



Modernization of oil refinery CJSC «Kyrgyz Petroleum Company» Jalal-Abad

Total project costs – \$ 409,9 mln.

Initiator's input – **up to \$ 100 mln. (24%)**

Investor's input – **\$ 309,9 mln. (76%)**

General information:

The company's been operating since **1997**
Main shareholder is the state-owned company **OJSC "KYRGYZNEFTEGAZ"**



Oil refinery's total area: **67,5 acres (27,3 hectares)**

Number of employees: **218**

Production capacity:

Estimated capacity **500 k tons/year**

Actual production up to **200 k tons/year**

Nowadays oil refinery is **not capable of** ensuring it's outputs compliance with environmental standards, since it **requires modernization**

Current production capacity:

Names of output:	Production		Prices (within last 12 months) USD/ton
	Tons/day	%	
Naphtha – brought to AI-80 gasoline (≈fuel RON91)	152,4	11%	452
Diesel	490,5	35%	614
Fuel oil (mazut)	739,6	53%	277,5
Total:	1382,5	100%	

Main goal of modernization is to increase refining depth
from 44% to 79,4%

After modernization:

Names of output:	%	Predicted prices USD/ton
AI-92 gasoline K5	43,4%	780
Diesel K5	36%	1 050
Fuel oil (mazut)	4,7%	379
LPG (liquefied petroleum gas)	8,9%	510
Losses	7,0%	-
Sulfur	0,14%	-
Total:	100%	

MODERNIZATION'S SETUP:



Liquid catalytic cracking (LCC) – technological process, providing deep oil refining.

At the output are the following products:

- **High-octane gasoline,**
- **Light liquid fuel**
- **light gases with a high olefin content such as propylene**

More than 150 technologies operate under UOP license among more than 400 refining LCC technologies all over the world



***SPEC Engineering INC (UAE)** – vertically integrated EPCC-supplier in oil and gas industry, providing solutions **on a turn-key basis**



****Honeywell UOP (USA)** - is the leading international supplier and technology licensor for the petroleum refining, gas processing, petrochemical production and major sectors of manufacturing industries

SPEC Estimated CAPEX for refinery with capacity of 500 k tons/day (LCC technology)

ISBL (INSIDE BATTERY LIMITS)		
Process Unit	Capacity	SPEC PRICE USD
LPG MEROX	1700	4 388 929,46
ISOM – ONCE THROUGH	630	10 429 312,99
NHT (Naphtha Hydrotreating)	3000	14 185 497,73
NHT SPLITTER	3100	4 288 811,24
SRR (Semi-Regenerative Reforming)	2500	26 353 650,01
Diesel HDT (Hydrotreating)	4000	37 174 696,25
RFCC (Residue fluid catalytic cracking)	6000	100 296 558,64
FCC (Fluid Catalytic cracking)NHT	2000	21 278 246,59
Sulfur plant	2	5 613 680,63
H2 Plant	3	13 037 175,73
PSA (Pressure Swing Adsorption)	6	900 000,00
	Subtotal	237 946 559,27
OSBL (OUTSIDE BATTERY LIMITS)		
Utilities		40 450 915,08
Buildings (admin, shops, warehouse, lab)		10 272 000,00
Piperacks		17 412 000,00
Site Prep		3 960 000,00
Blending and Control		3 072 000,00
Raw Material Storage		2 400 000,00
Finished Product Storage		15 396 000,00
Waste Water Treatment Plant		4 800 000,00
	Subtotal	97 762 915,08
Ancillary		
Spare Parts		11 897 327,96
Ocean Freight and Insurance		14 276 793,56
Engineering Services		7 138 396,78
Construction Expense and Supervision		5 968 145,75
Training		1 800 000,00
Start up		9 984 000,00
Business and Finance		360 000,00
Fees (Process License)		15 600 000,00
Insurance and Liabilities		1 189 732,80
Site Prep/Construction/Start up (Mobilization)		2 700 000,00
Permitting and HSE (Health and Safety Executive) Issues (PPE and Signage)		300 000,00
Miscellaneous		600 000,00
Contingency		2 400 000,00
	Subtotal	74 214 396,85
TOTAL		409 923 871,19



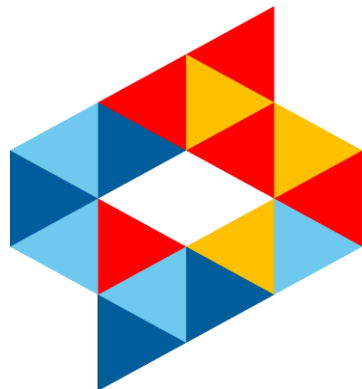
**Looking forward to cooperating
and answering questions
regarding presented project**

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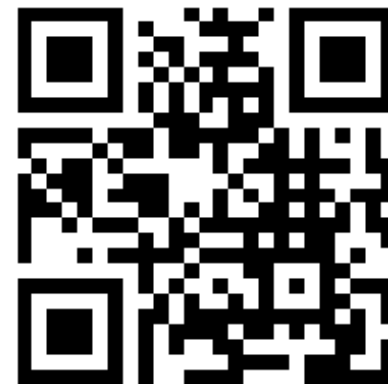
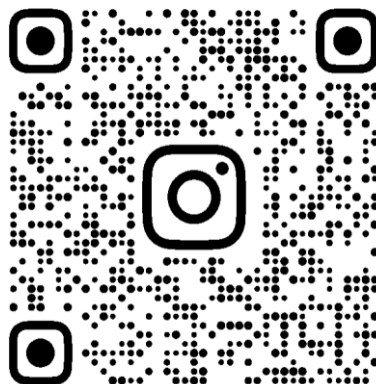
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