



**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

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

**Initial Public Notice Regarding FCC Comments on
Category 2 Budgets**

**Response Prepared By:
AdvanEdge Solutions Inc. / Intelafunds
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CATEGORY 2 PUBLIC NOTICE – WC DOCKET NO. 13-184

Contact Information:

Steve Mandarino

stevemandarino@advancedgesolutions.com

412-668-0785

Dave Miller

davemiller@advancedgesolutions.com

412-668-0785

Company Background:

AdvanEdge Solutions Inc. (AES) / Intelafunds was founded by two educational technologists to provide multiple viable strategy and project solution paths for technology-driven educational entities to address a wide scope of challenges, mandates and problems being faced today. The founders have an accumulated 60+ years of practical and administrative experience in the network, telecommunications and server technology arenas within the educational, public and private sectors ranging from small to enterprise levels. Areas of expertise include:

- Cabling infrastructure/plant design (fiber and copper), Network routing/switching
- Infrastructure design/support, WAN design, Centralization of services,
- Technology budgets and project migration paths, Data center design/support,
- Voice services/infrastructures, Internet access management/design,
- Network security, Data warehousing, Server and end-user environments.

AES resources have been engaged with the E-rate program since the start of the program and has helped ensured its schools receive the benefits of this important funding program.

AES resources have successfully designed, implemented and coordinated hundreds of strategic technology solutions for schools and educational entities of all types. We provide “turn-key” E-rate support/filing service delivery that addresses the program’s mandates/audit needs and schools’ project requirements. As such, AES acts as a representative/liaison for the schools’ E-rate relevant engagements to ensure that their interests are expressed, concerns are identified and needs are addressed.



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Opening Statement:

We want to thank the FCC for its continued support for the E-Rate program and the critical programmatic and policy modifications the commission adopted in 2014. The E-Rate program provides critical discounts to assist schools to obtain affordable telecommunications and internet access. Without this valuable resource, many would be woefully behind as they prepare their students in this digital world.

As an E-Rate strategy and support resource for our numerous clients spanning across several states we welcome the opportunity to provide the FCC with specific in-site to our schools' numerous challenges regarding the E-Rate Program. In addition to identifying these challenges experienced by our schools' we are also leveraging this opportunity to pinpoint specific issues as we navigate EPC on a day-to-day basis (since we are power EPC Users and Program liaisons). The goal is to provide insight to numerous issues in hopes of potentially establishing suggestions that will streamline various program aspects for the schools, vendors, filers, Reviewers and other program support resources.

The items listed below have a significant impact for our schools across the board. Additionally, in consultation with other E-Rate Resources and schools they confirm many of the same challenges. Our list of schools with whom we have active E-Rate LOAs (Letter of Agency) encompasses over 160 school buildings equating to support of over 64,000 students.

Comments:

In order to provide structure to our submittal we have categorized our comments into specific groupings labeled "Budget" and "Additional C2 Eligibility", "Additional C1 Eligibility", "EPC Issues/Challenges", "Protocols/Procedures". Please review each category and its' corresponding numbered list of bulleted comments. Additionally, we have also included some supporting documents where noted. Our goal was to provide clean bulleted items for documentation of issues and considerations for changes to strengthen the administration and leveraging of this critical educational funding assistance Program.



A. C2 Budget

1.) Increase per student C2 allocation. The per-student funding value of \$150.00 - \$157.49 throughout a 5-year period is also woefully inadequate. This equates to an average of just \$12.85 per month per student to address cabling infrastructure, firewall needs, routing/switching needs, access points, wireless management/controllers (needed to ensure maximal functional availability of wireless system), installations of eligible components and maintenance/subscriptions for eligible items. We advocate the FCC re-evaluate the per-student multiplier to meet a base minimum \$225.00 per student (50% increase vs. the 2015 base minimum). The annual inflation factor should remain in effect during this five-year period. Based on our experiences with hundreds of school technology projects (large and small) this will significantly ensure that required project scopes will be more readily achieved and thus provide a higher level of utilization of all functionality/services for all stakeholders. Correspondingly, the budget multiplier for eligible libraries should increase by the same percentage.

