

E-rate 2016

New Fiber Options

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Overview of new fiber rules

Purpose of rules is to provide affordable high bandwidth Internet access.

New rules provide funding to install fiber to connect schools to each other and to the Internet.

- *This is called “special construction.”*
- *It means, new construction.*

Any RFP for special construction of dark fiber must include a bid option for leased lit fiber.

Dark vs. Lit Fiber

“Lit fiber” refers to a leased fiber service that the school does not own or manage.

- *Bandwidth amounts are controlled by the terms of a contract with the service provider, for example, 100 Mbps for \$3,000/month.*
- *Badgernet, or BCN, service is an example.*

Dark vs. Lit Fiber

“Dark fiber” refers to physical fiber that the school owns, leases, or IRU’s.

- *The school “lights” it, or makes it live, by connecting its own network equipment to it, or contracting with a third party to provide and configure it.*
- *Bandwidth amounts are controlled by the school, and determined by the capacity of the optical network equipment, called “modulating electronics” in USAC’s language.*
- *Standard modulating electronics provide bandwidth in amounts of 1 and 10 Gbps.*

Dark vs. Lit Fiber

Difference between lit and dark fiber in simple terms:

- *When you go to bid for lit fiber service, you are bidding for bandwidth.*
- *When you go to bid for dark fiber, you are bidding for infrastructure.*

Special Construction

“Special Construction” means new construction.

Special construction is done when

- *there is not existing fiber connected to the school, or*
- *available lit service is not cost-effective.*

Special Construction

For special construction for lit service, the district would pay . . .

- an up front amount to cover construction costs incurred by the service provider, and then*
- a monthly ongoing cost for the service*

. . . which would be covered by E-rate at the district's discount rate

Special Construction

For special construction for dark fiber, the school would pay for . . .

- *Construction*
- *Modulating electronics*
- *Initial setup*
- *Maintenance*
- *Repairs*

. . . which would be covered by E-rate at the district's discount rate.

E-rate Discounts on Special Construction

Special construction expenses are subsidized at the district's discount rate. The following example describes a district with an 80% discount rate that chooses to “self-provision,” or purchase and own, dark fiber.

- *A school with an 80% discount rate would pay \$100,000 for a \$500,000 dark fiber build, and would then own the fiber.*
- *The district would also need to pay for ongoing maintenance and management costs, which are also eligible for E-rate discounts.*

RFPs for Lit Fiber

Bid evaluation for lit fiber service cost would be based on

- *Quotations for requested bandwidth amounts over a contract period*
- *For example, the RFP could request a quotation for a 5 year contract providing*
 - 100 Mbps of service for 2016 and 2017
 - 1 Gbps of service for 2018-2020

Bid evaluations for Dark Fiber

Case: IRU

Bidders propose comprehensive project.

- *Quotation would include*
 - *Construction*
 - *Electronic equipment*
 - *initial setup*
 - *Maintenance*
 - *Repairs*
- *District can assess annual cost based on 20 year IRU term*

RFPs for Dark vs. Lit Fiber

RFPs need to be written in a way that makes it possible for lit service providers to bid, and must be based on a reasonable projection of anticipated needs.

Finally

Developing a fiber project and writing an RFP for fiber construction are complex and will require planning and lead time.

To hold open the option of developing an RFP for dark fiber construction vs. lit fiber service, districts might consider short term contracts for bandwidth while developing their plans.