

# Utilizing Togo's Free Trade Zone for Solar Module Manufacturing and Export

Export-Oriented Boutique Production for the ECOWAS Market

Content Partner: J. v. G. technology GmbH

*Turnkey solar module production lines — since 1997*

[www.jvg-thoma.com](http://www.jvg-thoma.com)





# Technical Overview: Togo's Free Trade Zone for Solar Manufacturing and Export



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

**20–50 ...**

## Production Scale

Export-oriented boutique manufacturing target

**0%**

## Tax & Customs

Full exemptions within Togo's Free Trade Zone

**15+**


## ECOWAS Markets

Member states accessible via preferential trade terms

**1**

## Region

Togo — Lomé Port Gateway, West Africa

 Investment focus: Export-oriented boutique manufacturing · Market: ECOWAS / West Africa · Source: PVKnowHow / J.v.G. Technology GmbH

# Why Togo? Strategic Position in West Africa

## Geographic Advantage

- Central location on the West African coast
- Direct access to the Gulf of Guinea shipping lanes
- Lomé is the only deep-water port in the sub-region
- Borders Ghana, Benin, Burkina Faso — core ECOWAS corridor

## Stability & Infrastructure

- Politically stable investment environment
- Established free trade zone (SAZOF) with active operator base
- Reliable grid connection and industrial utility access
- Growing government focus on industrialization and exports

# Togo Free Trade Zone: Regulatory Framework

## Legal Structure

- Governed by SAZOF (Zone Franche Industrielle de Togo)
- Established framework for foreign and domestic investment
- Clear repatriation of profits and capital provisions

## Tax Incentives

- Full exemption from corporate income tax (initial period)
- No import duties on machinery, equipment, and raw materials
- VAT exemptions on production inputs and exports

## Customs & Export

- Simplified customs procedures for FTZ operators
- Bonded warehouse status for component storage
- Direct container export linkage via Lomé Port

## Labor & Operations

- Competitive labor cost structure vs. European or Asian benchmarks
- Flexible employment frameworks within the zone
- Access to technical training programs for local workforce

# Lomé Port: Export Logistics Infrastructure

## Port Capabilities

- Only natural deep-water port in West Africa — handles large vessels
- Container terminal capacity: over 1.5 million TEUs per year
- Direct proximity to FTZ — minimal inland transit
- Established container shipping routes to Europe, Asia, Americas

## Logistics Advantages

- FTZ-to-port distance: under 10 km — low trucking cost
- Dedicated freight forwarding and customs brokerage ecosystem
- Multimodal options: road and rail to landlocked ECOWAS markets
- Regional transshipment hub status for sub-Saharan Africa

# ECOWAS Market Access: Trade Dynamics

## ECOWAS Trade Protocol

- 15-member economic community covering ~400 million consumers
- Preferential tariff treatment for goods manufactured within member states
- Togo is a founding ECOWAS member — full protocol access

## Solar Demand Drivers

- Electricity access deficit across West Africa: <50% in several markets
- Off-grid and mini-grid solar projects scaling rapidly in the region
- Government electrification mandates and donor-funded programs

## Competitive Positioning

- Local manufacturing avoids anti-dumping duties applicable to Asian imports
- Regional origin labeling supports procurement preference programs
- Shorter lead times vs. shipment from China or Southeast Asia

# Solar Manufacturing Feasibility: 20–50 MW Scale

## Production Parameters

- Boutique scale: 20–50 MW/year — manageable capex entry point
- Semi-automatic line configuration suitable for this volume range
- Core processes: stringing, lay-up, lamination, framing, testing
- Module formats: standard 60/72-cell or large-format (182/210mm)

## Feasibility Indicators

- Proven turnkey manufacturing concepts available for rapid deployment
- No prior PV manufacturing experience required — full training included
- Local staff can be trained to operate and maintain equipment on-site
- Modular line design allows capacity expansion in later phases

# Turnkey Manufacturing Concept: Key Elements



---

## Factory Planning

- Site layout design, utility requirements, cleanroom specification
- Equipment list and civil work coordination



---

## Equipment Supply

- Full production line from a proven European turnkey provider
- Laminator, stringers, testers, framing machines — integrated system



---

## Commissioning & Training

- On-site installation and process commissioning by specialists
- Operator and maintenance training — production-ready handover



---

## Certification Support

- IEC-compliant process design supports module certification
- Market access documentation for ECOWAS and beyond

# Operational Setup: Phase-by-Phase Timeline



# Risk & Mitigation: Key Considerations

## Supply Chain

- Solar cells and wafers primarily sourced from Asia
- FTZ bonded storage reduces import delay risk
- Lomé Port offers flexible inbound shipment scheduling

## Market Risk

- ECOWAS demand is policy-driven – tied to electrification programs
- Diversification across multiple ECOWAS markets reduces single-country exposure
- Export flexibility to non-ECOWAS markets via Lomé hub

## Operational Risk

- Workforce training mitigated by turnkey provider on-site support
- Semi-automatic lines reduce dependency on high-skill operators
- Modular equipment design supports maintenance and spare part access

## Regulatory Risk

- FTZ framework governed by established SAZOF legislation
- Incentive agreements documented at contract signing
- Togo's commitment to ECOWAS protocols provides long-term trade stability

# Strategic Case: FTZ Solar Manufacturing in Summary

1

## Cost Advantage

Zero duties on equipment and inputs + competitive labor = lower cost per module vs. importing finished goods

2

## Market Proximity

ECOWAS-origin product + Lomé Port logistics = shorter lead times and competitive pricing across 15 markets

3

## Execution Readiness

Proven turnkey manufacturing concept eliminates technology risk — no prior PV production experience required

- ✔ The combination of FTZ incentives, deep-water port access, and ECOWAS trade protocols creates a structurally competitive foundation for boutique-scale solar module export manufacturing in Togo.

# Further Information & Sources

## Content Basis

- PVKnowHow Knowledge Network — solar manufacturing technical reference
- J.v.G. Technology GmbH — European turnkey PV line specialists since 1997
- SAZOF — Togo Free Trade Zone Authority
- ECOWAS Trade Protocol documentation

*Note: Case study figures are based on real parameters but presented as composite scenarios for analytical purposes.*

## Scope & Disclaimer

- Scale reference: 20–50 MW export-oriented boutique manufacturing
- Region: Togo, West Africa
- Market: ECOWAS / West Africa
- This presentation is factual and non-promotional in intent
- Investment decisions require independent due diligence

# 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

[www.jvg-thoma.com](http://www.jvg-thoma.com)

# Contact

J.v.G. Technology GmbH

Möningerberg 1a, 92342 Freystadt, Germany

[info@jvg-thoma.de](mailto:info@jvg-thoma.de) | [www.jvg-thoma.com](http://www.jvg-thoma.com)

Source:

<https://www.pvknowhow.com/countries/togo/togo-free-trade-zone-solar-export>

---

*Created with the support of JvGLabs — specialist for AI systems*

*and AI-driven visibility. [www.jvglabs.com](http://www.jvglabs.com)*