

BUSINESS PLAN PROJECT

"Industrial complex for processing
natural (associated) gas into methanol with a capacity of
130 thousand tons per year"

Aktobe , 2022

The project business plan includes the following sections:

1. *General description of the project*
2. *General description of technology, production and product*
3. *project team*
4. *methanol market*
5. *Marketing plan*
6. *Factory technical parameters*
7. *Financial plan (production, terms, financial indicators)*

1. General description of the project.

The gas chemical industry around the world has long been synonymous with technological breakthroughs. Unlike the production of motor fuel and other refined products that require additional expensive purification, the production of gas chemistry products makes it possible to obtain the widest range of pure products used in all areas of modern life and production. The leading technologies are concentrated here, and, given the relatively low cost of raw materials - natural gas (methane - CH_4), the greatest added value is formed. One of the most profitable gas chemical processing products is methanol, a monohydric alcohol (CH_3OH), widely used as a raw material in the chemical industry, in gas and oil production, and also as a high-octane additive to motor fuels, the world consumption of which is growing every year.

The project "**Plant for the production of 130 thousand tons of methanol per year**" involves the construction of a modern, competitive and highly profitable plant for the production of methanol for consumers in Kazakhstan, using it as an end product, and at the next stage of processing as an intermediate product for the production of olefins and plastics.

Despite significant raw material potential (15th in the world in oil production and 30th in gas in 2017), Kazakhstan occupies a modest position in the production of basic gas and petrochemical products.

The proposed project involves the phased development of the gas processing industry in Kazakhstan:

2. Establishment of a gas chemical production operating on local raw materials - natural gas, with the production of methanol - CH_3OH .
3. Production is focused both on the domestic market of Kazakhstan and for export, mainly to China.
4. Gradual increase in the depth of methanol processing to obtain olefins, plastics and other products with even higher added value.

The implementation of the gas chemical gas processing project will make it possible to switch from raw material exports to the production of high-tech products with increased added value.

Chemical processing of natural gas will form fundamentally new attitude to the use of gas resources in Kazakhstan.

This project can become an example of the implementation of large processing projects and act as one of the significant measures that ensure the accelerated economic development of an extremely important region in the economic sense and the petrochemical industry of Kazakhstan as a whole.

The problems of associated petroleum gas (APG) processing are also acute for Kazakhstan. Every year, about 10 billion cubic meters are required to be disposed of here. m PNG. At the same

time, Kazakhstan does not have its own methanol production, and all needs are met through imports.

The need to develop this business plan was the current situation in the methanol market:

1. Active development of oil and gas production in Western Kazakhstan - the region is the main one for the production of gas and oil in Kazakhstan;
2. Growing demand for methanol in gas and oil industry to use it as a hydrate inhibitor ;
3. The remoteness of Russian methanol producers from methanol consumers located in Kazakhstan, and as a result, additional transportation costs for the delivery of methanol from the regions of its production (Tomsk , Tolyatti , Novomoskovsk , etc.).

The presence of a methanol production plant in Kazakhstan will allow:

- reduce the amount of APG emissions;
- increase the competitiveness of the oil and gas industry in Kazakhstan;
- more actively implement state programs for the development of deep gas processing;

2. General description of the product, technology and production.

2.1. Product

Technical grade A methanol is used for organic synthesis processes.

Technical grade B methanol is used in the oil and gas industry for the elimination of crystalline hydrates in pipelines and well testing, as well as in the chemical, pharmaceutical, microbiological industries for extraction, condensation, and others.

Methanol is a raw material for the production of formaldehyde, dimethyl terephthalate , methyl methacrylate, pentaerythritol, synthetic isoprene rubber. It is used in the production of photographic film, various amines, polyvinyl chloride, carbamide and ion-exchange resins, in the production of dyes and intermediates, in the form of a solvent, including in the paint and varnish industry. A large amount of methanol is consumed to produce various chemicals, such as chlorophos, phthalophos , karbofos , methyl chloride and bromide, various acetals , and others.

