

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	
A National Broadband Plan for Our Future	)	GN Docket No. 09-51
	)	
Establishing Just and Reasonable Rates for Local Exchange Carriers	)	WC Docket No. 07-135
	)	
High-Cost Universal Service Support	)	WC Docket No. 05-337
	)	
Developing a Unified Intercarrier Compensation Regime	)	CC Docket No. 01-92
	)	
Federal-State Joint Board on Universal Service	)	CC Docket No. 96-45
	)	
Lifeline and Link-Up	)	WC Docket No. 03-109

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**REPLY COMMENTS OF AT&T**

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## INTRODUCTION AND EXECUTIVE SUMMARY

Commenters from every segment of the communications industry, from academia, and from the public sector agree that the existing regimes for intercarrier compensation and universal service are fundamentally broken. They further agree that reforms are necessary to smooth the transition from the circuit-switched networks of the past to the all-IP networks of the future. And the vast majority of these commenters also agree, in principle, with the *NPRM*'s two key proposals: first, that intercarrier charges should be harmonized and reduced for many or all carriers, and, second, that the Commission should create an explicit universal service mechanism to support deployment of broadband services.

Of course, these commenters have markedly different views as to how, exactly, the Commission should go about implementing these two proposals. Many argue that the Commission should perpetuate some intercarrier charges, while others advocate bill and keep as the default end state for reform on the public switched telephone network ("PSTN"). Some argue that the Commission should dedicate many billions of dollars to support both fixed and mobile broadband services, while others contend that the universal service fund should be significantly reduced and that only one broadband provider should be funded in any given area. And various commenters advocate a multitude of different approaches to the eventual sunset of the PSTN.

As it grapples with these many competing proposals, the Commission should keep in mind that the measures it adopts in this proceeding should be designed to bring about a specific end state. Indeed, *any* reforms that the Commission makes to intercarrier compensation or universal service should have the purpose of hastening and smoothing the transition from today's legacy communications networks and services to next-generation networks and IP-enabled services. Finally, the Commission should be clear from the outset that these are merely

transitional reforms and that, in the ultimate end-state for reform, all of these intermediate regulatory structures will give way to the free-market regime that already defines today's Internet, where market forces, rather than prescriptive public-utility regulation, govern interconnection and interprovider compensation.

***Interconnection and interprovider compensation.*** As the industry transitions to an all-IP communications infrastructure, there will be no need for the Commission to regulate interconnection or interprovider compensation for *any* type of packet-switched communication. Instead, relationships among IP networks should continue to be governed, as they are today, by freely negotiated agreements. This market-based regime has functioned well for decades and has adapted to remarkable changes in technology and traffic flows, and there is no reason to believe that it will be any less capable of efficiently managing the exchange of IP traffic going forward.

Although some commenters contend that voice traffic will be somehow different from all the other types of traffic exchanged on the Internet, and assume that it will require some form of regulation to address a supposed “terminating access monopoly,” their arguments ignore the fundamental nature of IP networks. As AT&T has explained, there is no “terminating access monopoly” on the Internet. Unlike telecommunications carriers on the circuit-switched PSTN, providers of IP applications and content—including VoIP—have many different ways of delivering their packet-switched traffic to any broadband ISP's network, regardless of whether they are directly interconnected with that network. As any Vonage or Skype subscriber can attest, the Internet is capable of effectively delivering VoIP traffic among millions of users subscribing to different ISPs across the world, all without regulatory intervention. There is no reason to believe that such intervention will be any more necessary when, like millions of over-

the-top VoIP calls today, most or all voice communications are merely packets in these same converged Internet data streams.

Of course, the majority of voice traffic today still involves the PSTN on one end or both, and that traffic remains subject to regulation. The shift to IP alternatives will be delayed unless the Commission takes steps now to reform its intercarrier compensation and interconnection policies on the PSTN so that they promote, rather than hinder, broadband deployment. The Commission should harmonize today's divergent intercarrier charges, reduce them, and ultimately eliminate them in favor of a default bill-and-keep regime for PSTN traffic. And to facilitate this transition while the market adjusts to the new regulatory and technological paradigm, the Commission should gradually relax regulation of end-user charges and establish a temporary universal service mechanism to partially offset carriers' loss of intercarrier revenues.

Although commenters assail bill and keep on a variety of different grounds, these arguments are meritless. As AT&T has explained, that regime is not only lawful, but also a far better policy option than the existing CPNP regime. By requiring carriers to look to their own customers for recovery of network costs—rather than to other carriers and, ultimately, those carriers' customers—bill and keep ensures to the extent possible in any regulated regime that market forces, and not inefficient regulatory mandates, determine the winners and losers in the marketplace. And to the extent that reasonable end-user charges are insufficient to allow recovery of costs in high-cost areas, that gap can be closed through explicit universal service support.

Other commenters contend that carriers should not be allowed to turn to alternative sources of cost recovery as their intercarrier charges are reduced. These arguments too are without merit. Increases to end-user rates, which regulation has often held below market levels,

will not harm consumers. To the contrary, the intercarrier charges that ILECs impose today are themselves financed by consumers, and whether revenues are recovered in the form of access charges or direct end-user charges, consumers ultimately will foot the bill. Moreover, an explicit Access Recovery Mechanism will be necessary in the short term to mitigate the disruption that carriers—and, more importantly, their customers—could otherwise confront as the industry transitions from implicit to explicit subsidies. So long as that support is merely *temporary*, it will provide a transitional safety net for those carriers that depend heavily on access charges to fulfill legacy service obligations, while at the same time preparing those carriers to recover their costs only from end-user revenues, supplemented, as warranted, by targeted universal service funding in certain high-cost areas.

***Carrier-of-last-resort and other legacy service obligations.*** A handful of commenters urge the Commission and the states to retain indefinitely carrier-of-last-resort and similar service obligations with respect to legacy telecommunications services. Those arguments are flawed on both policy and legal grounds.

As AT&T explained in its opening comments, legacy service obligations impede the deployment of broadband and IP-enabled services and thereby undermine the goal of ensuring that all Americans have access to next-generation communications services. Although some commenters contend that such obligations remain necessary to ensure universal service with respect to legacy voice services, that simply is not the case. Indeed, the POTS business model is collapsing because of the erosion of implicit subsidies and the failure of federal and state regulators to undertake comprehensive intercarrier compensation and universal service reform following the opening of telecommunications markets to competition. As a consequence, legacy

service obligations are an unsustainable means of ensuring ubiquitous access even to basic telecommunications services.

Further, because the communications marketplace is now competitive, it no longer makes policy sense to burden just one provider—the incumbent—with the obligation to effect universal service throughout that provider’s historical service area. In fact, such lopsided burdens contravene the principle of competitive neutrality, and thus they cannot be reconciled with either section 254(f) of the Communications Act or Commission precedent.

Rather than perpetuate these outdated legacy service obligations, the Commission and the states should instead adopt a new, procurement-model approach to universal service. Under that approach, no provider would bear an unfunded mandate to offer service; instead, *all* providers would be able to compete to become the provider of last resort in a given area in exchange for a specific amount of universal service support. As AT&T has explained, this approach would be a far more effective and equitable means of ensuring that all Americans have access to both voice and broadband service.

***Universal service and the Connect America Fund.*** The Commission should implement this procurement-model approach through a new universal service mechanism designed to fund the deployment and maintenance of broadband service. Although there are many different ways that the Commission could configure this Connect America Fund, it is important that the Commission base any universal service reforms on certain fundamental principles.

The CAF should support both fixed and mobile broadband technologies so that consumers in high-cost areas are not denied the applications and services that their urban counterparts take for granted. Further, the CAF mechanism should be appropriately sized so that it is large enough to ensure that all Americans have access to broadband service, but small

enough that service remains affordable. To that end, the Commission should permit CAF recipients to fulfill their service obligations in certain extremely-high-cost areas by partnering with satellite broadband providers. And to eliminate uncertainty that could otherwise deter providers from participating in the CAF program, the Commission should adopt its final, comprehensive rules now instead of waiting until after completion of a “Phase 1” broadband pilot program.

AT&T has proposed a specific Plan for the design and administration of the CAF that conforms to all of the foregoing principles. Under that Plan, the Commission would adopt an application-focused definition of the supported “broadband” service, instead of an arbitrary speed threshold that would limit both the number of consumers to whom service could be deployed and the types of providers that could deploy it. Further, the Commission would identify CAF-eligible areas and providers using an approach that would target support to those areas that need it most and those providers that can use it most efficiently. CAF recipients would not be subject to conflicting or burdensome service obligations that could deter many providers from participating, drive up the bids of those providers that do participate, and ultimately undermine both deployment and adoption of broadband services. Finally, under AT&T’s Plan, high-cost support for legacy telecommunications services would be phased out efficiently and fairly, thereby ensuring a smooth transition away from outdated technologies and toward next-generation broadband and IP-enabled services.

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AT&T’s approach to intercarrier compensation and universal service reform is particularly well suited to facilitate the transition from the circuit-switched infrastructure of the past to the all-IP networks of the future. But this approach certainly is not the only one that could effectively serve that purpose; to the contrary, the proposals put forth by many other

commenters also have significant merit. Whatever path the Commission follows, however, it is essential that the Commission not continue to delay reform in an effort to develop the “perfect” plan. One of the most harmful actions that the Commission could take at this point would be to take no action at all. Reform has been sorely needed for more than a decade, and additional delay is simply not a valid option. Unless the Commission intends to abandon the goals that it articulated in the *National Broadband Plan*, as well as the market-oriented, deregulatory policies of the 1996 Act itself, it must act now to promote the deployment and adoption of broadband and IP-enabled services.

## **DISCUSSION**

### **I. THE COMMISSION SHOULD REFORM THE EXISTING INTERCARRIER COMPENSATION REGIME EN ROUTE TO AN UNREGULATED, ALL-IP END STATE.**

As nearly every commenter in this proceeding has observed, the existing intercarrier compensation regime is fundamentally unsound. Designed for the monopoly telecommunications era, when boundaries between legacy services were sharply defined, that regime relies on arbitrary service-by-service distinctions that are ill-suited to today’s converging and competitive communications marketplace. Rather than yielding a stable source of carrier cost recovery, the existing regime instead produces ever-changing arbitrage schemes and never-ending disputes among carriers. It is no longer capable of serving its intended purpose.

The Commission should harmonize today’s divergent intercarrier charges, reduce them, and ultimately eliminate them in favor of a default bill-and-keep regime for PSTN traffic. To ensure that these reforms do not cause disruptions for providers and, ultimately, those providers’ customers, the Commission should gradually relax regulation of end-user charges and should create a transitional universal service mechanism to temporarily replace a portion of providers’ lost intercarrier compensation revenues.

When undertaking these reforms, the Commission should not lose sight of the ultimate goal, namely, the transition to next-generation, all-IP networks. And it should recognize that, on those all-IP networks, regulation of interconnection and interprovider compensation will not only be unnecessary, but counterproductive. It is to this issue that we turn first.

**A. Market Forces, and Not Inefficient Regulatory Mandates, Should Govern Interconnection and Interprovider Compensation on IP Networks.**

In reforming intercarrier compensation, the Commission should keep the unregulated, all-IP end state firmly in mind. The Commission should reduce intercarrier charges and move towards bill-and-keep for PSTN traffic only as transitional steps, and not as an end in itself. Instead, the ultimate end state should be a marketplace governed by the same market forces that today ensure the efficient exchange of all IP traffic on the Internet.

Over the long term, it will become unnecessary to establish any rules (or regulatory “framework”) for either interconnection or interprovider compensation because all voice traffic will take the form of packets riding over fully converged IP platforms.<sup>1</sup> And exchanges of IP traffic—including the over-the-top VoIP calls contained in that IP traffic—have always been governed by unregulated transit and peering arrangements.<sup>2</sup> For example, when Vonage subscribers call each other today, transit and peering arrangements allow their calls to go through without any regulatory oversight, even though any two Vonage subscribers likely have different broadband ISPs, and even though their VoIP packets may cross several networks from one point to another on the public Internet.<sup>3</sup> There is no reason to believe that regulatory intervention will

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<sup>1</sup> See Public Knowledge Comments at 28 (celebrating “[t]he transition to all-IP networks—where voice, video, and data traffic flows over the same pipes, on the same servers and interconnection points, using the same protocols”); Level 3 Comments at 2 (“[V]oice service [will] continue[] to evolve toward being simply a data application riding over IP networks.”).

<sup>2</sup> Verizon Comments at 8-10; AT&T Comments at 17-19.

<sup>3</sup> AT&T Comments at 5, 24-25.

be any more necessary when most or all voice communications are handled in this same manner—as packets in converged Internet data streams.<sup>4</sup>

A number of parties nonetheless ask the Commission to regulate what they call “IP-to-IP interconnection.”<sup>5</sup> Commenters use this term to make two quite different regulatory requests, which they routinely conflate. *First*, citing a supposed “terminating access monopoly,” some commenters ask the Commission to regulate Internet peering and transit relationships: the arrangements that allow *broadband ISPs* to exchange packets containing data from various applications, including voice, between their respective subscribers.<sup>6</sup> *Second*, some commenters ask the Commission to require *ILECs* to configure their interconnection arrangements so that VoIP providers no longer need to convert their traffic from IP to TDM format before handing it off to ILECs for termination to the ILECs’ customers, including the vast majority who are still on the PSTN and use TDM-based telephone services.<sup>7</sup> Both proposals for regulation of “IP-to-IP interconnection” lack merit, and we address each in turn. We also explain why, in any event, the Commission lacks authority to regulate IP-to-IP interconnection.

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<sup>4</sup> As AT&T explained in its opening comments, the transition of all voice traffic to the Internet will not significantly increase network demands. *Id.* Sprint notes: “[G]lobal VoIP traffic in 2009 constituted only 1.4 percent of all consumer IP traffic” and it is predicted that “consumer VoIP traffic globally in 2014 will fall to only 0.3 percent of all consumer IP traffic (because of much higher growth rates for other broadband services, such as video and online gaming).” Sprint Comments at 17 (discussing Cisco White Paper, *Cisco Visual Networking Index: Forecast and Methodology, 2009-2014*, at 10-12, Tables 10, 12, & 14 (June 2, 2010), [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360.pdf](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360.pdf)).

<sup>5</sup> Sprint Comments at 16.

<sup>6</sup> *See, e.g.*, Google Comments at 2, 6-11; Public Knowledge Comments at ii-iii, 6, 23-24, 29-32.

<sup>7</sup> *See, e.g.*, XO Comments at 2-5, 7-11, 25-26, 29-33; Sprint Comments at 18-28; Cablevision Comments at 3-5; PAETEC Comments at 3-4; Time Warner Cable Comments at 12-13; Earthlink Comments at 3-7; T-Mobile Comments at 21-22.

## 1. There Is No Legitimate Policy Basis for Regulating Transit and Peering Arrangements.

A handful of parties call on the Commission to intervene in what today is a highly efficient marketplace for transit and peering relationships.<sup>8</sup> Google, for example, requests that the Commission “affirm that broadband service providers have a fundamental statutory duty to interconnect all traffic.” Google Comments at 2.<sup>9</sup> Google also contends that “the FCC should clarify that bill-and-keep will serve as the default for IP traffic and that each network provider should seek to recover its costs directly from its users.” *Id.* at 9. Similarly, Public Knowledge, though acknowledging it is premature to adopt any *specific* framework for IP interconnection and interprovider compensation,<sup>10</sup> nonetheless argues that “the Commission should use this ICC proceeding to create a safety net by asserting general authority to intervene in disputes if

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<sup>8</sup> See Analysys Mason, *Overview of recent changes in the IP interconnection ecosystem*, at 3, 21-25 (May 2011), [http://www.broadbandforamerica.com/sites/default/themes/broadband/images/pdf/analysys\\_mason\\_domestic\\_peering\\_paper.pdf](http://www.broadbandforamerica.com/sites/default/themes/broadband/images/pdf/analysys_mason_domestic_peering_paper.pdf) (“*Analysys Mason Paper*”) (noting that “backbones must compete vigorously on the price of transit .... This has resulted in an increase in the level of competition for Internet transit services, as evidenced for example in the fall in transit prices over the past five years, with no sign of respite.... [I]n the 15 years since the commercialization of the Internet backbone, the Internet ecosystem has proven itself to be able to develop and sustain interconnection in the absence of sector-specific regulation. It has also shown itself to be able to adapt well to rapid and profound market changes without regulatory intervention”); William B. Norton, *DrPeering White Paper: Internet Transit Prices—Historical and Projected* (Aug. 2010), <http://drpeering.net/white-papers/Internet-Transit-Pricing-Historical-And-Projected.php> (discussing efficient negotiation of interconnection and interprovider compensation); DrPeering, *Peering vs. Transit: Why care about Transit Pricing?*, [http://drpeering.net/AskDrPeering/blog/articles/Peering\\_vs\\_Transit\\_\\_\\_The\\_Business\\_Case\\_for\\_Peering.html](http://drpeering.net/AskDrPeering/blog/articles/Peering_vs_Transit___The_Business_Case_for_Peering.html) (discussing decline in transit prices); DrPeering, *Transit Prices Race to the Bottom* (Apr. 28, 2009), [http://drpeering.net/AskDrPeering/blog/articles/Ask\\_DrPeering/Entries/2009/4/28\\_Transit\\_Prices\\_Race\\_to\\_the\\_Bottom.html](http://drpeering.net/AskDrPeering/blog/articles/Ask_DrPeering/Entries/2009/4/28_Transit_Prices_Race_to_the_Bottom.html) (same).

<sup>9</sup> Google also argues that “the default should be ‘interconnection and traffic exchange without permission,’ so that if a dispute arises, carriers would be required to interconnect even while seeking dispute resolution.” Google Comments at 11 n.39.

