



Response to Notice 2022-51: Request for Comments on Domestic Content Requirements under the Inflation Reduction Act of 2022

This submission provides responses to questions posed in Notice 2022-51 (“Notice”) regarding the domestic content provisions. Further, this response provides examples of regulatory guidance that the Treasury and the IRS can issue in order to implement the domestic content provisions in a manner consistent with the responses to questions.

OVERVIEW

As described in detail below, Treasury and the IRS should rely on the provisions of 49 C.F.R. 661 to ensure that the domestic content provisions meet three key criteria:¹

1. The cost of solar cells produced in the U.S. and incorporated as a component into solar panels assembled outside of the U.S. should be included in the numerator of the 40% domestic content test. Such a rule is consistent with the statutory requirement that no less than 40% of “the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.” (emphasis added). This will ensure that there is an incentive for solar cells to be manufactured in the U.S. Such a rule is also consistent with well-established rules and regulations enforced by the Department of Commerce and Customs and Border Protection which determine the country of origin of the solar panel based on the origin of the solar cell.
2. The origin of subcomponents of a solar panel should not be taken into account when determining whether the domestic content requirements are satisfied. Such a rule is consistent with the Buy America rules in 661.5(d)(2), which qualifies manufactured products “regardless of the origin of its subcomponents.” If Treasury were to go beyond the existing Buy America rules, it would be required to develop new and novel requirements that are not administered by any other agency and would create significant compliance and enforcement challenges.
3. Labor cost for an energy project (e.g., the installation costs for a solar system) should not be included in the numerator or denominator. Such a rule is consistent with the statutory requirement that no less than 40% of “the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.” Per the statute, the denominator is “the total costs of all such manufactured products of such facility,” and the numerator is the cost of “manufactured products (including components) which are mined, produced, or manufactured in the United

¹ In particular, the relevant provisions of 49 C.F.R. 661 for purposes of implementing Section 45(b)(9)(B) are 49 C.F.R. 661.3, 661.5, and 661.6. Several other provisions, including 661.11 and 661.12 are not relevant for purposes of implementing 45(b)(9)(B) because they apply only to specific products (e.g. rolling stock) that are not within the scope of the tax credit.

States.” Further, labor costs for an energy project are necessarily incurred on site in the U.S., so it would be illogical to incentivize something that cannot be done offshore in any event. Moreover, the IRA created an additional credit that applies when laborers working on a project are paid prevailing wage and meet minimum apprenticeship requirements. To include labor in the domestic content incentive calculation would diminish the incentive to meet the prevailing wage and apprenticeship requirements by providing a higher tax credit even when those requirements are not met.

4. For a solar panel that does not qualify under 49 CFR section 661.5(d) (requiring that manufacturing activities and all direct components be made in the U.S.), the labor cost for assembling such panel should not be taken into account. Permitting the mere assembly of components to count towards toward the 40% domestic content rule would significantly diminish the incentive to produce the components in the U.S. and is contrary to the 40% domestic content rule in the statute, which tests only the value of “manufactured products (including components) which are mined, produced, or manufactured in the United States” as a percentage of “the total costs of all such manufactured products of such facility,” and does not test for labor.

RESPONSES TO QUESTIONS

(1)(a) What regulations, if any, under 49 C.F.R. 661 (such as 49 C.F.R. 661.5 or 661.6) should apply in determining whether the requirements of section 45(b)(9)(B) are satisfied; why?

- For the general rule in Section 45(b)(9)(B)(i), Treasury’s guidance should apply the general rule for manufactured products in 49 C.F.R. 661.5(d), which provides:
 - “For a manufactured product to be considered produced in the United States:
 - (1) All of the manufacturing processes for the product must take place in the United States; and
 - (2) All of the components of the product must be of U.S. origin. A component is considered of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents.”
 - Such a rule is required by the statute:
 - “Section 45(b)(9)(B)(i) IN GENERAL. The requirement described in this clause is satisfied with respect to any qualified facility if the taxpayer certifies to the Secretary (at such time, and in such form and manner, as the Secretary may prescribe) that any steel, iron, or manufactured product which is a component of such facility (upon completion of construction) was produced in the United States (as determined under section 661 of title 49, Code of Federal Regulations).”