In addition, having good motor properties (high octane number, wider combustion limits than gasoline), methanol can be used as a high-octane additive to gasoline, as well as alternative fuels for internal combustion engines, as an effective carrier of hydrogen when creating environmentally friendly pure hydrogen engine.

2.2. Brief information about production technology

Methanol production uses natural gas as a feedstock. Synthesis gas is obtained by two-stage steam-oxygen conversion, raw methanol synthesis in an isothermal recirculation reactor, and subsequent distillation to obtain commercial methanol.

Taking into account the northern conditions, the drive of power machines is electric. In this regard, most of the high and medium pressure steam is centrally sent to a power plant, the energy of which is used to drive machines. The rest of the steam goes to the technology and provision of the rectification process.

The main principles of production technology are as follows:

- all heat and energy flows are used to the maximum;
- methanol synthesis is carried out in an isothermal reactor, providing optimal conditions for the process.
- the catalysts used have increased activity, selectivity, high mechanical strength and ensure stable operation in a wide temperature range.

2.3. Production

The annual output of the finished product for rectified methanol is 130,000 tons with a daily output of 380 tons.

The production capacity is determined on the basis of calculations of material balances and analysis of the main technological equipment.

The hourly production of rectified methanol is 15.83 t/h.

According to the material balance, the hourly production of rectified methanol is:

- 16.354 t/h - at the beginning;
- 15,970 t/h - at the end.

The number of operating hours of the unit per year is 8000 hours (330 days), based on the non-stop operation of compressors K 101 and K 201 (run no more than 8000 hours).

2.3.1. Composition of production

The production of methanol consists of the main production - the production of raw methanol, and the separation of the rectification of raw methanol to obtain a commercial product of rectified methanol.

2.3.2. Production method

The feedstock for methanol production is natural gas and associated petroleum gas. The steam required for the conversion is obtained by using the heat of the flue and converted gases.

The technology includes the following main stages of production:

- desulfurization;
- steam reforming of methane;
- steam-oxygen conversion of methane;
- methanol synthesis;
- rectification.

3. Methanol market

By 2021, global demand for methanol may reach 117 million tons. In 2016, consumption did not exceed 80 million tons, but positive dynamics is expected for at least the next five years. The growth point is an increase in the number of MTO projects, traditional consumer sectors will also increase demand.

In the regional context, the undisputed leader in terms of consumption is and will remain Asia, and above all - China. If in 2016 the demand of Chinese enterprises for methanol amounted to 50 million tons, then by 2021 it will overcome the mark of 80 million tons (and over 90 million tons in Asia as a whole). Production in Asia, according to forecasts, will reach the ceiling - and this is about 88 million tons - in 2019, further development of consuming industries will be provided by imports.

The capacity of the domestic market of Kazakhstan is estimated at about 100 thousand tons per year.

4. Marketing plan

It is planned that the consumers of the plant's products will be oil and gas producing and petrochemical companies of Kazakhstan, including independent subsoil users . In addition, the plant will be located close to the existing transport infrastructure, and its products can also be offered for export.

130 thousand tons per year
5 thousand sq. m
. 75 people
18 months

Plant capacity:

Plant area:

Number of personnel:

Construction period:

5. Technical parameters of the plant.

6. Financial plan.

To implement the project (construction of a turnkey plant), according to preliminary estimates , it is necessary to invest about 76.5 million dollars. The final cost of the project will be clarified after completion of work on linking to the site.

The financial calculations for the project are presented in the tables listed below and attached to this business plan.

Table 3-1: "Key Assumptions"

Table 3-2: "Investment plan"

Table 3-3: "Cost calculation"

Table 3-4: "Profit and Loss Account"

Table 3-5: "Balance"

Table 3-6: "Cash flow account"

Table 3-7: "Summary data"

Table 3-8: Profitability

Table 3-9: "Sensitivity analysis"

The financial model of the project is built as follows:

(a) The values of the main parameters of the model for the base forecast variant are concentrated in the table "Basic assumptions". The calculation of the total amount of necessary investments is presented in the table "Investment plan"; production costs per unit of output - in the table "Cost calculation".

