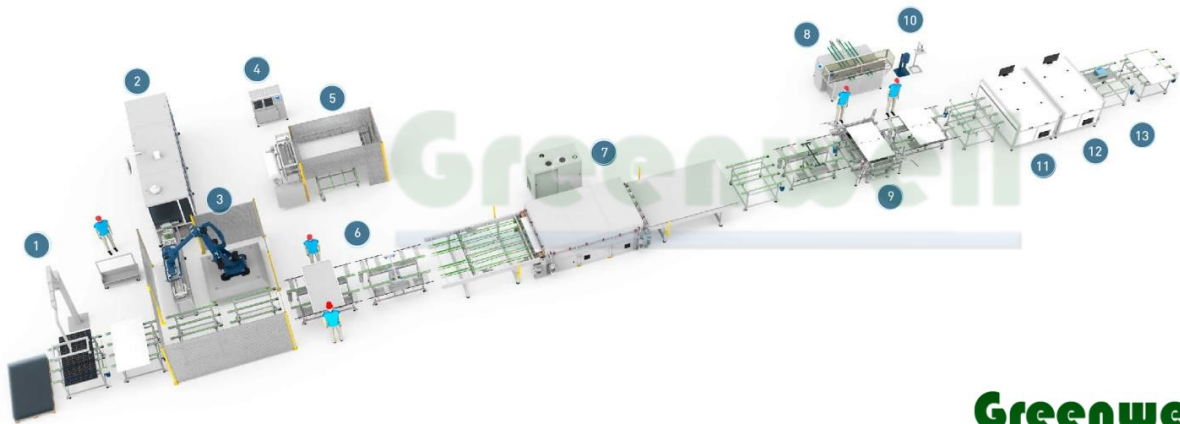


Distribution-Transformer Factory

Complete Turnkey Business Proposal



Greenwell
Technology

Made-in-China supplier reference: real distribution-transformer factory equipment.

bankable study investment gate	confirmed feedstock supply gate	EPC scope delivery gate	quality laboratory release gate
--	---	-----------------------------------	---

Prepared for investment planning in Afghanistan and regional export markets. Final specifications, pricing, civil works, and utility loads require supplier quotation and site survey.

Executive Summary

Strategic distribution-transformer manufacturing that cuts core steel, winds copper/aluminium coils, assembles active parts, dries and vacuum-processes units, fills oil, tests losses/ratio/withstand and dispatches compliant transformers.

Why this project fits Afghanistan

- This is a strategic plant, not a low-entry equipment package.
- Bankable feedstock, utility, permit, market, EPC and financing evidence is required before selection.
- Operate only with an independent laboratory, defined quality release and preventive-maintenance program.

Sanaatchi delivery scope

- Factory setup planning, supplier pre-qualification, and technical comparison
- Complete production-line and individual equipment supply
- Factory layout, utilities, civil-work coordination, installation, and commissioning
- Raw-material sourcing, trial-batch qualification, and repeat supply planning
- International logistics, customs documentation, operator training, spare parts, and after-sales support

Recommended configuration

Proceed after confirmed utility and industrial demand, approved transformer ratings/standards, core steel and conductor supply, oil handling, test-laboratory capability, quality system, warranty support and experienced transformer engineers are secured.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Oil-filled distribution transformers	kVA rating, voltage ratio, vector group, impedance, loss limits, cooling, insulation class, test standard and accessories	Utilities, substations, factories, commercial projects, solar plants, contractors and power distributors

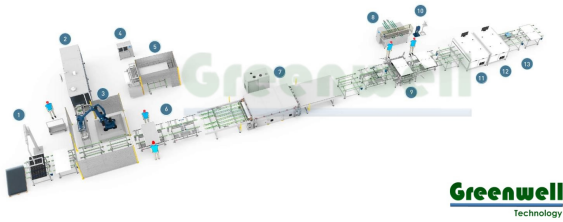
Final capacity, process, resource quality, utilities, permit conditions, emissions, acceptance test and commercial terms require independent engineering review before any order.

