

Navigating the E-rate Landscape

Understanding Program
Expansions, Efforts to
Streamline Program Processing,
Impact of Connectivity on
Student Outcomes, and
Advocacy Initiatives in 2025



 **January 14-17, 2025**  Orlando, Florida

Today's Agenda



Meet The Speakers

Introduction to E-rate

**Key E-rate Program
Expansions**

Anchor-Enabled Networks

**Broadband Special
Construction**

**How do you Plan for E-rate
in the Future?**

The Future of E-rate

SHLB's Advocacy

Q&A

Resources

Meet the Speakers



Kristen Corra

Policy Counsel
*Schools, Health &
Libraries Broadband
Coalition*



Milan Eaton

CEO
ERate Pro



Roger Zambrano

Director
*Los Angeles County
Office of Education*

Meet the Speakers



Beverly Sutherland

President

EdTechnologyFunds, Inc



Jim Kerr

President

ERate Profit Works

Introduction to E-rate

1

What is the E-rate
Program?

2

Knowing your budget

3

E-rate Program
workflow

Introduction to E-rate

E-Rate Demystified: Bridging Connectivity and Education



What is E-rate?

A program that provides discounts to schools and libraries for affordable internet access and telecommunications services.

- Established in 1996 & modernized in 2015 to meet today's technology needs.
- Funds over \$4.68 billion in services each year.

Who is Eligible?

- K-12 schools (public, private, and charter)
- Libraries
- Head Start programs

Key E-rate Program Highlights:

- **Category 2 Budget:** Calculated at \$167 per student for FY2021-FY2025
- **Cybersecurity Pilot:** A new \$200 million initiative to improve online safety.
- **Hotspot Lending:** Funding for devices that provide internet access outside of school.
- **Wi-Fi On School Buses:** Off-campus internet access to support educational purposes, promoting student connectivity during travel

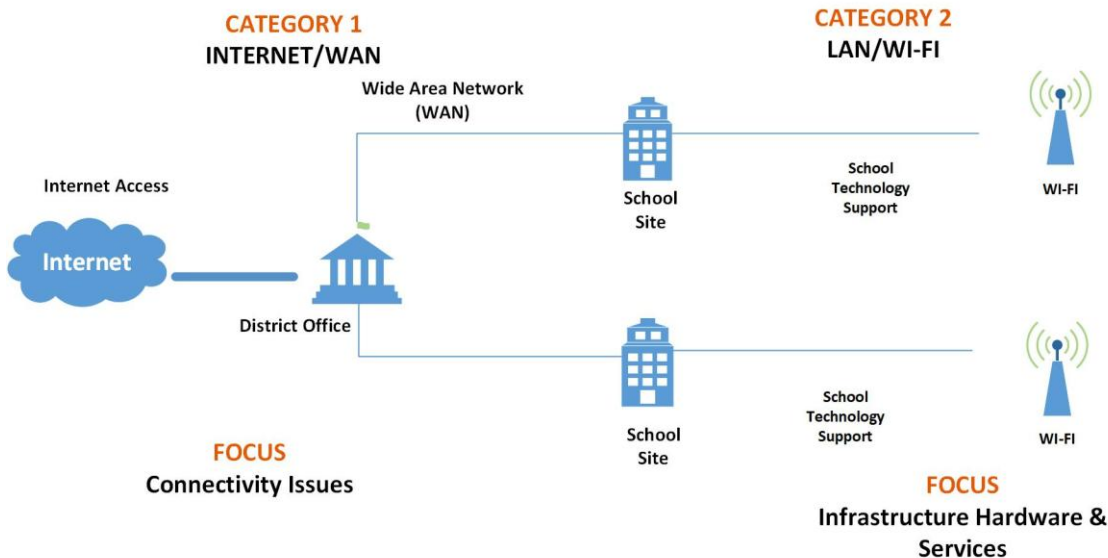
Introduction to E-rate

E-Rate Demystified: Network Topology and Funding Eligibility



What does E-rate fund?

- **Category 1:** Internet access and Wide Area Networks (WAN)
- **Category 2:** Internal Network Connections (LAN) and Wi-Fi, Management, Maintenance



Introduction to E-rate

Knowing Your Budget



Category 1

- Data Transmission Services
- Internet Access

There is no limit to the monthly recurring cost but you must follow procurement rules and price must be the heaviest weighted factor in your service selection

Category 2

- Internal Connections
- Managed Internal Broadband Services
- Basic Maintenance of Internal Connections

