

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of)
)
Developing a Unified Intercarrier) CC Docket No. 01-92
Compensation Regime)

NOTICE OF PROPOSED RULEMAKING

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By the Commission: Chairman Powell and Commissioner Ness issuing separate statements;
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I. INTRODUCTION

1. With this *Notice of Proposed Rulemaking (NPRM)*, we begin a fundamental re-examination of all currently regulated forms of intercarrier compensation. We intend to test the concept of a unified regime for the flows of payments among telecommunications carriers that result from the interconnection of telecommunications networks under current systems of regulation. Specifically, we seek comment on the feasibility of a bill-and-keep approach for such a unified regime. We also seek alternative comment on modifications to existing intercarrier compensation regimes. In sum, we seek to move forward from the transitional intercarrier compensation regimes to a more permanent regime that consummates the pro-competitive vision of the Telecommunications Act of 1996 (“1996 Act”).¹

2. As discussed below, there are currently two general intercarrier compensation regimes: (1) access charges for long-distance traffic; and (2) reciprocal compensation.

¹ Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (“1996 Act”).

We believe it essential to re-evaluate these existing intercarrier compensation regimes in light of increasing competition and new technologies, such as the Internet and Internet-based services, and commercial mobile radio services (“CMRS”). We are particularly interested in identifying a unified approach to intercarrier compensation—one that would apply to interconnection arrangements between all types of carriers interconnecting with the local telephone network, and to all types of traffic passing over the local telephone network. The purpose of this *NPRM* is to seek comment on the broad universe of existing intercarrier compensation arrangements. In issuing this *NPRM*, we do not expect that we will extend intercarrier compensation rules to Internet backbones, on which we do not currently impose rate-making regulation. Neither do we expect to extend compensation rules to other interconnection arrangements that are not currently subject to rate regulation and that do not exhibit symptoms of market failure.² We do, however, seek comment on whether imposing any particular unified intercarrier compensation regime only with respect to rates that we currently regulate would lead to distortions or other problems that would undermine the benefits of that regime. We emphasize at the outset that we seek an approach to intercarrier compensation that will encourage efficient use of, and investment in, telecommunications networks, and the efficient development of competition. Consistent with the deregulatory goals of the 1996 Act, we seek an approach to intercarrier compensation that minimizes the need for regulatory intervention, both now and as competition continues to develop.

3. In a related order that we are adopting today (“*ISP Intercarrier Compensation Order*”),³ we address intercarrier compensation for traffic that is specifically bound for Internet service providers (“ISPs”). We adopt interim measures that, for the next three years, will significantly reduce, but not altogether eliminate, the flow of intercarrier payments associated with delivery of dial-up traffic to ISPs. In another order that we are adopting today (“*CLEC Access Charge Order*”),⁴ we address the access charges that long-distance carriers pay to competitive local exchange carriers (CLECs). We adopt another three-year interim measure, under which CLECs may file tariffs establishing access rates only if their rates are at or below a benchmark rate, to bring CLEC rates closer to incumbent local exchange carrier (“ILEC”) rates.

4. In this *NPRM*, we envision that a bill-and-keep regime would fulfill the goals of the two interim measures, combined with the larger goal of a unified regime. We seek comment on our proposal to adopt a bill-and-keep rule to govern local exchange carrier (“LEC”) recovery of costs associated with the delivery of ISP-bound traffic after the three-year interim period. We also seek comment on the potential adoption of a bill-and-keep approach to reciprocal compensation payments governed by section 251 of the 1996 Act, and the eventual application of bill and keep to interstate access charges regulated under section 201 of the Communications Act of 1934, as amended (“Communications Act”). With respect to all categories of currently-

² Thus, we do not contemplate a need to adopt new rules governing CLEC-to-CLEC, IXC-to-IXC, CMRS-to-CMRS or CMRS-to-IXC arrangements.

³ In the Matter of Intercarrier Compensation for ISP-Bound Traffic, CC Docket No. 99-68, *Order on Remand and Report and Order*, FCC 01-131 (rel. Apr. 27, 2001) (“*ISP Intercarrier Compensation Order*”).

⁴ In the Matter of Access Charge Reform; Reform of Access Charges Imposed by Competitive Local Exchange Carriers, CC Docket No. 96-262, *Seventh Report and Order*, FCC 01-146 (rel. Apr. 27, 2001) (“*CLEC Access Charge Order*”).

regulated intercarrier compensation, we also seek comment on alternative reform measures that would build upon current requirements for cost-based intercarrier payments.

II. BACKGROUND

A. Existing Intercarrier Compensation Regimes

5. Interconnection arrangements between carriers are currently governed by a complex system of intercarrier compensation regulations. These regulations treat different types of carriers and different types of services disparately, even though there may be no significant differences in the costs among carriers or services. The interconnection regime that applies in a particular case depends on such factors as: whether the interconnecting party is a local carrier, an interexchange carrier, a CMRS carrier or an enhanced service provider; and whether the service is classified as local or long-distance, interstate or intrastate, or basic or enhanced.

6. Existing intercarrier compensation rules may be categorized as follows: *access charge rules*, which govern the payments that interexchange carriers (“IXCs”) and CMRS carriers make to LECs to originate and terminate long-distance calls; and *reciprocal compensation rules*, which govern the compensation between telecommunications carriers for the transport and termination of local traffic. Such an organization is clearly an oversimplification, however, as both sets of rules are subject to various exceptions (*e.g.*, long-distance calls handled by ISPs using IP telephony are generally exempt from access charges under the enhanced service provider (ESP) exemption).⁵

7. The access charge rules can be further broken down into *interstate* access charge rules that are set by this Commission, and *intrastate* access charge rules that are set by state public utility commissions. Both the interstate and intrastate access charge rules establish charges that IXCs must pay to LECs when the LEC originates or terminates a call for an IXC, or transports a call to, or from, the IXC’s point of presence (“POP”). CMRS carriers also pay access charges to LECs for CMRS-to-LEC traffic that is not considered local and hence not covered by the reciprocal compensation rules. Other customers carrying traffic to or from points within an exchange area to points outside the exchange area may also pay access charges to the LEC. These access charges may have different rate structures—*i.e.*, they may be flat-rated or traffic-sensitive. In general, where a long-distance call passes through a LEC circuit switch, a

⁵ The phrases “Internet telephony” and “Internet Protocol telephony” (“IP telephony”) refer to similar, but distinct concepts. IP telephony involves the provision of a telephony service or application using Internet Protocol. IP telephony may be provided over the public Internet or over a private IP network. In contrast, Internet telephony is a subset of IP telephony that is distinguished by the fact that it is provided over the public Internet and uses the domain-name system for routing. *See, e.g.*, In the Matter of Federal-State Joint Board on Universal Service, *Report to Congress*, 13 FCC Rcd. 11501, 11541-51 ¶¶ 83-104 (“*Stevens Report*”) (discussing Internet and IP telephony); HARRY NEWTON, *NEWTON’S TELECOM DICTIONARY* 378 (14th ed. 1998). For simplicity, the text will refer generally to the broader concept of IP telephony.

IP telephony can also be categorized by the equipment used to provide the service. For example, IP telephony may be provided using two personal computers (“computer-to-computer” IP telephony); the service may be provided between a computer and a standard telephone using a single IP gateway (“computer-to-phone” IP telephony); or it may be provided using two standard telephones that connect through two IP gateways (“phone-to-phone” IP telephony). *See, e.g., Stevens Report*, 13 FCC Rcd. at 11543-44 ¶¶ 87-89.

per-minute charge is assessed. In order to keep local telephone rates low, access charges have traditionally exceeded the forward-looking economic costs of providing access.⁶

8. Section 251(b)(5) imposes on all LECs a “duty to establish reciprocal compensation arrangements for the transport and termination of telecommunications.”⁷ Under current Commission rules interpreting the reciprocal compensation obligations of *incumbent* LECs, the calling party’s LEC must compensate the called party’s LEC for the additional costs associated with transporting the call from the carriers’ interconnection point to the called party’s end office, and for the additional costs of terminating the call to the called party.⁸ The Commission’s rules further require that the charges for both transport and termination must be set at forward-looking economic costs.⁹ The Commission’s rules permit a state public utility commission (“PUC”) to impose a bill-and-keep arrangement, provided that the traffic exchanged between the interconnecting carriers is relatively balanced and neither party has rebutted the presumption of symmetric rates.¹⁰

9. Existing access charge rules and the majority of existing reciprocal compensation agreements require the calling party’s carrier, whether LEC, IXC or CMRS, to compensate the called party’s carrier for terminating the call. Hence, these interconnection regimes may be

⁶ See In the Matter of Federal-State Joint Board on Universal Service, *Report and Order*, 12 FCC Rcd. 8776 (1997) (“*Universal Service Order*”). See also GERALD W. BROCK, TELECOMMUNICATION POLICY FOR THE INFORMATION AGE: FROM MONOPOLY TO COMPETITION 189-93 (1994); PETER W. HUBER, MICHAEL K. KELLOGG & JOHN THORNE, FEDERAL TELECOMMUNICATIONS LAW 552 (2d ed. 1999). Following the passage of the 1996 Act, the Commission, in addition to implementing the local competition provisions and reforming existing universal service subsidies, also initiated a proceeding to reform access charges. Specifically, in May 1997, the Commission concluded that it would, in the first instance, allow market forces to drive interstate access charges to economic cost. As a back-stop, however, the Commission ordered price cap ILECs to file forward-looking economic cost studies on or before February 8, 2001. See In the Matter of Access Charge Reform, *First Report and Order*, 12 FCC Rcd. 15982, 16003 ¶ 48 (1997) (“*Access Charge Reform*”). See also In the Matter of Access Charge Reform, CC Docket No. 96-262, *Sixth Report and Order*, 15 FCC Rcd. 12962 (2000) (“*CALLS Order*”) (adopting CALLS proposal and allowing price cap ILECs to opt out of CALLS in anticipation of completion of cost study proceeding).

⁷ 47 U.S.C. § 251(b)(5). In addition, section 252(d)(2) imposes additional requirements on reciprocal compensation agreements involving an ILEC. 47 U.S.C. § 252(d)(2).

⁸ 47 U.S.C. § 252(d)(2)(A). See also In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, *First Report and Order*, 11 FCC Rcd. 15499, 16024-25 ¶¶ 1056-59 (1996) (“*Local Competition Order*”), aff’d in part and vacated in part sub nom. *Competitive Telecommunications Ass’n v. FCC*, 117 F.3d 1068 (8th Cir. 1997) and *Iowa Utils. Bd. v. FCC*, 120 F.3d 753 (8th Cir. 1997), aff’d in part and remanded, *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366 (1999). In the *Local Competition Order*, the Commission also concluded that “the new transport and termination rules should be applied to LECs and CMRS providers.” *Local Competition Order*, 11 FCC Rcd. at 16016-17 ¶ 1043.

⁹ 47 C.F.R. § 51.705. See also *Local Competition Order*, 11 FCC Rcd. at 16054-58 ¶¶ 1111-18. Carriers are permitted to receive compensation only for “the traffic-sensitive components of local switching,” and not for local loop costs, which are not considered traffic sensitive. *Local Competition Order*, 11 FCC Rcd. at 16024-25 ¶ 1057.

¹⁰ *Local Competition Order*, 11 FCC Rcd. at 16054-58 ¶¶ 1111-18; 47 U.S.C. § 252(d)(2)(B). For purposes of this *NPRM*, we define a bill-and-keep arrangement as an intercarrier compensation mechanism in which there are no termination charges—*i.e.*, a mechanism in which the called party’s carrier is not allowed to recover any of the cost of the called party’s loop or local switch from an interconnecting carrier. As will become clear below, the treatment of transport costs may vary.

referred to as “*calling-party’s-network-pays*” (or “CPNP”). Such CPNP arrangements, where the calling party’s network pays to *terminate* a call, are clearly the dominant form of interconnection regulation in the United States and abroad.¹¹ An alternative to such CPNP arrangements, however, is a “*bill-and-keep*” arrangement. Because there are no termination charges under a bill-and-keep arrangement, each carrier is required to recover the costs of termination (and origination) from its own end-user customers.¹² As previously noted, under the Commission’s rules, state PUCs may impose bill-and-keep arrangements on interconnection agreements involving an ILEC, provided that the traffic between the carriers is relatively balanced and neither carrier has rebutted the presumption of symmetrical rates. In addition, bill-and-keep arrangements are found in interconnection agreements between adjacent ILECs.¹³ Finally, some Internet backbones have voluntarily negotiated interconnection agreements that resemble bill-and-keep arrangements.¹⁴

10. Finally, when entities connect to telephone networks as end users rather than as interconnecting networks, they do not pay usage-sensitive access or reciprocal compensation charges. For example, residential customers typically pay flat-rated subscription charges (or occasionally, local measured service rates), while business customers typically pay a flat monthly charge, plus a per-minute or per-call charge for originating calls. ESPs, including ISPs, are charged pursuant to the same rules that apply to local end users and are exempt from access and reciprocal compensation charges, even though the calls they send and receive generally travel outside the local service area.¹⁵ We also note that paging networks, which primarily *receive* traffic, are treated as networks under our existing reciprocal compensation rules.¹⁶ Payphone companies, which primarily *originate* traffic, are treated as end-user customers.¹⁷

¹¹ JEAN-JACQUES LAFFONT & JEAN TIROLE, *COMPETITION IN TELECOMMUNICATIONS* 4-8 (2000).

¹² As discussed below, there are a number of alternative ways to allocate transport costs under a bill-and-keep arrangement. *See infra* Section III.B.2.

¹³ *See* Comments of Time Warner Communications Holdings Inc., CC Docket No. 96-98 at 100 (May 16, 1996); Comments of American Communications Services, Inc., CC Docket No. 96-98 at 23 (May 16, 1996).

¹⁴ *See* Michael Kende, *The Digital Handshake: Connecting Internet Backbones* at 4-8 (Federal Communications Commission, OPP Working Paper No. 32, Sept. 2000).

¹⁵ The Commission has stated that the reciprocal compensation provisions of the 1996 Act, 47 U.S.C. § 251(b)(5), do not apply to ISP-bound traffic, but has allowed the states to require reciprocal compensation under existing interconnection agreements. In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Intercarrier Compensation for ISP-Bound Traffic, *Declaratory Ruling in CC Docket No. 96-98 and Notice of Proposed Rulemaking in CC Docket No. 99-68*, 14 FCC Rcd. 3689, 3703-06 ¶¶ 21-27 (1999). The D.C. Circuit reversed and remanded it to the Commission. *See Bell Atlantic Tel. Cos. v. FCC*, 206 F.3d 1 (D.C. Cir. 2000). In an order released today, the Commission adopts an interim measure that aims to move away from the current reciprocal compensation regime for ISP-bound traffic, over a three-year period. *See ISP Intercarrier Compensation Order, supra* note 3.

¹⁶ *Local Competition Order*, 11 FCC Rcd. at 16043 ¶ 1092.

¹⁷ *Id.* at 15936 ¶ 876.

B. Issues Raised by Existing Interconnection Regulations

11. The existing intercarrier compensation rules raise several pressing issues. First, and probably most important, are the opportunities for regulatory arbitrage¹⁸ created by the existing patchwork of intercarrier compensation rules. One source of regulatory arbitrage appears to be inefficient reciprocal compensation rates. As we explain in the *ISP Intercarrier Compensation Order* released today, these rates, whether they are inefficiently structured or set too high, do not simply compensate the terminating network, but also appear to generate profits for each minute that is terminated, thus creating a potential windfall for networks that primarily or exclusively receive traffic.¹⁹ As a result of these inefficient termination charges, certain CLECs appear to have targeted customers that primarily or solely receive traffic, particularly ISPs, in order to become net recipients of local traffic.²⁰

12. Another source of regulatory arbitrage arises from the different rates that different types of service providers must pay for essentially the same types of calls. For example, the fact that an IXC must pay access charges to the LEC that originates a long-distance call, while an ISP that provides IP telephony does not, gives the provider of IP telephony an artificial cost advantage over providers of traditional long-distance service. Similarly, a long-recognized form of regulatory arbitrage is the ability of certain owners of private branch exchanges (“PBXs”) to avoid paying access charges on long-distance calls (the “leaky PBX” problem).²¹ More generally, any discrepancy in regulatory treatment between similar types of traffic or similar categories of parties is likely to create opportunities for regulatory arbitrage. That is, parties will revise or rearrange their transactions to exploit a more advantageous regulatory treatment, even though such actions, in the absence of regulation, would be viewed as costly or inefficient.

13. A second major issue involves *terminating access monopolies*. This problem results from the fact that an end user typically subscribes to only one LEC. Hence, other carriers seeking to deliver calls to that end user have no choice but to purchase terminating access from

¹⁸ The phrase “regulatory arbitrage” refers to profit-seeking behavior that can arise when a regulated firm is required to set different prices for products or services with a similar cost structure. See, e.g., Patrick DeGraba, *Bill and Keep at the Central Office as the Efficient Interconnection Regime* at 1 ¶ 2 n.3 (Federal Communications Commission, OPP Working Paper No. 33, Dec. 2000).

¹⁹ *ISP Intercarrier Compensation Order* at ¶ 70 (ILECs assert that CLECs terminate an average of 18, 21 and even 40 times more traffic than they originate, and that 90 percent of CLEC reciprocal compensation billings are for ISP-bound traffic).

²⁰ *Id.* at ¶¶ 38-39.

²¹ The “leaky PBX” problem arises where large end users that employ multiple PBXs in multiple locations lease private lines to connect their various PBXs. Although these lines were intended to permit employees of the large users to communicate between locations without incurring access charges, some large users permitted long-distance calls to leak from the PBX into the local public network where they were terminated without incurring access charges. In order to address this problem, the Commission in 1983 imposed a \$25 per month charge on each trunk that could “leak” traffic into the public switched network. See 47 C.F.R. § 69.115. See generally *In the Matter of MTS and WATS Market Structure, Memorandum Opinion and Order*, 97 FCC 2d 682 (1983); *Memorandum Opinion and Order*, 97 FCC 2d 834 (1984).

the called party's LEC.²² These originating carriers generally have little practical means of affecting the called party's choice of access provider. Indeed, as we explain in the *CLEC Access Charge Order* released today, a number of CLECs, whose terminating access charges are not regulated, have taken advantage of this situation by charging terminating access rates that significantly exceed those charged by rate-regulated ILECs.²³ As described in the order, we find that, absent intervention, the current disputes between CLECs and IXCs over access rate levels could disrupt the ubiquitous interconnectedness that consumers expect of the public switched telephone network.²⁴ We adopt, as an interim measure, a detariffing regime in which CLECs may file tariffs establishing access rates only if the rates are at or below a benchmark rate.²⁵ Rates above the benchmark may not be tariffed.²⁶ The benchmark is designed to bring CLEC rates closer to ILEC rates over the three-year period that these interim measures are in place.²⁷

14. The terminating access problem is exacerbated by rate averaging policies that are adopted voluntarily by the carrier, or required by regulation such as section 254(g).²⁸ Rate averaging prevents carriers from passing on termination charges directly to the particular customers whose calls give rise to those charges. Because the originating carrier is effectively unable to pass on termination costs to particular end-user customers or to create incentives for end users to choose LECs with low termination charges, the end user who chooses the LEC with the high termination charges does not have an incentive to minimize costs. We note, in this regard, that even if averaging policies were eliminated, it is unclear whether calling parties could, due to transaction-cost considerations, effectively induce called parties to choose LECs with low termination charges.

15. A related terminating access issue may arise where ILECs also provide interexchange services in competition with IXCs. Certain IXCs have argued that, where access charges exceed economic cost, ILECs, and in particular the Regional Bell Operating Companies

²² With regard to wireless networks, we recognize that, where a customer subscribes to both a wireless and a wireline network, the wireline network does not have a complete monopoly over termination. We believe, however, that the customer's possession of a wireless number does not completely resolve all terminating access issues. Since wireless customers are generally charged per-minute rates when they receive calls, they have an incentive to receive calls on their wireline phones. To encourage this, wireless customers frequently withhold their wireless numbers, both directly, and from directory databases. In turn, many callers respect this preference by choosing to call the customer's wireline number before trying the wireless number.

²³ See *CLEC Access Charge Order*, *supra* note 4; see also In the Matter of Access Charge Reform, *Fifth Report and Order and Further Notice of Proposed Rulemaking*, 14 FCC Rcd. 14221, 14338-49 ¶¶ 236-257 (1999) ("Pricing Flexibility Order and NPRM"); Petition for Declaratory Ruling filed by AT&T Regarding Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers (Oct. 23, 1998).

²⁴ *CLEC Access Charge Order* at ¶ 24.

²⁵ *Id.* at ¶ 40.

²⁶ *Id.*

²⁷ *Id.* at ¶ 49.

²⁸ Section 254(g) requires IXCs to geographically average access charges. See 47 U.S.C. § 254(g); see also *CLEC Access Charge Order* at ¶ 31.

(“RBOCs”), may have the incentive and ability to discriminate in favor of their long-distance affiliates by engaging in a predatory price squeeze.²⁹

16. Third, questions have arisen recently whether different types of networks require different interconnection rates. Specifically, in the *Local Competition Proceeding*, the Commission established a presumption that, for reciprocal compensation agreements involving an ILEC, the termination rate should be symmetrical and based on the ILEC’s forward-looking, traffic-sensitive cost of terminating the call.³⁰ A recent study argues, however, that the traffic-sensitive costs of terminating calls on wireless networks may differ from the traffic-sensitive costs of the ILEC’s wireline networks.³¹ In addition, certain ILECs have argued that the various CLECs targeting ISPs as customers have designed their networks so as to reduce the traffic-sensitive costs of termination. These arguments suggest that, under existing reciprocal compensation rules, regulators may have to evaluate the specific costs of terminating traffic on different types of networks, and then carry out this exercise repeatedly as technology and prices continue to change.

17. Fourth, inefficient intercarrier compensation rules likely distort the structure and level of end-user charges. Typically, our existing rules allow, and in some cases require, interconnection charges to be set on a traffic-sensitive basis (*i.e.*, on a per-minute or per-call basis). Because these traffic-sensitive termination charges represent real marginal costs to the carrier that pays them, they impose pressure on the calling party’s carrier to flow these costs through to end-user customers and to adopt traffic-sensitive retail prices. If the underlying network costs are non-traffic sensitive, however, then these traffic-sensitive retail rates will reduce network usage to inefficient levels. In addition, such traffic-sensitive termination charges may create incentives for carriers to charge higher prices for calls that cross networks, than for calls that remain on the calling party’s network.

18. Finally, inefficient interconnection prices may distort an entity’s subscription decision. For example, the availability of termination charges (either access charges or reciprocal compensation charges) that are inefficiently structured or above-cost may create incentives for an entity that primarily or exclusively receives traffic to claim to be a network rather than to subscribe as an end-user customer.³² In addition, to the extent that carriers are allowed to charge a higher rate for calls that go off their networks (“off-net” calls) than for calls that remain on their networks (“on-net” calls), this may cause subscribers to choose larger networks, which could cause competitive networks to tip into monopoly.

²⁹ See, e.g., In the Matter of Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC’s Local Exchange Area, CC Docket No. 96-149, *Second Report and Order*, 12 FCC Rcd. 15756, 15826-33 ¶¶ 120-30 (1997); *Access Charge Reform*, 12 FCC Rcd. at 16100-05 ¶¶ 275-84.

