DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

Limited Applicability Nonavailability Waiver of the Buy America Domestic Content Procurement Preference as Applied to Recipients of Middle Mile Grant Program Awards

ACTION: Notice of Final Waiver

SUMMARY: Congress passed the Build America, Buy America Act ("BABA" or "Act"), which includes strong and permanent domestic sourcing requirements across all Federal financial assistance programs. The Act includes, among other things, Buy America Domestic Content Procurement Preference provisions ("Buy America Preference"), pursuant to which the iron, steel, manufactured products, and construction materials used in a Federal financial assistance project for infrastructure must be produced in the United States. 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 effort to catalyze domestic manufacturing, develop resilient supply chains, and promote American job growth. DOC will also help grow America's domestic production capacity while complying with BABA's requirements as much as possible—balancing equity, practicality, and implementation costs.

The National Telecommunications and Information Administration ("NTIA") has determined that certain manufactured products and construction materials are not produced in the United States in sufficient and reasonably available quantities and is issuing a limited applicability nonavailability waiver to recipients of Federal financial assistance under NTIA's Middle Mile Grant Program ("MMG Program"). The waiver (1) promotes broad participation in the MMG Program, (2) ensures that non-Federal entities and for-profit entities are able to compete for MMG Program funding on equal footing (especially in light of the very short application timeframe for the MMG Program), (3) ensures that MMG Program awardees will have access to the manufactured products and construction materials necessary to fulfill their obligations under the MMG Program, (4) allows funding recipients to continue to provide economic opportunity through innovation and timely deployment of broadband infrastructure, which is recognized to expand job opportunities, and (5) supports the timely development of critical domestic public infrastructure. Recipients to whom the waiver applies must report on their purchases of items from foreign sources.

NTIA emphasizes that this waiver is limited to the MMG Program and that the nature and scope of the waiver is a function of the facts and circumstances surrounding the MMG Program. It does not constitute, nor should it be construed as, precedent for or a baseline for any other grant program administered by NTIA.

DATES: The waiver will be effective for all MMG Program awards awarded from March 1, 2023, until March 1, 2024, on the date of issuance of each award. NTIA will review this waiver within six months of the date on which the first award is issued to assess whether it remains necessary to the fulfillment of DOC's missions and goals and consistent with applicable legal authorities, such as the Infrastructure Investment and Jobs Act, Executive Order 14005, *Ensuring the Future Is Made in All of America by All of America's Workers*, and the Office of Management and Budget ("OMB") Memorandum M-22-11, *Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure* ("OMB M-22-11").

PUBLIC COMMENTS:

On September 19, 2022, the DOC published its proposed limited applicability nonavailability waiver for the MMG Program for a 15-day public comment period on its Build America, Buy America website. NTIA also informed potentially interested stakeholders about the opportunity to comment on the proposed waiver. The public comment period closed at 11:59 p.m. Eastern Time (ET) on October 3, 2022. NTIA received eleven comments on the nonavailability waiver representing an international trade association, a bipartisan network of technology executives, a trade association representing the telecommunication industry, a membership association representing electric cooperatives, an industry association representing telecommunications equipment manufacturers, a nonprofit organization representing county governments, a membership association representing rural telecommunication companies and cooperatives, a trade organization representing application developers, a membership association representing major American manufacturers and labor, and two manufacturers of optical fiber and fiber optic cable. Three respondents strongly support NTIA's proposed nonavailability waiver as drafted. Three respondents support the proposed waiver but expressed concerns about the proposed reporting requirement, which would require MMG Program recipients to whom the proposed waiver would apply to report on their purchases of items from foreign sources. Three respondents discussed the proposed waiver review period. Two respondents offered minor modifications to the equipment list included in the waiver. Three respondents commented on the fiber component of the waiver. Several respondents indicated a desire that the waiver NTIA proposed for the MMG Program would serve as precedent for a comparable waiver for the $42.45 billion Broadband Equity Access and Deployment Program ("BEAD"). NTIA appreciates these comments and has modified the equipment list to include the suggested manufactured products and, as discussed in greater detail below, removed mention of "Fiber optic cable" from the waiver. Other aspects of the waiver will stand as they were originally published. Updated language can be found in Section V.C, below.