Schools

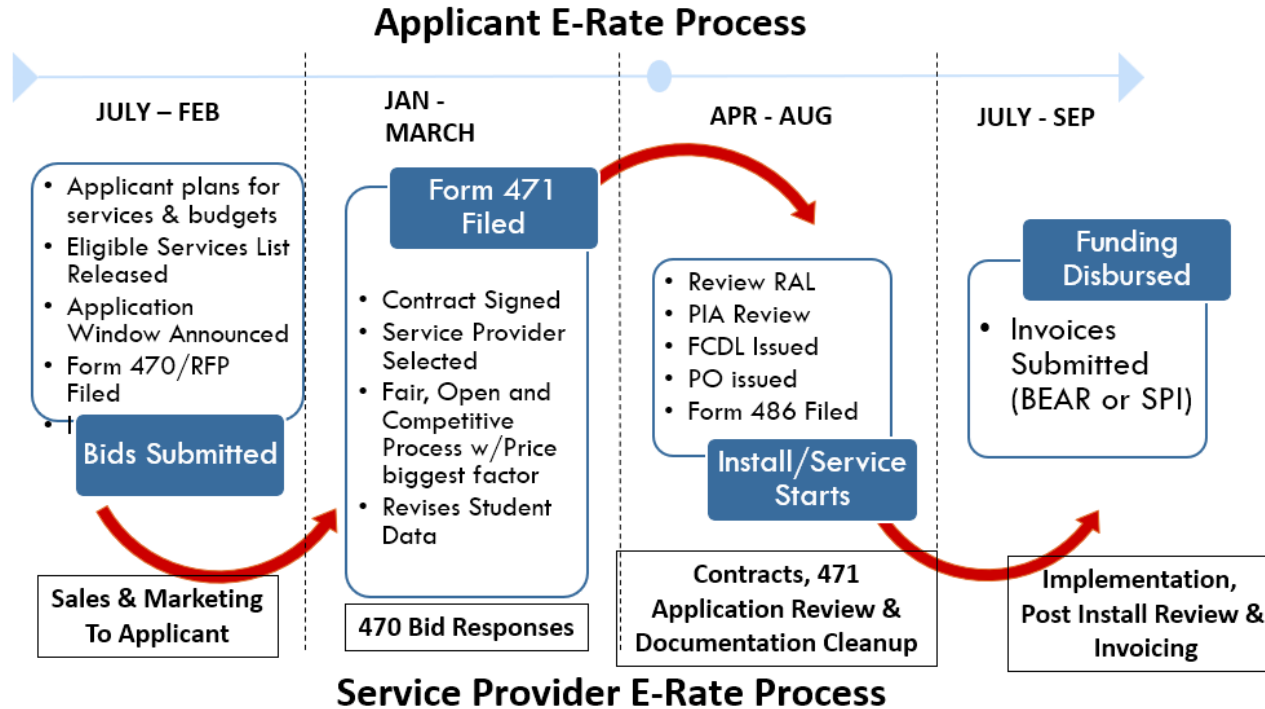
- \$167 per student (Min \$25,000)

Libraries

- \$4.50 sq ft (Min \$25,000) (\$55,000 Tribal)

Introduction to E-rate

E-rate Workflow



Key E-rate Program Expansions

- 1 School Bus Wi-Fi
- 2 Hotspot Lending
- 3 Cybersecurity Pilot Program
- 4 Streamlining E-rate Administration

Key E-rate Program Expansions

Recent FCC Initiatives – Learn Without Limits

School Bus Wi-Fi



Declaratory Ruling clarifying that the use of Wi-Fi on school buses is eligible for E-Rate funding

Hotspot Lending Initiative



Report and Order making Wi-Fi hotspots and Internet services eligible for E-rate program support for libraries and K-12 schools.

Cybersecurity Pilot Program



\$200 million, 3-year pilot program to fund cybersecurity resources to schools and libraries. Goal is to assess a future (permanent) funding structure.

Key E-rate Program Expansions

School Bus Wi-Fi

Item

- FCC Declaratory Ruling & Eligible Services List

Timing

- Adopted Oct. 2023 / ESL Dec. 2023



Key E-rate Program Expansions

School Bus Wi-Fi

Basics

- It is 100% Eligible (See Eligible Services link)
- Both Equipment & Cell Services are eligible under Category 1
- Buses Leased from a 3rd party are eligible if they are solely used by the applicant for students
- FY2025 FCC Form 470 with the new FY 2025 format released Sept. 19th.
- Applicants will use new drop-down menus on the Form 470
- Competitive bidding rules still apply
- Schools with a Rural Designation can have dual carriers on the same bus to ensure connectivity.
- Should only be used for students and staff & must comply with CIPA



Key E-rate Program Expansions

School Bus Wi-Fi

Eligibility

- Operating system for On board device is 100% Eligible
- Maintenance and operation services are not eligible
- Management overlay is not eligible
- Must implement content and user network restrictions consistent with the restrictions that you place on the building-based broadband network, as described in applicants Acceptable Use Policies (AUPs) and any other policies that limit a school's network access.
- Applicants will own the E-Rate funded equipment and are expected to work with their leased or contracted school bus providers to maintain an accurate asset inventory of the E-Rate-funded equipment.



