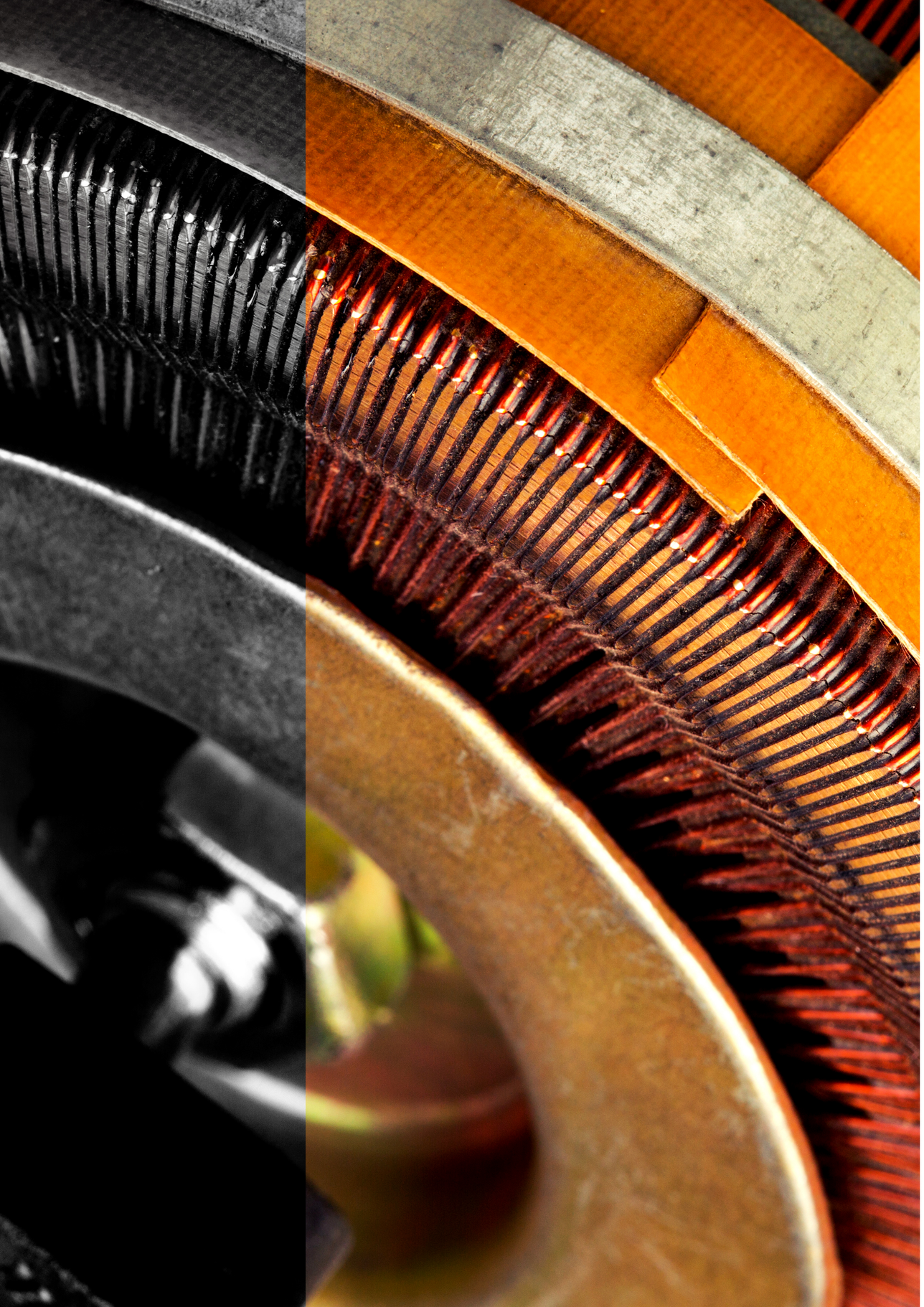
CHINA-PAKISTAN
INVESTMENT
PITCH BOOK

Engineering Development Board
Government of Pakistan

Electrical Devices & Electrical Equipment

Manufacturing Sector

Engineering Development Board
Government of Pakistan



Strategic Overview:

PAKISTAN AS CHINA'S REGIONAL MANUFACTURING BASE

Pakistan's Electrical Devices and Electrical Equipment sector is rapidly progressing as a strategic manufacturing and export hub for South Asia, the Middle East, Africa, and Central Asia. The sector serves both power infrastructure equipment and electrical devices for residential, commercial, and industrial use.

