

# Understanding the US Domestic Content Bonus: A Guide for Solar Manufacturers

Guidelines for Compliance and Certification.

**Content Partner: J. v. G. technology GmbH**

*Turnkey solar module production lines — since 1997*

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# Technical Overview: US Domestic Content Bonus Guide for Solar Manufacturers



Created as part of the PVKnowHow Knowledge Network



Prepared by J.v.G. Technology GmbH



European specialists in turnkey solar module production lines

# Key Project Data / Strategic Framework

**+10%**

## ITC Bonus

Additional Investment Tax  
Credit for qualifying  
domestic content projects

**40% → ...**

## Threshold (Phased)

Manufactured products  
domestic cost percentage —  
rising over time

**100%**

## Steel / Iron Rule

All structural steel and iron  
must be US-produced — no  
exceptions

**3**

## Focus Components

Solar modules, inverters, and  
trackers — primary targets  
for compliance

📄 Market: United States (IRA-driven) · Incentive: +10% ITC Domestic Content Bonus · Threshold: 40% → 55% (phased) · Focus: Solar modules, inverters, trackers · Complexity: High (cost + sourcing + certification) · Source: PVKnowHow / J.v.G. Technology GmbH

# The Problem: Complexity of US Domestic Content Rules

## Why It Is Difficult

- Two distinct rule categories must both be satisfied simultaneously
- Steel/iron and manufactured products are governed by separate standards
- Cost data must be obtained from multiple supply chain tiers
- Guidance has evolved across multiple IRS notices (2023-38, 2024-41, 2025-08)
- Regulations are phasing in higher thresholds year by year

## Consequences of Non-Compliance

- No access to the additional 10% ITC bonus
- For direct-pay entities: phased credit reductions of 10–15% from 2024–2025; 100% loss from 2026 onward
- Projects can proceed — but with reduced financial returns for investors
- Misclassification of components creates certification and audit risk

# The Opportunity: 10% ITC Domestic Content Bonus

## What It Is

- An additional 10 percentage points added to the base Investment Tax Credit
- Applicable under IRC Sections 48 / 48E (ITC) and 45 / 45Y (PTC)
- Raises effective ITC from 30% to 40% for qualifying projects
- Available for solar PV, onshore wind, and battery storage systems

## Who Benefits

- Project developers and owners claim the credit — not the manufacturer directly
- Creates strong market preference for domestically qualifying components
- A US-compliant module or tracker system commands a significant price premium
- Direct-pay (tax-exempt) entities also eligible but face stricter phaseout rules

## Strategic Impact

- The bonus is decisive for project economics in competitive utility-scale bids
- Manufacturers that qualify their products become preferred supply partners
- Stacks with prevailing wage / apprenticeship requirements for maximum credit
- Connects directly to Section 45X manufacturing incentives for US producers

# Requirements: Two Parallel Standards

Criterion	Steel / Iron Requirement	Manufactured Products Requirement
Domestic threshold	100% — all manufacturing processes must occur in the US	40% (rising to 55%) of total manufactured product cost must be US-sourced
Applies to	Structural steel/iron: racking (fixed-tilt), piles, ground screws, rebar in foundations	Solar modules, inverters, solar trackers, battery packs
Exemptions	Non-structural fasteners: nuts, bolts, screws, washers — not included	Steel/iron inside manufactured products is not subject to the 100% rule
Gate condition	Must be met first — failure disqualifies the project entirely	Only evaluated after steel/iron requirement is confirmed
Key note	Fixed-tilt racking = steel/iron. Trackers = manufactured products	Components, not subcomponents, are counted in the cost test

# Cost Calculation Logic: The Adjusted Percentage Rule

1

## Step 1 — Confirm Steel / Iron Compliance

Verify that 100% of all structural steel and iron components are US-manufactured

If this is not met, no further calculation is required — the bonus is not available

2

## Step 2 — Identify Manufactured Product Components (MPCs)

Classify each project component as a manufactured product or steel/iron item

Subcomponents (wafers in original guidance, screws, etc.) are excluded from the test

3

## Step 3 — Calculate the Domestic Cost Percentage

Formula: Domestic MPC cost ÷ Total MPC cost = Domestic Cost Percentage

Only components fully manufactured in the US count toward the numerator

4

## Step 4 — Compare Against Adjusted Percentage Threshold

If Domestic Cost Percentage  $\geq$  threshold (40%→55%), the project qualifies

Alternatively: elect the IRS Elective Safe Harbor to use pre-assigned DOE cost factors

5

## Step 5 — Certify and File

Submit domestic content certification with IRS Form 3468 (ITC) or Form 8835 (PTC)

Certification must be maintained annually; supporting documentation retained

# Example Breakdown: Ground-Mount Solar Tracker Project

Illustrative calculation using IRS Notice 2024-41 safe harbor assigned cost percentages (ground-mount tracker, crystalline silicon):

Component	Category	Assigned Cost %	US-Made? → Counts
PV Cells (in module)	Manufactured Product	~36.9%	Yes → 36.9%
Module Frame / Backrail	Manufactured Product	~5.3%	Yes → 5.3%
Torque Tube (tracker)	Manufactured Product	~9.7%	Yes → 9.7%
Inverter	Manufactured Product	Variable	No → 0%
Steel Piles / Rebar	Steel / Iron	—	100% US required

✔ **Result:** Cells (36.9%) + Frame (5.3%) + Torque Tube (9.7%) = **51.9% domestic content** — exceeds the 40% threshold and qualifies for the 10% bonus adder. Source: IRS Notice 2024-41 example mechanics (BDO / IRS).