Key E-rate Program Expansions

School Bus Wi-Fi

Applying

- **Bus Wi-Fi Network Equipment/Mobile Service for Buses.** These equipment and services were available in FY2024, but the FCC Form 470 was not updated in time to include specific selections for them. **USAC has updated the FY2025 FCC Form 470** to include selections for seeking bids **for School Bus Wi-Fi mobile services and the equipment** needed to make the services functional.
- Details about filing for **School Bus Wi-Fi Mobile Service/Network Equipment for Buses** can be found in the **C1: Mobile Services on School Buses** and the **C1: School Bus Wi-Fi Network Equipment** sections of the [How to File an FCC Form 470](#) learning module.



Key E-rate Program Expansions

Hotspot Lending

Item

- FCC Report and Order

Timing

- Adopted July 2024

FNPRM

- Comments due November 2024; Reply Comments due December 2024



Key E-rate Program Expansions

Hotspot Lending

Basics

- Allows schools and libraries to apply for E-rate funds to help offset the costs of purchasing Wi-Fi hotspots and Internet services to loan to students, school staff, and library patrons for off-premises internet use.
- Various program financial safeguards
 - Device and service reimbursement caps
 - Acceptable Use policies
 - A three-year budget mechanism to limit overall applicant funding requests
 - Long-standing program requirements like competitive bidding and filtering



Key E-rate Program Expansions

Hotspot Lending



Three-year budget formula

Independent School or District Budget = $\left[\text{student count} \times \frac{20 \text{ hotspots}}{100 \text{ students}} \times \text{C1 discount rate} \right] \times \630

Library or Library System Budget = $\left[\text{square feet} \times \frac{5.5 \text{ hotspots}}{1000 \text{ square feet}} \times \text{C1 discount rate} \right] \times \630

Note: The value in the brackets above for both the schools and libraries budgets is rounded up to the nearest ten.

For example, an independent school with 500 students and a 90% discount rate would have a three-year, pre-discount budget of \$56,700, while a school district with 500 students and a 40% discount rate would have pre-discount budget of \$25,200

Key E-rate Program Expansions



Hotspot Lending

A “Wi-Fi hotspot” means a device that is intended to provide Wi-Fi connectivity to a hotspot user as its sole function. Devices must be (1) portable; and (2) a single device (i.e., not a set of linked devices)

What Equipment is Ineligible?

- **Other multi-functional devices that can support Wi-Fi.** Multi-functional devices like smartphones, PCs, notebooks, tablets, customer premises equipment, routers or switches, and wireless access points
- **Service to broadband-enabled end user devices** (laptops, tablets)
- **Service that is not commercially available.** Wi-Fi hotspots must be for use with a commercially available mobile wireless Internet service, rather than for use with CBRS or other private network services.

Key E-rate Program Expansions

Hotspot Lending



SHLB's Recommendations

SHLB asked for technology neutral rules

- Don't limit funding only to traditional mobile devices/services

Schools and libraries might want to deploy their own wireless networks where traditional hotspots are inadequate.

- Positions schools and libraries to fund projects that better connect their communities (equipment with stronger signal strength)
- Potentially more cost-effective over the long run

Funding – Suggested benchmarking device and service costs associated with anchor-enabled networks against traditional mobile hotspot options.

