Testimony of the Pennsylvania Association of Intermediate Units
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Senate Communications and Technology Committee
September 5, 2019

Good Morning Senator Phillips-Hill, Senator Santarsiero and members of the Senate Communications and Technology Committee. My name is Dr. Eric Rosendale. I am here this morning both in my capacity as Executive Director of the Beaver Valley Intermediate Unit #27, and in representing my colleague IU Executive Directors as Chair of PAIUnet, the statewide K-12 broadband network operated by Pennsylvania's Intermediate Units.

Every year, hundreds of thousands of students, educators and adults receive services from one of Pennsylvania's twenty-nine intermediate units (IUs). As public, regional educational service agencies, IUs provide educational, administrative, and technology services to the Commonwealth's school districts, charter schools and non-public schools.

On behalf of IUs across the state, I want to commend the Senate Communications and Technology Committee for shining a light on the issue of broadband access in Pennsylvania. In so many ways today, technology is central to providing a high quality 21st century K-12 education for our children. IUs understand this reality well:

➤ IUs work with districts that seek to transform instruction to a personalized, anywhere/anytime experience for students. That is not possible without broadband access in the schools _and_ in the community.

➤ IUs and districts offer tens of thousands of students the option of taking classes online. That is not possible without broadband access at school _and_ at home.

➤ IUs work every day with principals and teachers on ways to leverage high quality digital resources to enhance, if not genuinely transform, instruction in the classroom. This requires _both_ broadband access and sufficient bandwidth in all our school buildings.

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We share the view expressed in our nation's National Education Technology Plan from the US Department of Education that states:

"Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent our approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners."

As I am sure the Committee has heard there is still important work to be done in ensuring broadband access to every community and home in Pennsylvania.

When it comes to broadband access at schools, there is a very good news story to tell. We think it will be useful for the Committee to understand what exists in Pennsylvania and, importantly as you consider strategies going forward, how we got to where we are today with our schools.

According to the non-profit group *Education Superhighway* which reviews school and state data regarding broadband access in schools:

- 100% of Pennsylvania public school students attend a school that has internet at speeds that meet the current national minimum standards (100 kbps/student). In fact, the medium Internet speed per student in PA is 727 kbps.

- Since 2016, 81% of Pennsylvania's schools have upgraded to scalable fiber infrastructure. Less than 35 schools remain connected via cable or wireless services.

- Since 2015, the cost of Internet access to schools in Pennsylvania has decreased 79%.

Intermediate Units are proud to be playing a significant role in delivering broadband access to schools. Intermediate Units operate PAIUnet - Pennsylvania's network for K-12 education, a system of telecommunications fiber infrastructure reaching schools in every corner of the Commonwealth.

PAIUnet starts with Intermediate Units (IUs). IUs connect to their member school districts through Regional Wide Area Networks (RWANs), which in turn connect to their schools. These regional IU networks link to PAIUnet, which provides access to other statewide resources and internet. The result is a seamless network of interconnected schools all linked together with high-speed broadband.

Today, 356 school districts, 39 Career and Technical Centers, 13 charter schools, 33 nonpublic schools, and 14 library entities are "members" of PAIUnet.

Thanks to PAIUnet, schools, educators and students can access online educational resources securely and reliably through "peering" without traversing the traditional commodity internet.

Districts can access high quality, on-demand educational products from companies such as Google, Apple, Amazon and others by way of PAIUnet peering relationships.

Pennsylvania is one of the only states in the country that does not depend entirely on the public internet for online testing. PDE's assessment vendor – DRC – maintains a dedicated connection to PAIUnet and the schools on the PAIUnet network.

PAIUnet has negotiated incredibly low prices for internet service for schools. Currently that price is $0.27/Mbps, and we expect that prices to go even lower as a result of our current competitive rebid.

