# Closing the Digital Divide in Illinois

BEAD Deep-Dive Webinar: Federal Administrative requirements (Subgrantee obligations, BABA)

September 18, 2024

# BEAD Deep Dive Webinar Series:

# Context and Goals

## Context:

To align with NTIA requirements, BEAD-funded Connect Illinois Round 4 **differs from Connect Illinois Rounds 1-3**

The Illinois Office of Broadband aims to **help all interested applicants get familiar** with these requirements ahead of the subgrantee process

## Goals:

Breaking down the BEAD process

- Walk through key elements and requirements of the Connect Illinois Round 4 subgrantee process

- Clarify specific components of the BEAD program requirements ahead of the subgrantee process

- Provide regular updates on Connect Illinois Round 4

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# Topics for Discussion Today

**1**

**Recap of BEAD and progress to date**

**2**

**Overview of NTIA requirements**
(Subgrantee obligations, BABA)

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# 1

# Recap of BEAD and progress to date

# BEAD is a $42B federal grant program that aims to bring high-speed internet to all Americans

## $42.45 billion
Funds provided for BEAD

**The Broadband Equity, Access, and Deployment (BEAD) Program is a federal grant program that aims to get all Americans online** by funding partnerships between states or territories, communities, and stakeholders to build infrastructure where high-speed internet is currently unavailable

## Program highlights

### Eligible entities

- All 50 States, District of Columbia, and Puerto Rico
- Other Territories: U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands

### Example eligible uses of funds

- Planning for the deployment of high-speed Internet, including conducting research, collecting data, outreach, and training
- Deploying or upgrading Internet in un/underserved areas
- Improving service to community anchor organizations
- Installing Internet and Wi-Fi in multi-unit residential buildings
- Workforce development, including Registered Apprenticeships and pre-apprenticeships, community college and/or vocational training for broadband-related occupations to support deployment, maintenance, and upgrades

# What are the goals of BEAD?

**The BEAD Program awarded Illinois $1.04 billion** to connect all unserved and underserved locations to broadband over the next 5 years

**Ensure universal coverage across all un/underserved locations in the state**, maximizing deployment of end-to-end fiber, and only using non-fiber where fiber costs are extremely high[1]

**Prioritize projects providing broadband access to unserved and underserved locations** and community anchor institutions, Wi-Fi equipment for Multi-Dwelling Units (MDUs) then other digital equity and inclusion priorities[2]

**Run subgrantee selection process within one year** of approval of the Initial Proposal, and complete implementation within four years of receipt of funds[3]

**Focus on improving broadband affordability** through a low-cost broadband service option, and a middle-class affordability plan[4]