Key E-rate Program Expansions

Cybersecurity Pilot Program

Item

- FCC Report and Order

Timing

- Adopted June 2024

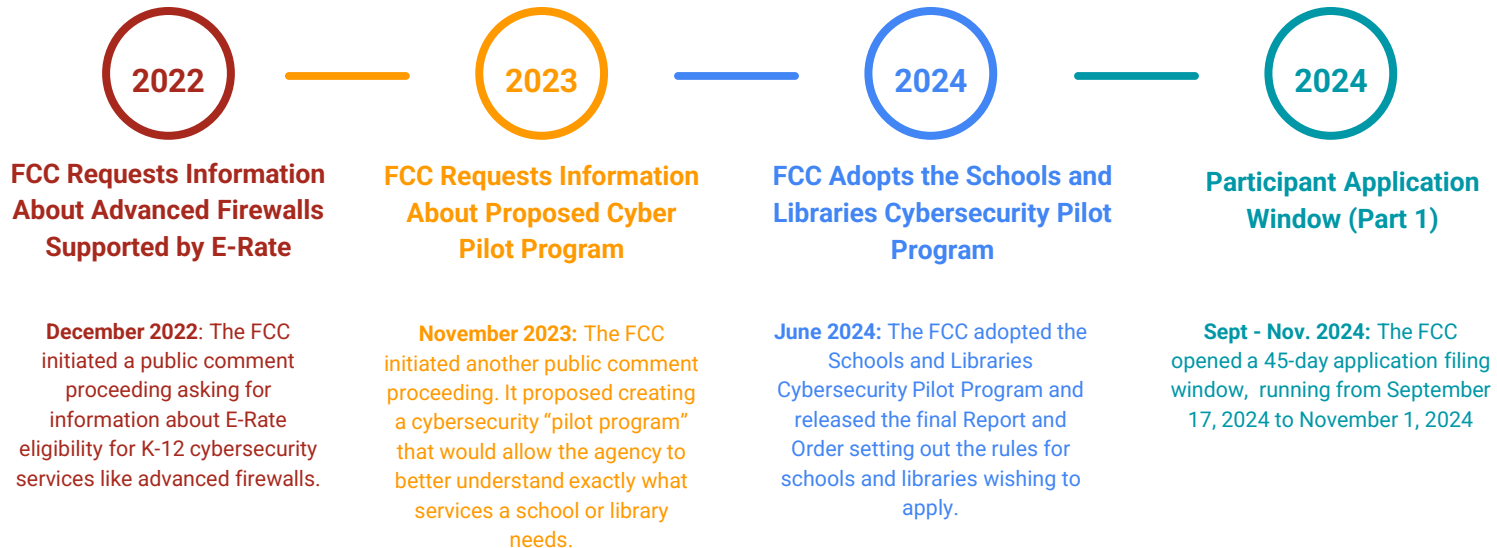


Key E-rate Program Expansions

Cybersecurity Pilot Program



Timeline:



Key E-rate Program Expansions

Cybersecurity Pilot Program

Basics

- \$200M over 3 years with one filing window (One 470 & 471 for all 3 years)
- Will follow E-Rate Process for Service Providers
- Applicants will need to file an Initial Application 484 to participate. If selected, they will need to file a more detailed application. If selected as a “finalist” then the normal E-rate process begins with a single 470 & 471 process for the 3 years.
- \$13.60 per student per year on a pre-discount basis (3 X \$13.60) to purchase eligible cybersecurity services and equipment over the three-year Pilot duration (pay as you go) . \$1.5M annual cap. (110,000 students)
- \$15,000 X 3 floor (1,100 Students) for Schools
- \$15,000 X 3 for each library in a system with \$175,000 annual max.



Key E-rate Program Expansions

Cybersecurity Pilot Program

- 470 & 471 will be used for applications and 472 & 474 for invoicing
- Annual reporting requirements for the applicant
- Competitive bidding rules apply
- C1 discount structure with highest discount going first

Eligible Service Groups:

1. Advanced/next-generation firewalls;
2. Endpoint protection
3. Identity protection and authentication
4. Monitoring, detection, and response



The FCC adopted a “Pilot Eligible Services List” (P-ESL) that includes examples of eligible services and equipment under each of these categories.

The P-ESL is a *non-exhaustive* list. The FCC wants to remain flexible in what tools are funded - it deems services and/or equipment eligible if they “constitute a protection designed to improve or enhance the cybersecurity of a K-12 school, library, or consortia.”

Key E-rate Program Expansions

Cybersecurity Pilot Program



What's Eligible?

- Eligible costs include maintenance, operation and support charges, monthly charges, special construction, installation and activation charges, software, modulating electronics, and other equipment necessary to make eligible equipment and services functional.
- A manufacturer's multi-year warranty for a period up to three years may be included in the cost of the component.
- Any equipment, service, or other related cost that is eligible in the Commission's ERate eligible services list program in the funding year for which Pilot reimbursement is sought is not eligible.

Key E-rate Program Expansions

Cybersecurity Pilot Program



What's Ineligible?

- Services/equipment/associated costs already eligible under E-Rate
- Services/equipment/associated costs already reimbursed/plans to be reimbursed, through other USF or federal, state, local program
- End-user devices (like tablets, laptops)
- Staff salaries and labor costs
- Beneficiary and consulting services that are not related to the installation and configuration of the eligible equipment and services
- Equipment on FCC's Covered List (e.g. Huawei, ZTE)

Key E-rate Program Expansions

Cybersecurity Pilot Program

Cybersecurity Pilot 484 Phase 1 Statistics

- **Application Window Closed** – November 1, 2024
- **Total Funding Requests:** \$3.7 billion
- **Total 484 Applications:** 2,734
- **Where did they apply from?** All 50 states, Puerto Rico, and the District of Columbia

Next Steps: FCC will review applications and announce selected participants in a future Public Notice. 470's will start at that point



