BEAD Restructuring Policy Notice

A Guide to Assessing Network Scalability for State Broadband Offices

30 June 2025

www.cartesian.com

Context & Summary

In the context of the BEAD Restructuring Policy Notice, we have developed a technology-neutral framework for SBOs to use in validating whether a project can easily scale to meet the connectivity needs of households and businesses in the project area and thus satisfy a key criterion to qualify as a Priority Broadband Project*

Context

The NTIA has issued a BEAD Restructuring Policy Notice that underscores a technology-neutral approach, with performance and scalability requirements

The policy and statute states that a Priority Broadband Project network must:

"Ensure that the network built by the project can easily scale speeds over time"

SBOs must evaluate whether proposed networks are easily scalable…

However, as NTIA recognized in adopting special notice appendices for LEO satellite and Unlicensed Fixed Wireless, there are fundamental differences in broadband technology projects' capabilities and potential scalability

Summary

We have developed a technology-neutral framework that enables SBOs to assess the scalability of networks, regardless of technology

The framework is designed to account for key differences across network types, including:

- The initial "day 1" capacity
- Network reach, i.e., how many locations are served
- Capacity constraints, such as spectrum limitations
- Upgrade path to meet increasing bandwidth demands

Note: * SBOs also are required to determine whether the network can easily scale to support 5G/6G and other advanced services. We have not addressed how to implement that requirement in this analysis.

BEAD Program Requirements

The need for scalability in BEAD priority broadband projects is established in statute with reference to meeting evolving connectivity needs and supporting the deployment of 5G and other services

Priority Broadband Project Definition

(I) Priority broadband project
The term "priority broadband project" means a project designed to:

(i) provide broadband service that meets speed, latency, reliability, consistency in quality of service, and related criteria as the Assistant Secretary shall determine; and

(ii) ensure that the network built by the project **can easily scale speeds over time** to:

I. meet the evolving connectivity needs of households and businesses; and

II. support the deployment of 5G, successor wireless technologies, and other advanced services.

What does it mean to "scale speeds"?

On a broadband network, scaling speeds involves two critical parameters:

1. **Data Rate**
Commonly referred to as "speed", this is the 100/20 Mbps specified for BEAD. According to the statute, BEAD networks must easily allow this to increase over time, e.g. to 1 Gbps+.

2. **Capacity**
To enable households and businesses to consistently receive the higher data rates, the capacity of the network will also need to grow. Network capacity is more complicated to assess and is the primary focus of the **scalability framework** presented in this document.

Scalability Framework

We propose a framework for SBOs to use to validate the scalability of solutions proposed by potential subgrantees to meet the connectivity needs of households and businesses

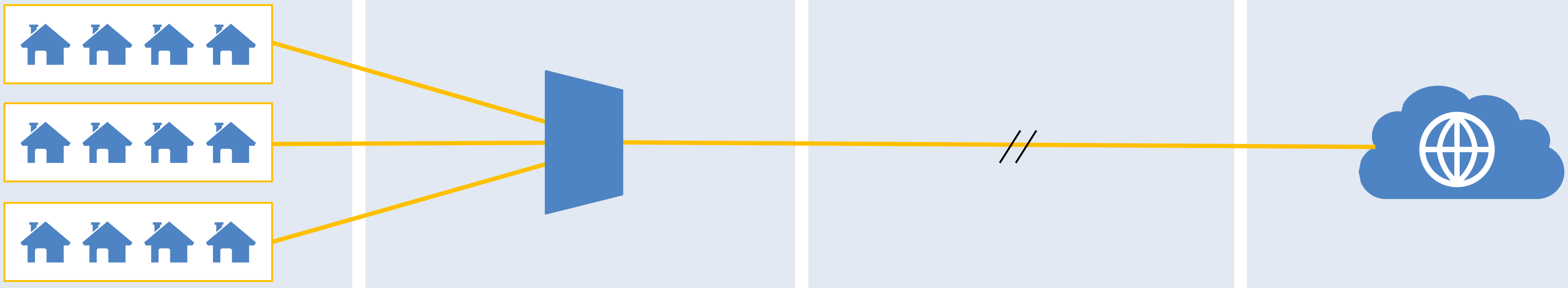
Technology-Neutral Framework for Assessing Scalability	
1 Determine Network Capacity	• Understand the **typical network architecture** of each technology • Request that bidders share **network designs, specifications** and **design parameters**
2 Forecast Future Demand	• Request **demand forecasts** over the project timeframe for each service group • Consider **BEAD** and **non-BEAD** (a.k.a. general market) use, including existing customer base (where relevant)
3 Identify Capacity Shortfalls	• For each service group, evaluate and quantify potential **capacity shortfalls**
4 Validate the Upgrade Strategy	• Understand from the bidder their proposed approach to **addressing capacity shortfalls** • Assess the **feasibility** in terms of time, cost and effort • Determine the consequences of failing to upgrade capacity sufficiently

Potential subgrantees bear the burden of demonstrating to SBOs their proposed solutions can easily scale

Source: Cartesian

1 Network Capacity | Overview

Assessing the scalability of a network requires an understanding of the initial “day one” capacity at critical points in the network



Service Groups

- In the access network, broadband serviceable locations (BSLs) are allocated to service groups
- Each service group has a finite capacity, shared between the BSLs
- Upgrades to capacity in this segment of the network can be costly and time consuming

Access Platform

- The access platform aggregates customer connections from several service groups (i.e. many BSLs)
- For terrestrial networks, this could be an optical line terminal (OLT) or FWA base station; for LEO satellite, it includes the satellites and ground stations

Backhaul

- Backhaul connectivity is required between the access platforms and the core network
- Backhaul links may use fiber or point-to-point microwave
- Frequently leased from other providers, with capacity tightly managed to minimize OpEx