1. Page 14 of BEAD NOFO, on the definition of Priority Broadband Project
2. Page 33 of BEAD NOFO, on the allocation of grant funds
3. Page 65 of BEAD NOFO, on deployment deadlines and benchmarks
4. Page 42-46 of BEAD NOFO, on inclusion of affordability in the BEAD scoring criteria
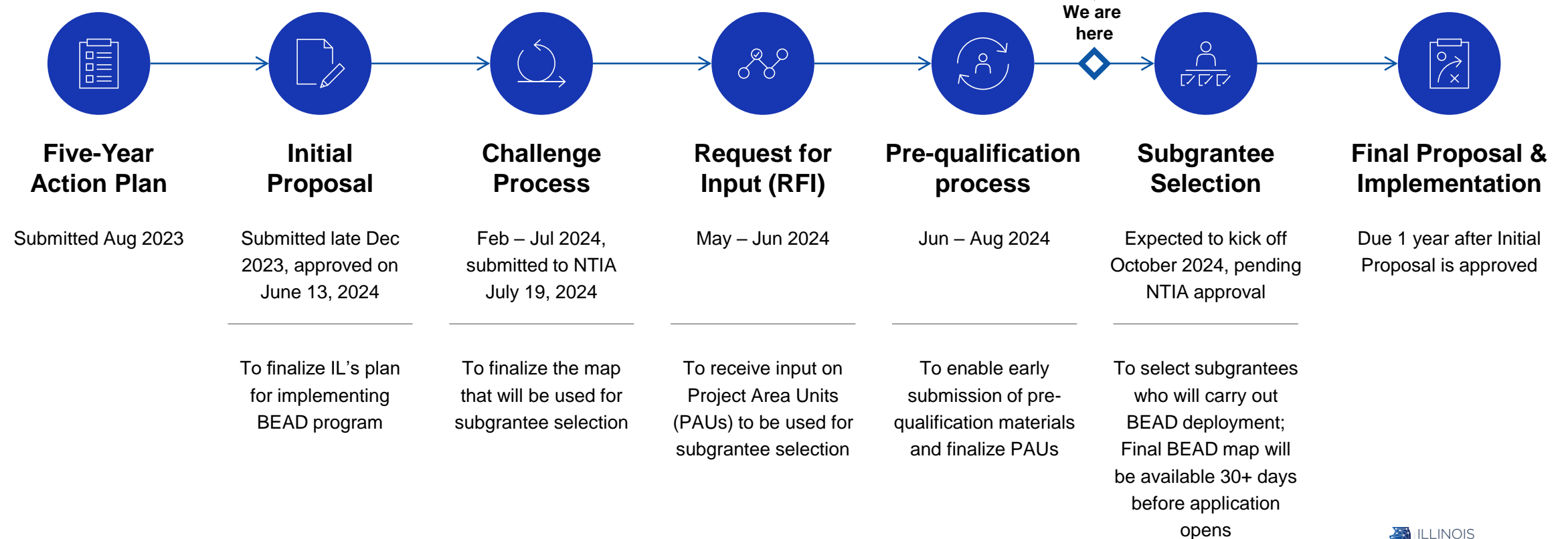
Source: BEAD NOFO

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# Overview of the BEAD-funded Connect Illinois Round 4 timeline

**PRELIMINARY TIMELINE - SUBJECT TO CHANGE**   **INFORMATION PROVIDED ON AN INFORMATIONAL BASIS AND DOES NOT SUPERCEDE ORIGINAL DOCUMENTS**

**Key Updates**
- BEAD NOFO approved by DCEO committee
- BEAD Map / selector tool in design phase
- Challenge results submitted; Illinois in curing process with NTIA
- All 40+ entities received IOB feedback on their Pre-qualification submissions, with additional feedback to be sent this week

**We are here**

| Five-Year Action Plan | Initial Proposal | Challenge Process | Request for Input (RFI) | Pre-qualification process | Subgrantee Selection | Final Proposal & Implementation |
|---|---|---|---|---|---|---|
| Submitted Aug 2023 | Submitted late Dec 2023, approved on June 13, 2024 | Feb – Jul 2024, submitted to NTIA July 19, 2024 | May – Jun 2024 | Jun – Aug 2024 | Expected to kick off October 2024, pending NTIA approval | Due 1 year after Initial Proposal is approved |
| | To finalize IL's plan for implementing BEAD program | To finalize the map that will be used for subgrantee selection | To receive input on Project Area Units (PAUs) to be used for subgrantee selection | To enable early submission of pre-qualification materials and finalize PAUs | To select subgrantees who will carry out BEAD deployment; Final BEAD map will be available 30+ days before application opens | |

Source: NTIA Initial Proposal Webinar materials; Connect Illinois Initial Proposal Volume II

# INTERNET FOR ALL

FUNDED BY THE BIPARTISAN INFRASTRUCTURE LAW

ADMINISTERED BY THE DEPARTMENT OF COMMERCE'S NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION

Subgrantee Obligations

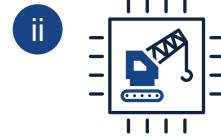# Subgrantee obligations | Subgrantees must meet three programmatic requirements