³⁰ *Local Competition Order*, 11 FCC Rcd. at 16040-41 ¶¶ 1085-86.

³¹ Bridger M. Mitchell & Padmanabhan Srinagesh, *Transport and Termination Costs in PCS Networks: An Economic Analysis* at 20-21 (Sprint PCS, White Paper, Apr. 4, 2000) (“*Sprint PCS Study*”).

³² See DeGraba, *supra* note 18, at 32-33 ¶ 113.

C. Economic Rationales for Intercarrier Compensation

1. Traditional Rationale for Calling-Party's-Network-Pays Regimes

19. Modern economic analysis of intercarrier compensation dates to the introduction of competition into the long-distance market in the United States. Given this background, it is not surprising that mainstream economic analyses have generally focused on the problem of setting both end-user rates and access charges so as to recover the full costs of a local network while at the same time ensuring efficient usage of the network.³³ Because these studies assumed that local networks exhibit increasing returns to scale, setting price equal to marginal cost would not generate sufficient revenues to cover the total cost of the network. Accordingly, the authors generally applied Ramsey-type analysis to determine the optimal increase of price above marginal cost for each service provided over the network, including the price of access to the network.³⁴ Two features of these traditional analyses are particularly noteworthy. First, in defining the problem, these studies took as a given that local exchange carriers would charge other carriers for access to their networks. In other words, these models did not explicitly consider *whether* carriers should charge other carriers interconnection prices; rather, they only examined the efficient level of those charges *assuming* that they were assessed. Second, while the authors recognized that both parties to a call generally benefited from a call,³⁵ they nevertheless assumed that the calling party was the sole cost causer of the call.³⁶ They made this simplifying assumption not only to make the analysis more tractable, but also because they

³³ More formally, these mathematical models have maximized a social welfare function (usually the sum of consumers' and producers' surpluses) subject to the constraint that the LEC break even or earn a normal return. For example, Willig considered the problem of setting optimal prices for access and network services in a model where the ILEC is the monopoly provider of access and local usage, but competes in providing various non-local services. While recognizing that consumers generally benefit from both incoming and outgoing calls, Willig argued that one could develop optimal access charges by billing only the calling party's network for outgoing calls. See Robert D. Willig, *The Theory of Network Access Pricing*, in ISSUES IN PUBLIC UTILITY REGULATION 109 (H. Trebing, ed. 1979). More recently, Laffont and Tirole considered optimal pricing rules in models of both "one-way access" (*i.e.*, LECs providing access to long-distance carriers) and "two-way access" (*i.e.*, two competing local networks compensating each other for terminating calls originating on each other's network). See, *e.g.*, JEAN-JACQUES LAFFONT & JEAN TIROLE, *supra* note 11, at 179-215.

³⁴ Ramsey pricing is a form of non-uniform pricing that is used in situations where setting price equal to marginal cost would not allow a firm to recover all its costs. More specifically, in decreasing cost industries where marginal-cost pricing would result in deficits, Ramsey analysis provides a rule for setting prices above marginal cost, where the deviation of price from marginal cost depends on the price elasticities of demand, including cross-price elasticities of demand, for the firm's product. See generally Frank Ramsey, *A Contribution to the Theory of Taxation*, 37 ECON. J. 47 (1927); KENNETH E. TRAIN, *OPTIMAL REGULATION: THE ECONOMIC THEORY OF NATURAL MONOPOLY* 115-45 (1992).

³⁵ See, *e.g.*, Lyn Squire, *Some Aspects of Optimal Pricing for Telecommunications*, 4 BELL J. ECON. 515 (1973) (noting that the called party generally benefits from receiving a call); Willig, *supra* note 33, at 114, 124-28.

³⁶ We recognize that some parties have argued, in discussions of access charge reform, that both the calling party and her IXC are the "cost causers" of long-distance calls. See, *e.g.*, *CALLS Order*, 15 FCC Rcd. at 12999-13000 ¶¶ 94-95. We note, however, that the Commission has uniformly found that it is the calling party, and not its IXC, that "causes" the cost of the long-distance call. *Id.* As discussed below, the more immediate issue is whether the calling party is the sole cost causer of a call, or whether the calling party and called party are joint cost causers. See *infra* Section III.B.1.

believed that the parties could solve (or “internalize”) any externality caused by charging only the calling party by simply trading phone calls.³⁷

20. Bill-and-keep arrangements are generally considered inefficient under traditional analyses of intercarrier compensation. More specifically, if one assumes that the calling party should pay the cost of the terminating carrier, then a bill-and-keep arrangement is only efficient if the cost of transporting and terminating a call is zero. If there is a positive cost of termination, which most analyses have assumed, then a bill-and-keep arrangement is inefficient because it will cause originating carriers (and calling parties) to overuse other carriers’ termination facilities.³⁸ Despite this, the Commission, recognizing that bill-and-keep arrangements could reduce “administrative burdens and transaction costs,” held in the *Local Competition Proceeding* that state PUCs could impose bill-and-keep arrangements “if traffic is roughly balanced in the two directions and neither carrier has rebutted the presumption of symmetrical rates.”³⁹

21. As discussed below, however, subsequent analyses have cast doubt on the assumption that the calling party is the sole cost causer and sole beneficiary of a call, and on the traditional view that bill-and-keep arrangements are only efficient in certain narrow circumstances.

2. New Approaches to Intercarrier Compensation

22. In light of the issues discussed in section II.B above, Commission staff members have released two working papers that propose alternative solutions to these intercarrier compensation problems. While the two papers differ significantly in their details, both offer justifications for a bill-and-keep approach to intercarrier compensation. Both working papers also propose default interconnection rules that would apply only when carriers cannot agree on the terms for interconnection.

23. *Central Office Bill and Keep (COBAK)*. Patrick DeGraba proposes default interconnection rules that would apply to all types of carriers that interconnect with, and to all types of traffic that pass over, the local circuit-switched network. Specifically, for local calls involving two local networks, DeGraba proposes two rules: (1) that no carrier may recover any costs of its customers’ *local access facilities* from an interconnecting carrier;⁴⁰ and (2) that the calling party’s network is responsible for the cost of transporting the call to the called party’s

³⁷ An externality occurs where there is a divergence between private and social costs and benefits. See, e.g., WILLIAM J. BAUMOL, *ECONOMIC THEORY AND OPERATIONS ANALYSIS* 517-20 (4th ed. 1977). In this case, the externality occurs because both the calling party and called party benefit from the call, but only the calling party is charged for the call. The parties can solve this externality by taking turns calling each other, so that both parties will pay for the cost of the call as well as benefiting from the call. See, e.g., Willig, *supra* note 33, at 128.

³⁸ See, e.g., *Local Competition Order*, 11 FCC Rcd. at 16055 ¶ 1112.

³⁹ *Id.*

⁴⁰ DeGraba defines *local access facilities* as consisting of the loop serving the customer’s premises and the central office that serves the customer’s loop. DeGraba, *supra* note 18, at 9 ¶ 23.

central office.⁴¹ As DeGraba explains, his Rule 1 means that the called party's network cannot charge the calling party's network to terminate a call. DeGraba's Rule 2 means that the calling party's network must either construct transport facilities to the called party's central office, or purchase transport facilities or services from another carrier, including possibly the called party's network. As DeGraba explains, the main theoretical rationale underlying his proposal is that both parties generally benefit from participating in a call, and therefore, that both parties should split the cost of the call. Notice that DeGraba's theoretical rationale, that both parties should split the cost since both benefit, provides a rebuttal to the traditional criticism of bill-and-keep arrangements—*i.e.*, that they do not properly assign the cost of the call to the cost causer.

24. DeGraba claims various additional advantages of COBAK. First, he claims that COBAK will significantly reduce regulatory arbitrage, including the ISP reciprocal compensation problem and the regulatory advantage that IP telephony providers currently have over traditional IXCs. Second, he argues that, by eliminating termination charges, COBAK will eliminate, or significantly reduce, the terminating access monopoly problem. Third, by eliminating most per-minute interconnection charges, DeGraba argues that COBAK should lead to more efficient retail rates and thus more efficient network usage. Finally, he contends that COBAK will reduce the need for regulatory intervention—specifically, the need for regulators today to determine the economically efficient level and structure of termination charges, and in the longer term, to regulate transport rates.⁴²

25. *Split the Incremental Cost of Interconnection.* Approaching the problem from a different perspective, Jay Atkinson and Christopher Barnekov develop an analysis that also supports a default bill-and-keep interconnection regime. Emphasizing the goals of efficiency and competitive neutrality, Atkinson-Barnekov propose “Bill Access to Subscribers–Interconnection Cost Split” (“BASICS”). BASICS consists of two rules: (1) networks should recover all intra-network costs from their end-user customers; and (2) networks should divide equally the costs that result purely from interconnection.

26. Atkinson-Barnekov develop their analysis in the context of “fully-provisioned networks”—*i.e.*, networks that have sufficient capacity to allow their subscribers to make and receive all calls as they wish. They then extend this analysis to less fully provisioned networks, showing that if a network chooses to lower its quality of service (*i.e.*, the probability of a call getting through falls below 100 percent), then calls entirely within that network are affected, together with interconnecting calls. However, service quality within the network of the other interconnecting carrier is not degraded by this choice. The facilities required within a network to handle calls to and from that network's own subscribers are considered “intra-network costs” in the Atkinson-Barnekov analysis.

27. For fully provisioned networks that face the same costs per unit of facilities, the Atkinson-Barnekov proposal results in an equal per-subscriber cost for the two interconnecting

⁴¹ *Id.* For interexchange calls, DeGraba's second rule is modified to make the calling party's LEC responsible for delivering the call to the IXC's point of presence (“POP”), and the calling party's IXC responsible for delivering the call to the called party's central office. *Id.* at 10 ¶ 28.

⁴² *Id.* at 22-29 ¶¶ 75-101, 34-35 ¶ 121-24.

networks. This cost per subscriber is also equal to that of a single network containing the subscribers of both interconnecting networks, so that interconnection is equivalent to subscription. More generally, Atkinson-Barnekov show that their proposed rule does not distort whatever cost and quality relationship the networks had before interconnecting. They argue that the rule is competitively neutral in this sense.⁴³

28. Two important assumptions underlie the Atkinson-Barnekov analysis. The first assumption is that one can clearly distinguish between a carrier's "intra-network costs" and "the incremental cost of interconnection." The second underlying assumption is that the incremental costs of interconnection involve primarily capacity costs that should be recovered through flat charges. Accepting this latter assumption eliminates the need for traffic-sensitive interconnection charges.

29. Atkinson-Barnekov assert that, if their theoretical solution can be implemented, it would induce interconnecting carriers to negotiate efficient interconnection agreements. In the presence of a competitive transport market, regulators would not need to intervene unless normal negotiation and arbitration procedures failed to produce agreement.⁴⁴ Atkinson-Barnekov also assert that their proposal avoids the problems of common cost allocation entirely. They further claim that their proposal produces an efficient allocation of interconnection costs between carriers regardless of the balance of traffic between networks, or how the calling and called parties bear the cost of a call.⁴⁵

30. Notice that Atkinson-Barnekov's Rule 1 is similar to DeGraba's Rule 1. Whether they are identical depends on how one interprets Atkinson-Barnekov's definition of "intra-network costs," and the details of DeGraba's definition of "local access facilities."⁴⁶ Atkinson-Barnekov's Rule 2 clearly differs from DeGraba's second rule. Nevertheless, both rules attempt to achieve an efficient allocation of transport costs. The main difference appears to be that DeGraba intentionally chooses an inefficient default rule for transport costs in order to prevent free-riding and to encourage voluntary negotiation, while Atkinson-Barnekov choose a rule that possesses certain efficiency properties.

⁴³ Thus, if end-user prices are based on cost, splitting interconnection costs does not bias end users' choices between networks or between technologies. Atkinson-Barnekov argue that, in this sense, their proposal satisfies their goal of competitive neutrality. Jay M. Atkinson & Christopher C. Barnekov, *A Competitively Neutral Approach to Network Interconnection* at 13-15 ¶¶ 33-38 (Federal Communications Commission, OPP Working Paper No. 34, Dec. 2000).

⁴⁴ *Id.* at 8 ¶ 18.

⁴⁵ *Id.* at 15 ¶ 38.

⁴⁶ Atkinson-Barnekov adopt a general theoretical approach to intercarrier compensation, but in the context of various stylized network models. DeGraba, in contrast, appears to adopt a more explicit approach by attempting to clearly define the boundary between "local access" and "transport" facilities.

III. DISCUSSION

A. Appropriate Goals for Intercarrier Compensation Rules in Competitive Markets

31. It is well recognized that regulators, including this Commission, have long used intercarrier compensation rules to achieve multiple goals.⁴⁷ One of the main goals of this Commission in setting intercarrier compensation rules in recent years has been to encourage efficiency. Thus, for example, the Commission has repeatedly emphasized the need to establish efficient rate structures and efficient rate levels.⁴⁸ But efficiency has not been the only goal of intercarrier compensation rules. For example, in order to encourage universal service, this Commission and state regulators historically set access charges above cost. By doing so, they hoped to be able to keep local telephone rates low, and thus telephone penetration rates high. Similarly, in order to encourage the development of enhanced services, this Commission in 1983 exempted ESPs from having to pay carrier access charges.⁴⁹

32. With the passage of the 1996 Act, and its mandate for opening all telecommunications markets to competition, it is no longer clear that intercarrier compensation rules can serve all of these multiple goals. For example, Congress, in passing the 1996 Act, recognized that the implicit subsidies historically contained in access charges are not sustainable in competitive local telecommunications markets.⁵⁰ Accordingly, Congress in the 1996 Act directed this Commission and the states to reform universal service, and in particular, to eliminate implicit subsidies contained in access charges and instead make all universal service support *explicit*.⁵¹

33. In light of the major recent changes in telecommunications markets, including the passage of the 1996 Act and the resulting increase in competition in local telephone markets, and the rapid technological changes that have been occurring in telecommunications, we seek comment on the appropriate goals for intercarrier compensation regulations. In particular, we seek comment on whether efficiency should be the sole or paramount goal of intercarrier compensation policy. We also seek comment on how we should evaluate whether a particular intercarrier compensation regime encourages efficiency. More specifically, should we consider whether a particular pricing regime encourages the efficient use of the network by end-user customers? Should we also consider whether a particular pricing regime encourages the efficient investment in, and deployment of, network infrastructure, including investment in broadband

⁴⁷ See, e.g., JEAN-JACQUES LAFFONT & JEAN TIROLE, *supra* note 11, at 98 (noting that interconnection regulation generally “must reflect multiple objectives”).

⁴⁸ See, e.g., *Local Competition Order*, 11 FCC Rcd. at 15874-79 ¶¶ 743-57; *CALLS Order*, 15 FCC Rcd. at 12970 ¶¶ 19-20.

⁴⁹ See *MTS and WATS Market Structure*, 97 FCC 2d at 711-12 (1983).

⁵⁰ See S. REP. NO. 103-367 (1994).

⁵¹ 47 U.S.C. § 254(e). See also H.R. CONF. REP. NO. 104-458 at 131(1996); *Universal Service Order*, 12 FCC Rcd. at 8783-84 ¶ 9.

infrastructure? In this context, should we consider whether a particular intercarrier compensation regime is technologically and competitively neutral?

34. It also seems appropriate to consider the degree of regulatory intervention required to implement various interconnection regimes. Some regimes require extensive regulatory intervention, while others are more market-oriented and thus largely self-administering. Market-oriented solutions may provide more timely adjustments and avoid distortions resulting from incorrect or outdated regulatory decisions. They may also avoid substantial litigation costs. Certain types of regulatory decisions are especially problematic—*e.g.*, the allocation of common costs among services or users. There is precedent for resolving problems such as common cost allocation, or possible market power in some market segments, by creating a demarcation. For example, customer premises equipment (CPE) was deregulated by separating it from the market for local exchange services.⁵² Bill and keep would similarly provide a demarcation between networks, so that regulators need not allocate costs. We invite comment on the weight we should give to such considerations, as well as on the extent to which particular proposals require regulatory intervention.

35. It also appears reasonable to consider whether a particular intercarrier compensation proposal would resolve the difficult issues that characterize current intercarrier compensation regimes. Related to this, it appears reasonable to ask whether a particular pricing proposal is likely to create new problems. We seek comment on these observations. We also invite parties to suggest alternative goals that the Commission should consider in evaluating alternative intercarrier compensation regimes.

36. Finally, many of those advocating the need for reforming existing intercarrier compensation rules argue that, with the introduction of local competition and new technologies (including packet-switched networks that are used for both voice and data), it has become essential to adopt a single, unified approach to intercarrier compensation.⁵³ We seek comment on this view. In particular, we invite comment on the possible advantages and disadvantages of moving to a single, unified approach to intercarrier compensation.

B. Bill-and-Keep Arrangements

1. Policy Justifications for a Bill-and-Keep Regime

37. CPNP regimes may be viewed as implicitly embracing the premise that the originating caller receives all the benefits of a call and should, therefore, bear the costs of both origination and termination.⁵⁴ Under this reasoning, the originating LEC pays the terminating telecommunications carrier and presumably recovers the payment from the rates charged to the originating caller. We question this assumption. If a caller telephones a catalog merchant, surely that merchant benefits at least as much as the caller. When a LEC terminates a call originating

⁵² See *infra* ¶ 41.

⁵³ See DeGraba, *supra* note 18, at 25 ¶ 85.

⁵⁴ We note, however, that with respect to LEC-to-CMRS calls, CPNP typically does not assign the full cost to the originating carrier and caller. CMRS firms typically still charge their own subscribers for incoming calls.

on the network of another LEC, it provides a benefit to both the originating caller *and* to its customer, the called party. As a consequence, there may be no reason why *both* LECs should not recover the costs of providing these benefits directly from their end users. Bill-and-keep provides a mechanism whereby end users pay for the benefit of making *and* receiving calls. Therefore, we seek comment on whether both the calling and the called party benefit from a call, and on the implications that cost causality has for choice of an intercarrier payment regime.

38. An intercarrier compensation regime that involves termination payments may create the opportunity to exploit undesirable pricing power for the terminating carrier. A terminating carrier has a sort of monopoly over the loop serving its end user: any interconnecting carrier that wishes to reach that customer *must* use that carrier's network. While end users can choose carriers, an interconnecting carrier *must* use the carrier that the end user has selected if it is to deliver traffic to the end user at all. Thus, the originating carrier cannot itself avoid unreasonable terminating charges. Moreover, where the originating carrier is effectively unable to pass on to the calling parties any terminating charges because of flat rate pricing and rate averaging, then the callers see no market price signals giving them an incentive to avoid those costs. In this situation, unreasonable termination charges may persist. Furthermore, per-minute reciprocal compensation rates may also give carriers the opportunity and incentive to leverage their position by seeking end users with disproportionately incoming traffic. Such artificial incentives may indeed have contributed to the current imbalances in traffic exchanged between ILECs and CLECs.⁵⁵ We seek comment on these observations.

39. Proponents of bill and keep claim that it can enable regulators to avoid two difficult problems.⁵⁶ The first is the allocation of common costs among services. The traditional approach to interconnection requires viewing intercarrier calls (local or long-distance) as services among the many others that carriers market to end users. This makes most network costs (particularly loop costs) common costs to be allocated among these various services. Markets make such allocations correctly, proponents argue. Regulators, however, cannot know enough relevant detail about specific market conditions.⁵⁷ This problem is intensified by the rule that the calling party's network pays the entire cost of the call. Because this cost includes an allocation of common costs, the calling party's network pays a share of the common costs of the called party's network. There is no perfect solution to these cost allocation problems, largely because regulators cannot know how benefits are distributed between the parties. That is, regulators cannot see individuals' demand functions. Any allocation that a regulator can make is arbitrary (in the economic sense), yet even a small allocation error can produce massive distortions. Proponents argue that an efficient bill-and-keep regime spares regulators the necessity of allocating common costs.

⁵⁵ See *ISP Intercarrier Compensation Order* at ¶¶ 75-76; *CLEC Access Charge Order* at ¶ 28-31.

⁵⁶ Atkinson-Barnekov, *supra* note 43, at 4-6 ¶¶ 9-11.

⁵⁷ Proponents argue that even if regulators could gather the relevant data, it would be out of date before they could assemble it. The genius of markets is their ability to make rapid, decentralized decisions that are efficient. See Friedrich A. Hayek, *The Use of Knowledge in Society*, AMERICAN ECONOMIC REVIEW, XXXV, No. 4 at 519-30 (Sept. 1945).

40. The second problem avoided by bill and keep, according to proponents, is the sense that end users have no direct control over access arrangements under current regimes. Under the access charge regime, IXCs must purchase access from LECs on both the originating and terminating ends of calls. IXCs must average the access charges they pay, so that IXC customers pay the same rate whether they call to, or from, a high-cost or low-cost LEC. IXCs may not pass through the access charges incurred on a particular call to the end user who makes that call. For local traffic, the current reciprocal compensation rules produce similar results. Thus, even if an omniscient regulator could discern the correct intercarrier cost allocations, these would not necessarily result in correct end user rates. The parties to a call are not empowered, under current arrangements, to choose the lowest-cost means of completing a call with the quality and other characteristics that they prefer. Therefore, correct intercarrier cost assignments cannot even assure efficient outcomes under current arrangements, because end users have no direct control over their access arrangements.

41. Bill-and-keep proposals may be seen as following the precedent of the Commission's 1980 *Computer II* decision that deregulated CPE.⁵⁸ This decision was equivalent to mandating interconnection with customer-owned CPE, and setting a zero interconnection rate for CPE.⁵⁹ That is, local carriers could no longer charge for, or control, the end user's purchase or use of CPE meeting FCC technical standards. Prior to 1980, LECs priced CPE usage as many discrete services. The resulting common cost allocation problems were insoluble, and pricing was based primarily on marketing estimates of demand elasticities for particular services. *Computer II* gave customers complete control of (and responsibility for) the wiring and equipment on their side of the network interface device (NID).⁶⁰ This decision also eliminated the cost allocation problems involving CPE. Atkinson-Barnekov suggest that, just as CPE was separated from local service, an efficient bill-and-keep regime can separate inter-network interconnection from local service in a manner that resolves common cost allocation problems. Such a regime also gives end users direct control over their access arrangements—*i.e.*, the ability to choose carriers on the basis of services and costs.

2. Re-examining the Efficiencies of Bill-and-Keep Arrangements

42. *Termination Costs.* As discussed above, traditional economic analyses of intercarrier compensation viewed bill-and-keep arrangements as inefficient in general because they did not require the calling party and her network to pay the cost of the terminating carrier. This meant that the originating carrier was likely to overuse other carriers' termination facilities. The one exception, where bill and keep was viewed as efficient, was where there were no traffic-sensitive costs of termination. The Commission adopted this analysis in the *Local Competition Proceeding*, though for reasons of administrative economy, it also permitted bill-and-keep arrangements where the traffic between two networks is relatively balanced while the rates are symmetric.⁶¹

⁵⁸ See Atkinson-Barnekov, *supra* note 43, at 6 ¶ 12.

⁵⁹ GERALD W. BROCK, INTERCONNECTION AND MUTUAL COMPENSATION WITH PARTIAL COMPETITION at 17, reprinted in GERALD W. BROCK, THE ECONOMICS OF INTERCONNECTION (Teleport Communications Group 1995).

⁶⁰ See generally Brock, *supra* note 6, at 79-101.

