

Fiber Essentials for Service Providers

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Today, we will discuss:

1. The fiber options supported by E-rate.
2. The E-rate Program's fiber rules.
3. Tips for service providers bidding on fiber services and their role in the fiber application review process.
4. Observations from applications filed for FY 2016.

Fiber Options Supported By E-Rate

Fiber Options Supported By E-rate

- **Leased Lit Fiber:** A fixed bandwidth broadband service where the service provider manages the network equipment that places the fiber/other transport medium into service and manages the technical support for the service.
- **Leased Dark Fiber (including IRU):** Service in which the customer purchases use of a portion of a provider-owned and maintained fiber network separately from the service of lighting (i.e., transmitting information over) that fiber.
- **Self-Provisioned Network:** Complete applicant ownership of a high-speed broadband network. The applicant hires a vendor to construct the network or a portion of the network, and thereafter owns and maintains that network or portion.

Eligible Charges By Fiber Type

Fiber Type	Before FY 2016	As-of FY 2016
Leased Lit Fiber	- Monthly recurring charges (typically including charges for modulating electronics) and all special construction charges eligible.	- Same.
Leased Dark Fiber	- Recurring costs and special construction charges <u>up to the applicant's property line</u> eligible. - Network equipment and special construction charges beyond the property line were ineligible.	- Special construction charges for leased dark fiber beyond the applicant's property line eligible. - Network equipment necessary to light dark fiber eligible as a separate service.
Self-Provisioning	- Applicant-owned networks ineligible.	- Charges for special construction, modulating electronics, and recurring costs for applicant-owned and maintained networks eligible.

Full Summary of New Fiber Rules: <https://www.fcc.gov/general/summary-second-e-rate-modernization-order>

What is special construction?

Special construction refers to the upfront, non-recurring costs associated with the installation of new fiber.

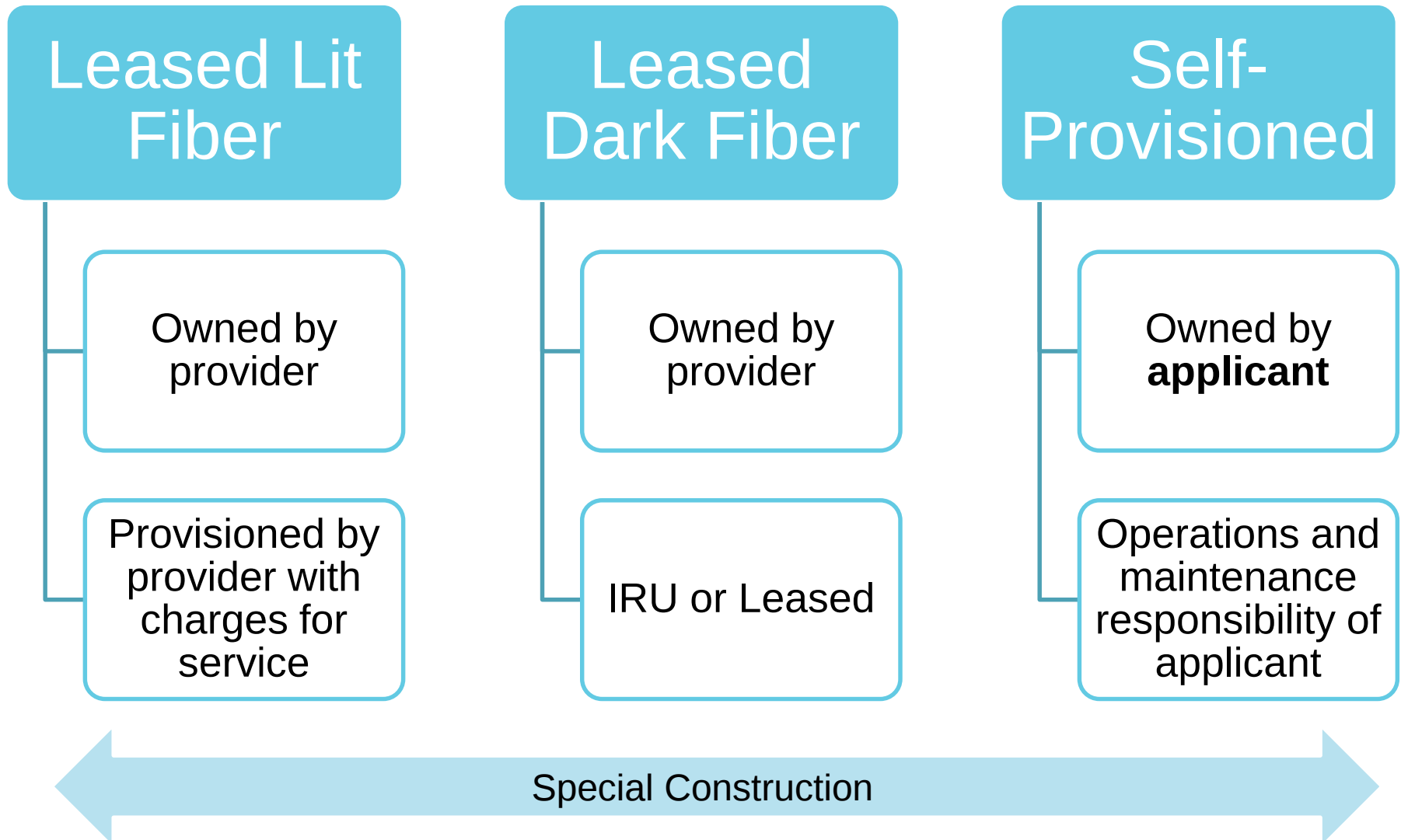
Applicants may seek funding for special construction charges in connection with all of the fiber options supported by E-rate, subject to program rules.