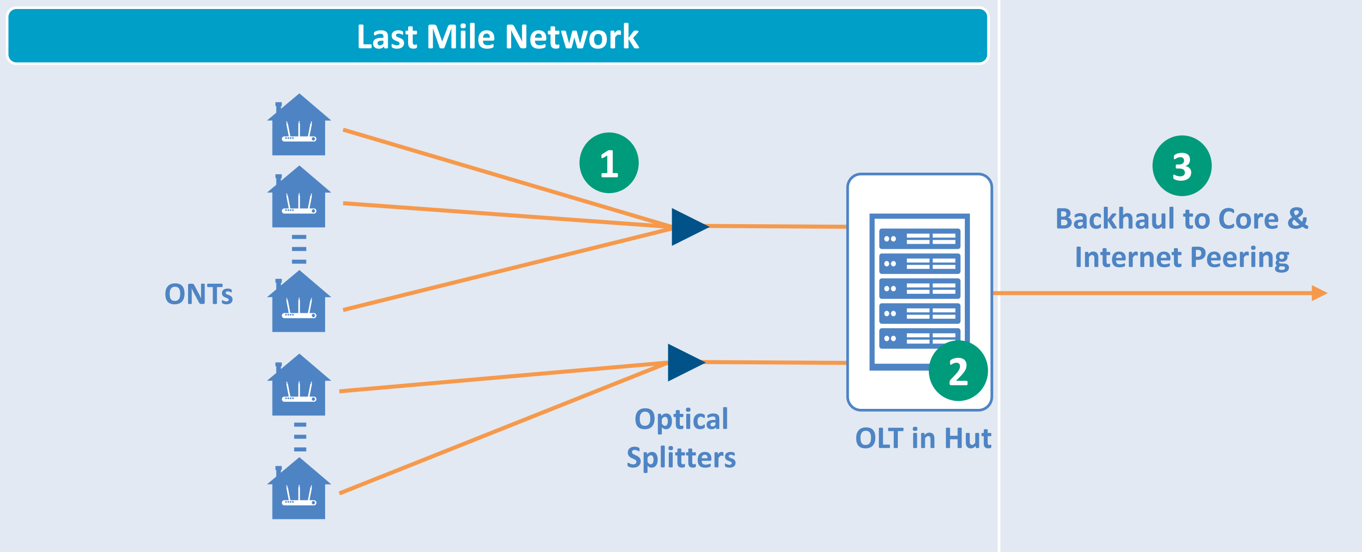
Core & Internet

- High-capacity core network aggregates all customer traffic and provides interconnect to the Internet
- Core networks are periodically upgraded, and this is considered a “business as usual” activity
- Unlikely to be relevant from a capacity perspective for BEAD

Source: Cartesian

1 Network Capacity | Fiber Access

The capacity of fiber access networks is largely determined by the technology choice and network design



Overview	• The last mile network consists of several Passive Optical Networks (PONs) that are lit by an Optical Line Terminal (OLT) located in a local hut/enclosure • The PONs branch out through splitters to serve multiple customers • Each PON has a dedicated capacity which is shared between the customers connected to that PON
Scalability	• Network capacity is determined by the OLT throughput and PON technology choice, e.g. XGS-PON has 10 Gbps symmetrical capacity on each PON • The number of customers sharing the available capacity is a function of take-up rate and is constrained by the split ratio in the PON design

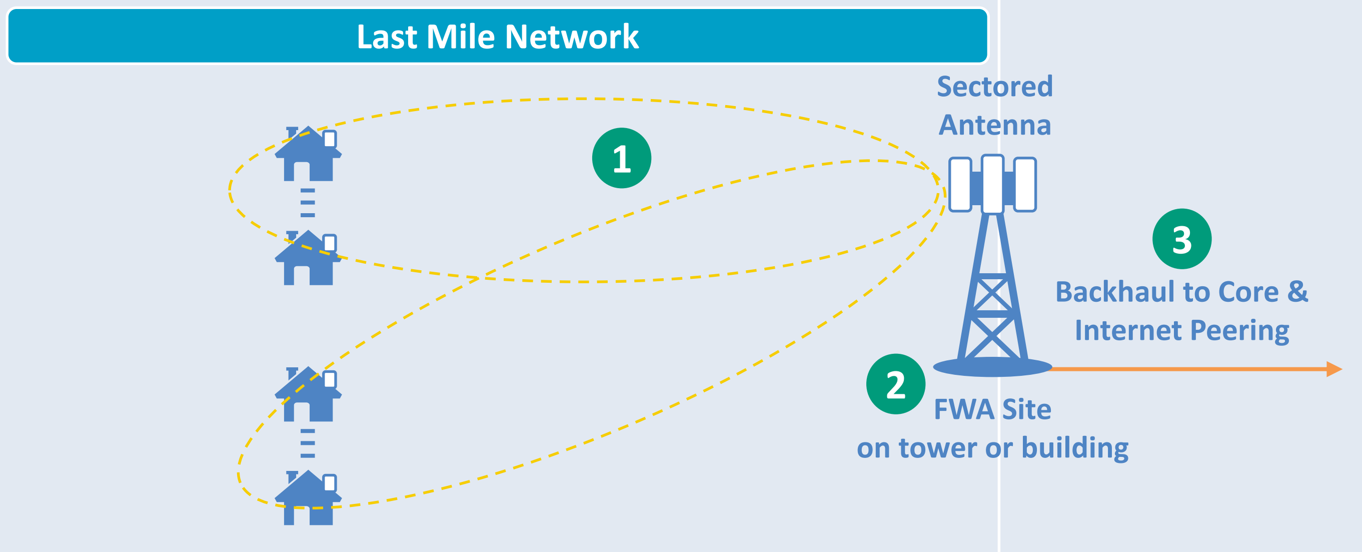
Focus Areas		
1	**PON**	For each PON, ascertain the overall capacity (based on the selected PON technology, e.g. XGS-PON) and the number of BSLs assigned to the PON.
2	**OLT**	Review the OLT specifications to understand the maximum throughput of the equipment, the maximum backhaul capacity, and the ability to swap PON optics to migrate to higher speed PONs (e.g. 25 Gbps) in the future.
3	**Backhaul**	Review backhaul technology and speed. Identify whether the backhaul is self-provided.

In practice, a properly dimensioned fiber access network should not raise any capacity concerns. Aside from equipment specifications, the key determinant will be the number of BSLs assigned to each PON.