⁶¹ See 47 C.F.R. § 51.713; *Local Competition Order*, 11 FCC Rcd. at 16028-29 ¶¶ 1063-64.

43. Subsequent to the release of the Commission's *Local Competition Order*, a number of developments have occurred that may justify our re-examining this conclusion about the inefficiencies of bill and keep. For example, we have seen large Internet backbone providers enter into peering arrangements. Similarly, certain ILECs have proposed bill-and-keep arrangements for certain classes of traffic.⁶² Finally, the OPP working papers summarized above have suggested justifications for bill-and-keep arrangements. In light of these developments, we seek comment on our earlier conclusion in the *Local Competition Order*.

44. More specifically, we seek comment first on possible reasons or rationales why bill-and-keep arrangements may be efficient. For example, we seek comment on the rationales contained in the DeGraba and Atkinson-Barnekov working papers. We also seek comment on any other rationales for finding bill and keep efficient. With respect to any justification of bill and keep, we ask that parties explain the conditions under which the justification holds. For example, would a particular rationale hold if: (1) only one party to the call benefited from the call; (2) the two interconnected networks had unbalanced traffic; (3) the two networks had dissimilar costs or cost structures (*e.g.*, one network exhibited significant economies of scale); or (4) the two networks offered different qualities of service? Thus, for any proposed justification, we ask the parties to state the conditions where bill and keep would be efficient (and in what sense), and the conditions where bill and keep would not be efficient.

45. Finally, we seek comment on whether bill-and-keep arrangements would preclude efficient forms of price discrimination. We note that regulators have historically recognized that it may be efficient to charge different prices to different users in order to recover the fixed cost of the network.⁶³ We seek comment on whether the potential efficiency gains of such non-uniform pricing are outweighed by the benefits of bill-and-keep arrangements.

46. *Transport Costs.* As previously noted, there are a number of different approaches to the treatment of transport costs under bill and keep. For example, DeGraba suggests that the calling party's network should be responsible for the cost of transporting the call to the called party's central office. A second approach would be for the parties to split the cost of transport equally. For example, the Atkinson-Barnekov proposal, requiring that the incremental cost of interconnection be split, leads under certain assumptions to an equal division of transport costs. A third approach would be for the interconnecting networks to share the cost of transport based on their relative balance of peak traffic. We invite parties to suggest alternative approaches to allocating transport costs. Parties are strongly encouraged to comment on any alternative approaches offered by other parties, as the latter may contain aspects that the Commission will choose to pursue.

47. DeGraba acknowledges that his proposed rule for transport is inefficient, but argues that it will create incentives for interconnecting carriers to agree on a more economical

⁶² See, *e.g.*, Letter from Robert T. Blau, Vice President-Executive and Federal Regulatory Affairs, BellSouth, to Dorothy Attwood, Chief, Common Carrier Bureau, CC Docket No. 99-68 at 8-10 (filed Dec. 22, 2000) (proposing that the Commission "ramp down" to bill and keep by placing limits on the volume of dial-up Internet access calls that qualify for reciprocal compensation).

⁶³ See, *e.g.*, JEAN-JACQUES LAFFONT & JEAN TIROLE, *supra* note 11, at 101-05, 191-95; KENNETH E. TRAIN, *supra* note 34, at 115-145.

and efficient meet-point arrangement. We seek comment on DeGraba's analysis. In particular, we seek comment on whether the potential savings offered under a meet point arrangement will induce carriers to agree to a more efficient solution to the transport problem. We also ask parties to comment on the strength and effectiveness of this incentive to negotiate a solution where traffic between the parties is unbalanced.

48. As previously indicated, Atkinson-Barnekov argue that it is efficient to require that interconnecting carriers equally split the incremental cost of interconnection. More specifically, Atkinson-Barnekov demonstrate that, under certain assumptions, their split-the-cost rule would require each network to bear equal per-subscriber costs after interconnection. More generally, they show that this rule does not distort whatever cost and quality relationship the networks had before interconnecting. They argue that the rule is competitively neutral in this sense. We seek comment on whether this conclusion holds true under other assumptions concerning network size, cost structure, and quality of service. If parties believe that the Atkinson-Barnekov results cannot be easily generalized under alternative network assumptions, we seek comment on whether their proposed rule would nevertheless result in an efficient intercarrier compensation regime.

49. More generally, with respect to the DeGraba and Atkinson-Barnekov approaches, and any alternative approaches that parties might suggest, we ask parties to comment on whether that approach is efficient, and in what sense. For example, we seek comment on whether particular approaches to allocating transport costs will generate efficient usage of the network and efficient deployment of network facilities, particularly transport facilities. We also seek comment on whether a particular approach would be competitively neutral.⁶⁴ Finally, we seek comment on whether a particular approach to allocating transport costs will likely result in entities making efficient choices between subscribing to a network as an end-user customer or interconnecting with a network as a carrier.

50. A criterion for efficient resource allocation is that the marginal benefit from consumption should equal the marginal cost of production. We seek comment on the extent to which cost sharing should be a criterion for selecting an intercarrier compensation regime. We seek comment on the importance of an interconnection regime's equitable cost distribution relative to its other efficiency properties.

51. *Transactions Costs.* Measuring and billing for terminating access invariably involves transactions costs, no matter which party to the transaction is billed. For example, with CPNP, the terminating LEC bills the originating network, whereas with COBAK, the terminating LEC bills its own customers. It is also possible that a terminating LEC may wish to bill the originating customer directly for termination services. These alternatives are not mutually exclusive, but they do involve transactions costs of measuring and billing; and notably, lower transactions costs are preferred to higher transactions costs. We invite comments on the relative sizes of transactions costs for these various alternatives, and how these transactions costs compare with other efficiencies (or lack thereof) for the various alternatives.

⁶⁴ In responding to this question, we ask parties to explain what they mean by "competitively neutral."

3. Bill and Keep as a Solution to Existing Interconnection Issues

52. We also ask parties to comment on whether bill and keep in general, or specific bill-and-keep proposals, will resolve, in whole or in part, existing interconnection problems. Both DeGraba and Atkinson-Barnekov argue that their versions of bill and keep will eliminate or ameliorate most of the regulatory arbitrage opportunities caused by existing interconnection regulations. More specifically, DeGraba contends that COBAK both will eliminate the regulatory advantage that IP telephony currently has over traditional long-distance service, and, by eliminating termination charges, will solve or reduce the ISP reciprocal compensation problem and the “one-way-network” problem.⁶⁵ Similarly, Atkinson-Barnekov argue that their proposal will significantly dampen current schemes to evade access charges.⁶⁶ We seek comment on these assertions. In particular, we seek comment on whether bill-and-keep arrangements in general, or specific forms of bill and keep, will solve or reduce these problems. We also seek comment on whether COBAK or other forms of bill and keep will reduce incentives, created by the existing system of interconnection regulation, for carriers to invest inefficiently.

53. We also seek comment on the potential impact of bill and keep on issues raised by terminating access monopolies. DeGraba, for example, argues that, by requiring local carriers to recover the cost of termination from their end-user customers, bill and keep eliminates the terminating monopoly.⁶⁷ We seek comment on this argument. In particular, we seek comment on whether a bill-and-keep arrangement will eliminate any market power arising from the local carrier’s bottleneck control, or whether, because the terminating local carrier still possesses bottleneck control over the trunk port at the central office, a terminating local carrier could still exercise monopoly power. If it could, then are there easily implementable solutions to this problem? For example, would it be sufficient simply to prohibit the terminating carrier from charging a traffic-sensitive charge for the trunk port?

54. As Atkinson-Barnekov point out, existing interconnection regimes may distort an entity’s decision whether to subscribe as an end-user customer, or to interconnect as a network. For example, where an entity primarily or exclusively receives traffic, it may have an incentive under the current CPNP regime to claim to be a network. Both DeGraba and Atkinson-Barnekov claim that their proposals will reduce this effect.⁶⁸ We seek comment on those claims. We also seek comment on how their proposals might affect the subscription/interconnection decisions of entities that primarily or exclusively originate traffic, such as payphones.

55. DeGraba suggests that, if we move to COBAK, we should also shift from recovering termination costs through per-minute charges, to recovering termination costs through flat monthly charges.⁶⁹ This raises the issue of how moving to a bill-and-keep arrangement

⁶⁵ DeGraba, *supra* note 18, at 22-24 ¶¶ 75-83.

⁶⁶ Atkinson-Barnekov, *supra* note 43, at 26-27 ¶ 76.

⁶⁷ DeGraba, *supra* note 18, at 25-26 ¶¶ 89-90.

⁶⁸ *Id.* at 24-25 ¶¶ 84-88; Atkinson-Barnekov, *supra* note 43, at 13-14 ¶ 34 n.46.

⁶⁹ DeGraba, *supra* note 18, at 27-28 ¶ 95-96.

might affect end-user rates. For example, if we move to a bill-and-keep arrangement and recover termination costs from the called party, should we regulate the rates that carriers charge their end users for termination? Assuming that we want to continue to regulate end-user rates for dominant carriers, what is the appropriate rate structure to adopt? Should LECs recover termination costs through per-minute charges, or should we require flat monthly charges? Should we allow carriers to give customers a choice between paying per-minute rates or flat monthly rates for termination? What measures, if any, might we adopt to protect called parties from charges caused by unwanted calls?

56. An additional advantage of bill and keep, DeGraba claims, is that it eliminates the need for regulators to set the level and structure of termination rates.⁷⁰ DeGraba also claims that bill and keep reduces the incentive for carriers to overstate their termination costs, because termination costs must be recovered from end-user customers who can change carriers if rates are too high.⁷¹ Similarly, to the extent that termination costs are not incremental to interconnection, the Atkinson-Barnekov approach requires carriers to recover termination costs from their own customers, and thus, like the DeGraba approach, frees regulators from setting termination rates.⁷² We seek comment in general on these assertions.

57. DeGraba further argues that his proposal for allocating transport costs should be easy for regulators to implement, because it creates incentives for networks to agree on interconnection terms and thus frequently avoid the need for regulatory intervention.⁷³ We seek comment on this assertion. More specifically, we seek comment on DeGraba's claim that his rule will encourage networks to voluntarily negotiate interconnection agreements. We also seek comment on Atkinson-Barnekov's claims that the incremental costs of interconnection are easy to estimate, and generally will not involve incremental switching costs. For example, we seek comment on how a regulator would estimate the incremental costs of interconnection, where a CLEC interconnects with an ILEC at the ILEC's tandem switch. We seek comment on the relative merits of these assertions. Finally, with respect to any alternative method of allocating transport costs, we seek comment on the relative advantages and disadvantages of such an approach compared to the current treatment of transport costs.

4. Weighing the Potential Disadvantages of Bill-and-Keep Arrangements

58. One obvious concern about shifting to a new paradigm for intercarrier compensation is that the new approach may create new and unexpected problems, and that these new problems may outweigh the benefits of the new regime. Accordingly, in this section, we seek comment on various implementation issues or problems that are likely to arise if we should move to a bill-and-keep regime. In particular, we seek comment on certain concerns regarding the DeGraba and Atkinson-Barnekov proposals.

⁷⁰ *Id.* at 26-27 ¶¶ 91-93.

⁷¹ *Id.* at 27-29 ¶¶ 94-101.

⁷² Atkinson-Barnekov, *supra* note 43, at 15-16 ¶¶ 39-40.

⁷³ DeGraba, *supra* note 18, at 21-22 ¶ 73.

59. As DeGraba points out, two implementation issues associated with COBAK are: (1) how to define the central office; and (2) whether COBAK creates an incentive for carriers to locate central offices inefficiently.⁷⁴ DeGraba notes that COBAK's rules for allocating the cost of transporting the call may create an incentive for a carrier either to claim that the central office is close to its customer, or to physically locate the central office close to its customer.⁷⁵ The issue of how to treat such "host-remote" switches illustrates this problem. First, parties are likely to disagree as to whether a remote switch is a central office, because a remote switch possesses different functionalities than a host, and in particular, because a remote switch is not interconnected directly with other remotes. Second, if we were to decide that only host switches qualify as a central office, then this might deter networks from deploying host-remote configurations which might otherwise be the most efficient switching technology currently available. A related issue can arise in the case of a network that chooses to deploy switches to serve subscribers over a large geographic area. Under COBAK, a remote network seeking interconnection would be required to carry traffic to this switch. DeGraba suggests that this could be resolved by allowing networks to assess toll charges for such transport.⁷⁶ Alternatively, COBAK could be interpreted to apply only to networks maintaining switches in singular, well-defined local calling areas. We seek comment on these concerns and invite parties to recommend alternative solutions.

60. A second implementation issue raised by DeGraba concerns unwanted calls.⁷⁷ Under the current CPNP regime, called parties generally do not pay for unwanted calls.⁷⁸ Under the DeGraba proposal, unwanted calls may increase because the costs imposed on calling parties are reduced. In addition, it is possible (depending on the retail rate structure) that called parties may have to pay traffic-sensitive charges for unwanted calls. We seek comment on the extent to which this is likely to be a problem, and invite parties to suggest ways to alleviate this problem.

61. Finally, DeGraba acknowledges that, at least until competition in transport develops further, it may be necessary to regulate the transport rates charged by ILECs.⁷⁹ He argues, however, that this would require no additional regulation of ILECs beyond what is required under existing CPNP regimes, and no additional regulation of end-user rates by CLECs.⁸⁰ We seek comment on this analysis.

⁷⁴ *Id.* at 30-32 ¶¶ 103-112.

⁷⁵ *Id.* at 30 ¶ 103.

⁷⁶ *Id.* at 31-32 ¶ 110.

⁷⁷ *Id.* at 33-34 ¶¶ 117-119.

⁷⁸ We note that CMRS subscribers may be required to pay for unwanted calls under CPNP regimes. That is, even under CPNP, CMRS subscribers may still pay directly for termination. However, market solutions to the unwanted call problem have emerged, such as first-incoming-minute-free pricing plans.

⁷⁹ DeGraba, *supra* note 18, at 34 ¶¶ 120-21.

⁸⁰ *Id.*

62. Atkinson-Barnekov emphasize the distinction between the “costs incremental to *traffic* and costs incremental to *interconnection*,”⁸¹ and they argue that only the costs incremental to *interconnection* should be split between carriers.⁸² Underlying their analysis of the incremental cost of interconnection is the concept of a “fully provisioned network,” which essentially is a network with such sufficient capacity that “any subscriber can always complete a call to any other subscriber who is not already engaged in a conversation.”⁸³ We seek comment on Atkinson-Barnekov’s distinction between costs incremental to traffic and costs incremental to interconnection, and on their concept of a “fully provisioned network.” In particular, we seek comment on how a regulator or arbitrator, in trying to determine the incremental costs of interconnection, would apply these concepts. We also seek comment on how this approach would be extended to interconnection arrangements between networks with different structures. Finally, we seek comment on how a regulator would resolve disputes between carriers concerning the incremental cost of interconnection.

63. Both DeGraba and Atkinson-Barnekov argue that their proposals would not preclude various end-user pricing schemes, such as calling-party-pays options or 800 numbers.⁸⁴ We seek comment on this claim. We also seek comment on whether the adoption of a bill-and-keep arrangement would generate new billing or collection problems for carriers, particularly where a carrier seeks to charge an entity that is not its customer.

64. We seek comment on whether the DeGraba or Atkinson-Barnekov proposals will generate other new problems. For example, if we move to a bill-and-keep arrangement for ISP-bound traffic, as proposed below, will this cause carriers to increase the rates they charge ISPs, which could then result in higher Internet access prices? To the extent that Internet access prices would rise, is the increase likely to take the form of a higher flat rate, or is it likely to result in the introduction of traffic-sensitive rates? Finally, to the extent that parties suggest other bill-and-keep arrangements, we ask them to identify any new problems that such an arrangement is likely to generate, and to suggest ways of dealing with those problems. Parties should provide concrete evidence and explanations for their calculations and assumptions.

65. We seek comment on the possible application of a bill-and-keep regime to LEC-CMRS interconnection. We note that the concerns motivating this *NPRM* primarily stem from certain wireline interconnection situations, particularly those involving LEC-ISP interconnection. The LEC-CMRS interconnection challenge may be different from that of interconnecting wireline carriers. For example, we are not aware of complaints against CMRS carriers for excessive termination rates—even in unregulated interconnection arrangements—or for engaging in regulatory arbitrage. Thus, there may be less of an imperative to apply a new regime to LEC-CMRS interconnection where significant problems do not exist. We also seek comment on the

⁸¹ See Atkinson-Barnekov, *supra* note 43, at 18 ¶ 48.

⁸² *Id.* at 15 ¶ 39.

⁸³ *Id.* at 9 ¶ 22. Atkinson-Barnekov note that, should interconnection result in an increased demand for calling, the costs of expanding the network to handle such increased demand without any blocking should be classified as costs incremental to traffic volume, but *not* incremental to interconnection. *Id.* at 18-19 ¶ 49.

⁸⁴ DeGraba, *supra* note 18, at 11-12 ¶ 32; Atkinson-Barnekov, *supra* note 43, at 25 ¶ 68.

ability or inability of CMRS carriers to obtain adequate compensation for local call termination under COBAK, BASICS, and other bill-and-keep regimes.

5. Bill and Keep for ISP-Bound Traffic

66. The record developed in the *ISP Inter-carrier Compensation* proceeding strongly suggested that we should consider adopting a bill-and-keep compensation rule for ISP-bound traffic.⁸⁵ We now believe that adopting such a rule is the correct policy choice because the exchange of reciprocal compensation payments appears to have distorted the development of competition in the local exchange market. Thus, we propose to adopt a bill-and-keep arrangement for all ISP-bound traffic. We seek comment on this proposal. We also seek comment on the implications of adopting bill and keep for ISP-bound traffic in the absence of a unified bill and keep regime for other, non-ISP-bound traffic.

67. Some parties note that compensation rates applicable to ISP-bound traffic have fallen,⁸⁶ and that undesirable incentives will be reduced as rates start to approach a LEC's actual costs. We believe, however, that even reduced rates will serve only as an approximation of a LEC's actual costs, and will not, in any event, reflect the LEC's opportunity to recover its costs from its end-user customers. Current compensation rates are based on average ILEC costs, and are assessed per-minute, which tends to overstate the costs of calls of longer duration. We therefore believe that as long as LECs are able to recover the cost of delivering such traffic from other LECs, they may have an incentive to target customers for whom termination costs are lower than average, and who predominantly receive traffic. We also note that ILECs seem less able than CLECs to shift any costs of serving ISP customers to other carriers because ILECs serve many more ISP subscribers and would only receive reciprocal compensation when a CLEC customer calls an ISP served by an ILEC. We seek comment on this reasoning.

68. Some commenters suggest that there has until now been a relationship between the payments that ILECs have had to make with respect to ISP-bound traffic, and the prices at which ILECs are willing to offer unbundled network elements (UNEs). These commenters believe that this relationship must be maintained in order to avoid opportunistically high UNE rates.⁸⁷ We therefore seek comment regarding what effect, if any, a bill-and-keep approach to ISP-bound traffic will have on ILEC incentives to support lower UNE rates. We believe that a bill-and-keep approach to ISP-bound traffic will not compromise the ability of state commissions to rely on the cost studies that ILECs have submitted over the past 12-24 months in support of lower rates for reciprocal compensation and UNEs. We seek comment on this reasoning.

⁸⁵ *ISP Inter-carrier Compensation Order* at ¶ 2.

⁸⁶ See *Allegiance Telecom, Inc., et al. ex parte* in CC Docket No. 99-68 at 1, Attachment B (filed Oct. 20, 2000) (comparing initial reciprocal compensation rates with greatly reduced rates that have been established more recently in several states).

⁸⁷ See, e.g., *AT&T ex parte* in CC Docket No. 99-68 at 5-6 (filed Aug. 11, 2000).

6. Bill and Keep for Traffic Subject to Section 251(b)(5)

69. In light of the current imbalances in traffic exchanged among interconnected networks, and the potential for inefficient incentives under the existing per-minute reciprocal compensation rates, we generally seek comment on the relative benefits of bill and keep for all traffic subject to section 251(b)(5),⁸⁸ versus the current per-minute reciprocal compensation rates imposed by most states. We seek comment from state commissions, in particular, regarding the benefits of either approach. We ask that parties discuss the incentives provided by each approach to intercarrier compensation. We also seek comment on the benefits of each approach in promoting competition and negating the effects of market power. We ask that commenters discuss the relative benefits of bill-and-keep and per-minute reciprocal compensation with respect to the pricing signals provided, and the relation between actual costs and prices determined under each approach. We seek comment on how the Commission should weigh the benefits of implementing bill and keep against any disadvantages that commenters may identify. We also seek comment on the disadvantages of applying a bill-and-keep arrangement to any particular type of traffic currently exchanged among interconnected carriers.

70. We seek comment on the best method for allocating transport responsibilities and costs among interconnected carriers under a mandatory bill-and-keep approach to reciprocal compensation. Under our current rules, the originating telecommunications carrier bears the costs of transporting traffic to its point of interconnection with the terminating carrier. If carriers must recover their transport costs from their end users, does this rule still make sense? What incentives does this rule create regarding location and number of points of interconnection (POIs)? Is there a more appropriate way to allocate transport costs?

71. Qwest argues, for example, that a bill-and-keep arrangement does not work when three carriers are involved in the transport and termination of traffic, because the middle carrier that transports the traffic from one LEC to the other does not really have a “customer” involved in the call from which it can recover costs.⁸⁹ Qwest therefore argues that the Commission should allow LECs to continue charging each other for delivering transiting traffic that originates on the networks of other carriers.⁹⁰ We ask commenters to address this and other issues related to the transport obligations of interconnected LECs under a bill-and-keep regime. CMRS carriers also originate and terminate three-carrier calls, some of which are governed by reciprocal compensation. We seek comment on the issues or problems that the current intercarrier compensation rules present for three-carrier calls. We seek comment on how bill and keep might affect such calls.

72. Under our current rules, interconnecting CLECs are obligated to provide one POI per LATA.⁹¹ Under a bill-and-keep regime, should this rule still apply? How should carriers

⁸⁸ See *supra* note 7 and accompanying text.

⁸⁹ Qwest *ex parte* in CC Docket No. 99-68, Appendix B, at ii (filed Nov. 22, 2000).

⁹⁰ *Id.*

⁹¹ 47 C.F.R. § 51.321; see also In the Matter of Application by SBC Communications Inc. *et al.* to Provide In-Region, InterLATA Services in Texas, CC Docket No. 00-65, *Memorandum Opinion and Order*, FCC 00-238 at ¶ 78, n.174 (rel. June 30, 2000).

select points of interconnection? If a CLEC chooses a point of interconnection outside a local calling area, should the LEC be obligated to meet the CLEC there? Or, should the CLEC be required to locate in every local calling area, or pay the ILEC transport and/or access charges if it does not? CMRS carriers may have several switches per MTA, which can comprise several states and multiple LATAs. Should originating carriers be required to deliver calls to all of a CMRS carrier's POIs? Should the Commission promulgate rules governing the technical requirements of interconnection, as it does for interconnection between CPE and the public switched telephone network?⁹² We seek comment on how the costs of interconnection should be allocated between carriers in this context. We seek comment on how carriers will allocate the costs of actual interconnection facilities. In addition, we seek comment on how the costs for internal network upgrades necessary for interconnection should be allocated.⁹³

73. Section 251(b)(5) provides that each LEC has the duty to “establish reciprocal compensation arrangements for the transport and termination of telecommunications.”⁹⁴ In addition, section 252(d)(2) states that, for the purpose of ILEC compliance with section 251(b)(5), the terms and conditions for reciprocal compensation must: (1) provide for the “mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier’s network facilities of calls that originate on the network facilities of the carrier”; and (2) “determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.”⁹⁵ Section 252(d)(2)(B)(i) further provides that the foregoing language shall not be construed “to preclude arrangements that afford the mutual recovery of costs through the offsetting of reciprocal obligations, including arrangements that waive mutual recovery (such as bill-and-keep).”⁹⁶ The legislative history of the 1996 Act indicates that the term “mutual and reciprocal recovery of costs” includes “a range of compensation schemes, such as in-kind exchange of traffic without cash payment (known as bill-and-keep arrangements).”⁹⁷

74. In the *Local Competition Order*, the Commission rejected claims that the Commission and states lack the authority to mandate bill-and-keep arrangements under any circumstances.⁹⁸ It instead found that in some circumstances, bill-and-keep arrangements can be imposed in the context of the arbitration process for termination of traffic.⁹⁹ The Commission

⁹² See generally 47 C.F.R. Part 68.