## i. Network capabilities

**Speed:** ≥100/20 Mbps or 1/1 Gbps for CAIs

**Latency:** 95% of measurements below 100 ms round-trip time

**Outages:** <48 hrs over any 365-day period except in the case of natural disasters or force majeure

## ii. Deployment requirements

**Deadlines:** Deploy and begin service not later than four years after subgrant received (with possible one year extension)

**Milestones:** Meet milestones established by Eligible Entities

**Conduit access points:** Include interspersed conduit access points at regular and short intervals for interconnection

## iii. Service obligations

**Low-cost plan:** Offer a low-cost option for all eligible subscribers

**Consumer protections:** Do not impose data usage caps

**Access to service:** Reasonable and non-discriminatory terms and conditions

**Public notice:** Conduct awareness campaigns to increase adoption

**Interconnection and wholesale access:** Permit interconnection for MM infrastructure receiving funding

**Cybersecurity and supply chain:** Adhere to baseline requirements

# Subgrantee obligations | Network Capabilities

## Network capabilities

**Speed:** ≥100/20 Mbps or 1/1 Gbps for CAIs

**Latency:** 95% of measurements below 100 ms round-trip time

**Outages:** <48 hrs over any 365-day period except in the case of natural disasters or force majeure

**Speed and Latency Requirement:**

The BEAD NOFO requires Funded Networks to deliver speeds of not less than 100 Mbps for downloads and 20 Mbps for uploads for broadband serviceable locations; speeds of not less than 1 Gigabit symmetrical for CAIs; and 95 percent of latency measurements during testing windows to fall at or below 100 milliseconds round trip time. These standards are critical for supporting modern applications and services that require high-speed and low-latency connections.

# Subgrantee obligations | Network Capabilities

## Network capabilities

**Speed:** ≥100/20 Mbps or 1/1 Gbps for CAIs

**Latency:** 95% of measurements below 100 ms round-trip time

**Outages:** <48 hrs over any 365-day period except in the case of natural disasters or force majeure

**Network Outages Requirement:**

Subgrantees must have protocols in place to ensure each Funded Network's outages do not exceed, on average, 48 hours over any 365-day period except in the case of natural disasters or other force majeure occurrence.

**Best Practices:**

**1. Preventive Maintenance:** A Subgrantee schedules regular maintenance during off-peak hours to check and replace aging components, aiming to prevent unplanned outages. They use predictive analytics to identify parts of the network that are at risk of failing and address them proactively.

**2. Rapid Response Protocol:** The ability to quickly recover from service disruptions is important for maintaining broadband service reliability. In the event of an outage, a Subgrantee activates an emergency response team that is trained to quickly diagnose and fix network issues. They also have a customer service protocol to inform affected users via SMS and social media, providing updates every 30 minutes until the issue is resolved

# Subgrantee obligations | Deployment Requirements
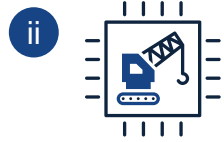
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**Deployment Deadlines and Benchmarks:**

Subgrantees must deploy Funded Networks and start service to each customer that desires it no later than four years after receiving the subgrant, meeting interim buildout milestones established by the Eligible Entity to ensure progress. Eligible Entities must set clear interim milestones and enforce them as conditions of the subgrant.

**Best Practices:**

**1. Fiber Deployment:** Establish clear benchmarks that are easily measurable, such as miles of fiber deployed per unit of time. Project timelines should factor in time-consuming gating items such as local permitting, and underground utility locating.

**2. Fixed Wireless Rollout:** For a fixed wireless network covering remote areas, a Subgrantee might have a set deadline with annual milestones defined by the respective Eligible Entity to activate new towers periodically

# Subgrantee obligations | Deployment Requirements
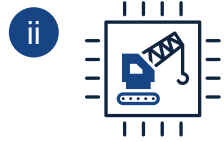
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**Conduit Access Point Requirement:**

Underground network deployments must include excess conduit capacity and regular conduit access points for interconnection by others.