<sup>10</sup> Public Knowledge concedes that “the Commission must recognize that it does not have a sufficient understanding of the underlying economics of IP transport to define a regulatory regime at this time.” Public Knowledge Comments at iii. See also *id.* at 23.

necessary, while developing basic principles that will ensure universal, affordable access to IP services.” Public Knowledge Comments at 24, *see also id.* at ii-iii, 6, 23-24, 29-32.

As discussed in AT&T’s opening comments, however, there is no merit to proposals to inflict intercarrier-compensation-style regulation—with all of its disruptions and uncertainties—on Internet peering and transit arrangements for the first time. *See* AT&T Comments at 19-24.<sup>11</sup> Such regulation would perpetuate many of the market distortions that currently afflict the PSTN, including arbitrage and fraud, while providing no countervailing benefit. Among other considerations, the distributed and packet-switched nature of the Internet makes *indirect* interconnection the norm among IP networks, whereas direct interconnection has been the norm on the circuit-switched PSTN.<sup>12</sup> And the interdependence of IP networks, along with the multiplicity of indirect paths into any broadband ISP’s network—for the transmission of a VoIP call or any other type of IP application—deprive any such ISP of any conceivable terminating access “monopoly” over traffic bound for its subscribers.<sup>13</sup> Again, practical experience confirms

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<sup>11</sup> In support of the notion that, “[a]bsent regulation,” negotiation of IP interconnection agreements could lead to inefficient outcomes, Public Knowledge cites a telecommunications policy treatise for the proposition that “there is ... no reason to suppose that the equilibrium point in any given game of brinksmanship will lead to economically efficient, cost-based rates for termination.” Public Knowledge Comments at 30, 31 n.78 (quoting Jonathan E. Nuechterlein and Philip J. Weiser, *Digital Crossroads: American Telecommunications Policy in the Internet Age* 314 (2007)). But that quotation describes interconnection and intercarrier compensation *on the PSTN*, not on IP networks. *See Digital Crossroads* at 314-16. Indeed, on the very same page from which Public Knowledge draws its quote, the treatise notes: “All this said, there is at least one notable telecommunications setting in which the absence of government-mandated interconnection rules arguably has produced an economically efficient equilibrium: the market for Internet backbone services, where the terms of intercarrier peering and transit arrangements are left purely to the dynamics of the free market.” *Id.* at 314.

<sup>12</sup> *See* AT&T Comments at 17-28, 22; Faratin, et al., *Complexity of Internet Interconnections: Technology, Incentives and Implications for Policy*, at 8-9 (2007), [http://mitas.csail.mit.edu/papers/Clark\\_Lehr\\_Faratin\\_Complexity\\_Interconnection\\_TPRC\\_2007.pdf](http://mitas.csail.mit.edu/papers/Clark_Lehr_Faratin_Complexity_Interconnection_TPRC_2007.pdf).

<sup>13</sup> *See, e.g.*, AT&T Comments at 19-20; Letter from Lynn R. Charytan, Vice President, Legal Regulatory Affairs, Comcast, to Marlene H. Dortch, Secretary, FCC, *Preserving the Open*

what theory suggests: unregulated transit and peering arrangements have succeeded for nearly twenty years in promoting the unparalleled growth of the modern Internet, with no significant hiccups along the way.

Sprint nonetheless argues that VoIP is different from other IP traffic<sup>14</sup> because every called party is assigned a telephone number, and the only way to reach that called party is through the “carrier” serving that called party. Sprint Comments at 18-19. Sprint contends that, therefore, the “carrier” exercises a “terminating access monopoly.” *Id.* at 19. Sprint fails to clarify whether the “carrier” exercising this supposed “monopoly” is the VoIP provider (such as Vonage or Skype) or the called party’s broadband ISP (such as Cox or Sprint). Either way, the argument makes no sense. The “phone number” of a called party is functionally indistinguishable from an IP address—and, indeed, may simply be a proxy for an IP address, which is the true mechanism for routing any “call” to a VoIP subscriber.<sup>15</sup> And the only way to reach *any* recipient of Internet traffic is through the IP address of that recipient. *Digital Crossroads* at 121-22. Thus, VoIP-to-VoIP calls are no more likely to raise the specter of a “terminating access monopoly” than any other form of Internet communication, such as the transmission of a webpage or the streaming of video to a particular IP address.

Granted, some VoIP services are provided on a “managed” basis today, which, depending on the network configuration, could call for additional technical requirements for indirect

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*Internet*, GN Docket No. 09-191 (Feb. 18, 2011) at 3-4 (describing how residential ISP customers can receive content from virtually any source on the Internet regardless of whether their ISP directly connects to the specific content provider).

<sup>14</sup> Importantly, Sprint “agrees that the Commission need not address the exchange of non-voice IP traffic (and its proposals ... are limited in scope to the exchange of packetized voice — as they would *not* apply to the exchange of non-voice IP traffic).” Sprint Comments at 18.

<sup>15</sup> See Memorandum Opinion and Order, *Vonage Holdings Corporation, Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission*, 19 FCC Rcd 22404, 22408 ¶ 9 (2004) (“*Vonage Order*”).

interconnection. But as the success of over-the-top VoIP providers like Skype and Vonage illustrates, the trend is toward convergence, and it is likely that most voice traffic ultimately will be treated as just another IP data stream and will be exchanged in the same way as all other IP communications. As Public Knowledge recognizes, “Differential treatment of voice IP traffic versus other traffic may be pragmatically necessary in the short term, but in the long term, bits are bits, and the Commission must adapt to an all-IP future.” Public Knowledge Comments at 32. *See also* footnote 1, *supra* (discussing convergence of IP traffic).

In any event, even to the extent that managed VoIP services continue to exist in some form, there is every reason to believe that the industry will develop effective means of ensuring indirect interconnection for those services. The technological capability already exists, and standards-setting bodies are working to develop standards for interconnection of such services, including indirect interconnection.<sup>16</sup> These technologies will enable networks to exchange managed VoIP packets (and other packets requiring special handling) along with all other traffic over the Internet. And this, in turn, will enable parties to use transit arrangements to deliver all of their traffic, including managed VoIP traffic, through indirect interconnection. Providers in this rapidly evolving marketplace have strong incentives to arrive at a solution that ensures their managed VoIP packets will be exchanged efficiently with providers offering similar services, and thus there is no need for the Commission to intervene in the absence of any evidence of market failure.

Indeed, the Commission could cause significant harm if it were to prejudge the outcome of industry negotiations. As Verizon notes:

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<sup>16</sup> Standards bodies, including the American Alliance for Telecommunication Industry Solutions’ Ordering and Billing Forum, GSMA, and i3 Forum are all currently working on developing standards for direct and indirect IP interconnection for the exchange of managed VoIP services traffic.

[T]he transition to IP interconnection is a textbook example where government should avoid prescribing the terms that will govern complex and evolving relationships among private sector actors. Regulatory history amply demonstrates that, especially in industries marked by rapid technological change, rules based on static assumptions about technology and markets quickly become obsolete—and worse, can lead to unintended negative consequences such as stifling investment and innovation.... Guessing wrong about the “right” IP interconnection standards at this early stage in the industry’s transition to IP could profoundly retard the industry’s future development and slow the speed at which consumers receive the benefits of next-generation technologies.

Verizon Comments at 16-18. The Commission should continue to allow the marketplace, which has efficiently governed IP interconnection and interprovider compensation for decades, to develop solutions with respect to managed VoIP services.

Many of the commenters advocating interconnection and interprovider compensation rules for VoIP traffic appear to envision separate interconnection arrangements for such traffic, distinct from the arrangements that govern all other IP traffic. Time Warner Cable, for example, argues that “interconnection arrangements that take advantage of IP technology should be subject to the same rules and processes as TDM-based interconnection.” Time Warner Cable Comments at 12. XO argues that LECs should be required to provide interconnection for VoIP traffic “at any technically feasible point within the LEC’s network.” XO Comments at 3, 17; *see also* Cox Comments at 19 (advocating same). And PAETEC argues that IP interconnection agreements should be arbitrated by state commissions, which could result in *fifty* different regimes for the exchange of VoIP traffic. PAETEC Comments at 4-5, 9-11; Comptel Comments at 5-6 (same). But as the Commission has recognized, it makes “little sense for providers to maintain different interconnection arrangements for the exchange of VoIP and other forms of Internet traffic.”<sup>17</sup>

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<sup>17</sup> Notice of Proposed Rulemaking and Further Notice of Proposed Rulemaking, *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up*, 26 FCC Rcd 4554, 4773 ¶ 679 (2011) (“*NPRM*”).

Indeed, maintaining two separate interconnection regimes for IP-to-IP traffic would be grossly inefficient, and thus would defeat one of the principal benefits of the transition to all-IP networks.<sup>18</sup> VoIP accounts for only one percent of the traffic on IP networks,<sup>19</sup> and as Sprint notes, “[r]edesigning IP networks based on one percent (1%) of the traffic transported over these networks so they accommodate legacy PSTN network architecture makes no sense whatsoever.” Sprint Comments at 25. Instead, efficiency requires providers to “transport and commingle IP voice over the same facilities used to transport other IP traffic.” *Id.* at 17.

Finally, transit and peering arrangements take innumerable forms that are suited to the particular needs of the parties to each such arrangement. *See* AT&T Comments at 17-19; *Analysys Mason Paper* at 21-25. As many commenters understand, it would be absurd to straitjacket the Internet with a one-size-fits-all regulatory “framework” for interconnection and interprovider compensation. *See, e.g.,* NASUCA Comments at 92 (discussing the diverse nature of existing IP traffic exchanges and rejecting the notion that “traffic exchanged between commercial IP networks should be a zero cost absent agreements between the networks”); Verizon Comments at 9-10 (explaining that “[t]he current regime of market-based arrangements for interconnection and exchange of Internet traffic has been a resounding success”). Although AT&T supports moving toward bill and keep on the PSTN, it supports that approach *only* on the PSTN, and only because statutory interconnection mandates specific to the PSTN require regulatory oversight of compensation arrangements there.<sup>20</sup>

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<sup>18</sup> As discussed below, interconnection with respect to voice traffic that originates or terminates on the PSTN presents a special case; until the transition to all-IP networks is completed, such traffic should continue to be governed by the mechanisms that regulate exchanges of VoIP-to-PSTN traffic today. *See* Section I.A.2, *infra*.

<sup>19</sup> *See* footnote 4, *supra*.

<sup>20</sup> Furthermore, AT&T supports bill and keep *only* if it applies universally to all carriers.

By contrast, such oversight is unnecessary on the Internet, where providers have tailored many different efficient arrangements to their widely divergent needs and circumstances. Those commenters who advocate what they call “bill and keep” for IP traffic would replace this diversity with a uniform settlement-free peering regime for all Internet communications.<sup>21</sup> But such arrangements arise today only where two networks agree that settlement-free peering is efficient and provides roughly equivalent value to each side, and the result of those flexible free-market arrangements is the phenomenally successful modern Internet.<sup>22</sup> The government has no basis for mandating settlement-free peering in the many circumstances where two networks would *not* reach such an agreement and would *not* both find it efficient. Since both networks retain the option of using transit arrangements, there can be no policy concern about peering unless and until some demonstrable failure arises in the transit market, which has functioned with exceptional efficiency to date.

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<sup>21</sup> Settlement-free peering takes many different forms on the Internet—such as “hot potato routing” versus “cold potato” or “best exit” routing—and thus it is a gross simplification to characterize settlement-free peering as “bill and keep on the Internet.” See *Analysys Mason Paper* at 29; IETF Network Working Group, *RFC 4277: Experience with the BGP-4 Protocol*, at 6-7 (Jan. 2006), <http://tools.ietf.org/pdf/rfc4277.pdf>.

<sup>22</sup> See, e.g., Michael Kende, *The Digital Handshake: Connecting Internet Backbones*, FCC, Office of Plans and Policy, OPP Working Paper No. 32, at 8 (Sept. 2000), [http://www.fcc.gov/Bureaus/OPP/working\\_papers/oppwp32.pdf](http://www.fcc.gov/Bureaus/OPP/working_papers/oppwp32.pdf) (discussing circumstances in which peering arrangements arise and noting that “companies will peer when they perceive equal benefit from peering based on their own subjective terms, rather than any objective terms”); NASUCA Comments at 92 (“IP network providers are well aware that unless traffic volumes exchanged between IP networks are in balance, the exchange of traffic will impose differential costs. If IP-based Carrier A terminates large volumes of traffic on IP-based Carrier B’s network, but not vice versa, then Carrier A gets something for nothing, and Carrier B will likely require that Carrier A pay IP transit charges.”); State Joint Board Members Comments at 148 (noting that settlement-free peering “between two parties will arise naturally only if both parties derive approximately equal benefits from the trade”).

## 2. The Commission Should Reject Calls to Supplant the Mechanisms That Facilitate Exchanges of VoIP-to-PSTN Traffic Today.

XO, Sprint, and others also contend that, under the banner of “IP-to-IP interconnection,” the Commission should entitle VoIP providers to hand off calls to *ILECs* in IP format for delivery to ordinary *PSTN subscribers*—and require the *ILECs* to convert those calls into the TDM format that is necessary for termination of VoIP traffic to PSTN subscribers.<sup>23</sup> XO argues, for example, that “no terminating carrier should be permitted to require conversion to a particular format for exchanging traffic, regardless of the technology used to serve any particular end users,” and that “carriers should exchange traffic in an IP format, whether it was originated or will terminate in IP or in a TDM format.”<sup>24</sup> In addition, these commenters contend that *ILECs* should not be entitled to charge VoIP providers for the IP-to-TDM conversion that they must perform. Under XO’s regime, for example, “the costs of any IP-TDM conversion necessary would be borne by the terminating carrier.” XO Comments at 32. *See also id.* at 2-4, 11; Sprint Comments at 2, 21; Cablevision Comments at 2-5.

These proposals are untenable. Interconnected VoIP providers have many market-based solutions for converting their traffic into TDM format before handing it off to TDM-based carriers. Indeed, such diverse providers as Level 3, Neutral Tandem, and HyperCube have made

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<sup>23</sup> For the most part, these providers argue that the Commission should regulate interconnection and interprovider compensation with respect to VoIP traffic more generally, and thus this argument is part and parcel of their overall pro-regulation arguments. *See, e.g.*, Sprint Comments at 16-28 (urging the Commission to regulate interconnection for VoIP traffic, but not IP traffic in general).

<sup>24</sup> XO Comments at 4, 11, 32. *See also, e.g.*, Sprint Comments at 18-28 (urging the Commission to “put all TDM network operators on notice that they will be likely required to support IP-IP interconnection before any phase down of current ICC rates is complete”); XO Comments at 10-11 (bemoaning the fact that “competitive carriers are currently required to convert IP-originated traffic to TDM format in order to deliver it to the *ILEC* or other terminating carrier”); Cablevision Comments at 3-5 (arguing that the Commission should ensure that telephony “competitors can exchange traffic in native IP format”).

these IP-to-TDM conversion solutions a major portion of their business.<sup>25</sup> In essence, Sprint, XO, and others want the Commission to supplant these market-based solutions with regulatory mandates and below-market pricing. But as Neutral Tandem explains, such regulatory mandates would subvert the public interest: “Neutral Tandem and other carriers offer services that allow carriers to deliver traffic seamlessly on an IP-to-IP basis, or between networks using legacy TDM-based technology and IP-based networks,” and “[t]he Commission should avoid adopting regulations that could hinder this competition and the benefits it brings.” Neutral Tandem Comments at 1-2.

### **3. The Commission Has No Authority to Regulate IP Interconnection.**

In any event, the Commission lacks jurisdiction to mandate IP-to-IP interconnection in any form, whether as a means of intervening in previously unregulated peering and transit arrangements or of imposing new IP-to-IP interconnection requirements involving VoIP-to-PSTN traffic.

Various parties seek to ground such jurisdiction in Title II in general and sections 201, 251(a), and 251(c)(2), in particular.<sup>26</sup> XO, for example, contends that because “section 251(c)(2) obligates ILECs to provide interconnection to any requesting telecommunications carrier at any technically feasible point within the LEC’s network,” it naturally follows that “IP interconnection clearly must be provided by all carriers for the exchange of telecommunications

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<sup>25</sup> See, e.g., Neutral Tandem Comments at 1-2, 5; Comments of HyperCube Telecom, LLC, *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up*, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, at 2, 6 n.13 (filed Apr. 1, 2011).

<sup>26</sup> See, e.g., XO Comments at 3, 15-17, 31, 33; Google Comments at 2, 10-11; PAETEC Comments at 3; Cablevision Comments at 8-10; COMPTTEL Comments at 5-6; Time Warner Cable Comments at 12.

traffic, regardless of the network on which it originated or technology used to serve the parties at either end of the call.” XO Comments at 3. Google similarly urges the Commission to “affirm that broadband service providers have a duty pursuant to Section 251(a)(1) of the Communications Act to interconnect with other network providers for the exchange of telecommunications traffic, including local traffic encoded in IP.” Google Comments at 10.