⁹³ See Atkinson-Barnekov, *supra* note 43, at 13-14 (showing that the incremental cost of interconnection includes internal provisioning necessary to handle traffic exchanged with the interconnecting carrier).

⁹⁴ 47 U.S.C. § 251(b)(5).

⁹⁵ 47 U.S.C. § 252(d)(2).

⁹⁶ 47 U.S.C. § 252(d)(2)(B)(i).

⁹⁷ See S. Rep. No. 230, 104th Cong., 2nd Sess. 125 (1996), *reprinted in* A&P S. Rep. 104-230, 125 (1996).

⁹⁸ *Local Competition Order*, 11 FCC Rcd. at 16054. See also BellSouth Local Competition Comments in CC Docket No. 96-98 at 73-75; GTE Local Competition Comments in CC Docket No. 96-98 at 56-59; SBC Local Competition Comments in CC Docket No. 96-98 at 51-53.

⁹⁹ *Local Competition Order*, 11 FCC Rcd. at 16054.

reasoned that “as long as the cost of terminating traffic is positive, bill-and-keep arrangements are not economically efficient because they distort carriers’ incentives, encouraging them to overuse competing carriers’ termination facilities by seeking customers that primarily originate traffic.”¹⁰⁰ The Commission found, nevertheless, that “in certain circumstances, the advantages of bill-and-keep arrangements outweigh the disadvantages.”¹⁰¹ For instance, the Commission recognized that “bill-and-keep arrangements may minimize administrative burdens and transaction costs,” when traffic is in balance and symmetrical rates are applied.¹⁰²

75. We believe that bill-and-keep arrangements also provide for the “mutual and reciprocal recovery of costs associated with the transport and termination of traffic” when traffic is not in balance. We therefore seek comment on whether a bill-and-keep rate structure for traffic subject to section 251(b)(5) is consistent with the 1996 Act. We ask commenters to discuss whether a bill-and-keep regime satisfies both the requirement for carriers to provide “reciprocal compensation” under section 251(b)(5), and the reciprocal compensation pricing standards set forth in section 252, even when traffic is not in balance. To what extent are carriers entitled to asymmetric reciprocal compensation under the Communications Act if they can establish additional costs of terminating calls on their networks? We note that the statute explicitly identifies bill and keep as one arrangement that affords “the mutual recovery of costs through the offsetting of reciprocal obligations”¹⁰³: one party terminates the other’s calls and vice-versa, thus providing for “in-kind” reciprocal compensation. It may be, however, that the statute does not permit the imposition of bill-and-keep where there is a significant imbalance in the traffic exchanged among interconnected LECs.¹⁰⁴

76. We therefore seek comment on whether bill and keep provides for the “*mutual and reciprocal* recovery” of costs,¹⁰⁵ when traffic is not in balance. In particular, we ask parties to address whether the opportunity to recover costs from end users “afford[s] the mutual recovery of costs.” To the extent that recovery from end users is consistent with the statute, what implication does this method of cost recovery have for retail rate levels and rate structures? We also seek comment on whether a bill-and-keep arrangement “affords the *mutual* recovery of costs through the *offsetting* of reciprocal obligations”¹⁰⁶ when traffic is not in balance, or whether the use of the term *offsetting* implies that traffic must be balanced.

¹⁰⁰ See *Local Competition Order*, 11 FCC Rcd. at 16055. Several commenters also argued that bill-and-keep arrangements could not be mandated without violating the 1996 Act. See, e.g., SBC Comments in CC Docket No. 96-98 at 51-52.

¹⁰¹ See *Local Competition Order*, 11 FCC Rcd. at 16055.

¹⁰² *Id.*

¹⁰³ 47 U.S.C. § 252(d)(2)(B).

¹⁰⁴ For example, Time Warner suggests that a bill-and-keep approach to reciprocal compensation is not consistent with Section 251(d)(2)(B)(i), 47 U.S.C. § 252(d)(2)(B)(i), when traffic is not in balance because it does not “*afford the mutual recovery of costs* through the offsetting of reciprocal obligations.” Time Warner *ex parte* in CC Docket No. 99-68 at 4 (filed Oct. 20, 2000).

¹⁰⁵ See 47 U.S.C. § 252(d)(2)(A)(i).

¹⁰⁶ See 47 U.S.C. § 252(d)(2)(B)(i).

77. We seek comment on whether the imposition of bill-and-keep regime would require that the Commission forbear from section 252(d)(2)'s "additional cost" pricing standard. In addition, we seek comment on whether the prohibition on forbearance from section 271,¹⁰⁷ a statutory section that references section 252(d)(2), makes imposition of bill and keep legally problematic.

7. Commission Authority Over LEC-CMRS Interconnection

78. In recent submissions to the Commission, the Cellular Telecommunications and Internet Association (CTIA) urges the Commission to immediately replace the existing reciprocal compensation mechanism for LEC-CMRS interconnection with a bill-and-keep regime.¹⁰⁸ In a December 12 letter,¹⁰⁹ CTIA contends that the Commission has exclusive and plenary jurisdiction to regulate LEC-CMRS interconnection under section 332(c)(1)(B) of the Communications Act, and *Iowa Utils. Bd. v. FCC*.¹¹⁰ CTIA further argues, in a December 29 letter, that the Commission has exclusive authority to establish the terms of, and to review, LEC-CMRS interconnection agreements.¹¹¹ In this portion of the *NPRM*, we review and seek comment on the Commission's authority over LEC-CMRS interconnection and, specifically, on the issues raised by the two CTIA letters.

a. Background

79. In 1993, Congress adopted amendments to section 332 of the Communications Act in the 1993 Budget Act.¹¹² The Budget Act amendments, *inter alia*, included new section 332(c)(1)(B) concerning interconnection between CMRS providers and common carriers, and new section 332(c)(3) preempting certain types of state regulation of CMRS providers. In 1994, we released the *CMRS Second Report and Order*, which implemented the 1993 Budget Act.¹¹³ In the *CMRS Second Report and Order*, we ordered that, pursuant to section 201 of the Communications Act, common carriers must provide the type of interconnection reasonably requested by any CMRS provider.¹¹⁴ We also required LECs and CMRS providers to

¹⁰⁷ 47 U.S.C. § 10(c).

¹⁰⁸ Letter from Thomas E. Wheeler, CTIA, to Chairman William E. Kennard (Dec. 12, 2000) ("December 12 letter"); Letter from Michael F. Altschul, CTIA, to Chairman William E. Kennard (Dec. 29, 2000) ("December 29 letter").

¹⁰⁹ December 12 letter at 2-3.

¹¹⁰ *Iowa Utils. Bd. v. FCC*, 120 F.3d at 800 n.21.

¹¹¹ December 29 letter at 1.

¹¹² Omnibus Budget Reconciliation Act of 1993, Pub.L. No. 103-66, Title VI, § 6002(b)(2)(A), 6002(b)(2)(B), 107 Stat. 312 (1993).

¹¹³ In the Matter of Implementation of Sections 3(n) and 332 of the Communications Act, Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Second Report and Order*, 9 FCC Rcd. 1411 (1994) ("*CMRS Second Report and Order*").

¹¹⁴ *Id.* at 1497 ¶ 227.

compensate one another for the reasonable costs incurred in terminating the others' traffic.¹¹⁵ As a matter of enforcement, we stated that under section 208 of the Communications Act, if a complainant could demonstrate that a LEC was charging different rates for the same type of interconnection, then the LEC would shoulder the burden of showing that the variance in its charges did not constitute unreasonable discrimination in violation of section 202(a) of the Communications Act.¹¹⁶ Finally, we held that a LEC could not deny a CMRS provider a form of interconnection that it provided to another carrier, unless the LEC could show that the provision of such interconnection was either technically infeasible or economically unreasonable.¹¹⁷

80. Subsequently, in the *LEC-CMRS Interconnection NPRM*, we observed that section 332 explicitly preempts state regulation that effectively precludes CMRS entry; that state regulation which precludes reasonable interconnection would be inconsistent with the federal right to interconnect established by section 332 and the Commission's prior decisions; and that preemption of intrastate regulation may be warranted on the basis of inseparability.¹¹⁸ As one option, we sought comment on whether we should require that LEC-CMRS interconnection be on a bill-and-keep basis.¹¹⁹

81. Shortly thereafter, the 1996 Act became law. In the *Local Competition Order*, we noted our jurisdiction to regulate LEC-CMRS interconnection under section 332, but decided to apply sections 251 and 252 to LEC-CMRS interconnection.¹²⁰ At that time, we declined to delineate the precise contours of, or the relationship between, our jurisdiction over LEC-CMRS interconnection under sections 251 and 332, but made clear that we were not rejecting section 332 as an independent basis for jurisdiction.¹²¹ Thus, we promulgated rules governing LEC-CMRS interconnection under the newly enacted sections 251 and 252, rather than under section 332. This approach would, we believed, facilitate consistent resolution of interconnection issues for CMRS providers and other carriers.¹²² We reserved the right, however, to revisit invoking our jurisdiction under section 332 to regulate LEC-CMRS interconnection, if circumstances should so warrant.¹²³ We noted, for example, that section 332 generally precludes states from rate and entry regulation of CMRS providers, differentiating

¹¹⁵ *Id.* at 1498 ¶ 231.

¹¹⁶ *Id.* at ¶ 233.

¹¹⁷ *Id.* at ¶ 234.

¹¹⁸ In the Matter of Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers, CC Docket No. 95-185, *Notice of Proposed Rulemaking*, 11 FCC Rcd. 5020, 5072-73 ¶ 111 (1996) ("*LEC-CMRS Interconnection NPRM*").

¹¹⁹ *Id.* at 5049-50 ¶¶ 60-62.

¹²⁰ *Local Competition Order*, 11 FCC Rcd. at 16005-06; *see also Iowa Utils. Bd. v. FCC*, 120 F.3d at 800 (finding that the Commission has jurisdiction under section 332 to issue rules regarding LEC-CMRS interconnection, including reciprocal compensation rules).

¹²¹ *Local Competition Order*, 11 FCC Rcd. at 16005.

¹²² *Local Competition Order*, 11 FCC Rcd. at 16005 ¶ 1024.

¹²³ *Id.* at 16006 ¶ 1025.

CMRS from other carriers. If the regulatory scheme established by sections 251 and 252 did not sufficiently address the problems encountered by CMRS providers in obtaining interconnection on just, reasonable and nondiscriminatory terms and conditions, we indicated that we might consider invoking jurisdiction under section 332 to regulate LEC-CMRS interconnection rates.¹²⁴

82. Several parties sought judicial review of various aspects of the *Local Competition Report and Order*. These petitions were consolidated before the Eighth Circuit Court of Appeals.¹²⁵ In *Iowa Utils. Bd. v. FCC*, the court concluded that certain of the rules promulgated in the *Local Competition Proceeding* exceeded our jurisdiction under sections 251 and 252 of the 1996 Act and that, in imposing other rules, the Commission substantively misinterpreted its jurisdiction under sections 251 and 252.¹²⁶ At the same time, the court held that section 332(c), read in combination with section 2(b), gave the Commission independent authority to promulgate rules governing LEC-CMRS interconnection.¹²⁷ In arguments before the court, CMRS providers had claimed that several of the Commission's rules were especially crucial to LEC-CMRS interconnection, and therefore should be upheld in that context even if they were otherwise struck down.¹²⁸ The court noted that these particular rules "of special concern to the CMRS providers" would continue to apply to interconnection involving those providers.¹²⁹ This CMRS interconnection aspect of the Eighth Circuit's decision was not appealed to the Supreme Court, nor addressed by the Court in *AT&T v. Iowa Utils. Bd.*¹³⁰

83. As noted above, in its letters advocating a bill-and-keep regime for LEC-CMRS intercarrier compensation, CTIA contends that the Commission has exclusive jurisdiction to regulate the rates for interconnection between CMRS providers and LECs, pointing to the 1993 Budget Act and the *Iowa Utils. Bd. v. FCC* decision. CTIA argues that Congress, in amending section 332 and section 2(b), established a federal regulatory framework to govern the offerings of all commercial mobile services because these services operate without regard to state lines as an integral part of the nation's telecommunications infrastructure. CTIA further argues that the Eighth Circuit's interpretation of section 332 recognizes the Commission's broad authority to preempt state rate and entry regulation of CMRS. CTIA posits that, because the Commission has exclusive jurisdiction, there is no role for states to regulate LEC-CMRS interconnection.¹³¹

¹²⁴ *Id.*

¹²⁵ *Iowa Utils. Bd. v. FCC*, *supra* note 8.

¹²⁶ *Id.*

¹²⁷ *Id.* at 800 n.21.

¹²⁸ See Brief for Intervenors CMRS Providers in Support of Respondents, *Iowa Utils. Bd. v. FCC*, Nos. 96-3321 *et al.* (8th Cir. Dec. 23, 1996).

¹²⁹ *Iowa Utils. Bd. v. FCC*, 120 F.3d at 800 n.21.

¹³⁰ *AT&T Corp v. Iowa Utils. Bd.*, 525 U.S. 366 (1999).

¹³¹ December 29 letter at 2.

b. Statutory Provisions

84. The 1993 Budget Act significantly changed the regulatory framework for CMRS.¹³² In place of traditional public utility regulation, the 1993 Budget Act sought to establish a competitive nationwide market for commercial mobile radio services with limited regulation. CMRS interconnection was a significant element of this framework.¹³³ Several provisions of the Communications Act, as amended by the 1993 Budget Act, are relevant to CMRS jurisdiction issues. First, the role of the states in regulating CMRS is expressly limited by section 332(c)(3).¹³⁴ That section bars the states from regulating the entry or rates of CMRS providers, but expressly permits states to regulate other terms and conditions of service.¹³⁵ Second, section 332(c)(1)(B), on the other hand, expressly grants the Commission the authority to order carriers to interconnect with CMRS providers.¹³⁶ Finally, in the 1993 Budget Act, Congress also added an exception to section 2(b) of the Communications Act.¹³⁷ Section 2(b) generally reserves to the states jurisdiction over intrastate communication service by wire or radio of any carrier. The 1993 Budget Act amended section 2(b) to exempt section 332 from its provisions.¹³⁸

c. Discussion

85. We seek comment on the question of whether we have authority under section 332 to replace the existing reciprocal compensation mechanism for LEC-CMRS interconnection with a bill-and-keep regime, as advocated by CTIA, as well as more generally on the scope of the Commission's jurisdiction under section 332. To assist the Commission in addressing these matters, we seek comment on the following more specific issues.

¹³² *LEC-CMRS Interconnection NPRM*, 11 FCC Rcd. at 5029-30 ¶¶ 19-21.

¹³³ The House Report stated, "The Committee considers the right to interconnect an important one which the Commission shall seek to promote, since interconnection serves to enhance competition and advance a seamless national network." House Report on H.R. 2264 at 261 (1993).

¹³⁴ 47 U.S.C. § 332(c)(3).

¹³⁵ Section 332(c)(3) provides in relevant part: "Notwithstanding sections 2(b) and 221(b), no state or local government shall have any authority to regulate the entry of or the rates charged by any commercial mobile service or any private mobile service, except that this paragraph shall not prohibit a state from regulating the other terms and conditions of commercial mobile services." *Id.*

¹³⁶ 47 U.S.C. § 332(c)(1)(B). Section 332(c)(1)(B) provides in relevant part: "Upon reasonable request of any person providing commercial mobile service, the Commission shall order a common carrier to establish physical connections with such service pursuant to the provisions of section 201 of the Act. Except to the extent that the Commission is required to respond to such a request, this subparagraph shall not be construed as a limitation or expansion of the Commission's authority to order interconnection pursuant to this Act." *Id.* Section 201, in turn, provides that "[i]t shall be the duty of every common carrier engaged in interstate or foreign commerce by wire or radio...to establish physical connections with other carriers..." 47 U.S.C. § 201(a).

¹³⁷ 47 U.S.C. § 152(b).

¹³⁸ *Id.*

86. First, we seek comment on the relationship between the CMRS interconnection authority assigned to the Commission under sections 201 and 332, and that granted to the states under sections 251 and 252. In adopting sections 251 and 252, and other provisions of the 1996 Act, Congress did not repeal or amend the prior sections, and in fact adopted specific savings clauses for the Commission's interconnection authority under section 201¹³⁹ and for the preemption of state entry and rate regulation under section 332(c)(3).¹⁴⁰ But the 1996 Act did establish a general interconnection framework that is subject, in part, to state jurisdiction and which, by its terms, applies to CMRS as well as to other carriers. How should the interconnection provisions in these various sections of the amended Communications Act be applied? To the extent that policies and rules, or rates and terms, under these frameworks conflict, how should the conflicts be resolved?

87. Second, we seek comment on the extent to which section 332 preempts state regulation of intrastate LEC-CMRS interconnection and gives such authority to the Commission. We note that in *Iowa Utils. Bd. v. FCC*, the court, when affirming the Commission's authority to adopt national LEC-CMRS interconnection rules, cited sections 332(c)(1)(B) and 332(c)(3)(A) as relevant to an evaluation of the Commission's intrastate LEC-CMRS interconnection authority.¹⁴¹ We seek comment on whether this reference by the court suggests that these subparagraphs of section 332(c) preempt state CMRS intrastate interconnection jurisdiction and assign the matter to the Commission. According to CTIA, the court observed that Congress provided express Commission authority to regulate LEC-CMRS interconnection under section 332(c)(1)(B), and "concluded that *federal regulation* of CMRS rates and entry is a function of the Commission's plenary authority over communications by wire and communications by radio."¹⁴² On the other hand, because the court affirmed one rule for CMRS providers that assigns authority over "true-ups" of interim rates to state commissions, and another rule recognizing the role of state commissions in the negotiation and arbitration process,¹⁴³ do the states have some authority over interconnection, particularly when read in conjunction with sections 251 and 252?

88. Third, we seek comment on whether forbearance is appropriate in the context of LEC-CMRS interconnection. Specifically, the Communications Act gives the Commission the authority and responsibility to forbear from regulating telecommunications carriers in certain specified cases. Section 332(c)(1),¹⁴⁴ adopted by the 1993 Budget Act, permits the Commission to forbear from applying most provisions of Title II of the Communications Act to CMRS providers, while section 10 of the Communications Act,¹⁴⁵ adopted by the 1996 Act, directs the

¹³⁹ See 47 U.S.C. § 251(i).

¹⁴⁰ See 47 U.S.C. § 253(e); see also section 601(c) of the 1996 Act.

¹⁴¹ *Iowa Utils. Bd. v. FCC*, 120 F.3d at 800 n.21.

¹⁴² December 29 letter at 3.

¹⁴³ 47 C.F.R. §§ 51.715(d), 51.717(b).

¹⁴⁴ 47 U.S.C. § 332(c)(1).

¹⁴⁵ 47 U.S.C. § 160.

Commission to forbear from regulating any telecommunications carrier or service, if the Commission determines that certain conditions are met. The three-part test for forbearance is essentially identical for each section. In summary, the test is: (1) that a provision of the statute is not necessary to ensure that rates and terms are just and reasonable and not unjustly or unreasonably discriminatory; (2) that the provision is not necessary for the protection of consumers; and (3) that forbearance is in the public interest. Under both sections, the Commission may determine that the public interest will be served if it concludes that forbearance will promote competition. In this regard, section 10(e) states that “[a] State commission may not continue to enforce or apply any provision of this Act that the Commission has determined to forbear from applying under [section 10(a)].”¹⁴⁶

89. More specifically, in light of the fact that both section 332 and sections 251 and 252 appear to provide processes and standards for LEC-CMRS interconnection, we seek comment on whether the Commission should forbear from applying some or all of the provisions of sections 251 and 252 to LEC-CMRS interconnection in some or all state jurisdictions. Alternatively, we seek comment on whether we should forbear from applying some or all of section 332 to LEC-CMRS interconnection in light of sections 251 and 252, and on the extent of our authority to do so. To whatever extent that those provisions overlap, application of both provisions may be unnecessary. For example, the process of negotiating and enforcing CMRS interconnection rates and terms with over 1,200 LECs in over 50 jurisdictions probably raises costs and otherwise impedes competition among CMRS providers and other services. On the other hand, the initial round of interconnection negotiations undertaken through the regulatory framework of sections 251 and 252 has been completed and has been successful in many respects (*e.g.*, setting rates that are more equitable and cost-based). We ask commenters to address these issues, as well as whether forbearance is warranted by other regulations or provisions affecting CMRS interconnection. Commenters should also address the practical consequences of the approaches the Commission might take to exercising, or forbearing from exercising, its authority over LEC-CMRS interconnection. For example, how would interconnection “work,” and how would the rates and terms for interconnection be established?

8. LEC-CMRS Intercarrier Compensation

90. We seek comment on the rules we should adopt to govern LEC interconnection arrangements with CMRS providers, whether pursuant to section 332, or other statutory authority. Generally, we seek comment on the rules necessary to further our goal of adopting a unified approach that encourages the efficient use of, and investment in, telecommunications networks, and the efficient development of competition.

91. The *Local Competition Order* held “that the new transport and termination rules should be applied to LECs and CMRS providers so that CMRS providers continue not to pay interstate access charges for traffic that currently is not subject to such charges, and are assessed such charges for traffic that is currently subject to interstate access charges.”¹⁴⁷ LEC-CMRS interconnection for calls that originate and terminate in the same MTA (as of the start of a call)

¹⁴⁶ 47 U.S.C. § 160(e).

¹⁴⁷ *Local Competition Order*, 11 FCC Rcd. at 16016-17 ¶ 1043.

are governed by section 251, and are subject to reciprocal compensation. Two common types of local LEC-CMRS interconnection include: connection through a LEC (typically an ILEC) end office (Type 1); and direct mobile switching center (MSC) connection with a LEC tandem (Type 2A). Where CMRS-LEC traffic volumes are small, as in rural areas, the CMRS carrier can connect to other LEC end offices and other carriers via a LEC end office switch.¹⁴⁸ The other interconnection alternative is a trunk between a MSC and the LEC tandem, whereby the CMRS carrier connects to LEC end offices connected to the tandem together with other carriers (including IXCs) interconnected through the tandem.

