistent with the Commission's rules to preserve and advance universal service." Furthermore, we concur with the Joint Board that it would also be permissible for states to choose not to supplement the federal program and thus prohibit their schools and libraries from purchasing services at special state-supported rates if the schools and libraries intend to secure federal-supported discounts. Finally, we note that, if a state wishes to provide an intrastate discount mechanism that is less than the federal discount, it may seek a waiver of the requirement that it match the federal discount levels, although we would only expect to grant such waivers on a temporary basis and only for states with unusually compelling cases.

342. Eligibility

The Joint Board concluded that, to be eligible for universal service support, a school must meet the statutory definition of an elementary or secondary school found in the Elementary and Secondary Education Act of 1965, must not operate as a for-profit business, and must not have an endowment exceeding \$50 million. We agree and conclude that all schools that fall within the definition contained in the Elementary and Secondary Education Act of 1965 and meet the criteria of section 254(h), whether public or private, will be eligible for universal service support. Illinois Board of Education and Community Colleges ask that we expand

the definition of schools to include entities that educate elementary and secondary school aged students, and APTS asks that we permit discounts for educational television station licensees as a way to support distance learning. We find, however, consistent with the Joint Board and with SBC's observation, that section 254(h)(5)(A) does not grant us discretion to expand the statutory definition of schools.

343. Section 254(h)(5) does not include an explicit definition of libraries eligible for support. Rather, in section 254(h)(4)'s eligibility criteria, Congress cited LSCA. The Joint Board, therefore, used the definition of library found in Title III of the LSCA. In late 1996, however, Congress amended section 254(h)(4) to replace citation to the LSCA with a citation to the newly enacted LSTA. In light of this amendment to section 254(h)(4), we find it necessary to look anew at the definitions of library and library consortium and adopt definitions that are consistent with the directives of section 254(h).

344. LSTA defines a library more broadly than did the former LSCA and includes, for example, academic libraries and libraries of primary and secondary schools. If, for purposes of determining entities eligible for universal service support, we were to adopt a definition that includes academic libraries, we are concerned that the congressional intent to limit the availability of discounts under section 254(h) could be frustrated. Specifically, in section 254(h)(5), Congress limited eligibility for support to elementary and secondary schools that meet certain criteria, choosing to target support to K-12 schools rather than attempting to cover the broader set of institutions of higher learning. If we were to adopt the new expansive definition of library, institutions of higher learning could assert that their libraries, and thus effectively their entire institutions, were eligible for support.

345. We, therefore, adopt the LSTA definition of library for purposes of section 254(h), but we conclude that a library's eligibility for universal service funding will depend on its funding as an independent entity. That is, because institutions of higher education are not eligible for universal service support, an academic library will be eligible only if its funding is independent of the funding of any institution of higher education. By "independent," we mean that the budget of the library is completely separate from any institution of learning. This independence requirement is consistent with both congressional intent and the expectation

of the Joint Board that universal service support would flow to an institution of learning only if it is an elementary or secondary school. Similarly, because elementary and secondary schools with endowments exceeding \$50 million are not eligible for universal service support, a library connected to such a school will be eligible only if it is funded independently from the school.

346. We adopt the independent library requirement because we are also concerned that, in some instances where a library is attached, for funding purposes, to an otherwise eligible school, the library could attempt to receive support twice, first as part of the school and second as an independent entity. We find that the independence requirement will ensure that an elementary or secondary school library cannot collect universal service support twice for the same services.

347. When Congress amended section 254(h)(4) in late 1996, it added the term "library consortium" to the entities potentially eligible for universal service support. We adopt the definition of library consortium as it is defined in LSTA, with one modification. We eliminate "international cooperative association of library entities" from our definition of library consortia eligible for universal service support because we conclude that this modified definition is consistent with the directives of section 254(h).

348. We conclude that community college libraries are eligible for support only if they meet the definition above and other requirements of section 254(h). We agree that all eligible schools and libraries should be permitted to enter into consortia with other schools and libraries.

349. The Joint Board concluded that entities not explicitly eligible for support should not be permitted to gain eligibility for discounts by participating in consortia with those who are eligible, even if the former seek to further educational objectives for students who attend eligible schools. We agree with, and therefore adopt, this Joint Board recommendation. Nevertheless, we look to ineligible schools and libraries to assume leadership roles in network planning and implementation for educational purposes. Although we conclude that Congress did not intend that we finance the costs of network planning by ineligible schools and libraries through universal service support mechanisms, we encourage universities and other repositories of information to make their online facilities available to other schools and libraries. We note that eligible schools and libraries will be eligible for

discounts on any dedicated lines they purchase to connect themselves to card catalogues or databases of scientific or other educational data maintained by colleges or universities, databases of research materials maintained by religious institutions, and any art or related materials maintained by private museum archives. Connections between eligible and ineligible institutions can be purchased by an eligible institution subject to the discount as long as the connection is used for the educational purposes of the eligible institution.

