

permanently crowd out other eligible services,² meeting the President's goals will require flexible and innovative approaches.

As the Commission considers how to stretch limited program dollars to increase the deployment of high capacity broadband, it should leverage all of the infrastructure deployed to date using universal service funding, including the High Cost fund (CAF/Mobility Fund), the existing E-rate mechanism, and the Rural Health Care program. As discussed below, HIEM's experience deploying its RHC-supported network speaks to all three of the Commission's goals for the E-rate modernization effort: (1) facilitating timely and affordable access to advanced broadband, (2) ensuring the most cost-effective utilization of limited universal service funding, and (3) reducing administrative burdens by focusing on long-term investments rather than perpetual annual applications for recurring support.

I. BACKGROUND

HIEM is a not-for-profit consortium of health care providers in communities across northwest and north central Montana, established to develop and share electronic health information and improve patient care throughout a shared service area. The HIEM service area includes remote communities on both sides of the Continental Divide, and features difficult terrain, harsh and unpredictable weather, and sparse population. In 2007, HIEM received a one-time \$13.6 million award through an RHC program pilot, which it matched with a 15% contribution, to bring fiber based-network connectivity to participating health care providers across the region.

Six years later, all HIEM participants will have 50-100 Mb service and scalable access to a 10 Gig fiber backbone which is effectively future-proof. This network has greatly expanded

² *E-rate NPRM* at ¶ 63.

health care capabilities, including the transmission of medical images, patient records, and other data at high speeds, and enabled high quality real-time distance learning for health care professionals throughout the region.

In addition, local communities have realized significant additional benefits. For example, by installing (at no cost to the universal service program) excess capacity fiber into its network HIEM has been able to lease dark fiber facilities to local telecommunications service providers who in turn provide advanced services to rural communities. Proceeds from these arrangements are used to operate and maintain the HIEM network. Local service providers use access to HIEM's network to increase commercial and residential broadband availability in rural communities.

The RHC program uses a competitive bidding process similar to E-rate which allows health care providers to leverage competition to lower costs. Unlike E-rate, however, RHC allows program beneficiaries (*i.e.*, health care providers) to build, lease, or own network capacity and self-provision broadband services where the competitive process establishes that doing so is more cost-effective.

In HIEM's case, the most cost-effective option offered by a competitive bidder proved to be an offer to build middle- and last-mile fiber to its members' facilities. Having the flexibility to choose the most cost-effective bid enabled HIEM to stretch its one-time RHC funding award, reaching far more health care facilities and increasing overall program effectiveness and

efficiency.³ HIEM's experience suggests the Commission should consider the potential benefits to schools and libraries of allowing investments in beneficiary-owned wide area networks.

II. PROMOTING INVESTMENTS IN NETWORK INFRASTRUCTURE CAN INCREASE COMPETITION, SPUR DEPLOYMENT OF BROADBAND, AND HELP REDUCE DEMAND FOR RECURRING SUPPORT

The Commission asks generally how to ensure increased deployment of high-capacity connectivity (including fiber) and specifically how to “minimize recurring costs to schools and libraries.”⁴ HIEM's experience in the RHC program shows that allowing the option to construct and own network facilities (1) spurred deployment of better broadband connectivity while (2) reducing recurring costs to health anchor institutions through increased reliance on one-time, non-recurring investments. There is no reason to believe that E-rate beneficiaries could not realize similar benefits.

The Commission has long-recognized that the Telecommunications Act authorizes competitively neutral universal service investment in infrastructure as a potential means to meet the advanced services objectives of Section 254(h)(2)(A).⁵ Since 2006, the Commission has

³ Additional background is available in HIEM's comments in WC Docket No. 02-60. *See, e.g., HIEM Reply Comments*, WC Docket No. 02-60 (Sep. 7, 2012); *HIEM Further Comments*, WC Docket No. 02-60 (May 25, 2012).

⁴ *E-rate NPRM* at ¶ 74.

⁵ *See Federal-State Joint Board on Universal Service*, CC Docket No. 96-45, Report and Order, 12 FCC Rcd 8776, ¶ 634 (1997) (internal citation omitted) (*First Report and Order*) (concluding that “[e]xtending or upgrading existing telecommunications infrastructure enhances access to the advanced services that may be offered over that infrastructure” consistent with the objectives of Section 254(h)(2)(A)).

allowed the RHC program to fund such infrastructure investment.⁶ This authority to fund infrastructure under Section 254(h)(2)(A) clearly extends to both RHC and E-rate.⁷

