



Achieving Digital Opportunity through BEAD Grants

BEAD Program: Determining the Extremely High Cost Threshold

What is an “Extremely High Cost per Location Threshold” (EHCT)?

In the BEAD program Notice of Funding Opportunity (NOFO), the National Telecommunications and Information Administration (NTIA) establishes the Extremely High Cost per Location Threshold (EHCT) – a foundational concept and requirement to achieving the program’s goal of maximizing the deployment of fiber technology while seeking to provide broadband connectivity universally. Put simply, the EHCT is a cost threshold set by a State or Territory above which the prioritization or preference for fiber projects ceases and the Eligible Entity may consider use of an alternate technology on equal footing if it can meet the BEAD technical requirements.

The EHCT is most relevant for determining whether and when to deploy fiber to locations in the hardest-to-reach places.

How is an EHCT set?

The NOFO provides the following guidance on setting the EHCT:

1. **Eligible Entities must submit a proposal to the NTIA about their chosen threshold.** Initial proposals to the NTIA should include the proposed EHCT or a method for choosing it, which will give NTIA an opportunity to ensure an Eligible Entity’s approach is reasonable to achieve the program’s goals.
2. **The EHCT should be set as high as possible.** High thresholds will bring fiber to as many households as possible, ensuring that the most future-proof technology is built wherever reasonable.
3. **The chosen EHCT will affect provider participation.** Providers will generally contribute at least 25% of project costs. A higher EHCT means that providers will need to increase their match, which may limit participation.

What are the consequences of setting an EHCT too low or too high?

If an EHCT is set **too low**, fewer homes will receive fiber connectivity. Fiber has long been recognized by providers investing their own capital as the most reliable, capable, and scalable high-speed broadband technology. Thus, to ensure consumers and businesses at unserved and underserved locations are not left behind, an Eligible Entity should strive to deploy fiber to the greatest extent possible. By contrast, if an Eligible Entity does not maximize fiber deployments, it will almost certainly need to eventually invest in more robust and capable networks yet again later. This is the reason setting the EHCT right will make all of the difference in leveraging the historic financial resources made available in BEAD.

1 The NOFO defines the EHCT as “a BEAD subsidy cost per location... above which an Eligible Entity may decline to select a proposal if use of an alternative technology meeting BEAD’s technical requirements would be less expensive.”



If an EHCT is set **too high**, the most remote unserved and underserved locations may remain under-connected. With a too-high EHCT, it is possible that resources could be depleted before every location is served.

What are the most important factors to consider when setting an EHCT?

There are three critical features that Eligible Entities should weigh in their decision process:

- 1. Fiber build costs.** What is the range and distribution of fiber costs per location? These costs will vary, sometimes significantly, depending on location density, regional terrain, and the proximity of existing infrastructure.
- 2. Service provider economics.** Providers must determine the economic feasibility of a project for themselves. Thus, Eligible Entities should consider factors including potential revenue, number of potential customers, expected return on investment and payback period, and use of existing network assets. The provider match also informs the provider's business case. In addition, there may be areas where certain providers are more willing to provide service based on factors such as the presence of multi-dwelling units and the provider's existing infrastructure in the area. These and other factors all influence providers' willingness to pay, and thus influence where an EHCT should reasonably be set.
- 3. Overall build goal.** An Eligible Entity should identify its goal for using BEAD funding consistent with the NOFO's guidance to bring fiber to as many locations as reasonable while supporting universal connectivity. Is it to maximize performance quality and avoid the need for significant rebuilding of networks in the near future, for example, or to reach as many locations as possible with a minimum level of performance? The Eligible Entity should design its EHCT with that goal in mind.

How can an Eligible Entity establish a reasonable EHCT?

- 1.** Determine a reasonable estimate for **fiber cost**. Fiber cost can be estimated based on the miles of plant to be built, local labor and permitting costs, geography and terrain, and other economic factors. The number of miles of fiber needed to reach a location can be estimated by finding the shortest path along roads that connect unserved and underserved locations to existing fiber networks.
- 2.** Build realistic **business cases** for providers who would participate in the BEAD grant application process, including an assessment of the factors that impact provider economics such as borrowing costs and market rates of return.
- 3.** Test different **deployment scenarios** using various EHCTs and assess the modeled outcome from each.
- 4.** Identify the EHCT that leads to the deployment scenario that **meets the Eligible Entity's goals** and BEAD requirements most comprehensively.

One Path of Many

Each Eligible Entity's actual calculation to set an EHCT must look at economic considerations on a per location basis and will require unique inputs specific to that Entity and its unique goals.