



## OFFICE OF AIR AND RADIATION

WASHINGTON, D.C. 20460

January 14, 2025

### MEMORANDUM

**SUBJECT:** Technical Amendment to January 10, 2025, Nonavailability waiver of Section 70914(a) of P. L. 117-58, Build America, Buy America Act, 2021 for domestically assembled solar photovoltaic panels as applied to select recipients of Federal Financial Assistance from the U.S. Environmental Protection Agency's Office of Air and Radiation

**FROM:** Joseph Goffman  
Assistant Administrator

A blue ink signature of Joseph Goffman, Assistant Administrator. The signature is cursive and written in blue ink.

The U.S. Environmental Protection Agency (EPA) is making a minor technical correction to clarify that the waiver was issued on January 10, 2025. The EPA inadvertently included the incorrect date at the top of the waiver. The corrected text reads: "January 10, 2025."

The January 10, 2025, waiver is attached for reference.



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Assistant Administrator

### Summary

The U.S. Environmental Protection Agency (EPA) is issuing a temporary, limited nonavailability partial waiver of the manufactured product requirements of Section 70914(a) of the Build America, Buy America Act (BABA) included in the Infrastructure Investment and Jobs Act (IIJA) (Pub. L. No. 117-58) for domestically assembled solar modules used in federal financial assistance awarded for infrastructure projects by the Office of Air and Radiation (OAR) to specifically named entities. This waiver combines multiple project-specific nonavailability waivers into one document to reduce paperwork and support administrative efficiency. The EPA is applying this waiver to awards outlined in the Appendix.

This waiver requires domestic assembly versus a waiver of the full manufactured product requirements, which would allow assembly to occur outside the United States. This waiver is intended to provide time needed for domestic solar module manufacturing capability to meet demand for BABA-compliant solar modules by supporting and encouraging continued investments while bringing the benefits of solar power to OAR's financial assistance recipients.

This waiver applies on or after January 10, 2025 until December 31, 2025, for all new solar modules with Final Assembly in the United States. Solar modules where final assembly occurred outside the United States are not eligible for coverage under this waiver. "Final Assembly" means all operations involved in the transformation of individual solar cells and all other module components into a fully functional encapsulated module. For recipient expenditures to be covered by this waiver, the solar modules will need to be installed by June 30, 2026. "Installed by" means modules being permanently fastened to an outdoor support structure at the project site. This requirement only applies to solar modules covered by this waiver and has no bearing on compliance determinations for other products.

nor for solar modules not covered by this waiver. For awards and amendments that otherwise meet the criteria of the waiver but were obligated prior to January 10, 2025, the waiver applies to eligible expenditures incurred on or after January 10, 2025 until December 31, 2025.

In accordance with Section 70914(b) of the BABA, the EPA is issuing this limited nonavailability partial waiver of the BABA manufactured product requirements for domestically assembled solar modules used in federal financial assistance awards for infrastructure projects due to the determination that compliant solar modules are not available in sufficient quality or quantity for use in OAR-funded infrastructure projects. The EPA conducted market research to determine availability of BABA-compliant solar modules which included subject matter expert analysis of domestic solar production based on announcements and non-public manufacturing plans disclosed by manufacturers. Based on this market research, the EPA finds that BABA-compliant solar modules are not produced in the United States in sufficient and reasonably available quantities for use in OAR-assisted solar projects and will not become available in sufficient and reasonably available quantities until December 2025 or later. This waiver will ensure recipients can effectively carry out the activities of their award in a timely manner while promoting domestic solar module manufacturing.

### **Background**

The Buy America preference set forth in section 70914(a) of BABA, requires all iron, steel, manufactured products, and construction materials used for infrastructure projects under federal financial assistance awards be produced in the United States.