- Treasury’s guidance should adopt the definition of “end product” in 49 C.F.R. 661.3 (Definitions):
 - In relevant part, “end product” means an article “which directly incorporates constituent components at the final assembly location” and “is ready to provide its intended end function or use without any further manufacturing or assembly change(s)”.
 - Treasury’s guidance should clarify that an “end product” includes a solar panel.
 - A solar panel is an end product because it is ready to generate energy without any further manufacturing or assembly changes. See Section 48(a)(3)(A), which defines the term “energy property,” and Treas. Reg. sec. 1.48(d)(3), which provides that “solar energy property includes equipment that uses solar energy to generate electricity...” and “this process involves the transformation of sunlight into electricity through the use of such devices as solar cells or other collectors.”
- Treasury’s guidance should include a de minimis exception so that de minimis amounts of non-domestic directly incorporated components of a solar panel (e.g., glue) do not prevent the incentive from applying to a domestically-produced solar panel.
 - For example, a de minimis exception can provide that for purposes of the general rule, a component shall not be considered directly incorporated into the product if the component is not of U.S. origin and the collective cost of such components of non-U.S. origin for such manufactured product is less than 5% of the total cost of goods sold for the manufactured product.

Such a rule is consistent with exceptions to 49 C.F.R. 661.5(d) to further U.S. trade policy goals. Treasury’s guidance should follow that example by allowing for a de minimis exception for direct components in solar panels in order to further the U.S. tax policy goal of U.S. manufacturing of solar panels.

What is the result of the foregoing guidance? Under the general rule in section 45(b)(9)(B)(i), the incentive is available for solar panels manufactured in the United States provided that the solar cells and other directly incorporated components (with a de minimis exception) were also manufactured in the United States. A component that is directly incorporated into the end product is of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents. See 49 U.S.C. section 661.5(d) (general requirements for a manufactured product). Under the deeming rule in section 45(b)(9)(B)(iii), a solar panel manufactured outside the United States is included in the numerator of the 40% test for the energy project only to the extent of the cost of components manufactured in the United States.

(1)(d) What records or documentation do taxpayers maintain or could they create to substantiate a taxpayer’s certification that they have satisfied the domestic content requirements?

- Treasury’s guidance should apply the Certificate of Compliance with Buy America Requirements in accordance with 49 C.F.R. 661.6 Certification Requirements for Components and Manufactured Products.
- The certification requirement for a directly incorporated component should be deemed satisfied if the manufacturer of the manufactured product obtains from the manufacturer of the directly incorporated component a Certificate of Compliance with Buy America Requirements in accordance with 49 C.F.R. 661.6.

Treasury should adopt this requirement because the incentive is easier for the IRS to administer and enforce, and for taxpayers to comply, if an existing certification for non-tax purposes is used. This approach is consistent with Congress’s intent that the determination of production in the United States be “determined under section 661 of title 49”, per IRC section 45(b)(9)(B)(i).

(2)(a) Does the term “component of a qualified facility” need further clarification? If so, what should be clarified and is any clarification needed for specific types of property such as qualified interconnection property?

- Treasury’s guidance should clarify that a “component of a qualified facility” includes solar panels installed in residential and commercial projects.
- A solar panel is a component of a qualified facility because it is ready to generate energy without any further manufacturing or assembly changes. See Section 48(a)(3)(A), which defines the term “energy property,” and Treas. Reg. sec. 1.48(d)(3), which provides that “solar energy property includes equipment that uses solar energy to generate electricity....” and “this process involves the transformation of sunlight into electricity through the use of such devices as solar cells or other collectors.”
- Note that while solar cells are not a “component of a qualified facility” for purposes of the general rule in section 45(b)(9)(B)(i), solar cells are a “component” of a “manufactured product” for purposes of the 40% domestic content test in section 45(b)(9)(B)(iii). We address the 40% domestic content test in our response to the next question.

(2)(b) Does the determination of “total costs” with regard to all manufactured products of qualified facility that are attributable to manufactured products (including components) that are mined, produced, or manufactured in the United States need further clarification? If so, what should be clarified? Is guidance needed to clarify the term “mined, produced, or manufactured”?

- Treasury’s guidance should define “total costs” as “the total costs of all manufactured products of a qualified facility” because that is the definition of the denominator provided in IRC section 45(b)(9)(B)(iii). Treasury should clarify that labor costs (including, but not limited to, labor costs for installing the manufactured products at a qualified facility, labor costs for assembling a solar panel that includes non-domestic components, etc.) are not included in “total costs.”

