

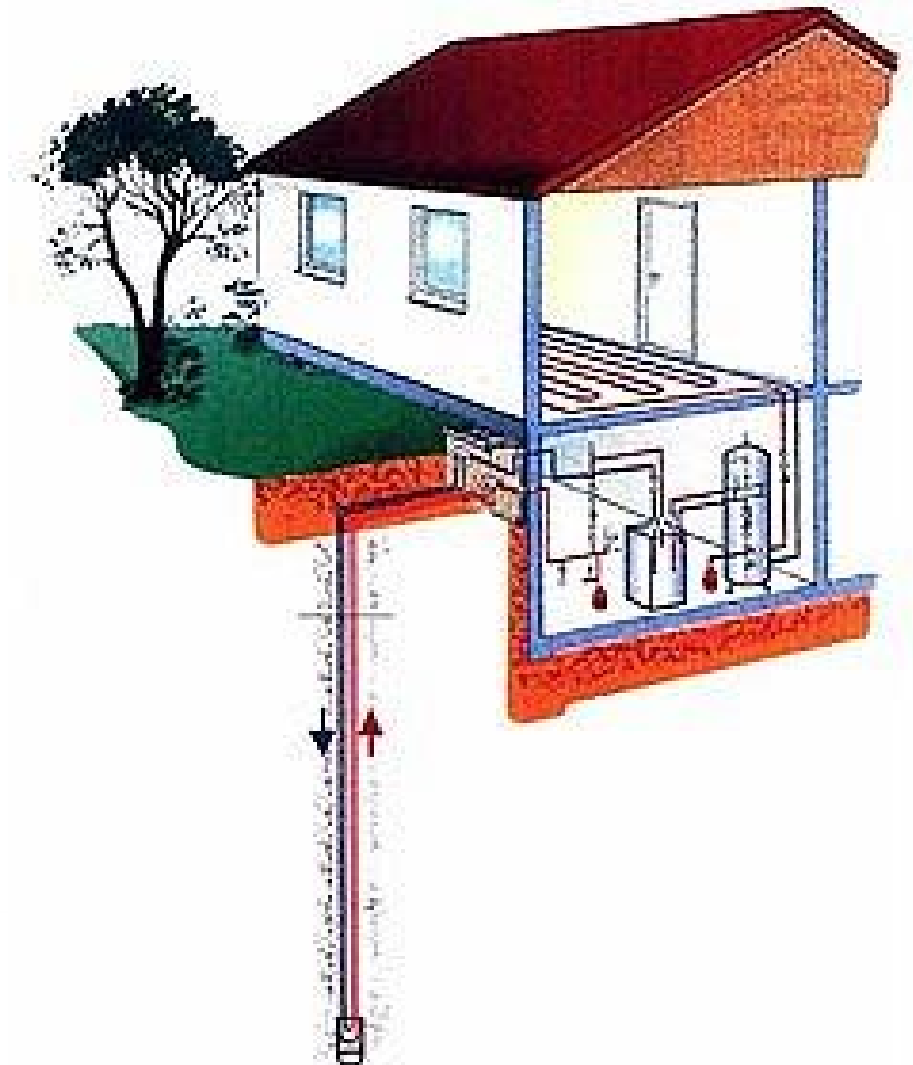
# Shallow Geothermal Energy

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Module BMAN  
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# Technical Background



# Drilling Rig

Astec DD-3238

Construction year: 2006

Price: 120,000 €



# Vehicles



- Mercedes-Benz Sprinter 209 Doka  
16.526 EUR



- Trailer  
Eduard Multitransporter  
3.367 EUR



- 2 VW-Passat Combi  
each € 10.000



# Property

500,00 m<sup>2</sup>

Rent/ m<sup>2</sup>: 2,00 EUR

Expenses: 0,30 EUR

Close to Highway





# Market Study

## Background:

- Rising Energy Prices
- Sustainable Technique  
→ high demand

Waiting time for drilling: 6 – 12 months

Common Rate „Standard Project“: 10.000€



# Marketing & Cooperation

Webpage

Local Trade Fairs

Contacts to selected heating contractors





# Investment

Investments			Depreciation	Depreciation Cost / year
Machinery&Tools	Drilling Rig	120.000 €	10	12.000 €
	Miscellaneous	10.000 €	10	1.000 €
Vehicles	Sprinter	16.526 €	9	1.836 €
	Trailer	3.367 €	11	306 €
	2 Passat ?	20.000 €	6	3.333 €
Office	3 PCs	1.500 €	4	375 €
	Furniture	4.000 €	13	308 €
	Renovation	3.000 €	8	375 €
Foundation of Company		3.000 €		
Unforeseen		15.000 €		
Circulating Capital		50.000 €		
		<b>246.393 €</b>		<b>19.533 €</b>

