

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Federal-State Joint Board on	)	
Universal Service	)	WC Docket No. 05-337
	)	
High-Cost Universal Service Support	)	CC Docket No. 96-45

**COMMENTS OF VERIZON AND VERIZON WIRELESS**

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Modernizing Universal Service: Verizon’s Plan for Comprehensive Reform

Appendix 1

Appendix 2

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**I. INTRODUCTION AND SUMMARY.**

The Joint Board’s recommendation to cap high cost support to competitive eligible telecommunications carriers (“ETCs”) on an interim basis is a critical first step toward meaningful, long-term reform. But as the Joint Board has made clear, it is only a first step. Further action is necessary to stabilize the fund permanently and to rationalize high cost universal service support. Verizon commends the Joint Board and the Commission for their leadership on these issues, both by proposing an interim, emergency cap on competitive ETC support and by signaling the intent to move forward with comprehensive reform.

In February, Verizon and Verizon Wireless (collectively “Verizon”) filed a proposal for phasing in the use of competitive bidding or “reverse auctions.”<sup>2</sup> For convenience, the details of Verizon’s proposal are spelled out in *Modernizing Universal Service: Verizon’s Plan for Comprehensive Reform* (“Reform Plan”), which is attached hereto. Verizon’s Reform Plan

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<sup>1</sup> In addition to Verizon Wireless, the Verizon companies participating in this filing are the regulated, wholly owned subsidiaries of Verizon Communications Inc.

<sup>2</sup> See Letter from Kathleen Grillo, Verizon, to Commissioner Tate and Commissioner Baum, Federal-State Joint Board on Universal Service, WC Docket No. 05-337, CC Docket No. 96-45 (February 9, 2007).

would transform the fund into a more efficient, market-oriented system, in a series of steps. It would implement auctions gradually, where they can provide the greatest benefits – first in areas with multiple wireless ETCs and then in areas with multiple wireline ETCs. The Joint Board and the Commission would then have the flexibility to assess the results of these auctions in deciding whether to extend their use more widely. Verizon’s Reform Plan would meet the needs of rural consumers for high-quality services – both wireline and wireless – and would help stabilize and modernize the fund. Most importantly, it will ensure that consumers are treated fairly when they pick up the tab for universal service support.

As the Joint Board observed, rapid increases in high-cost support have put the universal service fund in “jeopardy.”<sup>3</sup> The fund is intended to benefit consumers by ensuring that telecommunications services are universally available at affordable rates. But the opposite has occurred -- the growth of the high cost fund is threatening the affordability of telecommunications services and is contributing to mounting fees on consumer bills. Accordingly, in order to limit the cost to consumers and protect the sustainability of the fund, it is critical both to ensure that subsidies are limited to geographic areas where consumers would be denied service without universal support and to ensure that subsidy totals in areas that do need support are limited to no more than is required to accomplish that goal. Using auctions to distribute high cost support to those areas that need support will counteract the trends that now threaten the affordability and sustainability of the fund, allow market forces to set subsidy levels, and enhance the efficiency of service providers.

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<sup>3</sup> *High-Cost Universal Service Support; Federal-State Joint Board on Universal Service*, WC Docket No. 05-337, CC Docket No. 96-45, Recommended Decision, FCC 07J-1, ¶ 4 (rel. May 1, 2007) (“*Recommended Decision*”).

In Part II of its Comments, Verizon provides an overview of its Reform Plan, which addresses each aspect of the auction, including: (1) the process for wireless and wireline auctions; (2) the geographic areas for bidding; (3) the request for quote and resulting contract with the winning bidder; (4) the auction reserves; (5) the mechanics of the bidding process; and (6) applying the results of the auction. Verizon's Reform Plan also includes a way to retarget existing high cost support to ensure that subsidies are appropriately targeted to areas that would not be adequately served without support and outlines a means for funding any such areas that do not receive support today. Verizon's Reform Plan is consistent with the requirements of Section 254 and fully addresses the concerns raised by the Tenth Circuit in *Qwest II*,<sup>4</sup> as Verizon explains in Appendix 1.

Part III responds to the Joint Board's request for comment on network cost modeling and mapping using geographic information systems ("GIS") technology. Even with the advances that have been made in cost modeling, Verizon explains that these approaches are not the right solutions. Most importantly, as explained below, cost models cannot answer the question of how much universal service should cost. Auctions are a market-based tool that will allow the Commission to answer this question without the need for a model.

In Part IV, Verizon agrees that the Joint Board should recommend eliminating the identical support rule, which allows ETCs to receive the same per-line support as the incumbent regardless of the ETC's own costs or efficiencies. Although ostensibly intended to make high cost support competitively neutral, Section 254 does not require it, nor is the identical support rule necessary to ensure competitive neutrality. In reality, its practical effect has been to increase the high cost fund dramatically.

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<sup>4</sup> *Qwest Communications International, Inc. v. FCC*, 398 F.3d 1222 (10<sup>th</sup> Cir. 2005) ("*Qwest II*").

Finally, Part V explains why initiatives to encourage further broadband deployment should be separate from universal service reform and why the Joint Board should not recommend adding broadband to the list of supported services. Broadband access is expanding rapidly as a result of the Commission's deregulatory policies, as Verizon explains in detail in Appendix 2. Nonetheless, the continued deployment and increased penetration of broadband is an important national goal, and Verizon supports policies that will ensure that consumers in unserved or underserved areas have access to this powerful technology. However, there are other approaches that will better ensure that consumers have this access, including partnerships at the national, state, and local levels that provide financial incentives and grant funding to help connect Americans. The universal service program is under tremendous strain and, as nearly all commenters agree, needs comprehensive reform. It makes no sense to add broadband to a program that is in "dire jeopardy" of becoming unsustainable.

## **II. VERIZON'S REFORM PLAN WILL STABILIZE AND MODERNIZE HIGH COST FUNDING.**

Verizon's Reform Plan, the details of which are attached hereto, will allow the Joint Board and the Commission to answer for the first time the fundamental question of how much universal service should cost (*i.e.*, what minimum amount of support is "sufficient" "to preserve and advance universal service" consistent with Section 254). Left to themselves, without subsidy, carriers in each area would make available telecommunications services at certain levels of quality, price, etc. However, in a few areas, because of high costs or other factors, the competitive market might not produce the desired result, in which case the Commission and the states may intervene to ensure that a minimum level of services is being provided. In order to "procure" universal service in these areas, the government hires a universal service provider and, in doing so, must answer the question of how much to pay that vendor to make it willing to do

what is needed rather than what the carrier would do on its own? The answer to this question is the amount universal service should cost.

Reverse auctions are the only proposal before the Joint Board that will properly answer this question. For example, considering a company's embedded costs – the method used for the rural high cost fund today – reveals only what the company spent last year; it does not distinguish between efficient and inefficient expenditures or between costs that are related to the supported service and those that are not. Nor does it allow the Commission to distinguish costs that the company would have incurred anyway from those that are necessary to fulfill its universal service obligation. In other words, the current system cannot tell the difference between the cost of the necessary level of service and the cost of the service that would be provided without subsidies. Further, a company's willingness to serve as the universal service provider may depend on many factors unrelated to cost, such as the ability to obtain additional revenues from services other than the supported services or to make its services more valuable to customers in other areas by expanding its footprint. An auction would incorporate all of these factors, while a system based on embedded cost captures none of them.

Parties also have proposed using a new cost model to estimate costs. The Commission's own experience shows that the development of a cost model is time-consuming, expensive, and contentious, and that the results are not reliable. *See* Section III, *infra*. But aside from these concerns, the cost model approach suffers from the same basic problem as the embedded cost approach: it does not answer the right question. It cannot predict which firm will be most efficient, what the market outcome would have been in the absence of the subsidy, or what other factors a prospective provider might consider in deciding whether to undertake a universal service obligation.

Competitive bidding answers the fundamental question of what universal service should cost, and it does so based on the market. Carriers themselves reveal through their bids which is the most efficient provider and what payment is necessary for that carrier to provide the desired universal service outcome instead of what it would have done anyway, without subsidy. For that reason, competitive bidding allows the Commission to answer the question of what support is “sufficient” under Section 254 and otherwise ensure that universal service is provided consistent with the requirements of the Act.

In addition, Verizon’s Reform Plan would permit incumbent local exchange carriers (“LECs”) to retarget – but not increase -- current support below the study area level. In particular, under this approach, an incumbent LEC could seek approval from its state commission to disaggregate support in its study areas to either the wire center level or no more than two cost zones per wire center. This approach would help solve the issue identified by Embarq of competitors’ winning customers in a town (the so-called doughnut hole), while incumbent LECs are left to serve customers in the most costly outlying areas (the doughnut) with little or no universal service support.

Many areas of the country do not receive high cost support today. In most of those areas, this is an appropriate result. The incumbent LEC already offers service without support, and there is frequently at least one competitor (typically a wireless provider) that also provides service without subsidy. It is particularly difficult to justify increasing the high cost fund (and consumer USF surcharges) in order to provide support to those areas where consumers are already receiving service without subsidies. Nonetheless, if the Joint Board and the Commission conclude that some process is necessary to determine whether there are any areas that should receive support but currently do not, and subsequently target support to any given areas,

Verizon's Reform Plan includes such a process. Reverse auctions, if implemented properly, would create significant savings for consumers, and a large portion of those savings should be returned to consumers in the form of lower USF surcharges on their bills. However, a certain percentage of those savings could be set aside to support service in any high cost areas that are not funded today but that the Joint Board and the Commission determine warrant a subsidy going forward.

The increasing pressure on the high cost fund from escalating competitive ETC demand and a shrinking interstate revenue base makes it critical for the Joint Board and the Commission to move quickly toward comprehensive reforms that will stabilize the fund and rationalize support to ETCs. Verizon's Reform Plan to implement competitive bidding over a series of careful steps is designed to transition the industry to an equitable system that will benefit consumers. Some commenters also have recommended a different form of reverse auctions, but the specifics of those proposals would not correct the serious flaws in the current system and in fact could make matters worse.

For example, while providing a useful discussion on auction design and the benefits of competitive bidding,<sup>5</sup> CTIA's proposal would result in multiple winners. This "winner gets more" approach would award all bidders some support on a per-line basis.<sup>6</sup> This approach makes no sense, since it amounts to proposing an auction where no one ever loses. Not only would such an approach greatly reduce the incentive to bid aggressively, it would deprive the

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<sup>5</sup> See Reply Comments of CTIA, WC Docket No. 05-337, Attachment, James Stegeman, Dr. Steve Parsons, Robert Frieden, and Mike Wilson (CostQuest Associates), "Controlling Universal Service Funding and Promoting competition Through Reverse Auctions" (Nov. 8, 2006) ("CTIA's proposal").

<sup>6</sup> *Id.* at 19-22.

auction of the ability to identify the amount that would be just “sufficient” for a company to provide the supported service, resulting in more support than is necessary.

Furthermore, CTIA’s proposal would award support to all the bidders on a per-line basis. And as Verizon has explained, any system that subsidizes companies on a per-line basis will distort the incentive each carrier has to add customers. If there are five bidders, the auction will create five different distortions, since each bidder gets a different per-line amount.

Alltel also proposes to use auctions to distribute, as part of a pilot program, \$25 million to support broadband services.<sup>7</sup> First, as explained further below, there are better ways to target support for broadband deployment, if such support proves necessary, than adding broadband to the USF. Second, Alltel’s auction proposal would do nothing to stabilize the USF and would in fact exacerbate the problem by creating a new entitlement paid for by consumers. Alltel would continue to distribute support among carriers within an area on the basis of relative lines or handsets, which perpetuates the problems with this approach -- namely running afoul of competitive neutrality and causing the fund to grow. Auctioning only a tiny fraction of USF support – and new subsidies at that – would not serve to rationalize the vast majority of carrier subsidies paid out of the USF. Alltel’s proposal is not a serious solution to the problems facing the fund.

**III. THE JOINT BOARD SHOULD NOT RECOMMEND NEW, EXPENSIVE AND RESOURCE INTENSIVE COST MODELS THAT ARE OUT OF STEP WITH THE COMPETITIVE MARKETPLACE.**

The Joint Board and the Commission should not recommend new cost models, even those that use the new GIS technology developed in recent years. The industry’s experience with cost

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<sup>7</sup> See Letter from Gene DeJordy, Steve Mowery, and Mark Rubin, Alltel Wireless, to Commissioner Tate and Commissioner Baum, Federal-State Joint Board on Universal Service, WC Docket No. 05-337, CC Docket No. 96-45, at Attachment, at 1 (Feb. 16, 2007).

models teaches that cost models require an enormous investment of time and resources.<sup>8</sup> Even with recent advances, developing data for and implementing a cost model would take years.

Time is not on our side. Since the Joint Board last sought comments on using competitive bidding to distribute high cost support, demand for subsidies has increased. The fund will continue to grow at an unsustainable rate absent action by the Joint Board and the Commission. States continue to designate new ETCs, which adds new supported lines often without evidence of a corresponding benefit to consumers.<sup>9</sup> And one of the largest wireless carriers, Cingular – now AT&T – recently filed with the Commission for ETC status in Virginia and Georgia, two of the largest states in the country, and is seeking additional ETC designations

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<sup>8</sup> For example, in the proceeding that adopted the non-rural high cost loop support model, the Commission required nearly two years to seek comment on and develop a cost model. *See Federal-State Joint Board on Universal Service*, Ninth Report and Order and Eighteenth Order on Reconsideration, 14 FCC Rcd 20423 (1999), *reversed in part and remanded*, *Qwest Corp. v. FCC*, 258 F.3d 1191 (10th Cir. 2001). After the model was rejected by the Tenth Circuit in 2001, the Commission required an additional two years to amend its model in an effort to meet the court’s remand requirements, which were eventually unsuccessful. *See Federal-State Joint Board on Universal Service*, Recommended Decision, 17 FCC Rcd 20716 (2002); *Federal-State Joint Board on Universal Service*, Order on Remand, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order, 18 FCC Rcd 22559 (2003). The Commission’s experience in adopting TELRIC as a rate setting mechanism is also instructive, as the process for setting TELRIC rates was a time and resource intensive process. *See Application by Verizon New England Inc. et al. for Authorization to Provide In-Region, InterLATA Services in Vermont*, Memorandum Opinion and Order, 17 FCC Rcd 7625, ¶ 3 (2002) (noting that the Commission “recognize[s] that in smaller, more rural states, the section 271 process [which involved the setting of TELRIC rates] taxes the resources of the state commissions”).

<sup>9</sup> *See Order, Petition of Cinergy MetroNet, Inc. for Designation as an Eligible Telecommunications Carrier in the State of Indiana*, Indiana Utility Regulatory Commission Cause No. 41052 ETC 50 (approved Jan. 31, 2007); *Order, Application of Alltel Communications of Nebraska, Inc., Little Rock, Arkansas, seeking expansion of Eligible Telecommunications Carrier Designation*, Nebraska Public Service Commission Application No. C-3739 (granted Feb. 27, 2007); *Order, Application of Dobson Cellular Systems, Inc. for Designation as a Carrier Eligible to Receive Federal Universal Service Support*, Regulatory Commission of Alaska U-05-41 No. 4 (amending Dobson Companies designation to Dobson Alaska)(granted Nov. 7, 2006).

at the state level.<sup>10</sup> Cingular is doing so even though it already provides service in these areas without universal service support and hardly needs subsidies in order to continue doing so. Moreover, the contribution factor jumped more than 20 percent in the last quarter alone, from 9.7 percent in the first quarter of this year to 11.7 percent in the second quarter.

Even experts who support a cost model approach estimate that it could take two years, assuming work started today, to develop such a model.<sup>11</sup> The need for fundamental reform of the high cost fund is immediate and simply cannot wait on additional exercises in cost modeling. Moreover, for the reasons discussed above, a cost model would not answer the fundamental question of what universal service should cost. It cannot be used to identify the most efficient provider, nor can it determine what payment would be required to make that provider be willing to undertake the universal service obligation. For that reason, it cannot tell the Joint Board and the Commission what support would be “sufficient” to satisfy the goals of the Act.

Fortunately, if the Joint Board and the Commission implement a system of competitive bidding as Verizon has proposed, the concept of “costs” becomes immaterial, and there would no longer be a reason for the Joint Board and the Commission to struggle with cost modeling. An ETC that wins the bid to provide supported services in a high cost area, in either a wireless-or wireline-only auction or a general auction, would receive support in the amount of its bid without regard to the bidder’s costs. This is one of the primary benefits of competitive bidding.

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<sup>10</sup> See Cingular Petition For Designation As An Eligible Telecommunications Carrier In The State Of Georgia, CC Docket 96-45 (filed Dec. 13, 2006); and Cingular Petition for Designation As An Eligible Telecommunications Carrier In The State Of Virginia, CC Docket 96-45 (filed Nov. 7, 2006); *Application of Cingular Wireless, LLC for Designation as an Eligible Telecommunications Carrier in the State of Arkansas*, Arkansas Public Service Commission Docket No. 06-081-U (filed June 6, 2006)..

<sup>11</sup> Testimony of James Stegeman, CostQuest Associates, Federal State-Joint Board on Universal Service (Feb. 20, 2007); *Embarq Proposal* at 7.

particularly when trying to determine a carrier's "costs" has proven to be such a difficult and vexing process.

#### **IV. THE IDENTICAL SUPPORT RULE SHOULD BE ELIMINATED BUT NOT IN ISOLATION.**

Verizon supports the Joint Board's recommendation that the Commission eliminate the identical support rule in 47 C.F.R. § 54.307, which allows ETCs to receive the same per-line support as the incumbent regardless of the ETC's own costs or efficiencies. The Commission originally adopted the identical support rule as one way "to ensure that universal service support is distributed in a competitively neutral manner."<sup>12</sup> However, Section 254 does not mandate continuation of the identical support rule, nor is the rule required in order to ensure competitive neutrality. In fact, the application of the rule in its current form skews competition and results in excessive funding in contravention of Section 254.

As an initial matter, the Commission adopted the principle of competitive neutrality under its Section 254(b)(7) authority, which authorizes – but does not *require* – the Commission to base its universal service policies on "additional principles."<sup>13</sup> While that principle remains

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<sup>12</sup> *Federal-State Joint Board on Universal Service, Access Charge Reform*, CC Docket Nos. 96-45, 96-262, Seventh Report & Order and Thirteenth Order on Reconsideration in CC Docket No. 96-45, Fourth Report & Order in CC Docket No. 96-262, and Further Notice of Proposed Rulemaking, 14 FCC Red 8077, 8113 ¶ 73 (1999) (subsequent history omitted).

<sup>13</sup> *Federal-State Joint Board on Universal Service*, Report and Order, 12 FCC Red 8776, ¶¶ 46-55 (1997), as corrected by *Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Erratum, FCC 97-157 (rel. June 4, 1997), *aff'd in part, rev'd in part, remanded in part sub nom. Texas Office of Public Utility Counsel v. FCC*, 183 F.3d 393 (5th Cir. 1999) ("First Report and Order"); *see also id.*, ¶ 51 (stating that the Commission adopted the principle of competitive neutrality under Section 254(b)(7)). Even assuming *arguendo* that the Commission adopted the identical support rule under any of the subsections codified at 47 U.S.C. §§ 254(b)(1) through 254(b)(6), which is not the case, the Commission would retain plenary authority to eliminate the rule because the six enumerated universal service principles are not "statutory command[s]." *See, e.g., Alenco Communications, Inc. v. FCC*, 201 F.3d 608, 621 (5<sup>th</sup> Cir. 2001) ("We reiterate that predictability is only a principle, not a statutory command. To satisfy a countervailing statutory principle, therefore, the FCC may exercise reasoned discretion to ignore predictability."); *id.* at 615 ("While the FCC is required to obey statutory commands,

an important consideration, it is for the Commission to determine how that principle should be implemented and applied under the facts and circumstances existing today. Indeed, as explained below, this principle fully *supports* eliminating the identical support rule because it contravenes competitive neutrality and threatens the sustainability of the USF.