User device density has increased tremendously over the last several years and will likely continue to increase over the next several as well. Today, short-cuts/reductions to larger portions of project costs are absorbed by the schools. Correspondingly, many of these project needs are not followed-up and thusly have a negative impact on the overall project. This added burden of larger projects costs in conjunction with elimination of voice services support is adding stress to school technology budgets. As evidence of the C2 budget challenges we listed above we are attaching an example of one of our schools project/E-rate budget worksheet. This document represents the defined project for the school, including specific equipment/services details and pricing, identified C2 cap budget projection and (unfortunately) the project's non-E-rate relevant budget requirement due to limited C2 capacity. Note that on the spreadsheet all areas highlighted in pink or purple and/or having red text are C2 cap related deficiencies that the school must address out-of-pocket. Summary: The "Red" cell shows the out-of-pocket costs to address project needs...and note that this is a high poverty (80% funding) site. Also note that the reflective cost in this document is only for equipment and does not include the corresponding installation (due to C2 cap issues) which further impacts stress on the schools limited resources. (See Appendix A)

Recommendation: Increase the insufficient student C2 multiplier



A. C2 Budget (Cont'd)

2.) **Increase the minimum C2 budget.** The minimum site-based C2 budget for schools should be \$25,000.00. The current minimum budget value over a 5-year period is extremely inadequate which places a tremendous technology and budget hardship on those sites that qualify. These schools are simply not able to address base-level network access/functionality for their sites at this rate. Thus, the affected students experience a level of digital divide and disadvantage.

Recommendation: Increase the minimum C2 budget for small schools

3.) Support for implementation by “District/BEN” of C2 budgets

We favor a solution to incorporate the utilization of an aggregate total budget to be available for Districts to deem as their highest priority. Example: ABC School District has 5 schools, each with 200 students where the C2 available cap would be 1000 total students at the designated per-student dollar value. The District decides which if any of the 5 schools based on need would use the available funding bucket per year. This ultimately create efficiencies for both the schools and E-rate program.

Recommendation: Allow C2 budgets by District/BEN as an aggregate total

4.) **Annual C2 Budgets.** We believe the program and schools would be better served if all eligible entities have a budget based on each funding year’s student count within a given 5 year window to request funding. Since most schools do have dynamic enrollment the majority of eligible schools would benefit with having additional available funding each year. Within our current list of represented schools’ 72% have experienced an overall increase in enrollment over the last 5 years.

Recommendation: Continue C2 budget determination by annual student count

5.) **Rolling vs. Fixed Budgets.** As we support fixed five-year budget cycles for all schools along with the requirement to reset of all C2 budgets in 2020-2021. This would permit a program adopted fixed starting point for all schools in order to theoretically reduce administrative costs, increase funding availabilities and benefit entities by reducing the complexities of multiple timelines. Given that the generally accepted technology industry standards for best practices recommend a replacement cycle of 3 years for WI-FI, the 5 years program budget cycle provides alignment for schools to help meet those standards. Many schools, which began their budget in the first 3 years, would be able to insure their infrastructure needs are keeping pace with technology changes and demands. Additionally, the acceptance of this practice will greatly reduce program end-user (schools/libraries) confusion and corresponding stress on E-Rate program reviewers.

Recommendation: Reset all C2 budgets in 2020-2021



A. C2 Budget (Cont'd)

6.) Budget Transistion Year. As stated in item#5 we support fixed five-year budget cycles for all schools along with the requirement to reset of all C2 budgets in 2020-2021. However, if the program decides to wait until funding year 2021 to implement new changes we support an extension of funding utilization for schools starting their budgets in 2015. Although not all of these schools would benefit of an extension it would permit them an opportunity to access unused funding which may have been lost otherwise. Schools who began to use their budgets in 2016 would still have one year remaining for funding requests. Schools who started their budgets in 2017 and beyond, would then have one remaining year before a program-wide reset in funding year 2021. Please note that by starting the next 5 year funding cycle in 2021 (essentially providing no potential funding opportunity for schools that efficiently leveraged their available funding during the 2015-2019 term) there is a real potential for budgetary hardship for those schools. We believe that most schools were reasonably anticipating new C2 budget funding for the 2020-2021 application year.

Recommendation: Extension of funding utilization for schools starting their budgets in 2015



B. Additional C2 Eligibility

1.) **Equipment Standards**. We suggest the program consider allowing schools to request specific manufacturers/models whereas they have already established a system-wide standard. Requiring schools to request compatible equivalents actually places the schools in a position to utilize hybrid networks. Hybrid networks generally create un-do burdens in regards to management and support, resulting in increased costs and user-downtime. For example, incompatibility with items such as Wireless Access Points and controllers is a genuine concern. Schools utilizing equipment standards benefit from streamlining their IT infrastructure, simplify decision-making processes, and minimize purchasing and maintenance costs.

Recommendation: Permit schools to utilize specific established standards

2.) **Building Security and Safety**. With the importance of security challenges facing our schools today it would very helpful if considerations can be given to include components of building security as part of an eligible service. The priority should be for the cabling aspects for cameras, doors, etc. We would further advocate the inclusion end-devices such as cameras, mechanisms and Wi-Fi capable security broadcasting and monitoring (i.e. Wireless Access Points with embedded security capabilities). These items would be costed against the school's C2 budget the same as any other eligible item.