# KFW-Loan: ERP funding for start up companies

<b>Capital Needs</b>		
Total Investment		<b>246.393 €</b>
Personal Capital		36.959 €
Credit		209.434 €



# Repayment

Credit Repayment Scheme	Balance of debt	Interest Rate	Interest Cost paid p.a.	Guarantee	Repayment	Total Cost of Credit
Year 1	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 2	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 3	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 4	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 5	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 6	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 7	209,434 €	0.75%	1,571 €	2,094 €	0 €	3,665 €
Year 8	183,255 €	3.20%	5,864 €	1,833 €	26,179 €	7,697 €
Year 9	157,076 €	3.20%	5,026 €	1,571 €	26,179 €	6,597 €
Year 10	130,896 €	3.20%	4,189 €	1,309 €	26,179 €	5,498 €
Year 11	104,717 €	3.20%	3,351 €	1,047 €	26,179 €	4,398 €
Year 12	78,538 €	3.20%	2,513 €	785 €	26,179 €	3,299 €
Year 13	52,359 €	3.20%	1,675 €	524 €	26,179 €	2,199 €
Year 14	26,179 €	3.20%	838 €	262 €	26,179 €	1,100 €
Year 15	0 €	3.20%	0 €	0 €	26,179 €	0 €



# Fixed Cost

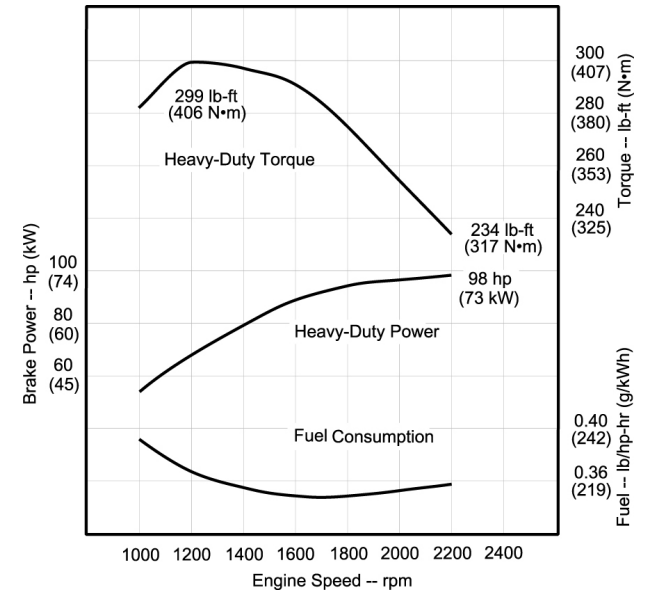
Fixed Cost		month	year
Labor	Owner 1	6.000 €	72.000 €
	Owner 2	6.000 €	72.000 €
	Drilling Worker 1	4.000 €	48.000 €
	Drilling Worker 2	4.000 €	48.000 €
	Office Manager	2.500 €	30.000 €
Rent		1.150 €	13.800 €
Financial Cost			according to year
Marketing			20.000 €
Insurance			7.872 €
			<b>311.672 €</b>



# The „Standard Offer“

## House with 150 m<sup>2</sup>

- Energy demand: 8 Kw
- drilling depth: two wholes of 80m
- Sandy ground
- drilling duration: 3 days



Variable Cost per Standard Offer			
Transport			200 €
Energy			839 €
Material			1.500 €
Wear&Tear			500 €
Site Exploration			250 €
Permit			500 €
			<b>3.789 €</b>

# Self Cost Calculation

<b>Self Cost years 1-3</b>			
	Year 1	Year 2	Year 3
Utilization of Capacity	60.00%	70.00%	80.00%
Quantity of Standard Projects	50.4	58.8	67.2
Cost			
Depreciation Cost	19.533 €	19.533 €	19.533 €
Financing Cost	3.665 €	3.665 €	3.665 €
Other Fixed Cost	311.672 €	311.672 €	311.672 €
Total Variable Cost	190.971 €	222.799 €	254.628 €
Cost of Foundation	3.000 €		
<b>Total Cost</b>	<b>528.841 €</b>	<b>557.670 €</b>	<b>589.498 €</b>
<b>Total Cost per Project</b>	<b>10.493 €</b>	<b>9.484 €</b>	<b>8.772 €</b>