Source: Cartesian

1 Network Capacity | Fixed Wireless Access

For FWA, the available spectrum is an important factor alongside the choice of wireless equipment and design



Overview	• FWA networks use wireless links from a central site and customer locations • The capacity of the FWA base station is shared between the customers; using sectored antennae enables capacity to be increased through more efficient spectrum reuse • Coverage is dependent on local topography, building clutter, foliage and other obstacles, with signal strength fading with distance from base station
Scalability	• Network capacity is determined by factors including equipment throughput, transmit power, spectrum, spectral efficiency, sectorization, and interference • Licensed spectrum has more predictable performance due to exclusivity (no in-band competition from external sources) and higher transmit power • The number of customers sharing the capacity is a function of take-up rate and may be constrained by capacity planning rules

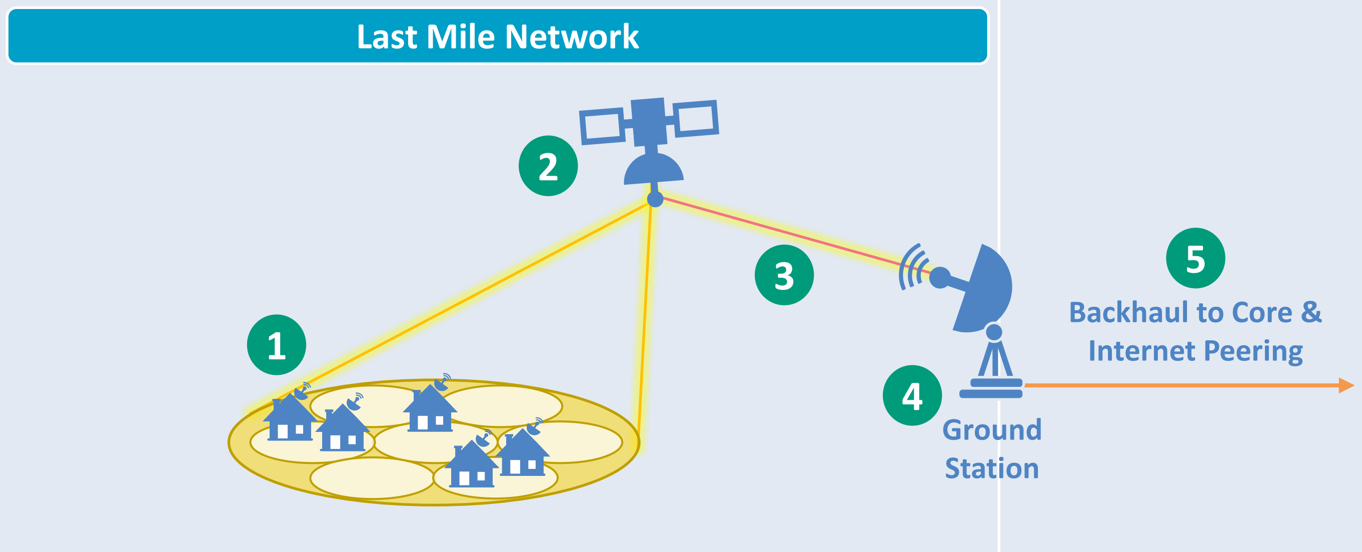
Focus Areas		
1	**Radio Link**	Ask the subgrantee to provide the expected capacity of each sector with supporting RF design detail including spectrum bands. Investigate how the subgrantee plans to mitigate the impact of external interference, particularly if reliant on unlicensed bands.
2	**Base Station**	Review the FWA equipment specifications to understand the maximum throughput, the maximum number of radio sectors, the maximum backhaul capacity, and the maximum number of customers.
3	**Backhaul**	Review backhaul technology and speed. Identify whether the backhaul is self-provided.

The radio link is the most critical aspect for FWA performance. SBOs will need to understand how the RF links have been dimensioned, their tolerance to noise and interference, and the number of BSLs per sector.

Source: Cartesian

1 Network Capacity | LEO Satellite

LEO Satellite capacity needs to be understood at the 'spot beam' level, considering spectrum and other factors



Overview	• Last mile network uses wireless links between satellites, user terminals, and ground stations • User terminals share capacity within spot beams each serving ~100 sq. miles • Available in most locations with clear view of the sky (i.e. not blocked by buildings, foliage, etc.); limited service in high latitudes (e.g. Alaska) as fewer satellites present (e.g. Starlink mostly below 53° north)
Scalability	• Network capacity between the user terminal and the satellite is determined by factors including satellite throughput, available spectrum, spectral efficiency, frequency reuse, and interference; similar factors determine the capacity to the ground station • The number of customers sharing the capacity is a function of take-up rate and may be constrained by capacity planning rules

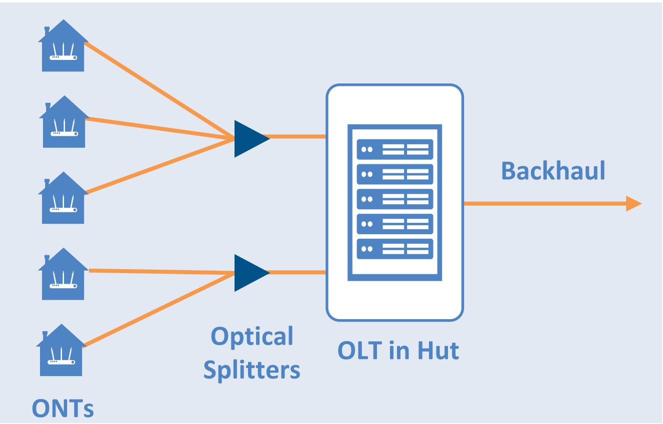
Focus Areas		
1	**Satellite to User Terminal Link (spot beams)**	Ask the subgrantee to provide the expected capacity per spot beam (up/down) with supporting RF design detail including spectrum use.
2	**Satellite Platform**	Ask the subgrantee to provide the maximum throughput per satellite. Understand any implications arising from different satellite versions.
3	**Satellite to Ground Station Link**	Ask the subgrantee to provide the expected link capacity (up/down) with RF design detail as above.
4	**Ground Station**	Ask the subgrantee to provide the maximum throughput per station.
5	**Backhaul**	Review backhaul technology and speed. Identify whether the backhaul is self-provided.

