RED PROJECT ENERGY

Presentation

Project Description

A new methodology that works!

- The method of producing electrical energy by exploiting temperatures higher than 150°C from unfractured and dry crystalline rocks, using deep drilling in a closed loop, without exploiting the water from that area.

According to the gelogical frame the geothermal resources may be used for different scopes and needs different types of technologies.The main factors are:

- **Depth range according to temperature** **Lithology** **Formation's water saturation** **Expected power**

Temperature

In this manner related to expected temperature there are more geothermal fields and targets:

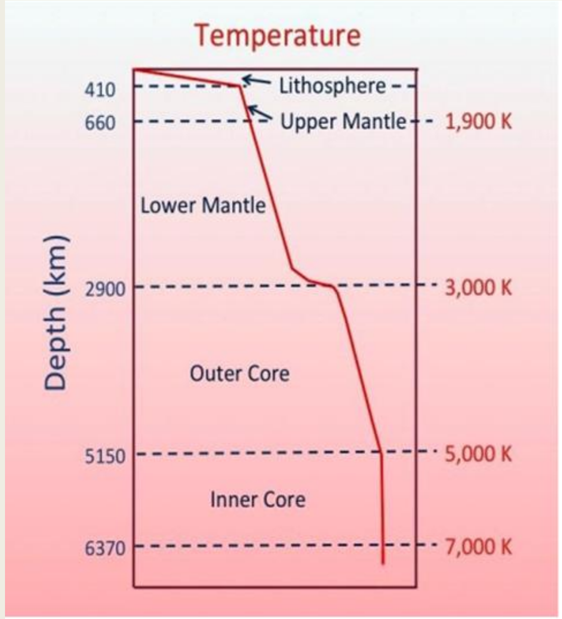
- Power Plants: High temperature more than 150-160 C deg, depths from 4500 to 7000m
- Domestic (houses, towns) heating systems more than 80-90 deg.
- Spa, tourism, 40-60 deg
- Greenhoses etc

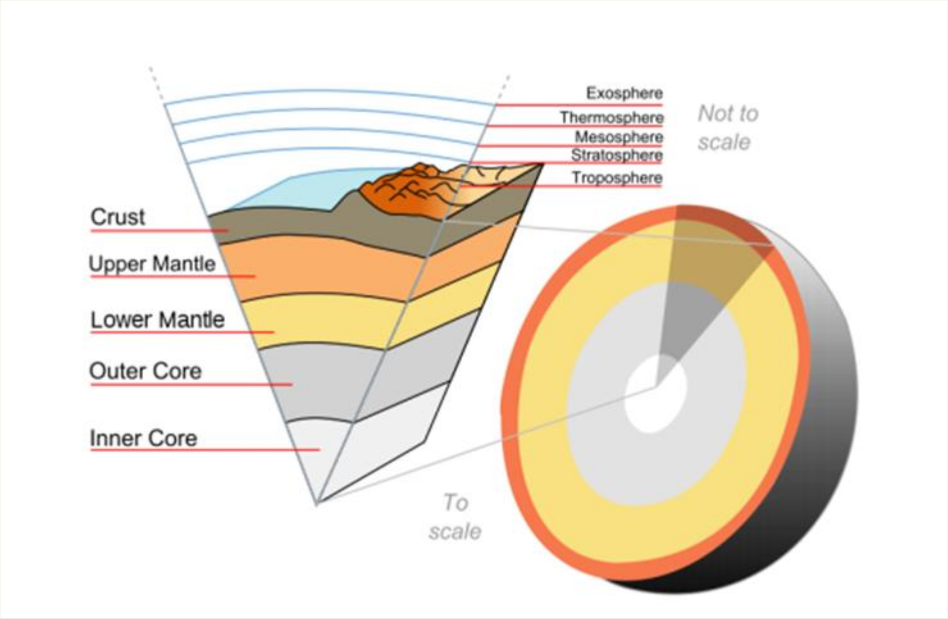
The use of geothermal energy depends on the thermal parameters of the resource. For resources with geothermal fluids exceeding 150 ° C they can be used for electricity production, being fully technically and economically justified (the current minimum threshold for electricity production is 97 ° C). Below this temperature, geothermal energy is used in direct processing technologies, most of which are built as cascade systems.

Project

A new visionary and efficient methodology

- The Earth's heat content is about 1×1019 TJ (2.8×1015 TWh) This heat naturally flows to the surface by conduction at a rate of 44.2 TW and is replenished by radioactive decay at a rate of 30 TW. These power rates are more than double humanity's current energy consumption from primary sources, but most of this power is too diffuse (approximately 0.1 W/m2 on average) to be recoverable. The Earth's crust effectively acts as a thick insulating blanket which must be pierced by fluid conduits (of magma, water or other) to release the heat underneath.