<b>Self Cost years 1-3</b>						
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Utilization of Capacity	60.00%	70.00%	80.00%	90.00%	100.00%	100.00%
Quantity of Standard Project	50.4	58.8	67.2	75.6	84	84
<b>Cost</b>						
Depreciation Cost	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €
Financing Cost	3.665 €	3.665 €	3.665 €	3.665 €	3.665 €	3.665 €
Other Fixed Cost	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €
Total Variable Cost	190.971 €	222.799 €	254.628 €	286.456 €	318.285 €	318.285 €
Cost of Foundation	3.000 €					
<b>Total Cost</b>	528.841 €	557.670 €	589.498 €	621.327 €	653.155 €	653.155 €
<b>Total Cost per Project</b>	10.493 €	9.484 €	8.772 €	8.219 €	7.776 €	7.776 €

Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%
84	84	84	84	84	84	84	84	84
19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €
3.665 €	7.697 €	6.597 €	5.498 €	4.398 €	3.299 €	2.199 €	1.100 €	0 €
311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €
318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €
653.155 €	657.187 €	656.087 €	654.988 €	653.888 €	652.789 €	651.689 €	650.590 €	649.490 €
7.776 €	7.824 €	7.811 €	7.797 €	7.784 €	7.771 €	7.758 €	7.745 €	7.732 €



# Turnover

<b>Turnover</b>					
	Year 1	Year 2	Year 3	Year 4	Year 5
Projects /yr	50,4	58,8	67,2	75,6	84
Price /project	9.500 €	9.500 €	9.500 €	9.500 €	9.500 €
Turnover	478.800 €	558.600 €	638.400 €	718.200 €	798.000 €





Cash Flow	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
Turnover	478.800 €	558.600 €	638.400 €	718.200 €	798.000 €	798.000 €	798.000 €
Depreciation Cost	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €
Financing Cost	3.665 €	3.665 €	3.665 €	3.665 €	3.665 €	3.665 €	3.665 €
Other fixed costs	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €
Total Variable Cost	190.971 €	222.799 €	254.628 €	286.456 €	318.285 €	318.285 €	318.285 €
Loss carried forward		-47.041 €	-46.111 €				
Profit before Tax	-47.041 €	-46.111 €	2.791 €	96.873 €	144.845 €	144.845 €	144.845 €
Tax 40%	0 €	0 €	1.116 €	38.749 €	57.938 €	57.938 €	57.938 €
Profit after Tax	-47.041 €	-46.111 €	1.675 €	58.124 €	86.907 €	86.907 €	86.907 €
Cash Flow	-27.508 €	-26.578 €	21.208 €	77.657 €	106.440 €	106.440 €	106.440 €
Repayment credit	0 €	0 €	0 €	0 €	0 €	0 €	0 €
Dividend	-27.508 €	-26.578 €	21.208 €	77.657 €	106.440 €	106.440 €	106.440 €

Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15
798.000 €	798.000 €	798.000 €	798.000 €	798.000 €	798.000 €	798.000 €	798.000 €
19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €	19.533 €
7.697 €	6.597 €	5.498 €	4.398 €	3.299 €	2.199 €	1.100 €	0 €
311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €	311.672 €
318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €	318.285 €
140.813 €	141.913 €	143.012 €	144.112 €	145.211 €	146.311 €	147.410 €	148.510 €
56.325 €	56.765 €	57.205 €	57.645 €	58.085 €	58.524 €	58.964 €	59.404 €
84.488 €	85.148 €	85.807 €	86.467 €	87.127 €	87.787 €	88.446 €	89.106 €
104.021 €	104.681 €	105.341 €	106.000 €	106.660 €	107.320 €	107.980 €	108.639 €
26.179 €	26.179 €	26.179 €	26.179 €	26.179 €	26.179 €	26.179 €	26.179 €
77.842 €	78.502 €	79.161 €	79.821 €	80.481 €	81.141 €	81.800 €	82.460 €

# Thank You!