Importantly, competitive neutrality does not require that the Commission subsidize all ETCs, nor does competitive neutrality require that the Commission provide exactly the same support to all ETCs.<sup>14</sup> As the Tenth Circuit made clear in *Qwest II*, Section 254 “does not impose a requirement of parity with respect to . . . the distribution of funds between and among carriers.” 398 F.3d at 1233. Accordingly, there is no legal support for the notion that two providers must receive the same per-line high cost subsidy in order to be treated in a competitively neutral manner

Further, the current system does not achieve that parity in any event. As explained above, counting every handset and every line the same is not competitively neutral. Wireless and wireline providers have different business models, and package their services to consumers in different ways. Although both services are valuable to consumers, it does not follow that each line and each handset have comparable costs, or comparable value in the marketplace. In a world where wireline connections are typically purchased on a per-household basis, and wireless handsets are typically purchased on a per-person basis, equating the support per line to the support per handset produces results that are inherently unbalanced.

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the guiding principles reflect congressional intent to delegate difficult policy choices to the Commission’s discretion.” (citing *Texas Office of Public Utility Counsel v. FCC*, 183 F.3d at 411-412).

<sup>14</sup> See, e.g., *TCG New York, Inc. v. City of White Plains*, 305 F.3d 67, 80 (2d Cir. 2002) (competitive neutrality “does not require precise parity of treatment”).

In the Commission’s view, the principle of competitive neutrality is designed to achieve two interrelated policy goals: (1) encouraging the competitive entry of new providers; and (2) increasing the availability of telecommunications services.<sup>15</sup> The identical support rule is not required in order to achieve either of these goals.

First, new providers will enter a market where and when it is economic to do so. Thus, as long as a carrier can recover its costs and a reasonable profit – whether directly from customers through end user rates or indirectly through high cost subsidies – the carrier will have sufficient financial incentive to enter a particular market. A rule that allows a new entrant to receive subsidies that have no bearing on any aspect of the entrant’s business – as is the case under the identical support rule – is not necessary to encourage competitive entry. In fact, such a rule distorts competitive entry by creating incentives for providers to enter new markets based solely on where they will receive the largest universal service windfall.

Second, as discussed above, telecommunications services are increasingly available from a variety of providers. These intermodal competitors can and do make available competing telecommunications services in rural and urban areas without the help of any universal service support, let alone support that is calculated based on the incumbent’s cost structure.

Furthermore, the identical support rule is incompatible with the fundamental goal of the high cost universal service fund, which is to ensure the availability of quality telecommunications service “at just, reasonable, and affordable rates.” 47 U.S.C. § 254(b)(1). The identical support rule ignores that new entrants may have the incentive and the ability to offer service at a lower cost than the incumbent by using more efficient technologies or network

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<sup>15</sup> See, e.g., *First Report and Order*, ¶ 48 (adopting the principle of competitive neutrality to “ensure that . . . no entity receives an unfair competitive advantage that may skew the marketplace or inhibit competition by [1] limiting the available quantity of services or [2] restricting the entry of potential service providers”).

architectures and by serving lower-cost areas.<sup>16</sup> By ignoring these possible cost advantages and allowing new entrants to receive excess subsidies based on the incumbent's costs, the identical support rule results in excessive subsidies – which translate into a larger universal service fund and higher USF charges for consumers. As the Fifth Circuit has correctly noted, “Because universal service is funded by a general pool subsidized by all telecommunications providers – and thus indirectly by the customers – excess subsidization in some cases may detract from universal service by causing rates unnecessarily to rise, *thereby pricing some consumers out of the market.*”<sup>17</sup> That is the case here, and the Commission can best serve the interests of consumers and the goals of universal service by eliminating the identical support rule.

However, just eliminating the rule itself will not solve the many problems facing the current system. It is crucial that elimination of the identical support rule be part of broader and more comprehensive universal service reform. As long as wireless competitive ETC support is based on the number of handsets it provides to customers, growth in handsets will continue to drive growth in the fund. Merely eliminating the identical support rule and replacing it with regulation designed to support competitive ETCs based on their individual, actual costs -- without other reforms -- could actually increase the pressure on the fund.

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<sup>16</sup> See, e.g., Written Statement of Paul W. Garnett, CTIA, before the United States House of Representatives, Subcommittee on Telecommunications and the Internet, Committee on Energy and Commerce, at 2 (June 21, 2006) (representing that “a greater share [of] high high-cost support clearly should be directed to deployment of more efficient wireless networks[s]”); Letter from Jeffrey S. Lanning, Director – Federal Regulatory, Embarq, to Marlene Dortch, Secretary, FCC (April 20, 2007) (noting competition in “low-cost portions of a wire center” rather than in “high-cost portions of the same wire center”).

<sup>17</sup> *Alenco*, 201 F.3d at 620.

As discussed above, determining accurately a carrier's per-line costs requires enormous resources and often constitutes little more than sophisticated guesswork.<sup>18</sup> Furthermore, given the incentives inherent in a cost-based system, it is certainly possible that competitive ETCs will argue that their "costs" actually exceed the incumbent's, whether through the use of creative models or self-serving inputs. As a result, payments to competitive ETCs would continue to increase at the same pace as they have in recent years. In fact, Alltel has already hired an expert who has developed a cost model that purports to demonstrate that Alltel's costs are actually higher than the costs of the incumbent LEC in certain areas.<sup>19</sup> Alltel's filing is a preview of what would surely unfold if the Commission were to revise the rules to allow competitive ETCs to continue to receive support if they could "prove" their actual costs. And that is all the more reason to move to a market-based reverse auction system rather than creating a new regulatory quagmire through which the Commission, the Joint Board, and the industry would be required to slog.

**V. INITIATIVES TO ENCOURAGE BROADBAND DEPLOYMENT SHOULD BE SEPARATE FROM USF REFORM.**

Broadband access is an important national goal, and Verizon supports policies that will ensure that consumers in unserved or underserved areas have access to broadband services. Broadband improves access to education, medicine, employment, and boosts economic growth. As a result of the Commission's deregulatory policies, broadband has been expanding rapidly as companies like Verizon invest billions of dollars in high quality, high speed networks. In

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<sup>18</sup> See, e.g., Sean Hao, "Three Phone Companies Rake in Subsidies," *The Honolulu Advertiser* (May 27, 2007) (according to Sprint Nextel "[t]here's no way for you to know what's costing what ...") (available at [carriershttp://the.honoluluadvertiser.com/article/2007/May/27/ln/FP705270372.html](http://the.honoluluadvertiser.com/article/2007/May/27/ln/FP705270372.html))

<sup>19</sup> See *Ex Parte* of Alltel Corp., WC Docket No. 05-337, Attachment at 32 (Jan. 12, 2007).

Appendix 2, Verizon briefly explains the extent to which broadband is widely available from a variety of sources over multiple platforms.

Clearly, the market is working in most areas, reaching consumers who desire broadband access usually several times over and across multiple technologies. The challenge for policymakers is how best to encourage broadband deployment in those remaining areas where broadband access is still lacking. In these areas, the best approach is to use targeted programs specifically designed to encourage development of broadband infrastructure. Focusing on solutions that will fix broadband access gaps at the local level would be much more efficient and effective than adding broadband to the USF. If broadband is a vital part of the nation's transforming infrastructure – and it is – then government can do better than broadening the reach of a broken and strained USF system.

The enormous increases in high cost support to wireless carriers demonstrates just how quickly the fund can grow to unsustainable levels when subsidies are extended to include new services with rapidly emerging competition for consumers of those services. As demonstrated in Appendix 2, there has been unprecedented growth in broadband deployment and competition over the last few years, not unlike the emergence of wireless voice services beginning in the late 1990s. In order to protect consumers who rely on a sustainable USF and to actually meet the needs of those consumers still without broadband access, a different approach is required.

The ConnectKentucky program is a model of one creative and successful approach to the narrow challenge of broadband deployment in unserved areas. ConnectKentucky is a private-public alliance of corporations, universities, and government entities seeking to promote broadband. The program's success shows that, even in relatively rural states such as Kentucky, broadband is becoming ubiquitous. ConnectKentucky gathered data from all wireline broadband

providers in the state, and then worked with unserved communities to obtain information about who was interested in broadband services. ConnectKentucky then shared this information with providers who, in some cases, decided to deploy facilities in these communities to meet this demand. In other cases, providers needed additional assistance, so they received support from the Appalachian Regional Commission, Rural Utility Service loans, state sponsors, and various other sources of funding. As a result of these initiatives, broadband is already available to more than 90 percent of households in Kentucky, and by the end of this year that total will reach virtually 100 percent.<sup>20</sup> An approach similar to the ConnectKentucky model could be successful in other localities to help identify those areas that truly lack broadband access and target support to those unserved areas.

Programs such as ConnectKentucky, rather than the high cost fund, show the most promise in bringing broadband to consumers in these areas. The fund is struggling to meet even current demands for support, and adding broadband to the mix will only make those problems worse. Historically, the fund has been designed to maintain a status quo, and thus it pays many carriers to do what they are already doing. Moreover, the fund is designed to provide ongoing support that ensures affordable access in areas that would otherwise be too costly to serve. The current challenge with broadband is in bringing broadband *infrastructure* to those areas that do not today have access. These investments require large up front capital outlays rather than on going expenses. Incenting broadband infrastructure development is a different kind of challenge than providing sustained, ongoing support to maintain affordable universal service. Given these

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<sup>20</sup> ConnectKentucky, *Broadband Adoption and Barriers: Results & Analysis from the ConnectKentucky Technology Assessment Study*, <http://www.connectkentucky.org/NR/rdonlyres/2F6BAAC1-A6D0-4DD7-BEDF-385030488D6C/0/CKdocSRSBroadbandAdoptionBenchmarks.pdf>; ConnectKentucky, *2007 Progress Report* at 4-5.

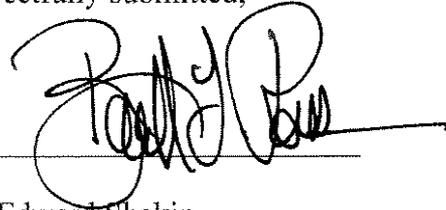
differences and the availability of other, more efficient means to ensure that consumers in unserved or underserved areas have access to broadband, the Joint Board and the Commission should not add broadband to the list of services supported by USF.

## **VI. CONCLUSION**

For all of the foregoing reasons, the Joint Board should build on the momentum of its Recommended Decision to cap support to competitive ETCs on an interim basis and now recommend that the Commission implement Verizon's Reform Plan and phase in competitive bidding for high cost support.

Respectfully submitted,

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**MODERNIZING UNIVERSAL SERVICE:**  
**VERIZON'S PLAN FOR COMPREHENSIVE REFORM**

**May 31, 2007**

## **I. The Commission Should Implement Auctions For High Cost Support**

### **A. The Use of Auctions Or Competitive Bidding Is An Established Process That Can Produce Significant Public Interest Benefits.**

Reverse auctions are not new, and there has long been support for using reverse auctions in the universal service context. Reverse auctions enable markets to set subsidy levels, avoid excessive levels of support, identify low-cost providers, and ensure adequate quality of service.<sup>1</sup>

Reverse auctions allow market forces – rather than the government – to determine the levels of support,<sup>2</sup> which reduces reliance on cost-estimation models and brings greater transparency to the distribution process.<sup>3</sup> And, if implemented properly, the use of auctions will decrease the amount consumers pay in universal service surcharges by reducing the size of the high cost fund to no more than the amount needed to meet the program’s goals.<sup>4</sup> Indeed, “there

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<sup>1</sup> See Paul Milgrom, Professor of Economics, Stanford University, Presentation at the Progress & Freedom Foundation Conference, *Universal Service Reform: Are Reverse Auctions the Answer?* (March 1, 2007); Dr. Patrick Xavier, *What Rules For Universal Service In An IP-Enabled NGN Environment?*, 14 (April 15, 2006) (“[R]everse auctions’, properly designed, can generate incentives to contain costs, to innovate, and to reveal the true cost of delivering universal service thus minimising [*sic*] the subsidy required”); Dennis Weller, *Auctions for Universal Service Obligations*, 12-13 (June 1998) (reverse auctions “provide[] a means for selecting the low cost providers . . . thus minimizing the cost of supply”) (“Weller”).

<sup>2</sup> Hank Intven and Curt Howard, *Least-Cost Subsidies for Universal Access Telecom Projects: A Practical Implementation Guide*, 8 (Aug. 25, 2004) (“Market forces rather than the government determine the level of subsidy required”) (“Intven & Howard”); Weller, at 31 (“Competitive bidding is a market mechanism for deciding which firms should provide universal service, and how much they should be paid for doing so”); *id.* at 13 (Reverse auctions “provide[] the regulator with a means of determining what support amount is sufficient”).

<sup>3</sup> See, e.g., See James Stegeman, Dr. Steve Parsons, Robert Frieden, and Mike Wilson, *Controlling Universal Service Funding and Promoting Competition Through Reverse Auctions*, 2 (“Stegeman, Parsons, Frieden & Wilson”); see also Siddhartha Raja, *Funding Universal Service: A Case For Subsidy Auctions*, 20-21 (“Raja”) (noting that a reverse auction “process is viable and stable – resulting in positive growth of the network, while optimizing the allocation of scarce funds and enhancing the efficiency of service providers”).

<sup>4</sup> See, e.g., Paul Milgrom, *Procuring Universal Service: Putting Auction Theory to Work*, (December 1996) (© 1997 by the Nobel Foundation) (“The advantage of this option [reverse auctions] is that competition among would-be universal service providers could drive down the necessary levels of subsidies”); see also Intven & Howard, at 8 (“Well-run auction reduces size of subsidy and need for government financing”).

is likely to be a significant opportunity to reduce subsidy payments below existing levels if a reasonable auction structure is employed.”<sup>5</sup> USF auctions will encourage increased deployment of telecommunications services in high cost areas,<sup>6</sup> and enhance the efficiency of service providers that under today’s system often “demand[] more than what is really needed to provide efficient service.”<sup>7</sup> And, importantly, reverse auctions are competitively neutral.<sup>8</sup>

The success of reverse auctions is confirmed by the experiences of other countries, which have employed reverse auctions for years. Indeed, no fewer than 13 foreign countries have used or currently are using reverse auctions to disburse universal service support.<sup>9</sup> These countries report that reverse auctions involved relatively small administrative costs while resulting in: (1) increased universal service coverage and deployment of telecommunications services; and (2) substantial savings through reduced universal service disbursements.<sup>10</sup>

**B. Verizon’s Reform Plan Would Transform The High Cost Fund Into An Efficient, Market-Oriented System.**

Verizon’s plan for reforming the high cost fund will benefit consumers, is competitively neutral, and is administratively workable for the Joint Board, the Commission, and state commissions. This proposal would be implemented in steps: Step 1 would be to put in place a

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<sup>5</sup> Stegeman, Parsons, Frieden & Wilson, at 13.

<sup>6</sup> See, e.g., Raja, at 24; see also Intven & Howard, at 8.

<sup>7</sup> Raja, at 5 & 19-20 (Reverse auctions “increase the efficiency of the bidders, since the lower their costs can be driven, the higher their chances of winning the auction get . . . the operator is forced to be as efficient as possible, not only during the bidding process and installation of facilities, but also during the actual provision of service to users”); see also Weller, at 31 (“Competitive bidding provides an approach that is more likely to reveal the amount of universal service support accurately, and which also allows regulators to move away from traditional regulatory methods”).

<sup>8</sup> Intven & Howard, at 8 (“Auctions are competitively neutral”); see also Stegeman, Parsons, Frieden & Wilson, at 2.

<sup>9</sup> See Stegeman, Parsons, Frieden & Wilson, at 8-9.

<sup>10</sup> See, e.g., Stegeman, Parsons, Frieden & Wilson, at 9; see also Bjorn Wellenius, *Closing the Gap In Access to Rural Communications: Chile 1995-2002*, 4 (June 2002).

cap on support to competitive ETCs to control the growth of the fund, which the Joint Board has now recommended; in Step 2, the Commission would adopt a framework for competitive bidding; in Step 3, the Commission would begin to implement auctions; first among wireless ETCs, in areas where there are at least two wireless ETCs, to select a single wireless provider of universal service, followed by auctions in those few areas where there are at least two wireline ETCs, to select a single wireline provider of universal service. In Step 4, the Commission would review its experience with these initial universal service auctions and consider next steps. Attached as Exhibit 1 is Verizon's February Letter outlining its proposal, which is further described below.<sup>11</sup>

**1. Wireless And Wireline Auctions.**

**(a) Wireless Auctions.**

Verizon has proposed starting the auction process with a wireless auction in areas with multiple wireless ETCs. Starting with wireless auctions makes sense because there are significantly more areas where a wireless auction could be held (currently, approximately 481 of the country's approximately 1,448 study areas have multiple wireless ETCs). In addition, wireless ETCs (like other competitive ETCs) have different regulatory obligations and enjoy considerably greater flexibility in deciding where and how to provide service. As a result, multiple wireless ETCs are receiving support in many areas, even though most of those same areas also are served by one or more unsubsidized wireless carriers – a situation that can and should be rectified. Wireless ETCs also operate on fundamentally different cost structures than

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<sup>11</sup> See Letter from Kathleen Grillo, Verizon, to Commissioner Tate and Commissioner Baum, Federal-State Joint Board on Universal Service, WC Docket No. 05-337, CC Docket No. 96-45 (February 9, 2007) ("February Letter"). Attachment A of Verizon's February Letter also discussed in detail the technical aspects of one possible auction design, which are not repeated here.

incumbent local exchange carriers (“LECs”) – a fact that, as discussed below, has long made the Commission’s identical support rule a target for reform.

After adopting the auction framework, the Commission would begin the process by nominating for auction all areas with at least two wireless ETCs, which ensures that there are at least two qualified bidders in each auctioned area. The auction would select one winner, which would enter into the contract described below and be paid a flat annual amount of high cost support, as specified in its bid. The auction would select the most efficient wireless provider of universal service and determine the amount that is just sufficient to make that carrier willing to undertake the obligations set forth in the contract.

**(b) Wireline Auctions.**

Once the wireless ETC auctions have been completed, the Commission would conduct separate wireline auctions. These auctions would occur in areas with at least two wireline ETCs. (About 90 of the approximately 1,448 study areas have at least two wireline ETCs.) Either a wireline ETC or the Commission would nominate for auction any area with multiple wireline ETCs. Both the incumbent LEC and any wireline competitive ETC could participate, and the auction would select a single wireline provider of universal service.

**(c) Areas Not Subject to Auction.**

Under Step 3 of Verizon’s proposal, wireless and wireline auctions will be held in approximately one-third of the current study areas. Since not all ETCs that currently receive support will be subject to auction, the Joint Board and the Commission will need to rely on a combination of approaches to distribute support and control the size of the fund during the transition process. These approaches include the current rules, the cap proposed by the Joint Board, expanded auctions, and broader use of auction results for ETCs not subject to auction.

In areas not subject to a wireline auction, the incumbent LEC would continue to receive support subject to the caps that apply to incumbent LECs under the current rules: (1) the high cost loop fund, which has been capped since the fund's inception in 1993;<sup>12</sup> (2) interstate access support ("IAS"), which has been capped since 2000;<sup>13</sup> and (3) safety valve support, which is capped at 5% of the high-cost fund.<sup>14</sup> Each of these caps is designed to prevent excessive growth in the fund,<sup>15</sup> and should remain in place for incumbent LECs not subject to auction to ensure that universal service support does not grow at unsustainable rates. However, these funds are poorly suited to today's marketplace and should not remain in place permanently because they create incentives for inefficient behavior and cause instability and churn in the funding for particular companies and areas. *See* Exhibit 1 at 5. For these reasons, as discussed below,

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<sup>12</sup> Federal-State Joint Board on Universal Service, Multi-Association Group (MAG) Plan for Regulation of Interstate Services of Non-Price Cap Incumbent Local Exchange Carriers and Interexchange Carriers, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256, 16 FCC Rcd 11244, ¶ 32 ("*MAG Report and Order*"); *see also* 47 C.F.R. § 36.604.

