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MALAYA HPP

ON THE MAILUU-SUU RIVER

Initiator:
JSC Mailuu-Suui Lamp Factory

Shareholder
State Agency for State Property Management under the Cabinet of Ministers of the Kyrgyz Republic"

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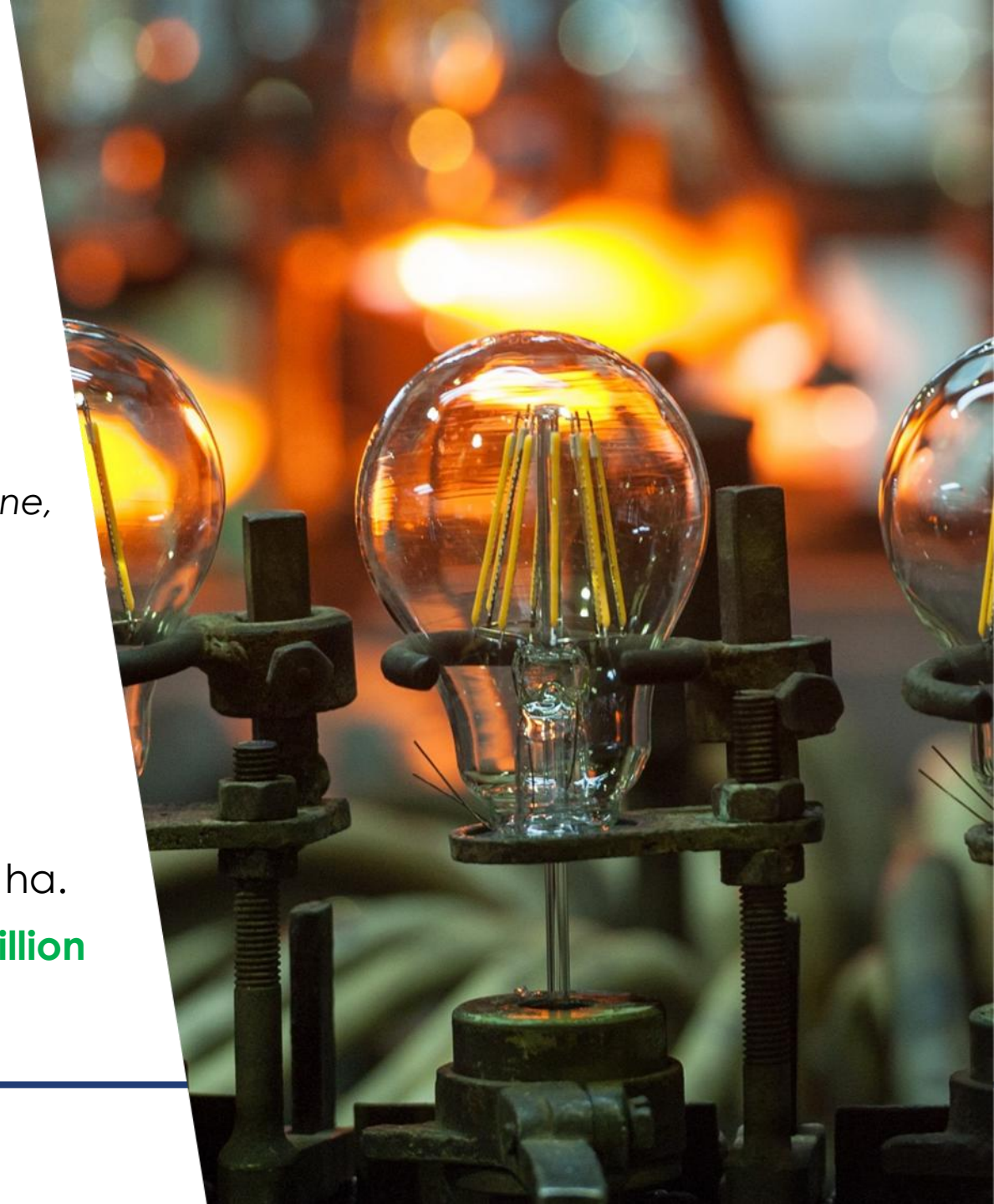
МАЙЛУУ-СУУЙСКИЙ LAMP FACTORY