350. While those consortium participants ineligible for support would pay the lower pre-discount prices negotiated by the consortium, only eligible schools and libraries would receive the added benefit of universal service discount mechanisms. Those portions of the bill representing charges for services purchased by or on behalf of and used by an eligible school, school district, library, or library consortia for educational purposes would be reduced further by the discount percentage to which the school or library using the services was entitled under section 254(h). The service provider would collect that discount amount from universal service support mechanisms. The prices for services that were not actually used by eligible entities for educational purposes would not be reduced below the contract price.

351. Finally, several commenters ask that universal service support be targeted to schools and libraries serving individuals with disabilities. We acknowledge the barriers faced by individuals with disabilities in accessing telecommunications, and we note that individuals with disabilities attending eligible schools and using the resources of eligible libraries will benefit from universal service support mechanisms to the extent that those institutions qualify for universal service support. We agree with the Joint Board, however, that the specific barriers faced by individuals with disabilities in accessing telecommunications are best addressed in the proceeding to implement section 255 of the Act.

352. Resale

Section 254(h)(3) bars entities that obtain discounts from reselling the discounted services. We concur with the Joint Board's recommendation that we not interpret the section 254(h)(3) bar to apply only to resale for profit. We agree with the Joint Board's recommendation that we interpret section 254(h)(3) to restrict any resale whatsoever of services purchased pursuant to a section 254 discount to entities that are not eligible for support.

353. We agree, however, that the section 254(h)(3) prohibition on resale does not prohibit an eligible entity from charging fees for any services that schools or libraries purchase that are not subject to a universal service discount. Thus, an eligible school or library may assess computer lab fees to help defray the cost of computers or training fees to help cover the cost of training because these purchases are not subsidized by the universal service support mechanisms. We also observe that, if eligible schools, libraries, or consortia amend their approved service contracts to permit another eligible school or library to share the services for which they have already contracted, it would not constitute prohibited resale, as long as the services used are only discounted by the amount to which the eligible entity actually using the services is entitled.

354. We concur with the Joint Board's conclusion that, despite the difficulties of allocating costs and preventing abuses, the benefits of permitting schools and libraries to join in consortia with other customers, as discussed above, outweigh the danger that such aggregations will lead to significant abuse of the prohibition against resale. The Joint Board reached this conclusion based on three findings, and we concur with each of them. First, the Joint Board found that the only way to avoid any possible misallocations by eligible schools and libraries would be to limit severely all consortia, even among eligible schools and libraries, because it is possible that consortia including schools and libraries eligible for varying discounts could allocate costs in a way that does not precisely reflect each school's or library's designated discount level. We agree with the Joint Board's conclusion that severely limiting consortia would not be in the public interest because it would serve to impede schools and libraries from becoming attractive customers or from benefiting from efficiencies, such as those secured by state networks. Second, illegal resale, whereby eligible schools and libraries use their discounts to reduce the prices paid by ineligible entities, can be substantially deterred by a rule requiring providers to keep and retain careful records of how they have allocated the costs of shared facilities in order to charge eligible schools and libraries the appropriate amounts. These records should be maintained on some reasonable basis, either established by the Commission or the administrator, and should be available for public inspection. We concur with the Joint Board's conclusion that reasonable

approximations of cost allocations should be sufficient to deter significant abuse. Third, we share the Joint Board's expectation that the growing bandwidth requirements of schools and libraries will make it unlikely that other consortia members will be able to rely on using more than their paid share of the use of a facility. This will make fraudulent use of services less likely to occur. We also agree with the Joint Board's recommendation that state commissions should undertake measures to enable consortia of eligible and ineligible public sector entities to aggregate their purchases of telecommunications services and other services being supported through the discount mechanism, in accordance with the requirements set forth in section 254(h).

355. Bona Fide Request for Educational Purposes

Section 254(h)(1)(B) limits discounts to services provided in response to bona fide requests made for services to be used for educational purposes. We concur with the Joint Board's finding that Congress intended to require accountability on the part of schools and libraries and, therefore, we concur with the Joint Board's recommendation and the position of most commenters that eligible schools and libraries be required to: (1) Conduct internal assessments of the components necessary to use effectively the discounted services they order; (2) submit a complete description of services they seek so that it may be posted for competing providers to evaluate; and (3) certify to certain criteria under penalty of perjury.

356. Because we find that the needs of educational institutions are complex and substantially different from the needs of other entities eligible for universal service support pursuant to this Order, we will require the administrator, after receiving recommendations submitted by the Department of Education, to select a subcontractor to manage exclusively the application process for eligible schools and libraries, including dissemination and review of applications for service and maintenance of the website on which applications for service will be posted for competitive bidding by carriers. The important criteria in recommending eligible subcontractors are: Familiarity with the telecommunications and technology needs of educational institutions and libraries; low administrative costs; and familiarity with the procurement processes of the states and school districts. Moreover, we will consult