92. Under both types of LEC-CMRS interconnection, the LEC receives forward-looking economic cost- (FLEC-) based reciprocal compensation for the LEC's additional costs of terminating CMRS-originated calls. The CMRS carrier, on the other hand, is compensated at the LEC's FLEC-based rate, which is used as a presumptive proxy for the CMRS carrier's own termination costs,¹⁴⁹ unless the CMRS carrier submits a forward-looking economic study to rebut this presumptive symmetrical rate.¹⁵⁰ Local LEC-CMRS calls would presumably be governed by any new, unified bill-and-keep regime. We seek comment on whether any such regime should be applied to these types of LEC-CMRS interconnection. We also seek comment on the potential effects of a unified bill-and-keep regime on local LEC-CMRS interconnection.

93. LEC-paging traffic is exchanged largely by mutual agreement.¹⁵¹ LEC-paging interconnection are of the same three types technically as LEC-CMRS generally: Type 1 (through a LEC end office); Type 2A (direct connection with a LEC tandem office); or Type 2B (direct connection limited to a specific LEC end office).¹⁵² Paging companies are paid terminating compensation stipulated in their mutual contractual agreements. The compensation rates vary by agreement. Some agreements stipulate charges per minutes of use.¹⁵³ Terminating

¹⁴⁸ Alternatively, in rural settings, wireless carriers can elect to deliver CMRS-originated calls to a large ILEC (typically a Regional Bell Operating Company [RBOC]) for routing to the rural LEC carrier. The large ILEC and rural LEC are interconnected on a bill-and-keep basis for the exchange of wireline calls. Once the CMRS-originated traffic is switched by the ILEC tandem, CMRS-originated traffic travels on the same trunk as wireline calls to the ILEC. The CMRS carrier pays the ILEC for switching and transport, and the rural LEC can seek recovery of its termination costs (if it can segregate the traffic) by asking the ILEC to charge the CMRS carrier. Increasingly, the large ILEC is unwilling to bill for the rural carrier, so rural LECs have begun to insist that the CMRS carrier deliver calls directly to the rural LEC's switch.

¹⁴⁹ *Local Competition Order*, 11 FCC Rcd. at ¶ 1085; 47 C.F.R. § 51.711(a).

¹⁵⁰ *Local Competition Order*, 11 FCC Rcd. at ¶ 1089; 47 C.F.R. § 51.711(b).

¹⁵¹ Where LECs and paging companies are unable to negotiate agreed-upon rates, we direct states, when arbitrating disputes under section 252(d)(2), to establish rates for the termination of traffic by paging providers based on the forward-looking economic cost of such termination to the paging provider. The paging provider seeking termination fees must prove to the state commission the costs of terminating local calls. *Local Competition Order*, 11 FCC Rcd. at ¶ 1093.

¹⁵² Columbia Institute for Tele-Information *ex parte* in CC Docket Nos. 99-68 *et al.*, "Stakeholders' Workshop on Interconnection Pricing" at Attachment 4 (filed Dec. 22, 2000).

¹⁵³ For example, Sprint and Paging Networks, Inc. have agreed to a constant \$0.00425 per minute of use in a 16-state territory. *Id.* Verizon Wireless Messaging Services and SBC have contracted for SBC to pay \$0.005 per minute of use for Type 1 or Type 2A interconnection, and between \$0.00174 and 0.006 per minute of use for Type 2B interconnection. *Id.*

compensation is paid to paging companies on the basis of aggregated minutes at the end of each month. We seek comment on whether (and if so, how) a bill-and-keep regime may apply to LEC-paging interconnection arrangements.

94. We also seek comment on whether access charges, when they apply to interexchange traffic under sections 201, 251(g) and 251(i), should also apply to CMRS carriers, and to what extent. In that context, commenters should also address whether CMRS carriers are entitled to receive access charges, or some additional compensation, for interexchange traffic terminating on their networks.

95. We note that there are further examples of carrier-to-carrier interconnection involving CMRS carriers that are not currently rate-regulated. Pursuant to section 251(a), as well as sections 201(a) and 332(c), CMRS carriers have a general duty to directly or indirectly interconnect with each other. In the absence of detailed interconnection regulation, many CMRS carriers appear to have entered into voluntary interconnection agreements. Because intercarrier, local CMRS traffic is often insufficient to justify a dedicated trunk, the majority of CMRS-to-CMRS call exchange occurs through a RBOC tandem switch. Under this arrangement, CMRS carriers appear to exchange local traffic on a bill-and-keep basis. As wireless traffic is growing, however, CMRS carriers increasingly enter into direct interconnection agreements. When the traffic between these carriers justifies a trunk, wireless carriers typically interconnect directly. We understand that the recurring and non-recurring cost of the trunk line is divided among the carriers by mutual contractual agreement, and that the carriers exchange traffic on a bill-and-keep basis. No instances of unreasonable terminating charges for these CMRS-to-CMRS calls have been brought to our attention. While we do not contemplate extending compensation rules to these arrangements, we nonetheless seek comment on how well these existing unregulated bill-and-keep agreements work, and their implications for a possible unified regime. We also invite comment on why we have not seen unreasonable termination fees from CMRS firms, while we have from wireline CLECs. Finally, we seek comment on whether (and if so, how) adopting a unified bill-and-keep regime—such as COBAK or BASICS—might affect unregulated types of intra-MTA, CMRS-to-CMRS interconnection.

96. Another category of unregulated interconnected calls subject to neither reciprocal compensation nor access charges is CMRS-IXC interconnection.¹⁵⁴ For inter-MTA call traffic, CMRS carriers effectively act as resellers, buying large, volume-discounted bundles of minutes of use from IXCs, then reselling them to CMRS subscribers. We understand that the IXCs then pay any terminating access, frequently absorbing terminating access charges that exceed the wholesale, flat rates negotiated with CMRS carriers. We seek comment on whether (and if so, how) COBAK and BASICS might affect the current quasi-resale regime. We seek comment on how eliminating terminating access under bill and keep might change the frequency or terms of IXC-CMRS agreements.

9. Bill and Keep for Interstate Access Charges

97. The long-term goal of this *NPRM* is to develop a uniform regime for all forms of intercarrier compensation, including interstate access. We do not, however, anticipate

¹⁵⁴ This category of interconnected calls encompasses CMRS-to-IXC-to-a-third telecommunications carrier.

implementing major changes to our access charge rules in the initial phase of this proceeding. The CALLS plan established, for the period July 1, 2000 through June 30, 2005, interstate access rate levels and an aggregate amount of interstate universal service support for ILECs subject to price cap regulation.¹⁵⁵ The Commission recently sought comment on an industry-sponsored access reform and universal service proposal for all other ILECs; this plan would, if adopted, be implemented over a five-year period.¹⁵⁶ We begin now to explore the possible application of bill-and-keep approaches to interstate LEC-IXC interconnection, with the intention of developing an answer to the question, “What comes after CALLS?” We recognize that large ILECs, small ILECs, and CLECs are all at different stages of the access reform processes that we have carried out over the last five years. We expect that, under current rules and proposed rules, their access rate levels may be much more similar four or five years from now than they are today. If we adopt a bill-and-keep rule for the intercarrier arrangements that currently fall under the access charge rules, should we attempt to apply it at the same time, and in the same manner, for all types of LECs? Will the possible benefits of bill and keep dissipate if it is phased in over a period of years? Will a staggered approach to reforming intercarrier compensation create certain opportunities for regulatory arbitrage? We seek comment on how best to proceed, in a coordinated manner, with this phase in the development of a pro-competitive intercarrier compensation regime.

C. Reforming the Existing Calling-Party’s-Network-Pays Regime

98. As discussed above, traditional economic analysis and Commission precedent have favored CPNP intercarrier compensation regimes. In general, the prevailing view has been that, if a regulator sets the appropriate rate level and rate structure, a CPNP regime should be efficient.¹⁵⁷ Given the strong support CPNP regimes have received from the economic literature and from Commission precedent, we seek comment generally on whether, and how, the existing CPNP interconnection regimes can be reformed in the event that the Commission decides not to adopt bill and keep.

1. Can CPNP Regimes Be Efficient?

a. Rate Level Issues

99. *What Is the Appropriate Cost Methodology?* We note that the Commission, in implementing the reciprocal compensation provisions of the 1996 Act, determined that reciprocal compensation rates should be based on forward-looking economic costs. Similarly, while interstate access charges had been based on historical costs (as modified by the Commission’s price cap regime), the Commission in 1997 determined that access charges should likewise move

¹⁵⁵ See *CALLS Order*, *supra* note 6.

¹⁵⁶ See Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, CC Docket No. 00-256, *Notice of Proposed Rulemaking*, FCC 00-448 (rel. Jan. 5, 2001).

¹⁵⁷ See, e.g., *Local Competition Order*, 11 FCC Rcd. at 15873-77 ¶¶ 741-757. See also JEAN-JACQUES LAFFONT & JEAN TIROLE, *supra* note 11, at 101-105 (discussion and characterization of efficient access pricing under a CPNP regime).

to forward-looking economic costs. The introduction of competition and new technologies appear to be exacerbating regulatory arbitrage opportunities, which suggests that we need to move quickly to a single cost methodology for setting both access charges and reciprocal compensation rates. To the extent that we need to adopt a uniform methodology other than bill and keep, we believe that, consistent with our decisions in the *Local Competition Proceeding* and the access charge reform proceeding, we should adopt a forward-looking cost methodology. We seek comment on this reasoning. We also seek comment on whether, in order to achieve the benefits of a uniform intercarrier compensation regime, state public utility commissions would need to move intrastate access charges to forward-looking-economic costs.

100. The Commission determined in the *Local Competition Order* that the “pricing standards established by section 252(d)(1) for interconnection and unbundled elements, and by section 252(d)(2) for transport and termination of traffic, are sufficiently similar to permit the use of the same general methodologies for establishing rates under both statutory provisions.”¹⁵⁸ The Commission reasoned that a new entrant might use unbundled network elements as a substitute for transporting traffic under section 252(d)(2), and that “transport of traffic for termination on a competing carrier’s network is, therefore, largely indistinguishable from transport for termination of calls on a carrier’s own network.”¹⁵⁹ The Commission therefore found that the “additional costs” standard for transport and termination permits the use of the forward-looking, economic cost-based (total element long-run incremental cost, or TELRIC) pricing standard that it established for interconnection and unbundled elements.¹⁶⁰

101. We seek comment on this analysis, and specifically ask that parties comment on whether, if the Commission declines to adopt bill and keep, the Commission’s use of the TELRIC cost standard is the most appropriate methodology for establishing “additional costs” under section 252(d)(2).¹⁶¹ What would be the implications of using short-run incremental costs when determining the “additional costs” incurred in terminating calls that originate on another carrier’s network? Do the “additional” costs of terminating traffic differ significantly from the *average* incremental costs calculated under TELRIC? If so, we seek comment on how we should more accurately calculate the “additional costs” of terminating calls. We also ask whether advances in technology have provided carriers with essentially inexhaustible capacity, and whether the “additional costs” of delivering a call that originates on a competing carrier’s network currently approach zero.

102. In the *Local Competition Proceeding*, the Commission concluded that the “incumbent LEC’s transport and termination prices” should be the “presumptive proxy for other

¹⁵⁸ *Local Competition Order*, 11 FCC Rcd. at 16023.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ See, e.g., Joint ILEC *ex parte* in CC Docket No. 99-68 at 12 n.33 (filed Nov. 3, 2000) (arguing that, unlike TELRIC, the “additional costs” statutory standard for calculating reciprocal compensation is a pure incremental cost standard that requires a short-run marginal cost analysis).

telecommunications carriers' additional costs of transport and termination."¹⁶² This rule, however, grew subject to demonstration by a telecommunications carrier that it incurs higher costs than the ILEC to transport and terminate local traffic. The *Local Competition Order* also determined that states could establish transport and termination rates during the arbitration process that varied according to whether the traffic is routed through a tandem switch or directly through an end-office switch.¹⁶³ The Commission reasoned that different rates are justified because the additional costs that a LEC incurs are likely to vary depending on whether the LEC uses both tandem and end-office switching, or end-office switching alone.¹⁶⁴ Moreover, the Commission determined that the ILEC's tandem interconnection rate should be applied as a proxy when interconnecting carriers utilize new switch technologies that serve a geographic area comparable to that served by the ILEC's tandem switch.

103. The presumptive ILEC cost proxy and the tandem-rate criteria have been disputed by carriers. Among carriers who have questioned the accuracy of the presumptive ILEC cost proxy, Verizon argues that, because certain CLECs have installed technology different from that of the ILECs, the CLECs' costs of termination are lower.¹⁶⁵ Sprint PCS, on the other hand, claims that its local-call termination costs exceed the ILEC proxy.¹⁶⁶

104. To assist parties in helping us to explore the broader question of moving to a unified interconnection regime raised in this proceeding, we review the application of the Commission's current orders and rules regarding asymmetric reciprocal compensation for LEC-CMRS interconnection. Under the language of section 252(d)(2)(A) of the Communications Act,¹⁶⁷ CMRS carriers are entitled to the opportunity to demonstrate that their termination costs

¹⁶² *Local Competition Order*, 11 FCC Rcd. at 16040 ¶ 1085. The Commission went on to state:

If a competing local service provider believes that its cost will be greater than that of the incumbent LEC for transport and termination, then it must submit a forward-looking economic cost study to rebut this presumptive symmetrical rate. In that case, we direct state commissions...to depart from symmetrical rates only if they find that the costs of efficiently configured and operated systems are not symmetrical and justify a different compensation rate.

Id.

¹⁶³ *Local Competition Order*, 11 FCC Rcd. at 16042.

¹⁶⁴ *Id.*

¹⁶⁵ Comments of Verizon Communications at 25-27 (in response to Comment Sought on Remand of the Commission's Reciprocal Compensation Declaratory Ruling by the U.S. Court of Appeals for the D.C. Circuit, CC Docket Nos. 96-98, 99-68, *Public Notice*, 15 FCC Rcd. 11311 (2000)); *see also id.*, Declaration of William E. Taylor, at 13-19.

¹⁶⁶ Sprint PCS submitted a cost study purporting to show that a CMRS provider's network components (including mobile telephone exchange, base station controller, base transceiver system, structure and antennae, and spectrum) are traffic-sensitive and should be included in the cost of termination. *See Sprint PCS Study*, *supra* note 31.

¹⁶⁷ The Communications Act permits asymmetric reciprocal compensation. Specifically, section 252(d)(2)(A) states that the terms and conditions of reciprocal compensation will be just and reasonable if: "(i) such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities of the other carrier; (continued....)"

exceed those of the ILECs. The “equivalent facility” language of sections 51.701(c) and (d) of the Commission’s rules was not intended to require that wireless network components be reviewed on the basis of their relationship to wireline network components. Nor, given the language of the statute, was it intended to have the effect of barring a CMRS carrier from receiving compensation for the additional costs that it incurs in terminating traffic on its network if those costs exceed the ILEC’s. Instead, a cost-based approach—one that looks at whether the particular wireless network components are cost sensitive to increasing call traffic—should be used to identify compensable wireless network components.¹⁶⁸ Thus, if a CMRS carrier can demonstrate that the costs associated with spectrum, cell sites, backhaul links, base station controllers and mobile switching centers vary, to some degree, with the level of traffic that is carried on the wireless network, a CMRS carrier can submit a cost study to justify its claim to asymmetric reciprocal compensation that includes additional traffic sensitive costs associated with those network elements. We note that, under our rules, the CMRS carrier bears the burden of justifying in its analysis precisely what are its additional costs, and demonstrating that its analysis complies with all applicable Commission rules.¹⁶⁹

105. In addition, section 51.711(a)(3) of the Commission’s rules¹⁷⁰ requires only that the comparable geographic area test be met before carriers are entitled to the tandem interconnection rate for local call termination. Although there has been some confusion stemming from additional language in the text of the *Local Competition Order* regarding functional equivalency,¹⁷¹ section 51.711(a)(3) is clear in requiring only a geographic area test. Therefore, we confirm that a carrier demonstrating that its switch serves “a geographic area comparable to that served by the incumbent LEC’s tandem switch” is entitled to the tandem interconnection rate to terminate local telecommunications traffic on its network.¹⁷²

106. Turning to the broader, forward-looking questions, we seek comment first on whether we should eliminate the symmetry presumption. If a party contends that we should eliminate this presumption, then it should explain how regulators should calculate the forward-looking cost of transport and termination for CLECs. In particular, is it possible for states to estimate a single cost of transport and termination for all CLECs, or should we require calculations of individual transport and termination rates for every CLEC? Alternatively, should we provide for calculation of separate rates only where a CLEC uses a different technology, and if so, for which technologies should there be a separate interconnection rate? Similarly, could

(Continued from previous page) _____
and (ii) such terms and conditions determine such costs on the basis of a reasonable approximation of the additional costs of terminating such calls.” 47 U.S.C. § 252 (d)(2)(A).

¹⁶⁸ *Local Competition Order*, 11 FCC Rcd. at 16024-25 ¶ 1057; 47 C.F.R. §§ 51.707, 51.711.

¹⁶⁹ We note that our rules do not require network elements to be priced on a minutes-of-use basis. Element rates can be structured consistently with the way network-element costs are incurred. For example, the costs of shared facilities may be recovered either through usage-sensitive charges or capacity-based flat-rated charges, if the state commissions find that such rates reflect the way users impose costs. See 47 C.F.R. § 51.507(a), (c).

¹⁷⁰ 47 C.F.R. § 51.711(a)(3).

¹⁷¹ *Local Competition Order*, 11 FCC Rcd. at 16042 ¶¶ 1090.

¹⁷² 47 C.F.R. § 51.711(a)(3).

transport and termination rates be established for CMRS carriers as a group, for categories of CMRS carriers, or on a carrier-by-carrier basis only? If a party suggests the need for a separate interconnection rate for each carrier, we ask it to explain how this position is consistent with the principles of forward-looking cost pricing. We also seek comment on whether adopting asymmetrical transport and termination rates is consistent with the efficient development of competition. Finally, we seek comment on the additional burdens that such a rule change might impose both on parties and on regulators.

107. We seek comment on whether our current tandem-rate rule creates an opportunity for regulatory arbitrage. We also seek comment on whether the rule, or any modification of it, facilitates or distorts the efficient development of competition. In particular, we seek comment on whether elimination of the rule may significantly disadvantage carriers with newer networks having fewer tandems, particularly where traffic exchanged between such networks and the incumbent is balanced. We also seek comment on whether section 51.711(a)(3) should be amended to include the “functional equivalency” concept discussed in the text of the *Local Competition Order*.¹⁷³

108. As previously indicated, IXCs have argued that, to the extent that access charges exceed economic cost, ILECs have the incentive and ability to discriminate in favor of their long-distance affiliates by engaging in a predatory price squeeze. We seek comment on this argument. Finally, we invite parties to raise any other rate-level issues that they believe the Commission needs to consider in evaluating how it might reform existing CPNP regimes.

b. Rate Structure Issues

109. The Commission has repeatedly recognized that, as a theoretical matter, the traffic-sensitive costs of shared facilities should be recovered through peak-load prices, under which a higher price would be assessed on traffic occurring during the peak period.¹⁷⁴ Because

¹⁷³ We note that, in dealing with the problems presented by ISP-bound traffic, some states have incorporated a functional equivalency test into their interpretations of section 51.711(a)(3). See Proceeding on Motion of the Commission to Reexamine Reciprocal Compensation, Case 99-C-0529, Opinion and Order Concerning Reciprocal Compensation, Opinion No. 99-10, at 35-40, 56-58 (New York PSC Aug. 26, 1999) (“*New York PSC Order*”); Texas PUC Remand Comments, attached Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996, Docket No. 21982, Arbitration Award at 19-29 (Texas PUC July 12, 2000) (“*Texas PUC Order*”). Both the Texas PUC and New York PSC concluded that large imbalances in traffic flows strongly suggest that a carrier is serving a higher proportion of convergent customers rather than a large distribution of customers similar to those served by an ILEC tandem switch. *New York PSC Order* at 37-38, 54-55; *Texas PUC Order* at 19-29. The New York PSC found that the “costs of serving a small number of large, convergent customers will likely be lower than the costs of serving a mass market,” and it therefore established a rebuttable presumption that a LEC is not providing tandem functionality when the traffic it exchanges exceeds a certain ratio. *New York PSC Order* at 54-58. These interpretations, while inconsistent with our rule, suggest that we should consider whether to amend the rule to give states greater flexibility in applying a tandem interconnection rate to networks using newer, more efficient technologies. Commenters are invited to address this issue in light of our treatment, under section 201 of the Communications Act, of intercarrier compensation related to ISP-bound traffic. See *ISP Intercarrier Compensation Order*, *supra* note 3.

¹⁷⁴ See, e.g., *Local Competition Order*, 11 FCC Rcd. at 15878 ¶¶ 755-57, 16028-29 ¶ 1064; *LEC-CMRS Interconnection NPRM*, 11 FCC Rcd. at 5051 ¶ 67.

of various implementation problems,¹⁷⁵ however, the Commission has never ordered a peak-load pricing rate structure, though it has permitted such rate structures. In implementing the reciprocal compensation provisions of the 1996 Act, for example, the Commission permitted states to adopt alternative rate structures, including: (1) a higher rate for peak periods; (2) a uniform per-minute rate; (3) a capacity-based rate; or (4) a bill-and-keep arrangement, provided that traffic is relatively balanced.¹⁷⁶ States, however, in applying the Commission's rules governing reciprocal compensation, have generally adopted average per-minute rates. Similarly, with respect to interstate access charges, the Commission has permitted ILECs to charge either a uniform per-minute rate to recover the costs of switching, or a two-part tariff consisting of a call setup charge and a per-minute charge.¹⁷⁷ The Commission has also sought comment on whether it should adopt capacity-based charges to recover switching costs.¹⁷⁸

110. Our recent experience with ISP reciprocal compensation issues suggests certain questions about the use of uniform per-minute charges to recover the traffic-sensitive costs of termination. In particular, it appears that the Commission may have underestimated the inefficiencies associated with the use of uniform per-minute prices. Accordingly, we seek comment first on whether an average per-minute rate structure can efficiently recover the traffic sensitive costs of interconnection, whether for reciprocal compensation or for access charges. If parties believe that such a rate structure is inherently inefficient, then we ask them to propose alternative, more efficient rate structures. We also seek comment on whether the Commission overestimated the practical difficulties associated with peak-load pricing arrangements. In particular, we seek comment on: (1) how to deal with the practical, implementation problems associated with peak-load pricing; and (2) whether a peak-load pricing structure can eliminate the regulatory arbitrage opportunities of the existing interconnection pricing regimes.

111. We also invite comment on whether alternative rate structures would be more efficient, and whether they would eliminate some of the problems we are currently experiencing. For example, we ask parties to comment on the advantages and disadvantages of using a capacity-based rate structure, and a multi-part rate structure that includes both a call set-up charge and a per-minute charge. Finally, we invite parties to propose alternative rate structures that they believe would be more efficient, and to explain the basis for their belief.

c. Single Point of Interconnection Issues

112. As previously mentioned, an ILEC must allow a requesting telecommunications carrier to interconnect at any technically feasible point, including the option to interconnect at a

¹⁷⁵ The practical difficulties associated with peak-load pricing schemes include: (1) that peak traffic volumes may occur at different times in different areas (*e.g.*, between a downtown business area and a residential suburb); (2) that peak periods may change over time (*e.g.*, in response to increasing Internet use); and (3) that implementing a peak-load pricing scheme may cause a shift in the peak.