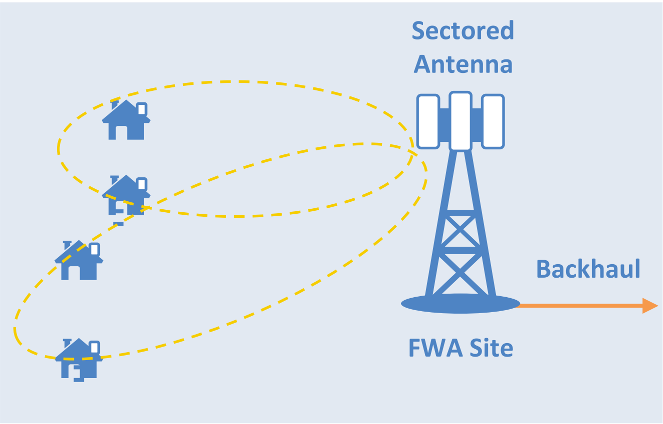
LEO Satellite networks have more potential pinch points than terrestrial alternatives. Capacity is most likely to be constrained in the spot beams as these cover a wide area and will also carry traffic from non-BEAD users.

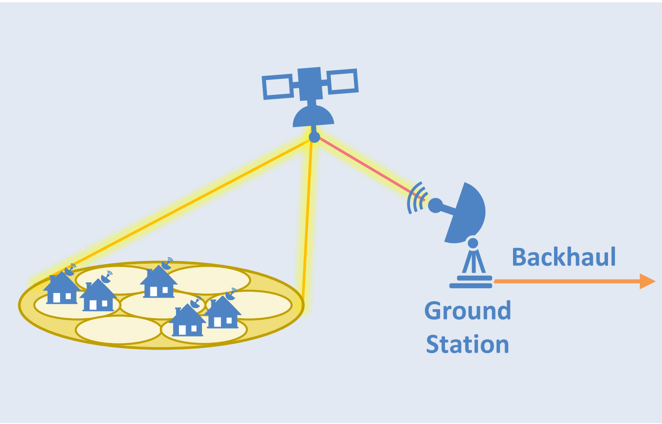
Source: Cartesian

1 Network Capacity | Typical Figures

The capacity of each BEAD project will vary, but can be expected to fall within a typical range for the technology







	Fiber Access	Fixed Wireless Access	LEO Satellite
Last Mile	• PON capacity: 10 Gbps • BSLs per PON: 32 – 128 • **Capacity per BSL: 80 – 300 Mbps**	• Sector capacity: 200 – 500 Mbps • BSLs per sector: 25 – 50 • **Capacity per BSL: 4 – 20 Mbps** • *Performance reduced in adverse weather* • *Unlicensed more susceptible to interference*	• Spot beam capacity: 800 Mbps – 1 Gbps • BSLs per spot beam: 200 – 300[1] • **Capacity per BSL: 3 – 5 Mbps** • *Performance reduced in adverse weather*
Access Equipment	• OLT throughput: 10 Gbps per PON • BSLs per OLT: 100 – 2000 • **Capacity per BSL: 80 – 300 Mbps**	• Base station throughput: 1 – 2 Gbps • BSLs per base station: 100 – 200 • **Capacity per BSL: 4 – 20 Mbps**	• Satellite throughput: 24 – 96 Gbps • BSLs per Satellite: 3000 – 4000 • **Capacity per BSL: 5 – 10 Mbps**
Backhaul[2]	• Fiber backhaul: 10 – 400 Gbps • BSLs per backhaul link: 100 – 8000 • **Capacity per BSL: 25 – 100 Mbps**	• Fiber or microwave: 1 – 10 Gbps • BSLs per backhaul link: 100 – 200 • **Capacity per BSL: 5 – 100 Mbps**	• Fiber backhaul: 10 – 400 Gbps • BSLs per backhaul link: 10,000 – 20,000 • **Capacity per BSL: 5 – 40 Mbps**

Notes: (1) LEO spot beams cover thousands of BSLs; the range provided reflects current understanding of Starlink's internal planning rules. (2) Backhaul links often have lower capacity than other network components (esp. when capacity is leased) but are typically easy to upgrade.
Source: Cartesian, vendor and operator websites

Cartesian

2 Demand Forecast | Overview

A robust demand forecast will consider how customer adoption and usage will evolve – both for BEAD eligible locations, and any other users sharing capacity in a service group

BEAD Eligible

- **Residential BSLs**
- **Business BSLs**
- **Community Anchor Institutions (CAIs)**

Non-BEAD Usage

- **Residential Broadband**
- **Business Broadband**
- **Other Business Connectivity**
- **Transport (cars, boats, planes)**
- **M2M / IoT**

Information to Collect:

Total locations within service group
All potential customers, split by location type

Expected number of customers within service group by year
Split by location type

Expected busy hour demand per customer by year (Tavg)
Busy hour demand as the increased expected consumer demand value at average peak hours

Source: Cartesian

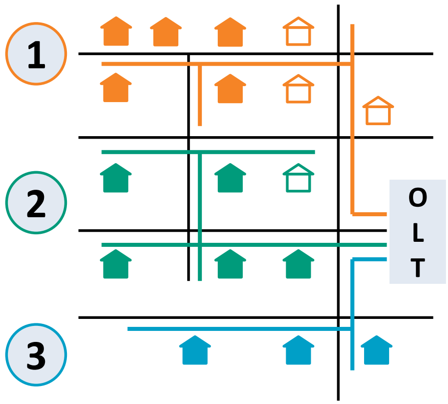
2 Demand Forecast | Service Group

The demand forecast needs to consider all network usage within the service group, not just the demand from BEAD eligible locations

Fiber Access

Each **PON** is a separate service group

Three service groups shown. A single OLT may support 16 PONs and OLTs can be stacked if more PONs are needed.



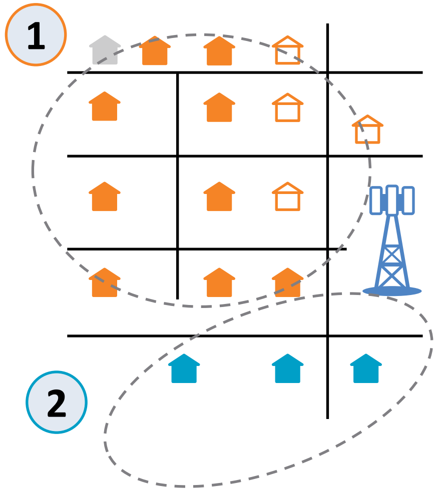
BEAD Eligible BSL **Other BSL**

- Fiber access networks consist of multiple Passive Optical Networks (PONs) served by an Optical Line Terminal (OLT)
- Each PON is a unique service group with its own dedicated capacity (e.g. 10 Gbps) available to customers on that PON
- There is no interference between PONs; each PON can utilize the full capacity available
- Large capacity provides plenty of headroom for any heavy users within a specific service group

Fixed Wireless Access

Each **sector** is a separate service group

Two service groups shown. Modern FWA kit supports up four sectors per tower.