A. Allowing Schools and Libraries to Invest In Network Facilities Can Reduce Dependence on Recurring Program Support

The current funding challenges being faced in E-rate should at a minimum spur an evaluation of the relative benefits of continuing to subsidize only ongoing costs versus increasing the amount and kind of support available for one-time capital expenditures. *The Omaha Plan*, prepared in 2011 by staff for State members of the Joint Board on Universal Service, used E-rate as a cautionary example as it explored the benefits of long-term investments (CAPX) versus perpetual subsidies (revenue requirements):

The closest recent analogy to the CAPX versus revenue requirements approach is the Schools and Libraries Program. The goal of schools and libraries [universal service fund (“USF”)] funding included in the Act was to wire every school and library in America to provide access to the Internet. Fifteen years after passage of the Act, we are still spending over \$2 billion per year “to wire every school and library in the nation to the Internet.” One would think that at some point in time, we will have completed the job. The problem associated with the Schools and Libraries program is that the states and their school systems leased facilities from the incumbent carriers that were needed to extend the existing networks into the school systems rather than constructing their own facilities. Instead of a one-time national problem that we could resolve at some point in time, the Schools and Libraries Program has become an entitlement program that will last forever.⁸

⁶ See *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Order, 21 FCC Rcd 11111, ¶ 14 (2006); see also *Rural Health Care Support Mechanism*, WC Docket No. 02-60, Report and Order, 27 FCC Rcd 16678, ¶ 79 (2012) (*Healthcare Connect Fund Order*); 47 C.F.R. § 54.636 (establishing conditions under which consortia of health care providers may construct and own network facilities).

⁷ Section 254(h)(2)(A) provides (emphasis supplied):

The Commission shall establish competitively neutral rules—

(A) to enhance, to the extent technically feasible and economically reasonable, access to advanced telecommunications and information services *for all public and nonprofit elementary and secondary school classrooms, health care providers, and libraries . . .*

⁸ THE OMAHA PLAN: A WHITE PAPER TO THE STATE MEMBERS OF THE FEDERAL-STATE JOINT BOARD ON UNIVERSAL SERVICE, at 7-8 (February 2011) (OMAHA PLAN).

A recent academic proposal to reform E-rate notes similar problems,⁹ suggesting that grants rather than recurring subsidies would be more cost effective for both the USF and E-rate beneficiaries:

The mandatory use of discounts for services provided to schools and libraries has arguably prevented the program from being offered in ways that may have saved schools and libraries money. Because service providers determine the basis for the discount, there is an information asymmetry. Providers will always know more about the actual cost of service delivery than USAC administrators or the FCC. There is no way to ensure that schools and libraries are actually paying less for E-rate services than they might have otherwise paid through aggressive negotiations.¹⁰

To help mitigate these issues, the Commission should follow the RHC program and allow E-rate support for CAPX in addition to ongoing subsidies. Program beneficiaries should be empowered to determine which approach (or a mix of both approaches) is most cost-effective, based on a fair and transparent competitive bidding process. Allowing such flexibility will free at least some program applicants from being forever dependent on annual E-rate funding and thereby reduce recurring annual demand.

Notably, applications for non-recurring support also require fewer administrative resources because they occur less frequently – certainly not annually. Once the facility is built, there is little ongoing paperwork to file. Non-recurring investments in long-term network facilities also reduce the uncertainty that comes with an annual application cycle in which each year the amount of approved funding is unknown.

⁹ See Lynne Holt, Mary Galligan, *Is it Time to Recreate the E-rate Program?* 64 FED. COMM. L.J. 275, 314 (2012) (“The current structure of the E-rate program encourages schools and libraries to seek and receive support for telecommunications services on an ongoing basis without a specific program goal or desired outcome.”).

¹⁰ See *id.* at 313. Note the problem of information asymmetry is more severe when there is only one or no bids, a significant problem in the RHC program (discussed further below). In evaluating E-rate policies the Commission should consider the number of E-rate “competitive” bids which have only a single bidder or no-bidder at all.

B. Ensuring Maximum Competition Will Stretch Limited Universal Service Funding

Competitive bidding is the ultimate key to ensuring efficient use of E-rate funds. Experience in the RHC program shows how dramatic the effects of increased competition can be in lowering rates and increasing the availability of broadband. The Commission concluded in the RHC pilot program that increased use of consortium applications attracted greater participation by service providers (which included alternative service providers such as fiber builders) and thus increased competition. Increased competition brought lower rates, higher bandwidth, and better service quality for applicants.¹¹

Effective competition in the RHC pilot program stood in marked contrast to the lack of competition that was the norm for much of the legacy RHC program.¹² While E-rate may not suffer from limited competitive bidding to the same degree as the legacy RHC, in many rural areas of the country, whether one is a school, library, or a health care provider, the number of potential bidders may be limited.