- Put into operation in **in 1966**
- Number of employees **1,352 people**
- Pproduction capacity **up to 100 million units.**
- **70-80% export**
- *Russia, Azerbaijan, Kazakhstan, Turkmenistan, Uzbekistan, Ukraine, Georgia*
- International Standard Certificate **ISO 9001:2008**
- Turnover for 2022 **933.7 million soms (US $ 11 million)**
- Factory territory **41.92 ha**, including:

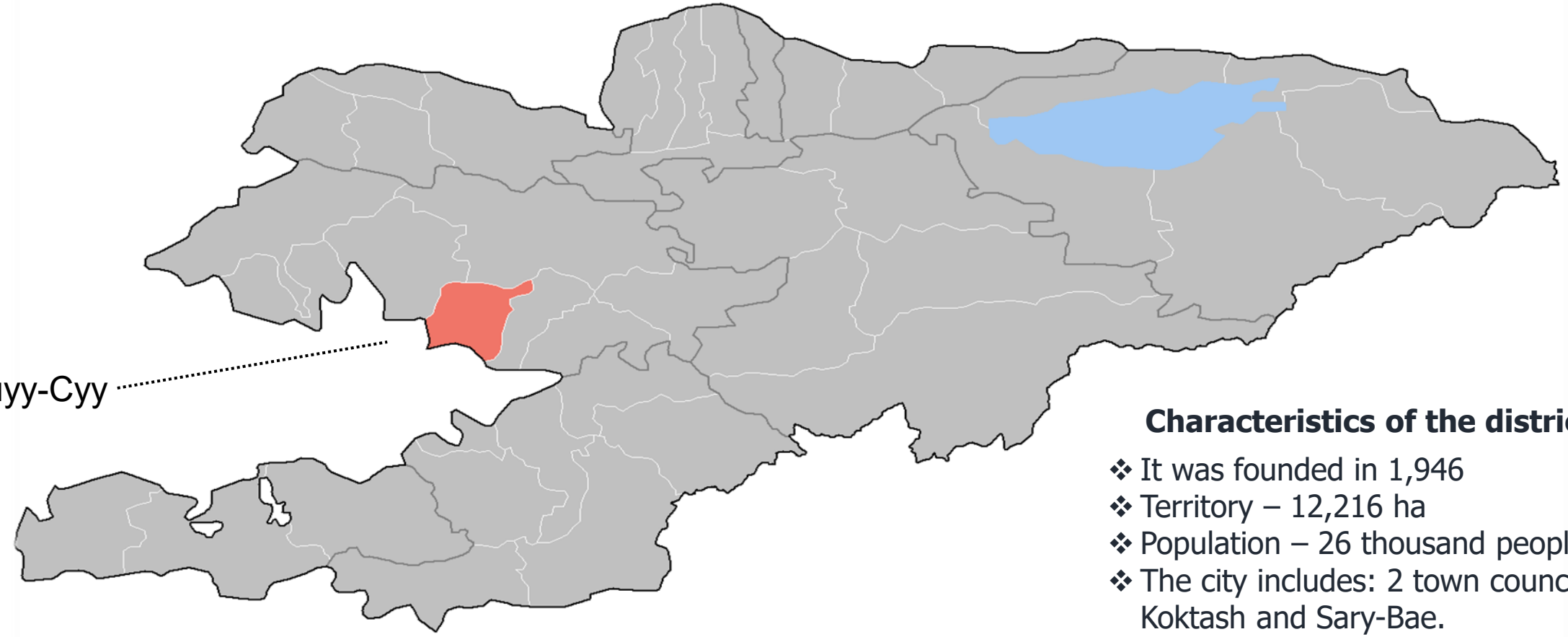
- main territory – 33.8 ha;

- transshipment base in the village of Shamaldy-Sai – 8.12 ha.

- Tax revenues for 2022 **142 million soms,** of these, **27.3 million soms** goes to the local budget.