¹⁷⁶ See 47 C.F.R. §§ 51.507(c), 51.713; *Local Competition Order*, 11 FCC Rcd. at 15878-79 ¶¶ 755-757, 16028-29 ¶¶ 1063-64.

¹⁷⁷ See 47 C.F.R. § 69.106.

¹⁷⁸ *Pricing Flexibility Order and NPRM*, 14 FCC Rcd. at 14328-30 ¶¶ 211-16.

single POI per LATA.¹⁷⁹ Our current reciprocal compensation rules preclude an ILEC from charging carriers for local traffic that originates on the ILEC's network.¹⁸⁰ These rules also require that an ILEC compensate the other carrier for transport¹⁸¹ and termination¹⁸² for local traffic that originates on the network facilities of such other carrier.¹⁸³ Application of these rules has led to questions concerning which carrier should bear the cost of transport to the POI, and under what circumstances an interconnecting carrier should be able to recover from the other carrier the costs of transport from the POI to the switch serving its end user. In particular, carriers have raised the question whether a CLEC, establishing a single POI within a LATA, should pay the ILEC transport costs to compensate the ILEC for the greater transport burden it bears in carrying the traffic outside a particular local calling area to the distant single POI.¹⁸⁴ Some ILECs will interconnect at any POI within a local calling area; however, if a CLEC wishes to interconnect outside the local calling area, some LECs take the position that the CLEC must bear all costs for transport outside the local calling area.¹⁸⁵ CLECs hold the contrary view, that our rules simply require LECs to interconnect at any technically feasible point within a LATA, and that each carrier must bear its own transport costs on its side of the POI.¹⁸⁶

113. If a carrier establishes a single POI in a LATA, should the ILEC be obligated to interconnect there and thus bear its own transport costs up to the single POI when the single POI is located outside the local calling area? Alternatively, should a carrier be required either to interconnect in every local calling area, or to pay the ILEC transport and/or access charges if the location of the single POI requires the ILEC to transport a call outside the local calling area? Further, if we should determine that a carrier establishing a single POI outside a local calling area must bear some portion of the ILEC's transport costs, do our regulations permit the imposition of access charges for calls that originate and terminate within one local calling area but cross local calling area boundaries due to the placement of the POI?¹⁸⁷

¹⁷⁹ See *supra* note 91 and accompanying text.

¹⁸⁰ See In the Matter of Joint Application by SBC Communications, Inc. *et al.* for Provision of In-Region, InterLATA Services in Kansas and Oklahoma, CC Docket No. 00-217, *Memorandum Opinion and Order*, FCC 01-29 at ¶ 235 (rel. Jan. 22, 2001) (“*Kansas/Oklahoma 271 Order*”) (citing 47 C.F.R. § 51.703(b); In the Matters of TSR Wireless, LLC *et al.* v. U.S. West, 15 FCC Rcd. 11166 (2000), *pet. for review docketed sub nom.*, *Qwest v. FCC*, No. 00-1376 (D.C. Cir. Aug. 17, 2000)).

¹⁸¹ 47 C.F.R. § 51.701(c).

¹⁸² 47 C.F.R. § 51.701(d).

¹⁸³ 47 C.F.R. § 51.701(e).

¹⁸⁴ See *Kansas/Oklahoma 271 Order*, *supra* note 180, at ¶¶ 232-34.

¹⁸⁵ SBC Reply in CC Docket No. 00-217, at 83-84.

¹⁸⁶ AT&T Comments in CC Docket No. 00-217, Attachment 2, Fettig Declaration, at 26-27.

¹⁸⁷ See *ISP Inter-carrier Compensation Order* at ¶¶ 24-30 (discussing relationship between reciprocal compensation and access charges).

114. Finally, we are concerned that the interplay of our single POI rules and reciprocal compensation rules may lead to the deployment of inefficient or duplicative networks. By requiring an ILEC to interconnect with a requesting carrier at any technical feasible point in a LATA of that carrier's choosing, are we compelling inefficient network design by forcing the LEC to provision extra transport? Or, by requiring carriers to pay ILECs for transport outside a local calling area, are we forcing the competitive carrier into an inefficient replication of the ILEC network? Assuming that the ILEC receives reciprocal compensation for transporting terminating traffic, how precisely does a distant POI unfairly burden the LEC? Is the efficiency concern limited to those instances in which traffic between two networks is unbalanced and/or where transport is required beyond a certain distance? We seek comment on these questions, and any other issues related to the interplay between our single POI rules and our reciprocal compensation rules.

d. Virtual Central Office Codes

115. We seek comment on the use of virtual central office codes (NXXs),¹⁸⁸ and their effect on the reciprocal compensation and transport obligations of interconnected LECs. Commenters in this proceeding have indicated that some LECs are inappropriately using virtual NXXs to collect reciprocal compensation for traffic that the ILEC is then forced to transport outside of the local calling area.¹⁸⁹ We note that the Commission has delegated some of its authority to state public utility commissions in order that they may order the North American Numbering Plan Administrator (NANPA) to reclaim NXX codes that are not used in accordance with the Central Office Code Assignment Guidelines.¹⁹⁰ The Maine Public Utility Commission recently addressed the issue of virtual NXXs when it directed the NANPA to reclaim the NXX codes that Brooks Fiber used to provide "unauthorized interexchange service" as opposed to "facilities-based local exchange service."¹⁹¹ In light of these developments, we seek comment on the following issues: (1) Under what circumstances should a LEC be entitled to use virtual NXX codes? (2) If LECs are permitted to use virtual NXX codes, what is the transport obligation of the originating LEC? (3) Should the LEC employing the virtual NXX code be required to provide transport from the central offices associated with those NXX codes?

2. Can CPNP Regimes Resolve the Existing Interconnection Issues and Will They Be Administratively Feasible?

116. We seek comment on how, if the Commission declines to adopt bill and keep, the existing CPNP regimes could be modified to deal with the issues presented by existing

¹⁸⁸ Virtual NXX codes are central office codes that correspond with a particular geographic area that are assigned to a customer located in a different geographic area.

¹⁸⁹ See, e.g., *BellSouth ex parte* in CC Docket No. 99-68 at 2 (Nov. 7, 2000).

¹⁹⁰ See *In the Matter of Numbering Resource Optimization*, CC Docket No. 99-200, *Report and Order and Further Notice of Proposed Rulemaking*, 15 FCC Rcd. 7574, 7678-7682 (2000).

¹⁹¹ *Investigation into the Use of Central Office Codes (NXXs) by New England Fiber Communications, LLC d/b/a Brooks Fiber* Docket No. 98-758, *Order Requiring Reclamation of NXX Codes and Special ISP Rates by ILECs*, Order No. 4, at 4 (Maine PUC June 30, 2000).

interconnection regimes, and whether CPNP regimes can be modified so that regulators can administer them easily. We also seek comment on how existing CPNP rules could be modified to address situations of regulatory arbitrage. To the extent that certain regulatory arbitrage opportunities arise from the disparities between existing interconnection regimes, we seek comment on the costs and benefits of moving to a uniform CPNP regime.

117. We also seek comment on how, under a unified CPNP regime, regulators should deal with the terminating access monopoly problem. In this regard, we ask parties to discuss the administrative feasibility of any proposed solution to this problem. For example, is there any way that regulators can avoid having to regulate the access rates of all local carriers? If the rates of all local carriers must be regulated, is there any way to simplify the form of regulation? For example, should we simply prohibit CLECs from charging terminating access charges that exceed those of the ILEC?

118. Parties should also address whether a CPNP regime increases the possibility of predatory price squeezes, particularly against long-distance carriers, and how this problem could be addressed. In this context, and to the extent that parties contend we should drop the presumption of symmetrical reciprocal compensation rates, we seek comment on how we can minimize the administrative burdens of setting multiple interconnection rates.

119. With respect to the problem of inefficient end-user charges, we seek comment on how existing CPNP rules can be modified to reduce this problem. For example, would this problem disappear if we moved to a capacity-based intercarrier compensation scheme? We also invite comment on how we can modify the existing intercarrier compensation scheme to eliminate any regulatory inefficiencies that might cause an entity to claim to be a network rather than a subscriber. Similarly, we seek comment on whether CPNP regimes create an incentive for carriers to discriminate between on-net and off-net calls, and whether this could increase any tendency toward tipping into monopoly.

120. Finally, we ask parties to comment on the administrative costs or regulatory burdens associated with reforming the existing CPNP regimes and making them more uniform. We also ask parties to discuss whether, under a CPNP regime, regulatory intervention can be reduced. For example, can rules be adopted that provide incentives for carriers to reveal their true costs of termination in a regulatory or arbitration process? Alternatively, if we will be unable to eliminate regulatory intervention, can we simplify the regulations?

D. Other Issues

1. Legal Authority

121. In Section II.B.6 above, we seek comment on whether the Commission has legal authority to establish bill-and-keep arrangements for reciprocal compensation between telecommunications carriers. With respect to any modification to the existing intercarrier compensation rules discussed herein or proposed by any party, we seek comment on whether the Commission has legal authority to adopt such a modification. In particular, with respect to bill-and-keep arrangements, we seek comment on whether the Commission has legal authority to modify our existing interstate access rules to move them into a bill-and-keep regime. Additionally, we seek comment (particularly from state public utility commissions) on whether

the state commissions have authority to mandate bill-and-keep arrangements for intrastate access charges. Finally, to the extent that parties believe it is important for bill-and-keep arrangements to be administered uniformly, we seek comment on how the Commission could ensure that all states adopt a bill-and-keep approach to intrastate access charges.

2. Jurisdictional Responsibility

122. As previously indicated, this Commission and the state public utility commissions have long shared the responsibility for regulating intercarrier compensation. Furthermore, this Commission has always strived to cooperate with the states to carry out this dual responsibility. In considering ways to reform intercarrier compensation, we are cognizant of the need to cooperate with the states, and the importance of not interfering unnecessarily with legitimate state policies. Thus, with respect to any proposed intercarrier compensation reform, we seek comment on how such a reform might affect this balance of responsibilities between the Commission and the states. We also seek comment on how each proposed reform might affect existing state policies. Finally, we seek comment on how each proposed reform might affect other existing Commission and state regulations. For example, how would a bill-and-keep regime for carrier access charges affect existing separations rules?

3. Impact on End-User Prices and Universal Service

123. We recognize that modifying our existing intercarrier compensation rules may affect end-user prices. For example, reforming the existing CPNP regimes might require a reduction in per-minute charges and an increase in flat charges. Similarly, DeGraba argues that instituting a bill-and-keep arrangement should result in a reduction in traffic-sensitive end-user rates, and a concomitant increase in network usage. Such a shift would also likely result in some increase in the flat-rated charges assessed against end users. In addition, while it is possible that, in moving to a bill-and-keep regime, carriers would simply charge existing traffic-sensitive termination charges to their end-user customers, it appears equally likely, or more likely, that carriers might modify the rate structure by moving to flat-rated charges. This likewise would result in an increase in flat-rated end-user charges. Finally, if we were to move to a bill-and-keep regime for access charges, this would reduce the portion of a consumer's total telecommunications bill that is subject to the geographic rate averaging required by section 254(g), which could further increase the rates of customers in high-cost areas. We seek comment on how significant any increase in flat-rated charges may be, and also the extent to which increases in flat-rated charges may affect telephone penetration levels. In particular, we invite parties to comment on the elasticities of demand with respect to usage and subscription. We also seek comment on the aggregate costs and benefits of a bill-and-keep approach, including any distributional consequences to any particular subscriber group.

124. We also seek comment on how a bill-and-keep regime would impact universal service. Specifically, we seek comment on whether a bill-and-keep approach would affect the Commission's ability to preserve and advance universal service through specific and predictable support mechanisms as required by the Communications Act.¹⁹² For example, to the extent that higher fixed rates may cause certain subscribers to drop off the network, we seek comment on

¹⁹² See 47 U.S.C. § 254.

how we can continue to achieve universal service throughout the U.S. In addition, we seek comment on how any new intercarrier compensation regime, including bill and keep, will impact the collection of universal service contributions under the existing contribution methodology. Since our contribution methodology continues to evolve in response to changing market conditions, we seek comment on how that methodology should account for any new intercarrier compensation regime that we establish.¹⁹³

4. Impact on Interconnection Agreements Between International Carriers

125. As previously indicated, this *NPRM* focuses on efficient intercarrier compensation mechanisms for all types of carriers interconnecting with a local telephone network, and for all types of traffic passing over that network. We invite parties to comment on whether any reforms we adopt as part of this proceeding should be extended to other interconnection arrangements; and if not, how such reforms might affect other types of interconnection arrangements. In particular, we seek comment on whether the reforms proposed for domestic intercarrier compensation could be a useful substitute for the traditional international settlements system¹⁹⁴ for the exchange of international traffic between U.S. international carriers and foreign carriers, were they adopted by other countries. The current international accounting rate system was developed as part of a regulatory tradition in which international telecommunications services were supplied through a bilateral correspondent relationship between national monopoly carriers. An accounting rate is the price that a U.S. facilities-based carrier negotiates with a foreign carrier for handling one minute of international telephone service. Each carrier's portion of the accounting rate is referred to as the settlement rate. In almost all cases, the settlement rate is equal to one-half the negotiated accounting rate. In a series of decisions since 1996, the Commission has adopted policies to encourage U.S. carriers to negotiate settlement arrangements outside the traditional accounting rate system with foreign carriers that lack market power and on routes where there is competition within the foreign market.

126. We also seek comment on what impact the proposed reforms, if adopted solely for domestic intercarrier compensation, would have on international settlement arrangements and on the prices that consumers pay for international services. We further seek comment on whether the reforms would require revision of the Commission's international settlement rate benchmarks policy and/or the International Settlements Policy.¹⁹⁵ The International Settlements Policy requires: (1) the equal division of the accounting rate between the U.S. and foreign carrier; (2) nondiscriminatory treatment of U.S. carriers (all U.S. carriers must receive the same

¹⁹³ See In the Matter of Federal-State Joint Board on Universal Service, *Report and Order and Order on Reconsideration*, CC Docket No. 96-45, FCC 01-85 (rel. Mar. 14, 2001) (modifying universal service collection mechanism by shortening revenue assessment from one year to six months).

¹⁹⁴ See Policy Statement on International Accounting Rate Reform, 11 FCC Rcd. 3146 (1996); In the Matter of Regulation of International Accounting Rates, Phase II, *Fourth Report and Order*, 11 FCC Rcd. 20063 (1996); In the Matter of 1998 Biennial Regulatory Review, Reform of the International Settlements Policy and Associated Filing Requirements, *Report and Order on Reconsideration*, 14 FCC Rcd. 7963 (1999).

¹⁹⁵ See In the Matter of Implementation and Scope of the Uniform Settlements Policy for Parallel Routes, *Report and Order*, 51 Fed. Reg. 4736 (1986).

accounting rate, with the same effective date); and (3) proportionate return of inbound traffic. The International Settlements Policy was developed to prevent foreign monopoly carriers from discriminating against U.S. international carriers in their settlement negotiations. The international settlement rate benchmarks policy requires U.S. carriers to negotiate settlement rates that comply with “benchmark rates” established by the Commission. In the Benchmarks Order, the Commission categorized countries by economic development level and established three benchmark rates for the different categories and a transition timetable from January 1, 1999 to January 1, 2003 for achieving those rates.¹⁹⁶

5. Impact on Interconnection Agreements Between Internet Backbones

127. As previously indicated, we do not intend to address directly the issue of interconnection agreements among Internet backbones. The backbones appear to be successfully negotiating interconnection agreements among themselves without any regulatory intervention, and we see no reason to intervene in this efficiently functioning market. Nevertheless, we are concerned that any of the actions we might take in this proceeding could have unintended consequences for interconnection agreements among Internet backbones. Thus, with respect to the various proposals for reforming intercarrier compensation, we seek comment on whether such proposals are consistent with existing interconnection arrangements among Internet backbones, and how, if at all, they might affect these privately negotiated arrangements.

6. Impact on Small Entities

128. For each proposed approach to intercarrier compensation, we seek further comment on the potential impact on small entities. We seek comment on the relative importance of developing a unified regime, and the pro-competitive vision of the 1996 Act, weighed against the specific needs of small entities in (and new entrants into) the telecommunications market. For example, would a different compliance timetable for small entities be appropriate in any of these contexts?

7. Further Possible Approaches to Intercarrier Compensation

129. Finally, we ask parties to comment on whether there are other types of intercarrier compensation not yet addressed (*i.e.*, unified CPNP approaches, or approaches other than CPNP and bill and keep) that can ameliorate the problems facing existing intercarrier compensation arrangements. In particular, we invite parties to propose alternative unified approaches to reforming intercarrier compensation. With respect to each proposal, we ask that the parties explain how their proposal encourages efficient usage of the network and deployment of network infrastructure, the likely transaction costs, whether their proposal solves existing interconnection problems, and whether it creates new ones.

130. Additionally, we ask parties to comment on the use of a market-based approach to intercarrier compensation. Specifically, we seek comment on whether allowing carriers freely to

¹⁹⁶ See International Settlement Rates, IB Docket No. 96-261, *Report and Order on Reconsideration and Order Lifting Stay*, 14 FCC Rcd. 9256 (1996); *aff'd sub nom. Cable & Wireless P.L.C. v. FCC*, 166 F.3d 1224 (D.C. Cir. 1999).

contract arrangements for intercarrier compensation could serve as a unified or partial approach to reforming intercarrier compensation. In what circumstances would such an approach lead to more efficient results, or better resolve the current problems, than a regulatory approach? We also ask parties to address whether, under a contract-based approach, carriers should be allowed to refuse to carry traffic for each other. What are the legal and practical implications of allowing parties to refuse to carry traffic for each other? What are the potential impacts of this behavior on small entities? Parties should also address the circumstances under which the use of tariffs rather than contracts would be more efficient or would better resolve the problems facing existing intercarrier compensation arrangements.

IV. PROCEDURAL MATTERS

A. Initial Regulatory Flexibility Analysis

131. As required by the Regulatory Flexibility Act (RFA),¹⁹⁷ the Commission has prepared this present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities by the policies and rules proposed in this *NPRM*. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the *NPRM* provided below in paragraph 182. The Commission will send a copy of the *NPRM*, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). *See* 5 U.S.C. § 603(a). In addition, the *NPRM* and IRFA (or summaries thereof) will be published in the Federal Register. *See id.*

1. Need for, and Objectives of, the Proposed Rules

132. The existing intercarrier compensation regime applies different sets of rules to different types of carriers and to different types of traffic. Basically, this patchwork of rules can be broken down into: (1) reciprocal compensation rules, which apply to the exchange of local traffic; and (2) access rules that apply to traffic exchanged between local carriers and long-distance carriers. Both sets of rules are “calling-party’s-network-pays” (CPNP) arrangements (i.e., they require the calling party’s network to pay the called party’s network to terminate a call). Both sets of rules are also subject to numerous exceptions, such as the enhanced service provider (ESP) exemption from access charges.

133. This *NPRM* is motivated by numerous problems that have appeared recently concerning the existing rules governing intercarrier compensation. A primary concern is the opportunity, under the current regime, for profit-seeking behavior to take advantage of cost or revenue disparities that are due solely to regulation. For example, competitive local exchange carriers (CLECs) often target Internet service providers (ISPs) as customers in order to become net-recipients of traffic, and thus profit from reciprocal compensation revenues. Similarly, Internet Protocol (IP) telephony threatens to erode access revenues for LECs because it is exempt from the access charges that traditional long-distance carriers must pay. Another major concern

¹⁹⁷ *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et. seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

is that local carriers possess monopoly power over terminating access. As a result, CLECs often impose access charges that far exceed the regulated access charges of incumbent LECs. Finally, the current regime can generate inefficient traffic-sensitive end-user rates, and can also create incentives for entities to claim to be networks in order to qualify for interconnection, rather than to simply subscribe as a customer.

134. This *NPRM* seeks comment on the existing CPNP regime, and asks whether it can be effectively reformed to address these problems. This *NPRM* also seeks comment on alternative approaches to intercarrier compensation, including the possibility of adopting some form of “bill and keep.” In particular, this *NPRM* seeks comment on the proposals contained in two working papers written by Commission staff members. In the first paper, Patrick DeGraba proposes the following two rules (called Central Office Bill and Keep, or “COBAK”): (1) that no carrier may recover any costs of its customers’ local access facilities from an interconnecting carrier; and (2) that the calling party’s network is responsible for the cost of transporting the call to the called party’s central office. In the second paper, Jay M. Atkinson and Christopher C. Barnekov propose another set of rules (called Bill Access to Subscribers–Interconnection Cost Split, or “BASICS”): (1) networks should recover all intra-network costs from their end-user customers; and (2) networks should divide equally the costs that result purely from interconnection. This *NPRM* seeks comment on COBAK and BASICS, together with any alternative bill-and-keep approaches.

135. With respect to each approach to intercarrier compensation, this *NPRM* seeks comment on whether it will encourage an efficient use of, and investment in, the network, and whether it will be administratively feasible. This *NPRM* also seeks comment on whether each of the alternative proposals will solve existing interconnection problems, and the extent to which the proposals will create new problems.

2. Legal Basis

136. The legal basis for any action that may be taken pursuant to the *NPRM* is contained in sections 4, 201-202, 303 and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154, 201-202, 303 and 403, and sections 1.1, 1.411 and 1.412 of the Commission’s rules, 47 C.F.R. §§ 1.1, 1.411 and 1.412.

3. Description and Estimate of the Number of Small Entities to Which Rules Will Apply

137. The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.¹⁹⁸ The RFA defines the term “small entity” as having the same meaning as the terms “small business,” “small organization” and “small business concern” under section 3 of the Small Business Act.¹⁹⁹ A small business concern is one which: (1) is independently owned and

¹⁹⁸ 5 U.S.C. § 603(b)(3).

¹⁹⁹ *Id.* at § 601(3).

operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.²⁰⁰

138. A small organization is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”²⁰¹ Nationwide, as of 1992, there were approximately 275,801 small organizations.²⁰² “Small governmental jurisdiction”²⁰³ generally means “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000.”²⁰⁴ As of 1992, there were approximately 85,006 such jurisdictions in the United States.²⁰⁵ This number includes 38,978 counties, cities, and towns; of these, 37,566, or 96 percent, have populations of fewer than 50,000.²⁰⁶ The Census Bureau estimates that this ratio is approximately accurate for all governmental entities. Thus, of the 85,006 governmental entities, we estimate that 81,600 (96 percent) are small entities. According to SBA reporting data, there were 4.44 million small business firms nationwide in 1992.²⁰⁷ Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by rules adopted pursuant to this *NPRM*.

139. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the number of commercial wireless entities, appears to be the data that the Commission publishes in its *Trends in Telephone Service* report.²⁰⁸ In a recent news release, the Commission indicated that there are 4,822 interstate carriers.²⁰⁹ These carriers include, *inter alia*, local exchange carriers, wireline carriers and service providers, interexchange carriers, competitive access providers, operator service providers, pay telephone operators, providers of telephone service, providers of telephone exchange service, and resellers.

140. The SBA has defined establishments engaged in providing “Radiotelephone Communications” and “Telephone Communications, Except Radiotelephone” to be small

²⁰⁰ *Id.* at § 632.

²⁰¹ *Id.* at § 601(4).

²⁰² 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

²⁰³ 47 C.F.R. § 1.1162

²⁰⁴ 5 U.S.C. § 601(5).

²⁰⁵ U.S. Dept. of Commerce, Bureau of the Census, “1992 Census of Governments.”