Manufactured Products

USTelecom and Tech Net offered minor modifications to the list of manufactured products covered by the waiver. Both comments requested that NTIA clarify that combined Optical Line Terminal ("OLT") and routing equipment is covered in addition to the Optical Line Terminal solutions and Broadband Routing Equipment identified in separate categories of the draft waiver.[1] Both comments also requested that the description of OLT and Remote Optical Line Terminal solutions be modified to read "Optical Line Terminal ("OLT") and Remote Optical Line Terminal ("rOLT") solutions and components, including, but not limited to those that support EPON, GPON, XGS, PON, 25GS-PON, Point-to-Point Ethernet, G.fast technologies, as well as future PON technologies."[2] NTIA views these suggestions as minor modifications to improve the waiver and has amended the equipment list in V.C, below.

Reporting Requirements

Three comments expressed concerns regarding the reporting requirements included in the waiver. Information Technology Industry Council ("ITI") requested that NTIA issue guidance around the reporting requirements, offer technical assistance to help recipients comply with the

[1] US Telecom at 2; Tech Net at 1-2.
[2] US Telecom at 2; Tech Net at 1-2.

requirements, and consider adjusting reporting requirements.[3] The Telecommunications Industry Association ("TIA") requested that industry be involved in the drafting of reporting requirements for any future waivers.[4] The National Rural Electric Cooperative Association ("NRECA") emphasized the importance of a streamlined reporting process, given that nearly all electric cooperatives are defined as small business entities by the Small Business Administration and that imposing additional burdens will increase costs and discourage participation among these small businesses.[5] NTIA appreciates the importance of balancing the benefits and the burdens of reporting requirements, and will issue additional guidance, offer technical assistance to recipients, and undertake efforts to ensure reporting processes are streamlined and efficient.

Waiver Review Period

Three comments discussed the proposed waiver review period. The Rural Broadband Association ("NTCA") suggested that NTIA should review the equipment list not only to see whether the list should be narrowed but also to consider whether it should be expanded as new supply constraints arise.[6] The Alliance for American Manufacturing ("AAM") and NRECA encouraged NTIA to review the waiver list more frequently than every six months, since domestic manufacturing may ramp up more quickly than expected[7] or the supply chain may undergo new, unexpected disruptions.[8] As stated in the waiver, NTIA will review the waiver every six months, and may, based on the result of that review, make appropriate changes to it.

Optical Fiber and Fiber Optic Cable

Three comments offered feedback on the inclusion of optical fiber and fiber optic cable in the waiver. Corning and AAM urged NTIA to exclude fiber optic cable (and in one comment, optical fiber) from the waiver entirely on the grounds that there is ample domestic supply.[9] Conversely, OFS Fitel, LLC ("OFS") urged NTIA to expand the scope of the waiver in relation to optical fiber and fiber optic cable, including a blanket waiver for optical fiber manufactured in Denmark and Japan.[10] In crafting this waiver, NTIA conducted an extensive initial industry assessment, which included input from suppliers and purchasers of optical fiber and fiber optic cable regarding the demands of the MMG Program. In light of these comments and subsequent market research regarding the availability of fiber optic cable suitable for MMG Program projects, NTIA has reconsidered its initial assessment that a targeted and limited waiver for "Fiber optic cable, provided that the optical fiber contained therein is manufactured exclusively in the United States" is necessary. This final waiver therefore does not reference fiber optic cable. As discussed above, NTIA will review the waiver every six months, and may, based on the result of that review, make appropriate changes to it.

OFS and Corning also questioned NTIA's treatment of fiber optic cable as a construction material rather than a manufactured product.[11] Pending further guidance from OMB, fiber optic cable meets the definition of a construction material in OMB M-22-11, as fiber optic cable is "an article, material, or supply…that is or consists primarily of…plastic and polymer-based products

[3] ITI at 1.
[4] ITA at 2.
[5] TIA at 2.
[6] NTCA at 4.
[7] AAM at 2.
[8] NRECA at 7.
[9] AAM at 3; Corning at 1.
[10] OFS at 2.
[11] OFS at 5-6; Corning at 2-3.