Pakistan's national electricity production reached 8,506 GWh in Mar 2024, demonstrating sustained growth in overall electricity generation activity, reflecting expanding demand for equipment across the grid and distributed power segments. The local electrical industry is supported by manufacturing associations such as the Pakistan Electrical & Electronics Merchants Association, which represents the interests of electrical industry stakeholders and contributes to standards, trade promotion, and local supply ecosystem strengthening.

While pockets of local manufacturing include power transformers, energy meters, switchgear, and electrical appliances via firms such as Pak Elektron Limited (PEL) which produces transformers, energy meters, and other electrical equipment. The overall domestic value addition remains low relative to demand and imports.

In 2023, imports of Electrical machinery and equipment (HS-85) to Pakistan were approximately USD 3.54 billion, with China accounting for ~86 percent of total imports in this category, indicating significant reliance on Chinese supply chains in machinery, components, semiconductors, and power equipment. Export performance remains limited, with exports of electrical and electronic equipment valued at USD 92.75 million in 2024, underscoring import dependency and export potential.

WHY CHINA SHOULD **INVEST IN PAKISTAN**

Strategic Location Advantage

Strategic Factor	Benefit for Chinese Investors
CPEC Logistic Corridors	Easy access to Karachi, Gwadar, Port Qasim for distribution
Regional Connectivity	GCC, Africa, Central Asia via shorter sea and land corridors
Time & Cost Efficiency	Regional shipping 20–30 % lower transit time vs SEA routes

Pakistan's geographic position makes it an ideal export hub for finished electrical equipment into South Asia, the Middle East, Africa, and adjacent markets.

Market Size & Demand Dynamics

Indicator	Latest Data
Electrical machinery imports (2023)	USD 3.54 B
Share of China in Imports (HS-85)	~86 %
Electrical & electronic exports (2024)	USD 92.75 M
Installed Electricity Consumption	>8,500 GWh/mo (Mar 2024)
Local production (Transformers capacity)	3,000 MVA/year

Import-Driven Market: Pakistan's large import bill in electrical equipment reflects a strong market opportunity for localized production of transformers, switchgear, meters, cables, automation equipment, semiconductors, and electrical devices.

Cost & Competitiveness

- Labor costs significantly lower than comparable manufacturing hubs
- Energy and utilities access in SEZs with preferential tariff structures
- Duty-free import of capital machinery and tools to support greenfield projects
- Lower manufacturing overheads compared to ASEAN and Gulf regions

These factors position Pakistan as a cost-competitive manufacturing base for Chinese electrical OEMs and component producers.

CHINA–PAKISTAN
ELECTRICAL MANUFACTURING COOPERATION OPPORTUNITY

Current Industry Landscape

Segment	Current Local Capability
Power Transformers	Domestic facility (HEC: 3,000 MVA)
Switchgear & Protection	Import-dominant
Smart Meters & AMI	Import/import-assembled
Motors & Drives	Partial local assembly
EV & Power Electronics	Mostly imported

Despite localized activities in certain product lines (transformers, energy meters), most high-value electrical equipment remains import-dependent particularly semiconductors, power electronics, and automation hardware.

Opportunity for China

Chinese manufacturers can fill strategic gaps and capture demand in:

- HV/MV transformer production with enhanced capacity expansion
- Switchgear, breakers & protection devices for utility networks
- Smart meters and AMI platforms for DISCO modernization
- Power inverters and UPS systems for renewable & industrial use
- Electric motors and drives for industrial electrification
- EV chargers and power electronics to capture transport electrification market

This aligns with Pakistan's import structure where approximately 34 % of electrical

imports are telephony/electrical apparatus and 29 % are semiconductor/LED components, indicating high technology and component import exposure.

CHINA-PAKISTAN INVESTMENT PITCH BOOK

PRIORITY INVESTMENT SEGMENTS
FOR CHINESE FIRMS

Segment	Nature of Opportunity	Target Markets
Power Transformers	Import substitution	Domestic + Export
Switchgear & Breakers	Localization	Utilities & EPC
Smart Meter & AMI	Digital grid rollout	Distribution companies
Power Electronics & Drives	Renewable + Industry	Data Centers / Solar
EV Charging Systems	New mobility segment	Urban + Regional Export
Electrical Accessories	Residential & Industrial	Local consumers

FLAGSHIP PROJECTS FOR CHINA–PAKISTAN JVS

Project	Location	Scale	Model
HV/MV Transformer Plant	Punjab Industrial Zone	5,000+ units/yr	OEM JV
GIS & Switchgear Line	Sindh	MV/HV capacity	Tech JV
Smart Meter Factory	National Rollout	8M units/yr	Licensing JV
Power Electronics Hub	SEZ	500 MW inverter capacity	OEM JV
EV Charger Manufacturing	Karachi/Islamabad	250k pcs/yr	Tech JV

POLICY & INCENTIVES FOR CHINESE INVESTORS

- SEZ incentive packages: up to 10-year tax holiday and duty exemptions
- Capital goods duty exemptions to reduce CAPEX burden
- Preferential input duty treatment for parts and raw materials
- Low-interest financing programs available through national banks
- Procurement preference mechanisms with domestic value add scoring

Combined, these help offset upfront investment costs and accelerate break-even timelines.