Under section 70914(b) of BABA, 2 CFR 184.7 & 200.322, and in accordance with the Office of Management and Budget (OMB)'s Guidance Memorandum M-24-02, *Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure*, the EPA may waive the BABA Buy America preference under an infrastructure program in any case in which it finds that: (i) applying the domestic content procurement preference would be inconsistent with the public interest ("public interest waiver"); (ii) types of iron, steel, manufactured products, or construction materials are not produced in the U.S. in sufficient and reasonably available quantities or of a satisfactory quality ("nonavailability waiver"); or (iii) the inclusion of iron, steel, manufactured products, or construction materials produced in the U.S. will increase the cost of the overall project by more than 25 percent ("unreasonable cost waiver"). All waivers must have a written explanation for the proposed determination; provide a period of not less than fifteen (15) calendar days for public comment on the proposed waiver; and submit the proposed waiver to the OMB Made in America Office for review to determine if the waiver is consistent with policy.

With more than \$100 billion in funding from Infrastructure Investment and Jobs Act (IIJA), Pub. L. No. 117-58, and H.R. 5376- Inflation Reduction Act of 2022 (IRA), the EPA is focused primarily on investing in projects that strengthen infrastructure, tackle climate change, and create a more equitable future. The EPA is committed to ensuring strong and effective domestic manufacturing capabilities consistent with Executive Order (EO) 14005 titled *Ensuring the Future is Made in All of America by All of America's Workers* (86 FR 7475) (Jan. 28, 2021). EO 14005 provides that the U.S. Government "should, consistent with applicable law, use terms and conditions of Federal financial assistance awards and Federal procurements to maximize the use of goods, products, and materials produced in, and services offered in, the United States."

The EPA provides grant funding to multiple recipients, subrecipients, and program participants with individual projects that utilize solar modules. Nationwide demand includes use by other federal agencies, state, local, and tribal governments, nonprofit organizations in addition to private consumers. The EPA, in collaboration with the U.S. Department of Energy (DOE) and the United States Department of Agriculture (USDA), analyzed anticipated demand for projects that may include demand for BABA-compliant solar modules. The EPA requirement is estimated to be approximately 3,300 MWdc for BABA-compliant modules through 2028. For the DOE, the estimate is approximately 75 MWdc to 150 MWdc through 2026. For the USDA, the estimate is \$80 million through 2025, corresponding to a nameplate capacity of 300 MWdc. The major driver for domestic solar supply-chain growth is the IRA tax credits, including the IRC §§48 and 45 clean energy investment and production tax credits and the IRC §§48E and 45Y “technology neutral” clean electricity investment and production tax credits, and the IRC §45X advanced manufacturing production tax credit, which provides per-unit tax credits for the domestic production of polysilicon, wafers, cells, modules, backsheets, tracker components, and inverters, with rates of \$0.07 per Wdc for modules and \$0.04 per Wdc for cells. Moreover, the 10% domestic content bonus in IRA tax credits will increase competition for domestically produced modules from private developers, which could further impact grant recipients' ability to procure BABA-compliant modules.

Solar modules are manufactured products. Per BABA sections 70912(6)(A) and (B), manufactured products are considered to be produced in the United States if (i) the manufactured product was manufactured in the United States; and (ii) the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard for determining the minimum amount of domestic content of the manufactured product has been established under applicable law or regulation.

Solar module components were analyzed by the DOE. Market research included subject matter expert analysis of domestic solar production based on announcements and non-public manufacturing plans disclosed by manufacturers. The cost of the cell is estimated to constitute the majority (67%) of the cost of a module. DOE subject matter experts concluded cells will not likely be available from U.S. manufacturers in sufficient quantities until December 2025 or later. The next highest estimated module cost component is the metal frame, at 10%. Metal frames for c-Si modules are expected to be unavailable at a significant quantity from anywhere other than China for several years. The cost of the front glass and backsheets are each estimated at 7%, of the encapsulant at 4%, of the junction box at 3%, and all other components less than 1% each.

To support BABA compliance verification, the EPA is considering step-certification following the expiration of this waiver, which is a type of certification process under which each handler (supplier, fabricator, manufacturer, processor, etc.) of the subject products and materials certifies that their step in the process was domestically performed. Each time a step in the manufacturing process takes place, the manufacturer delivers its work along with a certification of its origin. This process is common practice for verifying Buy America requirements for iron and steel.