**Best Practices:**

**1. Citywide Broadband Expansion:** In deploying broadband across a large city, a Subgrantee integrates conduit access points every 300 meters to facilitate easy access for municipal services and future Subgrantees.

**2. Highway Fiber Installation:** Installing fiber along a state highway, the Subgrantee sets up conduit access points at regular intervals and at locations where there is high probability to provide future service, such as at rest areas to allow for potential public Wi-Fi services and state traffic management connectivity.

# Subgrantee obligations | Service Obligations

## Service obligations

**Low-cost plan:** Offer a low-cost option for all eligible subscribers

**Consumer protections:** Do not impose data usage caps

**Access to service:** Reasonable and non-discriminatory terms and conditions

**Public notice:** Conduct awareness campaigns to increase adoption

**Interconnection and wholesale access:** Permit interconnection for MM infrastructure receiving funding

**Cybersecurity and supply chain:** Adhere to baseline requirements

**Consumer Protection Requirement:**

Prospective subgrantees are prohibited from imposing data usage caps on any BEAD-funded networks or imposing unjust or unreasonable network management practices.

**Access to Service Requirement:**

Subgrantees are required to provide consumers of BEAD-funded networks with reasonable and non-discriminatory terms and conditions.

**Best Practices:**

1. **Transparent Billing**

2. **Customer Service Protocols**

3. **Accessibility Features**

4. **Multilingual Support**

5. **Standard Installation**

## **Service obligations**

**Low-cost plan:** Offer a low-cost option for all eligible subscribers

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**Public notice:** Conduct awareness campaigns to increase adoption

**Interconnection and wholesale access:** Permit interconnection for MM infrastructure receiving funding

**Cybersecurity and supply chain:** Adhere to baseline requirements

**Public Notice Requirement:**

Subgrantees are required to conduct public awareness campaigns aimed at increasing broadband adoption. Campaigns must include details on the low-cost service option, federal subsidies for low-income households, and be conducted in an equitable and non-discriminatory manner.

Each Eligible Entity shall require prospective subgrantees to explain in its application how it intends to notify relevant populations of the new or newly upgraded offerings available in each area. Such proposals shall be designed in a manner that reflects any unique needs of the specific demographics of the area at issue.

**Best Practices:**

**1. New Service Launch:** When launching a new fiber service in a neighborhood, the Subgrantee conducts a direct mail campaign and hosts a community Q&A session to inform residents about the service features, costs, and installation process.

**2. Promotional Campaigns:** Seasonal promotions are advertised through local radio stations and social media, targeting specific demographics with tailored messaging about the benefits of upgrading or switching to the Subgrantee's services**.**

## **Service obligations**

**Low-cost plan:** Offer a low-cost option for all eligible subscribers

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**Interconnection Requirements and Wholesale Access**

Subgrantees must ensure that their Middle Mile Infrastructure networks funded by BEAD are designed to allow interconnection with other service providers at just, reasonable, and non-discriminatory rates.

**Best Practices:**

**1. Urban Network Expansion:** A city-funded broadband service sets up multiple interconnection points at major network hubs across the city. It offers standardized rates and technical support for new Subgrantees looking to connect their services.

**2. Rural ISP Collaboration:** A rural broadband provider funded by BEAD establishes a reciprocal interconnection agreement with a national carrier. This agreement includes defined technical parameters and support services to facilitate seamless data exchange and enhance service reliability for rural users.

# Subgrantee obligations | Service Obligations



## Service obligations

**Low-cost plan:** Offer a low-cost option for all eligible subscribers

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**Cybersecurity and Supply Chain Risk Management Requirement:**

Prospective subgrantees must attest to having cybersecurity and supply chain risk management plans in place, or ready to be operationalized, that reflect the National Institute of Standards and Technology (NIST) cybersecurity and supply chain risk management framework.

