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## EXECUTIVE SUMMARY

The Public Notice invites further comment on three general issues, and many more questions, on E-rate modernization. The questions include how best to focus E-rate funds on high-capacity broadband, whether and how to reduce or eliminate for voice services to shift more funding to broadband, and whether some demonstration projects or experiments could be authorized within E-rate to test new ways to maximize cost-effective purchasing.

***Focused Funding on High Capacity Broadband.*** CenturyLink welcomes increased focus on high capacity broadband services. It understands how high speed connectivity can bring greater opportunities to business and learning. At the same time, however, voice services will long remain a key service for schools and libraries, including standalone voice, so E-rate reform should preserve support for them. The Commission could consider a temporary boost in Priority 2 support to enable more WiFi connectivity inside school and library buildings, using some of the E-rate funds previously allocated but unspent. But Priority 2 services, chiefly internal connections, should otherwise remain secondary to the more essential Priority 1 voice and broadband services.

E-rate is a consumer discount program, not an infrastructure program. So its funds cannot properly be tapped for infrastructure grants, last mile grants, or self-provisioning. Last mile connectivity, however, including last mile special construction, is far less costly today than in the past for schools and libraries. Commercial providers like CenturyLink today deliver products like optical Ethernet over ever-expanding local fiber networks that already can reach the large majority of schools and libraries nationwide, and the greater ability to share fiber infrastructure means special construction charges are much lower than in the past. CenturyLink's Metro Optical Ethernet service is one of a class of new services that can deliver scalable, dedicated bandwidth to 1 Gbps or higher, meeting the President's and the Commission's connectivity goals quickly and cost-effectively.

There are many consortium and bulk buying arrangements already in place today, notably state contracts managed by departments of administration. CenturyLink serves many E-rate customers through these arrangements. School and library administrators should always have the flexibility to determine what arrangements best meet their needs, and the Commission and USAC should not give artificial preference to such arrangements in competitive procurement.

***Reduced Support for Voice Services.*** It would be mistaken to eliminate E-rate support for voice services. Schools and libraries rely on voice services to communicate with parents, patrons, staff, and the community, and even standalone POTS will continue to provide needed safety, reliability, functionality and convenience for some time to come. Voice support should not be reduced, but if the Commission takes such steps it would be less objectionable to reduce the discount rather than eliminate all support, while making any changes gradual. Any policy should be technology neutral within services and apply equally to all voice services, including traditional voice services, VoIP, wireless, and bundled service offerings.

***Demonstration Projects.*** CenturyLink values innovation in the E-rate program. Given financial demands on the program, of course, the Commission should limit the number, scale, and scope of any demonstration projects, and those should emphasize ways to improve efficiency in the program. A narrowly focused bulk-buying demonstration project might be worthwhile, if neutral in its management; the Commission should seek more input before proceeding. A project to test USAC providing neutral technical consultants would be helpful to many applicants. A demonstration project evaluating efficiencies and cost savings of cloud services could be enlightening. CenturyLink welcomes innovation in the E-rate program and would be pleased to work with the Commission as the agency develops and shares more details.

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

In the Matter of )  
 )  
Modernizing the E-rate ) WC Docket No. 13-184  
Program for Schools and Libraries )

**FURTHER COMMENTS OF CENTURYLINK**

**I. NPRM INTRODUCTION (¶¶ 1-12).**

The March 6, 2014 Public Notice<sup>1</sup> follows last year’s *E-rate Modernization NPRM*<sup>2</sup> and seeks comment on additional issues raised in the NPRM that the Commission believes warrant additional “focused inquiry.”<sup>3</sup> Those questions are how best to focus E-rate funds on high-capacity broadband especially high-speed Wi-Fi and internal connections, whether and how the Commission should begin to phase down or phase out support for traditional voice services in order to focus more funding on broadband, and whether there are demonstration projects or experiments that the Commission should authorize as part of the E-rate program that would help the Commission test new ways to maximize cost-effective purchasing in the E-rate program.

The Public Notice states, “[b]ased on the extensive input the Commission has received, it appears that meeting the Commission’s proposed goals for the E-rate program will require that, in the near term, the program focus on providing the support necessary to ensure schools and libraries can afford high-speed connectivity to and within schools and libraries, even as the

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<sup>1</sup> *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Public Notice, Wireline Competition Bureau Seeks Focused Comment on E-rate Modernization, DA 14-308 (rel. Mar. 6, 2014) (“Public Notice”).

<sup>2</sup> *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, Notice of Proposed Rulemaking, FCC No. 13-100, 28 FCC Rcd 11304 (rel. July 23, 2013) (“NPRM”). Comments were filed September 16, 2013. Reply comments were filed November 8, 2013.

<sup>3</sup> Public Notice at ¶ 4.

Commission develops a long-term approach that allows applicants to scale up capacity while driving down costs.”<sup>4</sup> There is much the Commission can do to help schools as they transition to higher capacity connectivity, new services, and the higher spending that will often be associated with them. Until contributions reform is undertaken to broaden the contribution base, however, the program will remain financially constrained.<sup>5</sup>

In the meantime, the Commission should proceed carefully. Schools, public school districts, and public libraries rely on the program, so policy changes should not be abrupt. School and library administrators should retain flexibility to determine what services they need. And the Commission must also resist calls to direct E-rate funding in ways the Telecommunications Act of 1996 does not authorize. Fortunately, thanks to new products like fiber based Ethernet services, high capacity services are available more widely and more cost effectively than ever.