<sup>13</sup> *Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Low-Volume Long-Distance Users, Federal-State Joint Board on Universal Service*, Sixth Report and Order in CC Docket Nos. 96-262 and 94-1, Report and Order in CC Docket No. 99-249, Eleventh Report and Order in CC Docket No. 96-45, 15 FCC Rcd 12962, ¶ 201 (2000) ("*CALLS Order*").

<sup>14</sup> 47 C.F.R. § 54.305(e). Interstate common line support and local switching support are not capped, but are tied to the incumbent LECs' interstate revenue requirements, and cannot grow faster than those revenue requirements.

<sup>15</sup> *MAG Report and Order*, ¶ 34 (reasoning that an indexed cap "would prevent excessive growth in the existing high-cost loop fund during the period preceding the implementation of a forward-looking support mechanism"); *Id.*, ¶ 108 (noting that "a five percent cap on the safety valve mechanism will prevent uncontrollable growth"); *CALLS Order* ¶ 201 (in limiting IAS support, the Commission noted that "[b]y fixing the amount of support at \$650 million per year for five years, the *CALLS* Proposal provides a specific and predictable amount of explicit support" consistent with the goals of Section 254 of the Act); *Recommended Decision*, ¶ 5 (recommending a cap on CETC support in order "to stem the dramatic growth in high-cost support").

Verizon proposes that in Step 4 of its reform plan, the Commission should consider extending auctions more widely to identify a single provider of universal service .

In areas not subject to a wireless auction, the Joint Board and the Commission should utilize “representative bidding” that would use the results from auctioned areas to determine the proper level of support for other wireless ETCs.<sup>16</sup> As soon as the first group of auctions has been completed, the Commission could develop a statistical analysis of the data generated by the auction results, which would estimate the results of the auction in each area, based on the characteristics of the area, such as size and density.<sup>17</sup> This analysis would allow the Commission to estimate the bid that would be required to win a wireless auction in an area where an auction had not yet been held and to adjust accordingly the support for wireless ETCs in not areas not subject to auction.

In each area where there is only one wireless ETC (or in areas where a wireless auction has been held but failed), that carrier would receive the capped amount of support until the results of the statistical analysis become available. At that point, the estimated auction result produced by the analysis would be used to adjust the capped support, and the wireless ETC would receive the lesser of the capped support or the amount estimated by the Commission’s statistical analysis .

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<sup>16</sup> This process was described in Verizon’s proposal and has been used in other applications around the world. Exhibit 1 at 9.

<sup>17</sup> In Step 3, wireless auctions would be held in approximately 481 study areas in the first bidding cycle. Within most of these study areas, several smaller geographic units (wire centers, or zones within wire centers) would be auctioned. These auctions should create a data set with enough observations to create a robust statistical analysis that could be refined and updated as additional auction results become available. The results produced by this statistical analysis also could be used to determine whether there are areas that do not receive high cost support today, where such support might be appropriate, and, if so, to prioritize any such areas. This process is discussed in more detail below.

## 2. Geographic Areas Subject To Auction.

In its initial proposal, Verizon proposed using wire centers as the geographic areas to be auctioned.<sup>18</sup> In order to target support even more precisely, carriers also could have the option of subdividing each wire center into two zones, which would distinguish the center of a small rural town from the surrounding countryside. If such disaggregation takes place in a particular area prior to auction, then these new disaggregated zones would serve as the auction areas. Exhibit 1 at 4.

Incumbent LEC wire centers, or zones within wire centers, would serve as the geographic building blocks for the auction. Verizon's proposal would allow bidders to place bids in "packages."<sup>19</sup> An ETC could submit a bid for a single area, or a package bid for a group of areas. For example, a bidder may submit a package bid if the bidder believes that it could serve a group of areas within the package more efficiently than the individual areas separately. This type of bidding process is called a "combinatorial" auction.

In an auction of this kind, bidders, based on their own business plans and market forecasts, determine whether to bid on individual areas separately or in a group. Rather than

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<sup>18</sup> The arrangement of incumbent LEC wire centers contains useful information about the geography of each area and the location of customers, since incumbent LEC switches generally have been located in population clusters – *i.e.*, in the centers of large cities and small towns. While competitive ETCs may have different network topologies than incumbent LECs, they have generally deployed their facilities to serve the same population clusters. They also are familiar with wire centers because they are used for interconnection, collocation, and access to unbundled network facilities.

<sup>19</sup> While Verizon and Verizon Wireless have supported the concept of combinatorial auctions the relative value of the methodology versus other auction methodologies depends on numerous factors such as what is being auctioned and the schedule for holding the auction. Thus, for example in the context of the 700 MHz proceeding, Verizon Wireless has objected to the Commission's proposal to combine in the same auction its longstanding and successful simultaneous multiple round (SMR) procedures with its package bidding procedures (SMR-PB). As Verizon Wireless has explained, such a "hybrid" auction would be neither efficient nor effective and would introduce unnecessary complications into the 700 MHz bidding process. *See* Comments of Verizon Wireless, WT Docket No. 06-150, 38-43 (May 23, 2007).

regulators deciding how geographic areas should be grouped together, the Joint Board and the Commission would obtain this information from the market, through the decisions of the bidders. It allows for more precise targeting of support, while at the same time giving ETCs more flexibility to plan their market entry in ways that fit their technologies and business plans. The particular combinatorial auction framework presented by Verizon is designed to perform well – in terms of efficiency, and minimizing the need for support – regardless of whether different bidders view a given set of areas as independent, substitutes, or complements.<sup>20</sup>

### **3. Request For Quote.**

The reverse auction process starts with a standard request for quote (“RFQ”). In general, the RFQ is a document that invites a qualified ETC to submit a bid. It identifies the services to be supported and provides enough detail about other terms of the contract so that bidders can reasonably decide how much to bid to provide the supported service in that area.

The Commission should develop a “model” RFQ through collaboration with the state commissions. The model RFQ would identify clearly the supported services the bidder would be required to provide to any customer in the geographic area being auctioned. Verizon proposes that the supported services be those currently set forth in 47 C.F.R. § 54.101.

Because the winning bidder should be expected to provide quality service to customers in the area subject to auction, the RFQ should clearly set out those expectations as well. State commissions may also suggest to the Commission the addition of certain state-specific quality

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<sup>20</sup> A small ILEC that serves a single wire center (“area A”) may only desire and have the capability to serve that area, in which case area A is “independent” because a bidder’s willingness to bid for a service contract in the area is not affected by the outcome of the bidding for any other area. By contrast, a CETC may seek to serve area A or another wire center (“area B”) but not both, in which case area A and area B are substitutes. Area A and Area B are complements if a bidder sees some synergies in serving the two areas together, such that it would be willing to accept less support in area A if it also wins area B. Verizon’s proposed auction design would perform well regardless of whether different bidders view given geographic areas as independent, substitutes, or complements.

requirements in the RFQ. However, any such requirements must comply with the Act,<sup>21</sup> and state commissions must recognize that any new and onerous requirements will either deter prospective bidders or cause them to raise their bids. Moreover, by allowing the market to place a value on any requirement in an RFQ, the auction process would give the Commission the incentive to accept only those state-proposed requirements whose benefits outweighed their costs, since ultimately any increase in the bids attributable to the requirements in the RFQ would be paid for by federal funds.

The RFQ need not address the retail prices to be charged by the winning bidder. Rates for telecommunications services have declined steadily, and competition across multiple platforms will continue to constrain prices in both rural and non-rural areas.<sup>22</sup> Wireless prices, in particular, have declined as much as 10 to 20 percent a year over the last decade, which also serves to discipline wireline prices.<sup>23</sup> Wireless customers in rural areas are offered the same national pricing plans as customers in urban areas. In addition, in many areas in which ETCs currently receive universal service support, other providers are competing without subsidy. Consequently, a winning bidder is unlikely to raise prices in a particular geographic area after it

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<sup>21</sup> See, e.g., *Federal-State Joint Board on Universal Service*, Report and Order, 20 FCC Rcd 6371, ¶19 (2005) (noting that the Commission “encourage[s] state commissions to apply [conditions for ETC designation] to all ETC applicants in a manner that is consistent with the principle that universal service support mechanisms and rules be competitively neutral”). For example, states have limited regulatory authority over wireless carriers today, and the RFQ process should not be used to create any new state authority. See 47 U.S.C. § 332(c)(3).

<sup>22</sup> Comments of Verizon, *Federal-State Joint Board on Universal Service: High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, at 13-15 (filed March 27, 2006) (“*Verizon Comments*”)

<sup>23</sup> *Verizon Comments*, at 13-14 (citing *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, 19 FCC Rcd 20597 (2004), and Stephen B. Pociask, Competitive Enterprise Institute, *Wireless Substitution and Competition: Different Technology but Similar Service – Redefining the Role of Telecommunications Regulation*, at 15 (Dec. 14, 2004)).

wins the auction. Including pricing provisions in the RFQ for these initial auctions is not necessary to protect consumers and could interfere with the development of innovative service and pricing options, such as those that have characterized the national wireless market and have produced enormous consumer benefits.<sup>24</sup>

Because the RFQ would set forth the terms of the a contract between the winner of the auction and the state, the terms of which would not apply to any other provider in the area, the RFQ and the resulting contract should be consistent. In order to avoid any possible inconsistencies, it may be helpful if the proposed contract were attached to the RFQ.

#### **4. The Bidding Process.**

As in any procurement process, the Commission must use some qualification standard for potential bidders. If an entity lacks the resources or capabilities to provide the supported services, there is no point in permitting that entity to participate in the bidding.

In order to be qualified to bid, a carrier must be an ETC. Using the ETC designation as the means to determine who is a qualified bidder is the most efficient use of resources and is consistent with the Act's requirement that ETCs be made "eligible" for universal service support. 47 U.S.C. § 214(e). In designating new ETCs or expanding existing ETC designations, the state commissions – or the Commission when it has jurisdiction – should consider certifying ETCs for areas larger than current study areas, perhaps for an entire state. This would allow an ETC to bid in different rounds of the auctions in a larger number of areas, which could produce more desirable auction results. Further, in considering ETC applications, state commissions should focus on the applicant's resources and capabilities, since ETC designation would qualify the

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<sup>24</sup> The Commission may return to the issue of pricing in the RFQ when it considers general auctions as part of its review in Step 4 described below, taking into account the continued development of competition in the market in the intervening years.

applicant to bid. However, such designation would not increase the number of supported carriers, as it does today, since it would not affect the number of winners in each auction.

Any bidder qualified in a given area could register to bid in an auction in that area. Qualified bidders would submit a bid for a flat amount of high cost support, which would represent the total annual support payment the ETC would accept in order to take on the universal service obligation in a given high cost area and enter into a contract. Having each bidder bid a flat dollar amount would simplify the bidding process. Each bidder would base its bid on its own business plan and cost structure and its assessment of the market, including estimated revenues, costs, and total demand likely to be involved if the bidder were to win the bid. This approach puts the responsibility for determining the appropriate amount to bid where it belongs – with the bidders themselves, which are much better suited than the Joint Board or the Commission to make such determinations.

Basing bids on a flat amount rather than per-line support would avoid many contentious issues that have arisen in the past, such as whether to support primary lines, additional lines, and multiple handsets. The current system, which counts every line and handset the same, is neither technically nor competitively neutral, and is one of the most important drivers of the rapid growth in the fund. Consider, for example, a family that has one wireline connection, and then purchases five new wireless handsets on a family plan. Under the current rules, this decision increases the USF support for this family by a factor of six. Further, in this case there are two networks that have been built to serve this household and the fund is valuing one network five times more than the other. Providing support on a flat basis for each area would eliminate this competitive distortion and would also prevent the growth of supported lines or handsets from unreasonably ballooning the size of the fund. While changes in demand over the term of the

contract might be relevant to a bidder, under Verizon's proposal it would be the job of each bidder to reflect any such factors in its bid.

In addition, this approach would avoid distorting the incentives for each ETC to gain or lose a customer. The benefit to any ETC of gaining a customer would be the additional revenue the ETC would obtain from that customer – not additional subsidies from the Commission, as is the case today. A flat amount of support would promote efficient competition among ETCs and would allow competition to develop in areas that would economically support it.

In administering the bidding process, the Joint Board and the Commission should establish a regular schedule of events that would include nomination of areas for bidding, registration of bidders, posting of deposits, and the bidding process itself – all which would make up the bidding cycle. A bidding cycle should be held twice each year. The first bidding cycle could reasonably begin six months after the adoption of an order establishing a plan for competitive bidding and adopting the auction framework. In any cycle, with respect to wireless-only auctions, a wireless ETC would be able to nominate for bidding any area in which it is qualified, and where there is at least one other wireless ETC, except in areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired. Similarly, for the wireline auctions, a wireline ETC would be able to nominate an area where it is qualified and where there is at least one additional wireline ETC, with the same exception for those areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired. Firm deadlines also will be necessary for the events in each bidding cycle. For example, if a wireless ETC wished to nominate an area for bidding in the first half of a given year, it might be required to file its nomination by February 1 of that year. As discussed above, the Commission should begin Step 3 of the process by

nominating in the first bidding cycle, on its own motion, any area where there are at least two wireless CETCs.

Once an area has been nominated, a second window should be established for ETCs to register to bid in areas that have been nominated, and to nominate additional areas. This second window would prevent an ETC from gaining a first-mover advantage by nominating an area and would ensure that all ETCs interested in bidding in a given area are able to participate. It will also ensure that all areas the participants consider to be related to those initially nominated can be included in the bidding process.

As part of the schedule of events in each bidding cycle, the Commission should set a firm date for bidding to begin in each high cost area nominated in that cycle. Bidding, in accordance with the auction design discussed below, should be “dynamic,” which is to say it would involve multiple rounds.

#### **5. The Auction Design.**

Verizon has proposed that the Joint Board and the Commission design the auctions based on a “clock-proxy” model. As discussed in detail in Verizon’s February Letter, this clock-proxy design is based on recent developments in auction theory. It is a combinatorial design that allows for the “package bidding” discussed above, which would perform efficiently in the environment of a universal service auction. The technical details of how the clock-proxy auction will function can be found on pages 11-15 of the Appendix to Exhibit 1.

#### **6. The Auction Reserves.**

The auction reserve, or maximum bid, is an important consideration. In this context, the auction reserve ensures that the support awarded in the auction is no greater than the amount of support provided in an area prior to the auction. If the reserve is not met, then the auction will

fail, and support would continue to be provided under the existing rules, subject to all applicable caps.

If a disaggregation plan has been adopted for a study area prior to the date of an auction in that area, then the auction will use the zones created by the disaggregation plan (two for each wire center). The reserve for each zone will be the amount of support distributed in that zone prior to the auction. For a wireless auction, the reserve will be the total amount of support distributed to wireless ETCs in the zone; for a wireline auction, the reserve will be the total amount distributed to all wireline ETCs in the zone. Because the sum of the support in all the zones under the disaggregation plan must be no greater than the amount of support for the study area as a whole, the application of these individual reserves will ensure that the amount of support in the study area cannot increase as a result of the auction. The software used to administer the auction would ensure that no bid that exceeded the reserve would be accepted.

If no disaggregation plan has been adopted for a study area by the date of the auction, then the geographic units for the auction will be the wire centers within that study area. For many small incumbent LECs, the study area may contain only one wire center, in which case the wire center reserve is simply the total amount of support (wireline or wireless, depending on which type of auction is being held) in the study area. If there is more than one wire center in the study area, then two separate reserves would be applied in the auction: an aggregate reserve at the study area level, and a separate reserve for each wire center. The reserve amount for each wire center would be calculated by disaggregating the existing support for that the study area. This would be done using only wireless support amounts and lines for a wireless auction, and only wireline support amounts and lines for a wireline auction. First, the aggregate support in the study area would be divided by the total number of lines to derive an average per-line support

amount. Second, the aggregate study area support would be disaggregated to each wire center on a pro-rata basis by multiplying the number of ETC lines in each wire center by the average per-line support amount. Finally, each wire center amount would be multiplied by a constant greater than one to arrive at the wire center reserve amount.

This method allows an auction to be held at the wire center level, even in a study area where no disaggregation plan has been adopted. Increasing the reserve for each wire center above its pro-rata share creates “room” for the auction to distribute more support to some wire centers, and less to others. The second reserve at the study area level ensures that the auction cannot result in an increase in support for the study area as a whole. Once again, in each round of the auction the administrative software will not allow any bidder to submit a bid that exceeds the wire center reserve. However, because the sum of the wire center reserves is greater than the aggregate reserve at the study area level, it is possible that the sum of the individual bids, even though each of them meets the relevant wire center reserve, might exceed the study area reserve. In this case, the auction will fail.

## **7. The Contract.**

If the reserves have been met, the auction will select a provider of universal service for the area, and determine the flat annual amount of support that provider will receive. The rights and obligations of the winner will be memorialized in a contract. The state commission would execute the contract with the winning bidder and that contract will spell out the obligations of the winning bidder, consistent with the RFQ. As with the RFQ, the Commission should develop a “model” contract in collaboration with the state commissions, which would detail the supported services and other requirements to which the winning bidder would be subject.

The state commission would monitor and enforce the winner's obligation according to the terms of the contract. The winning bidder would be required to honor all provisions of the contract and, as in any other government procurement, the consequences of any breach would be spelled out in the contract. Depending on the severity of the breach, such terms could include penalties for non-performance, forfeiture of support received or any bonds posted, termination of the contract, and, ultimately, debarment from participation in future auctions.<sup>25</sup> The support amounts would be paid out over time, perhaps quarterly, rather than in a lump sum, to maintain another, ongoing incentive for the winner to maintain its performance.

Similarly, the Commission would retain its authority to audit, investigate, and remedy fraud and abuse. This includes the Commission's delegated audit authority to the Universal Service Administrative Company ("USAC") in 47 C.F.R. § 54.707 and the Commission's own general audit authority in 47 U.S.C. § 220(c). Continuing Commission enforcement activity can also be expected as part of the Commission's enforcement and forfeiture authority in 47 U.S.C. § 403 *et seq.* and 47 U.S.C. § 501 *et seq.*

In the initial rounds, the contract should be for a five-year term. Verizon proposes that the Commission determine the length of the contractual term, rather than the states, given the trend toward national service plans, particularly by wireless companies. On the one hand, the contract must be long enough to make the auction attractive to bidders and to give the winning bidder adequate opportunity to earn a reasonable return on its investment. On the other hand, the process should not create a "universal service incumbent" which excludes ETCs that do not win the bid from a meaningful opportunity to bid again, particularly when technologies continue to

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<sup>25</sup> The Commission would retain control of general, carrier-specific debarment proceedings – particularly if debarment from participating in future auctions is contemplated beyond a single study area or state.

develop and the efficiencies of providers continue to evolve. Under the circumstances, a five-year term would seem to balance these two considerations.

Once the auctions have been completed and the contracts executed, the Commission should publish the auction results on a website, including the identity of the winning bidders and the amount of the winning bids. This information would be available for use by any bidder in formulating bids in future auctions.

#### **8. Post-Auction Process.**

Auctions – by definition – produce winners and losers, and under Verizon’s proposal an ETC receiving support may no longer continue to do so if it does not win the auction. An ETC that does not win the bid, of course, will have the opportunity to bid again when the contract with the winning bidder expires, or in the meantime could submit bids in auctions for other areas. Nevertheless, there are issues that the Commission should consider when an ETC loses support, including transition periods, carrier of last resort requirements, and other regulatory obligations, although these issues may vary depending on whether the losing ETC is a wireless or wireline provider.