Recommendation: Permit eligibility for school safety initiatives

3.) **Cabling**. Cabling eligibility should include utilization for all necessary technology components including network, WI-FI, security and voice. This would better align with actual technology-type needs of schools. Cost allocating for current ineligible use is burdensome for schools and program administration.

Recommendation: Permit eligibility for data cabling and voice initiatives



C. Additional C1 Eligibility

Comment: In our extensive involvement with many schools and district's ranging from small educational organizations with under 100 student to large districts with thousands of students it is amazing the similarities that exist in their service needs and budget challenges. Based on these noted factors the following considerations for service eligibility would provide much-needed budgetary support that would enable the schools to leverage the E-rate Program more aggressively with immediate reward/benefits to the schools and corresponding student populations:

1.) Support for adding Firewall and URL Filtering to C1 eligibility. With today's extensive data security challenge a firewall device/service is a must. This mandatory item could be cost-prohibitive (in regards to C2 cap budgets for a given entity) and absorb a major portion of an available C2 funding budget for said sites. Clearly the continuing need for higher Internet Access bandwidth services for all schools and the corresponding firewall needs substantiate a new approach for funding provide this mission-critical protection. Since this device actually connects directly to the Internet Access service for a site it would make sense to roll this previously categorized C2 item into a C1 eligible equipment/service opportunity. It would immediately provide for C2 cap flexibility for all sites, safeguard previous and new E-rate acquired investments, and bridge the gap for the ever-growing need for Internet Access services.

Recommendation: Permit eligibility for Firewall and URL filtering for Category 1

URL Filtering. A need exists and it would be very beneficial if the Program provided some funding assistance toward the mandated URL filtering. Perhaps one of two annual stipend options should be considered as a C1 eligible service to help address this need; 1) A fixed "X" dollar amount per student 2) "X%" of the schools' annual primary delivery of Internet Access or WAN costs. Correspondingly, a defined minimal amount for small schools (similar to a minimum C2 budget) who have the same needs but less overall students would be beneficial. This mandated program requirement aligns with an encompassing overall building security strategy.

Recommendation: Permit eligibility for at minimum a stipend for URL filter for Category 1



C. Additional C1 Eligibility (Cont'd)

2.) **Voice Services.** Restore the eligibility of voice services (excluding Cellular). The restoration of voice services would not have to include voice systems (i.e. PBX, etc.) but should provide at minimum for the hand-off of voice services (PRI, etc.) and support hosted broadband VoIP solutions to the buildings. These services certainly could utilize existing network cabling infrastructure. By omitting the eligibility of custom building-based voice infrastructure, the opportunities of wasting valuable funding on those projects when a facility closes would be eliminated.

Recommendation: Restore eligibility for Voice Services (except Cellular)

D. EPC Issues/Challenges

1.) **Form 471.** Extreme functional challenge exists whereas when you are in a school's EPC portal account and select "FCC Forms", then select "FCC Form 471" and then choose a funding year you can only see the "Original" filed form 471. The "Current" version (post funding award) of the Form 471 is not available for review and verification. This functionality was previously available pre- 2015 EPC tool. The display of a link to choose the current version should also display the date of last revision. This would be helpful since users could immediately identify whether or not a Form 500 or any other modification action within the "current" version had been executed. (See Appendix B)

Recommendation: Restore the ability to view "Current" version of Form 471

2.) **ERN Upload.** Add the ability to upload a corresponding invoice to a Category 1 funding request. This would permit reviewers to validate what a request. Additionally, this will lead to quicker funding awards and reduce applicant confusion.

Recommendation: Add the ability to upload documents for C1 requests

3.) **Terminology.** For standardization, clarity and communication purpose the use of the word "BEN" is confusing. Throughout EPC, PIA Review narratives, etc. for school sites ("Entities") that are part of a larger group/district which are under the management of a single "BEN". Seems to be a simple, small item but we have encountered numerous issues explaining to Reviewers and vendors the difference. (See Appendix C)

Recommendation: Restore the ability to view "Current" version of Form 471



D. EPC Issues/Challenges (Cont'd)

4.) **Contracts.** Designated EPC administrator(s) for specific schools/districts should be able to delete an uploaded contract document as long as said document (based on system assigned contract number) isn't leveraged within any previously awarded or active 471 applications. This cleans up the contracts area, eliminates naming confusion and streamlines reviews. If upon request to remove a previously uploaded contract document it is confirmed that the document in question is actively being leveraged for a 471 application (either awarded or in the review process) then an informative splash message should be displayed noting the affected 471 app number.