EXPORT MARKET ACCESS FOR PAKISTAN-BASED PRODUCTION

Region	Estimated Market Value
GCC & Africa	USD 45 B+
South Asia	USD 12 B+
Central Asia	USD 8 B+
MENA	USD 20 B+
EU & Turkey	USD 15 B+

WHAT PAKISTAN OFFERS TO CHINESE PARTNERS

Model	Chinese Strength	Pakistan Contribution
OEM Joint Venture	Technology + IP	Local production
Contract Manufacturing	Scale mfg	Labor + Facilities
Licensing / Technology Transfer	Know-how	Market Access
Supplier Park Investment	Components	Logistics
Export Partnership	Distribution	Regional Network

Strategic Commitments

- Long-term market predictability
- Dedicated facilitation via EDB & ministries
- Duty & tax incentives
- Infrastructure backing
- Local workforce and growing demand

These positions China–Pakistan partnerships for regional scale and global competitiveness.

FACILITATION & GOVERNMENT INTERFACE

Key Facilitation Agencies:

- Ministry of Industries & Production
- Engineering Development Board
- Ministry of Energy (Power Division)

This ensures policy alignment, approvals, and support across the investment lifecycle.

Proposition for Chinese Investors

Pakistan presents a high-growth, import-substitution and export-ready electrical manufacturing ecosystem with:

- Over USD 3.5 billion in electrical imports annually dominated by China.
- Large strategic demand from power grids, industry, and electrification.
- Growing consumer demand for electrical devices, meters, and smart components.
- Cost-competitive production base.
- Strong preference for technology and capital partner investment.

This makes Pakistan a compelling regional hub for China's electrical device and equipment manufacturing ambitions.

PAKISTAN-CHINA B2B INVESTMENT CONFERENCE

SECTOR SNAPSHOT

ELECTRICAL DEVICES & ELECTRICAL EQUIPMENT

MANUFACTURING SECTOR

MARKET OVERVIEW & OPPORTUNITY

a. Pakistan Electrical Equipment Market Size & Growth

Indicator	Value
Total Market Size (Imports 2024–25)	~USD 3.5–3.8 Billion
5-Year CAGR (Import Value)	~14–16% (2019–2024)
Household Penetration Rate	~90%+ (basic electrification)

b. Category-Wise Market Breakdown (Import Dependence)

Category	Market Size (USD, 2024–25)	Local Production
Power Transformers	~USD 112 M	Partial (≤132 kV)
Switchgear & Breakers	~USD 157 M	Limited
Conductors & Cables	~USD 115 M	Moderate
Smart Meters / AMI	~USD 280 M	Assembly only
Power Electronics / Inverters	~USD 450 M	None
Semiconductors / Components	~USD 1.0 B+	None

c. Demographic Tailwinds

Indicator	Metric
Population	240+ million
Median Age	21–23 years
Urbanization Rate	38–39%
Middle-Class Size	40–50 million households
Avg. Disposable Income	PKR 1.2–1.5 million/year

d. Demand Drivers

Driver	Current Status
Grid Expansion	USD 8.8 B (TSEP 2024–34)
Distribution Upgrade	USD 7–8 B
Electrification Rate	~95%
Smart Meter Rollout	33.6 M connections
Renewable Integration	Rapid (solar + BESS)

LOCAL PRODUCTION VS IMPORTS

e. Import Bill of Electrical Equipment

Year	Import Value (USD)
FY 2023	USD 3.54 B
FY 2024	USD 0.81 B
FY 2025	USD 3.7 B

f. Cost Comparison (Localization vs. CBU Imports)

Cost Component	Local Manufacturing	CBU Imports
Freight	Low	High
Customs Duties	0–5%	10–25%
Lead Time	3–6 weeks	10–16 weeks
Working Capital Lock	Lower	Higher
Total Cost Index	70–75	100

g. Government Policy Direction

Policy Instrument	Description
PSIP 2026–35	Mandatory localization roadmap
Procurement Preference	Local content scoring
Testing Reform	Accredited labs
PLI	Output-based incentives
Tariff Rationalization	Cascading duties