##### **(a) Transition periods**

As discussed above, the first group of auctions would occur in areas with at least two wireless ETCs. In these cases, there would be no need for a transition period to implement the auction results. First, the winning wireless ETC would already have an obligation to serve the area, so no transition should be necessary for that carrier to fulfill its new obligation under the contract. Also, the losing wireless ETCs likely would continue offering service in the area. In any event, in most areas where wireless ETCs receive support today, consumers can choose from among multiple wireless providers, many of which are unsubsidized. According to the

Commission's most recent data, 98 percent of the total U.S. population live in counties served by three or more different wireless providers, 94 percent live in counties served by four or more wireless providers, and 51 percent live in counties served by five or more wireless providers.<sup>26</sup>

If the Joint Board decides that a transition is appropriate for smaller wireless ETCs that do not win the auction, however, the Joint Board could consider a short transition with a gradual reduction of support over time. This transition would phase out support to carriers over the four quarters following the auction. For example, support to a smaller wireless carrier that does not win the bid could be reduced from the ETC's pre-auction support level by 25 percent in the first quarter following the auction, by 50 percent in the second quarter, and by 75 percent in the third quarter. In the fourth quarter following the auction, support to the ETC would be eliminated.

The wireline-only auctions may require a different approach. Although wireline auctions will take place in relatively few areas, some of the auctions could result in the incumbent LEC losing the auction to the wireline competitive ETC. In that event, a more lengthy transition -- perhaps one year -- may be necessary for the winner to assume its new obligations from the incumbent LEC. For the same reason, a transition may be necessary if the Joint Board and the Commission determine in the future to move to a general auction in which all ETCs, both wireless and wireline, compete to become the single universal service provider in the area.

In these cases, the Joint Board and the Commission should allow for a transition that gives state commissions the flexibility to ensure that there are no service gaps before the new universal service provider assumes the obligation to provide supported services throughout the auction area consistent with its contract. Such transition issues are similar to the procedures state commissions currently have in place to allow ETCs to relinquish their ETC status under 47

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<sup>26</sup> See *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, Eleventh Report, 21 FCC Rcd 10947, 10966 (¶ 41) (2006).

C.F.R. § 54.205. State commissions likely will require the winning ETCs to propose an implementation plan.

**(b) Carrier of last resort requirements**

In some states, incumbent LECs have carrier of last resort (“COLR”) obligations, which are defined by state law and vary significantly from state to state. As discussed above, under Verizon’s proposal, auctions will start in areas with multiple wireless ETCs and then in the few areas with multiple wireline ETCs. Thus, in the majority of areas Verizon’s auction proposal would have no effect on incumbent LEC’s COLR obligations.

Nonetheless, in those limited circumstances where an incumbent LEC is not the winning bidder and thereby loses universal service support, it could affect the incumbent LEC’s COLR obligations.<sup>27</sup> The extent of this effect is difficult to predict because COLR obligations vary under state law. For example, in some states, there is no COLR obligation in state law. In others, any obligation may not apply where another provider offers service or where the incumbent no longer receives universal service support and cannot recover the cost of service through retail rates. In still other situations, the incumbent LEC’s loss of universal service support may result in the incumbent’s COLR obligation being preempted under federal law. *See* 47 U.S.C. § 253(d).

At the time of adoption of an auction mechanism, the Commission should consider in consultation with state commissions whether it is appropriate to relieve some or all of an incumbent LEC’s COLR obligations in the event it loses high cost support. This process would

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<sup>27</sup> An incumbent LEC could be the losing bidder in a wireline auction for one of the few areas with at least two wireline ETCs. No further auctions affecting incumbent LECs would be held until after Joint Board and the Commission reviews the experience with auctions and decide next steps.

have to consider the specific requirements of applicable state law as well as federal preemption standards. The step-by-step approach Verizon has proposed will provide adequate time to do so.

**(c) Other regulatory obligations**

As is the case with COLR requirements, there are other regulatory obligations to which incumbent LECs must currently adhere that should be re-evaluated in the event the incumbent loses high cost support as a result of the auction process. For example, under Section 251(c)(3) of the Act, an incumbent LEC must provide unbundled access to its network. However, such access would no longer be warranted in a geographic area, and the impairment standard under section 251(c)(3) would not be met, when a competitive ETC is able to offer service ubiquitously in that same area and has undertaken a contractual obligation to do so.<sup>28</sup> Similarly, an incumbent LEC's obligation under Section 251(c)(4) to resell telecommunications services offered at retail would no longer be in the public interest if another carrier has assumed the incumbent's universal service obligations. The Commission should make affirmative findings to this effect (and preempt any similar requirements under state law) so that qualified bidders can plan accordingly in submitting their bids. Such findings would have no impact on the financial incentives of an incumbent LEC that loses high-cost support to offer wholesale services to the winning bidder on a commercial basis.

There also should be no need to regulate the retail prices of the incumbent LEC that has lost an auction. The incumbent LEC will have to compete for customers that the winning bidder has won the right to serve, and the incumbent LEC will be unable to do so successfully by raising prices, particularly when prices for telecommunications services have declined steadily.

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<sup>28</sup> Cf. *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. §160(c) in the Omaha Metropolitan Statistical Area*, WC Docket No. 04-223, Memorandum Opinion and Order, 20 FCC Rcd 19415 (2005).

In addition, as noted above, increased competition across multiple platforms will continue to constrain the incumbent LEC's prices in both rural and non-rural areas.

## **10. Review and Next Steps**

After completion of the wireless and wireline auctions in Step 3, the Commission should move to Step 4 under Verizon's proposal, which would involve opening a proceeding to review the experience with auctions, assess competitive developments, and determine the next steps in the transition. As a result of this review, the Commission may decide to take additional action.

First, the Commission should consider whether to extend the use of auctions more widely. In particular, it should consider holding general auctions, in which both wireless and wireline ETCs participate, to select a single provider of universal service for a given area. The combinatorial auction described herein is designed to perform well in the context of a general auction. However, if the Commission elects this approach, it will have the opportunity to reassess the bidding process based on its experience as well as the terms of the RFQ and resulting contract.

Second, the Commission should consider extending the use of representative bidding more widely. With the completion of the wireless and wireline auctions, the Commission will have gained valuable data that can be analyzed statistically to test whether, and under what conditions, the wireless and wireline outcomes differ, based on market observations rather than on competing claims about wireline and wireless costs. This statistical analysis could be used to adjust the support for an incumbent LEC in areas where support has not yet been determined by an auction (such as where there is no qualified bidder other than the incumbent LEC or where an auction was held but failed). Under this approach, the support for the incumbent LEC would be

the lesser of either: (i) the support it receives under the existing system; or (ii) the amount of support predicted by the statistical analysis conducted using data from the prior auctions.

## **II. The Commission Should Permit Incumbents To Retarget Current Support Below The Study Area Level.**

As Embarq has correctly noted, a carrier's per-line costs can vary significantly within a single study area and even within a single wire center.<sup>29</sup> For example, a more densely populated town center may be surrounded by countryside where customers are more dispersed, and where costs are much higher. When competitors win customers in the town (the so-called doughnut hole), the incumbent LEC is left serving customers in the most costly outlying areas (the doughnut) with little or no universal service support.

While the issue Embarq has identified may be a problem in some locations, the solution is not the development of a nationwide cost model to calculate per line costs on a wire center or sub-wire center basis, as Embarq proposes. Developing a new cost model would be a lengthy and contentious process that would likely be subject to legal challenge and would not improve the sustainability of the high cost fund. Instead, incumbent LECs should have the option to seek state commission approval of a disaggregation plan that would allow the incumbent to retarget – but not increase – current high cost support between lines within its study areas.

In 2002 the Commission presented rural carriers with three disaggregation options, or “paths,” in its *Rural Task Force Order*.<sup>30</sup> Under Path 1 a carrier could do nothing and not

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<sup>29</sup> See Letter from Brian K. Staihr, David C. Bartlett, and Jeffrey S. Lanning, Embarq, to Commissioner Tate and Commissioner Baum, Federal-State Joint Board on Universal Service, WC Docket No 05-337, CC Docket No. 96-45 (April 12, 2007) (“*Embarq Proposal*”).

<sup>30</sup> See *Federal-State Joint Board on Universal Service*, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256, 16 FCC Rcd 11244, 11302-09, ¶¶ 144-164 (2001) (“*Rural Task Force Order*”).

disaggregate. 47 C.F.R. § 54.315(b). Path 2 gave carriers an opportunity to seek approval of a disaggregation and targeting plan with their state commissions. 47 C.F.R. § 54.315(c). Path 3 gave carriers an opportunity to self-certify a disaggregation and targeting plan to their state commissions that either (1) disaggregated support to the wire center level; or (2) disaggregated support into no more than two cost zones per wire center that were reasonably related to the cost of providing service in those zones. 47 C.F.R. § 54.315(d).<sup>31</sup> The deadlines for carrier disaggregation under each path expired several years ago, and, with very few exceptions, carriers chose Path 1, electing not to disaggregate. *Recommended Decision*, ¶ 6.

Providing both rural and non-rural carriers with an opportunity to seek state commission approval of a disaggregation plan would help solve the issue Embarq identifies. Under this approach, incumbent LECs could seek approval from their state commissions to disaggregate support in their study areas to either the wire center level or no more than two cost zones per wire center. This is a combination of parts of Path 2 and Path 3 in the *Rural Task Force Order*. Limiting the disaggregation and retargeting to either wire centers or no more than two cost zones per wire center – and requiring approval from the state commissions – is appropriate to prevent gerrymandering of the zones for auction purposes. A two-zone limit also imposes a reasonable constraint on the number of potential areas for auction, which would make the auction process more manageable. At the same time, allowing for disaggregation of support into two zones per wire center would more equitably parse support between the “doughnut and the hole” – *i.e.*, the town or the city and the surrounding area – as some commenters propose.

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<sup>31</sup> The Commission also adopted additional procedures that carriers must follow under Paths 2 and 3. These procedures generally attempt to ensure that a carrier’s disaggregated support is equal to the total support available in the study area without disaggregation; the ratio of per-line support is publicly available; and support is recalculated when the carrier’s total annual support amount changes. 47 C.F.R. § 54.315(e).

Given the existing pressures on the high cost fund, however, it is critical that any reopening of the disaggregation window be accomplished in such a manner so that retargeting of high cost subsidies does not increase the size of the fund. Incumbents that seek approval of a disaggregation plan should be permitted to retarget their support but only so that it sums up to the same amount of support they receive on a study area level. This is the same requirement that the Commission imposed when the window was first opened by the *Rural Task Force Order*.

As before, incumbents seeking to disaggregate would get approval from their state commissions. Other carriers that object to any particular disaggregation proposal could raise their objections with the state commission. This approach would avoid the need for the Joint Board and the Commission to develop new cost models or specific disaggregation methodologies, which could take years and significant resources without adding anything to the process.

If a carrier is permitted to disaggregate and retargets support in an area that is nominated for auction in the manner described above, the geographic areas for auction would be the approved wire centers or zones within the study area. If a disaggregation plan is not approved at the time of an auction, then the geographic areas subject to auction should be wire centers, and the reserves should be calculated as discussed above.

### **III. The Commission Should Consider Whether To Use A Portion Of The Savings Realized From The Auctions To Make Support Available to New Areas That Currently Do Not Receive Such Support.**

Many areas of the country do not receive high cost support today. In most of those areas, this is an appropriate result. The incumbent LEC already offers service without support, and there is frequently at least one competitor (typically a wireless provider) that serves without subsidy. It is particularly difficult to justify increasing the high cost fund (and consumer USF

surcharges) in order to provide support to those areas when consumers are already receiving service without subsidies.

Nonetheless, if the Joint Board and the Commission conclude that some process is necessary to determine whether there are any areas that should receive support but currently do not, and subsequently target support to any given areas, the Joint Board and the Commission could use some of the efficiency gains from the auctions to accomplish this goal. Verizon's auction proposal would create significant savings for consumers, and a large portion of those savings should be returned to consumers in the form of lower USF surcharges on their bills. A certain percentage of the savings, however, could be set aside to support service in any high cost areas that are not funded today but that the Commission determines warrant a subsidy going forward. The amount set aside as a result of the auctions could be placed in a special fund that would provide a "budget" for the amount of new support made available in that year. This approach would accomplish two objectives: (1) it would direct support to those few areas that do not receive support today but need it to provide service to consumers going forward; and (2) it would ensure that consumers are paying no more than necessary in USF surcharges by using only a portion of the savings from the auctions to distribute this new subsidy.

As discussed above, data on the results of the initial auctions should be used to develop a statistical analysis, which could be used to estimate the bid that would be required to win an auction in these "new" areas that the Commission determines would not be adequately served absent USF support going forward, taking into account the characteristics of the area, such as size and density. These estimates could be used to identify and prioritize any such areas for the receipt of new high cost support from the special fund each year.

The statistical analysis would rank any such “new” areas from highest to lowest, in the order of estimated support per subscriber (*i.e.*, the flat amount per area divided by the number of subscribers in the area, which would be wire centers, or, in study areas where a disaggregation plan had been adopted, zones within wire centers). The Commission would then open a window for these areas to be nominated for auction. An auction would be held to select a provider of universal service for the area, and to determine a flat amount of support for that provider. These auctions could be general auctions (in which any ETC, wired or wireless, could participate) or wireless only (in order to ensure that the funds provide support for wireless services in areas that lack wireless service today).<sup>32</sup>

The Commission would then proceed through the rank-ordered list of any such areas, starting at the top and working its way down, holding auctions in those areas that have been nominated, and continuing until it awarded all of the dollars available in the special fund.<sup>33</sup> The reserves for these auctions would be based on the bids predicted by the statistical analysis. In areas where an auction is completed, the winning bidder would enter into a contract with a term (Verizon has suggested five years) and receive support in the amount of its bid. In areas where no competitive ETCs have been certified to bid against the nominating ETC, or where the auction failed, that ETC would enter into a contract and receive support in the amount of the reserve, but the contract would have no term, and the area could be nominated again in any subsequent bidding cycle.

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<sup>32</sup> A wireless ETC could nominate an area for a wireless-only auction if no wireless carrier – subsidized or unsubsidized – served that area.

<sup>33</sup> In order to administer these auctions efficiently, they could be held together in groups, rather than sequentially. Because the reserve for each auction would be known in advance, the Commission could do this while still ensuring that the results would be consistent with the budget.

This process is similar to how the Commission's rules work to allocate support within the schools and libraries program, which is subject to a cap. Under the E-rate rules, USAC calculates the total demand for support as determined by the applications received pursuant to 47 C.F.R. § 54.507(g). If demand exceeds the cap, funding is then prioritized into essentially two categories. The first priority is to fund telecommunications services, voice mail, and Internet access for all schools and libraries. The second priority is to fund internal connections, starting with the most economically disadvantaged schools and libraries and generally working down a rank-ordered list of applicants until the funding is exhausted. This E-rate process works well and reflects the judgment of Congress and the Commission to award funds from a program of at least equal importance as the high cost program within a reasonable budget based on established priorities. A similar approach to high cost funding in previously unfunded areas could work to meet the needs of consumers in these areas.

## **EXHIBIT 1**

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February 9, 2007

Hon. Deborah Taylor Tate  
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**Re: In the Matter of Federal-State Joint Board on Universal Service, High Cost Universal Service Support, WC Docket No. 05-337; In the Matter of Federal-State Joint Board on Universal Service, CC Docket No. 96-45**

Dear Commissioner Tate and Commissioner Baum:

This proceeding is a unique opportunity to put in place meaningful reforms that will stabilize the universal service fund, create better incentives for companies to serve rural America in efficient and innovative ways, and lower the cost of access to communications services for all consumers. The FCC and the Joint Board have shown constructive leadership on universal service reform in order to bring benefits to consumers and stabilize the fund. It is the right time for these important changes. More than ever before, consumers of communications services have options – especially from new offerings by cable, voice over IP, and wireless providers – and they are taking advantage of them. But at the same time, consumers are faced with increasing costs as they continue to support a universal service system that is growing larger every year.

The need for reform is becoming more urgent as the high cost fund now surpasses the \$4 billion mark, with approximately \$1 billion flowing to competitive eligible telecommunications carriers (“CETCs”) annually. A solution is needed, and the answer is a system that not only controls the growth of the fund, but provides more rational incentives to providers and ensures access to important services. Reforms must also create and sustain an environment that

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promotes innovation and efficiency gains and makes sure that consumers receive the benefit of these innovations.

For all these reasons, Verizon and Verizon Wireless (hereinafter "Verizon") propose that reform should involve the use of auctions or competitive bidding as the means to better target universal service support. This letter proposes the basic structure for and path to such auctions. Attached is an Appendix that outlines in greater detail one possible way to design and structure such auctions, although other approaches and designs may be appropriate and workable.

The reform plan proposed here is a careful and measured approach. It suggests immediate action to address the most pressing concerns. It proposes implementing competitive bidding quickly and on a limited basis, and where it can provide the greatest benefit. It then gives the Joint Board and the Commission the flexibility to assess the results of these auctions, and to decide whether to extend their use more widely.

Verizon's proposal is as follows:

**First**, stabilize the fund by placing a reasonable cap on current support levels that is designed to control the growth the fund has experienced in recent years, introduce better incentives for all ETCs, and prepare for further reform;

**Second**, establish an administrative framework for competitive bidding, which would include the auction design;

**Third**, implement auctions to allocate funding for wireless CETCs. These auctions would be held in areas that currently support more than one wireless CETC, and would select a single wireless CETC to receive support. Once these auctions have been completed, a separate set of auctions should be held for wireline ETCs in areas where there is currently at least one wireline CETC, to select a single wireline provider of universal service for the area.

**Fourth**, after some reasonable period, the FCC would review the experience gained with the CETC auctions, and consider developments in technology and rural markets to determine an appropriate method for extending market-based efficiencies to additional areas. These methods could include:

- A single auction in which both wireline and wireless ETCs would participate, which would select a single universal service provider for each area.
- The use of representative bidding, based on statistical analysis of the auction results, to adjust support for ETCs whose support had not yet been determined by an auction.

## **STEP ONE: STABILIZE THE FUND BY PLACING A REASONABLE CAP ON HIGH COST SUPPORT AT CURRENT LEVELS**

As commenters in this docket and many others have observed repeatedly, the high cost fund has grown at an alarming pace in recent years and this rate of growth threatens both the viability and the long term sustainability of the fund.<sup>1</sup> It is also increasing the amounts that consumers must spend on communications services.

A reasonable cap on the high cost fund is critical for at least three reasons.

First, the growth in the fund threatens core universal service goals if not contained. The USF contribution factor has risen dramatically in recent years. In 1998, the contribution factor averaged 3.16 percent and has increased more than three-fold since, now standing at 9.7 percent.<sup>2</sup> As the Fifth Circuit predicted more than five years ago, “excess subsidization in some cases may detract from universal service by causing rates unnecessarily to rise, thereby pricing some consumers out of the market.” *Alenco Communications v. FCC*, 201 F.3d 608, 620 (5th Cir. 2000).

Second, the current high cost mechanisms do not take into account the benefits and availability of new competition. Consumers increasingly view cable telephony, VoIP, and wireless as viable alternatives to wireline phone service. Competition from these intermodal providers has increased substantially over the last several years and has brought consumers exciting new services.<sup>3</sup> The spread of new intermodal competition in various ways and degrees into all parts of the country has advanced universal service goals tremendously. As intermodal competition thrives – and drives down prices – subsidies should be getting smaller or even disappearing altogether in areas where competitive carriers operate without subsidy. But just the

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<sup>1</sup> The Universal Service Administrative Company (“USAC”) now projects that in the first quarter of 2007 the high cost fund will top \$4.3 billion. See USAC, *HC02 - High Cost Support Projected by State – 1Q2007*, <http://www.usac.org/about/governance/fcc-filings/2007/quarter-1.aspx>. This is more than double the size of the fund just seven years ago. See USAC, *Universal Service Fund Facts-High Cost Program Data, 1998-2005 Disbursements by Calendar Year (2005)(Unaudited)*, <http://www.universalservice.org/about/universal-service/fund-facts/fund-facts-high-cost-program-data.aspx#calendar>.

<sup>2</sup> See FCC, Industry Analysis & Technology Division, Wireline Competition Bureau, *Trends in Telephone Service, Table Compiled as of April 2005*, at Table 19.16 (June 21, 2005); see also FCC, *Proposed First Quarter 2007 Universal Service Contribution Factor*, [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DA-06-2506A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DA-06-2506A1.pdf).