## **II. FOCUSED FUNDING FOR HIGH-CAPACITY BROADBAND.**

This winter, the Commission announced that “an initial review” determined that the agency could direct as much as “an additional \$2 billion” to broadband funding “over the next two years,”<sup>6</sup> principally by utilizing E-rate funds previously allocated but unspent. The Public Notice seeks comment on how best to use those additional funds.

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<sup>4</sup> Public Notice at ¶ 3.

<sup>5</sup> As Chairman Wheeler recently pointed out, “[f]or E-Rate modernization to be successful, the updated program must be . . . [f]iscally responsible and fact based[.]” Remarks of Tom Wheeler, Chairman, FCC before the Council of Chief State School Officers Legislative Conference, Mar. 17, 2014, at 4.

<sup>6</sup> News Release, FCC to Invest Additional \$2 Billion in High-Speed Internet in Schools and Libraries, Feb. 3, 2014.

**A. Broadband Deployment within Schools and Libraries (¶¶ 8-10).**

**1. Scope of services to be funded (¶¶ 11-12).**

CenturyLink supports responsible use of allocated but unspent program moneys. That can include providing some additional one-time support for Priority 2 internal connections, particularly expanding Wi-Fi installations within school buildings.<sup>7</sup>

Spending on internal connections must be carefully managed, however, and not merely because it is probably the program's area of greatest risk of waste, fraud or abuse. Applicants should provide an appropriate technology plan that shows how the internal connection work ties to broadband services and capacity that is existing or in procurement. Funding is limited, and in the last few years applicants have understood that only the highest discount applicants could have any hope of Priority 2 funding, so there is much more pent-up demand for Priority 2 support than recent applications to USAC would imply. The prospect of a one-time increase in Priority 2 funding probably will lead to more requests for internal connections support than can be met.

The Commission should direct USF dollars to internal connections only to the extent necessary to provision a provider's broadband service to and within the school and library. Accordingly, only equipment and supporting software that is essential to getting high capacity broadband to the classroom should be eligible for internal connections support. That includes internal wiring, switches and routers, wireless access points, and the software supporting these components.<sup>8</sup>

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<sup>7</sup> Given the heavy demands on the E-rate fund, CenturyLink believes the Commission should not change the Priority 2 funding category longer term, even if a modest portion of the one-time increase in available funding over the next two years is directed to internal connections.

<sup>8</sup> See CenturyLink Comments at 10.

Related technology that demonstrably improves the efficiency of broadband networks also should be considered to receive E-rate support.<sup>9</sup> Today, firewall services are absolutely essential to protect networks, secure data, and maximize broadband performance. They should be eligible for Priority 1 support. Currently, they are eligible only if they cannot be separated from Internet access. Similarly, DDOS and cybersecurity services should be eligible.<sup>10</sup> Maintaining outdated firewall processing or content filtering and other internal network problems can create bottlenecks and significantly degrade broadband performance. These capabilities should be updated when transitioning to high capacity broadband connections, and utilizing the broadband provider is the most cost-effective way to do so.

CenturyLink believes cloud storage should be added to the eligible services list, especially if caching through content servers is brought within E-rate as a means of reducing bandwidth demand and increasing cost-effectiveness of services.<sup>11</sup> Cloud storage is very cost effective for addressing rising costs associated with the data storage that necessarily accompany high capacity broadband applications and utilization.

**B. Broadband Deployment to Schools and Libraries (§§ 24-25).**

The Public Notice states that some parties have advocated a “targeted effort” to help support deployment of high capacity last mile connections to eligible schools and libraries that do not currently have access to connections meeting the connectivity goals proposed in the NPRM.<sup>12</sup> The problem is actually much less widespread than many people realize.

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<sup>9</sup> Public Notice at ¶ 12.

<sup>10</sup> Filtering cannot be eligible for E-rate support because of other federal law.

<sup>11</sup> CenturyLink Comments at 8-9.

<sup>12</sup> Public Notice at ¶ 24.

Carriers can provision the last mile and include that in the cost of service, either as a separate one-time charge or within the recurring charges over the life of the contract, whichever better suits the needs of the applicant. Special construction charges are appropriately eligible for E-rate funding.

But with the current generation of Ethernet services, special construction charges are commonly not a barrier for high capacity service delivery. With the latest commercial Ethernet services, potential special construction charges are much lower than in even recent years. Fiber-based carrier Ethernet service is the new standard for delivering dedicated high capacity Internet connectivity to businesses. It offers service to meet the NPRM's goals – up to 1 Gbps or higher per location – at a recurring cost substantially lower than other, older industry offerings. Today, special construction charges for deploying last mile fiber are commonly much lower than charges that businesses or schools and libraries faced in the past. That is because, unlike older technology requiring more dedicated plant, new Ethernet fiber infrastructure can be shared with other customers, even while delivering guaranteed bandwidth up to 1 Gbps or better to each site. Commercial fiber-based Ethernet service therefore enables schools and libraries to enjoy lower prices for both special construction and high capacity service, because they are using commercial network that is also serving other customers in the area.<sup>13</sup>

As CenturyLink explained in a confidential ex parte to the Commission,<sup>14</sup> special construction for a fiber loop to serve a school or library purchasing new commercial Ethernet

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<sup>13</sup> In rural areas, this shared infrastructure also means commercial Ethernet service to schools and libraries allows them to be valuable anchor tenants in the local network. This makes possible additional commercial investment for broadband deployment or upgrades that might otherwise not be economically viable in that community.

