

中巴投资推介手册

电气设备及电气器材制造业

1. 战略概述：巴基斯坦作为中国的区域制造基地

巴基斯坦的电气设备和电气装置行业正迅速发展成为南亚、中东、非洲和中亚的战略性和出口中心。该行业为电力基础设施设备以及住宅、商业和工业用途的电气设备提供服务。

2024年3月，巴基斯坦全国电力产量达到8506吉瓦时，表明整体发电活动持续增长，反映出电网和分布式电源领域对设备的需求不断扩大。当地电气行业得到巴基斯坦电气电子商会等制造协会的支持，该协会代表电气行业利益相关者的利益，并致力于标准制定、贸易促进和加强本地供应链生态系统。

巴基斯坦的本地制造业包括电力变压器、电能表、开关设备和电器，例如巴基斯坦电子有限公司(PEL)生产变压器、电能表和其他电气设备。但总体而言，国内增值率相对于需求和进口而言仍然较低。

2023年，巴基斯坦电气机械及设备(HS-85)进口额约为35.4亿美元，其中中国进口额约占该类别进口总额的86%，表明巴基斯坦在机械、零部件、半导体和电力设备方面对中国供应链的依赖程度很高。出口表现仍然有限，2024年电气和电子设备出口额为9275万美元，凸显了巴基斯坦的进口依赖性和出口潜力。

2. 中国为何投资巴基斯坦？

战略区位优势

战略因素	中国投资者的收益
中巴经济走廊物流走廊	可便捷地通过卡拉奇、瓜达尔港和卡西姆港进行分销。
区域连通性	通过更短的海陆通道连接海湾合作委员会、非洲和中亚
时间和成本效率	区域航运比海运航线运输时间缩短20-30%

巴基斯坦的地理位置使其成为成品电气设备出口到南亚、中东、非洲及周边市场的理想枢纽。

市场规模及需求动态

指标	最新数据
电机进口额 (2023年)	35.4 亿美元
中国进口份额 (HS-85)	~86 %
电气及电子产品出口额 (2024年)	9275 万美元
装机电力消耗量	>8500 吉瓦时/月 (2024年3月)
本地生产 (变压器产能)	3,000 MVA/年

进口驱动型市场：巴基斯坦庞大的电气设备进口额反映出本地化生产变压器、开关设备、电表、电缆、自动化设备、半导体和电气器件的巨大市场潜力。

成本与竞争力

- 劳动力成本远低于同类制造中心
- 经济特区享有优惠关税结构下的能源和公用事业接入
- 免税进口资本机械和工具以支持新建项目
- 与东盟和海湾地区相比，制造成本更低

这些因素使巴基斯坦成为中国电气 OEM 厂商和零部件生产商具有成本竞争力的制造基地。

3. 中巴电气制造合作机遇

当前行业格局

细分市场	当前本地产能
电力变压器	国内工厂 (HEC: 3,000 MVA)
开关设备及保护装置	进口为主
智能电表及高级计量基础设施 (AMI)	进口/进口组装
电机及驱动器	部分本地组装
电动汽车及电力电子产品	大部分进口
可再生能源逆变器	进口

尽管某些产品线（变压器、电能表）已实现本地化生产，但大多数高价值电气设备仍然依赖进口，特别是半导体、电力电子产品和自动化硬件。

中国的机遇

中国制造商可以填补战略空白并抓住以下领域的需求：

- 高压/中压变压器生产能力不断提升。
- 公用事业网络用开关设备、断路器和保护装置
- 用于供电公司现代化改造的智能电表和高级计量基础设施 (AMI) 平台
- 用于可再生能源和工业用途的电源逆变器和不间断电源 (UPS) 系统
- 用于工业电气化的电机和驱动器
- 电动汽车充电器和电力电子产品将抢占交通电气化市场。

这与巴基斯坦的进口结构相符，其中约 34% 的电气进口产品为电话/电气设备，29% 为半导体/LED 组件，表明巴基斯坦高度依赖高科技和零部件进口。

4. 中国企业的优先投资领域

细分市场	机遇性质	目标市场
电力变压器	进口替代	国内 + 出口
开关设备和断路器	本地化	公用事业和 EPC
智能电表和 AMI	数字电网部署	供电公司
电力电子和驱动	可再生能源 + 工业	数据中心 / 太阳能
电动汽车充电系统	新型出行领域	城市及区域出口
电气配件	住宅及工业	本地消费者

5. 中巴合资旗舰项目

项目	地点	规模	型号
高压/中压变压器厂	旁遮普工业区	5000+台/年	OEM 合资企业
GIS 及开关设备生产线	信德省	中压/高压容量	技术合资企业
智能电表厂	全国推广	800 万台/年	许可合资企业
电力电子中心	经济特区	500 兆瓦逆变器容量	OEM 合资企业
电动汽车充电器制造	卡拉奇/伊斯兰堡	25 万台/年	技术合资企业

6. 针对中国投资者的政策和激励措施

- 经济特区激励方案：长达 10 年的免税期和关税豁免
- 资本货物关税豁免，以减轻资本支出负担
- 零部件和原材料的优惠投入关税待遇
- 通过国家银行提供的低息融资计划
- 采用国内增值评分的采购优先机制

这些措施结合起来，有助于抵消前期投资成本并加快盈亏平衡点的实现。

7. 巴基斯坦产品的出口市场准入

地区	预计市场价值
海湾合作委员会和非洲	450 亿美元以上
南亚	120 亿美元以上
中亚	80 亿美元以上
中东和北非地区	200 亿美元以上
欧盟和土耳其	150 亿美元以上

巴基斯坦的地理位置使其电气设备出口到主要高增长地区能够快速进入市场，并缩短运输时间。

8. 巴基斯坦为中国合作伙伴提供的价值

型号	中国的优势	巴基斯坦的贡献
OEM 合资企业	技术+知识产权	本地生产
合同制造	规模化生产	劳动力+设施
许可 / 技术转让	专有技术	市场准入
供应商园区投资	零部件	物流
出口合作	分销	区域网络

战略承诺

巴基斯坦提供：

- 长期市场可预测性
- 通过出口发展局和各部委提供的专门便利
- 关税和税收优惠

- 基础设施支持
- 本地劳动力和不断增长的需求

这些优势使中巴伙伴关系具备区域规模和全球竞争力。

9. 便利化与政府对接

主要便利化机构:

- 工业与生产部
- 工程发展委员会
- 能源部（电力司）

这确保了投资生命周期内政策的协调一致、审批和支持。

对中国投资者的提议

巴基斯坦拥有高增长、进口替代和出口导向型的电气制造生态系统，具备以下优势：

- 每年超过 35 亿美元的电力进口主要来自中国。
- 来自电网、工业和电气化的巨大战略需求。
- 消费者对电器设备、电表和智能组件的需求不断增长。
- 具有成本竞争力的生产基地。
- 强烈倾向于技术和资本合作伙伴投资。

这使得巴基斯坦成为中国实现电气设备制造雄心壮志的理想区域中心。

China–Pakistan Investment Pitch Book

Electrical Devices & Electrical Equipment Manufacturing Sector

1. 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.

2. 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.

3. 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
Renewable Inverters	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.

4. 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

5. 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

6. 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.

7. 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+

Pakistan’s geography offers fast market access with reduced transit times for electrical equipment exports into key high-growth regions.

8. 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

Pakistan offers:

- 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.

9. 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.