<sup>3</sup> See Comments of Verizon and Verizon Wireless at 3-10, WC Docket No. 05-337 (filed October 10, 2006) (“Comments of Verizon”).

opposite is happening. Subsidies are increasing even as competition explodes and rates continue to fall over time.<sup>4</sup>

Third, a reasonable cap on support at current levels will put in place better incentives for all carriers and allow them to adapt to the new marketplace. The high cost fund in its current form is a product of an earlier time, before competition and technology transformed the industry. Today, these forces are compelling all providers to become more efficient and more creative, and to develop new services and new sources of revenue. Yet the current structure of the fund discourages supported companies from transforming themselves in a way that advances both their own long-term interests and those of the customers and communities they serve. Capping support would begin the process of introducing market incentives for innovation and efficiency – a process that would subsequently be carried forward through competitive bidding.

For example, support from the rural high cost fund is based on a comparison of each ILEC's revenue requirement per line with a nationwide benchmark. This may have made sense at one time in a less competitive market, but in today's dynamic market, where the number of traditional telephone lines is shrinking, it is creating anomalous results and bad incentives:

- Under the current rules, as a rural ILEC loses lines, its cost per line increases. Because CETCs receive the same amount of support per-line as the ILEC, over time this system also increases the per-line support for each CETC – even though the CETC's per-line cost is, if anything, falling as it gains customers.
- Each rural ILEC can increase its support if its cost per line grows faster than the national average. This creates an artificial incentive that may bias ILEC decision-making, since the system rewards higher expenditures and penalizes cost reduction.
- The ILEC portion of the high cost loop fund is capped, but that cap produces unanticipated effects, creating winners and losers among the ILECs, and a misalignment of incentives. When the total amount of support would otherwise push the fund above the cap, USAC raises the nationwide benchmark in order to ensure that disbursements to rural ILECs do not exceed the cap. This has the effect of eliminating support for some study areas where per-line costs had previously been just above the benchmark. The application of the cap thus has a dramatic impact on the support to those ILECs. Yet ILECs with higher costs – whose spending may have caused the fund to exceed the cap – have no incentive to change their behavior.

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<sup>4</sup> The Progress & Freedom Foundation, *Digital Age Communications Act: Preliminary Proposal of the Universal Service Working Group*, at 9-10 (Rel. 1.0, Oct. 2005) (footnote omitted) ("Although the costs of providing telephone service have fallen significantly over time, [Universal Service Fund] spending has increased from \$15 per household in 1993 to \$52 per household in 2003.").

For these reasons, as the first step in the reform process, the Commission should stabilize the fund and create better incentives for all ETCs. This can be done by placing a reasonable cap on the fund, based on current support levels. Support would be capped for each study area, with two separate caps, one for wireline ETCs and one for wireless ETCs.

The cap on support for wireline ETCs in each study area would be the total amount received by all wireline ETCs in that area in a base year, and would include support from all federal mechanisms that provide high cost funding (the high cost loop fund (both rural and non-rural), local switching, interstate access support (IAS), and interstate common line support (ICLS)). If more than one wireline ETC receives support in a study area, the support amount would be apportioned among them based on their relative lines.

The cap on support for wireless ETCs in each study area would be the total amount received by all wireless ETCs in that area in a base year from all the support mechanisms listed above. In a study area where there is more than one wireless ETC, the capped support would also be apportioned among them based on their relative lines.

In order to reflect changes in the overall need for universal service in each study area, each year the total wireline cap and the total wireless cap in the study area would be adjusted by the percentage change in the number of households in the area.

The particular structure proposed here, two separate funding limits, applied at the study area level, will accomplish two important goals: (1) It will end the churn in support – among study areas, and between wireline and wireless ETCs – caused by the current rules. As explained above, the current operation of the high cost loop fund is producing winners and losers as lines and support amounts change each year. The more targeted cap described here would minimize those shifts and stabilize wireline support for each study area; (2) By applying separately to wireline and wireless ETCs, the proposal would curtail what has been the largest source of growth in the USF in recent years – new funding to CETCs.

## **STEP TWO: ADOPT THE AUCTION DESIGN AND FRAMEWORK**

After the cap is in place, the Commission should adopt a framework for the auction process. This framework would include administrative arrangements as well as the design of the bidding process itself. For auctions to be successful, proper design is critical. Although the exact details of an auction may be flexible, the following are the key aspects which are necessary in this context:

### **Areas For Auction**

As part of the framework, the Commission should choose the geographic areas for which auctions would be held. These areas would then serve as the “building blocks” which bidders could, if they choose, package together in the flexible bidding process described below. Auction areas should be small enough to allow the auctions to target support where it is most needed, but

not so small as to create unnecessary complexity. Although other areas of similar size may be appropriate, the most logical choice among the current alternatives (at least initially) is wire centers. These areas tend to reflect information about where rural populations are clustered, and thus distinguish between high and low density areas, since ILEC switches have generally been located in population clusters, for example in the center of a small town. Although CETCs have different network topologies, they have also tended to locate their facilities in population clusters for similar reasons, and these areas therefore tend to be correlated with ILEC wire centers. For this reason, wire centers are a reasonable choice for the areas to be auctioned.

### **Package Bids**

The Commission should adopt an auction design that allows bidders flexibility to submit bids for individual wire centers, or bids for packages of wire centers. An auction with this package bidding feature is called a “combinatorial” auction.

Each bidder will be in the best position, based on its own business plan and market forecasts, to determine whether it is better to bid on individual areas separately, or in a group or package. By designing the auction this way, the Commission and the Joint Board would also gain the flexibility to use relatively small, targeted areas, such as wire centers, as the building blocks for this process. In effect, rather than deciding itself how these areas should be grouped together, the combinatorial auction allows the Commission to obtain this information from the market, through the decisions of the bidders.

By allowing for smaller building blocks such as wire centers, the flexible auction design would also provide more precise targeting of support, and address concerns about “cherry-picking,” without ballooning the fund. At the same time, it would give CETCs more flexibility to plan their market entry in ways that fit their technologies and business plans.

### **Flat Payments To Auction Winners**

Auctions for high cost support should be structured around bids for a flat amount of support. This approach offers several advantages. First, it eliminates the need to apportion support among different providers, avoiding controversial issues regarding whether support should be provided to primary or second lines, wireless handsets, or on some other basis. It also eliminates one of the main sources of growth in the fund in recent years: the addition of multiple handsets by each household.

Each bid can be a flat amount of subsidy for a given area, or package of areas. This format is simpler and puts the responsibility for estimating demand in a given area where it belongs – with the bidders themselves. ETCs are in a much better position than the auction administrator to know their own revenue expectations and cost structures. In preparing their bids, ETCs will evaluate the competitive landscape and project their own growth should they win the bid to provide supported services in an auctioned area.

Finally, by providing support in a flat amount, this approach avoids distorting the incentive each ETC would have to gain or lose a customer. The benefit to any ETC of gaining a customer would simply be the additional revenue the ETC would obtain from that customer. Further, the auction gives the Commission, for the first time, a means to set the flat support at the amount that is just sufficient to make an ETC willing to undertake the burden of the universal service responsibility. Taken together, these features ensure that the proposed framework would not distort competition at the margin among ETCs in an area and would not prevent competition from occurring in an area that would otherwise have supported it.

### **Auction Reserves**

Any auction for universal service support should include a reserve amount, which is the maximum bid that would be accepted. Reserves are commonly used in auctions to limit the range of possible outcomes. In the universal service context, the reserve ensures that the support determined by the auction is no greater than the amount of support provided prior to the auction.

The reserve reflects the limit of what the auction administrator would be willing to pay. By selecting the most efficient provider, and identifying the support amount that provider is willing to accept, the auction offers the best opportunity to obtain universal service on terms most advantageous to the public. However, if no bid lower than the current support amount is submitted, the administrator is better off reverting to the existing support arrangement, which would continue in an auctioned area where the reserve is not met.

The auction design included here suggests two reserves that would each have to be satisfied: one that applies at the study area level, and a second reserve that applies at the wire center level. The aggregate reserve at the study area level would be the capped amount established at the beginning of the process. The wire center reserve should be based on a pro-rata distribution of the study area support to each wire center, but with some additional amount added to allow for the auction results to direct more support to higher cost wire centers, and less to lower cost ones. This means that the sum of the individual wire center reserves in a study area would be greater than the aggregate reserve for the study area as a whole. However, the separate imposition of the study area reserve would ensure that the auction cannot result in an increase in support for any study area.

### **STEP THREE: AUCTIONS FOR WIRELESS AND WIRELINE CETCs**

It makes sense for the Commission and the Joint Board to start, as an initial step, with auctions for wireless CETCs in areas in which multiple wireless CETCs currently operate and receive support. This would be followed by a parallel set of auctions for wireline ETCs, in areas where at least one wireline CETC has been designated.

Wireless CETCs operate on fundamentally different cost structures than ILECs – a fact that has long made the Commission’s portability rules, which tie CETC support to the ILEC’s per-line costs, a primary target for reform. Starting the competitive bidding process with

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wireless CETCs would immediately help to connect wireless CETC subsidies with the actual cost of providing wireless services, as wireless CETCs bid against each other for support in those areas eligible for auction. A wireless CETC auction will ensure that affordable wireless service is available in high cost areas, and that such service is provided by the most efficient wireless provider.

Using an auction to select a single wireless CETC in each area is an important step toward rationalizing distributions from the fund. Support to CETCs (primarily wireless carriers) has caused substantial growth in the fund over the last few years. In 1999, wireless carriers received approximately \$500,000 in high cost support.<sup>5</sup> By 2002, wireless CETC support had increased to approximately \$45 million. *Id.* In 2005, wireless CETCs received more than \$600 million in high cost subsidies and through May of last year, that number increased to more than \$800 million. *Id.* At this rate, CETCs will soon account for approximately 25 percent (if not more) of all high cost subsidies. While in many areas a wireless CETC may ultimately prove to be the most efficient provider of universal service, funneling more and more support to fund duplicative networks in high cost areas should not continue. With wireless carriers and their customers now paying a significant share of the federal USF,<sup>6</sup> wireless consumers will be harmed by continual increases in USF assessments. The public interest will be served by stabilizing the universal service fund and directing wireless subsidies to the most efficient providers through the use of competitive bidding.

The Commission should also allow for a reasonable transition for wireless CETCs that are receiving support today, but do not receive support after the auction. The ILEC, and any wireline CETC in that area, would continue to receive support on the basis of the capping mechanism established in Step 1.

Once the wireless CETC auctions have been completed, the Commission should also nominate for auction any area where there is at least one wireline CETC. In these auctions ILECs and wireline CETCs would participate, and each auction would select a single wireline provider of universal service for the area. The reserve for this auction would be the total amount of support received by wireline ETCs in the area prior to the auction. These auctions would be held in a relatively limited number of areas, since wireline ETCs are designated in about 90 study areas today.

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<sup>5</sup> See USAC, *Distribution of High Cost Support Between Wireless and Wireline CETCs*, [http://www.universalservice.org/\\_res/documents/about/pdf/fundfacts-High-Cost-Support-Between-CETCs-1998-2006.pdf](http://www.universalservice.org/_res/documents/about/pdf/fundfacts-High-Cost-Support-Between-CETCs-1998-2006.pdf).

<sup>6</sup> See Alltel Ex Parte Presentation, CC Docket No. 96-45 (Oct. 20, 2006) at Attach. at 12.

**STEP FOUR: THE COMMISSION AND THE JOINT BOARD REVIEW AUCTION EXPERIENCES AND DECIDE NEXT STEPS**

After some reasonable period, the FCC should initiate a review of its experience with the wireless and wireline CETC auctions. The Commission would consider the development of markets in rural areas and changes in technology and determine next steps. Options would include:

(1) **Conducting general auctions.** The Commission could decide to move forward with general auctions in which both wireline and wireless ETCs would participate. Such an auction would be held in each high cost area where there is at least one CETC, and would select a single universal service provider for the area to receive the support determined by its bid.

(2) **Using representative bidding.** The Commission could use the results of auctions, where they have been held, to adjust the support of ETCs whose support has not yet been established by an auction. This use of “representative auctions” is an established practice in other applications.<sup>7</sup> Once it has assembled a representative sample of results from the areas where bidding has been completed, the FCC could commission an econometric study that would relate the auction results to the characteristics of a high cost area, such as size and density. This econometric model would estimate the likely results of an auction in an area with given characteristics.

Results from wireless auctions could be extended to wireless CETCs operating in areas where auctions had not yet been completed. Results from wireline auctions could be applied to wireline ETCs whose support had not yet been set by auction.

The support amount for these ETCs would then be set at the lower of the capped support amount or the amount estimated from the auction results. If an ILEC believes that the estimated support should not be implemented in a given area, it would have the option of nominating the area for an auction.

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<sup>7</sup> See Comments of Verizon and Verizon Wireless at 27-28.

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In its present form, universal service funding provides companies with the wrong incentives, discourages innovation, and has increased the amounts consumers pay for communications services. The approach outlined here will help remedy these problems and transform the fund into an efficient, market-oriented system that advances the core universal service objectives.

Sincerely,



Attachment

cc: Chairman Kevin J. Martin  
Commissioner Jonathan Adelstein  
Commissioner Michael J. Copps  
Commissioner Robert M. McDowell  
Hon. Lisa Polak Edgar  
Hon. Larry S. Landis  
Hon. John D. Burke  
Hon. Billy Jack Gregg  
Daniel Gonzalez  
Michelle Carey  
Ian Dillner  
Scott Bergmann  
Scott Deutchman  
John Hunter  
Thomas Navin  
Donald Stockdale  
Amy Bender  
Jeremy Marcus  
Vickie Robinson  
Ted Burmeister  
Katie King  
Gary Seigel  
Phil Nyegaard  
Jacob Williams  
Jennifer A. Richardson  
Peter Bluhm  
Peter A. Pescosolido  
Joel Shifman  
Jeff Pursley  
Lori Kenyon  
Aram Shumavon  
Eric Seguin  
Brad Ramsay  
David Dowds  
Michael H. Lee  
Philip McClelland  
Denise Parrish

## Appendix

### Modernizing Universal Service A Design for Competitive Bidding

This appendix illustrates one way the Joint Board and the FCC could implement a competitive bidding process for universal service obligations.

#### 1) Summary

The auction design outlined in this appendix would introduce a more efficient framework for the distribution of support to universal service providers in high cost areas. This could be done in a series of steps:

First, immediate measures would be taken to stabilize the fund, and to introduce better incentives for all ETCs, by capping support based on current levels.

Second, the FCC would adopt a framework for competitive bidding, including administrative arrangements and the design of the bidding process itself.

Third, to initiate the use of competitive bidding, the Commission would prompt auctions in high cost areas where there are multiple wireless CETCs. These auctions would select a single wireless provider of universal service for each area. The incumbent local exchange companies in those areas would continue to receive support based on the capping mechanism. Once the wireless CETC auctions had been completed, the FCC would also nominate any area where there is at least one wireline CETC. These auctions would select a single wireline provider of universal service for each of those areas.

Fourth, after some reasonable period, the FCC would review the experience it had gained with the CETC auctions, and consider developments in technology and rural markets to determine an appropriate method for extending market-based efficiencies to additional areas. These methods could include:

- A single auction in which both wireline and wireless ETCs would participate, which would select a single universal service provider for each area.
- The use of representative bidding, based on statistical analysis of the auction results, to adjust support for ETCs whose support had not yet been determined by an auction.

## 2) Stabilize the Fund

The FCC should start by taking immediate steps to stabilize the fund, bring fund growth under control, and put in place incentives for all ETCs to adapt to changes in the market and become more efficient. This would establish a starting point for the implementation of competitive bidding.

Support would be capped for each study area. There would be two separate caps in each study area, one for wireline ETCs and one for wireless ETCs.

- **Cap for wireline ETCs.** The cap on support for wireline ETCs would be the total amount received by all wireline ETCs in the study area in a base year (which could be the most recent twelve-month period for which data are available when an order becomes effective). The cap would include receipts from all programs for high cost areas (the high cost loop fund (rural and non-rural), local switching, interstate access support (IAS), and interstate common line support (ICLS)).<sup>1</sup>
  - If there is more than one wireline ETC in the study area, the capped support amount would be apportioned among them on the basis of their relative lines.
  - The current cap on the ILEC portion of the high cost fund is producing winners and losers as lines and support amounts change each year. The mechanism described here would minimize those shifts and stabilize wireline support for each study area.
- **Cap for wireless ETCs.** The cap on support for wireless ETCs would be the total amount received by all wireless ETCs in the study area in a base year (which could be the most recent twelve-month period for which data are available when an order becomes effective). The cap would include support from all programs for high cost areas (the high cost loop fund (rural and non-rural), local switching, interstate access support (IAS), and Interstate Common line support (ICLS)).<sup>2</sup>
  - If there is more than one wireless ETC in the study area, the capped support amount would be apportioned among them on the basis of their relative lines.

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<sup>1</sup> For ILECs, once the cap described here has been applied, it would replace the calculation that is done today to determine support amounts from each of the existing funds. The exception would be the calculation for rate-of-return ILECs of the support amounts for local switching and ICLS, which would be calculated as they are today. High cost subsidies in each rate-of-return study area would then be adjusted to bring the total amount of support within the study area cap. The current cap on the ILEC portion of the high cost fund would no longer be applied. For price cap ILEC study areas, the total amount of wireline support in each area should simply be capped, and if there are wireline CETCs in the area the support would be apportioned among the wireline ETCs on the basis of their relative lines.

<sup>2</sup> For wireless ETCs, none of the existing funds is capped today. The total amount of funding to wireless CETCs in each area should simply be capped, and the apportionment among wireless CETCs on the basis of their relative lines would replace the existing fund calculations.

- Increased support for wireless ETCs represents a large proportion of the growth in the federal mechanisms in recent years. The cap would stabilize the fund and provide a starting point for the wireless ETC auctions.
- **Adjustment of the caps.** Each year, the total wireline cap and the total wireless cap in each study area would be adjusted by the percentage change in the number of households in the study area. This would allow the cap to reflect changes in the overall need for universal service in the area. However, there would be no adjustment for the total number of lines or handsets in the area. The current rural growth factor (which has been negative in some recent years) would be eliminated.

### 3) **Adopt the Framework**

Before any auction takes place, the FCC should adopt a framework for the auction process.

#### a. **Areas for Bidding**

The FCC would first designate the geographic areas that would be used for bidding. Areas should be small enough to allow support to be targeted where it is most needed, but not so small as to create unnecessary complexity. They should incorporate information about where rural populations are clustered, so as to distinguish between high and low density areas.

Geographic units such as census block groups or counties are possibilities, but these areas often cut across geographic barriers, such as mountains and rivers, and ignore clustering of customers that would be relevant to any prospective provider of universal service. The arrangement of ILEC wire centers, however, contains useful information about the geography of each area and the location of customers, since ILEC switches have generally been located in population clusters (in the centers of small towns). CETCs, while they have different network topologies, have also tended to locate their facilities in population clusters for similar reasons; they have put their facilities where the customers are.

The use of ILEC wire center areas represents a reasonable balance among these considerations. If some other geographic unit of similar size is readily available, and meets the requirements discussed here, then the Commission may consider that unit in place of wire centers. Once a geographic unit has been selected, steps should be taken to ensure that all potential participants in an auction would have ready access to data delineating the boundaries of those areas. An auction design that allows for package bids (as discussed below) makes it possible to use areas that are smaller than a study area.

#### b. **The “Reserve” or Maximum Bid**

The Commission would also establish a maximum bid, or reserve, for each wire center. Reserve amounts are widely used in competitive bidding processes to limit the range of

possible outcomes. In this case, the reserve amount would be set at the level of the support provided immediately prior to the auction. In this design, two reserves would be enforced: the first at the study area level, and the second at the wire center level.

**The aggregate reserve.** For the wireless auction, the aggregate reserve for each study area would be the total amount of support provided to all wireless ETCs in the study area prior to the auction. For the wireline auction, the aggregate reserve for each study area would be the total amount of support provided to all wireline ETCs in the study area prior to the auction.