These analyses are flawed. As the commenters themselves appear to concede, the provisions they cite address the rights and obligations of “telecommunications carriers” providing Title II “telecommunications services.” *See, e.g.*, 47 U.S.C. §§ 251(a), 251(c)(2). And as AT&T has previously explained at length, neither VoIP<sup>27</sup> nor broadband Internet access<sup>28</sup>—nor, for that matter, any IP-based service<sup>29</sup>—is a Title II telecommunications service. Instead, each such service is an unregulated Title I private carriage and/or information service.<sup>30</sup>

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<sup>27</sup> *See, e.g.*, Letter from Robert W. Quinn, Jr., Senior Vice President, Federal Regulatory, AT&T, to Kevin Martin, Chairman, FCC, *Federal-State Joint Board on Universal Service; IP-Enabled Services; Universal Service Contribution Methodology*, CC Docket No. 96-45, WC Docket Nos. 04-36, 06-122 (filed July 17, 2008); Comments of AT&T, Inc. on the Transition from the Legacy Circuit-Switched Network to Broadband, *International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act; A National Broadband Plan for Our Future; Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket Nos. 09-47, 09-51, 09-137, at 18-19 (filed Dec. 21, 2009)

<sup>28</sup> *See, e.g.*, Comments of AT&T Inc., *Framework for Broadband Internet Service*, GN Docket No. 10-127, at 67-91, 97-106, 112-14 (filed July 15, 2010) (“AT&T Title II Comments”); Reply Comments of AT&T Inc., *Framework for Broadband Internet Service*, GN Docket No. 10-127, at 22-43, 62-65 (filed Aug. 12, 2010) (“AT&T Title II Reply Comments”).

<sup>29</sup> *See, e.g.*, Petition of SBC Communications Inc. for a Declaratory Ruling, *IP-Enabled Services*, WC Docket No. 04-36, at 1-2, 7-11, 43-46, 48-49 (filed Feb. 5, 2004) (discussing IP-enabled services generally); Comments of SBC Communications Inc., *IP-Enabled Services*, WC Docket No. 04-36, at 33-42 (filed May 28, 2004) (discussing IP-enabled services and VoIP); Reply Comments of SBC Communications Inc., *IP-Enabled Services*, WC Docket No. 04-36, at 22-26 (filed July 14, 2004) (same); Letter from James C. Smith, Senior Vice President, SBC, to Marlene H. Dortch, Secretary, FCC, *IP-Enabled Services*, WC Docket No. 04-36, Attach. at 1-4, 15-28 (filed Sept. 14, 2005) (discussing IPTV).

<sup>30</sup> *See* footnotes 27 through 29, *supra*.

Section 251(c)(2) is particularly deficient as a source of Commission jurisdiction in this area. That provision applies only where the “requesting” party is a “telecommunications carrier” (which VoIP providers are not) *and* only where the traffic exchanged by that party constitutes “telephone exchange service” or “exchange access”—*i.e.*, local PSTN services. 47 U.S.C. § 251(c)(2)(A). But the VoIP-to-PSTN traffic that VoIP providers wish to terminate via IP-to-IP interconnection falls outside those statutory categories not only because (like other IP services) it constitutes an information service rather than a telecommunications service, but also because it is inseparably interstate in character. *Vonage Order*, 19 FCC Rcd at 22423-24, 22432 ¶¶ 31, 46. And it has been settled law since the *Local Competition Order* in 1996 that non-local providers cannot invoke section 251(c)(2) as their legal basis for demanding interconnection with local providers.<sup>31</sup> There, the Commission explained that “Section 251(c)(2) states that incumbent LECs have a duty to interconnect with telecommunications providers ‘for the transmission and routing of telephone exchange service and exchange access,’” but a carrier seeking interconnection for only interexchange or interstate traffic “is not within the scope of this statutory language.” *Id.*

Other parties argue that the Commission should invoke its Title I ancillary authority to regulate IP interconnection arrangements. *See, e.g.*, COMPTTEL Comments at 13-14. But section 3(51) of the Communications Act unequivocally bars the Commission from treating any provider, including a “telecommunications carrier,” as a “common carrier” except to the extent that it is providing a Title II “telecommunications service.” 47 U.S.C. § 153(51). This statutory provision thus precludes the Commission from imposing common-carrier-type rules on any IP-

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<sup>31</sup> First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers*, 11 FCC Rcd 15499, 15598-99 ¶ 191 (1996) (“*Local Competition Order*”).

enabled service, including VoIP and broadband Internet access.<sup>32</sup> And generalized interconnection obligations are the essence of common-carrier regulation.<sup>33</sup>

**B. The Commission Should Adopt AT&T's Proposal for Reducing and Ultimately Eliminating Intercarrier Compensation for PSTN Traffic.**

During the transition to the all-IP end state, the Commission should proceed by unifying all termination charges on the PSTN, and it should ultimately reduce them (as well as any originating access charges) to zero for all traffic exchanged at defined points of interconnection. AT&T Comments at 30-32. Reducing such charges to zero—or to a low rate, such as \$0.0007<sup>34</sup>—would eliminate arbitrage opportunities and require providers to recover their costs more efficiently from their own customers rather than from other carriers and, ultimately, those carriers' customers.

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<sup>32</sup> See *AT&T Title II Reply Comments* at 10, 22, 43; Reply Comments of AT&T Inc., *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, at 165-66 (filed Apr. 26, 2010). Similarly, the Commission's orders recognize that a provider offering both Title I and Title II services should be regulated as a common carrier only when it is providing the latter. See, e.g., Memorandum Opinion and Order, *Northwestern Bell Telephone Company Petition for Declaratory Ruling and WATS Related and Other Amendments of Part 69 of the Commission's Rules*, 7 FCC Rcd 5644, 5644-45 ¶ 5 (1992).

<sup>33</sup> See, e.g., Memorandum Opinion and Order, *Core Commn's, Inc. v. Verizon Maryland, Inc.*, 18 FCC Rcd 7962, 7963 ¶ 3 (2003).

<sup>34</sup> As a matter of public policy, it is critical to bring termination rates down to very low levels—either zero or \$0.0007; it is less important which of those two levels the Commission ultimately chooses. As a legal matter, however, it might be easier for the Commission to adopt the former than the latter, as bill-and-keep is more clearly a “methodology.” See Earthlink Comments at 15-17 (arguing that the Commission does not have authority to set a rate for section 251(b)(5) traffic); *but see* Reply Comments of AT&T on the Missoula Plan for Intercarrier Compensation Reform, CC Docket No. 01-92, at 47-52 (Feb. 1, 2007) (“*AT&T Missoula Reply Comments*”) (arguing that the Commission has authority to adopt a low termination rate, such as \$0.0005 or \$0.0007). Of course, the ultimate end state after the PSTN sunsets should be *no regulation* of interprovider compensation at all, as discussed above and in AT&T's opening comments. AT&T Comments at 24-25, 30-32.

**1. There Is No Legitimate Legal or Policy Rationale for Rejecting a Transition Toward Bill and Keep for PSTN Traffic.**

Several commenters assail bill and keep as an inappropriate, or even unlawful, approach to intercarrier compensation on the PSTN. These arguments all fall short. The Commission has full authority to impose bill and keep for *all* traffic transiting the PSTN, and that methodology is a highly efficient default end state for PSTN traffic.

Opponents of the Commission's proposal for a unified bill-and-keep regime rehash their familiar litany of legal objections. Some argue that the Commission lacks authority to address "intrastate" access charges. *See, e.g.*, State Joint Board Members Comments at 143-45; Core Comments at 8-9; NECA Comments at 19-20. Others argue that the Commission lacks authority to impose bill and keep for unbalanced traffic. *See, e.g.*, PUC of Ohio at 46-47; Cbeyond Comments at 14-15; NECA Comments at 25-26; Nebraska Rural Independent Companies Comments at 31. These arguments lack merit. The Commission not only may prescribe bill and keep as the default compensation rule for all PSTN traffic, but also has authority to impose a rational transition to that end state. AT&T respectfully refers the Commission to its opening comments in this round and to its detailed analysis of these issues in prior rounds.<sup>35</sup>

Some parties revive similarly shop-worn arguments that the proposed bill-and-keep regime would disserve sound policy goals. Those arguments, too, are without merit. *First*, some commenters argue that, because carriers incur costs to terminate traffic, a bill-and-keep regime

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<sup>35</sup> *See* AT&T Comments at 37-48 (jurisdiction over intrastate traffic); *id.* at 48-53 (authority to adopt transition to bill and keep); *see also* AT&T Missoula Reply Comments at 34-54; Comments of the Intercarrier Compensation Forum, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, at 37-48 (May 23, 2005) ("*ICF Opening Comments*"); Reply Comments of the Intercarrier Compensation Forum, CC Docket No. 01-92, at 45-55 (July 20, 2005); Letter from Gary M. Epstein, Richard R. Cameron, Counsel for the Intercarrier Compensation Forum, to Marlene H. Dortch, Secretary, FCC, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92 (Oct. 5, 2004), Attach. at 35-42 ("*ICF Plan*").

would prevent carriers from recovering their costs of providing service.<sup>36</sup> But bill and keep would not limit the *amount* of cost recovery; instead, it would alter only the *source* of that recovery. Carriers would need to turn to their own customers (supplemented, in appropriate cases, by explicit universal service support) to recoup their network costs, rather than to other carriers and, ultimately, those carriers' customers. And, as AT&T has explained in prior proceedings, end-user cost recovery is far more efficient than intercarrier compensation.<sup>37</sup> The former rewards efficient carriers and punishes inefficient ones by forcing carriers to incorporate their costs into their own retail rates—which, unlike regulated intercarrier compensation, are subject to competition. As Sprint explains:

Any per-minute approach is “problematic in a competitive marketplace because it allows networks to shift costs” to their competitors. As a result, any per-minute approach “distorts pricing signals received by customers [and] does not serve the Commission’s goal of competitive neutrality.” In contrast, bill-and-keep “encourages the development of competition by rewarding carriers based on their ability to serve customers efficiently rather than their ability to shift costs to other carriers.” Bill-and-keep best promotes innovation and efficiency, because it puts “all carriers in the position where they must recover their own costs from their

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<sup>36</sup> See, e.g., NASUCA Comments at 10, 103-05; State Joint Board Member Comments at vii, 148-49; Core Comments at 15; Missouri Small Telephone Company Group Comments at 8-9. See also NASUCA Comments at 96-103 (arguing that even an incremental-costs standard would provide insufficient cost recovery).

<sup>37</sup> See, e.g., Comments of AT&T Inc., *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services*, WC Docket Nos. 05-337, 03-109, 06-122, 04-36, CC Docket Nos. 96-45, 99-200, 96-98, 01-92, 99-68, at 4-5, 10-12 (filed Nov. 26, 2008) (“AT&T November 2008 IC/USF Comments”); Reply Comments of AT&T Inc., *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service; Lifeline and Link Up; Universal Service Contribution Methodology; Numbering Resource Optimization; Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Developing a Unified Intercarrier Compensation Regime; Intercarrier Compensation for ISP-Bound Traffic; IP-Enabled Services*, WC Docket No. 05-337, 03-109, 06-122, CC Docket No. 96-45, 99-200, 96-98, 01-92, 99-68, 04-36, at 12-15 (filed Dec. 22, 2008) (“AT&T December 2008 IC/USF Reply Comments”); AT&T Missoula Reply Comments at 8-9; ICF Opening Comments at 25-30.

own retail customers. Under this regime, success in the marketplace will reflect a carrier's ability to serve customers efficiently, rather than its ability to extract payments from other carriers.<sup>38</sup>

Thus, by moving towards bill and keep on the pre-sunset PSTN, the Commission would not prevent efficient carriers from recovering their costs, but instead would make each carrier more accountable to consumers and let those consumers, rather than intercarrier compensation rules, pick winners and losers in the marketplace.<sup>39</sup>

*Second*, some commenters argue that a bill-and-keep regime would create incentives to originate traffic and dump it off at inefficient locations within a terminating carrier's network. NASUCA, for example, contends that "if the cost of access is reduced to zero, or near-zero ... carriers will have every incentive to dump traffic on to other carriers' networks." NASUCA Comments at 101. Similarly, ITTA argues that "moving to a bill-and-keep mechanism would introduce new arbitrage opportunities. In a bill-and-keep environment, providers do not have to compensate the carriers that terminate their traffic so they have an incentive to displace as much of the cost as possible on the terminating carrier." ITTA Comments at 41. And Level 3 argues that the Commission should retain a rate of \$0.0007 to "protect[] against one network offloading significant traffic on another." Level 3 Comments at 9.

Of course, the issue these parties identify is relevant only in a circuit-switched world in which mandatory interconnection obligations continue to apply. But even in that context, parties could not engage in the type of arbitrage that Level 3, NASUCA, and ITTA speculate about. No one is proposing that originating carriers be permitted to drop traffic off wherever they please

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<sup>38</sup> Sprint Comments, Appx. B at 4 (quoting Wireline Competition Bureau Report, *A Bill-and-Keep Approach to Intercarrier Compensation Reform*, at 101, 103-04, Appx. C to *Unified ICC Regime Further NPRM*, 20 FCC Rcd 485 (2005)) (footnotes omitted).

<sup>39</sup> Many of these same benefits could also be derived from a very low, but non-zero, termination rate.

and leave terminating carriers holding the bag for whatever costs they incur from that point on. Instead, any bill-and-keep regime would necessarily be coupled with rules concerning default points of interconnection. *See, e.g.*, AT&T Comments at 31 n.56; *ICF Plan*, Appx. A at 2-25. Under such rules, an originating carrier would bear financial responsibility for delivering traffic to the relevant POI, and the terminating carrier would bear financial responsibility for delivering it from the POI to the called parties. Because the originating carrier's costs to originate traffic and deliver it to the POI could be substantial, there is no basis for concern that the originating carrier could somehow exploit bill and keep to achieve some type of arbitrage windfall. Moreover, CMRS providers have, as a practical matter, operated under bill and keep for interexchange traffic for more than a decade,<sup>40</sup> and no such theoretical arbitrage practice has taken hold.

At bottom, parties opposing bill and keep on this ground appear to be concerned that the Commission will specify inefficient default POIs. However, AT&T has proposed efficient default POIs in connection with prior proceedings.<sup>41</sup> The Commission could easily prevent carriers from dumping off traffic at inappropriate locations by adopting such default POIs.

In short, the only plausible source of inefficient arbitrage schemes is continued reliance on the CPNP system that has spawned such schemes for the past 15 years. As explained in our

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<sup>40</sup> *See* AT&T Comments at 21 n.32 (citing Declaratory Ruling, *Petitions of Sprint PCS and AT&T Corp. for Declaratory Ruling Regarding CMRS Access Charges*, 17 FCC Rcd 13192 (2002)) (noting that wireless carriers generally terminate access traffic without charge, because they have no right to tariff access charges and thus no means of compelling carriers to pay those charges).

<sup>41</sup> *See, e.g.*, Letter from Hank Hultquist, AT&T, and Donna Epps, Verizon, to Marlene Dortch, FCC, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, at 1 (Oct. 14, 2008) (proposing “a simplified set of rules that would govern [interconnection] obligations as a default matter”); Letter from Tony Clark, et al., NARUC, to Kevin Martin, Chairman, FCC, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, Exec. Summary at 11, *The Missoula Plan for Intercarrier Compensation Reform* at 41-48 (July 24, 2006).

opening comments, whenever regulators mandate interconnection and entitle carriers to collect a substantial charge for terminating traffic, it gives those carriers inefficient incentives to specialize in terminating traffic. AT&T Comments at 19-21. That is certainly true of access charges, as illustrated by the proliferation of traffic-pumping schemes.<sup>42</sup> It is equally true of TELRIC-based termination charges, as illustrated by the ISP reciprocal compensation debacle several years ago.<sup>43</sup> As AT&T has explained in prior comments, it is past time to wean the industry off of this ill-conceived CPNP cost-recovery regime and the interminable rate disputes it inevitably engenders.<sup>44</sup>

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<sup>42</sup> See Comments of AT&T, Inc., *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up*, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, at 8-10 (filed Apr. 1, 2011) (“AT&T Apr. 1, 2011 Comments”); see also Comments of AT&T Inc., *Establishing Just and Reasonable Rates for Local Exchange Carriers*, WC Docket No. 07-135, at 12 (filed Dec. 17, 2007).

<sup>43</sup> There, certain CLECs “found it profitable to target and serve ISP customers who were large recipients of local traffic, since dial-up Internet customers would call their ISP and then stay on the line for hours. This practice led to significant traffic imbalances, with competitive LECs seeking billions of dollars in reciprocal compensation payments from other LECs.” Order on Remand and Report and Order and Further Notice of Proposed Rulemaking, *High-Cost Universal Service Support* (and related dockets), 24 FCC Rcd 6475, 6775 Appx. C ¶ 174 (2008). In its *ISP Remand Order* responding to this problem, “[t]he Commission discussed at length the market distortions and regulatory arbitrage opportunities created by the application of per-minute reciprocal compensation rates to ISP-bound traffic.” *Id.* at 6776 Appx. C ¶ 176 n.467; see Order on Remand and Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Intercarrier Compensation for ISP-Bound Traffic*, 16 FCC Rcd 9151, 9181-86 ¶¶ 67-76 (2001) (“*ISP Remand Order*”).

<sup>44</sup> See, e.g., *ICF Opening Comments* at 2-20, 25-33, 55-67; *ICF Plan* at 8-13, 19-28.

*Third*, some commenters contend that bill and keep would be too disruptive to the rural ILECs that rely disproportionately on subsidy-laden access charges to fund their provision of service in high-cost areas.<sup>45</sup> This contention is misconceived as well.

These commenters acknowledge that the Commission could alleviate such disruption by creating explicit support mechanisms to replace the implicit subsidies embedded in access charges.<sup>46</sup> But these parties argue that such an approach would unduly increase the size of those explicit mechanisms and thereby burden consumers. NECA, for example, notes that replacing the implicit support in intercarrier compensation would result in “a very large CAF” and this, in turn, “would appear to be at odds with the Commission’s stated intent to ... ‘limit the contribution burden on households.’”<sup>47</sup> This objection defies economic logic. Consumers will end up footing the bill for rural subsidies whether they are implicit or explicit.<sup>48</sup> And those subsidies will in fact be more sustainable if they are explicit because they will be less subject to the bypass and arbitrage dynamics that are undermining the current patchwork of implicit subsidies. *See* AT&T Comments at 9-14 (discussing the erosion of implicit subsidies); State Joint Board Members Comments at 116 (same).