(b) Forecast financial accounts and analytical calculations (according to the base scenario) are contained in tables 3-1 - 3-8.

(B) Table 3-9 presents an analysis of the sensitivity of the financial results of the project to changes in the values of the key parameters of the financial model.

e.1. Cost and financing of the project

The total cost of the project is estimated at \$76.6 million, of which \$33.1 million is for the cost of equipment and its delivery; \$29.08 million for construction work; and \$3.00 million for working capital.

It is assumed that the financing of the project will be provided by a loan with a maturity of 5

years, a grace period of 2 years and an interest rate of 5.0% per annum.

Since the construction period is 18 months according to the plan, it is proposed to repay the loan funds according to the following schedule:

- 1) 60%, or \$45,932 thousand - at the beginning of the project;
- 2) 30%, or \$22,966 thousand - after the first 8 months of the project; And
- 3) 10%, or \$7,656 thousand - after the first 12 months of the project.

e.2. Production costs

As shown in Table 3-3, the total production cost per tonne of final product (rectified methanol) will be \$88, of which 85.7% will be basic materials, 6.0% salaries of key production personnel, and 6.4% shop floor costs.

The largest share, 53%, in production costs is occupied by natural gas. In physical terms, 1,000.0 cubic meters will be spent per ton of methanol produced. m of gas.

e.3. Production volumes

The construction of the new plant is planned to be completed in 18 months, i.e. production will start in the second year of the project, and the degree of capacity development in this year is planned to be within 65%. By the 2nd year, the development of capacities will have to reach 100%, at which level, on average, it will remain in subsequent years.

e.4. Sale prices

In the first year of operation of the new plant, i.e. the third year of the project, the selling price will be \$369 per ton. The average annual increase in selling prices is included in the model at the level of 3.0% in the fourth year and 2.0% in further forecast years.

e.5. Project profitability

The main indicators of the project profitability, the calculation of which is given in the tables "Profitability" and "Summary data", will be:

- 1) payback period—3.5 years;
- 2) internal rate of return (IRR) -40.5%;
- 3) net present value (NPV) — \$243.4 million

e.6. Sensitivity analysis

Table 3-9 shows how changes in selling prices and production costs affect the profitability of a project.

Thus, a 10.0% increase in the selling price combined with a 5.0% decrease in production costs leads to an increase in IRR to 44.7% and a decrease in the payback period to 3.1 years.

Table 3-1
KEY ASSUMPTIONS

	on	2	3	4	five	6	7	8	nine	10
Requested loan										
Amount (\$ million)		76.6								
Interest rate		5.0%								
Maturity (years)		5.0								
Grace period (years)		2.0								
Periodicity of payments (months)		6.0								

Production and income

Construction and commissioning period (months)	eighteen										
Project capacity	130,000 tons										
Capacity development plan	65.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Selling prices (for 1 ton)	369	369	369	380	388	396	404	412	420	428	428
Production cost	88	88	89	90	91	91	91	91	91	91	91
Operating expenses:*											
Total	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
Implementation costs	3.9%	3.9%	3.9%	3.9%	3.9%	4.6%	4.6%	4.6%	4.6%	4.6%	4.6%
Administrative expenses	3.2%	3.2%	3.2%	3.2%	3.2%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Assets and liabilities											
As a percentage of gross income											
Debtors	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Inventory	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%	4.5%
Other current assets	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
Accounts payable	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
Other current liabilities	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
Equipment upgrade rate	20.0%	24.0%									
Average depreciation rate	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
VAT	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%
income tax	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%	20.0%

