



SOLAR PANELS OVER THE POND

Investor: XXXXXXX
Project Location: Vojvodina
Currency: EUR
Date Activity: 16.02.2021

Description and Goal of the Investment

Pond XXXXXX in Serbian province Vojvodina intends to install solar panels for the production of electricity on a part of the water surface on 0,5 ha (5,000 m²). He estimates that this investment would make a profit, but also that shading the water surface would contribute to greater aeration and production of fish, which are hard to bear in the summer sun. Designer's proposal: Panel orientation: azimuth south-east, tilt angle 10°. Electrical supply: Typology triphase MT, Nominal power 1,3 MW. PW plant characteristics: PV peak power 729 kWp, Plant typology grid-connected, Gross area 5378,4 m². PV plant components: 3.240 PV modules 225 Wp, 3 inverter Phom (AC) 300.000 W (x2), 50.000 W (x1). Reduce CO₂: 455,6 ton per year. Forecast annual productivity 918.540 kWh. He offered price is a total of 900.000 EUR (project, delivery of equipment, installation of equipment and commissioning). The calculations show the price of electricity for customers at 400 V: with access to the system + 7.5% excise total 0,1 EUR/kWh. Calculations were made for the life of the project 15 years. State donation 350.000 EUR.

The life of the project

15

Tax of profit

20

Discount Rate

4

Realization of Investment in 1st year

6

Realization of Investment in 2nd year

0

Estimation of Future Annual Inflation

4

Investment value and investment dynamics

! Items	Invested			Year 1			Year 2		
	Price	Durability	Amortization	Price	Durability	Amortization	Price	Durability	Amortization
	EUR	(Years)	Depreciation	EUR	(Years)	Depreciation	EUR	(Years)	Depreciation
Projects, permits, supervision	0	0	0	4.000	0	0	0	0	0
Equipment with installation	0	0	0	900.000	20	45.000	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
Credit processing	0	0	0	0	0	0	0	0	0
Working capital	0	0	0	4.592,7	0	0	4.592,7	0	0
Total	0	0	0	908.592,7	0	45.000	4.592,7	0	0
Total Investment	913.185,4	Working capital turnover ratio		10					

Sources of financing for new investments

	Sources	Year 1	Year 2	Total
Loan	Own capital	558.593	4.593	563.185
	Amount	0	0	0
	Repayment	0	0	0
	Grace period	0	0	0
	Interest	0	0	0
	Shareholders	0	0	0
	Donations	350.000	0	350.000
	Total	908.593	4.593	913.185

Loan repayment plan

[illegible]

Loan in Year 1

[illegible]

Loan in Year 2

[illegible]

Total loans

[illegible]

Operating income and expenses

At current prices (excluding inflation)

Items	Unit of	Unit	Annual volume				Annual amount			
	measure	Price	Year 1	Year 2	Year 3	Next year	Year 1	Year 2	Year 3	Next year
INCOMES		0	0	0	0	0	45.927	91.854	91.854	91.854
Revenues from electricity sales	kWh	0,1	459.270	918.540	918.540	918.540	45.927	91.854	91.854	91.854
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
EXPENSES		0	0	0	0	0	4.400	7.800	7.800	7.800
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
Gross wages of workers	Number of employees	0	0,5	1	1	1	0	0	0	0
Average per month	Gross wages	0	400	400	400	400	2.400	4.800	4.800	4.800
Gross management salaries		0	0	0	0	0	0	0	0	0
Maintenance		0	0	0	0	0	1.000	1.000	1.000	1.000
Insurance		0	0	0	0	0	1.000	2.000	2.000	2.000
Marketing		0	0	0	0	0	0	0	0	0
Other		0	0	0	0	0	0	0	0	0
OPERATIONAL RESULT		0	0	0	0	0	41.527	84.054	84.054	84.054

Income statement

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
INCOMES	45.927	91.854	95.528	99.349	103.323	107.456	111.754	116.225	120.874	125.709	130.737	135.966	141.405	147.061	152.944
Operating expenses	4.400	7.800	8.112	8.436	8.774	9.125	9.490	9.869	10.264	10.675	11.102	11.546	12.008	12.488	12.988
EBITDA	41.527	84.054	87.416	90.913	94.549	98.331	102.265	106.355	110.609	115.034	119.635	124.420	129.397	134.573	139.956
Amortization	22.500	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000	45.000
EBIT	19.027	39.054	42.416	45.913	49.549	53.331	57.265	61.355	65.609	70.034	74.635	79.420	84.397	89.573	94.956
Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	19.027	39.054	42.416	45.913	49.549	53.331	57.265	61.355	65.609	70.034	74.635	79.420	84.397	89.573	94.956
Tax of profit	3.805	7.811	8.483	9.183	9.910	10.666	11.453	12.271	13.122	14.007	14.927	15.884	16.879	17.915	18.991
NET PROFIT	15.222	31.243	33.933	36.730	39.639	42.665	45.812	49.084	52.487	56.027	59.708	63.536	67.518	71.659	75.965

The years are not calendar, but are calculated from the day of providing financial resources.