**The wire center reserve.** In order to allow competitive bidding to proceed at the wire center level, it would be necessary to develop a reserve amount for each wire center. This would be done by disaggregating the existing support at the study area level in the following way:

- First, the aggregate reserve in the study area would be divided by the total lines of all wireless (wireline) ETCs to derive an average per-line support amount.
- Second, the aggregate study area reserve would be disaggregated to each wire center on a pro-rata basis by multiplying the number of wireless (wireline) ETC lines in each wire center by the average per-line support amount.
- Finally, each wire center amount would be multiplied by a constant greater than one to arrive at the wire center reserve amount.

This approach allows a reserve to be developed for each wire center, but avoids the need for the Commission to develop detailed cost estimates by wire center.<sup>3</sup> Because each wire center reserve is greater than its pro-rata share of the current level of support in a study area, it also provides room for the bidding process to provide more support to higher cost wire centers, and less support to lower cost ones. However, this also means that the sum of the individual wire center reserves will be greater than the aggregate reserve at the study area level. The application of the aggregate reserve ensures that the bidding process cannot result in an increase in support for the study area as a whole.

### c. Qualification Process

Qualified bidders that would be eligible to participate in the bidding process would be providers who have been designated as ETCs in the area. This is consistent with Section 214(e), which requires a carrier to be an ETC in order to be eligible for support.

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<sup>3</sup> The Commission does not need to engage in detailed cost analysis in order to establish reserves. In fact, part of the reason to use competitive bidding is to reduce reliance on traditional measures of cost. However, auction results might be improved if some simple indicator could be developed, perhaps based on the size or density of the wire center, to differentiate between higher and lower cost wire centers. Support from the non-rural high cost fund is already disaggregated to the wire center level. There is also a process in place for ILECs to develop and submit proposals to disaggregate study areas for USF purposes, and where such plans have been approved, they could be used to calculate a reserve at the wire center level.

#### **d. Obligation of the Auction Winner**

In any competitive bidding process, the ETCs would be bidding for the obligation to serve as the provider of universal service in a high cost area, in return for which it would receive financial support equal to the amount of its bid.<sup>4</sup> The Commission, in cooperation with the states, would develop a statement that would define the winning bidder's obligations. This would, in effect, serve as a request for quote (or RFQ).

In return for the universal service support, the winning bidder would be required to offer service in the entire area, and to meet any other terms of the RFQ. If a wireless CETC bids for an area and loses, then that CETC would no longer have an obligation to serve that area.

#### **e. Schedule and Organization of the Bidding**

In this design, competitive bidding would not take place simultaneously in all areas. Instead, bidding would be introduced gradually through a series of transitional steps.

The Commission would establish a regular schedule of events leading up to an auction. This would include nomination of areas for bidding, registration of bidders, posting of deposits, and the bidding process itself (this series of events is referred to here as a "bidding cycle"). This flexible framework would allow the Commission to manage the transition to competitive bidding in reasonable steps, and, at the same time, provide ETCs themselves with the opportunity to decide when an area is ready for competitive bidding.

- A bidding cycle would be held twice each year. The first bidding cycle would begin six months after the adoption of an order establishing the plan.
- In any cycle, a wireless CETC would be able to nominate for bidding any area for which it is qualified, and where there is at least one other wireless CETC, except in areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired. A wireline ETC would be able to nominate an area where there is at least one wireline CETC for a wireline auction, except in areas where an auction had already been held and the term of the contract resulting from that auction had not yet expired.
- At certain points in the transition process, the Commission would, on its own motion, nominate areas that meet certain criteria. For example, as discussed in Section 4, it would nominate areas with more than one wireless CETC to begin the wireless CETC auctions.

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<sup>4</sup> Some of the universal service mechanisms, such as Lifeline, Link-up, schools and libraries, and rural health care, are not related to high cost subsidies, and would not be determined through the competitive bidding process outlined here.

- Dates would be established for the events in each cycle. For example, if a wireless CETC wished to nominate an area for bidding in the first half of a given year, it might be required to file its nomination by February 1 of that year.
- Once an area has been nominated, a second window would be established for ETCs to register to bid in areas that had been nominated, and to nominate additional areas. This would prevent an ETC from gaining a first-mover advantage by nominating an area, would ensure that all ETCs interested in a given area are able to participate, and ensure that all areas related to those initially nominated can be included in the bidding process.
- The Commission would set a firm date for bidding to begin. As described in Section 6 below, bidding would be dynamic, which is to say it would involve multiple rounds.
- By grouping all of the bidding processes for each six-month period together, this framework would simplify administration. And, by announcing a clear schedule of events in advance, the framework would also make it easier for ETCs to plan their participation in the bidding process.

#### 4) Auctions for Wireless and Wireline CETCs

To initiate the use of auctions for universal service, the Commission could first prompt competitive bidding among wireless CETCs.

In each area where there is more than one wireless CETC, an auction would select one “winner” to be the wireless provider of universal service in that area. Any area that had not previously been nominated by a wireless CETC, and where more than one wireless CETC is already certified, could be nominated by the FCC on its own motion.<sup>5</sup> Wireless CETCs would bid for a flat amount of support in each area. The design of the bidding process is discussed in Section 6.

Once a wireless winner is selected, that provider would receive the support amount contained in its bid. The ILEC, and any other wireline ETC in the same area, would continue to receive support under the cap mechanism described in Section 1.

The FCC could publish results of all auctions on a web site, where that information would be available for use by any bidder in formulating its bid in subsequent auctions.

Once the wireless CETC auctions have been completed, the Commission should nominate for auction any area where at least one wireline CETC has been designated. In these auctions, both the ILEC and any wireline CETC would participate, and the auction would select a single wireline provider of universal service for the area.

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<sup>5</sup> The Commission could decide either to prompt bidding on all such areas in one bidding cycle, or could decide that it would be more convenient to spread the auctions out over time.

## 5) FCC Reviews Auction Experience, Decides Next Steps

After a reasonable period, the FCC could then review its experience with the wireless and wireline universal service auctions.

The Commission would consider this experience, the development of markets in rural areas, changes in technology, and the acceptance of substitutes by customers of different services.

Based on this experience, the FCC would then determine whether it should nominate additional areas for auction.

- **A general auction.** The Commission could prompt a general auction in any area where there is a CETC. Both wireline and wireless ETCs would participate. The general auction would select a single ETC to be the universal service provider for the high cost area and to receive the support determined by its bid. The auction design described here is intended to be suitable for a general auction; the FCC could determine whether any adjustments would be appropriate, based on the experience gained with previous auctions. The reserve for this auction could be the sum of the wireline and wireless support amounts provided on the date of the general auction.
- **Representative bidding.** As part of its review, the Commission should also consider whether to use the results of auctions, where they have been held, to adjust the support of ETCs receiving support not yet established by an auction. Once it has assembled a representative sample of results from the areas where bidding has been completed, the FCC should either perform or commission an econometric study that would relate these results to the characteristics of the areas, such as size and density. This econometric model could then be used to estimate the likely results of an auction in an area with given characteristics.

Estimates based on the wireless auctions, or on general auctions, could be used to adjust the support of a wireless ETC in an area where a wireless ETC auction had not yet been completed, (either because the area had not been nominated, or because an auction in the area had failed).

Estimates based on the wireline auctions, or on general auctions, could be used to adjust the support of wireline ETCs whose support had not yet been set by an auction.

The support would be the lower of the capped support amount or the amount indicated by the econometric study.<sup>6</sup> If an ETC does not believe that the estimate produced by the econometric study should be applied to a given area, then it would have the option of nominating that area for bidding.

6) **Design of the Competitive Bidding Process**

The design outlined here is called a “clock-proxy” auction. The bidding process would be a hybrid of two designs that combines the advantages of each. The first phase is a clock auction. The second phase is a proxy auction. This design draws on the latest work of auction experts in this area (including the Commission’s own). A similar design has recently been adopted by Ofcom for a major spectrum auction in the United Kingdom.

a. **The Clock-Proxy Hybrid**

The last few years have seen significant advances in auction design theory.<sup>7</sup> One of these advances has been the development of a hybrid of two types of auction designs, a “clock” auction and a “proxy” auction. This hybrid is called a “clock-proxy” auction.

The first phase of this design would be a “clock auction.” A clock auction is a dynamic, multiple round process in which the auctioneer announces prices and bidders respond with quantities desired at the announced prices. It is called a clock auction because the rounds of bidding are conducted at regular intervals. This design allows the auction itself to generate information useful to the bidders. By observing the results of the early rounds, each bidder gains knowledge of the value of each area and how the areas are related to one another. In this respect, the clock phase of this design is similar to the spectrum auctions. Importantly, a clock auction also limits the opportunities for bidders to engage in strategic behavior compared with a more conventional multiple-round auction in which the bidders themselves formulate the bids. In each round, a bidder can only answer a yes-or-no question for each area or package of areas: will the bidder be willing to become the universal service provider at the support amount called out by the auctioneer? This kind of design thus makes it difficult, for example, for a bidder to use the amount of its bid to signal other bidders.

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<sup>6</sup> As Verizon and Verizon Wireless noted in their comments, this approach has been used to extend auction results in other settings, such as the pricing of timber cutting rights in Canada. Comments of Verizon and Verizon Wireless at 27-28, WC Docket No. 05-337 (filed October 10, 2006).

<sup>7</sup> For an overview of modern auction theory, see Paul Milgrom (2004), *Putting Auction Theory to Work*, Cambridge: Cambridge University Press. For essays on various aspects of combinatorial auctions, see Peter Cramton, Yoav Shoham, and Richard Steinberg (2006), *Combinatorial Auctions*, Cambridge, MA: MIT Press. A discussion of the clock-proxy design is provided in Lawrence M. Ausubel, Peter Cramton, and Paul Milgrom, “The Clock-Proxy Auction: A Practical Combinatorial Auction Design,” which appears as Chapter 5 in Cramton, Shoham, and Steinberg.

The second phase of this design would be a “proxy” auction, which is based on the results of the clock phase. The proxy phase is necessary to make the results from the clock phase more efficient. It provides the opportunity for bidders to create combinations of prices that would not have occurred in the clock phase. This is called the proxy stage because the bidding activity is conducted by a proxy agent (a computer program) following strict rules in order to limit the possibility of strategic behavior by the bidder itself.

**b. Advantages of the “Clock-Proxy” Hybrid Design**

**Flexible bidding for individual areas, or packages of areas.** This design allows the bidders to place bids on different areas in a very flexible way. A bidder could submit bids on a specific area or areas. The same bidder could also submit a “package bid” on a group of areas, if the bidder found them to be related to one another (for example, if the bidder could serve the “package” more efficiently than the individual areas separately). This type of bidding process is called a “combinatorial” auction.

A design which permits the flexibility of package bidding makes the choice of the area to be auctioned less critical. It would allow the Commission to design the auction around smaller geographic units (such as the wire center areas discussed here) without unduly complicating the bidding process. Rather than having the Commission make decisions about how areas should be grouped together, this approach allows the Commission to elicit information from the bidders about how the areas should be grouped. This design would achieve more accurate targeting of universal service support, and address cherry-picking concerns. These advantages would be gained without inflating the fund, and without giving up the economies of serving larger areas in cases where those are important.

**Allowing for different relationships among areas.** The auction design outlined here is designed to perform well – in terms of efficiency, and minimizing the need for support – regardless of whether different bidders view a given set of areas as independent, substitutes, or complements. This is important because in bidding for universal service support, all three of these are possible:

- Areas are **independent** if a bidder’s willingness to bid for hypothetical “area A” is not affected by the outcome of the bidding for any other area. For example, a small ILEC that serves a single wire center may care only about that area.
- Two areas are **substitutes** if a bidder wishes to win either area A or area B, but not both. This could be the case for a wireless carrier that wants to enter one new market, and is considering A and B as possible alternatives. If in the early rounds of bidding this carrier encounters strong competition for A, it may shift its attention to B in later rounds. This kind of behavior has occurred in the spectrum auctions.

- Two areas are **complements** if a bidder sees some synergies in serving the two areas together, so that it would be willing to accept less support in area A if it also wins area B. For example, a mid-size ILEC that serves several wire centers in a state may view them as complements. In this case, strong competition for A may make this carrier less willing to bid for B.

Some earlier proposals for competitive bidding of universal service have essentially treated high cost areas as independent.<sup>8</sup> For that reason, they do not make any provision for either substitutes or complements. The multiple-round design used in the spectrum auctions performs well when areas are substitutes, but not as well when they are complements. As explained in more detail below, the clock-proxy auction design will perform well regardless of whether different bidders view a given set of areas as independent, substitutes, or complements.

**Minimizing strategic behavior.** The design outlined here also minimizes the possibility of strategic behavior, such as collusion among the bidders, or an attempt by one bidder to conceal its interest in particular areas by holding back until the late rounds of an auction. This is particularly important in the context of bidding for universal service, where the number of bidders for any given area is likely to be small. Because this design encourages each party to bid straightforwardly based on relevant business factors, such as its expected costs and revenues, it would improve the transparency of the process, and the efficiency of the outcome.

**Single Winner-Flat Amount of Subsidy.** This design allows for a single winner. Thus, there would be no need to attempt the difficult task of apportioning support amounts among different providers. This would avoid many contentious issues that have arisen in the past, such as whether to support primary lines, additional lines, multiple handsets, and so on. It would also make for a simpler bidding process. Each bidder would bid a flat dollar amount of subsidy – the total amount the ETC would accept in order to take on the universal service obligation for a given high cost area. Each bidder would base its bid on its own business plan, which would include the bidder’s own assessment of many factors – including the demand quantities (of lines, handsets, etc.) it would expect to serve within each area.

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<sup>8</sup> For example, neither Milgrom (Paul Milgrom, “Procuring Universal Service: Putting Auction Theory to Work,” Lecture at the Royal Swedish Academy of Sciences, December 9 1996) nor Weller (Dennis Weller, “Auctions for Universal Service Obligations,” Telecommunications Policy, Vol 23, 1999, pp. 645-674) allowed for package bidding; instead they proposed a separate auction for each area. Since these designs were also single-round, sealed-bid auctions, they did not allow bidders to shift their attention from one area to another based on results in earlier rounds. The only provision for complementarity was a limited opportunity for a bidder to withdraw if it wins area A but loses some other area it sees as related. Because the design proposed here deals directly with package bidding, and also allows for multiple rounds, there is no need for such a withdrawal provision.

### c. Clock Phase

As discussed above, in the first phase of the auction (the “clock” phase), the bidding would proceed in a series of discrete rounds. Instead of having the bidders submit support amounts, the auctioneer “calls out” a support amount for each area in each round. Each bidder then indicates which areas it would be willing to serve as the universal service provider at the specified support amount. The clock phase would proceed as follows:

- The support amount called out by the auctioneer in each round is a flat amount per year. It is constant each year for the duration of the contract. In the first round of the clock phase, the auctioneer calls out the reserve price in each wire center.
- In each round of the clock phase, each bidder may submit a bid on a package that includes any area or combination of areas it chooses. Since the support amounts are being announced by the auctioneer, the package bid is simply a list of the areas the bidder would be willing to serve for the amounts called out in that round. Each bid is also exclusive in the sense that at the end of the clock phase the auctioneer can accept only one bid for each area, and one bid from each bidder. All bids remain in effect for the entire duration of the auction and cannot be withdrawn (even after bidding has closed). At the end of the bidding process, the auctioneer may go back and accept any bid from a previous round. This means that a bidder must carefully consider what it bids in every round, because every bid is a binding offer that the bidder might be called upon to honor.
- At the end of each round, the auctioneer determines how many bids have been submitted for each area. The objective of the auctioneer is to select a single bidder for each area. Therefore, in an area where more than one bid has been received, there is excess supply. In areas where no bids have been received there is excess demand. In areas where there is excess supply (more than one bidder) the auctioneer reduces the support amount called out in the next round by a set amount.<sup>9</sup>
- The auction is held over the Internet, using a software program to administer the bidding.<sup>10</sup> The program includes admission control to ensure that only qualified

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<sup>9</sup> The decrement by which the bid is reduced each round is an element of the auction design. A large, or coarse, bid decrement will make the auction go faster, but may jump over the correct support amount. To address this issue, a device called “intra-round bidding” may be used to obtain finer information from the bidders. Rather than simply drop out of the bidding for an area when the support amount falls below the level it would accept, a bidder could indicate willingness to accept a level of support between the amounts called out in the last two rounds.

<sup>10</sup> Having bids submitted electronically over the Internet, and using specialized software to administer the bidding process, has been used successfully in the FCC’s spectrum auctions, as well as many other successful auctions around the world.

entities submit bids. The program also checks to see that bids meet the rules, and prompts the bidder to resubmit a bid if it does not. The rounds occur at some set interval, perhaps every two hours.

- The program will accept only bids that meet the wire center reserve. It also checks after each round to see that the aggregate reserve is met at the study area level, and provides that information to the bidders prior to the next round.
- This aggregate reserve check can only be done after a round is completed, so within a round each bidder does not know if the bids being submitted, taken together, will satisfy the rules. In some cases, not all wire centers in a study area will have been nominated for bidding. In this event, in order to apply the aggregate study area reserve, the auctioneer would include the areas that were not part of the auction in the calculation as if they had received bids at their wire center reserve amounts.
- Each bidder would be subject to an “activity rule,” which would require it to bid actively in every round in order to maintain eligibility to bid in subsequent rounds. This rule, which has been used in the spectrum auctions, prevents a bidder from “lying low” in early rounds to conceal its intentions, or to allow rivals to eliminate one another.<sup>11</sup> In areas where there are few bidders, the auctioneer may limit the information provided to each bidder. For example, each bidder may know the number of other bidders, but not the identity of each.
- The clock auction rounds continue until there is no more than one bidder for each area.
- At the end of the clock phase, there may be some areas for which there is no bid. There may also be areas where bids have been submitted, but these do not satisfy the aggregate reserve constraint because, as discussed above, the sum of the wire center reserves will be greater than the aggregate reserve constraint for the study area.
- At the end of the clock phase, the auctioneer runs an optimization program that selects the winning bidder in each area, based on all the bids submitted (this may include bids from earlier rounds, since all bids remain in effect until the auction closes). The optimization seeks to select winners for as many areas as possible, while minimizing the cost to the fund.

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<sup>11</sup> Specifically, the rule employed here is called a “revealed preference activity rule,” which ensures that, as the support amount declines during the rounds of bidding, a bidder cannot shift its bid towards a package whose support amount has fallen more than the support amount from a previously preferred package. *See* Ausubel, Cramton, and Milgrom, *op. cit.*, at page 120.

#### **d. Proxy Phase**

Once the clock phase of the auction has been completed, a final round or “proxy phase” is held to “fine-tune” the results.

The proxy phase is used to make the results of the clock phase more efficient. The proxy format opens up additional bidding opportunities by allowing each bidder to specify package prices that might not have been announced by the auctioneer in the clock phase. At the same time, the proxy phase limits each bidder’s ability to behave strategically by having a proxy agent bid on behalf of the actual bidder according to strict rules.

In the proxy phase, each bidder reports a valuation for each package of areas in which it is interested. This valuation is the “best and final” support amount that bidder would accept. Unlike the clock phase, where each bidder specifies a single package in each round, here a bidder may submit valuations for any number of packages, and the packages may overlap in the sense that a given wire center may be included in more than one package.

The actual bidding is then done on the bidder’s behalf by a proxy, which is simply a computer program that bids according to preset rules, given the valuations submitted. Starting with the support amounts produced by the clock phase, each proxy looks for opportunities to make its bidder better off by submitting a bid on the bidder’s best package; that is, the package that maximizes the difference between the current bid and the bidder’s valuation. Bidding continues until no proxy can find any such opportunity.