- Inclusion of labor costs in the calculations would severely diminish the incentive to actually manufacture the components in the United States and would have the unintended consequence of diminishing the incentive included in the IRA for the payment of prevailing wage and the use of a minimum amount of apprenticeship labor. As a practical matter, U.S. labor will be used in the installation of any component or project in the U.S. Thus, to include labor costs in the calculation is essentially incentivizing activity that would already occur and by extension diminish the incentive to otherwise produce components in the U.S. Further, if labor costs are included in the calculation for the domestic content provision it will diminish the other labor incentives included in the IRA by providing a higher credit, even if the prevailing wage and apprenticeship requirements are not met.
- Under the deeming rule in section 45(b)(9)(B)(iii), a solar panel manufactured outside the United States is included in the numerator of the 40% test only to the extent of the cost of components manufactured in the United States. A component should be considered mined, produced, or manufactured in the United States if the component is manufactured in the United States, regardless of the origin of its subcomponents.

Example. D installs a solar energy system at a facility for \$120. The \$120 represents \$10 of profit for D, \$30 for D’s labor costs, \$10 for racks, \$20 for an inverter, and \$50 for solar panels. D purchased the racks from X, which certified to D that it manufactured the racks in the United States using steel components that were manufactured in the United States. D purchased the inverter from Y, which manufactured the inverter outside the United States using components manufactured outside the United States. D purchased the solar plans from Z, which certified that it manufactured the solar panels outside of the United States using as components solar cells with a cost of \$25 that were produced in the United States.

Analysis: The cost to X of the manufactured products (including components) manufactured in the United States is 43.75% of the total costs of the manufactured products of such facility (\$10 racks + \$25 solar cells, divided by \$80 of manufactured products of such facility). D obtained Certificates of Compliance with Buy America Requirements for the racks and solar cells and maintains the certificates in its records. D shall treat the total cost of \$80 for the manufactured products at the facility as deemed to have been produced in the United States under the 40% test.

(2)(e) Does the treatment of subcomponents with regard to manufactured products need further clarification? If so, what should be clarified?

- Treasury’s guidance should clarify that for purposes of applying the 40% test in the deeming rule, only components directly incorporated into a manufactured product need be mined, produced, or manufactured in the United States; subcomponents of a component need not be mined, produced, or manufactured in the United States.
- This approach is consistent with Congress’s intent that production in the United States be “determined under section 661 of title 49.” See 49 C.F.R. 661.5(d)(2) (“A component is considered of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents.”). If Treasury were to go beyond the this rule, then it would be required to develop new and novel requirements that are not administered by any other agency and would create significant compliance and enforcement challenges.

RELEVANT MARKET AND INDUSTRY BACKGROUND

Implementing the domestic content requirements in Section 45(b)(9)(B) in a manner consistent with the above requirements of 49 C.F.R. 661 will ensure that the domestic content provision incentivizes the domestic production of solar cells. Absent such requirements other provisions of the IRA and commercial realities will likely drive private sector investment to solar panel assembly operations rather than solar cell production in the U.S.

The current state: No incentive for a U.S. solar cell industry

At present, the existing production tax credit for solar products incorporated in Section 45X is a valuable tool for incentivizing solar cell production in the U.S. but the structure of that credit provides a much stronger incentive to invest in module assembly operations than solar cell production. The credit rate for solar panels in 45X is nearly twice that of the credit rate for solar cells (7 cents versus 4 cents). However, the capital costs required for a new solar cell plant are approximately twice that of the costs for a new solar panel assembly plant. Thus, given the combination of higher credit rate and lower capital costs, investors will be strongly incentivized to invest in solar panel assembly operations in the United States, but not for solar cell production.

The impact of the difference in the credit rate under 45X will be magnified by two other conditions present in the market for solar cells.

First, trade rules and policies already incentivize investment in solar panel assembly operations over solar cell production. Imports of solar panels from all markets are subject to a tariff of 14.75% under the Section 201 regime.² In contrast, imports of solar cells are not subject to Section 201 tariffs until imports exceed 5 GW, which has not happened and is not projected to happen in the short or medium term.³ As a result, this tariff differential incentivizes solar panel assemblers in the U.S. to import solar cells and incorporate them into solar panels assembled in the U.S.