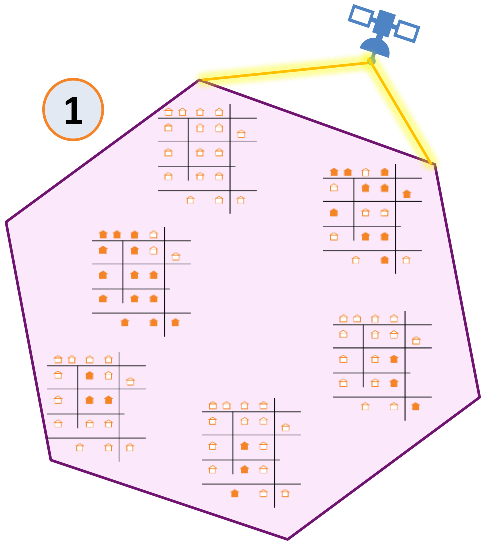


- Fixed Wireless Access uses wireless connections from a local FWA site to customers
- Depending on technology and design, there may be one or more sectors; each sector is a service group with its own capacity (e.g. 500 Mbps down)
- Upstream capacity is typically more limited
- Interference is possible between FWA sectors and may reduce capacity; FWA operators seek to mitigate these effects through radio planning

LEO Satellite

Each **spot beam** is a separate service group

Single service group shown, covering many communities over a large area.



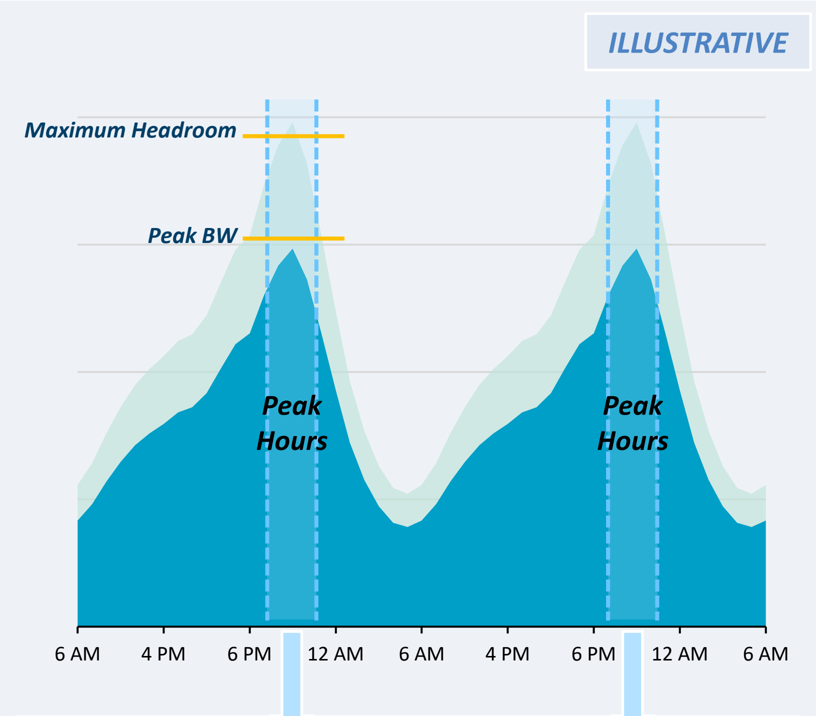
- LEO Satellites divide the ground area into large cells (~100 sq. miles) which are served by spot beams
- Each spot beam is a separate service group
- All customers within a spot beam area share the available capacity (e.g. 1 Gbps downstream)
- Upstream capacity is more limited
- Capacity must also be shared by mobile users as they pass through the beam area (e.g. aircraft)

Source: Cartesian

2 Demand Forecast | Data Collection

SBOs will need to gather demand data across all use cases within each service group to evaluate each bid

Collect Busy Hour Demand



Network must be dimensioned to accommodate total demand in peak hours (~7pm - 11pm)

Include All Services for All Years

Location Type		Total	By Year		
			Y1	…	Y10
Residential Locations	BSLs	-	-	-	-
	Tavg *(Mbps)*		-	-	-
Business Locations	BSLs	-	-	-	-
	Tavg *(Mbps)*		-	-	-
Community Anchor Institutions	BSLs	-	-	-	-
	Tavg *(Mbps)*		-	-	-
Non-BEAD Usage	*Subs*	-	-	-	-
	Tavg *(Mbps)*		-	-	-

Information to Collect

1. **Total locations within service group**
   All potential customers, split by location type
2. **Expected number of customers within service group for each year**
   Expected customers factors in assumptions re uptake for BEAD and other customer groups
3. **Expected busy hour demand per customer for each year (Tavg)**
   Average busy hour demand in the peak hours for each customer group, scaled over time to account for new applications and use cases

Once customers and average busy hour demand per customer information has been collected, total demand can be calculated