PAIUnet's internet service also comes with Distributed Denial of Service (DDoS) mitigation to school districts at no additional cost. Districts are protected from attacks that could bring their own district networks down and have a devastating impact on infrastructure. The cost for districts to purchase similar protection on their own can run in the hundreds of thousands of dollars.
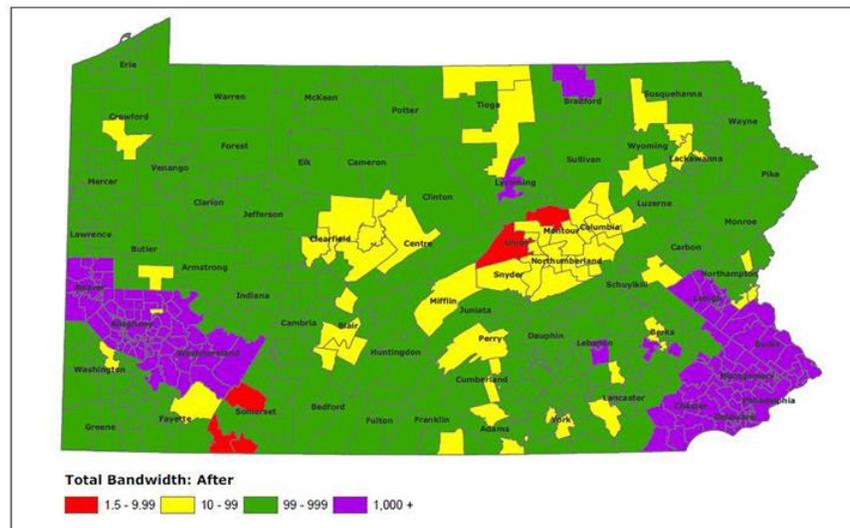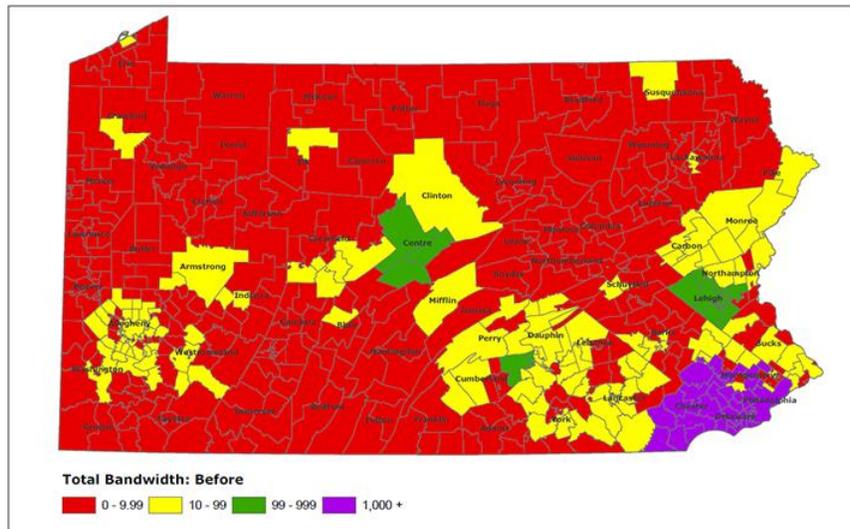
The pathway to broadband access at schools started 15 years ago and is relatively easy to trace. Two programs – one state and one federal – are largely responsible for making broadband access to schools possible: Pennsylvania's E-fund program, and the federal E-Rate program.

Act 183 of 2004 established Pennsylvania's E-Fund program. Act 183 created a more flexible regulatory environment for telecommunications companies in exchange for companies contributing to a fund, administered by the Pennsylvania Department of Education, for education technology improvements. The E-Fund program made grant awards over the course of six years. The program ended after the $60 million were expended.

The Schools and Libraries Program, popularly known as E-rate, is a Universal Service Fund program designed to help public and nonpublic schools and public libraries gain access to affordable telecommunication services, high-speed internet access, and internal Wi-Fi equipment. Administered by the Universal Service Administrative Company (USAC) under the direction of the Federal Communications Commission (FCC), K-12 schools and libraries across the country may apply annually for eligible services and equipment, which they procure at a scaled discounted rate, after a rigorous competitive bidding process.

From 2005 to 2010, the state E-Fund program provided nearly $60 million to eligible school entities. Over $21 million of those grants went to education consortiums led by Intermediate Units to build Regional Wide Area Networks (RWANs) connecting the school districts in their geographic areas. These RWANs also leveraged over $31 million from the federal E-Rate program, resulting in a total investment of over $52 million to build a robust educational broadband infrastructure.

The two maps below illustrate the dramatic impact of this investment. The maps were included in the 2012 "Act 183 E-Fund Program Analysis" prepared on behalf of the Pennsylvania Department of Education. The maps show each Pennsylvania school district's broadband capacity before and then after E-Fund.

Total Bandwidth: Before
0 - 9.99 | 10 - 99 | 99 - 999 | 1,000 +

Total Bandwidth: After
1.5 - 9.99 | 10 - 99 | 99 - 999 | 1,000 +

In 2008, once again with funding from E-Fund and E-Rate, IU leaders agreed to connect the RWANs across the Commonwealth to create Pennsylvania's statewide K-12 education network PAIUnet. Today the IUs are in their third round of a competitive bid process to secure the most affordable, modern and efficient telecommunications services possible to serve school districts, charter schools, non-public schools and libraries throughout Pennsylvania.