<sup>14</sup> Letter from Melissa Newman, CenturyLink, to Marlene Dortch, FCC, WC Docket No. 13-184 (filed Feb. 26, 2014) (filed subject to protective order) (“*CenturyLink Feb. 26, 2014 Ex Parte Letter*”).

service is far more economical than past services. This is a result of carriers' ability to utilize shared fiber network even while delivering dedicated bandwidth, meaning that commercial fiber deployed to serve a school building can also be used to provide service to other customers in the same area, and vice versa. Even in rural areas, schools and libraries generally are located where people are clustered – in the towns and community intersections – despite most of the single family residences being spread out in low density surrounding areas. Consequently, reaching rural town schools and libraries with high speed broadband connections is far less challenging than the low-density residential areas that surround them.

In CenturyLink's ILEC service areas, the vast majority of wire centers have fiber connectivity today, and others are close enough to be served by adjacent offices that are fiber-fed. At the request of Commission staff, CenturyLink reviewed specific states and communities within its ILEC operating areas to determine what percentage of school and library buildings are within Ethernet-capable wire centers. The company showed that the large majority of school and library buildings in the company's ILEC footprint are within wire centers already outfitted with Ethernet service, and more wire centers are being added all the time. To illustrate the surprisingly broad reach of fiber, the company also shared with the Commission results of a detailed examination of fiber capabilities in its Arkansas and Minnesota service territories, as well as a comparison between urban Denver and rural Montrose, Colorado.

Commercial providers are the foundation of the E-rate program, and the scope of available fiber is impressive. Admittedly, a very small percentage of schools and libraries where there may be no provider in the area that can provision a local loop on an economic basis, and for those deployment challenges E-rate service discounts alone cannot solve the problem. For those

situations, the Commission must look to the Connect America Fund and high-cost universal service support, not the Schools and Libraries universal service program.

Accordingly, CenturyLink questions the appropriateness of a “deployment fund” targeting loop deployment or special construction costs.<sup>15</sup> E-rate is not a program for infrastructure grants, and even with generous *Chevron* deference, the 1996 Act did not authorize such use of E-rate funds for deployment grants, whether to applicants or providers. Adjusting the level of discount for special construction is within the Commission’s discretion. The Commission could choose a higher level of E-rate-funded discount for special construction where that construction is part of a carrier’s new provision of service, selected through the standard procurement process. But this should not be a separate fund doled out for “special construction” or “deployment” applications outside of that competitive procurement system.

**1. Scope of services to be funded (§ 26).**

The scope of services suitable for E-rate funding is not unlimited. As commercial providers agree, promoting dark fiber is a misguided policy and likely inconsistent with the 1996 Act.<sup>16</sup> People consistently understate the costs associated with lighting, operating, and managing dark fiber,<sup>17</sup> and applicants will rarely be in a position to utilize it efficiently. That is one reason public and municipal systems have a poor track record.

The 1996 Act does not authorize E-rate support for self-provisioning. Section 254(h)(1)(B) directs providers to give “discounts” for their commercial “services,” to be “offset”

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<sup>15</sup> Public Notice at ¶ 24.

<sup>16</sup> See CenturyLink Comments at 5-6.

<sup>17</sup> Those substantial additional costs are included in commercially-provided service rates, but are separate (and appropriately ineligible) costs for dark fiber operators. That means comparisons between commercial fiber-based services and dark fiber are rarely apples-to-apples.

against their “contributions” or “reimbursed” by the Commission.<sup>18</sup> Many in the industry believe dark fiber is not properly classified as a *service*, but self-provisioning of fiber certainly is not. And the E-rate program is not a fund for grants to applicants for their construction or purchase of *facilities*.

Self provisioning is unnecessary, in any event. Commercial fiber networks already reach the great majority of communities nationwide, and they are being extended and upgraded every day. CenturyLink alone already has fiber to the vast majority of its wire centers nationwide,<sup>19</sup> despite having a substantial amount of rural footprint.<sup>20</sup> Commercial operators including CenturyLink can quickly and cost-effectively extend those networks to reach the large majority of school and library sites.<sup>21</sup> The costs of commercial fiber-based Ethernet services also are becoming lower all the time. At the same time, the actual costs of owning and operating fiber are much higher than applicants would expect.<sup>22</sup>

Self-provisioning or utilizing publicly-owned “private networks” also undermines private network investment. In rural areas in particular, it can discourage broadband upgrades and deployment for homes and small businesses in surrounding areas by denying commercial

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<sup>18</sup> 47 U.S.C. § 254(h)(1)(B).