Key E-rate Program Expansions

Streamlining E-rate Administration

Item

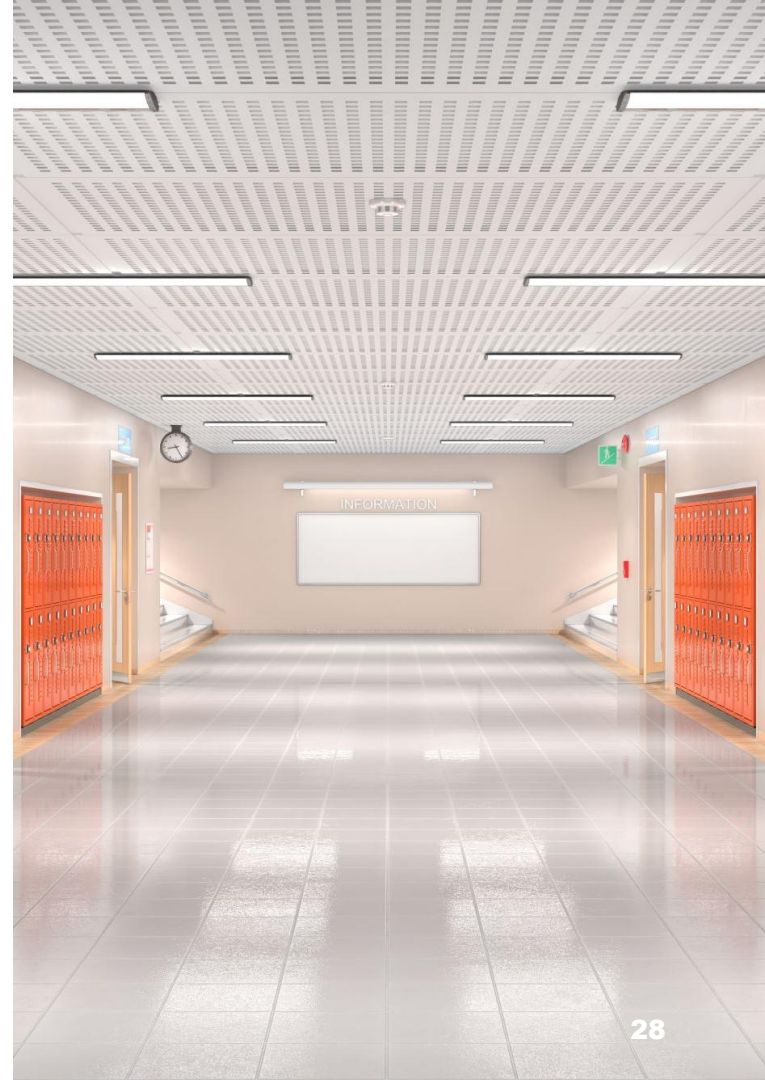
- Report and Order and FNPRM

Timing

- Adopted July 2023

FNPRM

- Comments due September 25, 2023
- Reply Comments Due October 23, 2023



Key E-rate Program Expansions

Streamlining E-rate Administration



Various Outstanding FCC Proposals/Questions

- **Transition of Services**
 - How should an applicant request E-Rate support when it is transitioning services between two providers during the same funding year?
- **Duplicative Services**
 - How should the FCC clarify cost-effective purchasing on services from two different providers?
- **Mid-Year Bandwidth Increases**
 - Proposal to adopt a limited exception to competitive bidding rules to allow applicants to seek bandwidth increases in between E-Rate funding cycles
- **Simplifying E-rate forms**
- **Seeking Program Recovery**

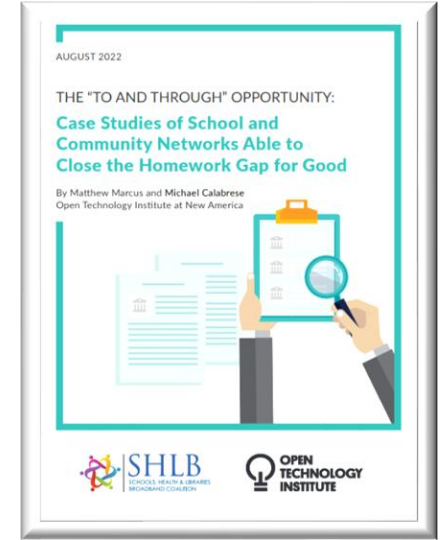
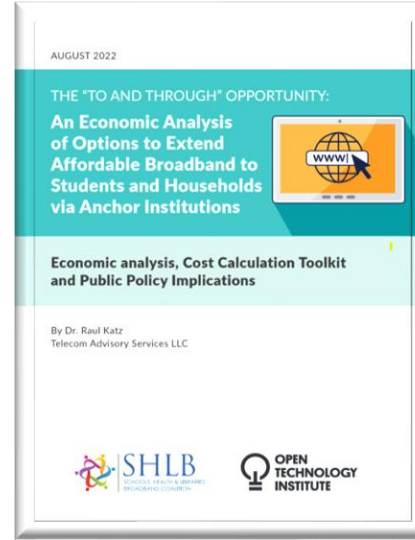
Anchors and Home Connectivity

- 1 Anchor-Enabled Networks
- 2 Broadband Special Construction

Anchor-Enabled Networks

Wireless extensions from anchor institutions to the surrounding community.

SHLB calls this connecting the community **“to and through”** anchor institutions



SHLB commissioned a **research report** and cost model written by Dr. Raul Katz (issued August 2022). Finds that schools partnering with WISPs can connect households much cheaper than distributing hot spots. A set of **12 case studies** accompanies the report.

Anchor-Enabled Networks



East Moline School District 37

Partnered with SmartWAVE Technologies to purchase access points and placed them on top of existing infrastructure like streetlights.

All students are given a Chromebook, which then automatically connects to the network wherever they are situated.

Unlike traditional hotspots (where the provider controls the network) East Moline's network allows the district much greater control; the IT department can control network access, diagnose problems, and "see" how the network is running and being used.

Boulder Valley School District

Partnered with a small local wireless ISP (WISP), LiveWire Networks, Inc. and provides space on school building roofs.