# Safe Harbor: The Elective Alternative

## What the Safe Harbor Offers

- Introduced in IRS Notice 2024-41; updated in Notice 2025-08
- Allows use of DOE-assigned cost percentages instead of supplier direct-cost data
- Eliminates need to obtain confidential manufacturing cost figures from each supplier
- Available for: solar PV, onshore wind, and battery storage (BESS)
- Must be elected for the entire project — cannot be applied selectively

## Key Safe Harbor Components (Solar PV Tracker)

- PV module (cells, frame, glass, encapsulant, junction box)
- Inverter (central, string, or module-level power electronics)
- Solar tracker (torque tube, drive, structural fasteners)
- Steel piles / ground screws (steel/iron category — 100% US required)
- Rebar in concrete foundation (steel/iron — 100% US required)

- 📄 Notice 2025-08 split the solar PV table into ground-mount and rooftop sub-tables and added optional cost percentages for modules using domestically produced wafers.

# Phased Threshold Escalation

1

**2024 and Earlier**

40% manufactured product threshold — entry-level compliance window

2

**2025 (from June 16 onward)**

45% threshold applies to projects beginning construction in this period

3

**2026**

Threshold rises to 45–50% range; domestic wafer incentives become strategically critical

4

**2027 onward**

55% final threshold — full phase-in complete; direct-pay entities lose eligibility if not compliant



**Critical:** For direct-pay (tax-exempt) entities beginning construction in 2026 or later without meeting domestic content requirements, the elective payment bonus is reduced to zero. Planning timelines must account for these escalating thresholds.

# Challenges: Supply Chain, Cost, and Documentation

## Supply Chain Sourcing

- US-made solar cells remain limited in availability — cell supply is the highest-cost MPC
- Thin-film (US-made) is constrained; crystalline silicon cell supply depends on wafer origin
- US tracker component suppliers exist but coverage is uneven across all sub-parts
- Few utility-scale inverters qualify as US-manufactured products

## Cost Verification Complexity

- Default method requires direct manufacturing cost data from each supplier tier
- Many manufacturers — including foreign — are reluctant to share cost breakdowns
- Safe harbor simplifies this but fixes percentages that may not reflect actual project economics
- Mixed-origin module batches (partial US, partial non-US) require proportional calculations

## Documentation and Certification Risk

- Developer must submit a formal domestic content certification with each tax return
- Requires Domestic Content Requirement (DCR) certificates from all equipment suppliers
- Project invoices must separate steel/iron component costs from manufactured product costs
- Guidance continues to evolve — compliance strategies must be reviewed per notice update

# Strategic Implications for Manufacturers

1

## Qualify Your Product

US-compliant modules, inverters, or tracker components become preferred supply — manufacturers that qualify command market access and price premiums

2

## Design for Compliance

Source US-made cells, frames, and torque tubes during product and supply chain design — retrofitting later is costly and may miss construction start windows

3

## Certify and Document

Build a documentation infrastructure: DCR certificates, cost segregation records, and supplier attestations — auditable from day one of production

- ❏ An experienced European turnkey provider integrates domestic content compliance strategy into full-line manufacturing methodology — reducing the learning curve for new manufacturers entering US-facing production.

# Conclusion: A High-Complexity, High-Stakes Opportunity

## The Incentive Is Real


- A genuine 10 percentage point ITC uplift — decisive for project IRR
- Creates durable demand for US-compliant solar manufacturing capacity
- Stacks with Section 45X manufacturing credits for domestic producers

## The Rules Are Complex

- Dual-track requirements (steel/iron + manufactured products) must both be met
- Thresholds escalate: 40% → 55% through 2027 and beyond
- Guidance is evolving — staying current with IRS notices is non-negotiable

## The Path Forward

- Use the elective safe harbor where advantageous; evaluate against actual costs
- Prioritize cell and module domestication — highest cost-share MPC
- Partner with proven turnkey manufacturing concepts that understand US compliance requirements

 Source: PVKnowHow / J.v.G. Technology GmbH · IRS Notices 2023-38, 2024-41, 2025-08 · IRC Sections 45, 45Y, 48, 48E · All data based on published regulatory guidance. Consult qualified legal and tax counsel for project-specific application.

# About the Content Partner

## **J. v. G. technology GmbH** – The DESERT Company

Founded in 1997 in Bavaria, Germany. Family-owned engineering company specializing in turnkey solar module production lines.

More than 90 factory projects delivered worldwide.

On-site team training included – no prior manufacturing experience required.

### **Key areas:**

Turnkey PV manufacturing lines | DESERT Technology® |  
TÜV-certified module designs | Factory planning to production

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