- The same reserve rules discussed in Section 3.b are maintained in the proxy round. The activity rule is also maintained in the proxy phase, but may be relaxed by a measured amount to allow bidders to increase the number of areas on which they bid.
- In practice, the proxy round is implemented using an optimization program. A winner is chosen for each area by a criterion that minimizes the total amount bid over all areas. The amount of support determined by the optimization is also competitive in the sense that no coalition of bidders can offer the auctioneer a lower-cost plan.
- In the final optimization, there may still be some wire centers for which there is no bid. There may also be study areas for which bids were submitted, but where the auction fails because the bids did not meet the aggregate reserve constraint for the study area. In these areas, the situation would revert to the status quo prior to the auction, and the ETC(s) that participated in the auction would continue to receive support capped by the mechanism described in Section 1.
- The proxy phase builds upon the advantages of the clock phase. The information generated in the clock phase helps bidders formulate the valuations they are asked to submit in the proxy phase.

- If the areas are substitutes, the clock auction may also do most of the work of identifying the best bids, leaving relatively little need for “fine tuning” in the proxy phase.
- However, where areas are complements, it is likely that bidders may hold back from making some bids, and the clock phase may end before all of the possible bids have been revealed. Suppose a bidder is interested in a package of areas A, B, and C which it views as complements. Given the particular support amounts called out by the auctioneer, and especially if another party bids aggressively for B, this bidder may choose not to bid for any of the three areas, even though its combined bid might have been superior. By giving the bidder an opportunity to specify a different combination of support amounts, the proxy phase may elicit a bid for the package that would be better, from the auctioneer’s perspective, than any combination of bids offered in the clock phase.

7) **Transition: Implementation of Auction Results**

After the auction results have been announced, a transition period is necessary if a “winner” will be taking on new universal service obligations. For example, if the winner is a wireless CETC not already serving the area, then a transition period may be needed. At some pre-announced point in the transition, the administrator could require the winner to post bonds to ensure performance of the contract. Later in the transition, the winner may be required to file an implementation plan to show how it would plan to fulfill its responsibility. This would create an incentive for the winner to formulate plans in a timely way, and would provide the administrator with an early warning of any potential problems. A transition period would also allow ETCs that had participated in an auction, and had not won, to adjust their business plans.

**Transition in the Event of a General Auction.** Under this proposal, no general auction would be held unless the Commission took action pursuant to its review in Step 4. If a general auction is held, and the ILEC is the winner, then no transition would be needed, since the obligation it would take on would simply be an extension of what it is already doing. If an ILEC bids for an area and loses, the state commission would decide whether and how to reduce regulation of that carrier and what (if any) obligation to serve would be appropriate. The Commission and/or state commissions, on the other hand, could decide to exercise their authority to remove obligations that the losing ILEC bidder may have to provide unbundled elements or resale.

Although the winner would have the responsibility to provide service, it could fulfill that responsibility by contracting with other parties, including the incumbent. The losing ILEC could choose to continue to operate, selling retail services to end-users. The state commission may reduce retail regulation of such ILEC services. The ILEC could also sell wholesale inputs to the new universal service provider. If the FCC and/or the state commission removed UNE and resale obligations from the ILEC, then these wholesale transactions could be at commercial terms.

**8) Terms of the Contract**

The contract between the winner and the regulators (FCC and state) would incorporate the terms of the RFQ and the level of annual support to the winner. Like any procurement contract, it would include provisions to ensure that the terms of the contract are met. These could include fines, forfeiture of bond amounts, and being barred from participation in any subsequent auctions.

The contract would be awarded for a set term. The area could not be nominated during that contract period. At the end of the term, the contract would continue until a party – either an ETC or the Commission – nominated it again, at which time another auction would be held.

**9) Areas Not Yet Auctioned**

In some areas, support may not have been set through competitive bidding (either because the area was not nominated for bid or because the auction failed to produce a result). These areas would continue under the capped support arrangement described in Section 1. In an area that receives no support today, the reserve would be zero, and thus that area would not be eligible for auction.

## APPENDIX 1

### VERIZON'S PROPOSAL IS CONSISTENT WITH THE ACT AND WOULD SATISFY THE CONCERNS RAISED BY THE TENTH CIRCUIT IN QWEST II

The Joint Board must consider the extent to which any USF reform proposal is consistent with the requirements of Section 254 and fully addresses the concerns raised by the Tenth Circuit in *Qwest II*.<sup>1</sup> Verizon's reverse auction proposal satisfies both of these standards.

Section 254 contains a list of six principles upon which the Joint Board and the Commission must base “policies for the preservation and advancement of universal service ....”<sup>2</sup> Four of these six principles relate to the high cost fund: (1) “[q]uality services should be available at just, reasonable, and affordable rates”; (2) “[a]ccess to advanced telecommunications and information services should be provided in all regions of the Nation”; (3) “[c]onsumers in all regions of the Nation ... should have access to telecommunications and information services . . . that are reasonably comparable to those services provided in urban areas and that are available at rates that are reasonably comparable to rates charged for similar services in urban areas”; and (4) “[t]here should be specific, predictable and sufficient Federal and State mechanisms to preserve and advance universal service.”<sup>3</sup> In *Qwest II*, the Tenth Circuit found that the Commission erred in defining the term “sufficient” by “focusing solely on the issue of reasonable comparability in §254(b)(3)” and ignoring other Section 254(b) principles, and

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<sup>1</sup> *Qwest Communications Int'l, Inc. v. FCC*, 398 F.3d 1222 (10<sup>th</sup> Cir. 2005) (“*Qwest II*”).

<sup>2</sup> 47 U.S.C. §§ 254(b)(1), (2), (3), & (5).

<sup>3</sup> In establishing universal service policies, Section 254 also requires the Commission and the Joint Board to ensure that: (1) “[a]ll providers of telecommunications services should make an equitable and nondiscriminatory contribution to the preservation and advancement of universal service”; and (2) “Elementary and secondary schools and classrooms, health care providers, and libraries should have access to advanced telecommunications services[.]” 47 U.S.C. §§ 254(b)(4) & (6). In addition, the Joint Board and the Commission are authorized to consider other principles as “necessary and appropriate for the protection of the public interest, convenience, and necessity and are consistent with this Chapter.” 47 U.S.C. § 254(b)(7).

directed the Commission to “articulate a definition of ‘sufficient’ that appropriately considers the range of principles” under the statute. *Qwest II*, 398 F.3d at 1234. In so doing, as the Tenth Circuit recognized, the Commission must examine “the evolving nature of the system of supports” and develop a “comprehensive picture” of how those supports should be structured in the current market. *Id.* at 1230.

Although *Qwest II* specifically addressed only the non-rural high cost fund, the rural high cost fund is subject to the same statutory definitions and goals, and Verizon’s auction proposal represents a comprehensive approach to reform. The proposal involves a complete reassessment of both the rural and non-rural high cost funds, taking into account the realities of today’s competitive market environment and targeting support in an economically efficient manner to ensure that the objectives of universal service are met.

The Act established explicit federal support for the “preservation and advancement of universal service.” 47 U.S.C. § 254(b). In establishing “specific and predictable support mechanisms,”<sup>4</sup> Congress was trying to facilitate the transition away from markets characterized in many instances by exclusive franchises to competitive markets. But the universal service mechanism was just one tool to achieve the overarching goal of preservation and advancement of universal service during this transition. Indeed, Congress recognized that the funding mechanism was only a limited tool to help achieve the statutory goals. When it described the mechanism, it included the goals that such mechanism be “specific, predictable and sufficient.” 47 U.S.C. § 254(b)(5). The requirement that support be specific and predictable suggests a limit on the fund to avoid open-ended growth that is neither specific nor predictable.

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<sup>4</sup> 47 U.S.C. § 254(b)(5).

Sufficiency is more complex and must include consideration of principles of affordability and sustainability. As Verizon has proposed previously, “sufficient” should be defined as “an affordable and sustainable amount of support that is adequate, but no greater than necessary, to achieve the goals of the high-cost program.”<sup>5</sup> This definition incorporates the principle that whether funding is “sufficient” involves an inquiry not merely into whether there is *enough* support, but whether there is *too much*. In fact, the court specifically agreed that the Commission could limit the term “sufficient” by including in the definition the requirement that it be “only as large as necessary” to meet the statutory goal. *Qwest II*, 398 F.3d at 1234.

Verizon’s reverse auction proposal would ensure that universal service levels are “sufficient.” First, the reverse auction proposal is designed to award the minimum amount that an ETC is willing to accept in order to undertake the contractual burden of providing supported services in an auction area. Under this approach, sufficient universal service funding is available by definition – no more, no less. Thus, reverse auctions avoid the problems of too little or too much universal service support and fully resolves any concerns about the ability of a system that compares relative costs to establish that any particular support amount is sufficient.

Second, the high cost fund has grown so large as to be unsustainable, as the Joint Board correctly concluded. *Recommended Decision*, at ¶ 4. Verizon’s auction proposal, if implemented properly, would reduce the size of the high cost fund, thereby making it more sustainable over the long term.

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<sup>5</sup> Comments of Verizon, *Federal-State Joint Board on Universal Service; High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, at 6, n.5 (filed March 27, 2006) (citing WEBSTER’S II NEW COLLEGE DICTIONARY 1128 (3d ed. 2005), which defines “sufficient” as “enough” or “adequate” or as much as is “necessary,” and BLACK’S LAW DICTIONARY 1447 (7<sup>th</sup> ed. 1999), which defines the term “as is necessary for a given purpose”) (“*Verizon Comments*”).

Third, market forces have made telephone rates more affordable over time, particularly when compared to other consumer items and overall income levels.<sup>6</sup> However, the growth of the high cost fund has resulted in the USF surcharge becoming an even larger proportion of consumers' bills. The increasing cost of universal service obviously tends to offset the benefit to consumers of competitive entry, since it is consumers who must bear the cost of universal service. By giving consumers access to supported services at a "sufficient" level (*i.e.*, the minimum level of support necessary), Verizon's reverse auction proposal would eliminate excessive subsidization that pervades the current high cost system. Excessive subsidies, as the courts have held, "may affect the affordability of telecommunications services, thus violating the principle in § 254(b)(1)."<sup>7</sup>

The *Qwest II* court also held that the Commission's definition of "reasonably comparable" was based on an impermissible statutory construction, because the Commission focused only on "preserv[ing]" universal service rather than, as the statute states, on "preservation and advancement."<sup>8</sup> According to the court, "by designating a comparability benchmark at the national urban average plus two standard deviations, the FCC has ensured that

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<sup>6</sup> *Verizon Comments*, at 13-15 (noting that "prices for total telephone service *decreased* 5.8 percent from 1998 to 2005; during the same time, the cost of all consumer items was *increasing* by 15.3 percent") (emphasis in original) (citations omitted).

<sup>7</sup> *Qwest II*, 398 F.3d at 1234, citing *Qwest Corp. v. FCC*, 258 F.3d 1191, 1200 (10<sup>th</sup> Cir. 2001) ("*Qwest I*"); see also *Alenco Communications v. FCC*, 201 F.3d 608, 620 (5<sup>th</sup> Cir. 2000) ("[E]xcess subsidization in some cases may detract from universal service by causing rates unnecessarily to rise, thereby pricing some consumers out of the market.").

<sup>8</sup> Specifically, in interpreting the statutory command to "preserve and advance" universal service, the court cautioned that the term "universal service" cannot be described separately for each verb. That is, the Commission cannot reason that "preserve" applies to one thing (rate variances) but "advance" applies to another (evolving rules recognizing changes in markets and technology). *Qwest II*, 398 F.3d at 1236.

significant variance between rural and urban rates will continue unabated.” *Qwest II*, 398 F.3d at 1235-37.

Verizon has proposed that the Commission define “reasonably comparable” rates as those that are “similar” or “within a reasonable range of” nationwide urban rates and retain the presumption that rates that are within two standard deviations of the average national urban rate satisfy this definition. *Verizon Comments*, at 25-26. Currently available data presented to the Commission suggest that rural and urban telephone rates generally are reasonably comparable,<sup>9</sup> and rates are likely to become even more comparable as wireless carriers continue to offer national pricing plans.

Although there is no reason to believe that reverse auctions would result in any increased variance in rural and urban rates, the state commissions could certify as part of the auction process that rural rates and urban rates are reasonably comparable within their boundaries or risk losing all high cost support in that state. This process would be similar to the current certification requirements that the Tenth Circuit upheld in *Qwest II*.<sup>10</sup> In addition, as part of the certification requirement, states could be required to gather and produce data regarding the specific rates that are being charged in rural and urban areas in the states. Such data would allow the Commission to evaluate the reasonable comparability of urban and rural rates between states on a going-forward basis.

Finally, in *Qwest II* the court invalidated the non-rural, high cost support mechanism because it rested on the application of the definition of “reasonably comparable” that the court

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<sup>9</sup> *Verizon Comments*, at 27 (citing Declaration of Patrick Garzillo, ¶¶ 13-21); Comments of BellSouth Corporation, *Federal-State Joint Board on Universal Service; High-Cost Universal Service Support*, CC Docket No. 96-45, WC Docket No. 05-337, Attachment A (filed March 28, 2006).

<sup>10</sup> 398 F.3d at 1238.

had invalidated. Although the court directed the Commission on remand to support its “pairing of rates to costs in this context,”<sup>11</sup> Verizon’s reverse auction proposal would obviate the need for such an exercise. Use of a reverse auction would leave to qualified bidders all issues related to cost, and the Commission would no longer be required to model costs or pair costs to rates.

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<sup>11</sup> *Id.* at 1237.

## APPENDIX 2

### AVAILABILITY OF BROADBAND HAD GREATLY EXPANDED

In most places, the private sector is making the necessary one-time capital investment in broadband, and where the market is working it should be allowed to meet the needs of consumers. As of the end of the first quarter of 2007, approximately 44 percent of all U.S. households subscribed to broadband – up from 22 percent in the first quarter of 2004, when the Commission issued its first broadband Notice of Inquiry (“NOI”) – and that total is expected to reach approximately 50 percent by the end of 2007.<sup>1</sup> Morgan Stanley estimates that, as of the end of first-quarter 2007, “roughly 70 percent of online households []have signed up for broadband.”<sup>2</sup> Nielsen//NetRatings reports that 80 percent of “active Internet users” already have a broadband connection at home.<sup>3</sup> According to the Commission’s most recent data, the vast majority of consumers in the U.S. have access to at least three competitive platforms for broadband, and consumers’ broadband options are quickly increasing.<sup>4</sup>

Underlying this progress in making broadband a nationwide reality for all consumers is a tremendous amount of private investment in broadband infrastructure. In the three years since

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<sup>1</sup> S. Flannery, *et al.*, Morgan Stanley, *Cable & Telecom; As Broadband Matures, Speeds (and CapEx) Rise* at Exh. 21 (Apr. 23, 2007) (1Q07 estimate); R. Bilotti, *et al.*, Morgan Stanley, *Broadband Update: Bundling Is an Arms Race, Not a Price War* at Exh. 7 (July 8, 2004) (1Q04 data).

<sup>2</sup> S. Flannery, *et al.*, Morgan Stanley, *Cable & Telecom; As Broadband Matures, Speeds (and CapEx) Rise* at 1 (Apr. 23, 2007).

<sup>3</sup> See S. Flannery, *et al.*, Morgan Stanley, *Cable & Telecom; As Broadband Matures, Speeds (and CapEx) Rise* at 7 (Apr. 23, 2007).

<sup>4</sup> As of June 2006, consumers in more than 87 percent of U.S. zip codes have three or more broadband choices, up from 58 percent in June 2003. Sixty-three percent of U.S. zip codes are served by five or more broadband providers, up from 33 percent in June 2003. In one in five zip codes, there are now *10 or more* broadband choices. Ind. Anal. & Tech. Div., Wireline Competition Bureau, FCC, *High-Speed Services for Internet Access: Status As of June 30, 2006* at Table 15 (Jan. 2007) (“*FCC June 2006 High-Speed Report*”).

federal regulators began dismantling network sharing and pricing regulation of broadband networks, Verizon's total capital expenditures were more than \$45 billion, including \$12.8 billion in 2004, \$15.0 billion in 2005, and \$17.1 billion in 2006 and much of this outlay was used to deploy broadband plant.<sup>5</sup> Other traditional telephone companies likewise are pursuing aggressive strategies for expanding their broadband offerings. AT&T, for example, is spending \$6.5 billion to deploy fiber-to-the-node serving 18 million homes. The cable industry has also invested heavily in broadband – reportedly over \$100 billion since 1996<sup>6</sup> – and Comcast recently announced that it will invest \$5.7 billion in capital expenditures in 2007.<sup>7</sup>

### **1. Fiber.**

Recent increases in broadband access over fiber lines have been particularly impressive. As Chairman Martin noted in his recent testimony to the Senate Commerce Committee, “[f]rom March of 2005 to the end of [2006], the number of homes passed by fiber increased from 1.6 million to 6.1 million.”<sup>8</sup> Verizon, in particular, is leading the charge on fiber deployment. Verizon is in the process of deploying its fiber network (“FiOS”) that runs fiber all the way to the premises. Verizon is spending a total of nearly \$23 billion to deploy FiOS to 18 million customer premises by the end of 2010. As of the end of first quarter 2007, the FiOS network

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<sup>5</sup> Verizon Communications, *2006 Annual Report* at 44, [http://investor.verizon.com/financial/quarterly/pdf/06\\_annual\\_report.pdf](http://investor.verizon.com/financial/quarterly/pdf/06_annual_report.pdf).

<sup>6</sup> See, e.g., National Cable & Telecommunications Association (NCTA), *NCTA 2006 Industry Overview* at 5 (2006), [http://i.ncta.com/ncta\\_com/PDFs/NCTAAnnual%20Report4-06FINAL.pdf](http://i.ncta.com/ncta_com/PDFs/NCTAAnnual%20Report4-06FINAL.pdf).

<sup>7</sup> P. Grant, *Comcast Spending Plans Raise Concerns; Net Surges*, Wall St. J. at B5 (Feb. 2, 2007).

<sup>8</sup> Kevin J. Martin, Chairman, FCC, Written Statement before the Committee on Commerce, Science & Transportation, U.S. Senate at 4 (Feb. 1, 2007) (“*Martin Statement*”).

already passed 6.8 million homes and businesses, and Verizon's goal is to reach nine million by the end of this year, and to add three million additional premises in each of the next three years.<sup>9</sup>

Other providers are also investing to build new fiber-based broadband networks. As discussed above, AT&T plans to spend up to \$6.5 billion to deploy a fiber-to-the-node network to 18 million homes by the end of 2008.<sup>10</sup> In addition, a number of municipalities, particularly in rural areas, have begun deploying fiber networks to provide broadband services to their residents.<sup>11</sup> According to Commission data, competing local carriers were serving approximately 128,000 high-speed lines over fiber as of the end of June 2006.<sup>12</sup> A study commissioned by the Fiber-to-the-Home Council reports that, in addition to Verizon and other Bell companies, fiber is being deployed by 341 other providers that currently serve more than 400,000 subscribers.<sup>13</sup>

## 2. Cable And DSL.

Gains in fiber deployment notwithstanding, DSL and cable broadband connections remain the most popular with consumers. According to the National Cable and

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<sup>9</sup> See J. Czwartacki, Verizon, *FiOS Fact Sheet* (May 3, 2007), <http://policyblog.verizon.com/policyblog/blogs/policyblog/czblogger1/290/fios-fact-sheet.aspx>.

<sup>10</sup> See D. Searcey, *et al.*, *Business Technology: AT&T Says Costs Rise for TV System's Launch*, Wall St. J. at B4 (May 8, 2007); AT&T, Form 10-Q at 31 (SEC filed May 4, 2007).

<sup>11</sup> See, e.g., B. Bohrer, *Plans for Fiber-Optic Network Gaining Speed in Wyoming City*, Telegraph Herald at B13 (Aug. 20, 2006) ("At least 40 municipalities and public utility districts around the nation already offer so-called 'fiber to the home,' according to market researcher Michael Render."); TIA & FTTH Council, *U.S. Optical Fiber Communities – 2006 with Customers Served Today via Fiber-to-the-Home* (Apr. 25, 2006), <http://www.ftthcouncil.org/documents/959055.pdf> (citing Render, Vanderslice & Associates data on FTTH communities, including municipal broadband systems).

<sup>12</sup> *FCC June 2006 High-Speed Report* at Table 6.