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<sup>45</sup> NECA Comments at 22-23 (a “bill-and-keep regime (or any other regime that sets rates at some amount lower than reasonable cost) would impose substantial additional burdens upon RLEC customers” and would preclude rural carriers from investing in their networks); ITTA Comments at 41; State Joint Board Members Comments at 116-17.

<sup>46</sup> *See, e.g.*, ITTA Comments at 41; NECA Comments at 23 (“Of course, in theory, the adverse consumer impacts of a bill-and-keep mechanism (or other regime that imposes some artificially low rate) could be averted by explicit universal service support ....”).

<sup>47</sup> NECA Comments at 23 (quoting *NPRM*). *See also* State Joint Board Members Comments at 12 (“Forcing intrastate intercarrier compensation rates to zero or near zero would greatly exacerbate the already difficult task of funding universal service.”).

<sup>48</sup> *See, e.g.*, AT&T Missoula Reply Comments at 8-9; AT&T December 2008 IC/USF Reply Comments at 13.

The only discernible reason that rural carriers could have to propose continued reliance on these comparatively unstable *implicit* subsidies is that such subsidies are subject to less public scrutiny because they do not appear as easily-noticed line items on telephone bills. And that, of course, is hardly a valid reason for disobeying Congress’s clear mandate in section 254 that the Commission effect a comprehensive transition from implicit to explicit subsidy mechanisms. *See* 47 U.S.C. § 254(e) (mandating that universal service “support should be explicit”).<sup>49</sup>

*Fourth*, some carriers argue that, although there should be a single unified termination rate “for each carrier,” the Commission should not adopt “a single national rate for intercarrier compensation.” State Joint Board Members Comments at 12; *see also* NECA Comments at 20-22. This argument too is unsound.

Insofar as these commenters seek a regime that would allow two carriers to charge each other asymmetric rates for call termination when they exchange traffic, that regime would force some carriers (and their customers) to cross-subsidize other carriers (and their customers). This would unfairly harm consumers in those states that have reformed intrastate access charges and rebalanced rates, while rewarding those in other states that have failed to undertake these important reforms. Such an approach would fly in the face of modern American telecommunications policy, which recognizes that implicit cross-subsidies—particularly those designed to give one group of competitors an artificial advantage over others—are anathema to efficient competitive entry.<sup>50</sup>

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<sup>49</sup> *See also Texas Office of Pub. Util. Counsel v. FCC*, 183 F.3d 393, 425 (5th Cir. 1999) (“*TOPUC I*”) (“[T]he plain language of § 254(e) does not permit the FCC to maintain any implicit subsidies for universal service support.”); *Comsat Corp. v. FCC*, 250 F.3d 931, 939-40 (5th Cir. 2001) (“[T]he ‘FCC cannot maintain any implicit subsidies’ whether on a permissive or mandatory basis.”).

<sup>50</sup> *See, e.g., Local Competition Order*, 11 FCC Rcd at 15506-07 ¶ 5 (such subsidies deter and distort competition by placing some carriers at an artificial competitive disadvantage);

Nor could the Commission mitigate these concerns by permitting disparate carrier-specific rates but imposing a “symmetry” rule that would require any two carriers with different rates to default to the higher rate when they exchange traffic with each other. Any such approach would produce the same types of arbitrage opportunities (such as traffic pumping or routing traffic through other carriers for reasons other than network efficiency) that have distorted the telecommunications marketplace under the existing regime.<sup>51</sup> The only way to establish a stable framework for the PSTN—and to avoid playing regulatory whack-a-mole as each new arbitrage opportunity arises—is to ensure a uniform termination rate for all traffic for *all* carriers.

## **2. The Commission Should Reject Calls for a Lengthy Glide-Path for Intercarrier Compensation Reform.**

Some commenters urge the Commission to establish a longer glide-path for intercarrier compensation reform than the one proposed in AT&T’s comments. For example, Level 3 proposes that the Commission establish “a nine year transition, with the first five years focused” solely on bringing intrastate access charges down to the level of interstate access charges. Level 3 Comments at 2-3, 6-8. The remaining four years would be devoted to reducing access charges

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Further Notice of Proposed Rulemaking, *Developing a Unified Intercarrier Compensation Regime*, 20 FCC Rcd 4685, 4702 ¶ 33 (2005) (“[A]ny new intercarrier compensation approach must be competitively and technologically neutral. Given the rapid changes in telecommunications technology, it is imperative that new rules accommodate continuing change in the marketplace and do not distort the opportunity for carriers using different and novel technologies to compete for customers.”).

<sup>51</sup> An example illustrates the problem. Suppose that LEC 1 and LEC 2 have different termination rates: one has a rate of \$0.0007, and the other a rate of \$0.05. When these two carriers exchange traffic with each other, the symmetry rule would require them to default to the higher rate: each would charge the other \$0.05. But LEC 2 could try to avoid paying that higher rate to LEC 1 by, for example, routing traffic to LEC 1’s customers through a CLEC or other intermediary that had the same low termination rate as LEC 1 and that agreed with LEC 2 to present the traffic to LEC 1 as its own. In that scenario, LEC 1 would bill only \$0.0007 from the intermediary for traffic originated by LEC 2, even though it would pay the higher termination rate for all traffic bound for LEC 2.

to the end-state rate of \$0.0007. *Id.* at 8-9.<sup>52</sup> Cbeyond too proposes a five-year period just for harmonization of interstate and intrastate access charges. Cbeyond Comments at 4. And Public Knowledge argues that it might *never* be appropriate to eliminate intercarrier compensation for some providers.<sup>53</sup>

These proposals are profoundly misguided.<sup>54</sup> Nearly every commenter agrees that the existing regime is fatally flawed, and it is clear that the Commission already has waited far too long to overhaul it. As Sprint notes:

[I]t is important to remember that “Congress in the 1996 Act *directed* this Commission ... to eliminate implicit subsidies contained in access charges and instead make all universal service support *explicit*,” with Congress stating its expectation that continued use of access charges would be “interim” only.... Thus, when parties in their comments refer to a four-year transition plan, they are really referring to a 19-year plan. With the passage of 15 years, it is time to at least begin reform this year.<sup>55</sup>

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<sup>52</sup> Level 3’s support for a decade-long phase-down of access charges represents a significant shift from the approach it advocated in its 2003 petition for forbearance from access charges for VoIP traffic. *See* Petition of Level 3 Communications LLC, *Petition for Forbearance Under 47 U.S.C. § 160(c) from Enforcement of 47 U.S.C. § 251(g), Rule 51.701(b)(1), and Rule 69.5(b)*, WC Docket No. 03-266 (filed Dec. 23, 2003). There, it criticized “ILECs’ reliance on perpetuating the existing broken patchwork of intercarrier compensation mechanisms, rather than making the evolution to a unified regime” and dedicated a section of its petition to the argument that “Congress established reciprocal compensation as the long-term mechanism for intercarrier compensation, while permitting a temporary continuation of interstate and intrastate access charges.” *Id.* at 40-41, 31-34, 51-53 (capitalization altered).

<sup>53</sup> Public Knowledge Comments at 27 (“It is true that an ICC system designed for a circuit-switched world is an uneasy fit in a packet-switched, all-IP future. But the most important thing is to make sure that Americans living in high-cost areas have access to modern communications. This takes precedence over regulatory simplicity.”).

<sup>54</sup> As discussed below in Section I.C, a rapid transition to bill and keep could cause disruptions for the smallest rural carriers, which rely heavily on access charges. But the Commission should address this issue not by delaying reform for all carriers, but instead by creating an explicit funding mechanism that temporarily allows carriers to recover a portion of their lost intercarrier revenues.

<sup>55</sup> Sprint Comments at 5 (emphasis in original) (quoting *Unified ICC Reform NPRM*, 16 FCC Rcd 9610, 9623 ¶ 32 (2001)). *See also* Google Comments at 5 (discussing “the express mandate in the Communications Act to make subsidies explicit”).

Further delay would only generate additional arbitrage opportunities and engender new carrier disputes, and thus it is far past time for the Commission to undertake comprehensive reform.<sup>56</sup>

Indeed, as the Commission itself recognized in the *NPRM*, arbitrage and disputes produced by the existing regime are impeding broadband deployment by consuming resources that providers could otherwise use to roll out broadband and IP-enabled services.<sup>57</sup> Those lost resources are significant: Global Crossing recently noted that, for it alone, “[b]ill reconciliation and disputes constitutes approximately 750 man-hours per month,” and “[m]anagement of the inter-carrier compensation regime through contract negotiation, routing, costing, pricing, and product support constitutes an additional 1,540 man-hours per month.”<sup>58</sup> In addition, as the Commission explained in the *National Broadband Plan*, “[b]ecause providers’ [intercarrier] rates are above cost, the current system creates disincentives to migrate to all IP-based networks.”<sup>59</sup> And “regulatory uncertainty about whether or what intercarrier compensation payments are required for VoIP traffic, as well as a lack of uniform rates, may be hindering investment and the introduction of new IP-based services and products.” *Id.*

Echoing the Commission’s findings, many commenters have explained how these aspects of the existing intercarrier compensation regime impede broadband deployment. Google, for

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<sup>56</sup> See *AT&T November 2008 IC/USF Comments* at 22 (“[I]n the absence of prompt reform, arbitrage schemes will only multiply and intensify—as carriers seek both to avoid paying the subsidy-laden compensation that supports universal service today ... and to receive more in the way of inflated compensation .... The result in each case would be yet further destabilization of the industry.”).

<sup>57</sup> *NPRM* ¶ 496 (“The wildly varying and disparate rates within the intercarrier compensation system create arbitrage opportunities and introduce layers of regulatory complexity and associated costs, which hinder deployment of IP networks.”).

<sup>58</sup> Letter from Paul Kouroupas, Global Crossing, to Marlene H. Dortch, FCC, *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, at 2 (filed Dec. 17, 2010).

<sup>59</sup> FCC, *Connecting America: The National Broadband Plan*, at 142 (2010) (“*National Broadband Plan*”).

example, argues that because “ICC charges still reflect substantial implicit subsidies used to support carriers ... the result is that carriers have strong motivations to continue the inefficient use and preservation of outdated infrastructure instead of responding to efficient economic and engineering signals” to provide next-generation services. Google Comments at 5. Similarly, Verizon explains that “decisions about investment in broadband facilities and IP-based services ... will be distorted by the availability of arbitrage opportunities, as well as by uncertainty and disagreement about which of the multiple rates will apply to new services.” Verizon Comments at 38-39. In short, further delays with respect to intercarrier compensation reform will translate into delays in achieving the Commission’s broadband goals.

### **3. The Commission Should Not Impose Burdensome Regulation on Efficient PSTN Transit Relationships.**

As AT&T emphasized in its opening comments, any bill-and-keep regime can sensibly encompass only charges imposed by an originating or terminating carrier—*i.e.*, a carrier that, with respect to any given call, is serving either the calling or called party and thus can recover from that party any associated network costs. In contrast, the regime should *not* encompass intermediate transit providers that can recover network costs only from other carriers. *See* AT&T Comments at 31 n.57. As Neutral Tandem explains, “[u]nlike originating and terminating carriers, intermediate tandem transit carriers do not have an end-user associated with the traffic they deliver, so their only source of cost recovery and revenue for the services they provide is the revenue they obtain from the originating and/or terminating carriers.” Neutral Tandem Comments at 10.

The Commission should not regulate these sources of PSTN transit revenue, despite the calls of some commenters in this proceeding.<sup>60</sup> As AT&T has explained in many prior

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<sup>60</sup> *See, e.g.*, Level 3 Comments at 18-21; Cbeyond Comments at 20-23.

proceedings,<sup>61</sup> the Commission has rightly refused to subject transit rate levels to TELRIC or any other specific cost methodology.<sup>62</sup> And the Commission has no plausible basis for reversing course here, particularly now that, as the Commission recognizes, transit services are competitive. *See NPRM* ¶ 683 (“More recently, the record in this proceeding indicates that a competitive market for transit services exists.”); *see also* Neutral Tandem Comments at 1-8 (discussing competition in the market for transit services and the innovative features that competitors offer); *id.* at 3 (noting that Neutral Tandem alone “provides service in 189 of the 197 LATAs nationwide and is continuing to expand to areas not currently served”). In any event, the Commission certainly has no warrant for subjecting transit services to the state arbitration scheme set up under section 251(c)(2) because that provision applies only to physical interconnection, and not to the routing of traffic. *See* Neutral Tandem Comments at 6-7. Indeed, the Commission and several courts of appeals have held as much,<sup>63</sup> and there is no reason to revisit the question now.

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<sup>61</sup> *See, e.g., AT&T December 2008 IC/USF Reply Comments* at 20-22; Comments of SBC Communications Inc., *Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, at 4 & n.2 (filed May 23, 2005). We do not repeat the arguments made in those comments here, but instead incorporate them by reference.

<sup>62</sup> *See* Neutral Tandem Comments at 2 (cautioning that the Commission “should not undermine local tandem transit competition with TELRIC price regulation”) (capitalization altered); *id.* at 6-8 (explaining how “adoption of TELRIC price regulation for ILEC local tandem transit service would stifle competition and inhibit the development of next-generation tandem networks”) (capitalization altered). Importantly, even Level 3 appears to concede that TELRIC would be an inappropriately low regulated rate for transit services. Level 3 Comments at 18-19 (“[L]imiting rates under the just and reasonable standard, rather than TELRIC, would be more appropriate to transit markets, which are not as difficult to enter as last-mile markets. TELRIC rates here could harm the development of competition in transit services.”).

<sup>63</sup> In its orders and rules, the Commission has concluded that “the term ‘interconnection’ under section 251(c)(2) refers only to the physical linking of two networks” and does not include “the transport and termination of traffic.” *Local Competition Order*, 11 FCC Rcd at 15590 ¶ 176; *see* 47 C.F.R. § 51.5. *See also* Neutral Tandem Comments at 6-7 (discussing the opinions of “multiple federal courts [that] have held that ‘interconnection’ under Section 251(c)(2) of the 1996 Act does not refer to the exchange or delivery of traffic.”).

Finally, although the transit market is functioning with great efficiency in most cases, there is one context where Commission intervention is needed. As AT&T explained in its April 1 comments in this proceeding, some providers are engaging in “mileage pumping” schemes that force IXCs to pay excessive charges for transit services. *AT&T Apr. 1, 2011 Comments* at 30-35. Under these schemes, LECs exploit centralized equal access (“CEA”) arrangements or make deals with competitive tandem providers to significantly inflate the distance that IXC traffic is transported before it is delivered to end users. *Id.* Like traffic pumping, mileage pumping serves no legitimate purpose and it “increase[s] costs for all telecommunications customers, impose[s] substantial litigation costs, and harm[s] competition and the public interest.” *Id.* at 30-31. Accordingly, the Commission should eliminate this arbitrage opportunity by deeming mileage pumping an unreasonable practice under section 201(b) of the Act. *Id.* at 33-34.

**C. As the Commission Reduces and Ultimately Eliminates Inter-carrier Charges, It Should Allow Carriers to Turn to Alternative Means of Recovering Their Costs.**

AT&T’s proposed framework for inter-carrier compensation reform would offer carriers opportunities (but no guarantees) to recover their lost access revenues. Under that framework, the Commission would gradually relax regulation of end-user charges and establish a new universal service mechanism designed to mitigate (but not entirely offset) carriers’ loss of inter-carrier revenues. *See AT&T Comments* at 30-35. Various commenters oppose both of these means of revenue recovery. Citing several different rationales, these commenters argue that ILECs have no right to *any* explicit mechanism for recovering the implicit subsidies they will lose as inter-carrier compensation is reduced and (under bill-and-keep proposals) ultimately eliminated. All of these arguments lack merit.

***End-user revenue recovery.*** Certain commenters argue that the Commission would harm consumers if it permitted carriers to recover their lost access revenues by increasing end-user

charges such as SLCs. *See, e.g.*, NASUCA Comments at 114-15; Ad Hoc Comments at 61; State Joint Board Members Comments at 150; Free Press Comments at 6 (“[A]ll available evidence suggests that for the substantial majority of residential LEC customers, the current SLC is already too high.”). But this is economically irrational. The access charges that ILECs charge today are themselves financed by consumers: whether revenues are recovered in the form of access charges or SLCs, consumers ultimately foot the bill. And as discussed above<sup>64</sup> and in AT&T’s prior comments,<sup>65</sup> allowing carriers to recover their costs directly from their customers is far more efficient than requiring them to recover those costs from other providers and, ultimately, those providers’ customers. Numerous commenters in this proceeding agree.<sup>66</sup>

Ad Hoc, however, argues that the Commission should not raise SLC caps in any state that has already relaxed caps on corresponding flat-rated intrastate end-user charges, on the theory that ILECs are now recovering from those state-level charges any implicit subsidies they may have lost through state-level rate rebalancing. Ad Hoc Comments at 59-60. This, too, is illogical. The transition from the existing CPNP regime to a bill-and-keep regime will eliminate not only the *implicit subsidies* contained in access charges, but (for all relevant purposes) *intercarrier compensation itself*. This transition will mark a fundamental shift in how carriers recover network costs, even in states that have rebalanced rates: carriers will look now to their own end users (and in some cases the CAF) to recover those costs, rather than to a complex

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<sup>64</sup> *See* Section I.B.1, *supra*.