While Pennsylvania's E-Fund program no longer exists, the federal E-Rate program remains the single-largest source of education technology funding for the nation's schools and libraries. Each year $3.9 billion is available to fund both broadband access connections to schools, and broadband and Wi-Fi related equipment within the school.

E-rate discounts range from 20-90%, depending on the relative poverty level of a school and its rurality. For example, if a school's discount is 60%, the federal E-rate program would pay 60% of the eligible cost,

and the school would be responsible for paying the remaining 40%. In Pennsylvania, the average E-rate discount is 69%.   Since the E-rate program began in 1998, Pennsylvania's schools and libraries have been committed more than $1.5 billion, with every school district receiving E-rate discounts either through their own applications or via consortium with their local Intermediate Unit.   In 2019 alone, PA schools and libraries received more than $64 million.

As the Committee moves from your hearings to developing an action plan on broadband access, we would like to offer several suggestions for your consideration.

The importance of E-Rate to public education cannot be overstated. Given the significant dollars involved, it is no surprise that the E-rate program is highly regulated. From time to time the FCC considers policy changes to the E-Rate program that can have significant consequences for schools: sometimes positive, sometimes negative. We urge this Committee to monitor E-Rate policy and be a strong advocate for Pennsylvania schools before the FCC and members of Congress.

While we have described the broadband access that exists for most schools in Pennsylvania, there are schools in certain geographic locations where it is cost prohibitive for schools to obtain fiber connectivity, as there continues to be no business case for service providers to invest in those areas. We can help address this situation with a relatively small investment in a state E-Rate matching fund for new fiber projects.

The FCC's rules state that if a state provides eligible schools or libraries with funding for special construction charges for high-speed broadband that meets the FCC's long-term connectivity targets, the E-rate Program will increase an applicant's discount rate for these charges up to an additional 10% to match the state funding on a one-to-one dollar basis. For example, a school district with a 70% discount applies for E-rate discounts for special construction charges associated with a $100,000 project would normally have to pay 30%, or $30,000. But with a state matching fund, the school could have its out of pocket costs reduced to a much more affordable $10,000 because E-rate would pay 70%, the state matching fund would provide $10,000, and the E-rate incentive match would provide an extra $10,000. In this case, the District would only have to pay 10% of the project instead of 30%. Twenty-four states have set up such matching grants and we encourage the Committee to consider establishing a small matching broadband fund that would be targeted to bring fiber to the remaining public schools that lack such connectivity.

Another area for the Committee's consideration would be to resolve a conflict between E-Rate rules and our state procurement laws. E-rate rules prohibit applicants from listing a specific manufacturer in their competitive bids but they DO allow schools to consider other factors besides price during their bid evaluations. However, PA procurement rules allow schools to specify a manufacturer, but do NOT allow schools to consider other factors during their bid evaluation, requiring them to select the lowest-cost bid among qualified bidders. For example, if a district needs an additional Cisco switch to upgrade their existing Cisco infrastructure, E-rate rules prohibit districts from asking for Cisco-only bids. Thus, they will receive bids from HP, Alcatel, Dell, Ruckus, etc., and very often, their preferred (needed) manufacturer is not the lowest bid.

This puts Pennsylvania public schools in an incredibly difficult position, as they are not *permitted* to consider additional bid evaluation factors during a formal sealed commodities

procurement. Pennsylvania state law permits establishing that the vendor is a responsible bidder and has met the minimum qualifications in the RFP in order to be considered; however, among all bidders that have been deemed responsible and met the minimum specifications, schools *must* select the low bid for equipment. Outside of E-rate, this is not a concern or barrier for local public school officials as <u>state</u> procurement rules permit schools to specify a certain manufacturer in their bids. But because of these conflicting rules, Pennsylvania school are caught in an untenable position of choosing between the lowest cost vendor for a manufacturer product line for which they have thoughtfully standardized in their district, and complying with E-rate rules and purchasing a product with the lowest bid from a myriad of manufacturers that they do not wish to utilize.

No other state has such a conflict. We respectfully request that the Committee consider revising the procurement laws for Pennsylvania public schools to allow them to consider other bid evaluation factors besides price for E-Rate eligible technology equipment purchases, or exempt schools from the state procurement rules if they are using the strict E-Rate procurement rules for E-Rate eligible technology equipment purchases. Not only would this simple legislative change save money for Pennsylvania schools, it would put them on the same playing field as all other public schools in the country.

Once again, on behalf of Pennsylvania's twenty-nine IUs I want to thank the Committee for including us in today's hearing. We stand ready to work with members of this Committee and the rest of the Pennsylvania General Assembly to ensure broadband access everywhere in the Commonwealth.