

A Business Guide to SAZ Certification for Solar Modules in Zimbabwe

A Business Guide to Regulatory Compliance and Market Access

Content Partner: J. v. G. technology GmbH

Turnkey solar module production lines — since 1997

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Technical Overview: SAZ Certification for Solar Modules in Zimbabwe



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

~5 MW

Factory Capacity
Typical small-scale
automated solar module
production line

3–4 mo

Certification Timeline
End-to-end SAZ
certification process under
ZWS 1018:2018

ZWS

Standard Applied
ZWS 1018:2018 —
harmonized with IEC 61215 /
IEC 61730

ZW

Target Market
Zimbabwe — regulated by
ZERA / certified by SAZ

 Line type: Automated solar module production · Market: Zimbabwe · Standard: ZWS 1018:2018 · Source: PVKnowHow / J.v.G. Technology GmbH

The Core Problem: Market Access Blocked Without Certification

The Barrier

- Selling uncertified solar modules in Zimbabwe is illegal under ZERA regulation
- No SAZ mark = no legal pathway to the domestic market
- Uncertified products are subject to seizure, fines, and enforcement action
- Applies to both imported products and locally manufactured modules

The Consequence

- Manufacturers without certification cannot sell — regardless of product quality
- Distribution channels require proof of compliance before listing products
- Reputational risk compounds financial penalties if non-compliant products reach market
- Certification is therefore a prerequisite, not an option

Regulatory Framework: ZERA and SAZ

ZERA — Zimbabwe Energy Regulatory Authority

- The statutory body responsible for energy sector oversight in Zimbabwe
- Mandates that all solar modules and components sold in the country must carry SAZ certification
- Sets and enforces compliance standards across the full solar supply chain

SAZ — Standards Association of Zimbabwe

- National standards body; founded 1957, incorporated 1960
- Operates third-party product certification schemes on behalf of the state
- Issues the SAZ Product Mark — the required compliance label for solar modules

Division of Roles

- ZERA = regulatory authority (mandates certification)
- SAZ = certification body (conducts testing, audits, and issues marks)
- Both bodies must be satisfied before a module can legally be placed on the market

Why Certification Matters: Market Access and Consumer Trust

Market Access

- Certification is the legal gateway to the entire Zimbabwean domestic market
- Distribution partners and project developers require documented SAZ compliance
- Without it, a factory cannot generate revenue regardless of production capacity
- Early certification reduces time-to-revenue for new manufacturing entrants

Consumer Trust

- The SAZ mark acts as a publicly recognized seal of quality
- Differentiates certified local products from low-cost, unverified imports
- Signals to buyers that modules are safe, reliable, and perform as specified
- Builds brand credibility in a market with significant prior quality issues

The Standard: ZWS 1018:2018 and Its International Alignment

ZWS 1018:2018 — The Mandatory National Standard

- Governs crystalline silicon (c-Si) solar modules sold or manufactured in Zimbabwe
- Published by SAZ; mandatory compliance required for all market participants
- An existing IEC certificate is beneficial but does not replace SAZ approval

IEC 61215 — Design Qualification and Performance

- Covers electrical performance, thermal cycling, humidity-freeze, and UV testing
- ZWS 1018:2018 is harmonized with this standard
- Factories designed to IEC 61215 are well-positioned to satisfy SAZ requirements

IEC 61730 — Safety Qualification

- Covers module construction safety, insulation, and electrical protection
- ZWS 1018:2018 is harmonized with this standard
- Provides a clear, internationally benchmarked framework for production quality control

Step-by-Step Certification Process

- 1 — Documentation Submission**

Technical file submitted to SAZ: product specifications, module design, bill of materials

Application accepted before physical testing can proceed
- 2 — Laboratory Testing**

SAZ requires finished modules submitted to an accredited laboratory for verification

Tests include: visual inspection, flash test (STC power output), insulation test, wet leakage current test
- 3 — Labeling Compliance**

ZWS 1018:2018 specifies mandatory information permanently affixed to the back of every module

Label content, format, and durability must meet standard requirements before approval
- 4 — Factory Audit**

SAZ conducts an on-site inspection to verify production processes and quality controls

Ongoing surveillance audits required — certification is valid for a defined period (typically 1–3 years)

Timeline and Cost Considerations

Phase	Typical Duration	Key Consideration
Documentation Preparation	2–4 weeks	Technical file completeness determines speed of acceptance
Laboratory Testing	4–8 weeks	Sample modules must be finished production-grade units
Labeling Review	1–2 weeks	Label design must be finalized before production starts
Factory Audit & Approval	2–4 weeks	Production line must be operational and auditable
Total (estimated)	~3–4 months	Assuming no rework; parallel processing of phases where possible
Certification Validity	1–3 years	Renewal/surveillance audit required at end of term

Operational Implications for Factory Planning

Production Readiness

- Factory must be operational before the audit phase can proceed
- Certification timeline (~3–4 months) must be built into the overall project schedule
- First production runs should be planned with certification sample output in mind

Quality Systems

- In-line inspection and process control must be documented and auditable
- Lamination, stringing, and testing parameters must meet ZWS 1018:2018 requirements
- A proven turnkey manufacturing concept reduces gap between production start and audit readiness

Labeling & Traceability

- Module labeling must be integrated into the production line from day one
- Serial number traceability supports both audit compliance and warranty management
- Label durability must be field-verified before submission

Risks of Non-Compliance

Legal and Financial Penalties

- Selling uncertified solar products is illegal and subject to ZERA enforcement
- Penalties can include fines, seizure of goods, and suspension of operations
- Non-compliant inventory cannot be sold or transferred pending resolution

Reputational Damage

- Association with substandard or uncertified products damages long-term brand position
- Distribution partners and project developers will delist non-compliant suppliers
- Recovery from a compliance failure in a small, relationship-based market is difficult

Operational Disruption

- Retroactive certification attempts are costly and time-consuming
- Production may be halted pending audit clearance
- Delayed market entry compounds the financial impact of non-compliance

Strategic Takeaway: Certification as Competitive Advantage

1

Legal Entry Point

SAZ certification is the mandatory key to the Zimbabwean market — without it, no revenue is possible regardless of factory capacity

2

Quality Signal

The SAZ mark differentiates certified local production from low-cost, unverified imports — directly supporting pricing power and buyer confidence

3

Long-Term Position

Early certification, built into the factory project plan, creates a durable competitive moat that late entrants will struggle to replicate quickly

- ❏ An experienced European turnkey provider integrates certification-readiness into full-line process methodology — reducing compliance risk for new manufacturers entering the Zimbabwean market.

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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