<sup>65</sup> *AT&T November 2008 IC/USF Comments* at 4-5, 10-12; *AT&T December 2008 IC/USF Reply Comments* at 12-15; *AT&T Missoula Reply Comments* at 8-9; *ICF Opening Comments* at 25-30.

<sup>66</sup> *See, e.g.*, *XO Comments* at 48-49; *Level 3 Comments* at 9 (“[A] carrier should have the opportunity to recover any lost access revenues from its own end user customers. That will permit the market to determine whether the carrier is operating efficiently or not.”); *COMPTEL Comments* at 36 (“Where possible, carriers should first be required to seek recovery through increased end user rates and/or subscriber line charges.”); *Cox Comments* at 14-15.

combination of end-user charges and charges imposed on other carriers (and ultimately *their* end users). The Commission cannot sensibly embark on this fundamental reorientation of cost recovery without augmenting opportunities for each carrier to recover its costs from its end users. Such opportunities require relaxing SLC caps.

In any event, competition will likely preclude LECs from raising their SLCs to the caps in many areas. AT&T Comments at 32. And for this reason, Sprint proposes that the Commission “lift in its entirety ... the current cap” on ILECs’ subscriber line charges. Sprint Comments at 9. As Sprint explains, “[t]he retail market for voice services is competitive and will become even more competitive by eliminating the market distortions caused by the current ICC system. This competition will limit the ability of these incumbents to raise to unreasonable levels their retail prices.” *Id.* XO makes the same point, arguing that “the Commission should remove the current caps on the interstate [SLC] and allow market forces to establish how much ‘lost revenue’ can be recovered.” XO Comments at 7; *see also id.* at 48-49.

Finally, Free Press argues that increasing SLC caps could potentially violate Section 254(k) by permitting “over-recovery of loop costs for loops that offer unsubsidized services (such as DSL or IPTV).” Free Press Comments at 6. This argument contravenes clear precedent interpreting section 254(k). The Fifth Circuit conclusively established nearly a decade ago that “§ 254(k) does not implicate the SLC.” *Texas Office of Pub. Util. Counsel v. FCC*, 265 F.3d 313, 324 (5th Cir. 2001) (“*TOPUC IP*”). Instead, “Section 254(k) concerns cost allocation of joint and common costs, while the SLC ... involve[s] the recovery of such costs.” *Id.*

***Explicit universal service funding.*** AT&T has proposed that the Commission establish an explicit Access Replacement Mechanism, or “ARM,” to partially offset carriers’ loss of intercarrier compensation revenues. *See* AT&T Comments at 32-33; *see also* Windstream

Comments at 46-47 (also proposing an ARM mechanism). Some commenters argue that there is no basis for such a mechanism. Indeed, many even urge the Commission to eliminate the existing IAS funding mechanism that was created in the wake of the *CALLS Order*.<sup>67</sup> The Commission should reject both arguments.

Several commenters contend that, because access charges are not cost-based, ARM funding would constitute an unjustified windfall for local exchange carriers. *See, e.g.*, Sprint Comments at 37-39; XO Comments at 7, 47-50; CTIA Comments at 42. But these commenters ignore the fact that, under AT&T's proposal, the ARM would merely be a *transitional* mechanism designed to mitigate the disruption that carriers—and, more importantly, their customers—could otherwise confront as the industry transitions from implicit to explicit subsidies. Some rural ILECs derive half of their revenues from access charges,<sup>68</sup> and rapidly eliminating those revenues without providing an alternative source of recovery could threaten universal service. As Public Knowledge warns, “if the revenues that some high-cost carriers currently receive from ICC are removed and not replaced, not only might broadband not be deployed on a timely basis to rural America, but basic telephone service might also be

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<sup>67</sup> Sixth Report and Order, Report and Order, Eleventh Report and Order, *Access Charge Reform; Price Cap Performance Review for Local Exchange Carriers; Low-Volume Long Distance Users; Federal-State Joint Board on Universal Service*, 15 FCC Rcd 12962 (2000) (“*CALLS Order*”), *aff'd in part, rev'd in part, & remanded in part, TOPUC II*, 265 F.3d 313.

<sup>68</sup> *See* Google Comments at 5; ITTA Comments at 40; National Tribal Telecommunications Ass'n Comments at 10; *see also NPRM* ¶ 567 n.845 (discussing NECA filing showing that “some carriers received up to 49 percent of revenues from intercarrier compensation”). As NECA notes, “because of the typically high-cost areas that they serve, RLEC ICC rates are higher than those charged by larger, urban-based carriers, and those charges compose a larger percentage of their revenues.” NECA Comments at 22.

imperiled.” Public Knowledge Comments at 25.<sup>69</sup> Rural consumers could suffer other harms as well:

If RLECs were no longer permitted to charge other carriers for the use of their networks, an RLEC’s limited end-user customer base would likely need to be relied upon to recover the overwhelming majority of these costs. This would cause end-user rates to skyrocket to unaffordable levels, and lead customers to discontinue service, contrary to the objectives of section 254 and the Commission’s own priorities for the federal High-Cost program in this proceeding. In turn, RLECs would have neither the ability nor incentive to continue investing in their networks, and further broadband deployment and upgrades would come to a halt.

NECA Comments at 22-23. *See also id.* at iii (warning that “[f]ailure to enable RLECs to recover their lost access revenues ... will prevent many from repaying outstanding loans, meeting current payrolls, fulfilling critical Carrier of Last Resort ... responsibilities, and simply maintaining existing network plant.”). A *temporary* ARM like that proposed by AT&T is a reasonable means of avoiding such harms: in the short term, it provides a safety net for those carriers most dependent on access charges, but in the long term it will require all carriers to recover their costs only from end-user revenues, supplemented, as warranted, by the CAF.

Other commenters, echoing the *NPRM*, argue that the access charges currently imposed by price-cap carriers are excessive and non-cost-based because the Commission has not lowered them through a “productivity” factor for several years. *See* Free Press Comments at 7; Ad Hoc Comments at 33-34; Coalition for Rational Universal Service and Intercarrier Reform Comments at 8. This argument makes no sense. In the 20th century, it was appropriate to impose such a productivity factor on price-cap carriers to reflect the declining per-line costs of providing service, which resulted from both efficiency improvements and steady increases in line counts

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<sup>69</sup> *See also* Public Knowledge Comments at 23 (“Many local carriers that continue to provide valuable service rely on the existing ICC regime, and [] too sudden a transition might create significant disruption and loss of service.”).

(with associated increases in economies of scale and density).<sup>70</sup> Over the past decade, however, ILECs have hemorrhaged access lines, and their per-line costs have—if anything—*increased*. See AT&T Comments at 9-14. Thus, access charges, which have remained essentially constant in real terms for many years, may now be insufficient to recover the network costs that ILECs cannot recover from their end users because of retail rate regulation (including SLC caps). It would thus be both irrational and confiscatory to reduce those access charges now without creating commensurate new opportunities for recovering these network costs.

For the same reason, there is no merit to proposals to eliminate the IAS mechanism on the misguided theory that network costs have somehow declined so much that IAS funds are no longer needed to recover them. See, e.g., Sprint Comments at 33; XO Comments at 6, 38; NASUCA Comments at 45-46; Florida PSC Comments at 9-10.<sup>71</sup> Again, those costs have, if anything, increased, and thus IAS remains necessary to sustain “affordable, quality voice services and enable some broadband investment in the high-cost areas receiving that support.” CenturyLink Comments at 27; see also, e.g., Frontier Comments at 12; Hawaiian Telecom Comments at 8; ITTA Comments at 42. Furthermore, it simply is not the case that IAS support was “due to expire in 2005,” as some commenters contend. Sprint Comments at 33. Instead, the amount of funding allocated to IAS was to be fixed for five years, and after that point the Commission was to “make any adjustment to the fund that is necessary to ensure that such funding is sufficient, yet not excessive, to keep rates in high-cost areas affordable and reasonably comparable to rates in areas with greater population density.” *CALLS Order*, 15 FCC Rcd at

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<sup>70</sup> See Fourth Report and Order, Second Report and Order, *Price Cap Performance Review for Local Exchange Carriers*, 12 FCC Rcd 16642, 16647 ¶ 5 (1997).

<sup>71</sup> AT&T is willing to cede IAS funding (and to phase out future ARM funding) *only* if the Commission adopts AT&T’s overall reform framework, including its proposals to relax SLC caps. If the Commission rejects this framework in whole or part, AT&T will oppose any effort to eliminate IAS and ARM support.

13047 ¶ 203; *see also* ITTA Comments at 9-10. The fact that the Commission has failed to undertake its promised re-evaluation of the IAS mechanism does not mean that such support is no longer needed and should be eliminated. Finally, termination of the IAS mechanism would further widen the disparity in support between “rural” carriers and so-called “non-rural” carriers, which, despite their name, serve most of America’s high-cost lines. *See* CenturyLink Comments at 27; Windstream Comments at 54; CWA Comments at 9.

***Offsets for affiliates’ access-charge “savings.”*** Some commenters argue that “any possible revenue recovery must be offset by reductions in cost that result from ICC reductions.” NASUCA Comments at 112; *see also* COMPTTEL Comments at 36. They argue, for example, that “large carriers that lose revenue will also see reductions in the access charges they have to pay for the long-distance traffic they carry and terminate on the networks of other carriers, especially the smaller rural carriers.” NASUCA Comments at 112. But as AT&T explained in its opening comments, it would be economically irrational and administratively impracticable to adjust the ARM or SLC caps to reflect the gross “savings” that an ILEC’s wireless or long-distance affiliate may obtain when delivering traffic to other ILECs. *See* AT&T Comments at 35-37.

***Offsets for revenues from non-regulated services.*** Finally, some commenters argue that the Commission should offset a carrier’s recovery of lost access revenues (through either end-user charges or explicit funding) against the carrier’s revenues from the provision of deregulated services (*e.g.*, DSL) over the joint-use facilities that are used to provide regulated POTS services. *See, e.g.*, NASUCA Comments at 112-13; *see also* CTIA Comments at 42. Indeed, the Commission itself appears to support this notion in the *NPRM*, noting: “As we evaluate revenue recovery, we do not believe that recovery needs to be revenue neutral given that carriers have a

variety of ... non-regulated revenues.” *NPRM* ¶ 568. The Commission should reject this approach in its order.

First, the non-regulated services to which these commenters refer are highly competitive and require substantial up-front investments in infrastructure.<sup>72</sup> Consequently, the revenues derived from these services are tenuous at best,<sup>73</sup> and the profit margins are often very small or even negative, especially in those markets that providers have recently entered. Thus, it simply is not the case that providers can rely on the revenues from these services to offset what in many cases will be a significant decline in intercarrier compensation revenues.

Moreover, precluding carriers from raising their SLCs and instead requiring them to cross-subsidize legacy services with non-regulated services could have the unintended effect of inhibiting broadband adoption. End-user rates for POTS service have long been held below market levels in many areas by regulation. And this sends inappropriate price signals to consumers, who, due to the price difference between legacy and advanced services, might be disinclined to replace their POTS service with broadband and an over-the-top VoIP service. In addition, below-market rates for POTS service artificially reduce the cost of dial-up Internet access—and the larger the price differential between dial-up service and broadband, the less likely some consumers are to adopt the latter for their Internet needs. In short, the Commission

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<sup>72</sup> See, e.g., Comments of AT&T Inc., *Preserving the Open Internet; Broadband Industry Practices*, GN Docket No. 09-191, WC Docket No. 07-52, at 2-3, 25-26, 78-87 (filed Jan. 14, 2010).

<sup>73</sup> Indeed, according to telecom sector analysts at Bernstein Research, access line loss rates are likely “to worsen at U.S. telecom service providers—rather than to abate as some analysts have predicted—because digital subscriber line (DSL) data service subscribership rates are also declining.” *Analysts: U.S. Telco Line Losses To Worsen*, TRDaily (May 19, 2011). While the popularity of DSL services had helped to keep copper lines in use even as customers were abandoning landline voice services, the Bernstein analysts estimate that major U.S. telcos lost about 800,000 DSL lines in 2010. *Id.* (quoting analyst report stating that “[t]he twisted pair copper infrastructure is now losing ground on all fronts. We are no longer witnessing the obsolescence of a product (wireline voice). We are witnessing the obsolescence of a network.”).

can best further its broadband adoption goals by allowing providers to make incremental SLC increases and thereby bring today's artificially low prices for legacy services closer to market levels.

**II. LEGACY SERVICE OBLIGATIONS ARE NOT ONLY UNNECESSARY TO ENSURE UNIVERSAL SERVICE IN TODAY'S COMMUNICATIONS MARKETPLACE, BUT ARE IMPEDING ACHIEVEMENT OF IMPORTANT UNIVERSAL SERVICE GOALS.**

As AT&T and other parties explained in their opening comments, carrier-of-last-resort and other legacy service obligations are unsustainable and unjustified in today's communications marketplace.<sup>74</sup> No provider should be subject to these obligations in any geographic area for which it does not receive universal service funding.<sup>75</sup> Indeed, the continued application of these outdated obligations is impeding the transition to an all-IP communications infrastructure.

**A. There Is No Sound Rationale for Imposing State Carrier-of-Last-Resort and Other Service Obligations on Providers That Do Not Voluntarily Assume Those Obligations in Return for Universal Service Funding.**

Several commenters call for the continued application of state carrier-of-last-resort and other legacy service obligations. NECA, for example, argues that “[t]he need for and benefits of COLRs have not decreased with the introduction of competition into the local exchange business since the passage of the Telecommunications Act of 1996, or with the evolution of the existing multiple-use network into a predominately broadband network.” NECA Comments at 72.

Similarly, the State Members of the Universal Service Joint Board argue that, “[e]ventually, it

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<sup>74</sup> See AT&T Comments at 54-82; see also Alaska Communications Systems Comments at 21-24; CTIA Comments at 20 (arguing that providers should be freed of their service obligations as legacy support is phased out); ITTA Comments at 22 (arguing that it makes no sense to apply service obligations to providers that do not receive CAF funding); Windstream Comments at 20 (same); CenturyLink Comments at 47 (same).

<sup>75</sup> AT&T agrees with commenters who argue that CAF recipients should bear broadband provider-of-last-resort obligations in the areas that they have *agreed* to serve in exchange for CAF funding. See, e.g., CenturyLink Comments at 47. But no provider should otherwise be compelled to offer either broadband or voice service, and certainly not at regulated rates in areas for which the provider does not receive universal service support.

may be possible to drop voice-only [carrier-of-last-resort] requirements, but that day has not yet arrived.” State Joint Board Members Comments at 130. *See also* NASUCA Comments at 5 n.15; GVNW Consulting Comments at 28; Regulatory Commission of Alaska Comments at 24-25. But none of these commenters has offered any sound policy rationale for maintaining these outdated obligations. Nor could they, as these obligations harm the very consumers that they purportedly are intended to help.

As AT&T has explained, state carrier-of-last-resort and other legacy service obligations impede the deployment of broadband services. *See* AT&T Comments at 59-75. Many of these service obligations are defined by reference to a particular network architecture or impose requirements that can be satisfied only with circuit-switched, TDM technology. *Id.* at 56, 62-63. Thus, such obligations effectively preclude retirement of the PSTN and require providers to maintain both TDM and IP facilities, which diverts capital from broadband deployment. *See* Alaska Communications Systems Comments at 22 (noting that the Commission’s goal of “promoting broadband infrastructure deployment may be at odds with longstanding state policies ... requiring that certain services and technologies be maintained”). In addition, legacy service obligations often require incumbents to serve high-cost areas at below-cost rates, and thus they make it more difficult for carriers to devote the capital necessary to deploy IP networks there. *See id.* at 22-24; AT&T Comments at 63.

Ignoring these harmful effects on broadband service, some parties contend that carrier-of-last-resort and other legacy service obligations are necessary to ensure universal service with respect to *voice services*.<sup>76</sup> But as AT&T and other commenters have explained, the POTS business model is collapsing, and thus legacy service obligations are an unsustainable means of

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<sup>76</sup> *See, e.g.,* State Joint Board Members Comments at 124-29; NECA Comments at 70, 72; GVNW Consulting Comments at 28.

ensuring ubiquitous access even to basic telecommunications services.<sup>77</sup> The implicit subsidies that carriers have traditionally relied on to fund their provision of POTS service in high-cost areas—and thus their compliance with legacy service obligations—are rapidly disappearing.<sup>78</sup> And the reforms that the Commission adopts in this proceeding will hasten the demise of the POTS business model by eliminating access charges and withdrawing explicit universal service support from legacy technologies. *See* AT&T Comments at 54, 57-58. Given these marketplace and regulatory developments, it is clear that legacy service obligations are not a viable means of ensuring universal access even to voice service. *See* Windstream Comments at 20 (arguing that continued reliance on unfunded service obligations to promote universal service “will serve only to degrade existing communications services in high-cost areas”).<sup>79</sup> Accordingly, policymakers should stop propping up outdated POTS networks and business models through unsustainable regulatory mandates and instead promote universal service by ensuring that all Americans have access to innovative VoIP services provided over next-generation communications networks.

Not only are legacy service obligations ill-suited to maintaining and advancing universal service with respect to *both* broadband and POTS service, they also contravene the Communications Act and Commission precedent because they are not competitively neutral.

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<sup>77</sup> *See, e.g.*, AT&T Comments at 9-14, 54, 57-59; CenturyLink Comments at 12-13 (“This system of implicit subsidies was rendered ineffective with the advent of competition and, accordingly, has long outlived its ability to ensure affordable high-quality services in rural areas.”); State Joint Board Members Comments at 116 (noting that “State Members are quite concerned about whether current trends can continue indefinitely without witnessing an increasing number of incumbent carriers” who are “unable to raise capital needed for broadband enhancements and to replace aging plant,” are “forced to ... defer[] maintenance and ... degrad[e] service quality,” and “must consider exiting from unprofitable rural markets”).