**Best Practices:**

**1. Implementing Advanced Threat Detection Systems:** A Subgrantee deploys a comprehensive threat detection system that continuously monitors network traffic for signs of unauthorized access or anomalies. They conduct regular penetration testing to evaluate the effectiveness of existing security measures.

**2. Securing the Software Supply Chain:** A Subgrantee establishes a protocol for software acquisition that validates software integrity through cryptographic signatures and sources from vendors that comply with an internationally recognized cybersecurity framework.

**3. Training and Incident Response Drills:** A Subgrantee organizes recurring cybersecurity training for staff and conducts simulated cyber-attack drills to prepare the team for real incident response. This helps to reduce response times and improves the resilience of network operations.

What is BABA?

# What is Build America, Buy America (BABA)?

*The Build America, Buy America Act – enacted as part of the Bipartisan Infrastructure Law in November 2021 – **requires that all of the iron, steel, manufactured products, and construction materials** used in infrastructure projects (e.g., roads, bridges, high speed internet networks, etc.) funded by a Federal financial assistance program **are produced in the United States**. Exceptions can be made by the head of a Federal agency – but first the agency must post the proposed waiver online for 15 days to allow the public to review it and submit comments.*

# Why Build America, Buy America?

At the core of BABA lies a commitment to strengthening our nation from within. By prioritizing domestic production and procurement of infrastructure products and components, we're:

1. **Fueling Job Creation:** Strengthening industries at home translates into more job opportunities for our communities.
2. **Boosting Economic Resilience:** Reducing dependence on foreign supply chains enhances the U.S.' resilience in times of global disruption.
3. **Empowering Local Businesses:** Empowers local businesses to contribute to our nation's digital growth.

# On February 23rd, 2024, the Department of Commerce released the final version of the BABA waiver for the BEAD Program

**DEPARTMENT OF COMMERCE**

**Limited General Applicability Nonavailability Waiver of the Buy America Domestic Content Procurement Preference as Applied to Recipients of Broadband Equity, Access, and Deployment Program**

**ACTION:** Notice of Final Waiver

**SUMMARY:** Congress passed the Build America, Buy America Act (BABA) on November 15, 2021, as part of the Infrastructure Investment and Jobs Act (IIJA), Pub. L. 117-58, 135 Stat. 429, 70901-70927. BABA establishes domestic content procurement preference requirements for Federal financial assistance projects for infrastructure. The Buy America domestic content procurement preference (Buy America Preference) under BABA applies to all iron or steel products, manufactured products, and construction materials used for infrastructure projects under a program for Federal Financial assistance.[1] The Department of Commerce (DOC), in keeping with its mission to create the conditions for economic growth and opportunity for all communities, is ready to lead on this important mission to catalyze domestic manufacturing, resilient supply chains, and job growth. DOC will also help grow America's domestic production capacity while advancing BABA's requirements to strengthen the resiliency of domestic supply chains and support America's communities, workers, and firms.

**Build America, Buy America Act**
**Frequently Asked Questions (FAQ) Related to the Broadband Equity, Access, and Deployment (BEAD) Program**

**OVERVIEW**

The Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA), created the Broadband Equity, Access, and Deployment (BEAD) Program, which provides an unprecedented $42.45 billion of federal investment to expand high-speed internet access to all Americans by funding planning, infrastructure deployment, and adoption programs in all 50 states, Washington D.C., and five U.S. territories.

As part of the IIJA, Congress adopted the Build America, Buy America (BABA) Act, which established a domestic content procurement preference across all Federal financial assistance programs for infrastructure. During 2023's State of the Union address, President Biden reaffirmed the government's commitments to both BEAD and BABA, saying, "We're making sure that every community . . . has access to affordable, high-speed Internet. And when we do these projects . . . we're going to buy American."[1]

On February 23rd, 2024, the Dept of Commerce released the *final version* of the Buy America waiver for the BEAD program.