### **Waiver Justification**

The EPA is issuing a temporary, limited nonavailability partial waiver of the BABA manufactured product requirements for solar modules to apply to the use of domestically assembled modules that

may incorporate foreign components. The United States is the second largest market for solar hardware, representing about 10%-15% of global solar demand. Developing and enhancing United States solar manufacturing will mitigate global supply chain challenges and meet decarbonization goals as well as benefit United States' workers, employers, and the economy. To reestablish domestic solar manufacturing in the United States, entities that produce and sell solar components will require a holistic industrial strategy to offset the 30-40% higher cost of domestic solar production relative to imported components. This narrowly tailored BABA waiver will meet immediate solar demands while the domestic solar industry expands supply through the operation of market forces.

Domestically, the United States currently has 10,600 MWdc/year nameplate production capacity for CdTe modules and 47,000 MWdc/yr nameplate production capacity for c-Si modules. Market research indicates c-Si module production capacity was historically underutilized for a variety of reasons including foreign competition, workforce shortages, and obsolete production equipment, with about 3,700 MWdc actually produced and sold in 2023 compared to a nameplate capacity of 15,000 MWdc/yr at the end of 2023. Capacity for c-Si modules has continued growing significantly in 2024 and as production is ramping, utilization rates are expected to grow. As of November 2024, domestic c-Si cell production in the United States has just restarted and production is also anticipated to grow.

In addition to current production capacity, future domestic manufacturing indicates growth will result in substantially more BABA-compliant module supply. As of November 2024, over \$20 billion in planned solar investments have been announced at over 148 new and expanded manufacturing plants for modules, module parts and other hardware. DOE subject matter experts performed a probabilistic analysis of these announcements to identify a date when full BABA compliance may be achievable. Subject matter expert review identified technical delays from announced dates due to site readiness as well as likelihood of project success and considered the time required to ramp to full production capacities as well as announced offtake agreements. Overall analysis concludes that domestic manufactures will likely be capable of producing fully BABA-compliant modules in sufficient quantities for OAR financial assistance recipients, subrecipients and program participants no sooner than December 2025. Thus, the EPA finds that BABA-compliant solar modules are not produced in the United States in sufficient and reasonably available quantities for use in OAR-assisted solar projects and will not become available in sufficient and reasonably available quantities until December 2025 or later.

#### **Impact Absent the Waiver**

Without a waiver, the EPA anticipates most recipients with solar projects subject to BABA will develop, implement, and submit individualized nonavailability waiver packages for solar modules. This conclusion is based upon widely reported domestic sourcing challenges for BABA-compliant solar modules. The corresponding administrative burden will impact the cost and schedule of recipients, and in some cases diminish the use of solar projects, or, in extreme cases, deter overall program participation. For those that participate and propose solar projects, recipient resources will be required to perform market research and submit nonavailability packages. Project schedules will need to be extended to account for waiver development and waiver processing through final approval. These anticipated delays adversely impact numerous agency goals of these projects, including climate action and energy justice.

The absence of this narrowly tailored BABA waiver will result in missed strategic opportunities to advance goals such as those within EO 14017 *American's Strategy to Secure the Supply Chain for a Robust Clean Energy Transition* and EO 14057 *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability*, in addition to the goals of EO 14005.

This narrowly tailored BABA waiver will support the establishment of a domestic solar supply chain. Fundamentally, the domestic content provisions in the IRA clean energy production and investment tax credits, including relating to IRC §§ 45, 45X, 45Y, 48, and 48E, including the domestic content bonus credit, constitute the significant driver for increasing the overall demand for domestic solar modules. Requiring full BABA compliance for federal financial assistance projects, as opposed to the narrowly tailored BABA compliance described in this waiver, would produce limited benefits for domestic solar manufacturing while potentially placing projects targeting vulnerable populations at risk.

#### **Assessment of Cost Advantage of a Foreign-Sourced Product**

Under OMB Memorandum M-24-02, agencies are expected to assess “whether a significant portion of any cost advantage of a foreign-sourced product is the result of the use of dumped steel, iron, or manufactured products or the use of injuriously subsidized steel, iron, or manufactured products” as appropriate before granting a waiver. The EPA’s analysis has concluded that this assessment is not applicable to this waiver, because this waiver is not based on cost advantage of foreign sourced products.

#### **Duration of Waiver**

This waiver applies to expenditures on solar panels made on or after January 10, 2025 until December 31, 2025, so long as those panels are installed by June 30, 2026.