<sup>78</sup> *See Qwest Corp. v. FCC*, 258 F.3d 1191, 1195-96 (10th Cir. 2001) (“*Qwest I*”); AT&T Comments at 9-14, 54; USTA Comments at 6; State Joint Board Members Comments at 32, 116; CenturyLink Comments at 12-13; Alexicon Comments at 15-16; ITTA Comments at 32.

<sup>79</sup> *See also* CenturyLink Comments at 12-13.

These obligations were first imposed on incumbent providers in exchange for specific benefits under the old “regulatory compact,” including exclusive franchises and a guaranteed return on investment. *See* AT&T Comments at 57-58. But ILECs no longer enjoy those benefits in the competitive marketplace that exists today and, therefore, it no longer makes sense to impose these burdensome obligations on *only* the incumbent provider. *See* CTIA Comments at 32 (characterizing service obligations as “relics of monopoly-era ILEC regulation”). Indeed, forcing ILECs alone to bear the weighty burden of serving customers in high-cost areas flouts the Commission’s requirement that universal service policies “be competitively neutral ... [and] neither unfairly advantage nor disadvantage one provider over another, and neither unfairly favor nor disfavor one technology over another.” Report and Order, *Federal-State Joint Board on Universal Service*, 12 FCC Rcd 8776, 8799-806, ¶¶ 43-55 (1997). Similarly, ILEC-only state service obligations also contravene the statutory mandate that “[e]very telecommunications carrier that provides intrastate telecommunications services shall contribute, on an equitable and nondiscriminatory basis ... to the preservation and advancement of universal service.”<sup>80</sup>

Fortunately, a far more equitable and effective means is available for ensuring ubiquitous access to voice and broadband services. As AT&T has explained, the Commission and the states should adopt a procurement-model approach to universal service. AT&T Comments at 59, 83-84. Under this approach, no provider would have an unfunded mandate to provide service; instead, *all* carriers could compete to become the provider of last resort in a given area in exchange for a specific level of *explicit* universal service support. This approach not only would be competitively neutral, but also would finally fulfill Congress’s directive that all universal service support be explicit rather than implicit. 47 U.S.C. § 254(e); *see* page 28 & n.49, *supra*

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<sup>80</sup> 47 U.S.C. § 254(f). *See also* AT&T Comments at 59, 64, 69-70 (explaining how legacy service obligations are not “competitively neutral” or “equitable and nondiscriminatory”).

(discussing court of appeals cases holding that support must be explicit). Finally, because this approach would rely on consent rather than compulsion, it would provide numerous other benefits over command-and-control, public-utility-style regulation. *See* Section III.A.1, *infra*. For all of these reasons, policymakers should eliminate legacy service obligations and adopt in their place the procurement-model approach to universal service.

Some state policymakers have already done so. Recognizing the harmful effects of legacy service obligations, a growing number of states have eliminated them or dramatically scaled them back.<sup>81</sup> And policymakers in many other states appear to be poised to follow suit.<sup>82</sup> Nonetheless, given the evident need for coordinated action at the national level to achieve Congress's ambitious objective of ensuring that *all* Americans have access to broadband,<sup>83</sup> and

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<sup>81</sup> Florida, for example, eliminated all COLR requirements effective January 1, 2009. Likewise, for companies electing to provide retail services on a deregulated basis, South Carolina has eliminated COLR obligations except with respect to a small number of grandfathered, stand-alone residential basic POTS customers. Louisiana has eliminated COLR obligations for certain telephone exchanges based on the existence of competition, and has established a procedure by which carriers may obtain relief from COLR obligations in additional exchanges based on a showing of competition. Comments of AT&T, Inc. – NBP Public Notice #19, *A National Broadband Plan for Our Future; International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act; Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket Nos. 09-51, 09-47, 09-137, at 22 & n.58 (filed Dec. 7, 2009). And just last month, North Carolina enacted legislation that relieved of their COLR obligations those LECs that are subject to G.S. 62-133.5(l) alternative regulation. *See* N.C. Session Law 2011-52/Sen. Bill 343, <http://www.ncleg.net/Sessions/2011/Bills/Senate/PDF/S343v4.pdf>.

<sup>82</sup> *See, e.g.*, Mo. House Bill 339 (amending RSMo § 392.460(3)), <http://www.house.mo.gov/billtracking/bills111/billpdf/truly/HB0339T.PDF> (pending governor's signature); *AT&T Louisiana's Petition for Modification of Rules and Regulations Necessary to Achieve Regulatory Parity & Modernization*, Docket No. R-31839 (La. Pub. Serv. Comm'n, filed Feb. 28, 2011); Tex. Sen. Bill 980, §§ 65.102, 65.151, <http://www.capitol.state.tx.us/tlodocs/82R/billtext/pdf/SB00980F.pdf#navpanes=0> (pending governor's signature); Wis. Sen. Bill 13, § 117 (adding Wis. Stats. § 196.503), [https://docs.legis.wisconsin.gov/2011/related/enrolled/jr1\\_sb13](https://docs.legis.wisconsin.gov/2011/related/enrolled/jr1_sb13) (signing by governor scheduled for May 24, 2011).

<sup>83</sup> The American Recovery and Reinvestment Act of 2009 makes ubiquitous broadband deployment a key Commission goal and mandates that the Commission “shall seek to ensure that all people of the [U]nited [S]tates have access to broadband capability.” 47 U.S.C. § 1305(k)(2).

the equally obvious risk that some states may fail to take the actions necessary to make that goal a reality, the Commission should preempt legacy service obligations under one of the theories articulated in AT&T's opening comments. AT&T Comments at 62-75. As other commenters have noted, such preemption is likely to be the only way to achieve important federal policy goals. *See, e.g.*, Alaska Communications System Comments at 21-24.

**B. The Commission Can, and Should, Limit Legacy ETC Obligations to Only Those Areas Where an ETC Receives Universal Service Support.**

Federal ETC obligations are quite similar to state service obligations.<sup>84</sup> Under the Commission's current interpretation of the Communications Act, an ETC must provide "the services that are supported by Federal universal service support mechanisms" throughout its service area, regardless of whether the ETC receives any high-cost support for doing so.<sup>85</sup> In addition, the Commission's regulations require ETCs to offer certain services that can be provided only through circuit-switched, TDM technologies.<sup>86</sup> In short, the Commission's ETC rules impose essentially the same duties as state legacy service obligations and, consequently, they inflict many of the same harms. Sound policy therefore requires their modification.

Several commenters contend that the Commission is powerless to remedy these harms. They assert, for example, that section 214 precludes the Commission from defining the scope of the areas that ETCs are obligated to serve. *See, e.g.*, NECA Comments at 86; State Joint Board Members Comments at 86-89, 138 ("The Act allows States to define individual service areas for

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<sup>84</sup> *See* NASUCA Comments at 37-38 ("Under 47 U.S.C. § 214(e), a USF fund recipient, as an ETC, has COLR-like responsibilities.").

<sup>85</sup> 47 U.S.C. § 214(e)(1)(A). *See* AT&T Comments at 55-56, 76 (discussing Commission orders interpreting the meaning of section 214). As NECA explains, "section 214(e)(1) makes an ETC a COLR by requiring it to offer the supported services ... to all customers within its designated service area that request service." NECA Comments at 71.

<sup>86</sup> *See* AT&T Comments at 56 (discussing the obligations imposed under 47 C.F.R. § 54.101(a)).

ETCs as a part of ETC designation proceedings.”); Cellular One Comments at 41. But these commenters ignore at least two different ways that the Commission could modify existing ETC obligations to mitigate their harmful effects on universal service and broadband deployment.

First, the Commission could alter the scope and nature of ETC service obligations without preempting the states’ authority. As AT&T has explained, the Commission could simply reinterpret section 214(e)(1)(A) so that an ETC is required to serve a given geographic area *only* when it receives explicit high-cost support for that area. AT&T Comments at 76.<sup>87</sup> And, of course, the Commission has plenary authority to modify its own service rules in section 54.101(a)—and thereby free ETCs of the obligation to provide services that require circuit-switched, TDM technology.

Second, the Commission also could direct the states to redefine the “service areas” of every ETC so that they include only those locations where the ETC is receiving support. 47 U.S.C. § 214(e)(5). As AT&T has explained, Congress clearly intended for state commissions to establish “service areas” for non-rural carriers that were smaller than those carriers’ “study areas,” yet in many cases states failed to do so. AT&T Comments at 77. Moreover, the Commission already has concluded that excessively large service areas can contravene section 254(f) of the Act, which precludes states from taking actions that are “inconsistent with the Commission’s rules to preserve and advance universal service.” 47 U.S.C. § 254(f); *see* AT&T Comments at 78-79 (discussing orders). Thus, the Commission has authority to direct states to reduce the size of ETC service areas.

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<sup>87</sup> That provision states that ETCs “shall, throughout the service area for which the designation is received [ ] offer the services *that are supported by* Federal universal service support mechanisms under section 254(c) ...” 47 U.S.C. § 214(e)(1)(A) (emphasis added). The Commission should reinterpret this provision to mean that a carrier is required to offer service only in those areas for which the carrier is receiving support—*i.e.*, where the services “are supported.” AT&T Comments at 76.

### **III. ADOPTION OF AT&T'S PLAN FOR UNIVERSAL SERVICE REFORM WOULD ACCELERATE BROADBAND DEPLOYMENT AND ADOPTION.**

The vast majority of commenters agree that the existing universal service regime is fundamentally broken and does far too little to promote the deployment and adoption of broadband. These commenters, like AT&T, urge the Commission to adopt reforms to ensure that *all* Americans have access to next-generation communications services. Below, we explain how AT&T's Plan for reform would effectively and efficiently promote the Commission's broadband goals.

#### **A. The Commission's Universal Service Reforms Should Be Based on the Foundational Principles Discussed in AT&T's Opening Comments.**

In its opening comments, AT&T urged the Commission to base any universal service reforms on certain basic principles. *See* AT&T Comments at 83-87. Although some commenters assert otherwise, it is clear that those principles are fundamentally sound and provide a strong foundation for reform.

##### **1. The Commission Should Adopt a Procurement Model for Universal Service.**

The Commission should design the CAF program around a procurement model for universal service. *See* AT&T Comments at 4-5, 59, 64, 82-84. Under this approach, providers would incur broadband service obligations *only* to the extent they expressly agree to serve a particular area in exchange for a particular amount of universal service funding.<sup>88</sup> Providers'

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<sup>88</sup> Although their proposed approaches differ from AT&T's in important respects, both NASUCA and the New Jersey Rate Counsel advocate a procurement-focused approach to universal service that would produce a binding contract between the Commission and each broadband provider receiving CAF funding. *See* NASUCA Comments at 47, 84-85 ("The better approach is NASUCA's recommendation that the Commission should use established civilian agency procurement procedures set forth in the Federal Acquisition Regulations ("FAR") to contract for the buildout of broadband networks in the unserved areas and for the operating of such networks."); NJ Rate Counsel Comments at 2 (same).

service obligations would be clear from the outset and would be temporally and geographically defined. And the Commission would have no power to abrogate agreements with CAF recipients or unilaterally redefine the terms of those agreements.

Some parties oppose this procurement model. They argue that the Commission should instead have unfettered flexibility to impose broadband service obligations on CAF recipients and to change the nature, scope, and duration of those obligations as the circumstances warrant. CWA, for example, not only proposes that a CAF recipient assume COLR obligations for a *minimum of 10 years*, but also suggests that if the recipient “chooses not to re-bid for CAF support,” nonetheless it should continue bearing that COLR obligation until *some unspecified time in the future* when another carrier assumes it. CWA Comments at 14-15. Similarly, Google proposes that the Commission “adopt an evolving speed threshold ... [as] a condition of broadband funding.” Google Comments at 16; *see also* NASUCA Comments at 78 (“Recipients should be required to upgrade so as to increase speed over time if they are to continue to receive support.”).

But the uncertainty created by such evolving service obligations would deter providers from participating in the CAF program. And this reduction in the number of bidders competing for funding would drive up the bids of those providers that do participate and potentially reduce the quality of the services offered. Moreover, the service obligations themselves would result in higher bids, because an economically rational broadband provider would assume evolving service obligations only if given an appropriate risk premium to offset the potential burdens. Such higher bids would, in turn, increase both the size of the CAF and the burden on contributors to the fund. And, ultimately, this burden would undermine broadband adoption because the CAF eventually will be funded at least in part by broadband subscribers. In short, if the Commission

imposes ever-changing service obligations on CAF recipients, it will hurt the very consumers that such obligations are designed to help.

In any event, the Commission should reject calls to adopt the polar opposite of a procurement model for universal service. Commenters advocating this flawed approach urge the Commission to *compel* telecommunications providers to offer broadband service even if they do not receive any CAF funding. *See, e.g.*, CWA Comments at 5-6 (urging the Commission to require *legacy* funding recipients to provide broadband service); Greenlining Institute Comments at 3-4 (arguing that the Commission should add broadband to the list of supported services).<sup>89</sup> But as AT&T explained in its opening comments, an unfunded mandate to provide broadband service would contravene both sound policy and settled law. First, it would violate section 254, which requires the Commission to ensure that support is “sufficient” to fund the provision of supported services and, further, that those supported services are “affordable” to consumers. AT&T Comments at 121-24 (discussing 47 U.S.C. §§ 254(b)(5), (e), & (b)(1)). Such a mandate also would exceed the Commission’s jurisdiction under Title I of the Act, because the Commission lacks authority to impose common-carrier obligations on broadband providers. *Id.* at 124-25 (discussing 47 U.S.C. § 153(51)). Finally, compelling providers to offer broadband service without sufficient universal service support would constitute a physical taking, regulatory taking, and confiscatory taking in violation of the Fifth Amendment. *Id.* at 125-28.

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<sup>89</sup> These commenters include those who urge the Commission “to define broadband as a supported service” and thereby require “any carrier designated as an ETC ... to provide broadband service.” Cellular One Comments at 40. The CAF “would support only one carrier in a service area, and, therefore, all carriers designated as ETCs would be required to provide broadband service without receiving any universal service support.” *Id.*

## 2. The Commission Should Ensure That Consumers in High-Cost Areas Have Access to Both Fixed and Mobile Broadband Services.

As AT&T and other commenters have explained, it is essential that consumers in high-cost areas have access to *both* fixed and mobile broadband services.<sup>90</sup> To ensure this result, the Commission should create an Advanced Mobility Fund within the CAF to support deployment and maintenance of mobile broadband infrastructure. *See* AT&T Comments at 86-87, 108-09.

Many commenters argue that the Commission should fund only one broadband provider in any given area. *See, e.g.*, NCTA Comments at 8-9; XO Comments at 45; Free Press Comments at 2; Comcast Comments at 17; COMPTTEL Comments at 31; ITTA Comments at 30. The rationale advanced by these commenters—the need to restrain CAF costs—is laudable. Nonetheless, because their proposed funding limitation would limit many rural consumers to either fixed *or* mobile broadband service, it should be rejected on both policy and legal grounds.

Mobility provides important benefits that fixed connections cannot offer.<sup>91</sup> For example, mobile broadband service is an essential tool for rural health-care providers who make house calls in remote areas and for public-safety officers who must respond to emergencies wherever they arise. *See, e.g.*, ADTRAN Comments at 8 (“For some applications, such as remote monitoring of a patient’s condition in an ambulance, continuous broadband service can literally mean the difference between life and death.”). Mobile broadband also is required for many applications that are useful to consumers and businesses alike, including mobile commerce applications, broadband-enabled GPS devices, wireless health monitors, and inventory-tracking systems. In fact, citing such benefits, the Joint Board has determined that “mobility” is “a

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<sup>90</sup> *See, e.g.*, NECA Comments at 80-81, 83-85; Cellular One Comments at 3-5, 13-15; State Joint Board Members Comments at 27-28, 68-78 (advocating separate funding mechanisms for fixed and mobile services); American Cable Ass’n Comments at 5-6, 13-15.

<sup>91</sup> *See* Sprint Comments at 40; State Joint Board Members Comments at 25-27.

fundamental necessity for an overwhelming majority of consumers for public health, safety, and economic development.”<sup>92</sup> Finally, mobility plays an important role in connecting low-income and minority consumers to the Internet. As CTIA notes, “17 percent of those who earn less than \$30,000 per year [and] 20 percent of those who have not graduated from high school ... connect to the Internet solely through a mobile wireless connection.”<sup>93</sup>

Fixed broadband also serves essential purposes in high-cost areas. As many commenters have explained, mobile broadband services often cannot provide connections that are robust enough for the needs of multi-user anchor institutions such as libraries, hospitals, and government buildings. *See, e.g.*, American Library Ass’n Comments at 7; Alexicon Comments at 48 (“robust capacity of fixed networks will be vital for economic development, schools, libraries, and rural health care as well as other anchor institutions”). Indeed, the *National Broadband Plan* goal that “[e]very American community should have affordable access to at least 1 gigabit per second broadband service to anchor institutions” can currently be accomplished only with fixed services. *See National Broadband Plan* at 10.

Fixed broadband services are important to *consumers* in high-cost areas as well. A wide variety of unique services are frequently offered over the same infrastructure as fixed broadband, including interactive video services and “cloud”-based services. *See, e.g.*, XO Comments at 39. Consumers will be deprived of these IP-enabled services if they do not have access to fixed broadband. Further, because spectrum constraints compel some mobile broadband providers to

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<sup>92</sup> Recommended Decision, *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, 22 FCC Rcd 20477, 20492 ¶ 64 (2007); *see also* State Joint Board Members Comments at 25-27.