Second, the largest CSPV (crystalline silicon photovoltaic) solar panel assemblers in the U.S. are subsidiaries of foreign companies and rely on solar cells imported into the U.S. from a related party to support their domestic solar panel assembly operations. Market analysis prepared by the U.S. Department of Energy found that in 2020, more than 50% of total solar panel production in the U.S. was accounted for by firms that source solar cells from related or parent companies whose solar cell production is located in Asia.⁴ Suniva believes that since 2020, the share of solar panel assembly in the U.S. accounted for by these companies has increased further. These companies are unlikely to purchase solar cells from an unrelated third party in the U.S. over internal transfers from their parent or sister corporations in Asia under current market conditions. As a result, it is likely that for the near period of time the largest market for U.S.-produced solar

² The tariff of 14.75% is effective through February 5, 2023. Thereafter imports of solar panels from all sources are subject to a tariff of 14.5%. See, Presidential Proclamation 10339, Feb. 4, 2022, 87 Fed. Reg. 7357 (Feb. 9, 2022).

³ See, <https://www.cbp.gov/trade/quota/bulletins/qb-22-507-solar-cells-and-modules-2022>.

⁴ Department of Energy, Solar Photovoltaics, Supply Chain Deep Dive, U.S. Department of Energy Response to Executive Order 14017, "America's Supply Chains," February 24, 2022, Figure 51, p. 49. Available at <https://www.energy.gov/sites/default/files/2022-02/Solar%20Energy%20Supply%20Chain%20Report%20-%20Final.pdf>.

cells will be foreign solar panel assemblers that import U.S. produced solar cells from an unrelated party and incorporate them into solar panels outside the U.S. and subsequently export those models to the U.S. Such imported solar panels are not subject to existing tariffs on solar panels because U.S. trade rules treat such solar panels as being of U.S. origin. If the domestic content regulations do not incentivize such use of U.S. produced solar cells it is possible that the market for U.S. produced solar cells will not be large enough to support a robust U.S. industry, and thereby fail to achieve the intended goal of the domestic content incentive.

The future state: Incentive for a U.S. solar cell industry from domestic content regulations

The implementation of the domestic content guidance or regulations are the Administration's best opportunity to create a U.S. solar cell industry by effectively restricting the new incentive to solar panels that contain U.S.-made solar cells. Further, as noted above, guidance or regulations that permit a solar panel containing a U.S. produced solar cell, irrespective of the location of final assembly of the solar panel, to qualify for the domestic content incentive would be consistent with the precedents and rulings regarding the country of origin for solar panels established by Customs and Border Protection and the Department of Commerce. Both of these agencies have repeatedly made rulings and determinations that unequivocally define the origin of the solar panel based on the origin of the solar cell. Thus, such rulings deem solar panels assembled outside the U.S. using solar cells produced in the U.S. as U.S. origin end products. Examples of the relevant rulemaking are included as Attachment 1 and Attachment 2.

As noted above, the solar cell is the heart of a solar panel and is by far and away the most significant component directly incorporated into a solar panel by cost. Under any circumstance a U.S.-produced solar cell incorporated in a solar panel, irrespective of where the final assembly of that solar panel takes place, will account for over 50% of the total cost of all components directly incorporated into a solar panel.

PROPOSED EXAMPLES OF REGULATORY GUIDANCE

Statute:

Section 45(b)(9)(B)(i) IN GENERAL. The requirement described in this clause is satisfied with respect to any qualified facility if the taxpayer certifies to the Secretary (at such time, and in such form and manner, as the Secretary may prescribe) that any steel, iron, or manufactured product which is a component of such facility (upon completion of construction) was produced in the United States (as determined under section 661 of title 49, Code of Federal Regulations).

Regulation:

(A)(i) General Rule. The requirement is satisfied for a manufactured product if:

(A) all of the manufacturing processes for the manufactured product take place in the United States; and (B) all of the components that are directly incorporated into the manufactured product are of U.S. origin. A component is considered of U.S. origin if it is manufactured in the United States, regardless of the origin of its subcomponents. This paragraph shall only apply if the certification requirements in (B)(ii) are satisfied.

(A)(ii) De Minimis Exception. For purposes of (A), a component shall not be considered directly incorporated into the product if the component is not of U.S. origin and the collective cost of such components of non-U.S. origin for such manufactured product is less than 5% of the total cost of goods sold for the manufactured product.

Example 1: X manufactures and sells solar panels. All of X's manufacturing processes for the solar panels take place in the United States. All of the components that are directly incorporated into the solar panel are of U.S. origin, including the solar cells, metal frames, glass, and back sheet. Some of the solar cells were made using wafers produced outside of the U.S.