²⁰⁶ *Id.*

²⁰⁷ 1992 Economic Census, U.S. Bureau of the Census, Table 6 (special tabulation of data under contract to Office of Advocacy of the U.S. Small Business Administration).

²⁰⁸ Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, *Trends in Telephone Service*, Table 16.3 (Dec. 2000).

²⁰⁹ *Id.*

businesses when they have no more than 1,500 employees.²¹⁰ Below, we discuss the total estimated number of telephone companies falling within the two categories, and the number of small businesses in each. We then attempt to further refine those estimates to correspond with the categories of telephone companies that are commonly used under our rules.

141. We have included small incumbent LECs (small ILECs) in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small business size standard (*e.g.*, a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”²¹¹ The SBA’s Office of Advocacy contends that, for RFA purposes, small ILECs are not dominant in their field of operation because any such dominance is not “national” in scope.²¹² We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

142. *Total Number of Telephone Companies Affected.* The U.S. Bureau of the Census (“Census Bureau”) reports that, at the end of 1992, there were 3,497 firms engaged in providing telephone services, as defined therein, for at least one year.²¹³ This number contains a variety of different categories of carriers, including local exchange carriers, interexchange carriers, competitive access providers, cellular carriers, mobile service carriers, operator service providers, pay telephone operators, covered specialized mobile radio providers, and resellers. It seems certain that some of these 3,497 telephone service firms may not qualify as small entities or small ILECs because they are not “independently owned and operated.”²¹⁴ For example, a PCS provider that is affiliated with an interexchange carrier having more than 1,500 employees would not meet the definition of a small business. It is reasonable to conclude that fewer than 3,497 telephone service firms are small entity telephone service firms or small ILECs that may be affected by the new rules.

143. *Wireline Carriers and Service Providers.* The SBA has developed a definition of small entities for telephone communications companies except radiotelephone (*i.e.*, wireless) companies. The Census Bureau reports that there were 2,321 such telephone companies in operation for at least one year at the end of 1992.²¹⁵ According to the SBA’s definition, a small

²¹⁰ See 13 C.F.R. § 121.201, Standard Industrial Classification (SIC) codes 4812 and 4813; *see also* Executive Office of the President, Office of Management and Budget, *Standard Industrial Classification Manual* (1987).

²¹¹ 5 U.S.C. § 601(3).

²¹² Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” See 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b). Since 1996, out of an abundance of caution, the Commission has included small incumbent LECs in its regulatory flexibility analyses. *See, e.g., Local Competition Order*, 11 FCC Rcd. at 16144-45 (1996).

²¹³ U.S. Department of Commerce, Bureau of the Census, *1992 Census of Transportation, Communications, and Utilities: Establishment and Firm Size*, at Firm Size 1-123 (1995) (“1992 Census”).

²¹⁴ *See generally* 15 U.S.C. § 632(a)(1).

²¹⁵ *1992 Census at Firm Size* 1-123.

business telephone company other than a radiotelephone company is one employing no more than 1,500 persons.²¹⁶ All but 26 of the 2,321 non-radiotelephone companies listed by the Census Bureau were reported to have fewer than 1,000 employees. Thus, even if all 26 of those companies had more than 1,500 employees, there would still be 2,295 non-radiotelephone companies that might qualify as small entities or small ILECs. We do not have data specifying the number of these carriers that are not independently owned and operated, and thus are unable at this time to estimate with greater precision the number of wireline carriers and service providers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate 2,295 or fewer small telephone communications companies other than radiotelephone companies are small entities or small ILECs that may be affected by rules adopted pursuant to this *NPRM*.

144. *Local Exchange Carriers.* Neither the Commission nor the SBA has developed a definition for small providers of local exchange services (LECs). The closest applicable definition under the SBA rules is for telephone communications companies other than radiotelephone (*i.e.*, wireless) companies.²¹⁷ According to the most recent *Telecommunications Industry Revenue* data, 1,335 incumbent carriers reported that they were engaged in the provision of local exchange services.²¹⁸ We do not have data specifying the number of these carriers that are either dominant in their field of operations, are not independently owned and operated, or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of LECs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that 1,335 or fewer providers of local exchange service are small entities or small ILECs that may be affected by the new rules.

145. *Interexchange Carriers.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to providers of interexchange services (IXCs). The closest applicable definition under the SBA rules is for telephone communications companies other than radiotelephone (*i.e.*, wireless) companies.²¹⁹ According to the most recent *Trends in Telephone Service* data, 204 carriers reported that they were engaged in the provision of interexchange services.²²⁰ We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of IXCs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 204 or fewer small-entity IXCs that may be affected by rules adopted pursuant to this *NPRM*.

146. *Competitive Access Providers.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to competitive access services providers (CAPs). The closest applicable definition under the SBA rules is for telephone

²¹⁶ 13 C.F.R. § 121.201, SIC code 4813.

²¹⁷ *Id.*

²¹⁸ *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

²¹⁹ 13 C.F.R. § 121.201, SIC code 4813.

²²⁰ *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

communications companies other than radiotelephone (*i.e.*, wireless) companies.²²¹ According to the most recent *Trends in Telephone Service* data, 349 CAP/CLEC carriers and 60 other LECs reported that they were engaged in the provision of competitive local exchange services.²²² We do not have data specifying the number of these carriers that are not independently owned and operated, or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of CAPs that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 349 or fewer small-entity CAPs and 60 or fewer other LECs that may be affected by rules adopted pursuant to this *NPRM*.

147. *Operator Service Providers.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to providers of operator services. The closest applicable definition under the SBA rules is for telephone communications companies other than radiotelephone (*i.e.*, wireless) companies.²²³ According to the most recent *Trends in Telephone Service* data, 21 carriers reported that they were engaged in the provision of operator services.²²⁴ We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of operator service providers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 21 or fewer small-entity operator service providers that may be affected by rules adopted pursuant to this *NPRM*.

148. *Pay Telephone Operators.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to pay telephone operators. The closest applicable definition under SBA rules is for telephone communications companies other than radiotelephone (*i.e.*, wireless) companies.²²⁵ According to the most recent *Trends in Telephone Service* data, 758 carriers reported that they were engaged in the provision of pay telephone services.²²⁶ We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of pay telephone operators that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 758 or fewer small-entity pay telephone operators that may be affected by rules adopted pursuant to this *NPRM*.

149. *Resellers (including debit card providers).* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to resellers. The closest applicable SBA definition for a reseller is a telephone communications company other than

²²¹ 13 C.F.R. § 121.201, SIC code 4813.

²²² *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

²²³ 13 C.F.R. § 121.201, SIC code 4813.

²²⁴ *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

²²⁵ 13 C.F.R. § 121.201, SIC code 4813.

²²⁶ *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

radiotelephone (*i.e.*, wireless) companies.²²⁷ According to the most recent *Trends in Telephone Service* data, 454 toll and 87 local entities reported that they were engaged in the resale of telephone service.²²⁸ We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of resellers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 454 or fewer small-toll-entity resellers and 87 or fewer small-local-entity resellers that may be affected by rules adopted pursuant to this *NPRM*.

150. *Toll-Free 800 and 800-Like Service Subscribers.*²²⁹ Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to 800 and 800-like service ("toll free") subscribers. The most reliable source of information regarding the number of these service subscribers appears to be data the Commission collects on the 800, 888, and 877 numbers in use.²³⁰ According to our most recent data, at the end of January 1999, the number of 800 numbers assigned was 7,692,955; the number of 888 numbers that had been assigned was 7,706,393; and the number of 877 numbers assigned was 1,946,538. We do not have data specifying the number of these subscribers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are 7,692,955 or fewer small-entity 800 subscribers, 7,706,393 or fewer small-entity 888 subscribers, and 1,946,538 or fewer small-entity 877 subscribers that may be affected by rules adopted pursuant to this *NPRM*.

151. *Cellular Licensees.* Neither the Commission nor the SBA has developed a definition of small entities applicable to cellular licensees. Therefore, the applicable definition of small entity is the definition under the SBA rules applicable to radiotelephone (*i.e.*, wireless) companies. This definition provides that a small entity is a radiotelephone company employing no more than 1,500 persons.²³¹ According to the Bureau of the Census, only 12 radiotelephone firms out of a total of 1,178 such firms that operated during 1992 had 1,000 or more employees.²³² Therefore, even if all 12 of these firms were cellular telephone companies, nearly all cellular carriers were small businesses under the SBA's definition. In addition, we note that there are 1,758 cellular licenses; however, we do not know the number of cellular licensees, since a cellular licensee may own several licenses. The most reliable source of information regarding the number of cellular service providers nationwide appears to be data the Commission publishes annually in its *Telecommunications Industry Revenue* report, regarding the Telecommunications Relay Service (TRS). The report places cellular licensees and Personal

²²⁷ 13 C.F.R. § 121.201, SIC code 4813.

²²⁸ *Trends in Telephone Service*, *supra* note 208, at Table 16.3.

²²⁹ We include all toll-free number subscribers in this category, including 888 number subscribers.

²³⁰ *Trends in Telephone Service*, *supra* note 208, at Table 19.2.

²³¹ 13 C.F.R. § 121.201, SIC code 4812.

²³² *1992 Census at Firm Size* 1-123.

Communications Service (PCS) licensees in one group. According to recent data, 808 carriers reported that they were engaged in the provision of either cellular or PCS services.²³³ We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of cellular service carriers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are no more than 808 small cellular service carriers.

152. *220 MHz Radio Service—Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and 4 nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a definition of small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the definition under the SBA rules applicable to radiotelephone communications companies. This definition provides that a small entity is a radiotelephone company employing no more than 1,500 persons.²³⁴ According to a 1995 estimate by the Bureau of the Census, only 12 radiotelephone firms out of a total of 1,178 such firms that operated during 1992 had 1,000 or more employees.²³⁵ Therefore, assuming that this general ratio has not changed significantly in recent years in the context of Phase I 220 MHz licensees, we estimate that nearly all such licensees are small businesses under the SBA's definition.

153. *220 MHz Radio Service—Phase II Licensees.* The Phase II 220 MHz service is a new service, and is subject to spectrum auctions. In the *220 MHz Third Report and Order*, we adopted criteria for defining small businesses and very small businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.²³⁶ We have defined a small business as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a very small business is defined as an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.²³⁷ The SBA has approved these definitions.²³⁸ An auction of

²³³ Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, *Trends in Telephone Service*, Table 19.3 (Mar. 2000).

²³⁴ 13 C.F.R. § 121.201, SIC code 4812.

²³⁵ *1992 Census at Firm Size* 1-123.

²³⁶ In the Matter of Amendment of Part 90 of the Commission's Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service, PR Docket No. 89-552, *Third Report and Order*, 12 FCC Rcd. 10943, 11068-70 ¶¶ 291-95 (1997).

²³⁷ *Id.* at 11068-69 ¶ 291.

²³⁸ See Letter from A. Alvarez, Administrator, SBA, to D. Phythyon, Chief, Wireless Telecommunications Bureau, FCC (filed Jan. 6, 1998).

Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998.²³⁹ Nine hundred and eight (908) licenses were auctioned in three different-sized geographic areas: 3 nationwide licenses, 30 Regional Economic Area Group (REAG) licenses, and 875 Economic Area (EA) licenses. Of the 908 licenses auctioned, 693 were sold. Companies claiming small business status won: 1 of the Nationwide licenses, 67% of the Regional licenses, 47% of the REAG licenses and 54% of the EA licenses. As of January 22, 1999, the Commission announced that it was prepared to grant 654 of the Phase II licenses won at auction.²⁴⁰ A second 220 MHz Radio Service auction began on June 8, 1999 and closed on June 30, 1999. This auction offered 225 licenses in 87 EAs and 4 REAGs. (A total of 9 REAG licenses and 216 EA licenses. No nationwide licenses were available in this auction.) Of the 215 EA licenses won, 153 EA licenses (71%) were won by bidders claiming small business status. Of the 7 REAG licenses won, 5 REAG licenses (71%) were won by bidders claiming small business status.

154. *Private and Common Carrier Paging.* The Commission has adopted a two-tier definition of small businesses in the context of auctioning licenses in the Common Carrier Paging and exclusive Private Carrier Paging services. A small business will be defined as either: (1) an entity that, together with its affiliates and controlling principals, has average gross revenues for the three preceding years of not more than \$3 million; or (2) an entity that, together with affiliates and controlling principals, has average gross revenues for the three preceding calendar years of not more than \$15 million. Because the SBA has not yet approved this definition for paging services, we will utilize the SBA's definition applicable to radiotelephone companies, *i.e.*, an entity employing no more than 1,500 persons.²⁴¹ At present, there are approximately 24,000 Private Paging licenses and 74,000 Common Carrier Paging licenses. According to recent data, 172 carriers reported that they were engaged in the provision of either paging or "other mobile" services, which are placed together in the data.²⁴² We do not have data specifying the number of these carriers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of paging carriers that would qualify as small business concerns under the SBA's definition. Consequently, we estimate that there are no more than 172 small paging carriers. We estimate that the majority of private and common carrier paging providers would qualify as small entities under the SBA definition.

155. *Mobile Service Carriers.* Neither the Commission nor the SBA has developed a definition of small entities specifically applicable to mobile service carriers, such as paging companies. As noted above in the section concerning paging service carriers, the closest applicable definition under the SBA rules is that for radiotelephone (*i.e.*, wireless) companies,²⁴³

²³⁹ See generally Phase II 220 MHz Service Auction Closes, Auction No. 18, *Public Notice*, 14 FCC Rcd. 605 (1998).

²⁴⁰ FCC Announces It is Prepared to Grant 654 Phase II 220 MHz Licenses After Final Payment is Made, Auction No. 18, *Public Notice*, 14 FCC Rcd. 1085 (1999).

²⁴¹ 13 C.F.R. § 121.201, SIC code 4812.

²⁴² Federal Communications Commission, Common Carrier Bureau, Industry Analysis Division, *Trends in Telephone Service*, Table 19.3 (Feb. 19, 1999).

²⁴³ 13 C.F.R. § 121.201, SIC code 4812.

and recent data show that 172 carriers reported that they were engaged in the provision of either paging or “other mobile” services.²⁴⁴ Consequently, we estimate that there are no more than 172 small mobile service carriers.

156. *Broadband Personal Communications Service (PCS).* The broadband PCS spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defined “small entity” for blocks C and F as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.²⁴⁵ For block F, an additional classification for “very small business” was added and is defined as an entity that, together with affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.²⁴⁶ These regulations defining “small entity” in the context of broadband PCS auctions have been approved by the SBA.²⁴⁷ No small businesses within the SBA-approved definition bid successfully for licenses in blocks A and B. There were 90 winning bidders that qualified as small entities in the C block auctions. A total of 93 small and very small business bidders won approximately 40% of the 1,479 licenses for blocks D, E and F.²⁴⁸ On March 23, 1999, the Commission held another auction (Auction No. 22) of C, D, E and F block licenses for PCS spectrum returned to the Commission by previous license holders. In that auction, 48 bidders claiming small business, very small business or entrepreneurial status won 272 of the 341 licenses (80%) offered. Based on this information, we conclude that the number of small broadband PCS licensees includes the 90 winning C block bidders, the 93 qualifying bidders in the D, E and F blocks, and the 48 winning bidders from Auction No. 22, for a total of 231 small-entity PCS providers as defined by the SBA and the Commission's auction rules.

157. *Narrowband PCS.* The Commission has auctioned nationwide and regional licenses for narrowband PCS. There are 11 nationwide and 30 regional licensees for narrowband PCS. The Commission does not have sufficient information to determine whether any of these licensees are small businesses within the SBA-approved definition for radiotelephone companies. At present, there have been no auctions held for the major trading area (MTA) and basic trading area (BTA) narrowband PCS licenses. The Commission anticipates a total of 561 MTA licenses and 2,958 BTA licenses will be awarded by auction. Such auctions, however, have not yet been scheduled. Given that nearly all radiotelephone companies have no more than 1,500 employees, and no reliable estimate of the number of prospective MTA and BTA narrowband licensees can be made, we assume, for our purposes here, that all of the licenses will be awarded to small entities, as that term is defined by the SBA.

²⁴⁴ *Trends in Telephone Service*, *supra* note 242, at Table 19.3.

²⁴⁵ See In the Matter of Amendment of Parts 20 and 24 of the Commission's Rules—Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap, WT Docket No. 96-59, *Report and Order*, 11 FCC Rcd. 7824, ¶¶ 57-60 (1996); 61 FR 33859 (Jul. 1, 1996); see also 47 C.F.R. § 24.720(b).

²⁴⁶ *Id.* at ¶ 60.

²⁴⁷ See, e.g., In the Matter of Implementation of Section 309(j) of the Communications Act—Competitive Bidding, PP Docket No. 93-253, *Fifth Report and Order*, 9 FCC Rcd. 5532, 5581-84 (1994).

²⁴⁸ FCC News, *Broadband PCS, D, E and F Block Auction Closes*, No. 71744 (rel. Jan. 14, 1997).

158. *Rural Radiotelephone Service.* The Commission has not adopted a definition of small entity specific to the Rural Radiotelephone Service.²⁴⁹ A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio Systems (BETRS).²⁵⁰ We will use the SBA's definition applicable to radiotelephone companies, *i.e.*, an entity employing no more than 1,500 persons.²⁵¹ There are approximately 1,000 licensees in the Rural Radiotelephone Service, and we estimate that almost all of them qualify as small entities under the SBA's definition.

159. *Air-Ground Radiotelephone Service.* The Commission has not adopted a definition of small entity specific to the Air-Ground Radiotelephone Service.²⁵² Accordingly, we will use the SBA's definition applicable to radiotelephone companies, *i.e.*, an entity employing no more than 1,500 persons.²⁵³ There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA definition.

160. *Specialized Mobile Radio (SMR).* The Commission awards bidding credits in auctions for geographic area 800 MHz and 900 MHz SMR licenses to two tiers of firms: (1) "small entities," those with revenues of no more than \$15 million in each of the three previous calendar years; and (2) "very small entities," those with revenues of no more than \$3 million in each of the three previous calendar years. The regulations defining "small entity" and "very small entity" in the context of 800 MHz SMR (upper 10 MHz and lower 230 channels) and 900 MHz SMR have been approved by the SBA. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. We assume, for our purposes here, that all of the remaining existing extended implementation authorizations are held by small entities, as that term is defined by the SBA. The Commission has held auctions for geographic area licenses in the 800 MHz (upper 10 MHz) and 900 MHz SMR bands. There were 60 winning bidders that qualified as small and very small entities in the 900 MHz auction. Of the 1,020 licenses won in the 900 MHz auction, 263 licenses were won by bidders qualifying as small and very small entities. In the 800 MHz SMR auction, 38 of the 524 licenses won were won by small and very small entities.

161. *Marine Coast Service.* Between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of this auction, and for future public coast auctions, the Commission defines a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding

²⁴⁹ The service is defined in section 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

²⁵⁰ BETRS is defined in sections 22.757 and 22.759 of the Commission's Rules, 47 C.F.R. §§ 22.757 and 22.759.

²⁵¹ 13 C.F.R. 121.201, SIC code 4812.

²⁵² The service is defined in section 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

²⁵³ 13 C.F.R. § 121.201, SIC code 4812.

three years not to exceed \$15 million dollars. A "very small" business is one that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars.²⁵⁴ There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as "small" businesses under the Commission's definition, which has been approved by the SBA.

162. *Fixed Microwave Services.* Microwave services include common carrier,²⁵⁵ private-operational fixed,²⁵⁶ and broadcast auxiliary radio services.²⁵⁷ At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not yet defined a small business with respect to microwave services. For our purposes here, we will utilize the SBA's definition applicable to radiotelephone companies—*i.e.*, an entity with no more than 1,500 persons.²⁵⁸ Under this definition, we estimate that all of the Fixed Microwave licensees (excluding broadcast auxiliary licensees) would qualify as small entities.

163. *Local Multipoint Distribution Service.* The Commission held two auctions for licenses in the Local Multipoint Distribution Services (LMDS) (Auction No. 17 and Auction No. 23). For both of these auctions, the Commission defined a small business as an entity, together with its affiliates and controlling principals, having average gross revenues for the three preceding years of not more than \$40 million. A very small business was defined as an entity, together with affiliates and controlling principals, having average gross revenues for the three preceding years of not more than \$15 million. Of the 144 winning bidders in Auction Nos. 17 and 23, 125 bidders (87%) were small or very small businesses.

164. *24 GHz—Incumbent 24 GHz Licensees.* The rules that we may later adopt could affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The Commission has not developed a definition of small entities applicable to licensees in the 24 GHz band. Therefore, the applicable definition of small entity is the definition under the SBA rules for the radiotelephone industry, providing that a small entity is a radiotelephone company employing fewer than 1,500 persons.²⁵⁹ The 1992 Census of Transportation, Communications and Utilities,

²⁵⁴ In the Matter of Amendment of the Commission's Rules Concerning Maritime Communications, PR Docket No. 92-257, *Third Report and Order and Memorandum Opinion and Order*, 13 FCC Rcd. 19853 (1998).

²⁵⁵ 47 C.F.R. §§ 101 *et seq.* (formerly, part 21 of the Commission's Rules).

²⁵⁶ Persons eligible under parts 80 and 90 of the Commission's rules can use Private Operational-Fixed Microwave services. *See* 47 C.F.R. parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee's commercial, industrial or safety operations.

²⁵⁷ Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission's Rules. *See* 47 C.F.R. § 74 *et seq.* Available to licensees of broadcast stations and to broadcast and cable network entities, broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile TV pickups, which relay signals from a remote location back to the studio.

²⁵⁸ 13 C.F.R. § 121.201, SIC code 4812.

²⁵⁹ *See* 13 C.F.R. § 121.201, SIC code 4812.

conducted by the Bureau of the Census, which is the most recent information available, shows that only 12 radiotelephone firms out of a total of 1,178 such firms that operated during 1992 had 1,000 or more employees.²⁶⁰ This information notwithstanding, we believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent and TRW, Inc.²⁶¹ Both Teligent and TRW, Inc. appear to have more than 1,500 employees. Therefore, it appears that no incumbent licensee in the 24 GHz band is a small business entity.

165. *Future 24 GHz Licensees.* The rules that we may later adopt could also affect potential new licensees on the 24 GHz band. Pursuant to 47 C.F.R. § 24.720(b), the Commission has defined “small business” for Blocks C and F broadband PCS licensees as firms that had average gross revenues of less than \$40 million in the three previous calendar years. This regulation defining “small business” in the context of broadband PCS auctions has been approved by the SBA.²⁶² With respect to new applicants in the 24 GHz band, we shall use this definition of “small business” and apply it to the 24 GHz band under the name “entrepreneur.” With regard to “small business,” we shall adopt the definition of “very small business” used for 39 GHz licenses and PCS C and F block licenses: businesses with average annual gross revenues for the three preceding years not in excess of \$15 million. Finally, “very small business” in the 24 GHz band shall be defined as an entity with average gross revenues not to exceed \$3 million for the preceding three years. The Commission will not know how many licensees will be small or very small businesses until the auction, if required, is held. Even after that, the Commission will not know how many licensees will partition their license areas or disaggregate their spectrum blocks, if partitioning and disaggregation are allowed.