Recommendation: Ability to delete contracts without a relevant Form 471

5.) **Landing Page.** Every screen display in EPC should have a default setup in design that permits one-click re-direct to "My Landing Page". Additionally, on the Landing Page, the ability to enter either a BEN# or part of a school name and find the school quicker than clicking through pages of clients

Recommendation: Provide the ability to easily reach "My Landing Page and improve BEN searches"

6.) **FDCL Process.** There is a need to change/improve upon the FCDL process currently in place. There is a substantial lack of detail being provided in this generic letter which requires the end user to have to search numerous other areas of data to try to piece together what truly is in place (assuming those areas are updated with current data and are accurate). Notification should minimally include (like the original FCDL letters did) details by 471 app number, FRN number, Pre- discount amounts requested, Funding percentage, Committed amounts, Implementation & Invoicing deadlines, SPIN, Vendor Name, and 471 application name. This functionality was previously available pre-2015 EPC. (See Appendix D)

Recommendation: Restore custom FDCL's prepared for schools

FDCL Screen Display. When searching for Funding Commitments, the school name is not shown on the screen, seeing this information on this screen would be extremely helpful in situations where multiple Form 471's have been submitted. This functionality exists on searching Revised Funding Commitment Decision Letters. (See Appendix E)

Recommendation: Add school name to screen FDCL display



D. EPC Issues/Challenges (Cont'd)

7.) **FRN Status Report.** We recommend the program add columns to the spreadsheet provided when using this tool. Currently for schools' to determine the amount of their funding award(s) that are remaining for utilization is to perform a manual calculation. Adding additional columns, labeled "Pre-Discount Budget Utilized and Pre-Discount Budget Available", would eliminate cumbersome manual processes. This would greatly assist schools and reviewers easily identify by FRN the remaining pre-discount budget for each. While this a simple back-end function to construct it would be extremely helpful to all parties. (See Appendix F)

Recommendation: Incorporate additional data to "FRN Status Report" tool

FRN Status Report. We recommend the program provide additional FRN detail by actual FRN line number (i.e. 1999047391.001, 1999047391.002, etc.). This would greatly assist schools and reviewers easily identify by line details the remaining pre-discount budget for each.

Recommendation: Incorporate additional line item data to "FRN Status Report"

8.) **Service Substitutions and Appeals.** Within the "Records" tab, a challenge exists whereas you can't readily find open Service Substitutions and/or Appeals to check the status for schools/libraries in the situation of administering multiple entities. Entering the school name doesn't help if it's not exact (i.e., abbreviations). It would be helpful to add tab on the consultant home page (similar to Customer Service Cases) labeled "Service Substitutions and Appeals". This would enable us to see the cases regardless of who files it, rather than having to have the unique case number. Currently under "Records" we can select Appeals and Service Substitutions but we see all for every entity and you have to have the service sub or appeal case number to see the schools for which we administer. (See Appendix G)

Recommendation: Provide streamlined access to consulting Firms search tools



E. Protocols/Procedures:

1.) **Equipment Transfers.** In conjunction with the item noted as “**Budget:** Item 3, Implementation by District”) the transfer of equipment requirements should be eliminated to allow transfer of any E-rate acquired equipment from any child site to any other child site within the parent district/BEN site (except non-eligible entities).

Recommendation: Permit schools to transfer equipment within their district without conditions

2.) **PIA Review Concerns Regarding C2 CAP Issues.** The Program needs to revisit its protocols in regards to the sequential action items executed by the PIA Review Team. Problem is, when a particular challenge is identified and pushed to the school (Example: C2 budget overage) and subsequent time/effort is invested by the school to address said challenge and respond only to have another challenge identified afterwards (Example: partial ineligibility of an item) that then needs addressed. Our program interactions with PIA Reviewers have shown us these processes can be extensive and confusing. The action steps for review should be set (with no exceptions) as follows:

Step 1.) Execute all RAL and/or relevant Form 500 requests first as submitted for the application.

Step 2.) Review the application for any potential ineligibility issues and obtain confirmation action(s) proactively BEFORE moving forward with Step 3.

Step 3.) Execute the C2 review processes. These processes should ideally incorporate ALL associated C2 budget cap filing years and be detailed in the accompanying Excel spreadsheet attached to the PIA Inquiry.