Core Equipment Schedule

Step	Equipment	Function	Indicative parameter
1	Core cutting/stacking	Builds magnetic circuit	Core loss and geometry
2	Coil winding and insulation	Forms electrical windings	Turns, conductor and insulation
3	Active-part assembly and tanking	Creates transformer assembly	Clearances and fit
4	Vacuum drying/oil filling	Protects insulation system	Moisture and oil quality
5	Routine/type test laboratory	Releases rated transformer	Ratio, losses and withstand

Equipment models are indicative and will be matched to the selected capacity, local raw-material tests, available utilities, and preferred automation level.

Reference Equipment Gallery



Made-in-China supplier reference: real distribution-transformer factory equipment.



Made-in-China supplier reference: second real machine configuration for distribution-transformer factory.

Images are supplier references for configuration discussion; final equipment appearance and model may differ.

Plant, Raw Materials & Utility Requirements

Raw materials

- Grain-oriented electrical steel, copper/aluminium conductor, insulation paper/pressboard, transformer oil, steel tanks/radiators, bushings, tap switches, gaskets, paint and laboratory consumables

Utilities & infrastructure

- Bankable electricity/fuel/water plans, process cooling and treatment, plant fire safety, laboratory, covered stores and qualified operation team
- Environmental permits, emissions control, waste route, maintenance workshop, critical spares and site-specific safety systems

Quality, safety and environmental controls

- Confirm utility-approved ratings, core/conductor contracts, standards, losses/warranty requirements, oil system, factory test scope and service network
- Control core loss, winding turns, clearances, drying vacuum, oil moisture, tank sealing, ratio, impedance, losses and dielectric withstand
- Test ratio/vector group, winding resistance, no-load/load loss, impedance, insulation resistance, oil quality, leak and withstand performance

A final factory layout must reserve safe forklift routes, maintenance clearances, raw-material segregation, finished-goods storage, fire protection, ventilation, and future expansion space.

Indicative Investment & Implementation Plan

LOW-ENTRY CONFIGURATION

Transformers are a standards-and-warranty business. Rated losses, test evidence and reliable after-sales support matter more than low assembly cost.

Component	Indicative range	Notes
Core, winding, assembly and tank fabrication	US\$30m-100m	Rating and automation
Drying, oil processing and test laboratory	US\$25m-90m	Quality/loss standard
Utilities, handling and installation	US\$15m-50m	Crane and test scope
Indicative strategic project total	US\$70m-240m	Inventory, land, finance and working capital excluded

Implementation sequence

Phase 1	2-5 weeks	Confirm product specification, representative raw material, buyer, capacity, site and utilities
Phase 2	3-7 weeks	Run supplier trials with the buyer material and freeze the balanced machine, tooling and utility scope
Phase 3	8-22 weeks	Manufacture or refurbish, inspect, document and ship the contracted equipment
Phase 4	3-12 weeks	Install, commission, train operators and pass material-specific acceptance tests

Ranges are planning targets for a low-cost entry configuration, exclude land, and remain subject to confirmed capacity, supplier quotation, freight, duties, exchange rates and site conditions.

Next Steps & Contact Information

Recommended next steps

- Confirm target products, hourly output, and packaging formats
- Test representative raw materials and document quality requirements
- Complete site survey covering electricity, water, fuel, drainage, roads, and warehouse space
- Request comparable technical and commercial quotations from shortlisted suppliers
- Finalize financing, logistics, installation, training, and spare-parts plan

Sanaatchi Industrial Vision Group

Afghanistan Office: +93 779 819 820 | info@sanaatchi.com

China Office: +86 159 5171 6867 | china@sanaatchi.com

Website: www.sanaatchi.com

Research and image references

- power-distribution-panel
- automatic-transfer-switch