Dividend payout rate

*From gross profit

Table 3-2 _

INVESTMENT PLAN

\$	Quantity	Price	Sum	
Equipment				
Technological	1	30 500 000	30,500,000	39.8%
Packaging			700 000	0.9%
Fare			1,755,000	2.3%
Customs clearance			124 000	0.2%
Total equipment costs			33 079 000	43.2%
Construction works				
Construction works			27 500 000	35.9%
Power supply, communications			800 000	1.0%
Design and survey work			780 000	1.0%
Total construction costs			29 080 000	38.0%
Other costs				
Installation supervision			1 800 000	2.4%
Total other costs			1 800 000	2.4%
Capital expenditures				
Unforeseen expenses		15.0%	9 594 000	12.5%
Total capital costs			73 553 000	96.1%
Existing fixed assets				
Total capital investment			73 553 000	96.1%
Working capital			3,000,000	3.9%
TOTAL PROJECT COST (rounded)			76 553 000	100.0%

FINANCING PLAN

\$ _____

Own contribution to the project

Fixed assets

working capital

Total own investments

Required additional funding including: new own investments	76 553 000	100.0%
external investment in capital		
Bank loan	76, 553,000	100.0%
TOTAL	76,553,000	

Credit Sampling Schedule

months project a
About 812

% общей суммы	60% 30% 10%
Сумма	45 932 000 22 966 000 7 656 000

Table 3-3 _

Costing

Product: rectified methanol

Unit: t

Quantity per 1 ton Price per unit Tot. sum Product Structure (\$)(\$) cost

Main materials:

Natural gas (20°C, 101.3 kPa) Nm3	1000.00	0.05	47.08	53.2%
Oxygen 95% O2 (0°C, 101.3 kPa), st. m3	184.62	0.04	7.10	8.0%
Carbon dioxide, nm3	92.31	0.05	4.26	4.8%
Low pressure steam for rectification, t	0.25	3.08	0.77	0.9%
Recycled water (cubic meters)	220.00	0.02	5.08	5.7%
Water demineralized	1.50	0.31	0.46	0.5%
Electricity (kWh)	144.00	0.08	11.08	12.5%

Total Basic Materials	75.82	85.7%
Basic workers salary	5.33	6.0%
Total direct costs	81.15	91.7%
shop expenses	5.68	6.4%
Total production cost	86.83	98.2%
environmental protection	1.62	1.8%
Full cost	88.45	100.0%

Table 3-4

PROFIT AND LOSS ACCOUNT

\$	year									
	12	3	4	5	6	78910				
Gross income	31,200,000	48,000,000	48,000,000	49 439 000	50 427 000	51 441 000	52 468 000	53 521 000	54 587 000	55 679 000
Cost price	7 474 130	11 498 662	11 609 000	11 726 000	11 843 000	11 843 000	11 843 000	11 843 000	11 843 000	11 843 000
Gross profit	23 725 870	36 501 338	36 391 000	37,713,000	38 584 000	39 598 000	40 625 000	41 678 000	42 744 000	43 836 000
Depreciation		3 677 650	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300
Operating expenses		913 446	1 405 302	1 401 054	1 451 951	1 485 484	1 801 709	1 848 438	1 896 349	1 944 852
Implementation costs										1 994 538

Administrative expenses	747 365	1 149 792	1 146 317	1 187 960	1 215 396	970 151	995 313	1 021 111	1 047 228	1 073 982
Total operating expenses	1 660 811	2 555 094	2 547 370	2 639 910	2 700 880	2 771 860	2 843 750	2 917 460	2 992 080	3 068 520
from sales	22 065 059	30 268 595	26 488 330	27 717 790	28 527 820	29 470 840	30 425 950	31 405 240	32 396 620	33 412 180
Interest payments	3 827 650	3 827 650	3 189 708	1 913 825	637 942					

balance sheet profit	18 237 409 26 440 945	23 298 622	25 803 965	27 889 878	29 470 840	30 425 950	31 405 240	32 396 620	33 412 180	
income tax	3 647 482	5 288 189	4 659 724	5 160 793	5 577 976	5 894 168	6 085 190	6 281 048	6 479 324	6 682 436
Net profit	14 589 927	21 152 756	18 638 897	20 643 172	22 311 903	23 576 672	24 340 760	25 124 192	25 917 296	26 729 744

