

Your Go-To Guide: Setting Up Solar Panel Production in Kenya – Regulations, Permits & KEBS Secrets

Regulatory Framework, Compliance & Market Entry

Content Partner: J. v. G. technology GmbH

Turnkey solar module production lines — since 1997

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Technical Overview: Solar Production Regulations and KEBS Standards in Kenya



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

Kenya

Region

Target market for solar module production line setup and regulatory compliance

12–24...

Timeline

Estimated setup and full regulatory approval period

Varies

Investment

Project-specific; scale-dependent on line capacity and automation level

3

Key Authorities

EPRA, KEBS, and NEMA govern licensing, standards, and environmental compliance

📄 Factory type: Solar module production line · Focus: Regulatory setup & compliance · Source: PVKnowHow / J.v.G. Technology GmbH

Kenya's Regulatory Framework: Overview

Primary Legislation

- **Energy Act No. 1 of 2019** — consolidates Kenya's energy law and anchors renewable energy regulation
- Mandates compliance with safety, quality, and environmental standards for all energy sector operations
- Establishes EPRA as the primary regulatory authority for the energy and petroleum sector
- Supports the Renewable Energy Feed-in-Tariff (FiT) system

Supporting Regulations

- **Energy (Solar PV Systems) Regulations, 2012** — governing standard for solar import, installation, and manufacturing
- Draft updates (2019/2020) proposed to align with the 2019 Energy Act
- Draft 2025 EPRA Solar PV Regulations published for public review
- EPRA Electric Power Undertaking Licensing Regulations, 2024 (draft)

Key Regulatory Authorities

EPRA — Energy & Petroleum Regulatory Authority

- Primary regulator for Kenya's entire energy and petroleum sector
- Issues manufacturing, installation, import, and sales licenses for solar PV
- Sets and enforces regulatory standards for electricity generation
- Market integration: clients operate under EPRA's framework — product alignment is essential

KEBS — Kenya Bureau of Standards

- National body responsible for product quality, safety, and performance standards
- KEBS certification is a prerequisite for market access
- Standards aligned with IEC international benchmarks (KS IEC 61215, KS IEC 61730)
- Mandates product labeling: performance specs, manufacturer details, safety warnings

NEMA — National Environmental Management Authority

- Oversees all environmental compliance for industrial operations
- Mandates Environmental Impact Assessment (EIA) before construction begins
- Covers water usage, waste management, chemical handling, air quality, and noise
- Ongoing environmental monitoring required post-commissioning

Licensing Process & Required Permits

1 — Company & Land Registration
Certificate of Incorporation; CR12 (directors/shareholders); proof of land ownership or lease
County-level business permit from the local government where the factory will be located

2 — NEMA Environmental Clearance
EIA must be initiated early — not a final step; typically required before construction begins
Engage a licensed EIA expert; submit assessment covering waste, water, air quality, noise

3 — EPRA Manufacturing License Application
Tax Compliance Certificate (KRA); T3 solar technician certificate for technical team
Application submitted via KenInvest eProcedures portal (eprocedures.investkenya.go.ke)

4 — KEBS Product Certification
Product testing against KS IEC 61215 (design qualification) and KS IEC 61730 (safety)
Initiate certification process in parallel with facility setup — not after production starts

5 — Operational Launch
All permits in hand; realistic total approval timeline: 6–12 months for national-level approvals
Minor county-level variations in process and fees — early engagement with local authorities advised

Quality Standards: KEBS & IEC Alignment

Standard	Scope	Key Requirements
KS IEC 61215	Design qualification & type approval for crystalline silicon PV modules	Thermal cycling, humidity, UV exposure, mechanical load testing
KS IEC 61730	PV module safety qualification	Prevention of electrical shock, fire hazards, and personal injury
KEBS Labeling	Product labeling requirements	Performance specs, manufacturer details, country of origin, safety warnings
Warranty (2012 Regs)	Minimum warranty obligations for solar components	Draft 2019 regulations proposed minimum 10-year warranty for solar panels
License Validity	Periodic renewal requirement	Draft 2019/2020 updates proposed 3-year license validity period

 KEBS certification signals product reliability and safety to the market — a prerequisite for competing with established international brands in Kenya.

