U.S.–Jordan Free Trade Agreement: A Strategic Gateway for Solar Module Exports

Expert analysis of turnkey manufacturing opportunities for strategic infrastructure investment in Jordan's expanding renewable energy sector.

Optimizing the Turnkey Approach: Strategic System Evaluations and High-Level Performance Analytics from J.v.G. Technology GmbH.

Report Details

Created as part of the PVKnowHow Knowledge Network

Prepared by J.v.G. Technology GmbH

European specialists in turnkey solar module production lines

Jordan Renewable Energy Context

Growth Targets

Jordan aims to reach 50% renewable electricity by 2030

IEA projects 1.7 GW capacity additions

Market Dynamics

Solar PV expected to account for 65% of 53 GW MENA additions

27% renewable energy share achieved by end 2023

Manufacturing Opportunity

Regional manufacturing hub potential

Export access to neighboring markets

Local Manufacturing Rationale

Supply Chain Resilience

- Reduces import dependence
- Creates regional manufacturing capacity
- Serves growing domestic market

Technology Transfer

- Establishes local technical expertise
- Diversifies economy through advanced manufacturing
- Builds sustainable knowledge base

Export Position

- Access to MENA growth markets
- Strategic location advantages
- Strong regional demand projections

Turnkey Investment Model

Technical Package

- Semi-automated production equipment
- Quality control systems
- Installation and commissioning

Operational Framework

- Comprehensive training programs
- Production optimization protocols
- Transition to autonomous operation

Risk Mitigation Factors

Technology Risk

- Proven manufacturing processes
- Standardized quality systems
- International certification compliance

Operational Risk

- Structured training programs
- Technical support during ramp-up
- Established optimization methods

Market Risk

- Strong regional demand growth
- Government renewable commitments
- Export market access

European Partnership Value

Proven Technology

Established manufacturing processes from experienced European providers

Comprehensive Training

Structured programs delivered by industry specialists

Quality Standards

European certification ensuring global market access

Operational Support

Continuous assistance during transition to autonomous operation

Implementation Phases

01

Foundation Development

- Infrastructure planning
- Regulatory compliance
- Workforce assessment

02

Technology Transfer

- Equipment installation by experienced provider
- Technical training delivery
- Quality systems implementation

03

Operational Transition

- Production ramp-up
- Performance optimization
- Autonomous operation achievement

Investment Structure

Equipment and Technology

- Equipment supply: 60-70% of CAPEX
- Technology transfer services
- Technical support and optimization
- Quality certification systems

Infrastructure and Operations

- Infrastructure development: 20-25%
- Working capital reserves
- Workforce preparation
- Regulatory compliance

Key Project Data

MW

Capacity

Annual production output

USD Million

Investment

Total CAPEX requirement

Months

Ramp-up Period

Training to autonomous operation

Line Type

Semi-automated manufacturing with quality control

Region

Jordan / United States export

Investment Type

Infrastructure-style renewable energy manufacturing

Source: PVKnowHow / J.v.G. Technology GmbH

Strategic Investment Benefits

Infrastructure Profile

Long-term asset with stable operational characteristics aligned with renewable energy growth

Portfolio Diversification

Manufacturing infrastructure exposure to growing renewable sector

ESG Alignment

Direct contribution to renewable energy supply chain development

Technology Leadership

Establishes advanced manufacturing capabilities with European standards

Investment Conclusion

Market Opportunity

Jordan's renewable targets and projected capacity additions create substantial manufacturing demand

Risk Management

Turnkey model with experienced provider reduces technology and operational risks

Operational Model

Proven methodology enables autonomous operation within structured timeframe

Source & Authorship

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Turnkey Solar Module Production Lines

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