Special construction charges eligible for Category One support consist of three components:

1. construction of network facilities;
2. design and engineering; and
3. project management.

Note: The term “special construction” does not include network equipment necessary to light fiber. Charges for network equipment are eligible for Category One support, but not as special construction.

E-rate Eligible Fiber Options Recap



Know the E-rate Rules

Competitive Bidding Requirements

- Applicants that seek bids for leased dark fiber (with and without special construction) or a self-provisioned network must also seek bids for the needed connectivity via a leased lit fiber option.
- Applicants soliciting bids for a self-provisioned network must seek bids for lit service on the same FCC Form 470 (unless the applicant already posted for lit services for this same funding year and received no bids).
- ❖ **Provider Tip**: *Providers may include special construction charges in bid responses even if an applicant's FCC Form 470 does not specifically call them out. For instance, if an applicant seeks bids for a dark fiber option, a provider may submit a bid response that includes special construction charges for the costs of deploying fiber to the eligible locations.*

Competitive Bidding Requirements

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- The competitive bidding process must be **open and fair**.
 - A service provider may not file FCC Form 470 for an applicant.
 - A service provider may not consult with an applicant on its RFP.
 - A service provider may not pay all or part of the applicant's non-discount share of services.
 - A service provider may not be the applicant's technical advisor.
 - Applicants may not condition a bid award on the use of particular facilities or state a preference for self-provisioning vs. leased dark fiber vs. leased lit fiber.
- ❖ **Provider Tip**: *Remember that the competitive bidding rules apply to state and municipal service providers. For instance, a municipal IT division that operates a municipal network may not both advise a school district on its FCC Form 470/RFP and bid to provide services to the school district.*

Cost-Effectiveness Requirement

- Applicants must select the most cost-effective service offering, using price as the primary factor.
- When comparing bids for different service offerings, applicants are required to:
 - Determine a reasonable, defensible period of time for the comparison, based on their anticipated use of the assets (Note: Applicants that self-provision or purchase the equipment required to light leased dark fiber may expect to recover their costs in 5, 7, 10, or even 20 years).
 - Identify a comprehensive and specific total cost for each option.
 - Divide total cost of the leased dark fiber or self-provisioned network by number of years to determine annual cost. Compare to annual lit fiber charge.
 - Be prepared to explain any assumptions made, such as expected useful life.

Submitting the Funding Request

- ❖ **Provider Tip**: *Although service providers may not consult with applicants during the competitive bidding process, once the contract has been awarded, a provider may work with the applicant on submitting funding requests and responding to questions from USAC during PIA review.*
- Funding requests for equipment and maintenance costs associated with lighting leased dark fiber must be included in the same application (FCC Form 471) with the dark fiber lease.
- Special construction FRNs may not request support for excess capacity (i.e., E-rate will not pay for applicants to warehouse fiber).
- Applicants may only receive special construction support for dark fiber that is lit, and self-provisioned networks that are constructed and lit, in the same funding year (July 1 through June 30).

Submitting the Funding Request

- **Installment Payments:** Applicants may seek to pay their share of special construction charges in installments over up to four years. Terms of any such installment payment arrangement must be stated in the special construction funding request.
 - ❖ **Provider Tip:** *Applicants are required to indicate their interest in an installment payment option when they seek bids in their FCC Form 470. While service providers are not obligated to agree to an installment plan, willingness to do so may be considered during the bid evaluation process.*
- **Matching Funds:** E-rate will pay an additional discount up to 10% to match funding from qualified sources (i.e., the state or, for tribal entities, a state, Tribal government, or federal agency) on a dollar-to-dollar basis (not to exceed 100%) for special construction charges. State match details must be submitted with the special construction funding request. USAC will review compliance with program rules during PIA.