RETAIL ACCOUNT

Retained earnings at the beginning of the period	14 589 927	35 742 683	54 381 580	75 024 752	97 336 655	120 913 327	145 254 087	170 378 279	196 295 575	223 025 319
Net profit	14 589 927	21 152 756	18 638 897	20 643 172	22 311 903	23 576 672	24 340 760	25 124 192	25 917 296	26 729 744
Dividends										
Retained earnings at the end period	14 589 927	35 742 683	54 381 580	75 024 752	97 336 655	120 913 327	145 254 087	170 378 279	196 295 575	223 025 319

Table 3-5 _

BALANCE

	year									
J1	1	2	3	4	five	6	7	8	nine	10
Assets										
Cash	89 138 927	40 500 333	40 912 109	43 355 649	47 464 495	78 355 322	110 009 132	142 445 919	175 674 705	209 765 209
Debtors	936 000	1,440,000	1,440,000	1 483 170	1 512 810	1 543 230	1 574 040	1 605 630	1 637 610	1 670 370
Inventory	2,160,000	2,160,000	2 224 755	2 269 215	2 314 845	2 361 060	2 408 445	2 456 415	2 505 555	2 505 555
Other current assets	156 000	240 000	240 000	247 195	252 135	257 205	262 340	267 605	272 935	278 395
Current assets, total	92 390 927	44 340 333	44 816 864	47 355 229	51 544 285	82 516 817	114 253 957	146 775 569	180 090 805	214 219 529
Fixed assets, initial cost		73 553 000	73 553 000	73 553 000	73 553 000	73 553 000	73 553 000	73 553 000	73 553 000	73 553 000
Minus: accumulated depreciation		3 677 650	11 032 950	18 388 250	25 743 550	33 098 850	40 454 150	47 809 450	55 164 750	62 520 050
Fixed assets, residual value		69 875 350	62 520 050	55 164 750	47 809 450	40 454 150	33 098 850	25 743 550	18 388 250	11 032 950
Other long-term assets										
Total long-term assets		69 875 350	62 520 050	55 164 750	47 809 450	40 454 150	33 098 850	25 743 550	18 388 250	11 032 950
total assets	92 390 927	114 215 683	107 336 914	102 519 979	99 353 735	122 970 967	147 352 807	172 519 119	198 479 055	225 252 479
Liabilities and Equity										
Accounts payable	780 000	1,200,000	1,200,000	1 235 975	1 260 675	1 286 025	1 311 700	1 338 025	1 364 675	1 391 975
Short term loans										
Current portion of long-term debt		25 517 667	25 517 667	25 517 667						
Other current liabilities	468 000	720 000	720 000	741 585	756 405	771 615	787 020	802 815	818 805	835 185
Current liabilities, total	1,248,000	27 437 667	27 437 667	27 495 227	20 170 800	20 576 400	20 987 200	21 408 400	21 838 480	22 227 160
Long term debt	76 553 000	51 035 333	25 517 667							
Other long-term liabilities										
Total long-term liabilities	76 553 000	51 035 333	25 517 667							
Capital										
Undistributed profits	14 589 927	35 742 683	54 381 580	75 024 752	97 336 655	120 913 327	145 254 087	170 378 279	196 295 575	223 025 319
Total equity	14 589 927	35 742 683	54 381 580	75 024 752	97 336 655	120 913 327	145 254 087	170 378 279	196 295 575	223 025 319
Liabilities and capital total	92 390 927	114 215 683	107 336 914	102 519 979	99 353 735	122 970 967	147 352 807	172 519 119	198 479 055	225 252 479