By executing the above steps’ you will significantly reduce the amount of back-end work that currently exists when the process is executed as today. We have directly experienced situations whereas PIA Reviews were completed, awarded and then the originally requested RAL’s were processed post funding award. Unfortunately, the reverse-engineering aspect of budgets, projects, etc. presented significant stress to the school and all parties involved. These type of incidents caused significant stress/delay in addressing needs for those review processes. In addition, the schools generally needed to delay project implementation due to extended funding awards.

Recommendation: Improve the PIA review process by insuring relevant changes requested are processes before the review



E. Protocols/Procedures (Cont'd):

3.) **PIA Reviews Concerns Regarding Validations.** It should also be identified and mandated to PIA Reviewers that upon running their validation processes (reviews for specific equipment/service items identified within an FRN line item) and receiving an item of note (Example: “Provide vendor documentation supporting FRN#xyz for \$999.99”) they must read the narratives embedded in the FRN. These narratives define how the bids, contract pricing and FRNs were structured. Substantial time is under-taken to make these application narratives as detailed as possible in order to eliminate unnecessary inquiries. However, in our interactions they seem to be by-passed. The Review process does not seem to reference them when receiving inquiries. By requiring the narratives to be read and applied by PIA Reviewers, a substantial amount of questioning can be eliminated thus reducing stress on all parties and streamlining the funding award processes.

Recommendation: Mandate review of FRN narratives for PIA reviewers

4.) **PIA Review Concerns Regarding Change of Reviewers.** There is a need to notify schools (by email and voice) in a timely fashion when an active Reviewer assigned to their application has under-gone change. We have witnessed multiple occasions whereas a review process has started, the school has responded to inquiries and then received no correspondence and/or funding award only to find out weeks/months later the Reviewer assigned has changed (various reasons). A customer support case by the school usually leads to an inquiry of the review. Our experience has shown in these instances eventually the school receives notification of a change and the review process starts all over again. Additionally, the review process should at minimum pick-up at the current position and not require the school to re-submit all previous provided documentation. These practices are causing substantial delays in funding awards and the places schools in a position of delay to implement projects. (See Appendix H). Additionally, schools in the situation whereas the initial reviewer was replaced, by rule should be moved to the top of list for the new reviewer. Since the school did not cause this issue, they should not have their application(s) further delayed and negatively impact their project(s).

Recommendation: Insure schools are notified quickly when a PIA reviewer has changed and receive top priority for review resolution



E. Protocols/Procedures (Cont'd):

5.) **PIA Review Concerns Regarding Request for Review Deferral.** We have witnessed on multiple occasions where a request to apply for a deferral was activated only to still receive an inquiry from a PIA reviewer for supporting application data. When making this request EPC only returns a screen message of “ok”. A more prudent method of confirmation would be send the authorized requestor an email and/or deposit a confirmation note in the school’s “News” section of EPC. In addition, the school’s “Pending Inquires” page could display this request under the “Status” column. (See Appendix I)

Recommendation: Add “Deferral enabled” to schools status screen for review inquiries so it’s plainly evident to all viewing parties



Final Statement:

Today schools are facing multiple challenges simultaneously.

- Local, state and federal budgets
- Physical and technical security
- Aging cabling infrastructure (including copper voice lines) to support QOS
- Increasing demands on WI-FI density and delivery
- Shrinking life-cycle of WI-FI components
- Increasing capacity for “on demand” content streaming
- Technology in general moving at an advanced pace in order to prepare students for diverse educational opportunities.
- Integrated security infrastructure to ensure streamlined response to support student and staff safety
- Important need to be able to set E-Rate eligible services and project budgets over a multi-year period and abide by them

Education is transformed everyday by technology whereas everyday access to the internet and computing devices is a utility, no different then turning on the lights. Dollar investments for IT infrastructure is more critical than ever in order to support new learning methodologies which embrace student creativity and removes barriers such as traditional classroom design. The E-rate program is a key component of the very complex funding mechanisms for schools. The subsidies provided is of great value to all schools. The current iteration of E-rate eligible components and services falls short in realistic expectations for schools in order to properly stage and build a cost-effective, sustainable IT infrastructure.

We suggest the program consider implementing a new funding window as early as possible, perhaps 2020-2021. This would help schools continue on technology implementation paths and schedules they have set-forth. Schools are still struggling to understand exactly what C2 budget balances are available since the current public and EPC C2 budget tools still exclude 2015 funding. Revising both C2 budget tools with the 2015 funding year certainly requires attention. Completion of that revision is mission-critical so-as all schools would benefit from knowing they were back to full 100% pre-discount availabilities while removing future budget inconsistencies.

Thank you for the opportunity to bring the comments and recommendations listed above to the attention of the FCC for potential considerations. Please feel free to contact us directly if there are follow-up questions or discussions that may be of benefit.