LiveWire constructs towers on these roofs with fixed wireless access points that transmit wireless internet using the 3.5 GHz (CBRS) spectrum band. The APs connect to subscriber modules – small receivers that are placed on the student's dwelling (such as the roof or patio).

LiveWire operates and manages the network and performs installation and other services directly at the home.

Broadband Special Construction



Broadband is now defined by the FCC as 100/25

E-rate pays for the construction of internet to your schools or library at your discounted rate

With the FCC's 2nd order and "Special Construction", it's possible to build high speed internet and WAN services for zero cost ([USAC New Brief March 2016](#))

Special construction charges are the upfront, non-recurring costs of deploying new or upgraded network facilities to eligible entities. Special construction consists of three components:

- (1) construction of network facilities
- (2) design and engineering
- (3) project management

Cost Per Meg



2016 Cost per Meg (First 50 Districts)		2022 Cost Per Meg (First 50 Districts)	
District Name	Cost Per Meg	District name	Cost per Mbps
KIRKLAND ELEMENTARY DISTRICT	\$510.00	Whiteriver Unified School District 20	\$57.83
WIDE RUINS COMMUNITY SCHOOL	\$350.00	Double Adobe School	\$30.00
SUPERIOR UNIFIED SCHOOL DISTRICT	\$339.70	Valentine Elementary District	\$30.00
MAINE CONSOLIDATED SCHOOL DISTRICT	\$206.67	Sacaton School District 18	\$29.31
SECOND MESA DAY SCHOOL	\$169.00	Baboquivari Unified School District 40	\$29.13
CONCHO ELEMENTARY DISTRICT	\$166.67	Kayenta Unified School District 27	\$24.50
MANY FARMS COMMUNITY SCHOOL	\$152.26	Pinon Unified School District 4	\$21.75
CEDAR UNIFIED DISTRICT	\$147.55	Owens Elementary School District 6	\$17.00
AGUILA ELEMENTARY DISTRICT	\$142.66	Grand Canyon Unified School District	\$15.09
TONTO BASIN ELEMENTARY DISTRICT	\$137.50	Canon Elem School District 50	\$14.93
HOPI JR-SR HIGH SCHOOL	\$134.44	Cedar Unified School District 25	\$12.75
M McNARY ELEMENTARY DISTRICT	\$133.55	Peach Springs Unified District	\$12.50
MOENCOPi DAY SCHOOL	\$132.32	Window Rock Unified School District 8	\$12.50

Funding the “Build”



E-rate funding and rule changes have created an

UNPRECEDENTED OPPORTUNITY

to connect schools and libraries with fiber and create more upgrade options

Example: District is in need of high-speed internet but is several miles from the nearest telco location

One-Time Build costs =

For a school/library with 80% discount E-rate will pay for 80% of the costs =

State *can* pay 10% =

With State match, E-rate will pay and additional 10% =

Net cost to District =

\$100,000
- \$80,000
- \$10,000
- \$10,000
\$ 0.0

THE FINAL MILE PROJECT

Fulfilling the Potential of Every Child

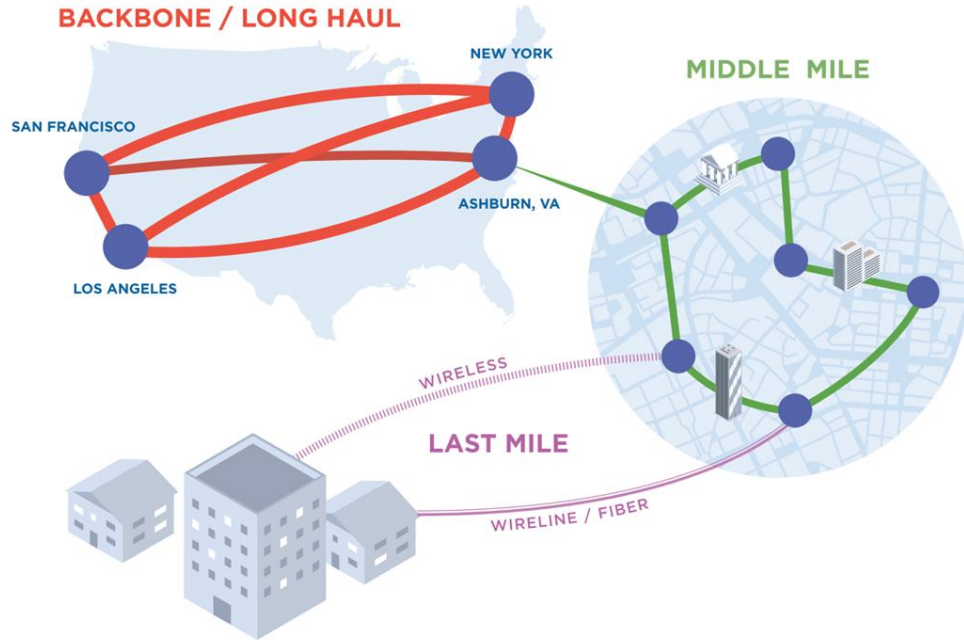
Arizona Rural Schools Association
Arizona Department of Education

Internet connectivity has become an essential utility

36% of Rural America lacks access to Broadband

Provision of Broadband is increasingly linked with access to a High Quality Education

The Services needed exceed what is available to a high percentage of students in many locales.