Funding Year 2016

Status & Top Tips Learned

FY16 – First Year of New Fiber Rules

- Fiber eligibility rules discussed today went into effect starting FY 2016.
- New rules for new eligible services = learning curve.
- The following slides summarize applications for different fiber types received in FY 2016 and top tips based on what we've seen.

FY 2016 Applications Filed

Status as of June 8, 2016:

Fiber Type	Subtype	Total FRNs	Amount
Dark Fiber		478	\$42,322,514
	Maintenance and Operations	255	\$16,753,618
	Network Equipment	94	\$7,114,874
	Network Equipment and M&O	42	\$950,440
	Special Construction	87	\$17,503,583
Lit Fiber	Special Construction	95	\$25,674,606
Self-Provisioned		371	\$62,208,837
	Maintenance and Operations	91	\$2,646,153
	Network Equipment	143	\$17,017,824
	Network Equipment and M&O	10	\$77,389
	Special Construction	127	\$42,467,470
TOTALS (all FRNs):			\$130,205,957
Special Construction FRN Total:			\$85,645,659

When preparing to bid . . .

- Read FCC Form 470s and RFPs posted on USAC.org carefully.
- Understand bid evaluation criteria specified by the applicant.
- Review all state and local procurement rules and regulations.
- Know the relevant FCC rules, e.g., gift rules, lowest corresponding price rule, rules on free services (Free Services Advisory: <http://usac.org/sl/applicants/step01/free-services-advisory.aspx>)
- Know process for asking questions for clarification.
- Review USAC's Eligible Services List, and be prepared to separate E-rate eligible and ineligible services.

When drafting your bid response . . .

- Know the key elements of your bid response. For instance, if responding to a bid that requires special construction:



1. Define endpoints
2. Route/assess ROW
3. Soil survey
4. Pre-engineer
5. Legal/ROW acquisition
6. Environmental
7. OSP define/procure
8. Construction define
9. Construction procure
10. Optics define/procure
11. Final engineering
12. Build and splice
13. Test
14. Implement FAM

When drafting your bid response . . .

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- Follow all bid instructions (e.g., disqualification factors, deadlines, formatting, attachments).
- Respond to bid request using correct terms and conditions.
- Use templates provided by the applicant with its RFP.
- Be aware of E-rate eligible and ineligible services (e.g., any strands of fiber installed pursuant to a contract with an E-rate applicant must be for the applicant's use).
- Include maps of routes, highlighting bores, water crossings, rail crossing segments, etc.
- Be prepared for requests for invoice level detail for outside plant, permits, construction labor, etc.
- Anticipate PIA review – submit high quality, detailed bid responses.

Assisting with application filing . . .

- After the contract is awarded, service providers may assist applicants with submitting their funding requests.
- Review the requirements of FCC Form 471, its drop down choices, and other fields to understand the information that the applicant will need to prepare a funding request (e.g., footage, cost per foot, etc.)
- Keep common filing oversights in mind:
 - Was an installment payment agreement entered?
 - Have funds for special construction been committed by the state that are eligible for E-rate matching funds?
 - If an FRN for special construction charges is being filed, are there corresponding FRNs for Network Equipment and/or Maintenance and Operations, and if not, why not?
- Recommend submitting total cost of ownership calculation with special construction FRNs.

- Maintain contact with the applicant and assist with review process.
- Direct contact with PIA reviewers is acceptable.
- Expect thorough and exhaustive review of funding requests.
- Applicants will be asked to defend the cost-effectiveness of their service selection:
 - Need detail on the specific build: End Points, Terrain, OSP, etc.
 - Reasonableness of costs, whether all costs have been considered (e.g., maintenance and operations, equipment refresh, major cuts, managed service).
 - When will capital investment made by the Fund yield cost-savings?
 - If FRN is for a dark fiber lease or self-provisioning option, cost analysis vs. lit fiber service option.

A few general misconceptions . . .

- New Rules Encourage Self Provisioning – **False.** Competitive bidding and cost effectiveness are still the bedrock concepts of E-rate. E-rate is technology neutral.
- No need to consider total cost of operations when applying for a dark fiber lease or self-provisioning option – **False.** Check every cost comparison for its thoroughness, including equipment, equipment refresh, maintenance, pole attachment fees, etc.
- Service providers cannot call USAC with questions – **False.** Especially when contemplating a bid involving a complicated build, please reach out!

- Fiber Background Document
 - <http://www.usac.org/sl/applicants/beforeyoubegin/fiber.aspx>
- Common Questions
 - <http://www.usac.org/sl/about/faqs/faqs-fiber.asp>

Questions?

Thank you!