<sup>19</sup> CenturyLink Feb. 26, 2014 Ex Parte Letter.

<sup>20</sup> CenturyLink has an ILEC service territory of nearly 600,000 square miles, which includes portions of 37 states. Its CLEC operations also provide fiber-based services to E-rate customers outside the company’s ILEC areas.

<sup>21</sup> Letter from Michael D. Saperstein, Jr., for Frontier Communications and CenturyLink, to Marlene H. Dortch, FCC, WC Docket No. 13-184 (filed Nov. 29, 2013); Letter from Melissa Newman, CenturyLink, to Marlene H. Dortch, FCC, WC Docket No. 13-184 (filed Nov. 22, 2013).

<sup>22</sup> Public and municipal broadband operators have routinely underestimated these costs, which is one reason so many public broadband projects have run into financial difficulty.

networks access to anchor tenants like schools and libraries.<sup>23</sup> It is essential that modernization of the Schools and Libraries discount program not frustrate goals of the *Connect America Fund*<sup>24</sup> program for broadband deployment in adjacent high cost and rural areas.

Public owned networks have a very poor record for performance, cost, and reliability. They undermine E-rate competition by introducing political considerations that effectively remove schools and libraries from competitive procurement, naturally expecting to lock up school and library sites on their networks, whether or not the real world economics of the project

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<sup>23</sup> CenturyLink Comments at 5-6.

<sup>24</sup> See *In the Matter of Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and Reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing an Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; Universal Service Reform - Mobility Fund*, WC Docket Nos. 10-90, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, WT Docket No. 10-208, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 26 FCC Rcd 17663 (rel. Nov. 18, 2011) (*USF/ICC Transformation Order* or *Order*), *Order Clarifying Rules*, 27 FCC Rcd 605 (rel. Feb. 3, 2012) (*Clarification Order*), Erratum to *USF/ICC Transformation Order* (rel. Feb. 6, 2012), *Further Clarification Order*, DA 12-298, 27 FCC Rcd 2142 (2012), Erratum to *Clarification Order* (rel. Mar. 30, 2012), Second Erratum to *USF/ICC Transformation Order*, DA 12-594, 27 FCC Rcd 4040 (2012), *pets. for recon. granted in part and denied in part*, Second Order on Recon., FCC 12-47, 27 FCC Rcd 4648 (2012), *pet. for rev.*, *Windstream v. FCC* (10<sup>th</sup> Cir. No. 12-9575); Third Order on Recon., FCC 12-52, 27 FCC Rcd 5622 (2012), Erratum to Second Order on Recon. (rel. June 1, 2012), *Order Clarifying Rules*, DA 12-870, 27 FCC Rcd 5986 (2012), Erratum to *Order Clarifying Rules* (rel. June 12, 2012), Second Report and Order, FCC 12-70, 27 FCC Rcd 7856 (2012), Fourth Order on Recon., FCC 12-82, 27 FCC Rcd 8814 (2012), *Order Clarifying Rules*, DA 12-1155, 27 FCC Rcd 8141 (2012), Fifth Order on Recon., FCC 12-137, 27 FCC Rcd 14549 (2012), Erratum to Fifth Order on Recon. (Dec. 4, 2012), Sixth Order on Recon. and Memorandum Opinion and Order, FCC 13-16, 28 FCC Rcd 2572 (2013), Erratum to Third Order on Recon., DA 13-309 (rel. Mar. 1, 2013), Erratum to Sixth Order on Recon. and Memorandum Opinion and Order (rel. Mar. 7, 2013), *Order Clarifying and Correcting Rules*, DA 13-564, 28 FCC Rcd 3319 (2013), Erratum to *Order Clarifying and Correcting Rules* (rel. Apr. 8, 2013), *Order Clarifying Reporting Obligations for 2013 and 2014*, DA 13-1115, 28 FCC Rcd 7227 (rel. May 16, 2013), Erratum to *Order Clarifying Reporting Obligations for 2013 and 2014* (rel. May 29, 2013), Order, 28 FCC Rcd 14887 (2013), Report and Order, DA 13-2115 (Oct. 31, 2013), Order, DA 14-434 (Mar. 31, 2014), *pets. for rev. of USF/ICC Transformation Order pending, sub nom. In re: FCC 11-161* (10<sup>th</sup> Cir. No. 11-9900, Dec. 16, 2011).

truly justifies it.<sup>25</sup> Sustainability of such projects is also a real concern.<sup>26</sup> Moreover, the Commission should strive to avoid politicization of E-rate procurement. In addition to leading to uneconomic decisions, it could compromise the future of the program by diminishing public and Congressional support, especially when commercial service is capable of delivering more value than ever before.

The E-rate program cannot be expected to pay all the costs of local loop buildout.<sup>27</sup> But school and library administrators should be allowed flexibility to pursue lower monthly contract costs options from their commercial providers. The program should allow front-loading of non-recurring charges if an applicant chooses that option to secure a lower monthly recurring charge for service. The program should allow longer term contracts, which provide lower monthly service charges and help spread out or entirely avoid special construction charges.<sup>28</sup> The program should allow applicants to purchase scalable service, as is now routinely offered with carrier optical Ethernet service, so they can increase their bandwidth during a longer contract term as their needs change. These measures can give applicants opportunities for lower monthly service costs and improve cost efficiency within the program.