Table 3-6

CASH FLOW ACCOUNT

	year									
\$	1	2	3	4	five	6	7	8	nine	10
Operating cash flows										
Net income	14 589 927	21 152 756	18 638 897	20 643 172	22 311 903	23 576 672	24 340 760	25 124 192	25 917 296	26 729 744
Depreciation		3 677 650	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300	7 355 300
Accounts receivable	-936 000	-504 000		-43 170	-29 640	-30 420	-30 810	-31 590	-31 980	-32 760
Inventory	-2,160,000		-64 755	-44 460	-45 630	-46 215	-47 385	-47 970	-49 140	
Other current assets	-156 000	-84 000		-7 195	-4 940	-5 070	-5 135	-5 265	-5 330	-5 460
Accounts payable	780 000	420 000		35 975	24 700	25 350	25 675	26 325	26 650	27 300
Other current liabilities	468 000	252 000		21 585	14 820	15 210	15 405	15 795	15 990	16 380
Net cash flows from core business	12 585 927	24 914 406	25 929 442	27 961 207	29 626 513	30 890 827	31 653 810	32 436 787	33 228 786	34 090 504
Cash flows from investing activities:										
Acquisition of major concomitants in_		-73,553,000								
Cost of renovating fixed assets										
Net cash flows from investing activities		-73,553,000								
Cash flows from financing activities:										
Change in short-term loans										
Change in long-term loans		76,553,000		-25,517,667	-25,517,667	-25,517,667				
Capital										
Net cash flows from financial activities	76 553 000	-25 517 667	-25 517 667	-25 517 667						
Net increase (decrease) in cash	89 138 927	-48 638 594	411 776	244 3540	4 108 846	30 890 827	31 653 810	32 436 787	33 228 786	34 090 504
Cash at the beginning of the year	89 138 927	40 500 333	40 912 109	43 355 649	47 464 495	78 355 322	110 009 132	142 445 919	175 674 705	209 765 209
Cash at the end of the year	89 138 927	40 500 333	40 912 109	43 355 649	47 464 495	78 355 322	110 009 132	142 445 919	175 674 705	209 765 209

