Private Network and Internet Bandwidth Allocation and Security Monitoring Policy

Effective July 1, 2023

The Private Network and Internet Bandwidth Allocation and Security Monitoring Policy (hereinafter referred to as the "Policy") is intended to create an equitable method of determining how much private network and internet bandwidth is funded by the South Carolina K-12 School Technology Initiative Committee (the "K-12 Committee") for participating charter schools, public schools and libraries in South Carolina. The K-12 Committee considered the bandwidth and security monitoring requirements of South Carolina's schools and libraries as well as commercially available technology in developing the standards of this Policy. The following Policy was approved by the Principals of the K-12 Committee, on April 27th, 2023, to be effective July 1, 2023.

This Policy establishes the criteria that the South Carolina E-Rate Consortium (hereinafter referred to as the "Consortium") will use to evaluate requests for funding for private network and internet bandwidth increases and decreases. As detailed below, recent bandwidth utilization and forecast bandwidth utilization will serve as the primary criteria for evaluating bandwidth increases or decreases.

This Policy also establishes a schedule the Consortium will use to determine the portion of internet and private network costs funded with state funds and, if applicable, the portion leveraged as cost share by the Consortium member.

Section A: Details how a Consortium member may request a bandwidth increase or decrease, and the criteria the State E-Rate Coordinator will use to evaluate a bandwidth increase or decrease request.

Section B: Defines bandwidth over-allocation.

Sections C, D, E and F: Details the funded and cost share internet and private network bandwidth schedules for Consortium members.

Section G: Details the security monitoring service provided to Consortium members by the state.

Appendix 1: Lists definitions and acronyms.

A. **Evaluating Requests for Bandwidth Increases or Decreases**

Any School District, Charter School or Library that is a member of the Consortium may request an increase or decrease in its current internet and private network bandwidth allocation. Hereinafter, such a request shall be referred to simply as a bandwidth increase or decrease. Upon submitting such a request, the School District, Charter School, or Library agrees to comply with the Consortium's determination and take all steps necessary to carry out the Consortium's determination.

1. Submitting a Request for Private Network or Internet Bandwidth Increase or Decrease

    An authorized school district representative, independent charter school principal or main library representative may request a bandwidth increase or decrease by submitting the following documentation to the State E-Rate Coordinator:

    i.   District, Charter and/or Library System name.

    ii. Utilization report for private network or internet bandwidth. Indicating points of the highest usage over the past six months.

    iii. Narrative supporting the bandwidth request.

2. Evaluating a Private Network or Internet Bandwidth Request

    a. The State E-Rate Coordinator will evaluate the private network or internet bandwidth utilization request based on the following criteria:

        i.   Verify bandwidth request against the current funding year Form 471 application with the Universal Service Administrative Company (USAC).

        ii. Overall efficiency of network hardware infrastructure can support the request.

        iii. Use of security hardware and software supporting the environment.

        iv. Trend of average bandwidth utilization.

        v.   Trend of peak bandwidth utilization over previous months and forecast future bandwidth utilization.

        vi. Significant increase or decrease in student population and/or 1:1 computing.

        vii. Additional related information as the State E-Rate Coordinator may request.

    b. Bandwidth will be adjusted in increments determined by the network services and/or internet service provider's products provided under the state master contract.

B. **Over Allocation of Bandwidth**

From time to time, Consortium members may have been over-allocated bandwidth. To ensure state and federal funds are spent as efficiently as possible, the State E-Rate Coordinator will evaluate private network and internet bandwidth usage and work with the Consortium member to determine an acceptable level.

Over allocated bandwidth is defined as average bandwidth utilization of less than 30% over a three consecutive calendar month period and where the average peaking bandwidth utilization does not exceed 50%.

C. **Private Network Bandwidth Allocation Policy for Schools**

1. Funded Bandwidth

For FY 2023-24 the South Carolina E-Rate Consortium will continue to provide all schools with 999 students or fewer with a maximum of 250Mb of bandwidth at no cost to the school district. The bandwidth at hub/aggregation points for complex, multi-school sites will be determined by the number of schools and bandwidth currently in use.

For individual school locations with reported student population above 1,000, the following tiers detail the funded portion paid by the Consortium and are subject to appropriation from the General Assembly and the amount of reimbursement from the E-Rate program.

Tier	Individual School Population	Funded Bandwidth
1	less than or equal to 999	250Mb
2	1,000 to 2,500	2Gb
3	greater than 2,501	2.5Gb

2. Unfunded Bandwidth

If a school or school district is approved for more than the funded bandwidth, the school or school district will be responsible for a portion of the difference in cost of the additional, unfunded bandwidth. The amount paid by the school or school district is referred to as the "cost share." A calculation example is provided below.

Cost Share Calculations

   a. The monthly cost share is the portion of the total cost of the bandwidth in excess of the funded bandwidth for private network service not covered by E-Rate funding.

   The Cost Share formula is:

   Cost of Requested Bandwidth – Cost of Funded Bandwidth = Cost Difference

Cost Difference x District Non-Discount % (100% - District %) = Monthly Cost Share

Example 1

School A (80% District) is approved for 2Gb and requests 2.5Gb:

Requested 2.5Gb cost	$1,300*	(PNSP Service Provider Avg. for 2.5Gb)
Minus baseline 2Gb cost	$1,100*	(PNSP Service Provider Avg. for 2Gb)
= Cost Difference	$200*	
Times 20% (100%-80%)	**$40***	Monthly Cost Share

*Examples are for illustrative purposes and not representative of actual pricing

D. Internet Bandwidth Allocation Policy for School Districts

1. Funded Bandwidth

a. For FY 2023-24, the Consortium will provide all school districts with 2,500 students or fewer with a maximum 300Mb of funded internet bandwidth at no cost to the school district.