#### **Comments on the Proposed Waiver**

On December 13, 2024, the EPA issued a notice proposing to issue this waiver and the comment period was open until December 28, 2024. The EPA received 36 comments during the public comment period from a variety of stakeholders. During the 15-day public comment period, 94% of the 36 commenters supported the EPA’s proposed waiver.

There were requests to extend the duration of the waiver, including the installation date. Commenters also suggested removal of the installation date altogether or the establishment of longer durations based on geographic environmental challenges. After review and given the projected timelines for domestic cell makers to come online, the current durations and installation date requirement in the waiver are adequate.

There were also requests to expand the waiver to include other solar-related manufactured products such as inverters and batteries. While these products are outside the scope of this waiver, the EPA, in collaboration with other agencies, actively monitors these industries for any BABA-related issues and notes that projects facing any challenges are still able to request project-specific waivers.

Two commenters challenged the need for the waiver based on their views regarding expected availability of BABA-compliant solar modules to meet the demand from projects receiving federal financial assistance during the waiver period. The EPA acknowledges that there are companies making strides to develop cell manufacturing capacity in the United States. However, that capacity is reported

to be sold out well past the duration of the waiver. Given the EPA's analysis and other comments received, it is believed that the volume, quality, and availability of domestically produced modules made using domestically produced cells over the duration of the waiver will be inadequate to meet the needs of projects receiving federal financial assistance. The same two commenters suggested adding Foreign Entity of Concern restrictions to the waiver, which the EPA notes are addressed where appropriate in individual project terms and conditions.

## Appendix

<b>Program</b>	<b>Recipient/Awardee</b>
Climate Pollution Reduction Grants: Implementation Grants	Central Midlands Council of Governments (South Carolina)
Climate Pollution Reduction Grants: Implementation Grants	City of Austin (Texas)
Climate Pollution Reduction Grants: Implementation Grants	City of New Haven (Connecticut)
Climate Pollution Reduction Grants: Implementation Grants	City of New Orleans (Louisiana)
Climate Pollution Reduction Grants: Implementation Grants	Colorado Energy Office
Climate Pollution Reduction Grants: Implementation Grants	Connecticut Department of Energy and Environmental Protection
Climate Pollution Reduction Grants: Implementation Grants	Cuyahoga County (Ohio)
Climate Pollution Reduction Grants: Implementation Grants	Denver Regional Council of Governments (Colorado)
Climate Pollution Reduction Grants: Implementation Grants	Hudson Valley Regional Council (New York)
Climate Pollution Reduction Grants: Implementation Grants	Illinois Environmental Protection Agency
Climate Pollution Reduction Grants: Implementation Grants	King County (Washington)
Climate Pollution Reduction Grants: Implementation Grants	Metroplan (Arkansas)
Climate Pollution Reduction Grants: Implementation Grants	Michigan Department of Environment, Great Lakes, and Energy
Climate Pollution Reduction Grants: Implementation Grants	Minnesota Pollution Control Agency
Climate Pollution Reduction Grants: Implementation Grants	Montana Department of Natural Resources and Conservation
Climate Pollution Reduction Grants: Implementation Grants	Nebraska Department of Environment and Energy
Climate Pollution Reduction Grants: Implementation Grants	New Jersey Department of Environmental Protection
Climate Pollution Reduction Grants: Implementation Grants	Nez Perce Tribe
Climate Pollution Reduction Grants: Implementation Grants	North Carolina Department of Natural and Cultural Resources
Climate Pollution Reduction Grants: Implementation Grants	Oregon Department of Environmental Quality
Climate Pollution Reduction Grants: Implementation Grants	Pennsylvania Department of Environmental Protection