Table 3-7

SUMMARY

\$ unless otherwise noted	year									
	one	2	3	4	five	6	7	8	nine	10
net gross income	31,200,000	48,000,000	48,000,000	49,439,000	50,427,000	51,441,000	52,468,000	53,521,000	54,587,000	55,679,000
Gross profit	23,725,870	36,501,338	36,391,000	37,713,000	38,584,000	39,598,000	40,625,000	41,678,000	42,744,000	43,836,000
Operating profit	22,065,059	30,268,595	26,488,330	27,717,790	28,527,820	29,470,840	30,425,950	31,405,240	32,396,620	33,412,180
Net profit	14,589,927	21,152,756	18,638,897	20,643,172	22,311,903	23,576,672	24,340,760	25,124,192	25,917,296	26,729,744
Depreciation		3,677,650	7,355,300	7,355,300	7,355,300	7,355,300	7,355,300	7,355,300	7,355,300	7,355,300
Interest payments	3,827,650	3,827,650	3,189,708	1,913,825	637,942					
Repayment of principal amount of d. -term debt cash flows	12,585,927	24,914,406	25,929,442	27,961,207	29,626,513	30,890,827	31,653,810	32,436,787	33,228,786	34,090,504
Cumulative cash flows	12,585,927	37,500,333	63,429,775	91,390,982	121,017,495	151,908,322	183,562,132	215,998,919	249,227,705	283,318,209
		-2,777,933	529,715		3,470,904	30,890,827	31,653,810	32,436,787	33,228,786	34,090,504
Payback period (PP, years)	3.5 from project start									
	2.0 from plant commissioning									
Net Present Value (NPV) Internal Rate of Return (IRR)	243 420 672									
	40.5%									
Net working capital	91,142,927	42,420,333	42,896,864	45,377,669	49,527,205	80,459,177	112,155,237	144,634,729	177,907,325	211,992,369
Fixed assets (residual value)	69,875,350	62,520,050	55,164,750	47,809,450	40,454,150	33,098,850	25,743,550	18,388,250	11,032,950	
Average annual equity	14,589,927	25,166,305	45,062,132	64,703,166	86,180,704	109,124,991	133,083,707	157,816,183	183,336,927	209,660,447
Average annual assets	92,390,927	103,303,305	110,776,298	104,928,446	100,936,857	111,162,351	135,161,887	159,935,963	185,499,087	211,865,767
Gross profit margin	76.0%	76.0%	75.8%	76.3%	76.5%	77.0%	77.4%	77.9%	78.3%	78.7%
Net profit margin	46.8%	44.1%	38.8%	41.8%	44.2%	45.8%	46.4%	46.9%	47.5%	48.0%
Operating expenses from revenue	5.3%	5.3%	5.3%	5.3%	5.4%	5.4%	5.4%	5.5%	5.5%	5.5%
Return on invested capital	880.8%	65.6%	31.1%	36.4%	42.6%	51.0%	62.6%	79.5%	106.8%	157.8%
Return on equity	100.0%	84.1%	41.4%	31.9%	25.9%	21.6%	18.3%	15.9%	14.1%	12.7%
Return on assets	15.8%	20.5%	16.8%	19.7%	22.1%	21.2%	18.0%	15.7%	14.0%	12.6%
Long-term debt ratio	0.8	0.6	0.3							
Aggregate . liabilities to capital	5.3	2.2	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Aggregate . liabilities to assets	0.8	0.7	0.5	0.3	0.0	0.0	6.0	0.0	0.0	0.0
Interest repayment	5.8	8.9	10.6	18.3	56.2					
Debt service ratio	5.8	8.9	1.2	1.3	1.4					
, turnover capital to assets	1.0	0.4	0.4	0.4	0.5	0.7	0.8	0.8	0.9	0.9
Coeff . current liquidity	2.6	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ratio , urgent liquidity	72.2	21.8	22.1	22.7	24.3	38.8	53.2	67.3	81.2	94.9
Money . Wednesdays, and cr .-cf. inv. to cr .- cf.	71.4	21.1	21.3	21.9	23.5	38.1	52.4	66.5	80.5	94.2
Revenue to total assets	0.3	0.5	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.3
Revenue to net working capital	0.3	1.1	1.1	1.1	1.0	0.6	0.5	0.4	0.3	0.3

Table 3-8

PROFITABILITY**Invested capital**

\$	1	2	3	4	five	6	7	8	nine	10
Calculation of the amount of invested capital										
Operating current assets	3,252,000	3,840,000	3,904,755	3,999,580	4,079,790	4,161,495	4,244,825	4,329,650	4,416,100	4,454,320
Non-interest cr .- avg. liabilities	1,248,000	1,920,000	1,920,000	1,977,560	2,017,080	2,057,640	2,098,720	2,140,840	2,183,480	2,227,160
Operating working capital	2,004,000	1,920,000	1,984,755	2,022,020	2,062,710	2,103,855	2,146,105	2,188,810	2,232,620	2,227,160
Net fixed assets		69,875,350	62,520,050	55,164,750	47,809,450	40,454,150	33,098,850	25,743,550	18,388,250	11,032,950
Other net operating assets										
Operating invested capital	2,004,000	71,795,350	64,504,805	57,186,770	49,872,160	42,558,005	35,244,955	27,932,360	20,620,870	13,260,110
Calculation of return on invested capital										
Operating income before interest and cash. (EBIT) income tax	22,065,059	30,268,595	26,488,330	27,717,790	28,527,820	29,470,840	30,425,950	31,405,240	32,396,620	33,412,180
Operating profit minus taxes	17,652,047	24,214,876	21,190,664	22,174,232	22,822,256	23,576,672	24,340,760	25,124,192	25,917,296	26,729,744
The main components of profitability										
EBIT to invested capital		42.2%	41.1%	48.5%	57.2%	69.2%	86.3%	112.4%	157.1%	252.0%
EBIT to gross income		63.1%	55.2%	56.1%	56.6%	57.3%	58.0%	58.7%	59.3%	60.0%
Cost to gross income		24.0%	24.2%	23.7%	23.5%	23.0%	22.6%	22.1%	21.7%	21.3%
Operating expenses to gross income		5.3%	5.3%	5.3%	5.4%	5.4%	5.4%	5.5%	5.5%	5.5%
Depreciation to gross income		7.7%	15.3%	14.9%	14.6%	14.3%	14.0%	13.7%	13.5%	13.2%
Gross return on invested capital		66.9%	74.4%	86.5%	101.1%	120.9%	148.9%	191.6%	264.7%	419.9%
Working capital to gross income		4.0%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.1%	4.0%
Fixed assets (rest . cost .) to the shaft. income		145.6%	130.3%	111.6%	94.8%	78.6%	63.1%	48.1%	33.7%	19.8%