Environmental Compliance: EIA & Waste Management

Environmental Impact Assessment (EIA)

- Mandatory for all new solar manufacturing facilities — must be completed before construction
- Managed by NEMA; requires engagement of a licensed EIA expert
- Frequent oversight: EIA is often treated as a final step rather than an early-phase requirement
- Underestimating EIA timeline is a common cause of project delays

Operational Environmental Standards

- Water usage and effluent management: regulated discharge and treatment requirements
- Chemical handling and disposal: solvents, adhesives, and lamination materials require controlled waste streams
- Air quality and noise levels: factory emissions must remain within prescribed thresholds
- Facilities consuming >180,000 kWh/year must appoint an energy manager and conduct audits every four years

Waste Management: End-of-Life Modules

- Emerging regulatory focus on PV waste streams as the installed base grows
- Manufacturers should plan for take-back and recycling procedures in facility design
- Aligns with Kenya's Green Manufacturing Policy (SEforALL framework) and Vision 2030 sustainability targets

Government Incentives: VAT, Duties & SEZ Benefits

VAT Exemption

- Solar equipment exempt from the standard 16% VAT (Finance Act, 2021 reinstatement)
- Applies to specialized assembly machinery and finished solar modules
- Also covers raw material inputs used in assembling solar modules
- Governed by VAT Act Sections 14(1)(e) and 15(n)

Import Duty Waivers

- Core machinery (e.g., laminators, stringers, framing stations) eligible for customs duty exemption
- Raw materials — solar cells, encapsulant film, backsheets — eligible for import duty reduction
- Duty relief can reduce initial machinery investment by an estimated 15–25%
- Investment Deduction Allowance (IDA): 100% deduction of investment value over multiple years

Special Economic Zones (SEZs)

- 12 gazetted SEZs available; offer full tax and duty exemption on construction and production imports
- Preferential corporate tax rates or tax holidays for qualifying manufacturing ventures
- Streamlined infrastructure: reliable power, water, and logistics access
- One-stop-shop service for permits and licenses via the SEZ Authority

 Incentives are anchored in Kenya's Vision 2030, the Investment Promotion Act, and the SEZ Act — providing a stable policy foundation for long-term planning.

Market Challenges & Opportunities

Key Challenges

- Complex, multi-authority approval process with interdependent timelines (EPRA, KEBS, NEMA)
- EIA and KEBS certification frequently underestimated in project planning phases
- Minor county-level regulatory variation adds administrative complexity
- VAT policy history shows potential for legislative reversals — monitoring KRA updates is essential
- Skilled technical workforce (T3-certified technicians) remains a constrained resource

Market Opportunities

- Growing domestic demand driven by energy access targets and electrification programs
- Strong government policy commitment to local solar manufacturing (Green Manufacturing Policy)
- Regional export potential via SEZ/EPZ frameworks for East African markets
- Access to development finance institutions (DFIs) and international climate funds
- First-mover advantage in a nascent local manufacturing sector

Implementation Roadmap

1

Phase 1: Pre-Investment

Feasibility study; regulatory mapping; engagement with KenInvest, EPRA, KEBS, NEMA; site selection (SEZ vs. standard industrial zone)

2

Phase 2: Approvals

Company registration; EIA initiation; EPRA license application; KEBS certification process launch — run in parallel to reduce total timeline

3

Phase 3: Setup

Factory construction; production line procurement and installation via an experienced turnkey manufacturing concept; staff recruitment and T3 certification

4

Phase 4: Production

Trial production; quality audits; KEBS product certification submission; market launch with full regulatory compliance in place

- ❏ A proven turnkey manufacturing concept integrates regulatory compliance methodology into full-line process delivery — reducing the setup learning curve for new market entrants in Kenya.

Strategic Compliance Considerations

Regulatory Sequencing

- EIA and KEBS certification must be initiated early — not treated as end-of-project formalities
- A comprehensive business plan accounting for the full regulatory scope is required before major capital commitments
- Procurement strategy must align with the compliance timeline — equipment orders do not require all permits to be finalized

Documentation Quality

- Complete and professional documentation can significantly shorten the 6–12 month approval period
- Required documents: Certificate of Incorporation, CR12, Tax Compliance Certificate, technical team certifications, land proof
- Non-compliance risk: fines, project delays, and potential license revocation

Ongoing Monitoring

- Regular review of EPRA, KEBS, and NEMA portals for regulatory updates — policy evolves frequently
- Energy audit every four years for facilities exceeding 180,000 kWh/year consumption
- License renewal cycles (proposed 3-year validity) require advance compliance planning

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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