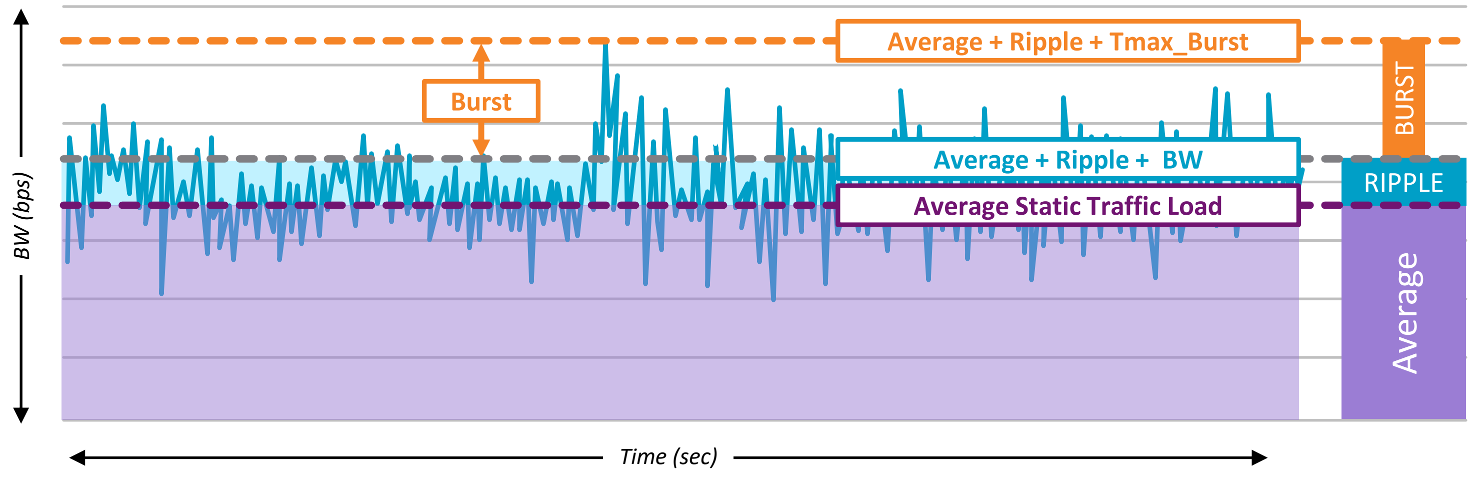
Source: Cartesian

2 Demand Forecast | Calculating Total Demand

The required capacity needs to factor in short-term variation in demand and the ability to burst to 100/20 Mbps

Broadband Traffic Engineering Model

Bandwidth vs. Time



Source: J. Ulm, Z. Maricevic, R. Ranganathan, "Broadband Capacity Growth Models" in 2022 Fall Technical Forum (SCTE, Cable Labs, NCTA).

Burst accounts for spikes in traffic, caused by individual users hitting the maximum throughput of the highest service tier (e.g. 100 Mbps)

Ripple accounts for natural fluctuations in bandwidth usage, caused by variations in user activity (20% of maximum throughput)

Illustrative Example

Users in Service Group	40
Tavg[1] (Mbps)	5
Average Load (Mbps)	200
Ripple Factor	20%
Ripple Traffic (Mbps)	20
DS Speed Tier (Mbps)	100

Total Demand for Network Dimensioning (Mbps)	320
Capacity Required per User (Mbps)	8

1. Tavg is the average traffic demand per subscriber at peak hours. 5 Mbps used as a placeholder value for illustrative calculation – SBOs will need to determine expected Tavg for each year, allowing for growth in usage.
Source: SCTE, Cartesian

3 Capacity Assessment | Overview

To assess whether a network is easily scalable, start by assessing whether the day 1 capacity (when the BEAD service goes live) will be sufficient to meet future needs and if not, how large the gap will be

Calculating Remaining Network Capacity

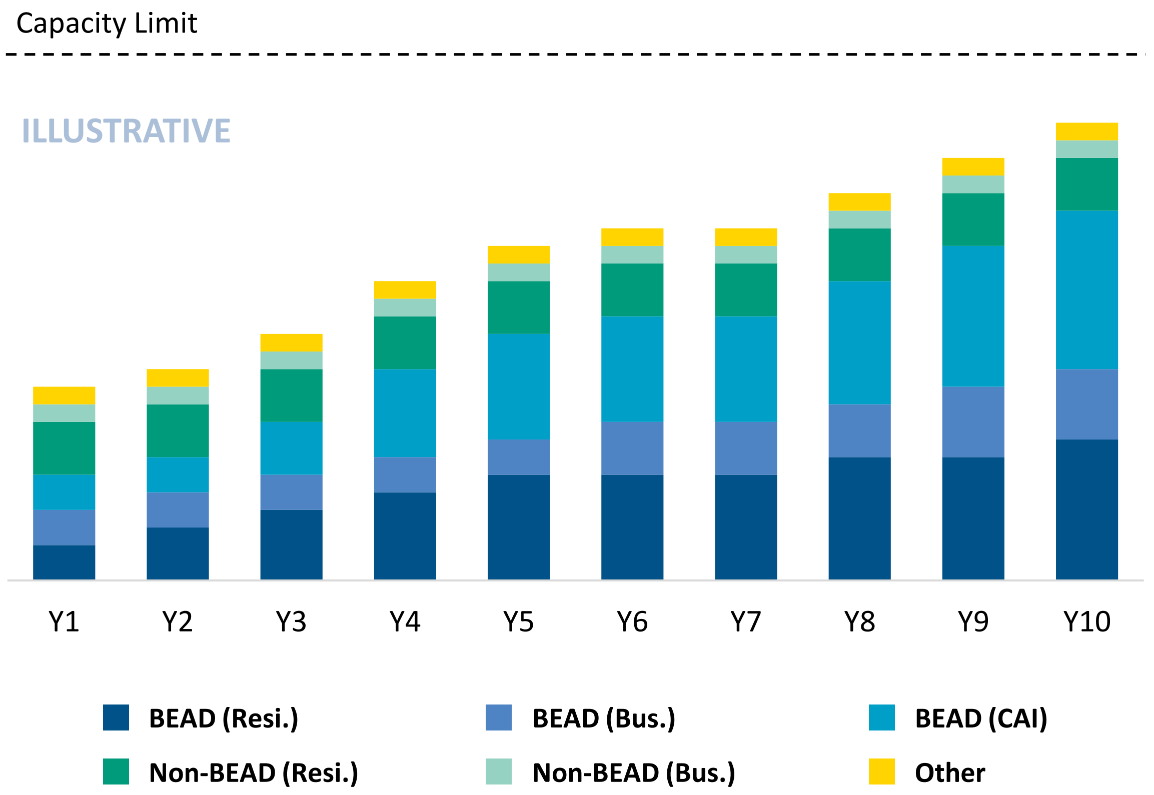
Day 1 Capacity (Mbps) *Total capacity when the network goes live for BEAD*	Assess **initial capacity** of critical network segments at day 1 (when BEAD goes live).
−	
Day 1 Demand (Mbps) *Network demand from any other customers (pre-BEAD)*	Identify any **existing customer demand** on the network at day 1. For example, satellite networks may already be sharing local capacity with users in nearby towns.
−	
Forecast Growth in Demand (Mbps) *Future customer demand (both BEAD and non-BEAD)*	Forecast **future demand for both BEAD and non-BEAD** use cases. Ensure all users sharing the capacity of the segment are accounted for.
=	
Capacity Remaining (or Shortfall) (Mbps) *The difference between initial capacity and predicted demand*	Estimate the capacity remaining or potential capacity shortfall by subtracting predicted demand from existing capacity. Identify **network segments causing capacity shortfalls**.