<sup>93</sup> CTIA Comments at 6 (citing Aaron Smith, Pew Internet and American Life Project, *Mobile Access 2010*, at 10 (July 7, 2010), <http://www.pewinternet.org/Reports/2010/Mobile-Access-2010.aspx>).

impose usage limits, fixed broadband services are important for consumers who wish to make frequent use of extremely bandwidth-hungry applications. *See* ADTRAN Comments at 19.

Finally, as several commenters note, urban consumers have access to both fixed and mobile broadband options, and “some parts of the country should [not] have to settle for fixed *or* mobile as both are important.” Alexicon Comments at 47 (emphasis added); *see also* NECA Comments at 80-81, 83-85; Indiana Utility Regulatory Commission Comments at 2-3 (cautioning against creation of a “rural Digital Divide”). Indeed, limiting universal service support to a single broadband provider, whether fixed or wireless, would contravene section 254(b)(3), which mandates that “[c]onsumers in all regions of the Nation, including ... those in rural, insular, and high cost areas, should have access to telecommunications and information services ... that are reasonably comparable to those services provided in urban areas.” 47 U.S.C. § 254(b)(3). *See also* NECA Comments at 80-81, 83 (arguing that supporting only one provider per market would violate the principle of reasonable comparability). For all of these reasons, the Commission should provide universal service funding to ensure that one fixed broadband provider *and* one mobile broadband provider will offer service in every high-cost area.

### **3. The Commission Should Not Adopt the CAF Program in Separate Phases.**

The *NPRM* proposes to implement the CAF program in two separate phases. *NPRM* ¶¶ 18-33. In the first phase, the Commission would adopt a set of immediate reforms and establish a short-term CAF mechanism. *Id.* ¶ 18. In the second, it would adopt final, “long-term” rules for the CAF. *Id.* The Commission should rethink this approach, because continued uncertainty about the final CAF rules will deter timely and efficient broadband deployment in high-cost areas. Instead, the Commission should adopt a comprehensive regulatory framework now and move quickly to implement it. *See* AT&T Comments at 84-85.

Uncertainty about the Commission’s broadband universal service plans *already* is deterring broadband deployment in high-cost areas. As one rural carrier noted in its comments, “[g]iven the uncertainty in regulation ... Farmers is reluctant to increase capital spending even though the need to prepare for higher Internet bandwidth capability is rapidly approaching.” Farmers Mutual Telephone Co. Comments at 2. Another explained: “Not knowing whether they will be able to recover their investment, let alone earn a return on their investment, service providers are already inhibited in making near-term investments until the full extent of the proposed changes are understood.” Alaska Communications Systems Comments at 8.

The Commission will exacerbate this uncertainty if it further delays its adoption of final rules for the CAF program. And such uncertainty will deter some providers from participating in the program until the second phase, when the permanent support framework is in place. Providers are unlikely to compete for broadband deployment funding in Phase 1 if they fear that the Commission will later fail to provide sufficient support for the maintenance of those facilities in Phase 2. *See* NASUCA Comments at 65-66; CenturyLink Comments at 31-32. Furthermore, providers that might otherwise take this risk could be precluded from participating in the Phase 1 program by their inability to secure the necessary capital. *See, e.g.*, CenturyLink Comments at 20-21 (“Regulatory uncertainty ... could signal to investors that additional broadband deployments—particularly in remote rural areas—are not worth the risk of investment.”); Alaska Communication Systems Comments at 10 (“Investors require sufficient and reasonably predictable revenue streams over the life of any investment. In the absence of such predictable, sufficient revenue, necessary private sector participation in broadband network expansion is unlikely.”). And the fewer providers that participate in the Phase 1 program, the higher the bids will be of those providers that do take part. Thus, it would be far more efficient for the

Commission to adopt final CAF rules now, rather than wait until some undetermined future date.<sup>94</sup>

**4. The Commission Should Permit CAF Recipients to Satisfy Their Service Obligations Via Satellite in Extremely-High-Cost Areas.**

As AT&T has explained, a very small percentage of households accounts for over half of the projected cost of deploying fixed broadband service to all Americans who currently lack it—on average, those costs amount to nearly \$54,000 per household. AT&T Comments at 102-03. It would be a tremendous waste of resources to incur these costs for deployment of either fixed or mobile terrestrial broadband service, when satellite service offers a viable alternative at a fraction of the cost. Accordingly, the Commission should permit CAF recipients to fulfill their service obligations in extremely-high-cost areas by partnering with satellite broadband providers. *Id.* at 86; *see also* US Cellular Comments at 55; Box Top Solutions Comments at 2.

Numerous commenters agree that the use of satellite broadband services is essential to containing the size of the CAF funding mechanism. The California Public Utilities Commission, for example, highlights the FCC’s finding that “broadband-over-satellite is a cost effective solution for low-density areas and could reduce the \$24 billion total investment gap by \$14 billion, if used to reach the 250,000 most-expensive-to-reach housing units.” California PUC Comments at 9-10. Other commenters argue that “[s]ome locations may be simply too remote, too far from others, to be reached via conventional terrestrial means at reasonable cost” and thus satellite broadband is a better option there. Coalition for Rational Universal Service and

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<sup>94</sup> If the Commission were to collapse the two CAF phases into one, it could also simplify the funding of middle-mile facilities. Rather than establishing a “pilot program” or a distinct funding source to support these facilities, as some commenters propose—*see* Level 3 Comments at 3, 21-23; NECA Comments at 29-31—the Commission could distribute whatever support is necessary for deployment and maintenance of middle-mile facilities as part of a provider’s initial CAF distribution.

Intercarrier Reform Comments at 6-7. Similarly, Verizon agrees that “satellite broadband service can be very effective at reaching remote locations too expensive to serve with either fixed wireline or traditional wireless.” Verizon Comments at 60.

Other commenters disagree and contend that satellite broadband cannot meet the needs of unserved Americans. NASUCA, for example, suggests that the Commission “reject the use of satellite services to provide supported voice services” because of “signal propagation delays that reduce call quality.” NASUCA Comments at 70. But proponents of satellite broadband service have refuted such contentions. They explain, for example, that satellite broadband networks can support many “real-time communications—whether by text, voice, or video.” Satellite Broadband Providers Comments at 11. Moreover, they note that “satellite broadband excels at applications requiring speed” and, because the service has low jitter (fluctuations in latency), “applications such as distance learning, telecommuting activities, and telehealth work extremely well over satellite.” *Id.*; *see also* California PUC Comments at 8-9 (“Many sparsely populated areas already have [satellite] broadband availability at a speed that can provide streaming video.”). Satellite providers also note that “it would be possible to deploy enough satellite capacity to provide at least 4/1 Mbps broadband service to every unserved household in the United States at an overall cost well below the \$24 billion estimated required funding for the CAF.” Satellite Broadband Providers Comments at 6. In fact, two new satellites that will be launched in the next eighteen months will be able to provide 4/1 Mbps broadband service to approximately one million households. *Id.* at 7; *see also* California PUC Comments at 8-9 (discussing increased capacity due to recent and planned satellite launches).

In short, satellite service is sufficient to meet the needs of most consumers in extremely-high-cost areas and thus should be a permissible means of meeting broadband service obligations there.

**5. The Commission Should Ensure That the CAF Is Appropriately Sized to Achieve All of the Commission’s Broadband Goals.**

The Commission should carefully size the CAF to ensure that broadband not only is *deployed* to all Americans, but also is *adopted* by them. AT&T Comments at 85-86. Indeed, section 254(b) *requires* the Commission to ensure that the CAF is both large enough to effect universal access to broadband services, and small enough that service remains affordable. *Id.* at 85-86, 122-24; *see also* State Joint Board Members Comments at 7-8. The Commission should reject any reform proposal that would upset this careful balance.

Several commenters have called for significant reductions in the amount of universal service funding. *See, e.g.*, NJ BPU Comments at 2; Florida PSC Comments at 9-10. But as AT&T and others have explained,<sup>95</sup> accepting such proposals would contravene sections 254(b)(5) and 254(e) of the Act, which provide that support must be “sufficient” to ensure universal service.<sup>96</sup> Indeed, two courts of appeals have held that “sufficiency of universal service support [is] a direct statutory command.”<sup>97</sup>

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<sup>95</sup> *See* AT&T Comments at 85-86; NECA Comments at 89; State Joint Board Members Comments at 7.

<sup>96</sup> 47 U.S.C. § 254(b)(5) (requiring “sufficient Federal and State mechanisms to preserve and advance universal service”); *id.* § 254(e) (providing that “[a]ny [universal service] support should be ... sufficient to achieve the purposes of this section”).

<sup>97</sup> *TOPUC I*, 183 F.3d at 412 (holding that “the plain language of § 254(e) makes sufficiency of universal service support a direct statutory command”); *see also Qwest I*, 258 F.3d at 1197, 1200 (explaining that “the FCC must base its policies on the [enumerated] principles” in section 254(b) and holding that the principles’ “language indicates a mandatory duty on the FCC”).

Similarly misguided are other commenters who urge the Commission to distribute significantly more CAF funding than proposed in the *NPRM*.<sup>98</sup> An expansion of the fund would require increased contributions from users of telecommunications and, ultimately, broadband services. Thus, an excessively large CAF could contravene section 254(b)(1), which provides that “[q]uality services should be available at just, reasonable, and affordable rates.”<sup>99</sup> As the State Members of the Joint Board note, “several courts have recognized that telecommunications services can become unaffordable through excessive universal service surcharges.”<sup>100</sup>

Instead of adopting proposals on either of these two extremes, the Commission should carefully balance its dual goals of promoting both *access to* and *adoption of* broadband services. And the Commission can best achieve this equilibrium by ensuring that the CAF is only as large as necessary to effect ubiquitous broadband service.<sup>101</sup>

## **6. The Commission Has Ample Authority to Support Broadband Service with Universal Service Funding.**

Some commenters contend that the Commission does not have authority to support broadband services with universal service funding. *See, e.g.*, NASUCA Comments at 11, 25-35;

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<sup>98</sup> *See, e.g.*, NECA Comments at 89-90 (arguing that “high-cost support at current levels will not provide sufficient funding to accomplish the nation’s broadband goals”); CWA Comments at 12 (noting that it might be appropriate to size the CAF as large as \$12 billion).

<sup>99</sup> 47 U.S.C. § 254(b)(1); *see* AT&T Comments at 123; Florida PSC Comments at 9-10; Mercatus Center Comments at 8-9.

<sup>100</sup> State Joint Board Members Comments at 7. *See, e.g.*, *Qwest I*, 258 F.3d at 1200; *Rural Cellular Ass’n v. FCC*, 588 F.3d 1095, 1103 (D.C. Cir. 2009); *Alenco Commc’ns, Inc. v. FCC*, 201 F.3d 608, 620 (5th Cir. 2000).

<sup>101</sup> *See* State Joint Board Members Comments at 7-8 (“[T]he level of broadband and legacy support should be the minimum amount that can achieve ubiquitous availability and make both rates and services in rural areas affordable and reasonably comparable to urban areas”).

NECA Comments at 80-82; NARUC Comments at 3-8.<sup>102</sup> However, as AT&T has explained in several prior submissions, the Commission has at least three sources of authority to fund the provision of broadband service in high-cost areas.<sup>103</sup>

First, section 254 of the Communications Act—especially when viewed in light of section 1 of the Act and section 706 of the Telecommunications Act of 1996—gives the Commission direct authority to support broadband with universal service funding. AT&T Comments at 111-17 (discussing 47 U.S.C. §§ 254, 151, 1302). Second, section 706(b) independently empowers the Commission to adopt a broadband universal service funding mechanism. *Id.* at 117. Finally, the Commission has ancillary authority to adopt such a mechanism as well. *Id.* at 118-20. No commenter has persuasively refuted any of these bases of authority.

**B. The Commission Should Adopt AT&T’s Plan for the Design and Administration of the CAF.**

AT&T has proposed a Plan for the design and administration of the CAF that conforms to all of the principles discussed above. *See* AT&T Comments at 88-111. Although minor

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<sup>102</sup> Numerous other commenters disagree and argue that the Commission does have such authority. *See, e.g.*, American Cable Ass’n Comments at 25-26; Comcast Comments at 20-21; Google Comments at 14-15; Telecommunications Industry Ass’n Comments at 6-7.

<sup>103</sup> *See AT&T Title II Comments* at 11, 22-27; *AT&T Title II Reply Comments* at 15-18; Reply Comments of AT&T Inc., *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, at 4-7 (filed June 2, 2008); Letter from Gary L. Phillips, AT&T, to Marlene H. Dortch, FCC, *A National Broadband Plan for Our Future; International Comparison and Consumer Survey Requirements in the Broadband Data Improvement Act; Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion; High-Cost Universal Service Support; Lifeline and Link-Up*, GN Docket Nos. 09-51, 09-47, 09-137, WC Docket Nos. 05-337, 03-109 (filed Jan. 29, 2010); Letter from Gary L. Phillips, AT&T, to Marlene H. Dortch, FCC, *A National Broadband Plan for Our Future; Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion; High-Cost Universal Service Support; Lifeline and Link-Up*, GN Docket Nos. 09-51, 09-137, WC Docket Nos. 05-337, 03-109 (filed Apr. 12, 2010).

refinements might be warranted, the Plan is fundamentally sound, and the Commission should reject proposals that diverge markedly from it.

**1. The Commission Should Reject Calls for an Excessively High Speed Threshold for the “Broadband” Services Supported by the CAF.**

In determining which types of “broadband” services should be supported by the CAF, the Commission should not fixate on throughput and ignore other important broadband characteristics such as latency, jitter, packet loss, security, and reliability. Instead, the Commission should adopt an application-focused definition of broadband that encompasses all of the service characteristics necessary to support the applications that consumers *actually use* today and are likely to use in the near future. And under this analysis, it is clear that the 4/1 Mbps speed threshold proposed in the *NPRM* is overly ambitious. See AT&T Comments at 91-96.

Many commenters have proposed that the Commission adopt a broadband speed threshold of 4/1 Mbps for the CAF program. See, e.g., Google Comments at 16; CWA Comments at 16-17; NCTA Comments at 8-9. And a handful of commenters have urged the Commission to set the minimum speed threshold even higher. The American Cable Association, for example, proposes that CAF recipients be required to provide broadband services capable of delivering 16 Mbps in the downstream direction and 4 Mbps in the upstream direction. American Cable Ass’n Comments at 6. Similarly, NASUCA contends that the Commission will need to increase the speed threshold if it hopes to achieve the *National Broadband Plan* goal “to have 100 Mbps service available to 100 million households by 2020.” NASUCA Comments at 76-77.

But as AT&T has explained, there is a fundamental trade-off between the speed of broadband services and the number of people to whom those services can be deployed through

the CAF. AT&T Comments at 88, 92-93; *see also* ADTRAN Comments at 20. Unless the Commission intends to grow the CAF to gargantuan size, it must acknowledge that the fund simply cannot support the deployment of lightning-fast broadband service to all Americans. Instead, as several commenters have noted, the Commission can best balance its broadband deployment and adoption goals by reducing the upstream threshold of supported services to 768 kbps (and, potentially, the downstream threshold to 3 Mbps).<sup>104</sup> By making these modifications to its broadband definition, the Commission could ensure that service is deployed promptly to all Americans, while at the same time ensure that the CAF does not grow so large that it threatens broadband adoption.

Such broadband service unquestionably would deliver the performance that consumers need to run the applications they actually use today and are likely to use in the near future. As the Commission itself has recognized, 63 percent of reported connections are capable of upstream speeds of *less than 768 kbps*. Windstream Comments at 18; *see also* AT&T Comments at 93 (noting that nearly 70% of reported connections are slower than the Commission’s proposed broadband definition).<sup>105</sup> Yet most consumers are completely satisfied with their connections and have no desire to subscribe to more costly, higher-speed services. As CenturyLink explains, “[m]ost broadband networks are not configured today to deliver 1 Mbps

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<sup>104</sup> AT&T Comments at 93-94; Windstream Comments at 18 (“[C]urrent technologies can deliver 768 Kbps upload speed with significantly lower deployment costs than 1 Mbps would require.”); Florida PSC Comments at 5-6 (same); ADTRAN Comments at 16 (“768 kbps rather than 1 Mbps in the uplink direction will allow significantly more efficient utilization of funding and support the provision of broadband service to more consumers at lower cost, without significantly affecting the quality of the service received”).

<sup>105</sup> *See also* Federal Communications Commission, Wireline Competition Bureau, Industry Analysis & Technology Division, *Local Telephone Competition: Status as of June 30, 2010*, at 2 (Fig. 1) (Mar. 2011), [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2011/db0321/DOC-305297A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0321/DOC-305297A1.pdf) (analyzing the characteristics of the connections that consumers currently subscribe to).

upstream for residential services because consumers largely have not demanded such capabilities to-date.” CenturyLink Comments at 21.

This consumer preference makes abundant sense, as a connection offering throughput of 3 Mbps in the downstream direction and 768 kbps in the upstream direction is “more than sufficient to provide ‘basic’ broadband service and ample service for many multimedia applications.” Florida PSC Comments at 6. For example, “[g]aming applications generate relatively little traffic, with average rates on the order of 100 kbps or less.” ADTRAN Comments at 21, 24. For web-browsing, low latency is far more important than high throughput, because “most of the time involved in loading an average web page at broadband speeds is spent waiting for responses to messages, rather than actually sending or receiving traffic.” *Id.* Streaming media downloads typically occur at 280 Kbps to 3.8 Mbps (with the vast majority on the lower end of this scale), including “high quality downloads from Netflix.com and other sources intended to be viewed on large screen video displays.” *Id.* at 23.