General information

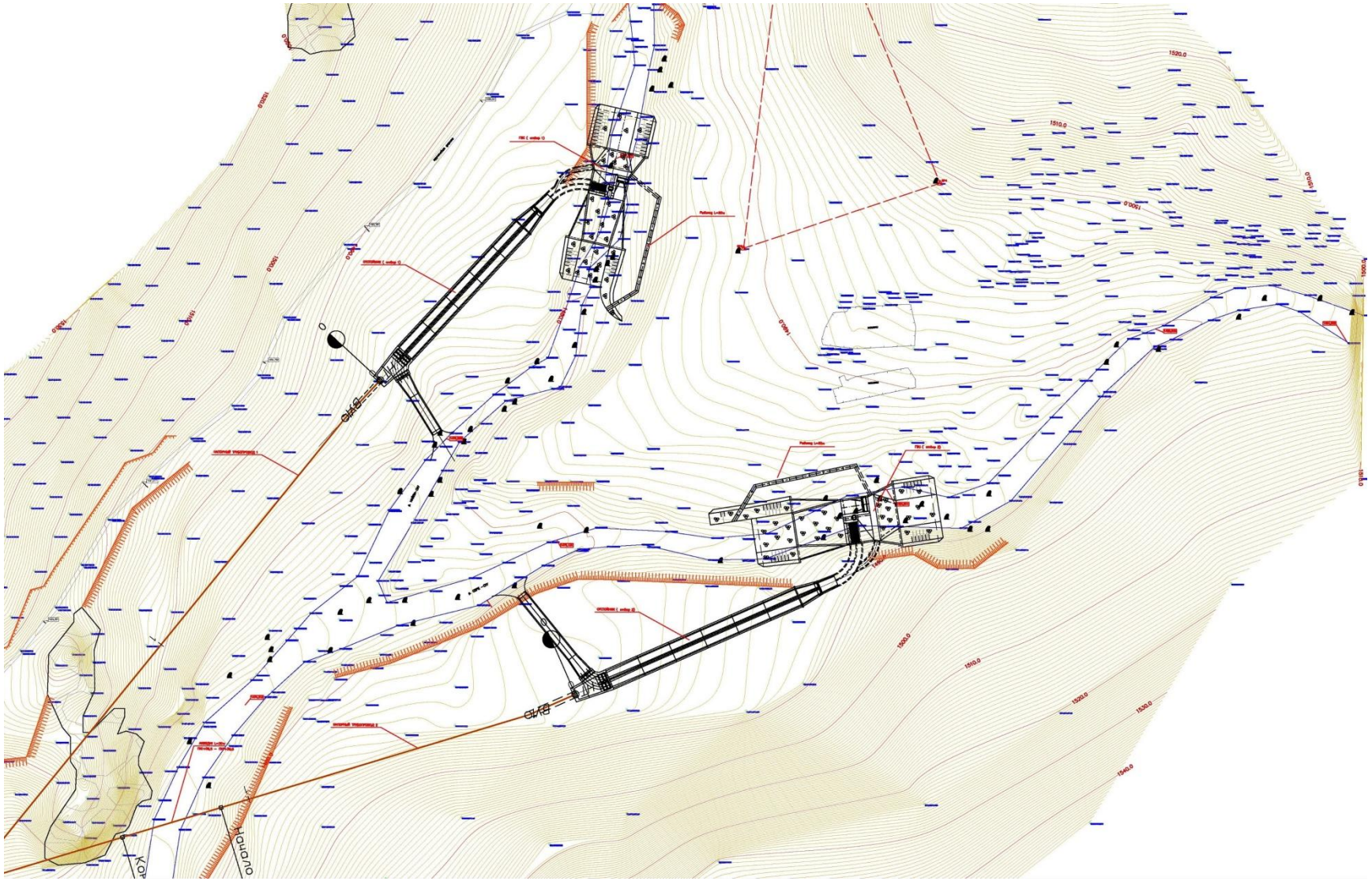


Characteristics of the district:

- It was founded in 1,946
- Territory – 12,216 ha
- Population – 26 thousand people
- The city includes: 2 town councils: Koktash and Sary-Bae.

