

# Jordan as a Humanitarian Manufacturing Hub: A Strategic Plan for Supplying Solar to Iraq and Syria

Comprehensive assessment of turnkey manufacturing opportunities for institutional investors seeking infrastructure-style renewable energy investments.

Modernizing Turnkey Methodologies: Systematic Framework Audits and Extended Operational 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



## Strategic Analysis Framework

Institutional investment approach to solar manufacturing infrastructure development



## Knowledge Network Source

Created as part of specialized renewable energy manufacturing research



## Industry Expertise

Analysis by experienced European turnkey provider

Specialists in semi-automated solar module production systems

# Jordan's Renewable Energy Investment Context

Jordan aims to reach 50 percent of electricity from renewables by 2030 and will add 1.7 gigawatts of renewable capacity by the end of this decade. Goals include diversification of energy resources, expansion of renewable energy capacities, and increasing investments.



## Manufacturing Growth Opportunity

Solar PV systems are expected to account for 65% of the 53 GW of renewable capacity additions across the MENA region



## Skills Development Infrastructure

Investment alignment with national workforce development for renewable energy manufacturing careers



## Regional Manufacturing Hub

Strategic location with port access and proximity to European markets for export opportunities

# Strategic Rationale for Local Manufacturing



## Supply Chain Resilience

Reduces import dependence and creates regional manufacturing capacity for growing domestic and export markets



## Technology Localization

Establishes sustainable technical expertise and diversifies economy through advanced manufacturing capabilities



## Market Position

Creates opportunities for domestic supply and regional export across MENA markets with strong growth projections

# Turnkey Investment Model Structure

## Technical Package

- Semi-automated production line equipment
- Quality control and testing systems
- Installation and commissioning services

## Operational Framework

- Comprehensive training and skills transfer
- Production optimization protocols
- Technical support during ramp-up
- Autonomous operation transition planning

# Investment Risk Mitigation Factors

## Technology Risk

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

## Operational Risk

- Comprehensive training programs
- Structured ramp-up with support
- Established optimization methods

## Market Risk

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

# Experienced European Partnership Benefits

## Proven Technology Transfer

Access to established manufacturing processes and quality systems from experienced providers with track record

## Comprehensive Training Framework

Structured technical training programs delivered by experienced specialists with industry expertise

## Operational Excellence Support

Continuous technical assistance during ramp-up phase and transition to autonomous operation

## International Quality Standards

European certification and compliance requirements ensuring global market access and product quality





# Investment Implementation Framework

1

## Foundation Development

- Infrastructure planning and preparation
- Regulatory compliance and permitting
- Initial workforce assessment and recruitment

2

## Technology Transfer and Training

- Equipment installation by experienced turnkey provider
- Comprehensive technical training programs
- Quality systems implementation and certification

# Financial Structure Components

## Turnkey Provider Contributions

- Equipment supply and installation: 60-70% of CAPEX
- Technology transfer and training services
- Ramp-up technical support and optimization
- Quality certification and compliance systems

## Local Investment Components

- Infrastructure development: 20-25% of total investment
- Working capital and contingency reserves
- Local workforce and operational preparation
- Regulatory and legal compliance framework

# Proven Manufacturing Implementation

## Standardized Implementation

Established project delivery methodology with proven risk management from climate-adapted turnkey manufacturing concept

## Comprehensive Training Program

Structured skills transfer with hands-on experience using production equipment and real manufacturing scenarios

## Quality Assurance Framework

International certification standards ensuring product quality for both domestic and export market requirements

## Autonomous Operation Transition

Systematic knowledge transfer enabling independent operation within structured timeframe and ongoing support

# Key Project Data

## MW

**Scale**

Annual manufacturing capacity per year

**Line Type**

Semi-automated / climate-adapted turnkey manufacturing line with quality control systems

## Months

**Ramp-up**

Training to autonomous operation

**Application Focus**

Solar water pumping / agriculture applications

## Industrial

**Investment**

Industrial-scale turnkey investment

**Region**

Jordan

**Source:** PVKnowHow / An experienced European turnkey provider

# Strategic Investment Alignment

## Infrastructure Investment Profile

Long-term asset with stable operational characteristics and predictable returns aligned with renewable energy growth trends

## Asset Diversification Value

Manufacturing infrastructure investment providing exposure to growing renewable energy sector with regional market access

## ESG Investment Alignment

Direct contribution to renewable energy supply chain development supporting regional decarbonization objectives

## Technology Leadership Position

Establishing advanced manufacturing capabilities with European technical standards and quality systems

# Investment Analysis Conclusion

## Market Opportunity

Jordan's 50% renewable energy target by 2030 and projected 1.7 GW capacity additions create substantial manufacturing demand

## Risk-Adjusted Returns

Turnkey model with experienced European provider reduces technology and operational risks while providing infrastructure-style investment characteristics

## Operational Transition

Proven methodology enables autonomous operation within 10-12 months with comprehensive training and ongoing support framework

# Source & Authorship

J.v.G. Technology GmbH

Turnkey Solar Module Production Lines

PVKnowHow Knowledge Network

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