The Result

All Students gain access to affordable Internet (\$10 per month for 100/25) to facilitate connections with teacher led classes anywhere.

Schools can close the Homework Gap by enabling students to utilize technology at home.

Secondarily, spurs economic development through access to consumer internet and broad skill-set learning opportunities.

\$3M Capital investment by the state, small privately owned WISP's own and manage the networks



How Do You Plan for E-rate in the Future?

- 1 Wi-Fi: Where are we & Where are we going?
- 2 Wi-Fi 8: What Should the Applicants Strategy Be?
- 3 Issues with BMIC One-Time Cost Payments
- 4 Broadband Upgrades & Audits
- 5 Strategic Multi-Year Infrastructure Planning
- 6 Building Capacity for E-rate Administration

How Do You Plan for E-Rate in the Future?

Wi-Fi : Where Are We & Where Are We Going?



- Wi-Fi 6e done
- Wi-Fi 7 rollout rocky with some announced and contracted for products release dates pulled or only partial functionality delivered.
- Wi-Fi 7 promised up to 24 Gbps but only delivers 8-9 Gbps in real world. Typically issue is cable infrastructure.
- Wi-Fi 8 Commercially available products expected for E-Rate FY 2028
- Wi-Fi 8 says 100 Gbps but may only get to 25 Gbps based on experience
- Wi-Fi 8 will obsolete copper cabling
 - Max. distance for 10 Gbps (Cat6a) copper is 100 meters including patch cords
 - Max. 90 watts power (POE) over Cat6a
- Fiber is cheaper to deploy
- Edge Switching is going to change dramatically



How Do You Plan for E-Rate in the Future?

Wi-Fi 8: What Should the Applicants Strategy Be?



1. Use your E-Rate C2 Budget wisely but use it.
2. Make sure you invest in your fiber backbone (Single Mode – Hybrid with power?)
3. If your network needs refresh, do it (>6-7 years old)
4. If you are going to go Wi-Fi 7, make sure you do your due diligence. Demos, bake offs, POC's - test products in your environment. Don't buy vapor ware. Demand that the product is fully compliant and deliverable at the time of the 470.
5. Invest in your core switching. Buy the most horsepower today that you can afford.
6. Use E-Rate for your Firewalls.
7. Look at MIBS for another way to use E-rate C2. Some of the newer NaaS companies will provide a 5-year contract for your network that includes a complete network refresh and operational support that is very cost effective/pays for itself.



How Do You Plan for E-Rate in the Future?

Issues with BMIC One-Time Cost Payments



USAC has been paying one time cost BMIC for Manufacturers support as if they were month to month.

Scenario:

- SP delivers a support sku from the manufacturer under BMIC
- SP invoices Applicant and USAC via SPI
- USAC partial pays the invoice stating that “recurring Services have not been rendered” Invoice is for ineligible services”, “billed date is outside the Funding Year for the FRN” etc.
- SP invoices USAC multiple times over the year to recuperate the total amount

If you have a partner who is experiencing this, please refer them to us. We have escalated this within USAC, and it appears they are escalating to the FCC. 2010 FCC Order and the 2025 Eligible Services List support one-time payments.

FCC DA 10-2355 Adopted Dec 15, 2010 <https://docs.fcc.gov/public/attachments/DA-10-2355A1.pdf>

How Do You Plan for E-Rate in the Future?

Broadband Upgrades



- **Assess Current Network Needs**
- **Scalability**
- **Identify potential “Bottlenecks”:**
 - **Switch & Firewall Throughput**
 - **Cabling – Cat6/7, fiber**
- **Timeline Coordination**
- **Compliance with E-rate Rules**
- **Service Provider Performance:**
- **Funding and Budgeting:**
- **PIA Review Preparedness**
- **Vendor Invoicing and Payment Options:**

How Do You Plan for E-Rate in the Future?

Audit Trail



- E-rate & ECF Records must be retained for 10-years from the last date of service
- Applicants are required to keep documentation supporting their funding requests including:
 - ✓ Service provider selection process including evaluation criteria RFPs, Addenda, Q&A issued
 - ✓ Copies of all bids received (winning and losing)
 - ✓ Bid evaluation documentation including evaluation worksheets Contracts for supported services
 - ✓ Asset inventory Invoices
 - ✓ Proof of payment of entity portion

How Do You Plan for E-Rate in the Future?

