

Licensed Modular Crude-Petroleum Refinery

Complete Turnkey Business Proposal



Made-in-China supplier reference: real licensed modular crude-petroleum refinery equipment.

1-5 kbpd initial strategic screen	licensed design mandatory basis	assayed crude feedstock gate	24/7 operations
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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

A licensed strategic refinery project converting a laboratory-characterised crude feedstock into specified fuel components through crude receipt, desalting, atmospheric distillation, controlled product treatment, tankage, loading and quality release. A simple distillation unit is not a compliant finished-fuels refinery.

Why this project fits Afghanistan

- Crude chemistry determines the process, yield, corrosion and treatment design.
- Fuel quality, fire protection and emissions compliance are project-defining.
- A licensed refinery requires trained operations and continuous laboratory control.

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 only after an independent crude assay, national licences, process-licensor design, product-standard route, water and fire study, emissions/sulfur controls, tank-farm design, qualified operator plan and contracted offtake are secured.

Manufacturing Process & Product Portfolio

Integrated process flow



Target products

Product	Typical specification	Primary market
Specified fuel components	Product slate, sulfur, distillation curve, flash point, density and regulatory release	Licensed national fuel distributors and industrial off-takers

A supplier must prove the defined process with representative material, utilities and documented acceptance testing.

Core Equipment Schedule

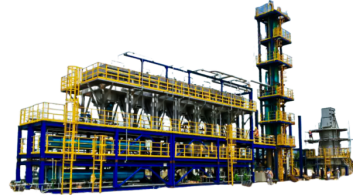
Step	Equipment	Function	Indicative parameter
1	Receipt, tank farm and desalting	Protects controlled feed quality	Assayed crude basis
2	Distillation and heat recovery	Separates defined fractions	Licensed process design
3	Treatment, blending and loading	Achieves released components	Product standards
4	Firewater, flare, laboratory and emissions controls	Protects people and environment	Regulatory approval

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 licensed modular crude-petroleum refinery equipment.



Made-in-China supplier reference: second real machine configuration for licensed modular crude-petroleum refinery.

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

Plant, Raw Materials & Utility Requirements

Raw materials

- Assayed crude oil and process chemicals approved by licensor
- Laboratory standards, treatment catalysts/chemicals and safety consumables

Utilities & infrastructure

- Stable three-phase electricity with verified connected load
- Guarded machinery, lockout, ventilation and fire protection
- Covered raw-material and finished-goods storage
- Maintenance tools, safe lifting and critical spare parts
- Reliable power, process fuel, steam, treated water, nitrogen, cooling and firewater
- Hazardous-area electrical design, flare/relief, emissions treatment and emergency response

Quality, safety and environmental controls

- Approve feed by independent crude assay before design and each delivery
- Monitor temperature, pressure, corrosion, sulfur and tank inventories
- Release each product by accredited laboratory and custody-transfer records

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

This is not a low-entry line. Do not present a basic distillation skid as a finished-fuel refinery; secure licensed design, regulatory approvals and offtake first.

Component	Indicative range	Notes
Licensed process, distillation and treatment package	US\$12m-35m	Depends on crude and products
Tank farm, loading, firewater and utilities	US\$8m-25m	Safety-critical scope
Civil, laboratory, environmental and commissioning	US\$5m-20m	Licensing and site dependent
Indicative strategic project total	US\$25m-80m+	Crude inventory, land and finance 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

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Research and image references

- <https://www.alibaba.com/showroom/modular-oil-refinery.html>
- https://www.made-in-china.com/products-search/hot-china-products/Crude_Oil_Refinery.html