For school districts with reported student populations above 2,501, the following tiers detail the funded portion paid by the Consortium and are subject to appropriation from the General Assembly and the amount of reimbursement from the E-Rate program.

FY 2023-24 Internet Bandwidth Tiers for School Districts:

Tier	District Student Population	Funded Bandwidth
1	1 to 2,500	300 Mb
2	2,501 to 3,000	350 Mb
3	3,001 to 3,500	400 Mb
4	3,501 to 4,000	450 Mb
5	4,001 to 4,500	500 Mb
6	4,501 to 5,500	600 Mb
7	5,501 to 6,000	700 Mb
8	6,001 to 7,000	800 Mb
9	7,001 to 8,000	900 Mb
10	8,001 to 9,000	1.0 Gb
11	9,001 to 10,000	1.5 Gb
12	10,001 to 10,500	2.0 Gb
13	10,501 to 20,000	2.5 Gb
14	20,001 to 25,000	3.0 Gb
15	25,001 to 30,000	3.5 Gb
16	30,001 to 35,000	4.0 Gb
17	35,501 to 40,000	4.5 Gb
18	40,001 to 45,000	5.0 Gb
19	45,001 to 50,000	5.5 Gb
20	50,001 to 55,000	6.0 Gb
21	55,001 to 60,000	6.5 Gb
22	60,001 to 65,000	7.0 Gb
23	65,001 to 70,000	7.5 Gb
24	70,001 to 75,000	8.0 Gb
25	75,000 +	9.0 Gb

Note: Managed Router Service is available to all Consortium members. Members requesting this service are required to pay the applicable monthly cost share based on members discount percentage.

b. For FY 2023-24, the Consortium will continue to provide all Special Schools with 200 students or fewer 250 Mb of funded internet bandwidth at no cost to the special schools.

The following funded internet bandwidth tiers are subject to appropriation from the General Assembly and the amount of reimbursement by the E-Rate program.

FY 2023-24 Internet Bandwidth Tiers for Special Schools:

Tier	Special School Student Population	Funded Bandwidth
1	Less than or equal to 200	250 Mb
2	Greater than or equal to 201	500 Mb

2. Unfunded Bandwidth

If a School District or Special School is approved for more than the funded bandwidth, the school will be responsible for a portion of the difference in cost of the additional, unfunded bandwidth. The amount paid by the school is referred to as the "cost share." A calculation example is described below.

Cost Share Calculations

a. The monthly cost share is the portion of the total cost of the unfunded bandwidth in excess of the funded bandwidth for internet and/or WAN service not covered by E-Rate funding.

The Cost Share formula is:

Cost of Requested Tier – Cost of Funded Tier = Cost Difference

Cost Difference x District Non-Discount % (100%- District %) = Monthly Cost Share

Example 1 – District A (90%) is in Tier 1 and approved for 250 Mb and requests 300 Mb:

Current 300 Mb cost	$1,200*	(Internet Service Provider Avg. for 300 Mb)
Minus baseline 250 Mb cost	$1,100*	(Internet Service Provider Avg. for 250 Mb)
= Cost Difference	$100*	
Times 10% (100%-90%)	**$10***	Monthly Cost Share

Examples are for illustrative purposes and not representative of actual pricing

E. **Private Network Bandwidth Allocation Policy for Library Systems**
Funded Bandwidth

For FY 2023-24, the Consortium will continue to provide all Library Systems private network bandwidth at a minimum of 250Mb with no cost to the Library System. Funding is subject to appropriation from the General Assembly and the amount of reimbursement from the E-Rate program.

F. **Internet Bandwidth Allocation Policy for Library Systems**
Funded Bandwidth

For FY 2023-24, the Consortium will continue to provide all Library Systems internet bandwidth at a minimum of 250Mb with no cost to the Library System. Funding is subject to appropriation from the General Assembly and the amount of reimbursement from the E-Rate program.

G. **Internet Security for School Districts, Charter Schools and Libraries:**

As efficient bandwidth utilization becomes increasingly important to Consortium members, information security is an essential service to protect internet connectivity. The Consortium offers internet security services through Cisco Umbrella an industry-leading, proactive, internet security service to all Consortium members at no cost, subject to appropriation by the General Assembly.

Questions about this policy may be directed to:

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Appendix 1:

Definitions and Acronyms:

FY	Funding year: begins July 1 and ends June 30.
WAN	Wide area network.
Mb	Megabits per second, unit to measure bandwidth.
Gb	Gigabits per second, unit to measure bandwidth.
Educational Rate (E-Rate)	Reimbursement program administered by the Universal Service Administration Company under the authority of the Federal Communications Commission's Universal Service Fund.
Consortium Members	Schools, charter schools and libraries who receive connectivity services from the South Carolina E-Rate Consortium.
Student Population	Total number of students enrolled in grades kindergarten through 12th grade in the school or district on the 45th day of school.
School District	As defined in SC Code §59-1-160 and special districts where internet and/or private network services are provided by the SC E-Rate Consortium.
Charter School	As defined in SC Code §59-40-40 and for the purposes of this policy includes special schools electing to receive services from the SC E-Rate Consortium.
Library	As defined in SC Code §4-9-35 and special municipal operated libraries electing to receive services from the SC E-Rate Consortium.
Special Schools	Career and technology education centers operated by one or more school districts.