(including polyvinylchloride, composite building materials, and polymers used in fiber optic cables)[.]"[12]

Impact of Free Trade Agreements

Section 70914 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, 135 Stat. 429 (November 15, 2021) ("Bipartisan Infrastructure Law" or "IIJA") states that the Buy America preference under BABA "shall be applied in a manner consistent with United States obligations under international agreements." OFS requested that NTIA clarify that foreign components that are manufactured in countries in which the United States has a trade agreement shall be treated as if they were domestic components under IIJA section 70914(e). Per OMB M-22-11, if a recipient is a State that has assumed procurement obligations pursuant to the Government Procurement Agreement or any other trade agreement, a waiver of a Made in America condition to ensure compliance with such obligations may be in the public interest.

Precedent for Other Grant Programs

Several comments indicate a desire that the waiver NTIA proposed for the MMG Program would serve as precedent for a comparable waiver for the $42.45 billion Broadband Equity Access and Deployment Program ("BEAD"). NTIA emphasizes that this waiver is limited to the MMG Program and that the nature and scope of the waiver is a function of the facts and circumstances surrounding the MMG Program. It does not constitute, nor should it be construed as, precedent for or a baseline for any other grant program administered by NTIA – including the BEAD Program. NTIA will continue to carefully balance the requirements of its grant programs with the clear direction provided by Congress and the President to catalyze domestic manufacturing, develop resilient supply chains, and promote American job growth.

FOR FURTHER INFORMATION CONTACT: For questions about this notice, please contact Will Arbuckle, Policy Advisor, Office of Internet Connectivity and Growth, National Telecommunication and Information Administration, U.S. Department of Commerce, 1401 Constitution Avenue NW, Room 4887, Washington, DC 20230, via telephone at (202) 482-2048 or by email at BABA@ntia.gov.

SUPPLEMENTARY INFORMATION:

I. IIJA Broadband Infrastructure Grant Programs

The Infrastructure Investment and Jobs Act tasked NTIA with, among other things, the MMG Program. The MMG Program provides funding for the construction, improvement, or acquisition of middle mile broadband infrastructure. The purpose of the grant program is to expand and extend middle mile broadband infrastructure to reduce the cost of connecting areas that are unserved or underserved to the internet backbone. To apply for the MMG Program, an entity must be a State, political subdivision of a State, Tribal government, technology company, electric utility, utility cooperative, public utility district, telecommunications company, telecommunications cooperative, nonprofit foundation, nonprofit corporation, nonprofit institution, nonprofit association, regional planning council, Native entity, economic development authority, or any partnership of two or more of these entities. NTIA will make up to$980,000,000 available for Federal assistance under the MMG Program ($1,000,000,000 minus a two percent set aside to cover NTIA's administrative costs). NTIA expects to make awards under this program in amounts between $5,000,000 and $100,000,000 but retains

[12] OMB M-22-11, pg. 13.

authority to issue smaller or larger MMG Program grants. The period of performance for grants made pursuant to this program will terminate five years from the date on which the grant funds are made available to the awardee, subject to a permissive one-year extension. NTIA issued its Notice of Funding Opportunity ("NOFO") detailing the MMG Program on May 13, 2022. The application deadline was 11:59 p.m. Eastern Daylight Time (EDT) on September 30, 2022, with the exception that applications for eligible entities that plan to apply for Middle Mile Grant funds to be deployed in Puerto Rico, Western Alaska, Florida, and South Carolina was extended until November 1, 2022, due to severe weather events in those jurisdictions. NTIA expects that the start date for awards will be no earlier than March 1, 2023.

II. Build America, Buy America

BABA was enacted on November 15, 2021, as part of the IIJA. Under the IIJA, Federal financial assistance projects for infrastructure must comply with domestic content procurement preference requirements established in the "Build America, Buy America Act," set out at IIJA sections 70901-70952. BABA's domestic content procurement preference applies to all iron and steel, manufactured products, and construction materials used for infrastructure projects under an award. These requirements took effect on May 14, 2022.