Source: Cartesian

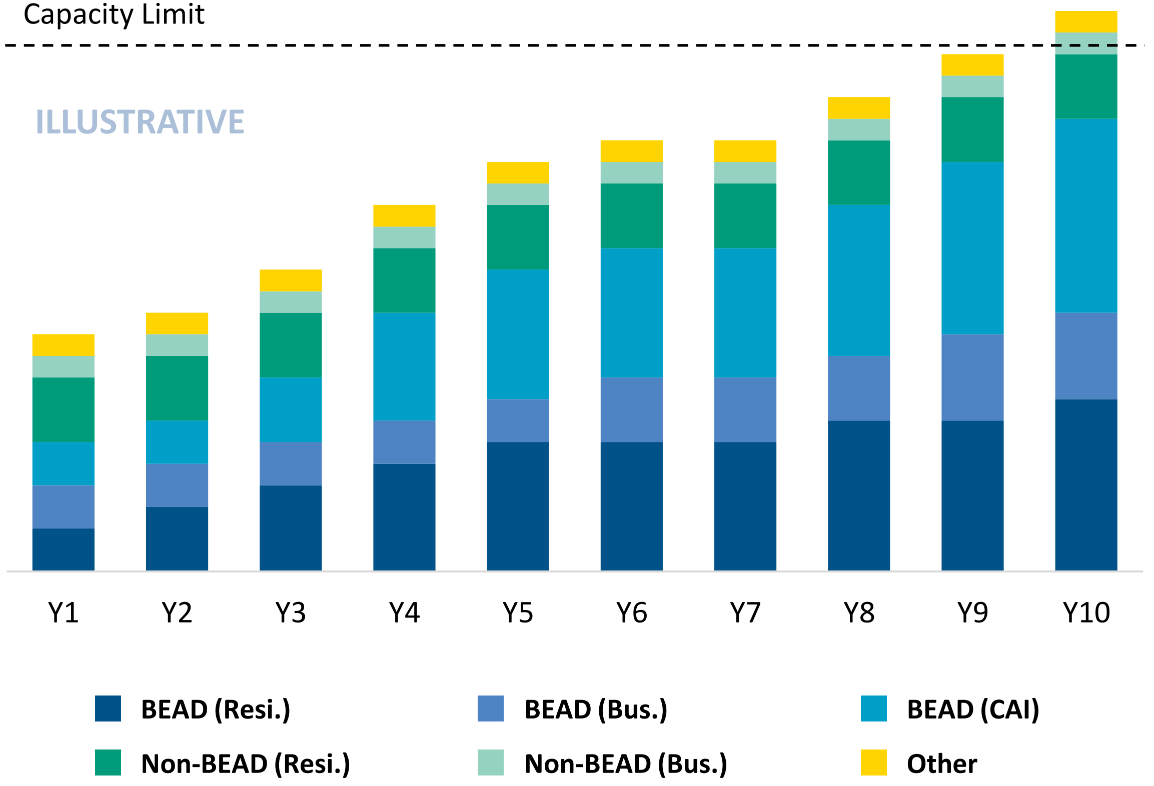
3 Capacity Assessment | Overview

The capacity assessment will reveal how much headroom the network has to support the growth in demand, or if it will run out of capacity during the contract period

Capacity Limit Not Reached



Capacity Limit Reached



Source: Cartesian

4 Upgrade Strategy | Overview

Potential subgrantees should be prepared to explain and justify how their networks will easily scale, particularly if the initial "day one" capacity appears insufficient to meet demand throughout the contract period

High-Level Objective:

Ensure the network can *"easily scale"*

The NTIA notice does not define what **"easily"** looks like, but it is reasonable to assume:

1. No major technical challenges
2. Operationally straightforward
3. Reasonable costs
4. Manageable timescales

Areas of Investigation

- **Network Architecture**
- **Subscriber Provisioning**
- **Network Resilience**
- **Performance Verification**
- **Interference Strategies**
- **Backhaul Details**

States Plan of Action

A. Use Standardized Information Requests
Provide a detailed template to collect consistent technical and operational data from all applicants

B. Assess Costs on a Per-Subscriber Basis
Normalize costs per subscriber, e.g. for PON allocate cost of new optics ($100s) to service group; likewise, for FWA allocate cost of new tower ($10,000s) if that is required.

C. Require Expert Technical Review
Have a professional engineer assess submissions to catch any errors or omissions

Source: Cartesian

4 Upgrade Strategy | Fiber Access

The key information for validating the scalability of a fiber access network is the network architecture, technology choice, and planning rules for subscriber provisioning

Areas of Investigation		Importance
Fiber Architecture	*What type of fiber technology is used (e.g. GPON, XGS-PON, P2P), and how does it impact capacity and scalability*	Technology choice and architecture directly affects scalability, upgrade paths, and service consistency
Subscriber Provisioning	*How many premises are provisioned per splitter or OLT port, and how do you ensure consistent performance under load?*	Oversubscription at the node or splitter level can affect performance; understanding provisioning helps assess if users will consistently receive required speeds
Optical Line Terminal	*What is the maximum throughput of your OLTs? How many PONs and BSLs does each one support?*	Verifies that the OLT will not be a capacity pinch-point
Optical Performance	*What optical performance metrics (e.g. optical power levels, signal attenuation, split ratios) demonstrate reliable service at all locations?*	Provides technical evidence that users will receive consistent, high-quality service at each location
Backhaul Details	*How is backhaul configured, and how do you ensure it doesn't limit network performance?*	Confirms whether the broader network can support delivered speeds without introducing bottlenecks

Source: Cartesian

4 Upgrade Strategy | Fixed Wireless Access

The key information for validating the scalability of an FWA network is the spectrum usage, network design, performance of the radio platform, and planning rules for subscriber provisioning