Discounted Cash Flows

Operating cash flows	12,585,927	24,914,406	25,929,442	27,961,207	29,626,513	30,890,827	31,653,810	32,436,787	33,228,786	34,090,504
Free cash flow Final cost	15,648,047	27,976,526	28,481,209	29,492,267	30,136,866	30,890,827	31,653,810	32,436,787	33,228,786	34,090,504
										340,905,040
Total free streams	15,648,047	27,976,526	28,481,209	29,492,267	30,136,866	30,890,827	31,653,810	32,436,787	33,228,786	374,995,544
Internal Rate of Return (IRR)	40.46%									
Net Present Value (NPV)	243 420 672									
Discount rate	10.0%									

Table 3-9

SENSITIVITY ANALYSIS

Profitability of the project depending on changes in selling prices and

production costs		<i>Yen change for products</i>						
		-15.0%	-10.0%	-5.0%		5.0%	10.0%	15.0%
	-15.0%	35.9%	37.9%	39.9%	41.8%	43.7%	45.6%	47.5%
	-10.0%	35.4%	37.4%	39.4%	41.4%	43.3%	45.2%	47.0%
	-5.0%	34.9%	37.0%	39.0%	40.9%	42.8%	44.7%	46.6%
		34.4%	36.5%	38.5%	40.5%	42.4%	44.3%	46.1%
	<i>Change</i> 5.0%	34.0%	36.0%	38.0%	40.0%	41.9%	43.8%	45.7%
	<i>volumes</i> 10.0%	33.5%	35.5%	37.6%	39.5%	41.5%	43.4%	45.3%
	<i>implementation</i> 15.0%	33.0%	35.1%	37.1%	39.1%	41.0%	42.9%	44.8%

IRR

The payback period of the project depending on selling price changes and

production costs	G	<i>Yen change for products</i>						
		-15.0%	-10.0%	-5.0%		5.0%	10.0%	15.0%
	-15.0%	4.0	3.7	3.5	3.3	3.2	3.0	2.9
	-10.0%	4.1	3.8	3.6	3.4	3.2	3.0	2.9
	-5.0%	4.1	3.9	3.6	3.4	3.2	3.1	3.0
		4.2	3.9	3.7	3.5	3.3	3.1	3.0
	<i>Change</i> 5.0%	4.3	4.0	3.7	3.5	3.3	3.2	3.0
	<i>volumes</i> 10.0%	4.3	4.0	3.8	3.6	3.4	3.2	3.0
	<i>implementation</i> 15.0%	4.4	4.1	3.9	3.6	3.4	3.2	3.1

Payback period

7. Project results

As a result of the project implementation, the following important indicators will be achieved:

- Creation of highly profitable methanol production with the optimal price of finished products.
- Preparation for the start of the implementation of the next stage of creation in Kazakhstan of the industry of deep gas processing at the source of its production .
- Creation of additional jobs.
- Creation of an additional competitive advantage for oil and gas producing and transporting gas companies.
- Creation of large innovative production.