III. DOC's Progress in Implementing BABA

The IIJA, including its BABA provisions, will help close gaps in the domestic manufacturing base. DOC is building processes that must provide benefits not only in the coming months but long into the future as well. As the domestic manufacturing base develops, some limited waivers will be required to keep projects moving and ensure that the IIJA programs meet their statutory objectives.

Since the enactment of BABA, DOC has worked diligently to implement the Buy America Preference. Consistent with the requirements of Section 70913 of the Act, DOC has produced a report that identifies and evaluates all of DOC's relevant Federal financial assistance programs to determine which programs would be in compliance with the Buy America Preference and which would be considered inconsistent with Section 70914 of the Act and thus "deficient" under Section 70913(c) of BABA.

The report, entitled "Department of Commerce's Identification of Federal Financial Assistance Infrastructure Programs Subject to the Build America, Buy America Provisions of the Infrastructure Investment and Jobs Act," was submitted to Congress and OMB, and a summary was published in the Federal Register within 60 days after the date of enactment of the Act, on January 21, 2022. Since issuing the report, DOC has held regular meetings with the OMB MIAO and is an active participant in the MIAO Buy America Preference Working Group.

IV. Waivers

Under BABA Section 70914(b), DOC has authority to waive the application of a domestic content procurement preference when (1) the application of the preference would be contrary to the public interest, (2) the materials and products subject to the preference are not produced in the United States at a sufficient and reasonably available quantity or satisfactory quality, or (3) inclusion of domestically produced materials and products would increase the cost of the overall project by more than 25 percent. Section 70914(c) provides that a waiver under Section 70914(b) must be published by the agency with a detailed written explanation for the proposed determination and provide a public comment period of not less than 15 days.

V. Limited Nonavailability Waiver: Middle Mile Grant Program

Given the importance of BABA and its potential to impact the MMG Program and other NTIA-administered grant programs, NTIA and DOC initiated an assessment of the domestic supply chain for relevant manufactured products and construction materials during the leadup to the May 13, 2022, release of the MMG NOFO. During the course of that assessment, it became clear that the impact of BABA on the MMG Program would likely be particularly significant, necessitating an approach that acknowledges the non-availability of certain construction materials and manufactured products required for the deployment of middle mile infrastructure on the timeline mandated by the IIJA. In light of these findings, NTIA grants a limited applicability nonavailability waiver that would provide recipients of Federal financial assistance under NTIA's MMG Program a limited exemption from application of the Buy America Preference as applied to limited classes of manufactured products and construction materials.

A. Findings of Initial Industry Assessment

NTIA and DOC conducted an initial industry assessment by contacting a broad set of industry trade associations, network operators, and communications technology manufacturers to obtain input on the challenges they anticipate in meeting BABA requirements while deploying broadband infrastructure for the MMG Program and other NTIA-administered grant programs. This assessment built on previous research conducted by DOC on the global shortage of semiconductors. In September 2021, DOC solicited input through a Request for Information on the global semiconductor supply chain. The Department received more than 150 responses, including comments from nearly every major semiconductor producer and from companies in multiple industries that integrate semiconductors into finished products, and published the key findings in January 2022.

This initial industry assessment made clear that many of the manufactured products and some of the construction materials required for middle mile broadband infrastructure deployment are not available in the quantity or quality needed for the MMG Program on the timeframes established by the IIJA. These included the following:

a. *Network Equipment*. Much middle mile network equipment is produced outside of the United States, with limited options available for industry to meet BABA content requirements for 55 percent domestic production. Industry estimates indicate that 67 percent of the value of a middle mile network device is derived from communications components sourced exclusively from Asia, including broadband switching equipment, broadband routing equipment, dense wave division multiplexing ("DWDM") transport equipment, and broadband access equipment. Although some network equipment components (including timing devices, microprocessors, memory, and enclosures) are currently produced in the United States for sourcing, the maximum value of domestically sourced components for network equipment is, in no combination, valued at more than 24 percent of the device bill of materials ("BOM").

b. *Fiber optics.* Although optical fiber appears to be produced in sufficient quantities in the United States, fiber optic cable assembly (including sheathing and connectors) generally occurs in Mexico.