HIEM is in a very remote and isolated area of the country where it received prohibitively high priced bids from existing providers that offered to lease certain of the “links” HIEM needed to complete its network. Competing offers from fiber builders to construct new facilities capable of providing equivalent services won by a significant margin – even with ongoing maintenance costs factored in.

¹¹ See *Wireline Competition Bureau, Evaluation of Rural Health Care Pilot Program*, WC Docket 02-60, Staff Report, DA 12-1332, ¶¶ 81, 83 (2012).

¹² See *Wireline Competition Bureau Seeks Further Comment on Issues in the Rural Health Care Reform Proceeding*, WC Docket 02-60, Public Notice, DA 12-1166, at ¶ 11.b, n.52 (2012) (between 2006 and 2010, outside of Alaska, only 11% of applicants in the legacy RHC program received competitive bids in response to requests for services).

RHC program rules governing building and owning network infrastructure do not require health care providers to build or even encourage them to do so. However, retaining the *option* to construct is important – especially where there are few competitors bidding for support. RHC rules simply help ensure vendors put forward their best offer when bidding to meet the needs of rural health care providers. There is no reason why a similar option should not be offered to schools and libraries in the E-rate program.

III. LEVERAGING ALL SUBSIDIZED BROADBAND INVESTMENTS CAN MAXIMIZE THE IMPACT OF LIMITED E-RATE FUNDING

Carriers serving rural areas that have long participated in federal and state universal service mechanisms now have subsidized plant available for schools and libraries in many areas. They have drawn from E-Rate, RHC, and High-Cost support mechanisms in order to build networks. Yet, many rural schools and libraries lack fiber access from carriers, while others cannot get access at reasonable prices.

Accordingly, the Commission should also allow RHC networks be part of the solution in meeting the broadband needs of rural schools and libraries.¹³ Indeed, given the limited E-rate funding budget, the Commission cannot afford to ignore any low-cost broadband that may be available in rural areas. There is no sound policy reason why schools and libraries should not be able to take advantage of RHC investments to reduce their cost of obtaining broadband service.

Specifically: (1) a RHC consortium should be permitted to make competitively priced high bandwidth services available to schools and libraries through a master contract;¹⁴ and (2) if

¹³ The FCC committed over \$360 million in funding to over 50 health care broadband networks across 38 states. *See Healthcare Connect Fund Order*, at ¶ 14.

¹⁴ *Cf.* 47 C.F.R. § 54.642(h)(5) (providing competitive bidding waiver in RHC program for eligible health care providers to purchase services through USAC-approved E-rate master contracts); Oregon Health Network *Ex Parte*, in WC Dockets 02-60, 02-6, at 2 (filed Jul. 26, 2013) (suggesting

a RHC consortium has invested in facilities (like HIEM), it should be allowed to provide schools and libraries with dark fiber or broadband services on its own, or in partnership with another service provider.

Consider for example a rural school that faces the following two choices: First, connect to the nearest carrier-owned fiber; Second, connect to the nearest RHC network. Either choice allows the school to connect to a network that was made possible in part by the federal universal service fund. However, one may be significantly more cost-effective for the school. By enabling this choice (and in the real world, perhaps other choices) the FCC increases the chance that program funds will stretch farther through a robust competitive bidding process. In the example above, when the RHC health network option is removed, it is less likely that a sole source provider will bid at the level it otherwise would in a competitive setting.

Provided additional proceeds realized by RHC networks are used solely to support the network, potentially lowering the monthly broadband costs for health care providers (and perhaps schools and libraries), such a policy would be consistent with current RHC rules,¹⁵ would benefit schools and libraries, and would help fulfill the purposes of Section 254(h)(2)(A).

IV. CONCLUSION

A primary goal for E-rate modernization is making high-speed broadband more available and affordable for schools and libraries. In fashioning rules to further this goal, the Commission should empower schools to determine the most cost effective way to utilize those facilities. Increased competition will ensure the most cost effective use of limited E-rate funding. In these respects, E-rate should follow the RHC program and allow E-rate beneficiaries to own network

E-rate program reciprocally allow eligible schools and libraries to purchase services through USAC approved Rural Health Care program contracts).

¹⁵ See 47 C.F.R. § 54.633(d)(7).

facilities when doing so proves more cost effective than available alternatives. In addition, RHC networks should be permitted to make broadband facilities available to either E-rate funded beneficiaries or to service providers seeking to serve E-rate beneficiaries. These policies will further the Commission's goals for the E-rate modernization effort by (1) stimulating the deployment of high-speed broadband, (2) increasing competition to promote cost-effective utilization of limited facilities with limited funding, and (3) decreasing administrative burdens for applicants by making long-term investments that reduce dependence on recurring support.

Respectfully submitted,

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