## **2. Ensuring equitable distribution (¶ 30).**

The Public Notice asks how best to distribute support among applicants for high speed connections to schools and libraries. If the Commission offers “additional deployment support”

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<sup>25</sup> The prospect of E-rate money for these projects led at least one of them to contact school districts across its state during the recent E-rate procurement cycle, telling them not to order high capacity service from other providers and to make only short term orders from existing high capacity providers. Such contacts show a shameful disregard for competitive procurement.

<sup>26</sup> Public Notice at ¶ 27.

<sup>27</sup> *Id.* at ¶ 29.

<sup>28</sup> Extremely long duration contracts are unwise in the E-rate space, however. Applicants have difficulty accurately predicting future needs and extremely long terms conflict with competitive procurement principles.

to applicants that “do not already have access to high-speed scalable connections available at reasonable prices,” how should it identify those schools and what should those applicants be required to show?<sup>29</sup> To start, the Commission should not be creating a new “deployment fund” of grants. It should limit itself to discounts on commercial services, which include special construction for new connections or upgrades for high speed connectivity.<sup>30</sup>

The Commission has discretion to set reasonable discount levels for schools’ service, and it can provide a high discount for special construction charges if appropriate. But E-rate funding is not authorized for infrastructure grants to applicants. Instead, the Commission should provide the highest level of discount appropriate for an applicant for the services of a carrier offering service or bidding in the E-rate procurement process.

The Public Notice also asks whether the program should focus on future scalability of existing connections and available pricing when reviewing applications or opportunities for service. The Commission should be open to supporting special construction charges that allow for scalability and reasonable room for future growth. In competitive procurement, applicants should be free to order scalable service as part of a long term contract for commercial service. That allows them to increase their bandwidth and/or add service to new district buildings during the term, so they can realize lower monthly costs even while retaining flexibility to meet their bandwidth needs. The Commission should welcome but not require these arrangements.

**C. Encouraging Cost-effective Purchasing (§§ 34-37).**

***Consortium Purchasing and Bulk Buying (§§ 34-35).***

CenturyLink welcomes consortia customers and participates in many bulk buying arrangements. Smaller applicants especially benefit from these opportunities. CenturyLink

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<sup>29</sup> Public Notice at ¶ 30.

<sup>30</sup> 47 U.S.C. § 254(h)(1)(B).

works with customers within state and larger county contracts, as well as other cooperative buying arrangements. The company's sales personnel routinely advise potential customers of such opportunities when they may offer lower prices or other benefits to the customer.

Consortia or bulk buying arrangements can involve tradeoffs and are not always suited to everyone's situation. They can be a challenge to applicants if they are uncertain about their future needs, their rate of growth of bandwidth consumption, their future enrollment or patronage levels, or their future budget allowances. Smaller applicants may not meet minimum volume requirements; larger districts may secure better or more flexible terms through direct negotiations. The program managers may impose processing costs or fees. State master contracts, for example, are sometimes tailored more for state agency needs than the local school or library administrator.

Thus, school and library administrators need flexibility to determine what arrangements best meet their needs. Consequently, consortia or bulk buying arrangements should not be artificially promoted or favored in E-rate's competitive procurement process. Likewise, consortia applications should not be artificially moved to the front of the line for USAC processing. Neither, however, should USAC defer them because of their potentially larger size or complexity, as reportedly often happens today.

### ***Technology Planning (§ 36).***

Some state and local laws already require technology planning, especially in school settings. Commercial service providers typically support requiring it. CenturyLink supports requiring applicants that are seeking E-rate support for upgrading high capacity connections to demonstrate that they have a reasonable plan and the demonstrated ability to use those services. This need not be an extensive burden, nor require the use of outside consultants. Service providers increasingly offer industry-standard Ethernet products for single site or multi-site

businesses, including combinations tailored to typical school district needs. For smaller applicants, a technology plan need not be professionally prepared or detailed.

***Data Collection and Transparency (¶ 37).***

The Commission should gather more data on the E-rate program before making any major policy changes. The best and more efficient way to gather data about speed and quality of connections is to survey samples of schools and libraries. This should be sensitive to the burden and costs imposed, both to reduce the costs imposed on applicants and to promote more consistent participation. Sampling selected subsets of schools and libraries could provide the Commission with insights -- on how schools and libraries use E-rate supported services, the applications they use, and what their true needs are -- without burdening every applicant in America.<sup>31</sup>

CenturyLink supports transparency. Not every new data or transparency measure, however, is necessarily worth the burden. The NPRM's suggestion of compiling a public database of E-rate service pricing,<sup>32</sup> for example, would likely not be successful, given the largely unique needs and circumstances of each applicant and the immense diversity of the nation's 140,000 schools and libraries across the U.S.<sup>33</sup>

E-rate contracts are awarded through a public competitive procurement process or are purchased from public tariffs or schedules. Actual purchase prices are already disclosed following award, and tariffed or scheduled services are publicly priced already. Ultimately, however, most packages of E-rate services are individually tailored to an applicant's particular

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<sup>31</sup> To improve accuracy, sampling should ask only straightforward, objective questions and solicit some documentation to support the description of the service tier and service arrangements.