c. *Semiconductors.* DOC research into semiconductors, which are required for all radio and broadband network equipment, found that the increase in demand for chips has not been met with a commensurate increase in supply. Indeed, the

median inventory of semiconductor products fell from 40 days in 2019 to less than 5 days in 2021. Over 70 percent of global semiconductor production occurs in Asia, including all production of the most advanced chips; only 12 percent of production of any kind occurs in the United States. Additional industry outreach conducted by NTIA indicates that natural disasters, extreme weather events, and political instability have all contributed to global semiconductor shortages.
Industry noted that between 52 percent and 80 percent of the BOM value for telecommunications products comes from chips, which are not produced domestically.

d. *Oil-based polymers.* There is an inadequate supply of domestically manufactured critical inputs to middle mile broadband deployments made from oil-based polymers, such as hand holes, conduit, and splice enclosures. Further, oil shocks due to Covid-19 and the Russia-Ukraine conflict have resulted in global shortages and long leads times.

Although there are public and private efforts underway to increase manufacturing capacity for certain products and construction materials in anticipation of the demand created by various federally funded broadband deployment programs, DOC's initial assessment indicates that industry will not be able to address shortages of the manufactured products and construction materials required for middle mile network deployment within the timeframes required by the MMG Program. The historic CHIPS and Science Act will spur a major domestic semiconductor manufacturing investment. However, fab construction timelines mean that the impact of that investment is unlikely to be realized for several years. Industry estimates indicate that new semiconductor fabrication facilities will take between 3 and 5 years to build within the United States, meaning that they would likely not be completed in time to fulfill demands associated with MMG Program projects. Further, these new semiconductor fabrication facilities may require the concomitant development of new facilities for producing locally supplied components, including MVA, Power, Metals, Plastics, Interconnect, PCB, Antennas, Packaging, and Fans.

Many of the other relevant manufactured products and construction materials that are not currently produced in the United States in sufficient quantity or quality will face similar time delays to onshore. Domestic manufacturers have stated it will require at least twelve months, and probably longer, to onshore the production of fiberoptic cable connectors. Domestic manufacturing capacity for components, broadband routing and broadband transport equipment will require, at minimum, 24-36 months.

B. Waiver

NTIA grants a targeted and limited waiver for the following manufactured products incorporated into MMG Program funded middle mile broadband infrastructure:

- Broadband Routing Equipment: Equipment that routes data packets throughout a broadband network including servers used to host features including but not limited to switching, routing and backhaul or controlling the action of other network hardware. This category includes, but is not limited to, the following:
    - Access Router – Equipment for broadband communications that routes data packets through an access network to an aggregation network
    - Aggregation Router – Equipment for broadband communications that

aggregates data packets from access routing equipment to a subscriber management system
    - Edge Router – Equipment that provides regional level aggregation along with end user services
    - Core Router – Equipment that routes data packets through a core network to and from subscriber management equipment and peering routing equipment
    - Peering Routing Equipment – Equipment for providing interconnection from a broadband provider's network to one or more other service providers for transit Internet Protocol ("IP") services or exchange of data traffic
- Broadband Access Switching Equipment: Equipment for broadband communications that switches data packets through an access network to an aggregation network including servers used to host features including but not limited to switching, routing and backhaul or controlling the action of other network hardware
- Broadband Aggregation Switching Equipment: Equipment for broadband communications that aggregates data packets from access switching equipment and delivers data packets through an aggregation network to a subscriber management system including servers used to host features including but not limited to switching, routing and backhaul or controlling the action of other network hardware
- Microwave Backhaul Equipment: Network equipment used to support microwave backhaul including servers used to host features including but not limited to switching, routing and backhaul or controlling the action of other network hardware. This includes, but is not limited to, the following:
    - Outdoor Transceiver – Microwave Transmitter and Receiver mounted outdoors
    - Indoor Transceiver – Microwave Transmitter and Receiver mounted inside
    - Antenna – Passive device to isolate specific frequencies and transmit patterns
    - Indoor aggregator – Indoor shelf used to aggregate multiple Microwave Transceivers for connection to other devices
- Broadband Optical Fiber Transport Equipment: Equipment—not including fiber and cable—that supports the deployment of optical fiber and/or the multiplexing of signals onto fiber-based media. This includes, but is not limited to:
    - Transponders, transceivers (including pluggable transceivers), and interrogators connected to network devices and used to multiplex optical signals onto fiber-based media for communication or sensing
    - FTTx cabinets and fiber optic splitters
    - Pre-connectorized FTTx fiber optic terminals, with or without splitters and with or without taps
    - Central Office fiber optic hardware, including frames and racks, pre-connectorized hardware with or without wavelength division multiplexing ("WDM")
    - Fiber optic cable assemblies; simplex, duplex, and multifiber jumpers
    - Fiber optic closures
    - Fiber optic connectors, adapters, and attenuators
    - Optical Line Systems – dense wave division multiplexing ("DWDM") optical add-drop multiplexers
    - Inline Amplifier – Optical only amplification system for middle mile, regional, long haul, or ultra-long haul dark fiber
    - Dynamic Gain Equalizer Node – Optical only power balancing node for the C, L or C+L band DWDM networks