Geographical location: The construction of the Mailuu-Suu hydroelectric power station is planned on the Mailuu-Suu River 15 km upstream from the city of Mailuu-Suu. In the Nooken district, Jalal-Abad region of the Kyrgyz Republic.

Water intake units



Project name	Construction and operation "Mailuu-Suuiskaya Malaya Hydroelectric power station"
Place of implementation of hydroelectric power plants	Jalal-Abad region, Nooken district
Installed version power	**26,4 MW**
Average annual electricity generation	**112,842 million kW/tsch (at 75% security)**
Construction period	24 monthbut
Estimated project cost	**35,670 millions US dollars**
Project support	Guarantee of the Ministry of Finance of the Kyrgyz Republic-commission of 1% of the financing amount
Availability of initial authorization information	1) Engineering surveys on the river alignment («NK Group») 2) Title and title documents for land plots (HPP construction site) 3) NK Group design and survey works 4) Availability of a contract for guaranteed purchase of electricity (PPA) at the maximum tariff in accordance with the legislation
Additional expertise required	1) Gosudarstvennaya expertise construction of the HPP building (general contractor) 2) After construction is completed "Malaya Hydroelectric power station Майлуу-Суу» subject to conformity assessment (according to the Gosarkhnadzor act)
Project goals	1) Improving the efficiency of the plant's operations 2) Creating additional jobs 3) Increase in payments to the state budget 4) Social impact

PROJECT COST STRUCTURE

NAME OF COSTS	Total costs, USD	
Preparatory work (allotment of land) land plot, temporary production base, power supply, access roads, stone protection measures)	200 000	0,6%
Main production facilities	**30 724 800**	**86,1%**
2.1. Water intake unit	1 400 000	
2.2. Pressure water line	22 725 200	
2.3. MSPP building	800 000	
2.4. Hydraulic power equipment, RC, ETC.: installation and transportation	5 799 600	
Auxiliary production and service facilities	240 000	0,7%
Energy facilities	3 465 600	9,7%
External water supply and sewerage networks and structures	140 000	0,4%
Design and survey work	900 000	2,5%
total	**35 670 400**	**100,0%**

Small HPP project financing model and terms (35 670 400 $)

Mailuu-Suui Small HPP financing model

RKFR (as agreed)
Allocates a loan to OJSC MSLZ in the amount of US $ 8.9 million **(25% of the project cost)**

JSC "MSLZ"
Hires China National Hcavy Machinery Corporation (CHMC) as the general contractor.
(75% of the project cost)

CHMC
builds a small hydroelectric power station on a turnkey basis, with the attraction of funds from KKB (US $ 26.752 million)

Total to be refunded –
46,579,728 thousand US dollars,
including by percentage **–**
10 909 228 thousand US dollars

Financing conditions for Mailuu-Suui Small HPP

RKFR (as agreed)		
Allocated credit funds	thousands of US dollars$	8 917,625
Loan term	years	8
Grace period	years	2
Interest rate	%	4,0
Repayment of RKFR loan funds		
Total amount of loan repayments	thousands of US dollars$	**11 042,992**
including payment of the principal amount of the debt	thousands of US dollars$	8 917,625
Interest payment	thousands of US dollars$	2 125,367

China Commercial Bank (CCB)		
Allocated credit funds	thousands of US dollars$	26 752,875
Loan term	years	14
Grace period	years	2
Interest rate	%	4,0

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Planned calculations of prime cost, selling prices and marketable products

Name of annual expenses	Unit of change	The amount
Material costs total	thousands of US dollars$	52,467
Labor Remuneration Fund	thousands of US dollars$	60,000
Social security contributions	thousands of US dollars$	10,350
Production and other expenses	thousands of US dollars$	12,159
Administrative expenses, incl.	**thousands of US dollars$**	**47,764**
Labor Remuneration Fund	thousands of US dollars$	35,455
Social security contributions	thousands of US dollars$	6,116
Taxes and other administrative expenses	thousands of US dollars$	6,193
TOTAL COMPANY'S OWN EXPENSES EXCLUDING DEPRECIATION per year (1 kW = 0.15 som	**thousands of US dollars$**	**182,740**