Cash Flow

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. INFLOWS	954.520	96.447	95.528	99.349	103.323	107.456	111.754	116.225	120.874	125.709	130.737	135.966	141.405	147.061	152.944
Equity	558.593	4.593	0	0	0	0	0	0	0	0	0	0	0	0	0
Loans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shareholders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Donations	350.000	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shareholders	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating income	45.927	91.854	95.528	99.349	103.323	107.456	111.754	116.225	120.874	125.709	130.737	135.966	141.405	147.061	152.944
2. OUTFLOWS	916.798	20.204	16.963	18.001	19.081	20.204	21.373	22.588	23.851	25.165	26.532	27.953	29.431	30.968	32.567
Investments	908.593	4.593	367	382	397	413	430	447	465	483	503	523	544	566	588
Payment of old obligations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Replacement of fixed assets	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Operating expenses	4.400	7.800	8.112	8.436	8.774	9.125	9.490	9.869	10.264	10.675	11.102	11.546	12.008	12.488	12.988
Loan annuities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax of profit	3.805	7.811	8.483	9.183	9.910	10.666	11.453	12.271	13.122	14.007	14.927	15.884	16.879	17.915	18.991
FINANCIAL FLOW (1-2)	37.722	76.243	78.566	81.348	84.242	87.252	90.382	93.637	97.023	100.543	104.205	108.013	111.974	116.093	120.377
Financial flow cumulative	37.722	113.965	192.530	273.878	358.121	445.372	535.754	629.391	726.414	826.957	931.162	1.039.176	1.151.150	1.267.243	1.387.619

Note

From the future accumulation, the program automatically included in the projections the replacement of fixed assets with a shorter lifespan than the project life Residual (residual value of the project) after the project life is not calculated in the last year of the project life because the market value of fixed assets after the end of the project life cannot be realistically estimated, and can significantly affect the financial effects.

Financial results of the investment

Parameter	Amount
Investment	913.185 EUR
Average Income	115.074 EUR
Average Net profit	49.415 EUR
Σ Net profit / Investment	0,81
Liquidity in all years	Yes
Average Net profit / Average Income	42,94 %
NPV (net present value)	414.071 EUR
IRR (internal rate of return)	12,17 %
Return time discounted	8 Years

SWOT Analysis

Strength

Your strengths can be qualified staff, team, experience, available resources (technological equipment, raw material base), market position, innovative products, investment and creditworthiness.

Weaknesses

Poor creditworthiness, lack of team, experience, qualified staff, creditworthiness, ie. financial resources (especially for beginners in business), inflexibility (poor adaptation to market changes), poor financial analysis to prove the profitability of the idea and attract co-investors...

Opportunity

Innovative product, developed more advanced technology, profitability of the idea, favorable market situation, ie. favorable economic-socio-political environment,....

Threats

Unfavorable economic, socio-political environment, lack of state incentives and favorable loans,especially for business start-ups, strong competition in the planned activity, strong competition that quickly develops more innovative products.

Appendix

Agency	Standard and Poor's	Fitch Ratings	Moody's Service
Rating	BB+/stable appearance ↗	BB+/stable appearance ↗	Ba2/stable appearance ↗
Date Activity	6/11/2021 ↗	9/3/2021 ↗	3/12/2021 ↗
Activity	Rating confirmed ↗	Rating confirmed ↗	Increased rejting ↗

You can download the current Rating via the link https://nbs.rs/sr/finansijsko_trziste/informacije-za-investitore-i-analiticare/rejting_RS/. Attached is the latest rating rating from STANDARD & POOR'S, MOODY'S INVESTORS SERVICE and RATING FITCH. It is important if foreign investments or foreign investors are planned. More in the blog <https://investasistent.com/investiciona-i-kreditna-sposobnost-investitora/>

Note

An investment is eligible for realization if all indicators in the Financial Result have recommended values, if the SWOT analysis is realistic (more in the blog [SWOT Analysis](#)) and if the investment and creditworthiness is realistically assessed and accepted by a potential lender or co-investor (more in the blog [Investment and Investor Creditworthiness](#)). The key parameters on the basis of which it is concluded whether the investment is financially justified are: NPV (Net present value), which must be positive, and shows how much the investor will earn in the project life at current prices, IRR (internal rate of return) which is an indicator of interest invested capital, which in the basic variant must be at least 2 times higher than the discount rate, Discounted return on investment, which must be shorter than the life of the project, Average annual Net profit min 15-20% of average income. If the budget shows a loss on the Income Statement and / or illiquidity in the Financial Flow (often occurs in the first years of the project life if production is gradually established and / or due to the need to conquer the market, due to employee salaries, depreciation and due loan installments), and other above parameters are good, does not mean that you should give up the investment, but indicate that in those years it is necessary to invest additional external funds to maintain liquidity.

Disclaimer

We did not check the reliability of the input data (investment value, income and expenses, SWOT analysis), as well as investment and creditworthiness. Therefore, before starting the investment, all entered data should be checked again, especially the procurement and sales market.

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If you want our opinion on the investment in question, contact our consultants by [e-mail](#) with specific questions.