Climate Pollution Reduction Grants: Implementation Grants	South Coast Air Quality Management District (California)
Climate Pollution Reduction Grants: Implementation Grants	Southeast Conference (Alaskan Southern Coastal Communities)
Climate Pollution Reduction Grants: Implementation Grants	Utah Department of Environmental Quality
Climate Pollution Reduction Grants: Implementation Grants	Virginia Department of Environmental Quality
Climate Pollution Reduction Grants: Implementation Grants	Alaska Native Tribal Health Consortium
Climate Pollution Reduction Grants: Implementation Grants	Aleut Community of Saint Paul Island
Climate Pollution Reduction Grants: Implementation Grants	Bad River Band of Lake Superior Chippewa Indians
Climate Pollution Reduction Grants: Implementation Grants	Bay Mills Indian Community
Climate Pollution Reduction Grants: Implementation Grants	Blue Lake Rancheria
Climate Pollution Reduction Grants: Implementation Grants	Central Council of the Tlingit and Haida Indian Tribes of Alaska
Climate Pollution Reduction Grants: Implementation Grants	Eastern Band of Cherokee Indians
Climate Pollution Reduction Grants: Implementation Grants	Fort Independence Indian Community
Climate Pollution Reduction Grants: Implementation Grants	Hopi Utilities Corporation
Climate Pollution Reduction Grants: Implementation Grants	Iowa Tribe of Kansas and Nebraska (ITKN)
Climate Pollution Reduction Grants: Implementation Grants	La Jolla Band of Luiseño Indians
Climate Pollution Reduction Grants: Implementation Grants	Lac Vieux Desert Band of Lake Superior Chippewa Indians
Climate Pollution Reduction Grants: Implementation Grants	Lower Sioux Indian Community in the State of Minnesota
Climate Pollution Reduction Grants: Implementation Grants	Mashantucket Pequot Tribal Nation
Climate Pollution Reduction Grants: Implementation Grants	Miccosukee Corporation
Climate Pollution Reduction Grants: Implementation Grants	Mississippi Band of Choctaw Indians
Climate Pollution Reduction Grants: Implementation Grants	Municipality of Saipan, Office of the Mayor
Climate Pollution Reduction Grants: Implementation Grants	Narragansett Indian Tribe

Climate Pollution Reduction Grants: Implementation Grants	Native Village of Eyak - Capital Projects Department
Climate Pollution Reduction Grants: Implementation Grants	Nez Perce Tribe
Climate Pollution Reduction Grants: Implementation Grants	Nisqually Indian Tribe
Climate Pollution Reduction Grants: Implementation Grants	Nottawaseppi Huron Band of Potawatomi
Climate Pollution Reduction Grants: Implementation Grants	Passamaquoddy Tribe Indian Township
Climate Pollution Reduction Grants: Implementation Grants	Pokagon Band of Potawatomi Indians
Climate Pollution Reduction Grants: Implementation Grants	Pueblo of Sandia
Climate Pollution Reduction Grants: Implementation Grants	Rosebud Sioux Tribe
Climate Pollution Reduction Grants: Implementation Grants	Salt River Pima-Maricopa Indian Community
Climate Pollution Reduction Grants: Implementation Grants	Seminole Tribe of Florida
Climate Pollution Reduction Grants: Implementation Grants	Southern Ute Indian Tribe Air Quality Division
Climate Pollution Reduction Grants: Implementation Grants	Spirit Lake Tribe
Climate Pollution Reduction Grants: Implementation Grants	St. Croix Chippewa Indians of Wisconsin
Climate Pollution Reduction Grants: Implementation Grants	The Snoqualmie Indian Tribe
Climate Pollution Reduction Grants: Implementation Grants	Tule River Economic Development Corporation
Climate Pollution Reduction Grants: Implementation Grants	Village of Solomon
Clean Ports Program: Zero-Emission Technology Deployment Grants	City of Los Angeles Harbor Department
Clean Ports Program: Zero-Emission Technology Deployment Grants	Port Department of the City of Oakland
Clean Ports Program: Zero-Emission Technology Deployment Grants	Stockton Port District
Clean Ports Program: Zero-Emission Technology Deployment Grants	Enstructure New Haven Holdings LLC, d/b/a Gateway Terminals
Clean Ports Program: Zero-Emission Technology Deployment Grants	Illinois Environmental Protection Agency
Clean Ports Program: Zero-Emission Technology Deployment Grants	Detroit/Wayne County Port Authority

Clean Ports Program: Zero-Emission  
Technology Deployment Grants  
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Cleveland-Cuyahoga County Port Authority  
Utah Department of Environmental Quality