Analysis: The requirement is satisfied for the solar panels because all of X's manufacturing processes for the solar panels take place in the United States, and all of the components that are directly incorporated into the solar panels are of

U.S. origin. The non-U.S. origin of any subcomponents (e.g., wafers) of U.S. components (e.g., solar cells) is acceptable.

Example 2: X manufactures and sells solar panels. All of X's manufacturing processes for the solar panels take place in the United States. All of the components that are directly incorporated into the solar panel are of U.S. origin, except the solar cells, which were produced outside of the U.S. using wafers of U.S. origin.

Analysis: The requirement is not satisfied for the solar panel because a directly incorporated component (solar cells) is of non-U.S. origin. The fact that the solar cells were produced using subcomponents (wafers) of U.S. origin is irrelevant.

Example 3: X manufactures and sells solar panels. All of X's manufacturing processes for the solar panels take place in the United States. All of the components that are directly incorporated into the solar panel are of U.S. origin, including the solar cells, metal frames, glass, and back sheet. X also uses an anti-reflective coating and soldering material of non-U.S. origin in the production of the panels. The cost of the reflective coating and soldering material is less than 5% of the total cost of goods sold for the panel.

Analysis: The requirement is satisfied for the solar panel because all of X's manufacturing processes for the solar panels take place in the United States, and all of the components that are directly incorporated into the solar panel are of U.S. origin. The reflective coating and soldering material are excluded from the requirement under the 5% de minimis exception.

With regard to the implementation the domestic content incentive for manufactured products under the 40% test, the manufactured product test must focus on the costs of the components directly incorporated into the manufactured product, such as the solar panel.

Statute:

Section 45(b)(9)(B)(iii) MANUFACTURED PRODUCT. For purposes of clause (i), the manufactured products which are a qualified energy product shall be deemed to have been produced in the United States if not less than the adjusted percentage (as determined under subparagraph (C)) of the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States.

Regulation:

(B)(i) 40% Test for Manufactured Products. For purposes of (A)(i), the manufactured products of an energy project which are qualified energy products shall be deemed to have been produced in the United States if not less than the adjusted percentage (as determined under subparagraph (C)) of the total costs of all such manufactured products of such facility are attributable to manufactured products (including components) which are mined, produced, or manufactured in the United States. The denominator is the total cost of all manufactured products of the energy project. The numerator is the cost of all manufactured products of the energy project that were manufactured in the United States within the meaning of 49 C.F.R. section 661.5(d), and, for manufactured products that do not so qualify, the cost of all of the manufactured products' components that were manufactured in the United States. A component is considered mined, produced, or manufactured in the United States if the component is manufactured in the

United States, regardless of the origin of its subcomponents. Labor costs for the energy project and for manufactured products (including components) that are not manufactured in the United States within the meaning of section 49 C.F.R. section 661.5(d) are not included in the numerator or the denominator. This paragraph shall only apply if the certification requirements in (B)(ii) are satisfied.

(B)(ii) Certification Requirements for Components and Manufactured Products.

The certification requirement for a manufactured product or component of a manufactured product shall be deemed satisfied if the manufacturer of the manufactured product obtains from the manufacturer of the components a Certificate of Compliance with Buy America Requirements in accordance with section 661.6 of title 49, Code of Federal Regulations.

Example 1. D installs a solar energy system at a facility for \$120. The \$120 represents \$10 of profit for D, \$30 for D's labor costs, \$10 for racks, \$20 for an inverter, and \$50 for solar panels. D purchased the racks from X, which certified to D that it manufactured the racks in the United States using steel components that were manufactured in the United States. D purchased the inverter from Y, which manufactured the inverter outside the United States using components manufactured outside the United States. D purchased the solar panels from Z, which certified that it manufactured the solar panels outside of the United States using as components solar cells with a cost of \$25 that were produced in the United States.

Analysis: The cost to X of the manufactured products (including components) manufactured in the United States is 43.75% of the total costs of the manufactured

products of such facility (\$10 racks + \$25 solar cells, divided by \$80 of manufactured products of such facility). D obtained Certificates of Compliance with Buy America Requirements for the racks and solar cells and maintains the certificates in its records. D shall treat the total cost of \$80 for the manufactured products at the facility as deemed to have been produced in the United States under the 40% test.