<sup>32</sup> NPRM, 28 FCC Rcd at 11318 ¶ 43.

<sup>33</sup> Comments of CenturyLink at 20.

needs, even when using stock service elements, so comparisons among applicants are rarely well-matched.<sup>34</sup> That suggests a USAC or FCC database would be not just tedious to create and maintain but limited in accuracy and usefulness.

**D. Streamlining the Administrative Process (¶¶ 38-39).**

Parties commenting on the NPRM uniformly encouraged the Commission to strive to minimize administrative burdens and to streamline administrative processes. CenturyLink welcomes Commission efforts to reduce the current level of administrative burdens and complexity for applicants and providers. Ironically, the Public Notice – like the NPRM before it – describes opportunities for more administrative complexity. The Commission should reassess any proposals that would increase administrative burdens, among them extended 10-year record retention requirements for applicants and service providers and redundant officer certification requirements for providers. The Commission should, in particular, take long-overdue action to remove service providers from their current unnatural “middleman” role in payment processing.<sup>35</sup>

The Public Notice asks whether construction, deployment, purchase, and invoicing deadlines should be revised or extended. Some flexibility on invoicing and USAC processing of complex applications is reasonable where individual circumstances warrant it. Yet it is essential to have clear and predictable deadlines in a program of this type. Deadlines for installation and service delivery are especially necessary. CenturyLink does not believe, for example, that new deployment should universally be allowed eighteen months for completion and invoicing from the date funds are committed. Instead, USAC should be delegated the authority to waive or

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<sup>34</sup> Applicants themselves are not uniform in how they describe their services. Different applicants routinely complete Item 21 differently, making comparisons from those submissions of limited value.

<sup>35</sup> CenturyLink Comments, filed herein Sept. 16, 2013, at iv, 26; CenturyLink Reply Comments, filed herein Nov. 8, 2013, at v, 23-24.

extend deadlines in advance, and it should be given policy guidelines to help it exercise that deadline discretion.

### **III. REDUCED SUPPORT FOR VOICE SERVICES (¶ 40).**

The FCC should not eliminate support for voice services. Schools and libraries rely on these services, including traditional and standalone voice services. In comments on the NPRM, the applicant community broadly opposed eliminating E-rate support for voice services, including traditional telephone services. They cited many reasons, including service reliability, the simplicity of its 911 service,<sup>36</sup> the need to be able to send and receive faxes from parents,<sup>37</sup> the need for traditional lines linked to fire alarm systems and the costs of the special CPE and other equipment needed for Voice over Internet Protocol service. Traditional voice services provide a highly valued and needed service that should continue to receive E-rate support.

The Act likely precludes ending all support for standalone voice services, as voice is the basis for universal service.<sup>38</sup> Although the Act directs the Commission to “tak[e] into account advances in telecommunications and information technologies and services[.]” it provides that universal service support extends to the services by “telecommunications carriers” that are “supported by Federal universal service support mechanisms[.]”<sup>39</sup> Standalone voice remains squarely among them. In the *USF/ICC Transformation Order*, the Commission explained that *voice*, not broadband, is the USF-supported services.<sup>40</sup> The order expressly requires eligible

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<sup>36</sup> News accounts of recent emergencies at schools highlight the importance of 911 service that any child can know how to dial. News Release, Statement of FCC Commissioner Ajit Pai on the Importance of Connecting Americans to Emergency Personnel Whenever They Dial 911, Jan. 13, 2014.

<sup>37</sup> Even if schools all adopted VoIP service, a great many students’ families have not.

<sup>38</sup> CenturyLink Comments at 11; CenturyLink Reply Comments at 7.

<sup>39</sup> 47 U.S.C. §§ 254(c)(1), (c)(3).

<sup>40</sup> *USF/ICC Transformation Order*, 26 FCC Rcd 17663 at ¶¶ 61-65.

telecommunications carriers to offer standalone voice service.<sup>41</sup> It is also worth noting that the Universal Service Fund – including the Schools and Libraries Universal Service program – is paid for through assessments on voice providers.

There is no need to eliminate support for voice service, anyway. Voice service will gradually transition to a broadband application in most areas. That transition will not be immediate. During that long transition, many schools and libraries – and the people they serve – will continue to rely on standalone voice services, even as schools and libraries move toward higher capacity broadband connections.

**A. Reduced E-rate Support for Voice Services (¶¶ 41-44).**

If the Commission is nevertheless determined to shift E-rate funding to high capacity broadband services, CenturyLink believes it should limit itself to adjusting the level of discount, rather than denying support altogether, and it should transition to the lower discount level over time. It must also observe technological neutrality, meaning wireless services, VoIP applications, or bundled offerings should receive no more favorable treatment than traditional standalone voice services or POTS.

