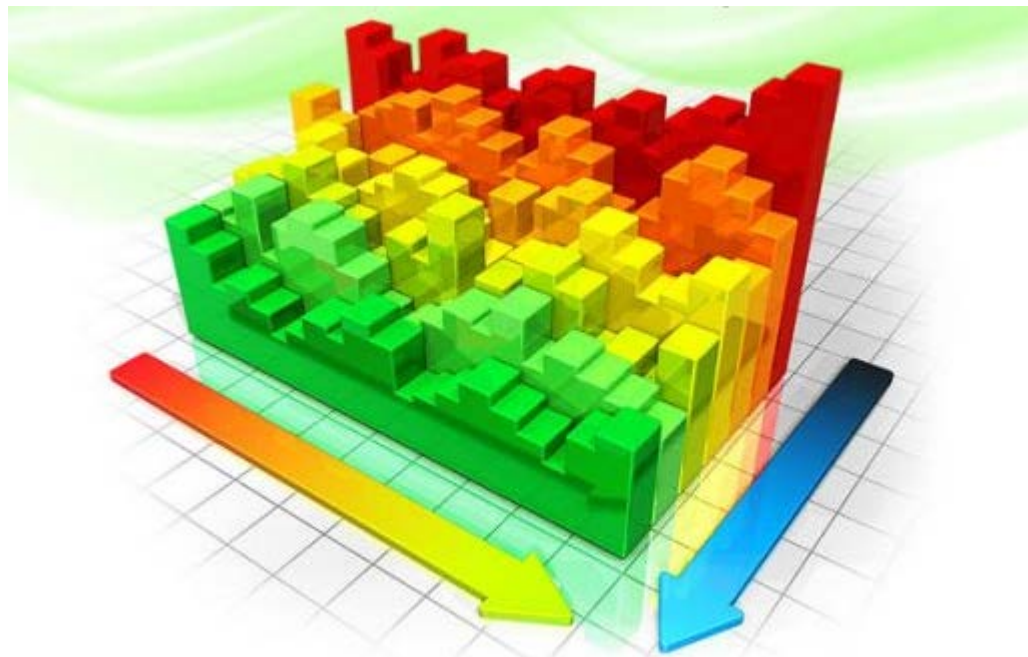
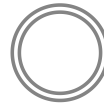


PROJECT IDENTIFICATION FORM - PIF

Energy Park Konjic





STATE IN KONJIC

- Partially solved heating system with steam coal boilers – only the right side of the Municipality of Konjic
- Existing steam coal boilers capacity 2x12.5 MWth
 - one boiler is not in function, while other is working with 50% of its capacity (bad combustion and high pollutant emission)
- Left side of the Municipality of Konjic is heated with several smaller boiler rooms
- Wider area of the Municipality of Konjic is not covered by any heating system
 - individual biomass, coal and electricity heating systems
- Hot water is used for heating purpose (not steam) → un-efficient heating system



PLANNED THREE PHASES OF 'ENERGY PARK KONJIC' PROJECT

PHASE I:

- Construction of boiler room and installation of biomass ORC module - 6 MWth and 1 Mwel
- Installation of pre-insulated pipe network 2 km

**IMPLEMENTATION
18 MONTHS**

PHASE II:

- Installation of biomass gasification system with waste co-combustion – 10 MWth and 3 Mwel,
- Installation of recycling yard together with baling center and waste selection

**IMPLEMENTATION
24 MONTHS
AFTER
IMPLEMENTATION
OF PHASE I**

PHASE III:

- Increase of capacity of gasification system for 14 MWth and 6 Mwel
- Installation of additional pre-insulated pipe network – according to the economical increase of the Municipality of Konjic

**IMPLEMENTATION
24 MONTHS
AFTER
IMPLEMENTATION
OF PHASE II**



INNOVATIVE ASPECT

- Local public authorities, teachers, fuel suppliers, children will be **MORE INFORMED** about RE

COSTS

- NEW JOBS** and **INCOME** are created and secured through value added chains

REPLICATION POTENTIAL

- More **SECURE** and **SUSTAINABLE** energy supply system with high potential for replication and upscaling

ENVIRONMENTAL COMPATIBILITY

- Reduction of Green House Gas emission and environmental pollution

Current fuel oil consumption (15 potential clients)	550,000 l/a
CO ₂ emission factor	0.00297 t CO ₂ /l
CO₂ emission reduction	1,634 t CO₂/a

EXPECTED PROJECT COSTS



INVESTMENT/COSTS	DETAILS	ESTIMATED INVESTMENT COSTS (EUR)	ESTIMATED REVENUES (EUR/a)
Thermal-energy equipment with biomass supply system		1,405,000.00	
Pipe network and connection equipment		250,000.00	
ORC turbine	Heat energy 6 MWth and electrical energy 1 MweI	1,900,000.00	4,028,800.87
Gasification unit	Heat energy 10 MWth and electrical energy 3 MWeI	6,500,000.00	
Construction		480,000.00	
Operation cost (salaries, maintenance, fuel/biomass)		1,967,900.00	
TOTAL INVESTMENT AND REVENUES		12,502,900.00	4,028,800.87
TOTAL INVESTMENT AND REVENUES WITHOUT OPERATION COSTS		10,535,000.00	