Name	Unit of change	The amount
Electricity generation per year	thousand kW	112 842
Cost of electricity generated without depreciation (thousand kW / h)	United States dollars. $	1,619
	United	

Selling prices per thousand kWh	Unit ed.	Price
1. for OJSC MSLZ for 1000 kW / h	United States dollars. $	24,431

Annual volume commercial products	Unit ed.	The amount
2. per side for 1000 kW / h	thous. States dollars. $	50,227
Commercial output of generated electric energy per year	United States dollars. $	**5 123,746**

Output (112,842 thousand kW – Demand (21,088 thousand kW) = **External sales (91,754 thousand kW)**

Tariff (4.42 som) – Production cost (0.15 som) = **4,27 som**

91,754 thousand kW * 4.27 som = **391 789.6 thousand. com** or **4,452. 2 thousand US dollars**

46,530,728 : 4453.2 = **10.5 years (payback period excluding plant needs)**

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Forecast indicators

Forward-looking statement of cash flows, thousands of US dollars	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037
DS flow from operating activities															
Proceeds from electricity sales	0	0	854	5124	5124	5124	5124	5124	5124	5124	5124	5124	5124	5124	5124
Proceeds from sales of MSLZ products	12202	12202	16999	17639	14598	14598	8503	10219	10221	6805	10231	10234	8509	10238	6805
Operating expenses for manufacturing of MSLZ products	-11475	-11323	-14121	-14380	-11539	-11539	-5788	-7081	-7084	-4262	-7094	-7096	-5794	-7101	-4262
Operating expenses of small hydroelectric power station	0	0	-30	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183	-183
Income tax	-31	-31	-118	-140	-138	-145	-138	-309	-320	-272	-343	-355	-350	-379	-339
Net cash flow from operating activities	**696**	**849**	**3583**	**8060**	**7862**	**7855**	**7518**	**7770**	**7758**	**7212**	**7736**	**7723**	**7306**	**7699**	**7145**
DS flow from investing activities															
Construction and launch of mini hydroelectric power stations	-31212	-4459	0	**0**	0	0	0	0	0	0	0	0	0	0	0
Net cash flow from investing activities	**-4459**	**-4459**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Costs of repair, modernization of fixed assets, repair or construction of the furnace	**-500**	**-500**	**-300**	**-1500**	**-300**	**-300**	**-1500**	**-300**	**-300**	**-3500**	**-300**	**-300**	**-2000**	**-300**	**-300**
DS flow from financing activities															
Total payments under the budget loan for the development of glass container production	**0**	**0**	**-1610**	**-1870**	-1802	-1733	-1665	-1597	-1529	-1461	-1393	-1324	-226	0	0
Getting a 25% loan at Malaya HPP	4459	4459													
Interest payments	0	0	-64	-299	-378	-333	-289	-244	-200	-155	-111	-51	0	0	0
Principal repayments	0	0	-139	-743	-1115	-1115	-1115	-1115	-1115	-1115	-975	-372	0	0	0
Total payments for small hydroelectric power plants (25%)	**0**	**0**	**-203**	**-1043**	**-1493**	**-1448**	**-1404**	**-1359**	**-1314**	**-1270**	**-1087**	**-423**	**0**	**0**	**0**

Project payback

Величина капитальных вложений	тыс.сом	3 139 004	Средний курс долл.США=88,00	тыс.долл.$	35 670,5
Общая сумма погашения по кредиту	тыс.сом	4 099 016		тыс.долл.$	46 579,7
в т.ч. погашения по основной сумме долга	тыс.сом	3 139 004		тыс.долл.$	35 670,5
Погашения по процентам	тыс.сом	960 012		тыс.долл.$	10 909,2
Среднегодовая выработка электроэнергии	т.кВт/час	112 842		т.кВт/час	112 842,0
Среднегодовой объем товарной продукции (план продаж)	тыс.сом	450 890		тыс.долл.$	5 123,7
Себестоимость электроэнергии без амортизации	тыс.сом	16 081		тыс.долл.$	182,7
Себестоимость электроэнергии с учетом амортизации	тыс.сом	103 781		тыс.долл.$	1 179,3
Среднегодовая прибыль	тыс.сом	347 108		тыс.долл.$	3 944,4
Налог на прибыль	тыс.сом	17 834		тыс.долл.$	202,7
Чистая прибыль (без учета оплаты суммы по процентам)	тыс.сом	329 275		тыс.долл.$	3 741,8
Срок окупаемости	**лет**	**12,4**		**тыс.долл.$**	**12,4**