CenturyLink believes decreasing the discount level by a flat 15% interval per year for up to five years, as the Public Notice suggests,<sup>42</sup> is unduly aggressive. For applicants at lower discount levels, the impact would be quite sharp and imposed too rapidly. With schools and libraries subject to strict budget cycles (including long budget county and state budget planning intervals), a more gradual and uniform reduction in discount level -- to a *non-zero* long-term discount baseline -- would be less objectionable. Phasing down over five years to a cap on total voice spending per student, if not set unreasonably low, would also be less objectionable than

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<sup>41</sup> *Id.* at 17693 ¶ 80.

<sup>42</sup> Public Notice at ¶ 41.

eliminating all voice support. However, a case-by-case phase-down of voice support – with different findings of eligibility or discount for different applicants based on their individual circumstances<sup>43</sup> – would be too complex to administer and too uncertain for applicants.

**B. Alternatives (¶¶ 45-49).**

The Public Notice asks whether lower priority for support of voice service, rather than elimination, would be a more suitable way of shifting funding to high capacity broadband services. A simplified flat 50% discount, perhaps lower in the future, would indeed be less objectionable than eliminating all support for voice. Such an approach also offers relative simplicity and predictability. In contrast, determining a benchmark per line for VoIP support would be very cumbersome to administer.

**C. Easing Administrative Burdens (¶ 54).**

Whatever approach to voice services the Commission may adopt in revising the E-rate program, the agency should take steps to ease administrative burdens. First of all, it should not pull the rug abruptly out from under applicants that rely on support for voice services, and which have reasonably planned and budgeted for such ongoing support. As explained elsewhere, the Commission should not eliminate support for voice services, including standalone voice. If the Commission nevertheless determines to reduce support, it should maintain a level of support for voice and allow a transition to the new rule, while maintaining seeking administrative simplicity. This could include revising the discount rates to a lower level, while otherwise leaving eligibility and administrative processing essentially unchanged. Or it could include a simplified flat rate for all voice services, instead of the tiered discount approach that otherwise would apply. All

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<sup>43</sup> Public Notice at ¶ 43.

voice services, however, should be treated alike, including POTS, VoIP, wireless and bundled voice service.

#### **IV. DEMONSTRATION PROJECTS (¶¶ 55-62).**

The NPRM invited comment on “innovative approaches to encouraging . . . efficiency” in the program.<sup>44</sup> The Public Notice now seeks further comment on whether to provide E-rate funding for “time-limited demonstration projects aimed at identifying and testing different approaches[.]”<sup>45</sup> CenturyLink supports efforts to promote efficiency in the E-rate program. Some limited demonstration projects may be worth exploring, although the Commission should keep such spending modest, given E-rate fund constraints, even after releasing allocated but unspent funds. The Commission should solicit detailed input from interested parties before launching or funding such efforts.

The Commission should bear in mind, too, that there are thousands of E-rate experiments underway today. Thousands of applicants and hundreds of providers nationwide have a very broad variety of service arrangements, with a complete range of technologies and project models. The Commission would learn much about efficiency in the E-rate program by surveying the many ways that applicants are receiving services.

The Commission should focus any demonstration projects on particular ways that the program can be more efficient and better administered. CenturyLink suggests the Commission should consider a small scale demonstration project focused on cloud-based storage. With vastly higher needs for data storage, access to stored applications, and security, cloud services can offer significant efficiencies. A demonstration project could select willing applicants and temporarily make cloud storage E-rate eligible for a time. That would offer the Commission an opportunity

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<sup>44</sup> NPRM, 28 FCC Rcd at 11362 ¶ 220 (heading); *see also* Public Notice at ¶ 55.

<sup>45</sup> Public Notice at ¶ 56.

to evaluate how use of the cloud affects bandwidth consumption efficiency and overall service costs. It may prove a cost savings compared to similar applicants that try to manage their own storage and security functions.

***Structured Bulk Buying Project (§ 57).***

States and some county and municipal authorities manage many bulk buying arrangements today. Many E-rate applicants procure services and/or equipment through these vehicles. For some applicants, they can deliver savings and convenience.<sup>46</sup> CenturyLink supports competitive bulk purchasing with many state and large county departments of administration, including for E-rate eligible services and equipment.

There are more than 130,000 schools and nearly 9,000 public libraries -- in 50 states and more than 3,000 counties.<sup>47</sup> CenturyLink alone serves nearly 4,000 applicants, including a much larger number of school and library buildings, in 46 states. Given the diversity and particular needs of schools and libraries nationwide, bulk buying arrangements are best handled at the state or major county level. Beyond that, Commission or USAC involvement in bulk buying arrangements would likely conflict with the competitive procurement process that USAC manages and the Commission oversees. And E-rate funding would not properly be used for administering bulk-buying arrangements.

***Hiring Technical Consultants (§ 58).***

CenturyLink supports the idea of technical assistance for E-rate applicants, if managed through USAC and administered in a purely neutral manner. The company recognizes that many

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<sup>46</sup> The departments that manage them can also provide some useful information to school and library administrators, within the limits of procurement laws.

<sup>47</sup> See Section II(C), *supra*.

applicants find themselves frustrated by complexity of planning, provisioning, and efficiently using today's more complex E-rate services.