Areas of Investigation		Importance
Spectrum Allocation and Licensing	*What spectrum bands do you use, and how are they allocated to ensure sufficient coverage and performance?*	Indicates whether the operator has access to enough high-quality spectrum to support reliable, scalable broadband service
Subscriber Provisioning	*How many users are provisioned per base station or beam, and how do you ensure speeds meet BEAD thresholds?*	Validates whether the operator has accounted for future increases in demand on the network
Base Station	*What are the locations, equipment specs, and power levels of your base stations?*	Helps verify that equipment placement and specs align with claimed coverage and capacity
RF Interference	*What specific technologies or operational strategies does your network use to mitigate interference?*	Interference from adjacent sectors or external sources will reduce performance and speeds customers receive
Environmental Factors	*What degradation can be expected due to adverse weather conditions? What technologies or methods are used to mitigate signal degradation from weather conditions?*	Mitigating interference and weather impacts ensures consistent service availability
Performance Verification	*What signal data (e.g. RSSI, SNR) supports claims of reliable service at each proposed location?*	Provides technical evidence that users will receive consistent, high-quality service at each location

Source: Cartesian

Cartesian®

4 Upgrade Strategy | LEO Satellite

LEO Satellite platforms are complex to assess; we recommend focusing on data that validates the capacity of the spot beams and how the available capacity is shared between all served users

Areas of Investigation		Importance
Spectrum Allocation and Licensing	*What frequency bands are used, and how are licenses secured to ensure interference-free operation?*	Proper spectrum allocation and licensing are essential to avoid interference with other services and ensure regulatory compliance, which affects service reliability
Subscriber Provisioning	*What are the planning rules for number of customers per spot beam, and what throughput can each user expect?*	Understanding capacity allocation ensures that users receive sufficient bandwidth and prevents congestion that would degrade user experience
Satellite Platform	*What is the maximum throughput of each satellite? How many spot beams, customers, and links to ground stations does each satellite support?*	A well-designed constellation is critical for seamless coverage and low latency, which directly impact service quality and usability
RF Interference	*What specific technologies or operational strategies does your network use to mitigate interference?*	Interference from adjacent sectors or external sources will reduce performance and speeds customers receive
Environmental Factors	*What degradation can be expected due to adverse weather conditions? What technologies or methods are used to mitigate signal degradation from weather or atmospheric conditions?*	Mitigating interference and weather impacts ensures consistent service availability, especially given satellite signals' vulnerability to atmospheric disruptions.
Backhaul Details	*Where are ground stations located, and how is the backhaul connected to the internet core?*	Ground station placement and robust backhaul are necessary to handle traffic efficiently and prevent bottlenecks that slow down the network

Source: Cartesian

Appendix – Information Requests

Information Requests | Fiber

SBOs should collect the following information from prospective subgrantees to assess the capacity and demand for each PON, and then aggregate this by OLT to validate the backhaul is sufficient

Information Request		
Determine Network Capacity	• Backhaul capacity • OLT specifications (e.g. throughput) • Total OLTs deployed • Current PON technology deployed	• PON split architecture and ratios
Validate Network Design	• PON architecture (diagrams/maps of the network) • OLT vendor and model • Fiber specifications • Predicted receive power levels	• Backhaul technology
Forecast Demand	• Forecasts for residential, business, and CAI customers (BEAD and non-BEAD) • Maximum take-up rate (if not 100%)	
Understand Upgrade Strategy	• Available upgrade paths (e.g. to 25G or 50G PON) • Planned timeline for capacity upgrades • Investment and network expansion road-map	

Source: Cartesian

Information Requests | Fixed Wireless Access

SBOs should collect the following information from prospective subgrantees to assess the capacity and demand for each FWA sector, and then aggregate this by base station to validate the backhaul is sufficient

	Information Request	
Determine Network Capacity	• Spectrum type (licensed, unlicensed, by rule) • Spectrum bands in use • Spectral efficiency • Frequency reuse factor	• Number of sectors • Expected (real world) link rate • Backhaul capacity
Validate Network Design	• Base station and CPE vendor and model • Equipment specs (e.g. radio, throughput) • Network diagrams/maps (sector serving areas) • Number of sectors	• Frequency reuse pattern • Transmitter power and antenna gain • Predicted SNR and RSSI levels • Backhaul technology (e.g. 40 GbE fiber)
Forecast Demand	• Forecasts for residential, business, and CAI customers (BEAD and non-BEAD) • Maximum take-up rate (if not 100%)	
Understand Upgrade Strategy	• Planned timeline for capacity upgrades • Investment and network expansion road-map	

Source: Cartesian

Information Requests | LEO Satellite

SBOs should collect the following information from prospective subgrantees to assess the available capacity for LEO satellite networks

	Information Request	
Determine Network Capacity	• Spectrum bands in use • Spectral efficiency • Frequency reuse factor	• Satellite throughput • Fleet expansion plans • Backhaul capacity
Validate Network Design	• Network diagrams/maps (spot beam footprint) • Equipment specs (e.g. radio, throughput) • Expected (real world) link rate • Backhaul technology (e.g. 40 GbE fiber)	• Frequency reuse pattern • Transmitter power and antenna gain • Predicted SNR and RSSI levels • Fade margin
Forecast Demand	• Forecasts for residential, business, and CAI customers (BEAD and non-BEAD) • Maximum take-up rate (if not 100%) • Capacity allocation for other use cases	
Understand Upgrade Strategy	• Planned timeline for capacity upgrades • Investment and fleet expansion road-map	

Source: Cartesian

Information Requests | Case Study

The Georgia Broadband Team has published technical evidence templates and accompanying instructions for potential subgrantees to use in support of their bids

Technical Evidence Templates

Separate technical evidence templates and instructions for each technology type:

- Unlicensed Fixed Wireless Template
- Licensed Fixed Wireless Template
- Low Earth Orbit Template
- Hybrid-Fiber Coaxial Template
- Fiber-to-the-Premises Template

Example Requested Information

- Logical Network Diagram
- Network Design and Configuration
- Design of Headend and Internet Backbone (Fiber and HFC)
- Tower Site and Sector Information (FWA)
- Gateway and Uplink Information (LEO)
- Radio Link Characteristics (FWA and LEO)
- Customer Premises Equipment Details
- Details of Reliability and QoS
- Performance Calculations
- Demonstration of Scalability

gta GEORGIA TECHNOLOGY AUTHORITY

https://broadband.georgia.gov/bead-application-templates

Source: Georgia Technology Authority

Michael Dargue
Vice President, Strategy & Analytics
michael.dargue@cartesian.com

Rishi Modha
Vice President, Strategy & Analytics
rishi.modha@cartesian.com

Megan Corriveau
Manager, Strategy & Analytics
megan.corriveau@cartesian.com

BOSTON

KANSAS CITY

LONDON

NEW YORK

PARIS

Cartesian®