Even bandwidth-hungry applications run well on the connections that most consumers subscribe to today. As George Mason University’s Mercatus Center explains, a 4/1 Mbps connection is *not* essential to education, public health, or public safety. Mercatus Center Comments at 4-6. For example, online education courses are typically delivered at far slower speeds, and, indeed, “most of the successful online education efforts highlighted in the Broadband Plan ... work with any existing cable or DSL speeds.” *Id.* at 4. Similarly, video conferencing applications—which are some of the most demanding applications in terms of network resources—require throughput of only 256 kbps for standard-definition video calls and 2 Mbps (and often far less) for high-definition video calls. ADTRAN Comments at 22. Granted, some anchor institutions might need more robust connections to support the cutting-edge

applications that they use, but such services should be separately accounted for in the Commission's universal service programs. It would be wasteful to allow the purported needs of a tiny minority of specialized users to dictate the build-out standard for all users.<sup>106</sup>

Finally, adopting a lower speed threshold also would further competitive neutrality and provide important consumer benefits. An excessively ambitious broadband goal could preclude providers using certain technologies from participating in the CAF program. As CenturyLink points out, “[e]ven those DSL-based technologies that can provide an actual download speed of 4 Mbps cannot necessarily provide a stable upload speed of 1 Mbps,” and, therefore, a 1 Mbps upload threshold could “inadvertently eliminate use of a DSL technology that could help accomplish broadband deployment in rural areas at a reasonable cost.” CenturyLink Comments at 22. Similarly, Sprint notes that “[c]onditioning receipt of USF support on meeting speed or bandwidth requirements associated with landline technology will limit, if not eliminate, the ability of wireless ... providers to compete for such support.” Sprint Comments at 39-41; *see also* CTIA Comments at 34. Thus, to promote diversity among funding recipients, the Commission should establish a broadband speed threshold that not only is achievable using a variety of broadband technologies, but also is sufficient to run the applications most Americans use today and are likely to use in the near future.

## **2. The Commission Should Adopt AT&T's Proposals Concerning Identification of CAF-Eligible Areas.**

Several parties propose alternative methods of determining which geographic areas should be eligible for CAF funding. The Commission should reject these alternatives and instead define CAF-eligible areas in the manner outlined in AT&T's Plan.

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<sup>106</sup> *See, e.g.*, Dept. of Health and Human Services Comments at 1-2, 4 (explaining that “patients in their homes require less demanding [broadband] capabilities than clinics with several clinicians”).

*First*, the Commission should identify areas eligible for CAF funding on a census-block basis. *See* AT&T Comments at 89. Several commenters disagree and contend that CAF determinations should be made on the basis of larger geographic areas.<sup>107</sup> Some of these commenters argue that the Commission should direct funding on a wire-center basis. *See, e.g.*, Hawaiian Telecom Comments at 3, 5; FairPoint Comments at 21. Others argue that CAF-eligible areas should be even larger, with support directed on a service-area or study-area basis.<sup>108</sup>

But directing support to areas larger than census blocks would make it more difficult for the Commission to target funding to those specific areas that need it most. As one commenter notes, the existing regime, which allocates support by study area, is “based on an average calculation rather than a precise determination of need,” while the “use of the census block ensures support is most precisely targeted.” American Cable Ass’n Comments at iii, 20-21; *see also* Global Crossing Comments at 18 (urging the Commission to “adopt a highly disaggregated distribution model that targets the relatively few areas that truly require support, relying on competitively neutral funding areas (such as census blocks)”).<sup>109</sup> Moreover, if the geographic unit for CAF determinations is too large, providers will be forced to continue relying on implicit subsidies, with all the marketplace distortions and disincentives to invest that such reliance produces.<sup>110</sup> Indeed, Public Knowledge concedes this, but appears to view this as a positive

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<sup>107</sup> *See, e.g.*, Public Knowledge Comments at 3; State Joint Board Members Comments at iv, 85-86; Ohio PUC Comments at 32-33.

<sup>108</sup> *See, e.g.*, NECA Comments at 85-87 (study areas); Cellular One Comments at 41 (study areas); Alexicon Comments at 41 (service areas); U.S. Cellular Comments at 27 (service areas).

<sup>109</sup> *See also* NCTA Comments at 10 (arguing that “it is important for the Commission to analyze distribution of high-cost support on a more granular basis”).

<sup>110</sup> *See, e.g.*, State Joint Board Members Comments at 31-33 (discussing need to narrowly target support due to erosion of implicit subsidies); ITTA Comments at 32-33 (urging the

outcome, noting that larger service areas will “ensure that provision of service to high-cost areas can be cross-subsidized by serving low-cost areas as well.” Public Knowledge Comments at 3. But as AT&T explained in detail in its opening comments, such implicit subsidies are eroding rapidly and are an unsustainable source of support even in the short term. AT&T Comments at 9-16; *see also* State Joint Board Members Comments at 31-33.

*Second*, any area deemed “high cost” by the Commission’s model should be eligible for CAF funding *unless a non-ETC already provides broadband service there*. AT&T Comments at 89, 96-98. Some commenters would further limit the areas that are CAF-eligible by denying support to any area where *any* “unsubsidized” provider (*i.e.*, one that does not receive universal service funding) already is offering broadband service. *See, e.g.*, CTIA Comments at 26-27 (“Where unsupported broadband service is available, high-cost support is not needed for customers and thus serves only to support providers.”); CenturyLink Comments at 6 (“[S]upport should not be provided where an unsubsidized provider is offering high quality broadband and voice service.”).

AT&T agrees with these commenters (and with the Commission) that CAF support should be directed to *only* those census blocks “where it is genuinely needed”<sup>111</sup>—namely, where there would be no business case to provide broadband service in the absence of a subsidy.<sup>112</sup> *See* AT&T Comments at 96-97 (arguing that the Commission should designate as CAF-eligible “those areas of the country where Americans will not have access to ‘broadband’ service absent

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Commission to design the CAF mechanism to ensure that providers need not rely on implicit subsidies).

<sup>111</sup> Sprint Comments at 30.

<sup>112</sup> *See NPRM* ¶ 30 (proposing that the CAF “provide ongoing support to maintain and advance broadband across the country in areas that are uneconomic to serve absent such support”); Sprint Comments at 34 (“USF support should be directed to areas where providers would not deploy and maintain network facilities absent a USF subsidy.”).

government support”).<sup>113</sup> But even under this standard, it will be necessary to provide support to some high-cost areas where an ETC (in most cases, an incumbent LEC) provides fixed broadband service but does not currently receive universal service funding.<sup>114</sup> These providers traditionally have borne carrier-of-last-resort obligations for voice service and thus have been compelled to deploy facilities—which can be used to provide broadband service—in high-cost areas where the provision of service is uneconomic. And often, they have been forced to do so without any explicit universal service support. But this does not mean that they have been entirely “unsubsidized,” as the analysis advocated by the above commenters presumes. Instead, these ETCs have traditionally relied on implicit subsidies embedded in retail rates and intercarrier compensation to support their provision of both voice and broadband service. However, as those implicit subsidies continue to erode due to competition and reductions in intercarrier charges, it will no longer be economic for many ETCs to continue maintaining their facilities in the high-cost areas identified by the Commission’s cost model. Thus, CAF funding is necessary in these high-cost areas to ensure that broadband remains available. *See, e.g.*, PUC of Ohio Comments at 43 (“Ohio Commission does not believe that the existence of unsubsidized broadband service today serves as any reliable indicator that future funding will not be necessary.”). In other words, funding broadband service in high-cost areas where an ETC does not receive explicit legacy support is fully consistent with the notion that CAF support should be

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<sup>113</sup> Indeed, it is for this reason that AT&T opposes Windstream’s proposal that CAF funding be directed to areas that are *not* high-cost, but are unserved. *See* Windstream Comments at 12-15. Such areas are far more likely than high-cost areas to become served without any government support.

<sup>114</sup> As discussed, any area where a non-ETC provides fixed broadband service should *not* be eligible for CAF funding, regardless of the funding status of the ETC providing broadband service there.

distributed to only those areas where there would be no business case for broadband absent a subsidy.

**3. The Commission Should Grant Existing Broadband Providers a Right of First Refusal.**

Before initiating a competitive funding-allocation process, the Commission should give existing ETCs that already provide broadband service in a particular wire center an opportunity to be designated as the CAF recipient there at a level of support calculated by the Commission's cost model. *See* AT&T Comments at 98-99.

As AT&T has explained, such a "right of first refusal" is efficient because the existing provider generally can leverage its facilities and other resources to deploy broadband at a lower cost than a new provider. *Id.* at 99. Other commenters cite this same rationale, including CWA, which notes that a right of first refusal "would make most efficient use of limited capital by allowing the existing carrier to leverage its current network plant and equipment, technical and market knowledge, skilled workforce, and customer relations to expand broadband to areas already served by its voice network." CWA Comments at 12; *see also* CenturyLink Comments at iii (a right of first refusal "would enable the Commission to capitalize on the significant investments that have been made or are planned in wireline networks in rural areas, thereby promoting the efficient use of limited USF support").<sup>115</sup> Additionally, as several parties have noted, this approach could "protect consumers from stranded investment and market exit by a new entrant" by "obviat[ing] the very real danger of competitive bidding leading to stranded ratepayer-supported or publicly-subsidized network investment."<sup>116</sup>

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<sup>115</sup> *See also* CWA Comments at iii, 5; CenturyLink Comments at 6, 10, 28-29; ITTA Comments at 25.

<sup>116</sup> CWA Comments at 5, 12. *See also* CenturyLink Comments at 39; ITTA Comments at 23-25; CWA Comments at 12 (a right of first refusal "would protect consumers by ensuring that

Some commenters oppose AT&T's right-of-first-refusal approach, but they do so for very different reasons. On the one hand, some claim that such a mechanism is too favorable to existing ETCs. *See e.g.*, Sprint Comments at 41; CTIA Comments at 24-26. These commenters argue, for example, that the existing provider will not always be the most efficient broadband provider in a given area.<sup>117</sup> On the other hand, some commenters contend that the specific approach advocated by AT&T is *not favorable enough* to existing providers. NECA, for example, argues that if the Commission uses a cost model to determine the amount of support allocated to providers exercising a right of first refusal, that support is likely to be insufficient to support deployment and maintenance of broadband service. NECA Comments at 79-80. Other commenters argue that the existing *voice* carrier of last resort should be provided a right of first refusal regardless of whether it currently provides *any* broadband service in the area in question. *See, e.g.*, ITTA Comments at 25. The approach proposed by AT&T might not be a perfect solution, but it is a reasonable compromise among the competing positions of these various commenters.

#### **4. It Would Be Inappropriate to Impose Burdensome and Potentially Conflicting Regulatory Obligations on CAF Recipients.**

Several commenters have advocated allowing state public utility commissions to impose service-quality and other ETC obligations on CAF recipients.<sup>118</sup> Others have proposed that the

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the current voice carrier-of-last resort continues to serve customers in low-density areas, thereby minimizing the danger that a new entrant, having won a competitively bid auction, might default on its obligations at the same time that the current incumbent, having lost its subsidy, either exited the area or reduced network investment, leaving customers without quality, affordable voice and broadband service”).

<sup>117</sup> *See, e.g.*, Cellular One Comments at vii, 6 (“[E]nabling rural incumbent LECs to avoid reverse auctions by exercising a right of first refusal option, would result in subsidizing inefficient operations.”); COMPTTEL Comments at 31; CTIA Comments at 24-25.

<sup>118</sup> *See, e.g.*, California PUC Comments at 10-11; RC of Alaska Comments at 20.

Commission itself impose burdensome “public interest” conditions on CAF recipients.<sup>119</sup>

Adoption of either approach would significantly undermine the Commission’s broadband goals.

As AT&T explained in its comments, state service obligations already conflict in numerous ways even with respect to legacy services. AT&T Comments at 62-65. Requiring providers to comply with multiple conflicting sets of obligations for broadband services would impose significant costs on providers but yield little actual benefit for consumers.

Further, allowing state-specific service obligations (whether conflicting or merely burdensome) also would deter participation in the CAF program. And because it would decrease competition among bidders while simultaneously increasing the regulatory burdens imposed on CAF recipients, this approach would result in larger support requests from those few providers that do participate in the program. As discussed above, this would increase the size of the universal service fund, increase the burden on the consumers who contribute to the fund, and ultimately undermine broadband adoption. *See* Section III.A.1, *supra*.

The same outcome would result if the Commission itself were to impose burdensome “public-interest” conditions on CAF recipients. Such conditions would deter participation in the CAF program, increase the bids of participating providers, and give rise to all of the negative consequences discussed above. And as AT&T explained in its opening comments, those consequences would not be counterbalanced by any meaningful public-interest benefit. *See* AT&T Comments at 102-07.

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<sup>119</sup> *See, e.g.*, Google Comments at 15-18; NASUCA Comments at 36-38, 75-81; New America Foundation Comments at 12.

**5. The Commission Should Not Delay Reductions in Legacy Universal Service Funding or Create Carve-Outs for Certain Carriers or Types of Support.**

AT&T has proposed that all legacy high-cost support be transitioned to the CAF in a five-year phase down. Under AT&T's Plan, the transition would be identical for *all* legacy high-cost support, regardless of the mechanism and regardless of the type of carrier receiving the support. AT&T Comments at 109. In addition, reductions in legacy support would be implemented at the holding company level. *Id.* Several commenters have offered alternatives to this phase-down, but none is superior to AT&T's proposal.

Many commenters call for slower reductions in support for legacy telecommunications services.<sup>120</sup> But other commenters representing a diverse cross-section of the industry disagree,<sup>121</sup> and for good reason. Because the CAF will be funded by the phase-down of legacy high-cost support, a delay in transitioning legacy support will also delay broadband deployment.<sup>122</sup>

Perhaps in response to this concern, some commenters argue that, instead of transferring all legacy funding to the CAF, the Commission should provide ongoing universal service support for *both* legacy and broadband services. *See, e.g.,* NASUCA Comments at 72; NECA Comments at v, 73-74; State Joint Board Members Comments at 12, 28-67 (proposing new

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<sup>120</sup> *See, e.g.,* Windstream Comments at 44-46, 50-56; Alaska Communications Systems Comments at 14 (suggesting that "existing levels of support for legacy networks should continue until 95% of all Alaskan communities are connected to terrestrial or satellite backhaul facilities with bandwidth prices comparable to the contiguous 48 states").

<sup>121</sup> *See, e.g.,* Google Comments at 12 (arguing that the transition of all legacy support to the CAF should be complete "by the end of 2015"); Sprint Comments at 30 ("[T]he Commission should phase out existing high-cost support to all eligible telecommunications carriers (ETCs) expeditiously."); XO Comments at 6-7, 37-42.

<sup>122</sup> *See* XO Comments at 40 (arguing that "funds should be redirected as quickly as possible to subsidize the deployment of broadband over IP-based networks, rather than the entrenchment of circuit-switched voice systems").

“POLR” fund to support voice service). But these proposals would require a dramatic increase in the size of the universal service fund. And this, in turn, would place an undue burden on contributors<sup>123</sup> and potentially undermine broadband adoption.

Moreover, continued support for legacy telecommunications services could deter recipients from deploying broadband and IP-enabled services. As XO explains, “continued USF support for voice-only, circuit-switched networks merely creates, in many cases, an incentive for recipient network providers to delay the migration to all-IP networks, with their attendant benefits.” XO Comments at 42. Similarly, Google argues that legacy support gives carriers “strong motivations to continue the inefficient use and preservation of outdated infrastructure.” Google Comments at 5. And Public Knowledge contends that “the nature of most universal service funding schemes is that they create a disincentive to innovate or invest beyond the minimum standards needed to qualify for funding.” Public Knowledge Comments at 8.

Finally, some commenters apparently would not oppose a prompt phase-down of legacy support for *most carriers* or *most support types*, but they argue that certain carriers and certain funding sources should enjoy special carve-outs or different phase-down schedules. *See, e.g.*, American Cable Ass’n Comments at 7-8, 34-36 (arguing that “any transition should be more gradual” for “smaller local telephone companies”); Cellular One Comments at 22-24 (arguing that “any reduction in competitive ETC support ... should include an exception for competitive ETCs serving Tribal lands, such that these competitive ETCs would not be subject to any phase-down of their existing support”); NECA Comments at 34, 38-47, 61 (advocating an “RLEC Plan” that provides special protections for rural LECs); Nebraska Rural Independent Companies

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<sup>123</sup> As Sprint explains, “phas[ing] out existing high cost support mechanisms expeditiously” is necessary to “eliminate the burden these mechanisms place on consumers.” Sprint Comments at 32.

Comments at 9-10 (advocating a “waiver” process to “enable companies that believe they made reasonable investment decisions under the existing USF rules to be permitted to obtain continuing support necessary to enable it to discharge debt incurred for network investments”).

Not only could adoption of such proposals delay broadband deployment for the reasons highlighted above, it also would dramatically complicate the phase-down procedure for legacy support. One of the key benefits of AT&T’s proposal is its simplicity and ease of administration. Legacy support, regardless of its source (high-cost support, IAS, ICLS, etc.), and regardless of the carrier receiving it (BOC, RLEC, mobile provider, etc.), would be reduced in five equal steps at the holding-company level. *See* AT&T Comments at 109-11. Special carve-outs or phase-downs for different types of support or carriers would eliminate this significant virtue of AT&T’s Plan.

## CONCLUSION

The Commission should facilitate the transition to next-generation communications networks by adopting the intercarrier compensation and universal service policies outlined above.

Respectfully submitted,

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