Service providers like CenturyLink can provide tailored solutions to applicants' needs, and unlike many providers the company generally assigns each E-rate customer a dedicated account representative who can arrange technical support at any time. But a demonstration project on independent, informed technical advice would surely be welcome among school and library administrators nationwide. USAC can properly utilize consultants necessary for its own administrative functions, and USAC can likely retain consultants to support a technical help line and consulting resources to provide scrupulously neutral technical assistance to applicants.

The Commission should not extend E-rate funding for applicants' hiring of third-party consultants. Applicants are welcome to hire consultants, and many do.<sup>48</sup> But the 1996 Act does not authorize grants of Schools and Library universal service funds for that purpose any more than it provides funding for hiring of a school district's IT director.

***ALA Proposal (¶ 59).***

The Public Notice highlights the American Library Association's suggestion for a program that would temporarily increase the discount level for some libraries, "prioritizing based on public-private partnerships," and rendering "technical assistance" to "catalyze innovation[.]"<sup>49</sup> CenturyLink has high regard for the ALA, and a modest scaled project would be welcome. Providing a temporary increased discount for projects exploring innovation, new product or service models, and program efficiency would be welcome. The Commission must

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<sup>48</sup> The quality of third party E-rate consultants is often poor, especially in engineering and cost areas.

<sup>49</sup> Public Notice at ¶ 59 (footnote omitted).

provide guidelines, though, sufficient to ensure that any project, even any “public-private partnership,” remains consistent with competitive procurement rules.

***Linking Last Mile Infrastructure to BTOP Funded Networks (¶ 60).***

The Commission should not be directing E-rate money to public-funded last-mile BTOP projects, even for a limited demonstration project. Doubtless, BTOP-funded R&E networks – especially those facing financial troubles -- would welcome an opportunity to tap E-rate funding to expand their reach and scope by overbuilding commercial networks. The Act does not authorize use of E-rate funding for grants to BTOP projects, nor to carriers or anyone else. The law requires “discounts” for “services,” which are to be “offset” against USF contribution or “reimbursed” from the Universal Service Fund.<sup>50</sup> The Act directed the Commission to “enhance ... access to advanced telecommunications and information services”<sup>51</sup> for schools and libraries and authorized it to “designate additional services for such support”<sup>52</sup> as telecommunications and universal service “evolve.”<sup>53</sup> In doing so, however, it must utilize “competitively neutral rules[.]”<sup>54</sup> Even with the broad measure of *Chevron* deference allowed by the 5<sup>th</sup> Circuit, the statute does not allow the E-rate discount program to provide funding for infrastructure grants.

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<sup>50</sup> 47 U.S.C. § 254(h)(1)(B). The 5<sup>th</sup> Circuit allowed the Commission’s extension of E-rate supported service to information services and non-telecommunications entities that provide Internet access and internal connections. *Texas Office of Public Utility Counsel v. FCC*, 183 F.3d 393, 443-44 (1999); *see also* NPRM, 28 FCC Rcd at 11374 n. 340.

<sup>51</sup> 47 U.S.C. § 254(h)(2)(A).

<sup>52</sup> 47 U.S.C. § 254(c)(3).

<sup>53</sup> 47 U.S.C. § 254(c)(1).

<sup>54</sup> 47 U.S.C. § 254(h)(2). The Act also directs the Commission to consult with the Federal State Joint Board on Universal Service on appropriate supported services. 47 U.S.C. §§ 254(c)(1), (2).

Using E-rate for infrastructure grants is unnecessary, anyway. Private companies have invested \$250 billion in communications network since 2009.<sup>55</sup> Commercial carriers' fiber networks are now capable of reaching nearly all schools and libraries in America, with higher bandwidth and at lower cost than ever before. With improving technology and commercial innovation, products and services are continually becoming cheaper and more capable, and the market is becoming only more competitive. Those new Ethernet products, for example, can meet the President's goals of 100Mbps per 1,000 students (and ultimately 1 Gbps) quickly and cost effectively, and even with increased broadband spending they reflect a very small portion of education or total IT spending.

If an eligible provider chooses to utilize a BTOP project's capacity to support its planned service to an E-rate applicant, and that provider wins the competitive procurement, the provider's special construction of a local loop to the BTOP middle-mile network may be eligible. But the Commission should not extend special favors to BTOP projects.

Commercial providers like CenturyLink plan network deployment and upgrades so as to provide competitive services while lowering costs, using a privately funded infrastructure that is shared among many customers and that benefits a broader class of applicants and their surrounding communities of families and businesses. The success and future political viability of the E-rate program depends on commercial networks, competitive procurement, and disciplined administration.

CenturyLink recognizes that the Commission is concerned about affordability of high-capacity services, when most schools will need to increase their spending to reach the high

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<sup>55</sup> Statement of Chairman Tom Wheeler, FCC, Hearing on the FCC's Fiscal 2015 Budget Request, Before the Subcommittee on Financial Services and General Government, Committee on Appropriations, U.S. Senate, Mar. 27, 2014, at 2.

bandwidth targets embraced by the President and recommended by the Commission. Releasing allocated but unspent funds is a modest and temporary help. The good news is that commercial services are more available, more capable, and most cost-effective than ever before.

CenturyLink and other commercial providers are eager to work with them to help meet those needs quickly and cost effectively.

Respectfully submitted,

**CENTURYLINK**

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