    - Transponder – Optical module used to convert grey optics to a DWDM frequency in the C and/or L band
    - Muxponder – Optical module used to multiplex low speed signals into a higher rate DWDM frequency in the C and/or L band
- Optical Line Terminal ("OLT") and Remote Optical Line Terminal ("rOLT") solutions and components, including, but not limited to those that support EPON, GPON, XGS-PON, 25GS-PON, Point-to-Point Ethernet, and G.fast technologies, as well as future PON technologies
- Equipment that combines the functions of Broadband Routing Equipment and OLT and/or rOLT solutions
- Undersea Cable Equipment: Equipment designed to support the transmission of data using undersea cables. This includes, but is not limited to, the following:
    - Power feeding equipment ("PFE") for undersea cable systems
    - Submarine line terminating equipment ("SLTEs") for undersea cable systems
    - Undersea optical repeaters for undersea cable systems
    - Undersea branching units for undersea cable systems
- Fixed Test Equipment – Equipment that is used to monitor and troubleshoot performance of broadband transport, switching and routing equipment
- Telemetry Router – Equipment used to route data packets for out of band command, control and provisioning of broadband transport, switching, and routing equipment
- Telemetry Switch – Equipment used to switch data packets for out of band command, control and provisioning of broadband transport, switching, and routing equipment
- Combined Broadband Routing Equipment and Optical Line Terminal equipment.

C. Reporting Requirements

MMG Program recipients to whom the waiver applies must report on their purchases of items from foreign sources. Recipients reporting foreign-sourced items will help with future NTIA grant programs and awards that also use those items and support market research. NTIA 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 MMG Program as well as its other broadband infrastructure deployment programs.

NTIA will issue detailed guidance regarding this reporting requirement to MMG Program applicants and awardees.

D. Additional Steps to Support Domestic Manufacturing

In the course of the industry analysis, NTIA found that a small number of manufacturers currently produce some of the components required for middle mile infrastructure, though not in the quantity required for the purposes of the MMG Program. NTIA will provide technical assistance to MMG Program awardees to connect them with the existing domestic manufacturers to encourage the use of domestically manufactured components whenever possible. DOC is working with industry to secure commitments that will lead to new plants, thousands of new jobs, and the development of large and small manufacturing capacity within the United States. These commitments include component manufacturing plants, broadband routing manufacturing investment, broadband transport equipment manufacturing, and the relocation of assembly plants to the United States. Completion of these commitments is not, however, expected to occur for 12-36 months.

VI. Effective Date and Duration of the Waiver

The waiver will be effective for the period of performance of all MMG Program awards awarded from March 1, 2023, until March 1, 2024, on the date of issuance for each award. NTIA will review this waiver no less than every six months from the date on which the first award is issued to assess whether it remains necessary to the fulfillment of NTIA's missions and goals and consistent with applicable legal authorities, such as the IIJA, Executive Order 14005, and OMB M-22-11. NTIA may, based on the results of that review, terminate or narrow the scope or duration of the waiver, or take such other action as it deems appropriate.

Issued in Washington, DC

ALAN DAVIDSON

Digitally signed by ALAN DAVIDSON
Date: 2023.04.19 17:16:19 -04'00'

Alan Davidson

Assistant Secretary for Communications and Information