EBITDA (average annual rate)	**thousand som**	**434 808,5**	**The average annual loan repayment amount (12 years) is 3,800 thousand US dollars**
	thousands of US dollars$	**4 941,006**	

Project Payback (RR)	**Unit ed.**	**The amount**	**Note**
Net profit	thousands of US dollars$	3 741,757	319,578. 5 thousand soms
Total loan repayment amount, incl.	thousands of US dollars$	46 579,728	

Project payback (PP)

Net profit for 14 years = 4,609,850,000 soms
Average annual profit = 329,275,000 soms
Loan repayment amount = 4,099,016,064 SOM (US $ 46,579,728)
PP = 4 099 016 064/ 329 275 000 = 12,45 years or 12 years 5 months

Project payback including discounting (DPP)

*The base rate is the deposit rate in the amount of 10%

Net profit for 13 years = 4,190,772,726 SOM
Average annual profit = 299,340,909 SOM
Loan repayment amount = 4,099,016,064 SOM
DPP =4 099 016 064/ 299 340 909 = 13,69 years or 13 years 8 months

r(a) = 5%;
r(b) = 380% (product profitability = profit/cost*100);
IRR - ?
NPV(a) = 4 609 850 000 / (1+0,05) – 4 099 016 064 = 291 317 269
NPV(b) = 4 609 850 000 / (1+3,80) – 4 099 016 064 = - 3 138 630 647
IRR = 5%+(380%-5%)* 291 317 269/ (291 317 269– (- 3 138 630 647)) = 36,9%
The rule is followed: 291 317 269>0> - 3 138 630 647 and 5%<36,9%<380%

Information about the work done

Land lease agreements:

► Received a land plot for temporary use on a long-term basis with a total area of 2.7 ha., from the mayor's office of Mailuu-Suu.

► Toskol-Ata Forestry of Nooken district of Jalal-Abad region has previously agreed to provide a land plot for temporary use on a long-term basis with a total area of 0.14 hectares. Forestry should calculate the lost profit.

► Kochkor-Ata forestry of Nooken district of Jalal-Abad region reported that at the moment changes are being made to the Forest Code of the Kyrgyz Republic, after making these changes, they will consider the possibility of transferring a land plot for temporary use on a long-term basis with a total area of 14.45 hectares.

On the construction of a small hydroelectric power station:

MSLZ is negotiating the construction of a small hydroelectric power station with the following companies: :

- with a Chinese company CHMC (signed a contract of intent for the implementation of this project).
- with an Austrian company VOITH.

On electricity sales:

JSC "NES of Kyrgyzstan" expressed its readiness to buy electricity from JSC "MSLZ", as a subject of renewable energy.

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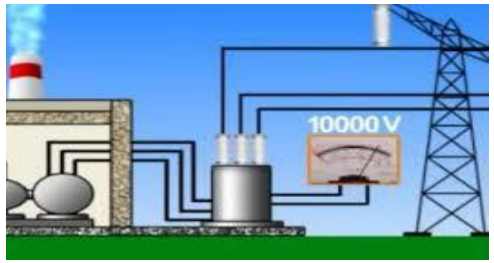
EXPECTED EFFECT

❖ Reduction of electricity costs per year by **70.0 million rubles. som (795 thousand rubles) $)**

❖ Getting an average annual profit of more than **345 million soms (3.9 million euros). $)**

❖ Possibility of switching to a combined glass furnace, resuming foundry production on induction furnaces



❖ Providing your own stable electricity

❖ Providing the city with clean drinking water.

thanks for the attention!