



INSTALLATION OF SOLAR COLLECTORS ON THE HOUSE

Investor: XXXXXXXXX
Project Location: Serbia
Currency: RSD
Date Activity: 21.03.2022

Description and Goal of the Investment

In the summer months (7 months) the household consumes an average of 340 kWh per month, ie consumes 2,380 kWh per 7 months and pays 12,733 dinars for it, and in the winter months (5 months) consumes an average of 1,340 kWh per month, ie consumes 6,700 kWh in 5 months. pays 63,663 dinars, which means that the annual cost of the household for electricity is $14,409 + 63,663 = 78,072$ RSD / year. In order to save costs for electricity, the household intends to install solar collectors with a power of 5 kW (15 panels), and the offered price of the company that deals with the installation of solar plants is 7,000 EUR, ie. 826,000 dinars. Solar collectors produce 500 kWh per month in summer and about 400 kWh per month in winter. Considering that solar collectors produce a total of $500 \times 7 = 3,500$ kWh in 7 summer months, and the household consumes a total of about 2,380 kWh in that period, according to the Law on Energy and the Contract with EPS, the household will have surplus energy in the amount of $3,500 - 2,380 = 1,120$ sell kWh to EPS at a feed-in tariff at a price of 20.06 RSD / kWh and thus generate revenue of $1,120 \times 20.06 = 22,467$ RSD per year. In the winter, the household will not have surplus energy to supply EPS from solar collectors, because it consumes 1,340 kWh per month, and solar production produces 400 kWh, but will reduce the takeover of energy from EPS to $1340 - 400 = 960$ kWh per month (8,773 dinars) , ie 43,866 dinars per year. Therefore, by investing 826,000 dinars in solar collectors, the household will realize annual savings in the amount of 22,467 dinars based on the sale of surplus electricity at feed-in tariffs + 43,866 dinars based on reduced takeovers from EPS at regular tariffs, a total of 66,333 dinars. The budget includes non-refundable incentive funds in the amount of 50% of the investment of 413,000 dinars. The investment is worthwhile for the realization with the non-refundable funds (Time of return 7 years), but without the non-refundable funds it is on the verge of payback (Time of return 15 years), but the benefit of the investment is greater security of supply. If inflation were higher and electricity prices adjusted to inflation, the financial effects would be better. Note: Green zone VT 5.85 RSD / kWh, NT 1.46, Blue zone VT 8.76, NT2.19, red VT 17.52, NT 4.38

The life of the project

Tax of profit

Discount Rate

Realization of Investment in 1st year

Realization of Investment in 2nd year

Estimation of Future Annual Inflation

15

0

4

1

0

3

Investment value and investment dynamics

! Items	Invested			Year 1			Year 2		
	Price	Durability	Amortization	Price	Durability	Amortization	Price	Durability	Amortization
	RSD	(Years)	Depreciation	RSD	(Years)	Depreciation	RSD	(Years)	Depreciation
Projects, permits, supervision	0	0	0	0	0	0	0	0	0
Collector with installation	0	0	0	826.000	25	33.040	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	5.527,75	0	0	0	0	0
Total	0	0	0	831.527,75	0	33.040	0	0	0
Total Investment		831.527,75	Working capital turnover ratio		12				

Sources of financing for new investments

	Sources	Year 1	Year 2	Total
Loan	Own capital	418.528	0	418.528
	Amount	0	0	0
	Repayment	0	0	0
	Grace period	0	0	0
	Interest	0	0	0
	Shareholders	0	0	0
	Donations	413.000	0	413.000
	Total	831.528	0	831.528

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	66.333	66.333	66.333	66.333
Savings from sales by feed and tariff	eur	1	22.467	22.467	22.467	22.467	22.467	22.467	22.467	22.467
Reduction of withdrawals from EPS	eur	1	43.866	43.866	43.866	43.866	43.866	43.866	43.866	43.866
Carbon credits		0	0	0	0	0	0	0	0	0
Green certificates		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	5.000	5.000	5.000	5.000
		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
Gross wages of workers	Number of employees	0	0	0	0	0	0	0	0	0
Average per month	Gross wages	0	0	0	0	0	0	0	0	0
Gross management salaries		0	0	0	0	0	0	0	0	0
Maintenance		0	0	0	0	0	0	0	0	0
Insurance		0	0	0	0	0	5.000	5.000	5.000	5.000
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	61.333	61.333	61.333	61.333

Income statement

Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
INCOMES	66.333	66.333	68.323	70.373	72.484	74.658	76.898	79.205	81.581	84.029	86.550	89.146	91.820	94.575	97.412
Operating expenses	5.000	5.000	5.150	5.305	5.464	5.628	5.796	5.970	6.149	6.334	6.524	6.720	6.921	7.129	7.343
EBITDA	61.333	61.333	63.173	65.068	67.020	69.031	71.102	73.235	75.432	77.695	80.026	82.426	84.899	87.446	90.070
Amortization	30.287	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040	33.040
EBIT	31.046	28.293	30.133	32.028	33.980	35.991	38.062	40.195	42.392	44.655	46.986	49.386	51.859	54.406	57.030
Interest	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
EBT	31.046	28.293	30.133	32.028	33.980	35.991	38.062	40.195	42.392	44.655	46.986	49.386	51.859	54.406	57.030
Tax of profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET PROFIT	31.046	28.293	30.133	32.028	33.980	35.991	38.062	40.195	42.392	44.655	46.986	49.386	51.859	54.406	57.030

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	897.861	66.333	68.323	70.373	72.484	74.658	76.898	79.205	81.581	84.029	86.550	89.146	91.820	94.575	97.412
Equity	418.528	0	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	413.000	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	66.333	66.333	68.323	70.373	72.484	74.658	76.898	79.205	81.581	84.029	86.550	89.146	91.820	94.575	97.412
2. OUTFLOWS	836.528	5.000	5.316	5.475	5.640	5.809	5.983	6.163	6.347	6.538	6.734	6.936	7.144	7.358	7.579
Investments	831.528	0	166	171	176	181	187	192	198	204	210	216	223	230	236
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	5.000	5.000	5.150	5.305	5.464	5.628	5.796	5.970	6.149	6.334	6.524	6.720	6.921	7.129	7.343
Loan annuities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tax of profit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FINANCIAL FLOW (1-2)	61.333	61.333	63.007	64.897	66.844	68.850	70.915	73.043	75.234	77.491	79.816	82.210	84.676	87.217	89.833
Financial flow cumulative	61.333	122.666	185.673	250.571	317.415	386.264	457.180	530.222	605.456	682.947	762.762	844.972	929.649	1.016.865	1.106.699

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	831.528 RSD
Average Income	79.981 RSD
Average Net profit	41.096 RSD
Σ Net profit / Investment	0,74
Liquidity in all years	Yes
Average Net profit / Average Income	51,38 %
NPV (net present value)	369.961 RSD
IRR (internal rate of return)	14,24 %
Return time discounted	7 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.