On the same day, the Department of Commerce also released a supplemental FAQ.

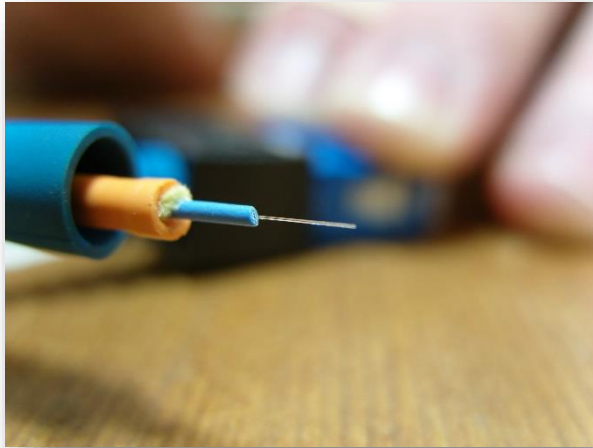How does BABA apply to the BEAD Program?

# Optical fiber & fiber optic cable requires domestic production

**Optical fiber**



**Fiber optic cable**



Optical fiber and fiber optic cable are both categorized as "construction materials," which require production in the U.S.

(3) **Glass**: All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.

(4) **Fiber optic cable (including drop cable):** All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.

(5) **Optical fiber:** All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.

NTIA waived the Buy America preference for non-optic-glass inputs (*e.g.*, an overclad cylinder) which are used as an input to the preform manufacturing process of optical fiber.

# Four Electronics require domestic production

**Optical Line Terminals**
(OLTs & rOLTs)

**OLT Line Cards**

**Optic Pluggables**
(installed in OLTs, subscriber-facing)

**Standalone Optical Network Terminals**
(ONTs & ONUs)

- NTIA provides **specific guidance regarding manufacturing processes** that must occur in the United States for these categories of electronics to be BABA compliant.
- NTIA **waives the 55 percent cost of components test**.

Source: NTIA

# Enclosures require domestic production

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## Cabinets

### Optical Hub Cabinet

### Fiber Distribution Frame

## Vaults and other Below Ground Housings

## Pedestals and other Above Ground Housings

## Closures and Terminals

### Closure

### Terminal

- NTIA defines and then provides **specific guidance regarding manufacturing processes** that must occur in the U.S. for these four categories of enclosures.
- NTIA upholds **the 55 percent cost of components test**.

Source: NTIA

# BABA Self Certification & Reporting Requirements

### B. Additional Requirements

#### 1. Buy America Self Certification

Manufacturers that have expressed a willingness to onshore manufacturing of key electronics are concerned that they will be undercut by companies falsely claiming BABA compliance. In order to address such concerns, DOC will publish and maintain on the NTIA website a list of manufacturers and that manufacturer's individual products that an officer of the company has certified, subject to fine or imprisonment under Title 18 of the United States Code, 18 U.S.C. 1001, are compliant with the Buy America Preference.[43]. DOC will publish additional self-certification information in separate guidance.

