WAIVER NUMBER: 2025-10
Issued: January 10, 2025
Expires: December 31, 2025

DEPARTMENT OF ENERGY

Nonavailability

Nonavailability Waiver applicable to Domestically Assembled Solar Photovoltaics (PV) panels referred to as "Solar Modules" under Build America, Buy America Manufactured Product Provisions as Applied to Recipients of Department of Energy Federal Financial Assistance under the Clean Energy Demonstrations on Current and Former Mine Land and Weatherization Assistance Program: Sustainable Energy Resources for Consumers.

AGENCY: U.S. DEPARTMENT OF ENERGY.

ACTION: Issuance of waiver.

DATES: The duration of the waiver is from the date of issue ("Effective Date") of the waiver until December 31, 2025 ("Expiration Date"). The waiver applies to solar modules with Final Assembly in the United States (as defined below in the "Waiver" section).

I. Waiver:

U.S. DEPARTMENT OF ENERGY is issuing a temporary, limited non-availability 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 for infrastructure projects selected as of the Effective Date for an award by DOE under the (i) Clean Energy Demonstrations Program on Current and Former Mine Land ("CEML") and (ii) Weatherization Assistance Program: Sustainable Energy Resources for Consumers ("WAP"), including all projects listed on the appendix to this waiver. This waiver combines for efficiency multiple project specific non-availability waivers into one waiver document to reduce paperwork and reduce administrative burdens for project recipients and the U.S. Government.

CEML will demonstrate the technical and economic viability of deploying clean energy on

current (operating) and former (abandoned or inactive) mine land. These projects are expected to be replicable, providing knowledge and experience that catalyze the next generation of clean energy on mine land projects.

WAP reduces energy costs for low-income households by increasing the energy efficiency of their homes, while ensuring their health and safety. Sustainable Energy Resources for Consumers expand assistance to in materials and renewable energy technologies not covered by the Weatherization Formula program.

U.S. DEPARTMENT OF ENERGY 's 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 the U.S. DEPARTMENT OF ENERGY 's financial assistance recipients.

This waiver applies on or after the Effective Date until December 31, 2025, the Expiration Date 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. The U.S. DEPARTMENT OF ENERGY applies this waiver to awards or selections made on or before the Effective Date under CEML and WAP.

In accordance with Section 70914(c) of the BABA, the U.S. DEPARTMENT OF ENERGY is providing notice that it is seeking a combined nonavailability waiver of the BABA manufactured product requirements for domestically assembled solar modules used in federal financial assistance awards for infrastructure projects under CEML and WAP , as stated above, due to the

determination that compliant solar modules are not available in sufficient quality or quantity for use in U.S. DEPARTMENT OF ENERGY - funded infrastructure projects. The U.S. DEPARTMENT OF ENERGY 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 U.S. DEPARTMENT OF ENERGY proposes to find that BABA-compliant solar modules are not produced in the United States in sufficient and reasonably available quantities for use in U.S. DEPARTMENT OF ENERGY 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. The U.S. DEPARTMENT OF ENERGY issues this waiver on the basis of nonavailability in accordance with Section 70914(b)(2) of the BABA.

II. 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 U.S. DEPARTMENT OF ENERGY 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").

With $98 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 U.S. DEPARTMENT OF ENERGY is focused primarily on research and development, demonstration, and deployment programs to help to achieve carbon-free electricity in the U.S. by 2035 and a net-zero economy by 2050. The U.S. DEPARTMENT OF ENERGY is also responsible for strengthening and securing manufacturing and energy supply chains through financial assistance opportunities. This is 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 U.S. DEPARTMENT OF ENERGY is committed to ensuring strong and effective domestic solar model domestic manufacturing capabilities consistent with EO 14005.

The U.S. DEPARTMENT OF ENERGY also provides grants to multiple recipients with individual projects that utilize solar modules. Nationwide demand includes use by other federal agencies, state, local, and tribal governments in addition to private consumers. The U.S. DEPARTMENT OF ENERGY, in collaboration with the Environmental Protection (EPA) and the United States Department of Agriculture (USDA), analyzed anticipated demand for projects that may include demand for BABA-compliant solar modules. The U.S. DEPARTMENT OF ENERGY requirement is estimated to be approximately 75 MW_{dc} to 150 MW_{dc} through 2026 for BABA-compliant modules. During this timeframe, the expected total capacity of overall U.S. installations is 82,000 MW_{dc}, of which U.S. DEPARTMENT OF ENERGY's BABA-compliant demand is only 0.1% of total domestic demand in this timeframe. 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, backsheet, tracker components, and inverters, with rates of

$0.07 per W_{dc} for modules and $0.04 per W_{dc} 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 U.S. DEPARTMENT OF ENERGY. 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 component cost of a module. U.S. DEPARTMENT OF ENERGY 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 backsheet are each estimated at 7%, of the encapsulant at 4%, of the junction box at 3%, and all other components less than 1% each.

III. Waiver Justification

The U.S. DEPARTMENT OF ENERGY, limited partial nonavailability waiver of 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. A narrowly tailored BABA waiver will meet immediate solar demands while the domestic solar industry expands supply.

Domestically, the United States currently has 10,600 MW_{dc}/year nameplate production capacity for CdTe modules and 47,000 MW_{dc}/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 MW_{dc} actually produced and sold in 2023 compared to a nameplate capacity of 15,000 MW_{dc}/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. U.S. DEPARTMENT OF ENERGY 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 U.S. DEPARTMENT OF ENERGY financial assistance recipients no sooner than December 31,

2025. Thus, the U.S. DEPARTMENT OF ENERGY finds that BABA-compliant solar modules are not produced in the United States in sufficient and reasonably available quantities for use in U.S. DEPARTMENT OF ENERGY assisted solar projects under CEM and WAP and will not become available in sufficient and reasonably available quantities until December 2025 or later.

