

Future of E-rate & Eligibility of Fiber Networks



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History of Modernization

- **1st Modernization Order – adopted July 2014**
 - Created C2 budget caps
 - Revised C2 eligibility
 - Eliminated voice and other non-broadband services
 - District-wide discount calculations
 - Eliminated tech plan requirement
 - Direct BEAR reimbursements to schools
 - Expanded document retention from 5 to 10 years
- **2nd Modernization Order – adopted December 2014**
 - Equalized Lit/Dark Fiber
 - Expanded eligibility to Self-Provisioned Fiber
 - Increased E-rate cap to \$3.9 billion
 - Expanded definition of rural

FCC Chairman Pai's Previous Comments

- Pre-Modernization:
 - Wanted to eliminate the Priority system and place all remaining services into one list
 - Wanted a single, centralized website to document the amount of money every school and library received as well as how they spend it
 - Note: This has been done
 - Wanted funding to be allocated to schools based on enrollment
 - Rural and low-income students would have a higher \$ value
 - Note: This has been done for C2, but he also wants it for C1
 - Wanted the process reduced to 2 forms, each only 1 page long
 - Wanted to streamline rules to eliminate need for consultants

FCC Chairman Pai's Previous Comments

- Since becoming FCC Chair:
 - Letter to USAC about EPC Problems:
 - Commit to fixing EPC
 - Be more transparent in reporting problems to FCC
 - Identify alternatives ways to help applicants who have EPC problems
 - “I believe in a strong E-rate program, and that is my commitment going forward.”
 - Expected NPRM to recommend additional changes sometime in 2018
 - Released Request for Comments on Category 2
- Commissioner O’Reilly has expressed strong concerns over self-provisioned fiber networks

Request for Comments – C2

- September 2017 - FCC Sought Comments on Category 2 issues:
- Sufficiency of Category 2 budgets
 - Is \$150/student over 5 years enough funding? How have applicants have used their budgets and what percentage of the eligible C2 projects were NOT covered by the C2 budget amounts?
 - Are there specific situations where the C2 budgets were not enough because of differences in geography, rural status, applicant type, or student population?
 - For those applicants that have not used any of their C2 budgets, why? Did those applicants already have adequate internal connections in place before FY 2015 when the C2 initiative began? Do they intend to seek support for C2 services in FY 2018 or FY 2019?
- Administration of the budgets from both from a policy perspective and with regard to the application process
- Calculation of C2 Budgets
 - Should the C2 budgets be calculated differently (different than student counts or square footage)?
 - Is there a simpler way to calculate the C2 budgets? If so, how?
 - How would that simpler method be an improvement over the current system?
- Category 2 application process
 - How can the C2 process be changed to ease the burden on applicants?
 - Specifically, how could EPC be changed? The Form 471? The Invoicing Process? Form 500?

What's Next

- **Category 2 Funding, Budgets, Eligible Services**
 - Current rules state that the C2 budgets are for 5-years, based on the first year that any school in the district was committed C2 funding
 - After 5 yrs have been used, C2 system reverts to 2/5 rule
 - Rules also say that after FY 2019, BMIC, MIBS and caching are no longer eligible
- **Category 1 Fiber Special Construction Amortization**
 - Rules state that after FY 2019, the Brooklyn Decision returns
 - Brooklyn Decision = Special Construction charges over \$500,000 must be amortized over at least 3 years
 - Cannot request all discounted share upfront in a single year

USAC Seeking IT Feedback

- USAC has created a new web page for program participants to submit their ideas and feedback for improving and/or enhancing E-rate's IT systems
<https://goo.gl/aXm6YP>
- Be as descriptive as possible, citing the form, webpage, specific language that should be changed, whether you're in EPC and if so, which module, etc.
- Suggestions:
 - Keep track of your submissions
 - Include 1 suggestion per submission
 - Even if you don't have a suggested fix, you can say that "xx" language is confusing

E-rate Crystal Ball

- EPC will remain in place
- FCC will release NPRM within next 6 months
 - Fiber? C2 budgets? Extreme streamlining?
- New Acting VP for S/L = Catriona Ayer
 - She is committed to eliminating backlog of appeals, SPIN changes, Service Substitutions, etc.
 - Goal is to return to 90 days processing for appeals, 60 day processing for all other post-commitment processes
 - Also committed to issuing FCDLs by Sept 1
- New CSB contractor will take over in April 2018
 - Better service? Growing pains?
- RFP in 2018 for new PIA/Invoicing contractor
 - More automation? Growing pains?