30% owner's equity
3,165,000.00 EUR

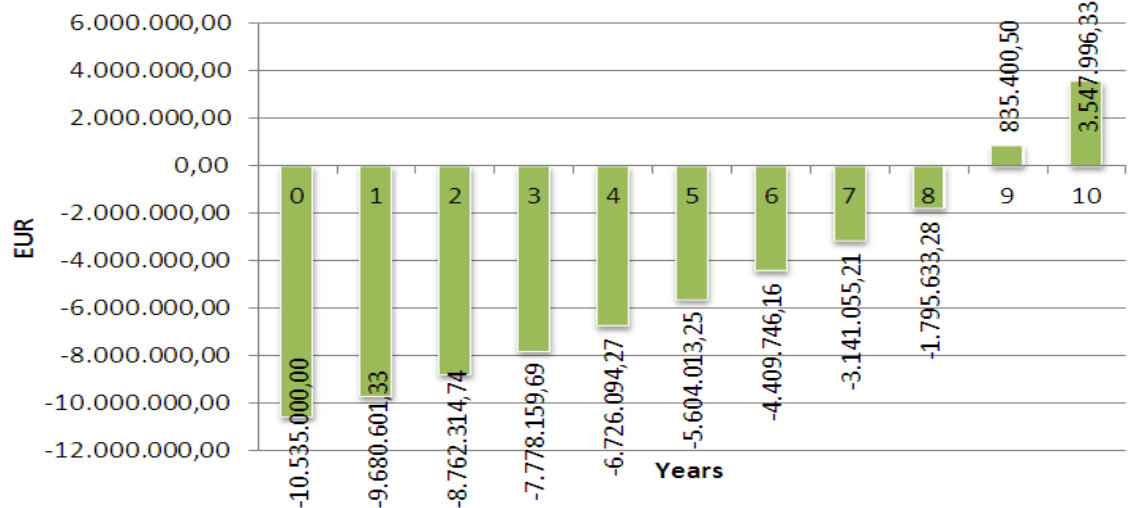
70% bank loan, 8 years, 7%
7,374,500.00 EUR

CASH FLOW

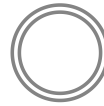
YEAR*	0	1	2	3	4	5	6	7	8
CAPITAL INVESTMENT	10,535,000								
REVENUE		4.028.800,87	4.153.693,69	4.282.458,20	4.415.214,40	4.552.086,05	4.693.200,72	4.838.689,94	4.988.689,33
OPERATION & MAINTENANCE COST		1.967.900,00	2.028.904,90	2.091.800,95	2.156.646,78	2.223.502,83	2.292.431,42	2.363.496,79	2.436.765,19
BANK LOAN		1.206.502,20	1.206.502,20	1.206.502,20	1.206.502,20	1.206.502,20	1.206.502,20	1.206.502,20	1.206.502,20
TOTAL REVENUES		854.398,67	918.286,59	984.155,05	1.052.065,42	1.122.081,02	1.194.267,10	1.268.690,95	1.345.421,93
CASH FLOW	-10.535.000	-9.680.601,33	-8.762.314,74	-7.778.159,69	-6.726.094,27	-5.604.013,25	-4.409.746,16	-3.141.055,21	-1.795.633,28

*All figures are in EUR

Bank interest rates: 5-7%
 Inflation: 3.1%/a
 Exchange rates:
 1 BAM = 1.955830 EUR
 1 BAM = 1.507217 USD
 1 BAM = 0.047449 RUB

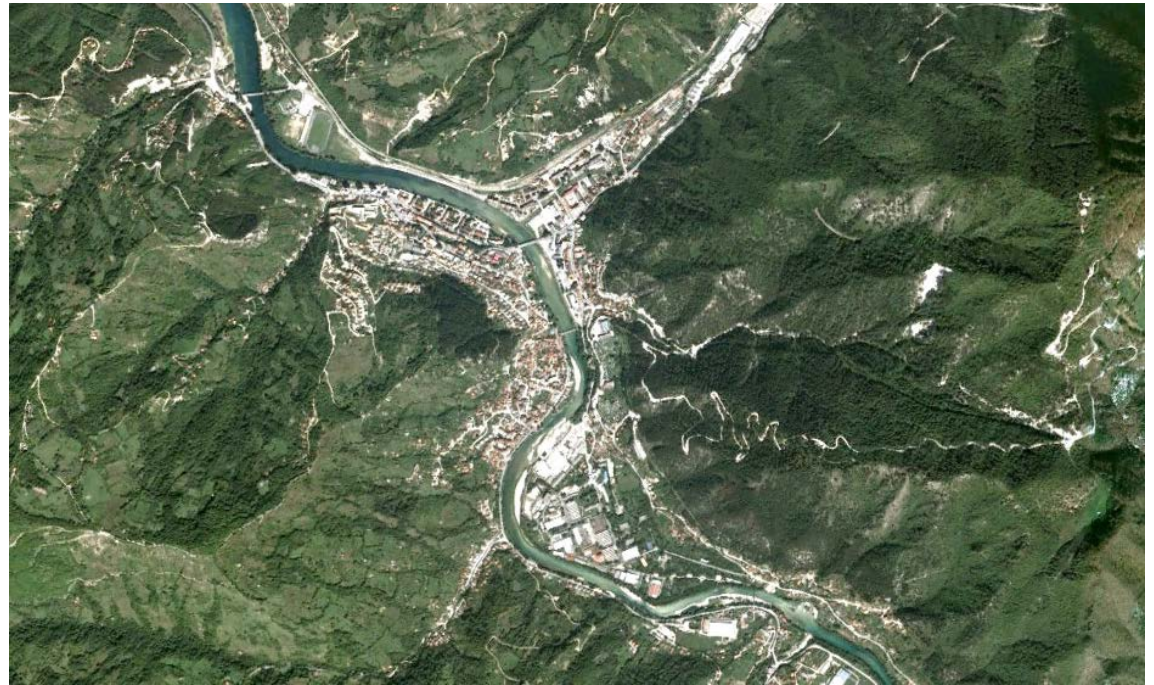


THANK YOU FOR YOUR ATTENTION



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Municipality of Konjic