<sup>13</sup> RVA Market Research & Consulting, *FTTH/FTTP Update* at 11 (Apr. 1, 2007), <http://www.ftthcouncil.org/documents/800832.pdf>.

Telecommunications Association, as of the end of 2006, cable broadband service was available to 94 percent of all U.S. homes – up from 85 percent at the time of the last broadband NOI.<sup>14</sup> The Commission’s recent decisions have also lifted many regulatory burdens on DSL services. Verizon and other telephone companies responded by investing heavily to increase the availability of DSL service. According to the Commission’s data, as of June 2006, DSL was available to 79 percent of homes where ILECs offer local telephone service.<sup>15</sup> More than 82 percent of homes served by the Bell telephone companies are able to obtain DSL service.<sup>16</sup> Other broadband technologies such as fixed wireless are suited to serving areas where DSL cannot reach, and many providers are concentrating on providing service in those areas to take advantage of the greater market opportunities that exist.<sup>17</sup>

The number of consumers that subscribe to cable modem and DSL has increased significantly since the last broadband NOI and continues to grow. As of the end of first quarter 2007, there were an estimated 29 million cable modem and 22 million residential DSL

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<sup>14</sup> NCTA Presentation, *Competition Works. Consumers Win! Competition, Choice and Value Shape Today’s Communications Marketplace* at 5 (Mar. 2007), [http://i.ncta.com/ncta\\_com/PDFs/Consumers\\_Win\\_03.09.07.pdf](http://i.ncta.com/ncta_com/PDFs/Consumers_Win_03.09.07.pdf) (2006 data citing Kagan Research); NCTA, *Mid-Year 2004 Overview* at 6 & Chart 1 (2004) (year-end 2003 cable broadband availability of more than 95 million homes); R. Bilotti, *et al.*, Morgan Stanley, *Broadband Update: Bundling Is an Arms Race, Not a Price War* at Exh. 8 (July 8, 2004) (110.8 million U.S. households in 2003).

<sup>15</sup> See *FCC June 2006 High-Speed Report* at Table 14.

<sup>16</sup> See J. Hodulik, *et al.*, UBS, *Qwest Communications* at Table 1 (Oct. 4, 2005) (weighted average).

<sup>17</sup> See, e.g., S. Silvius, *The Best (and Worst) ISPs: Fixed Wireless Fills the Broadband Gaps*, PC World (Apr. 27, 2005) (“Until recently, people in many rural and suburban areas had no choice for Internet access other than dial-up. . . Residents in many such communities now have a new broadband alternative: fixed-wireless Internet service (in which the wireless antenna is in a fixed location”); WildBlue Press Release, *WildBlue High-Speed Internet Via Satellite Triples Capacity with New Satellite* (Mar. 20, 2007) (“WildBlue provides broadband Internet access via satellite to homes and small businesses not currently served, or underserved, by other high-speed providers.”).

subscribers – up 76 and 199 percent, respectively, since the last broadband NOI – with an estimated one million cable modem and one million DSL subscribers still being added each quarter.<sup>18</sup>

### 3. Wireless.

Wireless broadband networks are also expanding rapidly. Verizon Wireless's 3G technology enables users to obtain high-speed Internet access on their EV-DO-equipped laptops at typical speeds of 600 kbps to 1.4 Mbps, with bursts up to 2 Mbps. Verizon Wireless has invested more than \$3 billion to upgrade its wireless networks to 3G, using EV-DO technology. This has led to one of the broadest 3G deployments in the country, reaching 242 major U.S. cities with a total population of more than 200 million people. Verizon Wireless also has begun rapidly deploying next-generation EV-DO technology, which enables even higher-speed broadband services and which currently is available to more than 135 million people across more than 150 major markets.

Other wireless providers have followed suit. Current 3G wireless networks are capable of providing Internet access at speeds of 600 kbps to 1.4 Mbps, which is generally sufficient to support common Internet applications such as web surfing.<sup>19</sup> Verizon Wireless and Sprint each already makes 3G services available to more than 200 million people, and AT&T to more than 35 million.<sup>20</sup> Verizon Wireless and Sprint both recently deployed EV-DO Revision A

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<sup>18</sup> See S. Flannery, *et al.*, Morgan Stanley, *Cable & Telecom; As Broadband Matures, Speeds (and CapEx) Rise* at Exh. 21 (Apr. 23, 2007) (1Q07 estimates); R. Bilotti, *et al.*, Morgan Stanley, *Broadband Update: Bundling Is an Arms Race, Not a Price War* at Exh. 7 (July 8, 2004) (1Q04 data).

<sup>19</sup> See, e.g., Telstra Media Release, *Telstra's Turbo-Charged, Nationwide Mobile Broadband Network Goes Live* (Oct. 6, 2006) (announcing that Telstra's network in Australia provides peak network speeds of up to 3.6 Mbps, increasing up to 14.4 Mbps early next year).

<sup>20</sup> Verizon Wireless News Release, *Verizon Wireless Launches Faster New Wireless Broadband Network* (Feb. 1, 2007); Sprint, *The Largest Mobile Broadband Network*,

technology, enabling typical download speeds of 600 kbps to 1.4 Mbps, and typical upload speeds of 500 to 800 kbps.<sup>21</sup> T-Mobile recently spent \$4.2 billion in the FCC's Advanced Wireless Services ("AWS") auction to acquire licensed spectrum covering 100 percent of the U.S. population and will begin its 3G deployment in 2007.<sup>22</sup>

#### 4. Other Technologies.

In addition to fiber, cable modem, DSL, and wireless, a number of other providers have entered the broadband market, thus making advanced communications capabilities available to even more Americans.

Fixed wireless service is a broadband alternative for many customers today and is likely to reach many more customers over the next few years. Currently, there are thousands of wireless Internet service providers ("WISPs") that use fixed wireless technology, often to serve

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<http://powervision.sprint.com/mobilebroadband/plans/coverage.html>; Cingular News Release, *Cingular Launches 3G Network in Indianapolis* (Sept. 22, 2006). In January 2007, Cingular announced that its 3G network covers 165 cities, including 73 of the top 100 markets in the country. Cingular News Release, *Cingular Wireless Reports Fourth-Quarter 2006 Results* (Jan. 24, 2007). See also Verizon Wireless, *BroadbandAccess Coverage & Speeds*, <http://www.verizonwireless.com/b2c/mobileoptions/broadband/coveragearea.jsp>; Cingular, *BroadbandConnect Coverage Map*, available at [http://www.cingular.com/broadbandconnect\\_consumer](http://www.cingular.com/broadbandconnect_consumer); Sprint Nextel, *Search for Sprint Power Vision(SM) Network Coverage Areas*, <http://www.sprint.com/business/products/products/evdoEnterZip.jsp>.

<sup>21</sup> See Verizon Wireless News Release, *Verizon Wireless Launches Faster New Wireless Broadband Network* (Feb. 1, 2007); Verizon Wireless, *Facts About . . . Verizon Wireless Network* (May 1, 2007), [http://news.vzw.com/pdf/Verizon\\_Wireless\\_Press\\_Kit.pdf](http://news.vzw.com/pdf/Verizon_Wireless_Press_Kit.pdf); Sprint News Release, *Sprint 'Powers Up' Largest Mobile Broadband Network with More Upgraded Markets, Faster Speeds, New Device and Integrated GPS Capabilities* (Jan. 30, 2007).

<sup>22</sup> See T. Watts, et al., Cowen and Company, *Mobile Content Delivery – The Next Wave of Wireless Growth* at 6 (June 28, 2006) ("T-Mobile plans to begin its 3G roll out in 2007."); R. Klugman, Prudential Equity Research, *FCC AWS Auction 66 Ends Raising \$13.7B, the Top Four Major Wireless Carriers Represented 78% of Total Bids and 7% of MHz-Pops Sold* at 2 (Sept. 18, 2006) ("T-Mobile, the most aggressive bidder in the auction, spent \$4.2 bil. on spectrum covering 100% of the U.S. population.").

rural areas that cable and DSL do not reach.<sup>23</sup> In Virginia, for example, a Verizon survey revealed that fixed wireless services were available to 71 percent of households in Verizon's local telephone service area in the state. WISP services also are being deployed in major metropolitan areas and small, rural communities by companies such as TowerStream and Clearwire.<sup>24</sup> Sprint has announced that by 2008 it will have constructed a nationwide WiMAX network to offer 2-4 Mbps service to an estimated 100 million customers, with an investment of up to \$3 billion.<sup>25</sup> WiMAX services are capable of and are being used to provide voice services that compete with distance-insensitive wireline offerings.<sup>26</sup> In-Stat estimates that, by 2009, 8.5

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<sup>23</sup> See Wireless Broadband Access Task Force, FCC, *Connected & On the Go: Broadband Goes Wireless*, GN Docket No. 04-163, at 32 (Feb. 2005) (reporting estimates that there are between 4,000 and 8,000 WISPs). WiMAX is being rapidly deployed, and more than 150 deployments were in use as of May 2006. See *May 2006 GAO Report* at 60.

<sup>24</sup> TowerStream, *Service Areas*, <http://www.towerstream.com/content.asp?serviceareas> (TowerStream offers high-speed Internet access in Boston, New York City, Seattle, San Francisco, Los Angeles, Chicago, and Providence/Newport/Westerly, Rhode Island); Clearwire Press Release, *Clearwire Reports First Quarter 2007 Results* (May 8, 2007) (Clearwire offers service "in 38 U.S. markets, covering approximately 9.1 million people in more than 400 municipalities in Alaska, California, Florida, Hawaii, Idaho, Minnesota, Nevada, North Carolina, Oregon, Texas, Washington and Wisconsin," and serves approximately 258,000 subscribers in the U.S. and Europe). See also Clearwire Corp., Amendment No. 5 to Form S-1 at 1 (SEC filed Mar. 7, 2007) ("Our markets range from major metropolitan areas to small, rural communities, and all sizes in between.").

<sup>25</sup> See A. Sharma, *et al.*, *Sprint To Spend Up to \$3 Billion To Build Network Using Wimax – New Wireless-System Plan Shows Belief in Demand for Mobile Internet Services*, Wall St. J. at B2 (Aug. 9, 2006); A. Mohammed, *Sprint Nextel To Build \$2.5 Billion Wireless Network*, Wash. Post at D04 (Aug. 9, 2006); J. Markoff, *et al.*, *Sprint Will Build an Intel-Backed Network*, N.Y. Times at 7 (Aug. 9, 2006). See also *Q1 2007 Sprint Nextel Corporation Earnings Conference Call – Final*, FD (Fair Disclosure) Wire, Transcript 050207aq.751 (May 2, 2007) (Sprint Nextel President and CEO Gary Forsee: "We also continue to make solid progress toward the deployment of our WiMAX broadband network. We are encouraged by the development of the WiMAX ecosystem . . . and we are on track to launch WiMAX in Washington D.C. and Chicago in late 2007 and to be in more than 20 markets by the end of 2008.").

<sup>26</sup> See, e.g., Clearwire, *Clearwire Internet Phone Service: Features*, <http://www.clearwire.com/internet-phone-service/features.php>; Clearwire, *Products: Internet Phone Service*, <http://www.clearwire.com/internet-phone-service/compare.php> (Clearwire offers unlimited local and long-distance calling, along with many basic features (including voice mail, caller ID, call forwarding, 3-way calling, call blocking, etc.), for \$29.99); Virginia Broadband, *What is VoIP*, <http://www.vabb.com/voip.htm> (Virginia Broadband advertises "Local and

million users will get their broadband services via WiMAX, with more than half of those customers receiving voice service via their WiMAX connection.<sup>27</sup>

WiFi development is also increasing the number of domestic broadband access points. Initial deployment of commercial WiFi service in the U.S. involved the placement of hotspots in public gathering points such as airports, coffee shops, and parks.<sup>28</sup> There are now more than 50,000 WiFi hot spots in the U.S., which represents more than one-third of all hot spots worldwide.<sup>29</sup> Recently, dozens of cities have begun deploying WiFi networks to provide high-speed Internet access (typically up to 1 Mbps) and other services to businesses and residents.<sup>30</sup>

The Commission's recent decisions have encouraged further development of broadband over powerline ("BPL") as well. BPL uses the electric distribution network as a third broadband pipe to the home. Because the wires needed for BPL are largely in place, BPL can be deployed rapidly and at relatively low cost in virtually any market.<sup>31</sup> BPL technology is being deployed commercially by Current Communications (a company backed by Google and other investors) in

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National telephone service for one flat rate. With your high-speed Internet connection you can get phone service, and not have to deal with any large, cumbersome phone company.").

<sup>27</sup> J. Hu, *Study: Net Phones Key to WiMax Success*, CNET News.com (Feb. 16, 2005), [http://news.com.com/Study+Net+phones+key+to+WiMax+success/2100-1039\\_3-5579377.html](http://news.com.com/Study+Net+phones+key+to+WiMax+success/2100-1039_3-5579377.html).

<sup>28</sup> See JiWire, *Wi-Fi Hotspot Directory*, <http://www.jiwire.com/search-hotspot-locations.htm> (50,267 hotspots in the U.S. as of May 14, 2007); see also T-Mobile, *T-Mobile HotSpot: US Locations*, <https://selfcare.hotspot.t-mobile.com/locations/viewLocationMap.do> (T-Mobile offers more than 8,000 WiFi hotspots spanning all 50 states).

<sup>29</sup> See JiWire, *Wi-Fi Hotspot Directory*, <http://www.jiwire.com/hotspot-hot-spot-directory-browse-by-country.htm> (visited May 14, 2007).

<sup>30</sup> According to one industry source, as of the end of March 2007, there were approximately 81 municipal WiFi networks in the U.S. that were providing public access, plus 38 additional networks that were being used solely for municipal purposes such as public safety. See MuniWireless.com, *List of US Cities and Regions* at 1, 3 (Mar. 31, 2007), <http://muniwireless.com/reports/docs/March-31-2007summary.pdf>.

<sup>31</sup> See S. Cleland, NetCompetition.org, *Why Competition Obviates Net Neutrality*, presentation for the FTC Internet Access Task Force at 6 (Sept. 26, 2006) ("99% of the cost to provide BPL is already paid for to supply electricity.").

Ohio and Texas,<sup>32</sup> and by other providers in smaller deployments throughout the U.S.<sup>33</sup> Parks Associates recently estimated that the number of U.S. households subscribing to BPL services will increase from 400,000 in 2007 to 2.5 million by 2011.<sup>34</sup>

Finally, satellite broadband service is also emerging quickly and is available nationwide from multiple providers.<sup>35</sup> HughesNet, StarBand, and WildBlue offer two-way broadband services at download speeds up to 1.5 Mbps and upload speeds up to 256 kbps,<sup>36</sup> which are comparable to the most widely purchased DSL offerings. Satellite providers report that they served more than 495,000 broadband lines at the end of June 2006, and that their subscribership

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<sup>32</sup> See Current Communications, *Overview*, <http://www.currentgroup.com/about/index.html>; Current Communications Press Release, *Current Communications Group Announces Strategic Investments To Catalyze Broadband over Power Line Deployments* (July 7, 2005); Current Communications Press Release, *Current Communications Announces \$130 Million in Investments in Broadband over Power Line Networks* (May 4, 2006).

<sup>33</sup> See, e.g., utility.net Press Release, *utility.net Announces Commercial Broadband Rollout in Michigan with Potential To Reach One Million Customers in Coming Years* (Apr. 30, 2007); United Power Line Council, *BPL Deployment Map*, [http://uplc.utc.org/file\\_depot/0-10000000/0-10000/7966/conman/BPL+Deployment+Map+2007.pdf](http://uplc.utc.org/file_depot/0-10000000/0-10000/7966/conman/BPL+Deployment+Map+2007.pdf); BPL Co-op, *Broadband over Powerline*, <http://www.forcvec.com/bplcoop/index.html> (In southwestern Virginia, a joint venture of the Central Virginia Electric Co-operative and International Broadband Electric Communications is deploying BPL service to rural customers).

<sup>34</sup> See Parks Associates: *Growth of Broadband over Power Line To Outpace Cable and DSL*, Business Wire (Jan. 18, 2007).

<sup>35</sup> See, e.g., StarBand, *What is StarBand?*, <http://www.starband.com/about/> (service available throughout U.S.); WildBlue, *About WildBlue: Questions & Answers*, [http://www.wildblue.com/aboutWildblue/qaa.jsp#1\\_1](http://www.wildblue.com/aboutWildblue/qaa.jsp#1_1) (service available in contiguous U.S.); HughesNet, *For Your Home*, [http://go.gethughesnet.com/HUGHES/Rooms/DisplayPages/LayoutInitial?pageid=hughesnetc&Container=com.webridge.entity.Entity\[OID\[91908CBE85AD4C428CCD8D5CDB016B51\]\]](http://go.gethughesnet.com/HUGHES/Rooms/DisplayPages/LayoutInitial?pageid=hughesnetc&Container=com.webridge.entity.Entity[OID[91908CBE85AD4C428CCD8D5CDB016B51]]) (same).

<sup>36</sup> WildBlue, *Packages and Pricing*, <http://www.wildblue.com/forYourHome/index.jsp> (WildBlue offers residential and small business service at \$49.95/mo. for 512 kbps/128 kbps, \$69.95/mo. for 1 Mbps/200 kbps, and \$79.95/mo. for 1.5 Mbps/256 kbps); HughesNet, *For Your Home: Pricing*, <http://go.gethughesnet.com/HUGHES/Rooms/DisplayPages/LayoutInitial?Container=com.webridge.entity.Entity%5BOID%5B71A9F5B422ABCE4886D9492F66B5B589%5D%5D> (HughesNet offers residential services at \$59.99/mo. for 700 kbps/128 kbps, \$69.99/mo. for 1 Mbps/200 kbps, and \$79.99/mo. for 1.5 Mbps/200 kbps); StarBand by Spacenet, *New StarBand Nova Series*, <http://www.starband.com/services/> (StarBand offers residential and small office/home office service at \$49.99/mo. for 512 kbps/128 kbps, \$129.99/mo. for 1.024 Mbps/256 kbps).

was growing rapidly.<sup>37</sup> Although satellite broadband was previously considered expensive for residential customers, satellite providers' pricing is comparable to what cable modem and DSL providers charged just a few years ago.<sup>38</sup> In any event, satellite providers continue to improve their technology and cost structures.<sup>39</sup>

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<sup>37</sup> *FCC June 2006 High-Speed Report* at Tables 1, 6.

<sup>38</sup> *See, e.g., EchoStar Launches High-Speed Service*, Multichannel Newswire (Oct. 20, 2006) (EchoStar began marketing high-speed Internet to rural customers starting at \$49.95/month).

<sup>39</sup> *See, e.g., Hughes Network Systems, LLC Press Release, Broadband Within Reach: Hughes' New Low Price Makes Broadband Dream a Reality for Underserved Communities* (May 7, 2007) ("Effective [May 7, 2007], new subscribers to HughesNet™ high-speed Internet satellite service will enjoy a significant reduction in price on Hughes equipment and standard installation. Now consumers in underserved areas can get fast broadband service at a new, affordable price."); *Hughes Network Systems, LLC Press Release, Hughes Signs Contract with Arianespace to Launch SPACEWAY 3* (Mar. 1, 2007) (The HughesNet SPACEWAY 3 satellite scheduled to launch in August 2007 "will deliver a wide range of new high-speed communications services for IP data and multimedia applications to North American enterprise, consumer, and government customers"); *WildBlue Press Release, WildBlue High-Speed Internet Via Satellite Triples Capacity with New Satellite* (Mar. 20, 2007) (WildBlue recently began offering service through a new satellite, WildBlue-1, which "allow[s] WildBlue to more than triple its customer capacity."); *Spacenet Reinvents Home and Small Office Satellite Services with All New StarBand Nova Featuring Next-generation Technology and Dramatically Reduced Pricing*, Business Wire (Sept. 19, 2006) (Spacenet introduced a new, StarBand Nova satellite broadband Internet service for residential and small office users "looking for a more reliable, professional-grade broadband satellite Internet connection at an affordable price.").