IV. Impact Absent the Waiver

Without a waiver, the U.S. DEPARTMENT OF ENERGY anticipates most recipients with solar projects subject to BABA will develop, implement, and submit unavailability 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 participation. For those that participate and propose solar projects, recipient resources will be required to perform market research and submit unavailability packages. Project schedules will need to be extended to account for waiver development and waiver processing though final approval. These anticipated delays adversely impact numerous U.S. DEPARTMENT OF ENERGY goals of these projects, including climate action and energy justice.

The absence of a 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.
A 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, would produce limited benefits

for domestic solar manufacturing while potentially placing projects targeting vulnerable populations at risk.

V. 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 U.S. DEPARTMENT OF ENERGY ’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.

VI. Duration of Waiver

This waiver applies to expenditures on solar panels after the Effective Date and by December 31, 2025 the Expiration Date, so long as those panels are installed by June 30, 2026.

VII. Solicitation of Comments and Comments Received

On December 13, 2024, the U.S. DEPARTMENT OF ENERGY issued a notice proposing to issue this waiver and soliciting comments. The comment period was open until December 28, 2024, and the U.S. DEPARTMENT OF ENERGY received comments from a variety of stakeholders. During the 15-day public comment period, the majority of commenters supported the U.S. DEPARTMENT OF ENERGY’s proposed waiver while some comments disfavored the waiver.

Comments requested to both extend and reduce the duration of the waiver, including the installation date. Commenters also suggested removal of the installed by date altogether or the establishment of longer durations based on geographic environmental challenges. Although the vast majority of comments attested to the need and benefits of the waiver, three commenters

questioned the need for the waiver based on their views regarding expected availability of BABA-compliant solar modules to meet the demand from federal grant recipients during the waiver period.

The U.S. DEPARTMENT OF ENERGY acknowledges that there are companies making strides to develop c-Si cell manufacturing capacity in the United States as well as significant thin film capacity. However, that thin film capacity is reported to be sold out well past the duration of this waiver. And while the U.S. DEPARTMENT OF ENERGY is glad to receive confirmation of the expected growth in domestic c-Si cell manufacturing, the commenters failed to take into account several important factors when asserting that there is sufficient domestic supply. Firstly, there is only 1,000 MWdc/yr of c-Si cell capacity currently ramping up production, which is substantially lower than expected nationwide demand. Additional cell capacity is anticipated to come online later in 2025 and will need time to ramp before reaching high volumes of production. Thus, those facilities are expected to be producing at a fraction of their nameplate capacity for the duration of this waiver. Secondly, and perhaps most importantly, commenters failed to indicate how much of their production is already spoken for through existing public and non-public supply agreements - predominantly, but not exclusively, for projects wishing to receive the domestic content bonus - such as those announced between Heliene and UGE, Heliene and Excelsior, and Qcells and Microsoft to name just a few. U.S. DEPARTMENT OF ENERGY recipients will be competing against private consumers wishing to qualify for the domestic content bonus, who often have significant purchasing advantages and the ability to negotiate long-term offtake agreements, significantly reducing the available supply. Nationwide demand also includes use by other federal agencies - such as EPA, which is anticipated to require at least 3,300 MWdc alone - as well as state, local, tribal governments, and nonprofit organizations in addition to private consumers. U.S. DEPARTMENT OF ENERGY analysis determined in August that there was a 90% chance that demand for domestic c-Si cells would exceed domestic supply by more than 12,500 MWdc/yr in 2025, which informed the U.S. Trade Representative's decision to expand the c-Si cell tariff rate quota under Section 201 of the Trade Act of 1974. None of the comments have provided evidence indicating any new sources of supply that were missing from the original analysis that would close this 12,500 MWdc/yr gap.

Two commenters suggested adding Foreign Entity of Concern restrictions to the waiver, which the U.S. DEPARTMENT OF ENERGY notes are addressed as needed in individual project terms and conditions. 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 if this waiver, the U.S. DEPARTMENT OF ENERGY, in collaboration with other agencies, actively monitors the growth of these industries and remains confident that there is sufficient BABA-compliant capacity available for these products.

Given comments and U.S. DEPARTMENT OF ENERGY analysis, 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 awardees.

VIII. Comment Resolution

Upon careful review and given the projected timelines for domestic cell makers to become operational, U.S. DEPARTMENT OF ENERGY deems adequate the current duration of the waiver and installation date requirement in the waiver.

In sum, the U.S. DEPARTMENT OF ENERGY has carefully considered the comments received and has determined that no changes to the waiver scope or duration will be made as a result of the comments.

For more information on the Build America, Buy America preference, please reference https://www.energy.gov/management/build-america-buy-america or www.MadeinAmerica.gov

APPENDIX: Awards and Selections under the Clean Energy Demonstrations on Current and Former Mine Land and Weatherization Assistance Program: Sustainable Energy Resources for Consumers.

Program	Recipient
Clean Energy Demonstrations on Current and Former Mine Land	Freeport Minerals Corporation
Clean Energy Demonstrations on Current and Former Mine Land	Rye Development
Clean Energy Demonstrations on Current and Former Mine Land	Nevada Gold Mines LLC
Clean Energy Demonstrations on Current and Former Mine Land	Mineral Basin Solar Power, LLC
Clean Energy Demonstrations on Current and Former Mine Land	Nicholas County Solar Project, LLC, a subsidiary of Savion, LLC
Weatherization Assistance Program: Sustainable Energy Resources for Consumers	All Annual and BIL funded projects.
Weatherization Assistance Program	All Annual and BIL funded projects.