166. *39 GHz.* The Commission held an auction (Auction No. 30) for fixed point-to-point microwave licenses in the 38.6 to 40.0 GHz band (39 GHz Band).²⁶³ For this auction, the Commission defined a small business as an entity, together with affiliates and controlling interests, having average gross revenues for the three preceding years of not more than \$40 million. A very small business was defined as an entity, together with affiliates and controlling principals, having average gross revenues for the three preceding years of not more than \$15 million. The SBA has approved these definitions.²⁶⁴ Of the 29 winning bidders in Auction No. 30, 18 bidders (62%) were small business participants.

167. *Multipoint Distribution Service (MDS).* This service involves a variety of transmitters, which are used to relay data and programming to the home or office, similar to that

²⁶⁰ *1992 Census at Firm Size* 1-123.

²⁶¹ Teligent has acquired the DEMS licenses of FirstMark, the only other licensee in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

²⁶² See *In the Matter of Implementation of Section 309(j) of the Communications Act—Competitive Bidding, Fifth Report and Order*, 9 FCC Rcd. 5532, 5581-82 ¶ 115 (1994).

²⁶³ See *39 GHz Band Auction Closes; Winning Bidders of 2,173 Licenses Announced*, *Public Notice*, DA 00-1035 (rel. May 10, 2000)

²⁶⁴ See Letter to Kathleen O’Brien Ham, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (filed Feb. 4, 1998).

provided by cable television systems.²⁶⁵ In connection with the 1996 MDS auction, the Commission defined small businesses as entities that had annual average gross revenues for the three preceding years not in excess of \$40 million.²⁶⁶ This definition of a small entity in the context of MDS auctions has been approved by the SBA.²⁶⁷ These stations were licensed prior to implementation of Section 309(j) of the Communications Act of 1934, as amended.²⁶⁸ Licenses for new MDS facilities are now awarded to auction winners in Basic Trading Areas (BTAs) and BTA-like areas.²⁶⁹ The MDS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 BTAs. Of the 67 auction winners, 61 meet the definition of a small business.

168. MDS is also heavily encumbered with licensees of stations authorized prior to the MDS auction. SBA has developed a definition of small entities for pay television services, which includes all such companies generating \$11 million or less in annual receipts.²⁷⁰ This definition includes MDS systems, and thus applies to incumbent MDS licensees and wireless cable operators which may not have participated or been successful in the MDS auction. Information available to us indicates that there are 832 of these licensees and operators that do not generate revenue in excess of \$11 million annually. Therefore, for purposes of this analysis, we find there are approximately 892 small MDS providers as defined by the SBA and the Commission's auction rules.

169. *Offshore Radiotelephone Service.* This service operates on several UHF TV broadcast channels that are not used for TV broadcasting in the coastal area of the states bordering the Gulf of Mexico.²⁷¹ At present, there are approximately 55 licensees in this service. We are unable at this time to estimate the number of licensees that would qualify as small under the SBA's definition for radiotelephone communications.

170. *Wireless Communications Services (WCS).* This service can be used for fixed, mobile, radio-location and digital audio broadcasting satellite uses. The Commission defined "small business" for the WCS auction as an entity with average gross revenues of \$40 million for each of the three preceding years, and a "very small business" as an entity with average gross revenues of \$15 million for each of the three preceding years. The Commission auctioned

²⁶⁵ For purposes of this item, MDS includes both the single channel Multipoint Distribution Service (MDS) and the Multichannel Multipoint Distribution Service (MMDS).

²⁶⁶ 47 C.F.R. § 1.2110 (a)(1).

²⁶⁷ In the Matter of Amendment of Parts 21 and 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service; Implementation of Section 309(j) of the Communications Act—Competitive Bidding, MM Docket No. 94-131, PP Docket No. 93-253, *Report and Order*, 10 FCC Rcd. 9589 (1995), 60 FR 36524 (Jul. 17, 1995).

²⁶⁸ 47 U.S.C. § 309(j).

²⁶⁹ *Id.* A Basic Trading Area (BTA) is the geographic area by which the Multipoint Distribution Service is licensed. See RAND MCNALLY, 1992 COMMERCIAL ATLAS AND MARKETING GUIDE 36-39 (123rd ed. 1992).

²⁷⁰ 13 C.F.R. §121.201.

²⁷¹ This service is governed by subpart I of Part 22 of the Commission's Rules. See 47 C.F.R. §§ 22.1001-22.1037.

geographic area licenses in the WCS service. In the auction, there were seven winning bidders that qualified as very small business entities, and one winning bidder that qualified as a small business entity. We conclude that the number of geographic area WCS licensees affected includes these eight entities.

171. *General Wireless Communication Service (GWCS)*. This service was created by the Commission on July 31, 1995²⁷² by transferring 25 MHz of spectrum in the 4660-4685 MHz band from the federal government to private sector use. The Commission sought and obtained SBA approval of a refined definition of "small business" for GWCS in this band.²⁷³ According to this definition, a small business is any entity, together with its affiliates and entities holding controlling interests in the entity, that has average annual gross revenues over the three preceding years that are not more than \$40 million.²⁷⁴ By letter dated March 30, 1999, NTIA reclaimed the spectrum allocated to GWCS and identified alternative spectrum at 4940-4990 MHz. On February 23, 2000, the Commission released its *Notice of Proposed Rulemaking* in WT Docket No. 00-32 proposing to allocate and establish licensing and service rules for the 4.9 GHz band.²⁷⁵

4. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

172. There are certain transaction costs for terminating access, including measuring and billing. Under the existing CPNP regime, the terminating LEC bills the originating network, whereas under bill and keep, the terminating LEC may bill its own customers. In this *NPRM*, we seek comment on the relative transaction costs of each proposal, weighed against the other efficiencies of the various alternatives.²⁷⁶ We note that transaction costs can increase under a bill-and-keep arrangement, for example, since each carrier may be responsible for measuring and billing its own customers for all traffic, rather than merely measuring and billing the originating carrier.

173. Apart from the transaction costs for termination, this *NPRM* more broadly suggests that a new regime could free regulators from allocating transport costs, and from setting the level and structure of termination rates.²⁷⁷ Where rates had once been set by regulation, individual carriers, including small entities, could inherit this responsibility.

174. As a result of rules that we may adopt, incumbent LECs and CLECs may be required to discern the amount of traffic carried on their networks that is bound for ISPs.

²⁷² See *In the Matter of Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use*, ET Docket No. 94-32, *Second Report and Order*, 11 FCC Rcd. 624 (1995).

²⁷³ See Letter to Daniel B. Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (filed May 19, 1998).

²⁷⁴ See 47 C.F.R. § 26.4.

²⁷⁵ See *In the Matter of the 4.9 GHz Band Transferred From Federal Government Use*, WT Docket No. 00-32, *Notice of Proposed Rulemaking*, 15 FCC Rcd. 4778 (2000).

²⁷⁶ See *supra* ¶ 51.

²⁷⁷ See *supra* ¶¶ 56-57.

In addition, such incumbent LECs and competitive entrants may be required to produce information regarding the costs of carrying ISP-bound traffic on their networks.²⁷⁸

175. In this *NPRM*, we seek comment on the extent to which a new regime would comply with our reciprocal compensation obligations regarding traffic balances and symmetrical rates.²⁷⁹ If we adopt rules on this issue, we may require carriers to report traffic imbalances, corresponding to rate symmetry. This is especially true in the context of LEC-CMRS interconnection, in which we seek comment on the feasibility of cost studies that CMRS carriers could use to justify separate treatment.²⁸⁰

5. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

176. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.²⁸¹

177. Although the transaction costs for terminating access can increase under a bill-and-keep arrangement, the impact on small entities would be minimal since measuring and billing is already a fundamental component of their operations. Furthermore, the advantages of a bill-and-keep regime, in providing clearer demarcations of cost between carriers, appear to outweigh the minimal increase in transaction costs that could occur under bill and keep. With regard to the related task of allocating transport costs, the same reasoning applies to small entities in that the clearer demarcations between carriers inherent in bill and keep outweighs the potential burden of setting the level and structure of termination rates. We note, in any case, that many small entities are competitive entrants such as CLECs, which currently enjoy specific exemptions from ILEC rate regulation.

178. We also note a potential benefit that may accrue to small-entity LECs transporting ISP-bound traffic. As discussed above, we may adopt rules that may require incumbent LECs and CLECs to discern the amount of traffic carried on their networks that is bound for ISPs. We anticipate that if we adopt such rules, incumbent LECs and CLECs, including small-entity incumbent LECs and CLECs, will be able to receive compensation for the delivery of ISP-bound traffic that they might not otherwise receive. The *NPRM* separately requests comment on alternative proposals.

²⁷⁸ See *infra* ¶ 178.

²⁷⁹ See *supra* ¶¶ 73-77.

²⁸⁰ See *supra* ¶¶ 90-96.

²⁸¹ 5 U.S.C. § 603(c).

179. In the *NPRM*, we seek comment on the issue of asymmetrical compensation for unbalanced traffic. Although small entities could experience an increase in reporting and recordkeeping when submitting cost studies to this effect, if adopted, we note that such a requirement would more accurately serve the revenue requirements of small entities in relation to larger competitors.

180. Finally, in the *NPRM*, we seek comment on additional impacts on small entities that may result from any new intercarrier compensation regime.²⁸² When seeking comment on the alternative of contractual arrangements for intercarrier compensation, we ask commenters to address the potential impacts of such a market-based approach on small entities, such as the refusal to carry traffic.²⁸³

6. Federal Rules that May Duplicate, Overlap or Conflict With the Proposed Rules

181. None.

B. Comment Filing Procedures

182. Pursuant to sections 1.415, 1.419, and 1.430 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, 1.430, interested parties may file comments within 90 days after publication in the Federal Register, and reply comments within 135 days after publication in the Federal Register. All filings should refer to CC Docket No. 01-92. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS) or by filing paper copies.²⁸⁴ Comments filed through the ECFS can be sent as an electronic file via the Internet to <<http://www.fcc.gov/e-file/ecfs.html>>. Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, Postal Service mailing address, and the applicable docket number, which in this instance is CC Docket No. 01-92. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to <ecfs@fcc.gov>, and should include the following words in the body of the message: "get form <your e-mail address>." A sample form and directions will be sent in reply.

183. Parties who choose to file by paper must file an original and four copies of each filing. All filings must be sent to the Commission's Secretary, Magalie Roman Salas, Office of the Secretary, Federal Communications Commission, Room TW-B204, 445 12th Street, S.W., Washington, D.C. 20554. Regardless of whether parties choose to file electronically or by paper, parties should also serve: (1) Paul Moon, Common Carrier Bureau, 445 12th Street, S.W., Room 3-C423, Washington, D.C. 20554; (2) Jane Jackson, Common Carrier Bureau, 445 12th Street, S.W., Room 5-A225, Washington, D.C. 20554; and (3) the Commission's copy contractor, International Transcription Service, Inc. (ITS), 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (202) 857-3800, with copies of any documents filed

²⁸² See *supra* Section III.D.6.

²⁸³ See *supra* ¶ 130.

²⁸⁴ See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 Fed. Reg. 24121 (1998).

in this proceeding. Comments and reply comments will be available for public inspection during regular business hours in the FCC Reference Center, Room CY-A257, 445 12th Street, S.W., Washington, D.C. 20554.

184. Parties who choose to file by paper should also submit their comments on diskette. These diskettes should be submitted to Wanda Harris, Common Carrier Bureau, 445 12th Street, S.W., Room 5-A452, Washington, D.C. 20554. Such a submission should be on a 3.5-inch diskette formatted in a Windows-compatible format using Microsoft Word or compatible software. The diskette should be accompanied by a cover letter and should be submitted in "read only" mode. The diskette should be clearly labeled with the commenter's name, proceeding (including the docket number—in this case, CC Docket No. 01-92), type of pleading (comment or reply comment), date of submission, and the name of the electronic file on the diskette. The label should also include the following phrase: "Disk Copy—Not an Original." Each diskette should contain only one party's pleadings, preferably in a single electronic file. In addition, commenters must send diskette copies to the Commission's copy contractor, International Transcription Service, Inc., 1231 20th Street, N.W., Washington, D.C. 20036.

185. Comments and reply comments must include a short and concise summary of the substantive arguments raised in the pleading. Comments and reply comments must also comply with section 1.49 and all other applicable sections of the Commission's rules.²⁸⁵ We also direct all interested parties to include the name of the filing party and the date of the filing on each page of their comments and reply comments. All parties are encouraged to utilize a table of contents, regardless of the length of their submission. We also strongly encourage that parties track the organization set forth in this *NPRM* to facilitate our internal review process.

186. Pursuant to 47 C.F.R. § 1.200(a), which permits the Commission to adopt modified or more stringent *ex parte* procedures in particular proceedings if the public interest so requires, we announce that this proceeding will be governed by "permit-but-disclose" *ex parte* procedures that are applicable to non-restricted proceedings under 47 C.F.R. § 1.1206. Designating this proceeding as "permit-but-disclose" will provide an opportunity for all interested parties to receive notice of the various technical, legal, and policy issues raised in *ex parte* presentations made to the Commission in the course of this proceeding. This will allow interested parties to file responses or rebuttals to proposals made on the record in this proceeding. Accordingly, we find that it is in the public interest to designate this proceeding as "permit-but-disclose."

187. Parties making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must contain a summary of the substance of the presentation and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. See 47 C.F.R. § 1.1206(b)(2), as revised. Other rules pertaining to oral and written presentations are set forth in Section 1.206(b) as well. Interested parties are to file any written *ex parte* presentations in this proceeding with the Commission Secretary, Magalie Roman Salas, 445 12th Street, S.W., TW-B204, Washington, D.C. 20554, and serve with copies: (1) Paul Moon, Common Carrier Bureau, 445 12th Street,

²⁸⁵ See 47 C.F.R. § 1.49.

S.W., Room 3-C423, Washington, D.C. 20554; (2) Jane Jackson, Common Carrier Bureau, 445 12th Street, S.W., Room 5-A225, Washington, D.C. 20554; and (3) International Transcription Service, Inc. (ITS), 445 12th Street, S.W., Room CY-B402, Washington, D.C. 20554, (202) 857-3800.

188. Because many of the matters on which we request comment in this *NPRM* may call on parties to disclose proprietary information such as market research and business or technical plans, we suggest that parties consult 47 C.F.R. § 0.459 about the submission of confidential information.

189. Alternative formats (computer diskette, large print, audio recording, and Braille) are available to persons with disabilities by contacting Brian Millin at (202) 418-7426 voice, (202) 418-7365 TTY, or <bmillin@fcc.gov>. This *NPRM* can also be downloaded in Microsoft Word and ASCII formats at <<http://www.fcc.gov/ccb/cpd>>.

V. ORDERING CLAUSES

190. Accordingly, IT IS ORDERED that, pursuant to authority contained in sections 4, 201-202, 303 and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154, 201-202, 303 and 403, and sections 1.1, 1.411 and 1.412 of the Commission's rules, 47 C.F.R. §§ 1.1, 1.411 and 1.412, this *NPRM* IS ADOPTED.

191. IT IS FURTHER ORDERED that the Commission's Consumer Information Bureau, Reference Information Center, SHALL SEND a copy of this *NPRM*, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Magalie Roman Salas
Secretary

**SEPARATE STATEMENT OF
CHAIRMAN MICHAEL K. POWELL**

*Re: Notice of Proposed Rulemaking, Developing a Unified Intercarrier Compensation Regime
(CC Docket No. 01-92)*

I am immensely proud of the Commission and our staff for initiating this proceeding, in which we will explore whether and how we can rationalize the disparate compensation arrangements between carriers and other companies for traffic that traverses the public switched telephone network.

Since I arrived at the Commission, I have been known to talk about the public switched telephone network as the hub of a wheel, the spokes being the many companies (*e.g.*, paging companies, wireless carriers, ISPs, long distance carriers) that interconnect with and pass traffic to and from the wireline telephone network. As all regulators and businesses know, however, the rates for interconnecting with the phone network vary depending on the type of company that is doing the interconnecting. In a competitive environment, this leads to arbitrage and inefficient entry incentives, as companies try to interconnect at the most attractive rates. I support this *Notice* because it seeks comment on how we can make these varied intercarrier compensation regimes more consistent with each other and, thus, with competition.

In endorsing this *Notice* regarding intercarrier compensation, I should underscore that I consider this action to be part and parcel with two other items: first, the Order on remand that the Commission hopes to adopt in the next few days regarding reciprocal compensation for Internet-bound traffic; and second, the soon-to-be-adopted Order regarding how much CLECs can tariff and charge long distance companies in access charges. In all three of these proceedings, the Commission has demonstrated its willingness to tackle complex and often intractable pricing-related issues while, when appropriate, giving carriers a transition period to adjust to new compensation regimes.

I (and much of the CLEC industry) would have preferred that we adopt all three of these items at the same time, since they are inter-related. But because of the intricacies of both the issues and our internal deliberations, we have a few loose ends to tie up regarding CLEC access charges and reciprocal compensation. With the cooperation of my colleagues, however, I am very hopeful that we can finish those deliberations quickly, such that all three items can be finalized and released in the next few days.

In closing, I would note that these actions, which are the products of intense and long discussions and which will take years to implement, are hardly precipitous. They are, nonetheless, critical to the continued development of economically efficient and sustainable competition in telecommunications. Thus, I applaud my colleagues and our able staff for their courage and hard work in addressing these issues in a meaningful, albeit gradual, manner.

**SEPARATE STATEMENT OF
COMMISSIONER SUSAN NESS**

*Re: Notice of Proposed Rulemaking, Developing a Unified Intercarrier Compensation Regime
(CC Docket No. 01-92)*

In the five years since passage of the Telecommunications Act of 1996, we have taken significant steps to adapt to the changing marketplace the payments made from one carrier to another for the exchange of traffic. We have begun, although not yet completed, efforts to identify and make explicit the subsidies embedded in intercarrier payments. And we have modified rate structures so that payments more accurately reflect costs and the manner in which those costs are incurred. Our goal in all of these measures has been to reduce distortions in the marketplace that serve as impediments to competition.

Each of these incremental actions, however, addressed problems with a specific intercarrier compensation mechanism. Yet, we still have in place today a system under which the amounts, and even the direction, of payments vary depending on whether the carrier routes the traffic to a local carrier, a long-distance carrier, an Internet provider, or a CMRS or paging provider. In an era of convergence of markets and technologies, this patchwork of regimes no longer makes sense. What had been a historical artifact may have become an unsustainable anomaly.

Today's proceeding gives us an opportunity to take a fresh look at these various regimes and consider actions to harmonize the different payment structures. We should not underestimate the complexity of this undertaking. Even were we writing on a clean slate, this proceeding would present a daunting challenge. We must now also take account of the historical structure and the business plans and expectations that have been created by those regimes. We must also resist merely applying legacy regimes to new services. Although it is not clear that a "one-size-fits-all" approach to intercarrier compensation is warranted, our goal must be a consistent and rational system that relies to the greatest extent possible on market forces—and not the possibility of arbitrage created by different payment structures—to drive technological advances and innovation. If we are successful in our efforts to eliminate barriers to competition, consumers will reap the benefits—more choice, improved services, and lower prices.

At the same time, I urge the Commission to remain mindful of the implications of our actions on those living in rural and other high-cost areas. We must take heed to preserve the third pillar of the Telecommunications Act of 1996—universal service. Consumers will only benefit when we establish an economically rational, competitively neutral, explicit mechanism that will promote the Act's goals of competition, deregulation, and universal service.

**SEPARATE STATEMENT OF
COMMISSIONER HAROLD FURCHTGOTT-ROTH**

*Re: Notice of Proposed Rulemaking, Developing a Unified Intercarrier Compensation Regime
(CC Docket No. 01-92)*

This NPRM seeks comment on a variety of pricing mechanisms for commercial relationships between and among carriers, placing particular emphasis on bill-and-keep arrangements. Such mechanisms are worthy of praise when they are employed voluntarily and by mutual assent in contracts. This NPRM thus may do some good in informing the public of various contractual options, expanding and illuminating the range of pricing mechanisms that carriers can agree to adopt.

If, however, the goal of the NPRM is ultimately to limit the range of permissible contractual arrangements private parties may undertake, this is a sad and shameful day for the Commission. We would be telling private parties that Washington knows how to improve their lot better than they do themselves. We would be mandating an invasive form of nationwide price regulation, a great irony at a time when politicians of all stripes embraces the ideals of economic deregulation.

The Communications Act of 1934, as amended by the Telecommunications Act of 1996 (“1996 Act”), does not require the Commission to regulate the prices charged between and among carriers. Indeed, the entire elaborate framework of Sections 251 and 252 of the 1996 Act is predicated on the primacy of contracts between private parties, not rate regulation from Washington, D.C. *See* 47 U.S.C. §§ 251-252.

Moreover, the 1996 Act explicitly aims to remove impediments to contract. For example, section 252 limits the grounds on which State commissions may reject privately negotiated intercarrier agreements. *See* 47 U.S.C. § 252(e)(2)(A). In addition, section 253(a) prohibits barriers to entry—which necessarily include foreclosing options to contract between private parties: “No State or local statute or regulation, or other State or local legal requirement, may prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service.” 47 U.S.C. § 253(a). These provisions make unlawful many forms of price regulation that limit the scope of contracts between and among carriers. While the focus of these provisions is primarily upon State and local governments, the federal government should be slow to adopt regulation that State or local governments cannot legally impose.

Allowing and encouraging freedom of contract is profoundly important. As Milton and Rose Friedman explain in *Free To Choose*:

One set of ideas was embodied in *The Wealth of Nations*, the masterpiece that established the Scotsman Adam Smith as the father of modern economics. It analyzed the way in which a market system could combine the freedom of individuals to pursue their own objectives with the extensive cooperation and collaboration needed in the economic field to produce our food, our clothing, our housing. Adam Smith’s key insight was that both parties to an exchange can

benefit and that, *so long as cooperation is strictly voluntary*, no exchange will take place unless both parties do benefit. No external force, no coercion, no violation of freedom is necessary to produce cooperation among individuals all of whom can benefit. That is why, as Adam Smith put it, an individual who “intends only his own gain” is “led by an invisible hand to promote an end which was no part of his intention. Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it. I have never known much good done by those who affected to trade for the public good.”

Milton & Rose Friedman, *Freedom To Choose* 1-2 (1980) (quoting Adam Smith, *The Wealth of Nations* (1776)).

Two lessons relevant to this proceeding can be drawn from the Friedmans’ essay. First, limiting the scope of potential contracts among carriers, or coercing the terms of such contracts, cannot advantage all carriers; indeed, it will certainly harm some carriers relative to no limitations on contracts. Second, the unfettered pursuit of private interest, including through contracts, will lead to greater social welfare gains than the intentional, including governmental, efforts to promote welfare. Stated simply, contracts, rather than government regulation, are the surest way to promote the public interest.

Requiring intercarrier compensation of specific forms, such as bill-and-keep, is nothing more than price regulation—harmful to contracts, carriers, consumers, and the public at large. No amount of studies or documents can paper over that simple fact. Indeed, the burden should be on proponents of new forms of price regulation and new forms of contract foreclosure to demonstrate that such regulation promotes public welfare more than contractual flexibility. I await such demonstrations.

For its entire history, the Commission has regulated telecommunications rates with a heavy, clumsy, at times sadistic, and all too visible hand. Limiting voluntary contracts among private parties, or coercing the terms of such contracts, cannot promote the public interest. I hope that this proceeding will afford the public an opportunity to provide comments to the Commission on the legacy of Commission rate regulation and its substantial unintended harms. Perhaps it is time for the Commission to promote both the reality as well as the rhetoric of deregulation.