Strategic Multi-Year Infrastructure Planning

- Develop a roadmap aligning E-rate funding with long-term goals
- Focus on scalable, modular network designs to support growth
- Plan for next-generation technologies like Wi-Fi 7 and fiber connectivity

Balancing E-rate Eligibility with District Needs

- Leverage Category 1 funding for broadband and WAN infrastructure
- Use Category 2 funding to upgrade internal connections (switches, APs)
- Align funding with both short-term needs and long-term objectives



Building Capacity for E-rate Administration

Strategic Multi-Year Infrastructure Planning

- Train staff to manage E-rate processes and ensure compliance
- Use automation tools to streamline applications
- Develop a knowledge-sharing plan to address staff turnover

Integrating Cybersecurity into E-rate Planning

- Identify vulnerabilities and prioritize eligible security measures
- Leverage E-rate funding for firewalls, SOC as a service, and monitoring
- Make cybersecurity a foundational element of your E-rate strategy.



SHLB's Advocacy & The Future of E-rate

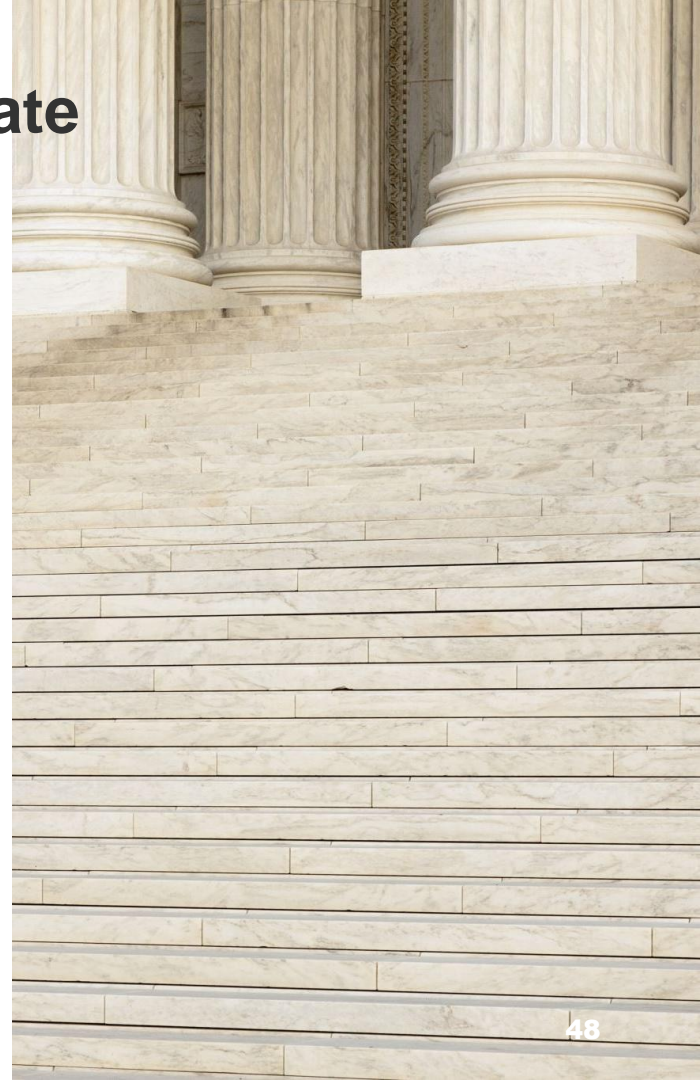


- 1 SHLB's Key Initiatives
- 2 Court Challenges
- 3 How You Can Get Involved

SHLB's Advocacy & the Future of E-rate

SHLB's Key Initiatives for 2025

- Monitor the effectiveness of the FCC's new programs
- Advocate for additional program changes that would benefit schools, libraries, and the communities they serve
- Defend the importance and impact of dependable E-Rate funding
 - What changes might we see in the new administration?



SHLB's Advocacy & the Future of E-rate

Court Challenges

- **Universal Service Fund**
 - Consumers' Research
 - 5th Circuit, 6th Circuit, 11th Circuit, DC Circuit
 - Currently at the Supreme Court
- **E-rate**
 - Todd Heath v. Wisconsin Bell
 - Supreme Court
- **School Bus Wi-Fi**
 - Matthew and Maureen Molak
 - 5th Circuit
- **Hotspots? Cybersecurity?**

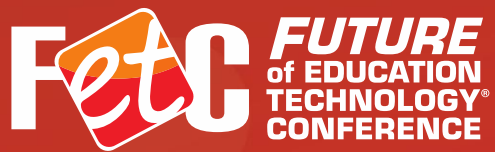


SHLB's Advocacy & the Future of E-rate

How You Can Get Involved!

- **Stay informed**
 - Keep up to date on new FCC rules/initiatives
 - SHLB is a great resource to learn about what's happening
- **Gather Data**
 - Gather information and data about your programs
 - *What's working?*
- **Educate lawmakers**
 - Your voice matters – let lawmakers know how E-rate helps your school, library, community
 - Show them how important this funding is





Thank You!

Questions?



Resources

- **SHLB**

- Website: www.shlb.org
 - *Blogs, filings, webinars (free and open to the public)*
- Sign up for our free newsletter

- **USAC Resources**

- Open Data tool: <https://opendata.usac.org/>
- How to file applications, webinars, trainings: usac.org

- **FCC**

- Website: fcc.gov
 - *Search filings through “ECFS”*