3 Types of Eligible Category 1 Fiber

**Leased Lit
Fiber**

**Leased Dark
Fiber**

**Self-
Provisioned
Fiber**

Leased Lit Fiber

- Fiber based network where service provider owns, lights, and manages the network
- Must be “lit” by June 30
- Typically contract for 1 or 10 gb to each building

Leased Dark Fiber

- Applicant leases capacity on a provider-owned fiber network
 - Typically lease # of strands
- Applicant lights the fiber -- not the vendor
 - Network equipment to light the fiber is E-rate eligible
- Maintenance/Operations (M&O) charges are eligible
 - Can be provided by same fiber vendor or another vendor
 - Specify in RFP which type of arrangement wanted
- Must be “lit” by June 30

Self-Provisioned Fiber

- “BYO” – Build Your Own Network
- Applicant contracts with vendor to construct the network
 - Thereafter, owns and is responsible for maintaining the network (whether in-house or contracted)
 - M & O costs are E-rate eligible
 - Typically purchase at least 12 strands
- Applicant lights the fiber -- not the vendor
 - Network equipment to light the fiber is E-rate eligible
- Must be “lit” by June 30

Bidding Requirements



- **Leased Lit Fiber**
 - RFP not required, but addresses must be in 470 if no RFP
 - RFP strongly suggested
- **Leased Dark Fiber**
 - RFP required
 - Must also seek bids for Leased Lit Fiber
 - Cannot specify preference
 - M&O and Network Equipment should be on same 470
 - Can be different procurements
 - Use “Other” category on 470
 - RFP required
- **Self-Provisioned Fiber**
 - RFP required
 - Must also seek bids for “Services Over 3rd Party Networks”
 - Essentially means Lit and Dark Fiber Services
 - Cannot specify preference
 - M&O and Network Equipment should be on same 470
 - Can be different procurements
 - Use “Other” category on 470
 - RFP required

Evaluating Cost Effectiveness

- Applicants are required to demonstrate that they selected the most cost-effective service
- Analysis should include:
 - Cost comparison, including upfront and recurring costs
 - Evaluation of the expected useful life of the networks
 - Comparison of total costs of each solution
 - Leased Dark and Self-Provisioned Fiber analysis should include costs of network electronics and M&O

What is Special Construction?

- “Build” Charges
 - One time charges incurred for physical installation of new service
 - Can be for Leased Lit, Leased Dark or Self Provisioned Fiber
- Special Construction includes:
 - Construction of network facilities
 - Design and engineering
 - Project management
- Special Construction does NOT include:
 - Network equipment
- Special PIA Review
 - Intensive
 - 40+ network questions asked of applicant AND service provider
 - Examples at: <http://e-ratepa.org/wp-content/uploads/2014/03/4-7-Fiber-Questions.pdf>



Special Construction Payments

- E-rate Discounted Share
 - E-rate will pay for entire discounted amount in 1st year
 - After FY 2018, requests over \$500,000 must be amortized over at least 3 years
 - Network must be “lit” by June 30 in order for Special Construction to be paid
- Applicant Non-Discounted Share
 - Applicants can ask vendors for up to a 4 year payment plan for the non-discounted share of these costs
 - This is a permanent option
 - Request must be included on the Form 470 and be listed in contract
 - Vendors are not required to agree (but most do)
 - Finance and interest charges are not E-rate eligible
- **For example:**
 - If there is a \$100,000 SC Charge with 60% E-rate discount:
 - E-rate will pay for \$60,000 in Year 1
 - Applicant may request to pay vendor \$10,000/year for 4 years to pay off non-discounted amount of SC charge

Excess Strands Put in Trench?

- Often, vendors will want to lay additional fiber strands in trench/conduit for future use
- Such excess strands have VERY strict E-rate rules
 - Applicant should make clear in RFPs that vendors will be required to disclose excess strands and cost associated with including that fiber

Excess Strands – Leased Lit and Leased Dark

Applicant's Exclusive Future Use:

- If the applicant can **prove** that buying a cable containing the larger # of strands placed in the fiber system for the applicant's future use is more cost effective than buying a fiber cable with the exact # of strands the applicant plans to place into service the first year, then
- **No cost allocation of the excess strands is required and no other special construction charges would need to be cost allocated**

Vendor's Future Use:

- Applicant **must** cost allocate the cost of the service provider-owned extra strands, **AND** all incremental costs of those extra strands from the special construction E-rate funding request
- It is **not** a pro-rata share, but an **incremental** cost calculation that must be backed by detailed documentation
 - Splicing labor
 - Splicing enclosures
 - Fiber installation labor (for extra strands)
 - Fiber materials (for extra strands), such as larger circuit boards, etc.

Excess Strands – Self-Provisioned

- In general, no excess fibers can be included
- All fibers must be for applicant’s exclusive use and must be lit by June 30
 - Small exception for additional fibers included for applicant’s future use
 - If the applicant can **prove** that buying a cable containing the larger # of strands placed in the fiber system for the applicant’s future use is more cost effective than buying a fiber cable with the exact # of strands the applicant plans to place into service the first year, no cost allocation of the excess strands is required and no other special construction charges would need to be cost allocated
 - Small exception for additional fibers included for “public sector partners”
 - Defined as health care providers and public sector (governmental) entities
 - Cost allocation rules for Leased Lit/Leased Dark would apply

What if You Can't Meet June 30 Deadline?

- If new fiber network cannot be lit by June 30, applicant can request a 1-year extension to complete the special construction and light the fiber
 - Delay must be due to weather or “other reasons”
 - Such as very late FCDL
- Must request extension from USAC via Form 500
 - Is not “automatically” granted

Close-Proximity Fiber Eligibility

- 1 school – 2 buildings
 - Fiber between those buildings = C2
 - Does PDE recognize it as single school?
- 1 building – 2 schools
 - Fiber between those schools = C2
- 2 schools, not in same building
 - Fiber between those buildings = C1
 - Must be bid as “self-provisioned fiber”
 - Requires RFP
 - Requires to be bid against 3rd party networks
 - Must be on same 470