EXPORT POTENTIAL & MARKET ACCESS

h. Preferential Trade Access

Market	Trade Framework	Concessional Duty
China	Pak-China FTA	Preferential
EU	GSP+	Duty-free
GCC	Bilateral	Reduced
Central Asia	Transit Trade	Low

i. Regional Demand Snapshot

Region	Equipment	Demand Growth
Middle East	Transformers / GIS	High
Central Asia	Distribution Gear	Medium–High
Africa	Smart Meters	High

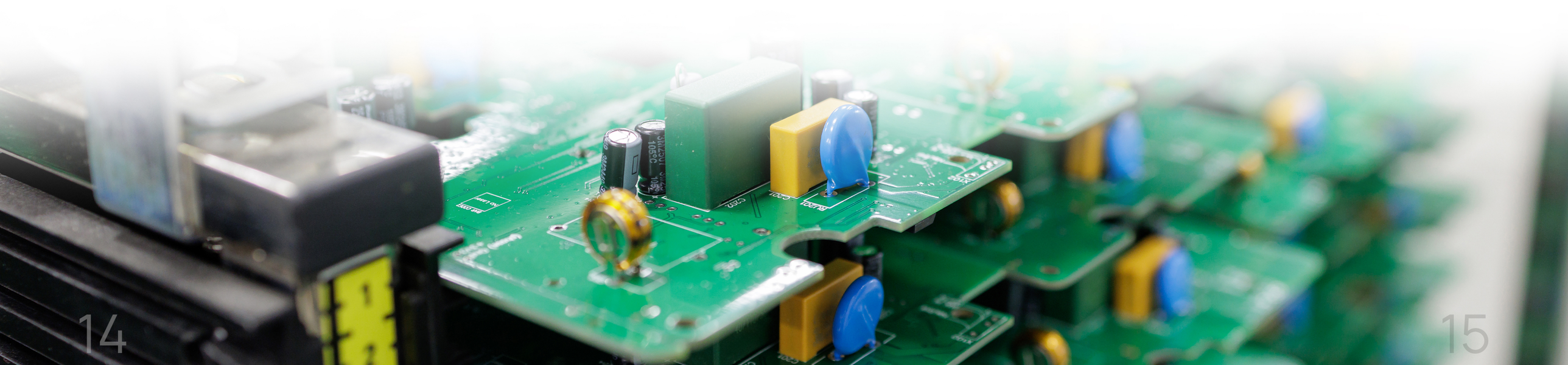
COST & RESOURCE ANALYSIS

j. Raw Material Availability

Input	Local Capacity	Compliance
Copper Conductors	Moderate	IEC
Aluminum	High	ISO
CRGO Steel	None	Imported
Insulation Materials	Limited	IEC
Semiconductors	None	Imported

k. Utility Costs

Utility	Industrial Tariff	SEZ Tariff
Electricity	~$0.09–0.11/kWh	Competitive
Gas	~$6.5–9.0/MMBTU	Competitive
Water	Moderate	Subsidized



l. Labor Cost Structure

Category	Avg. Monthly Cost (USD)
Unskilled	$150–$200
Semi-Skilled	$200–$300
Skilled (SMT Operators)	$300–$500
Engineers / Technicians	$500–$1,000+

FISCAL & TARIFF INCENTIVES

m. Tax Regime Overview

Tax Type	Rate	Incentivized
Corporate Tax	29%	0% (SEZ)
Withholding	Variable	Reduced
Sales Tax	18%	Exempt
Customs Duty	0–20%	0% (inputs)

n. Tariff Differential

Category	Duty Rate
Raw Materials	0–2%
SKD Assemblies	3–5%
Finished Equipment	15–25%

SEZS & FACILITATION

o. Priority SEZs

SEZ	Province	Status	Suitability
Rashakai	KP	Operational	High
Allama Iqbal City	Punjab	Operational	High
Port Qasim	Sindh	Developing	High
Dhabeji	Sindh	Developing	Medium

p. Approval Timelines

Authority	Timeline
SECP	1–3 Days
BOI	1–3 Months
EDB	1–2 Months
EPA	1–2 Months

INVESTMENT PROJECTS

q. Available / Proposed Projects

Project	Location	Investment	Structure
Transformer Plant	Punjab	USD 120 M	JV
Switchgear Factory	Sindh	USD 90 M	Tech JV
Smart Meter Plant	National	USD 150 M	Licensing
Power Electronics Hub	SEZ	USD 200 M	OEM JV

r. Land Availability

Location	Plot Size	Rates (USD/m²)
SEZ	5–50 ac	50–100
Non-SEZ	5–100 ac	30–80

FINANCING ECOSYSTEM

s. Financing Sources

Source	Instrument	Terms
Local Banks	Project Finance	KIBOR + 3%
Chinese Banks	Long-Term Debt	5–7%
SBP LTFF	Concessional	3–5%
DFIs	Equity/Debt	Market