#### 2. Reporting Requirements

BEAD Program recipients are responsible for compliance with BABA reporting requirements under this waiver. In addition, consistent with the approach taken in the Middle Mile Grant Program BABA Waiver, BEAD Program recipients to whom the waiver applies must report on their purchases of items from foreign sources.[44] Recipients reporting foreign-sourced items will help with future DOC grant programs and awards that also use those items and support market research. DOC will use this information to better understand the market and availability of U.S. products in this supply chain to inform its implementation of the BEAD Program as well as its other broadband infrastructure deployment programs. DOC will publish additional BABA reporting and compliance requirements in separate guidance.
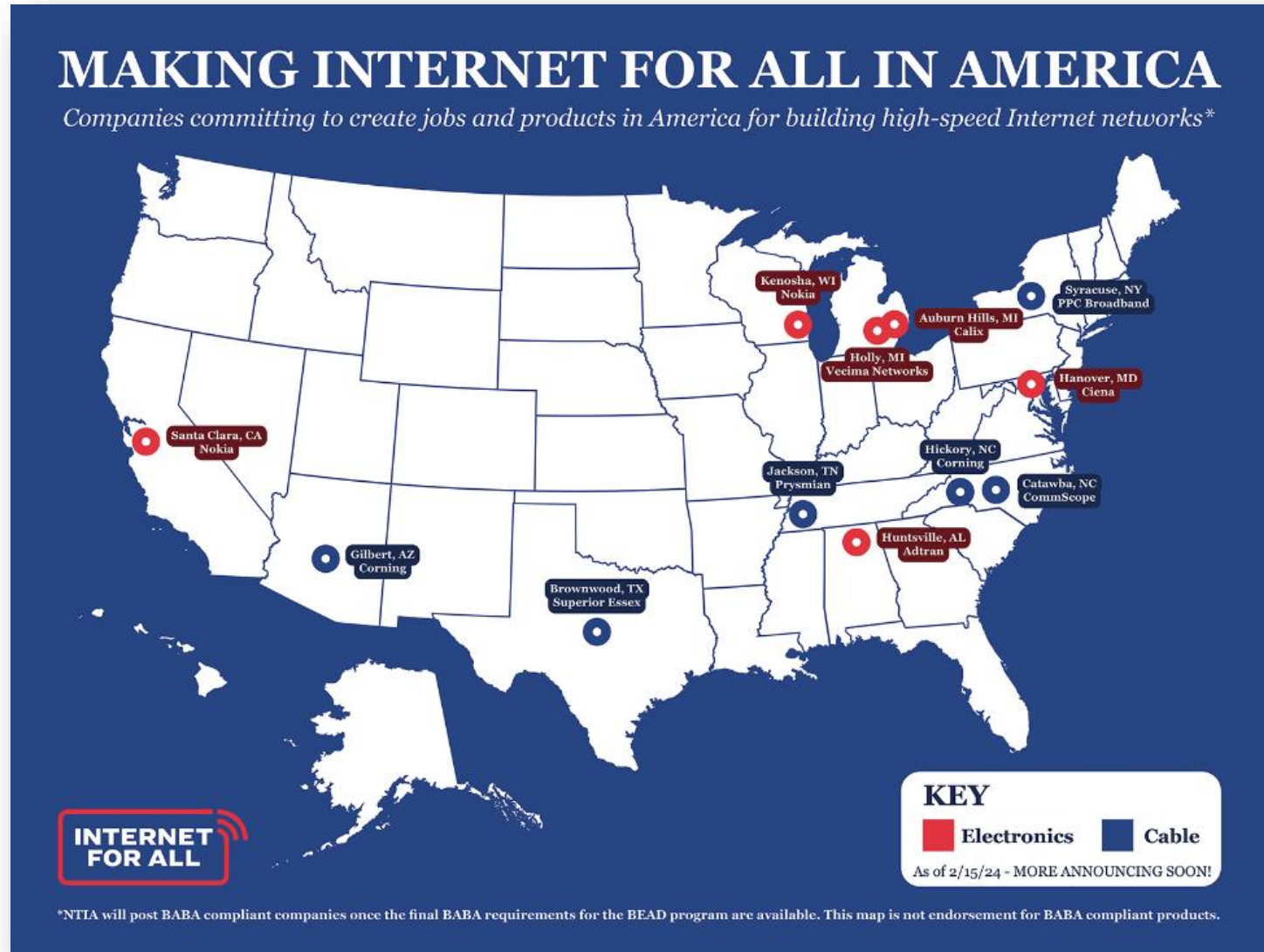
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# Stay informed!

**Next Webinar:**
September 25, 12-1PM (every Wednesday)

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