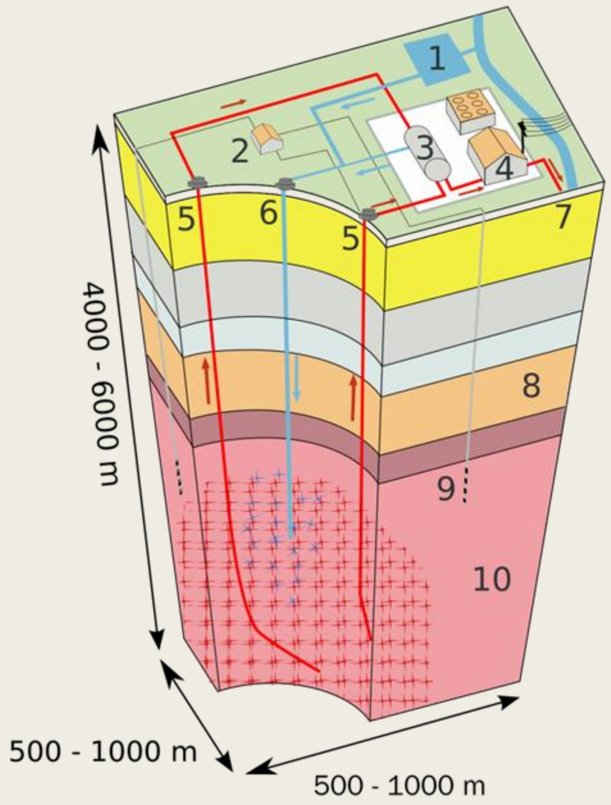




Project

An innovative and practical approach that delivers results

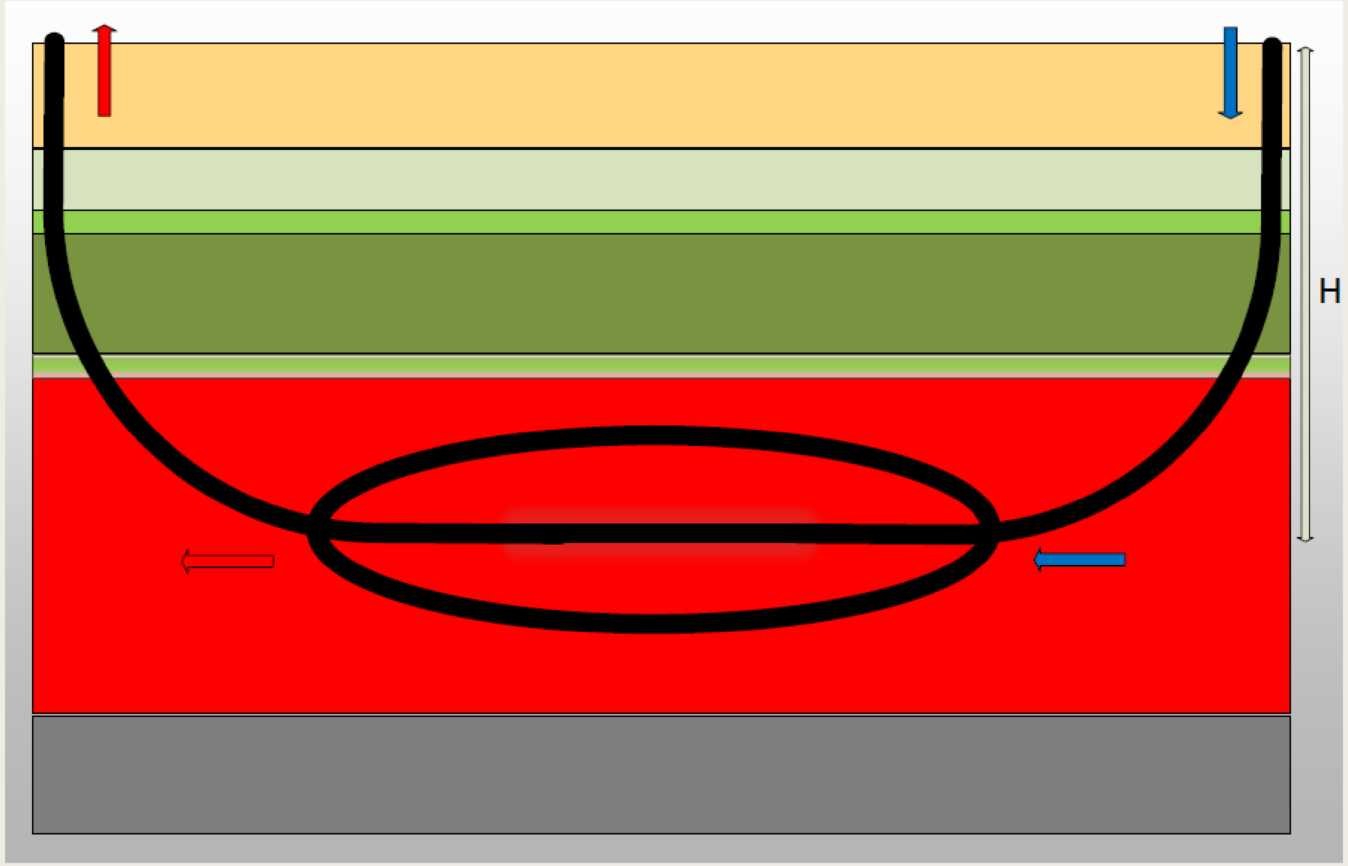
- The heat transport medium is still water, but we use demineralized surface water, which can be injected at the necessary flow and pressure for the production of electrical energy with the help of a system consisting of turbines and generators (ORC).
- We do not depend on the flow and pressure of the reservoir, which, according to the latest studies, decrease during exploitation. This means an inevitable reduction in the amount of available thermal energy and, consequently, a decrease in electrical energy production.
- **Enhanced geothermal system** 1:Reservoir 2:Pump house 3:Heat exchanger 4:Turbine hall 5:Production well 6:Injection well 7:Hot water to district heating 8: Porous sediments 9:Observation well 10:Crystalline bedrock
- A geothermal exploitation requires two wells :
- 1) one of production, which allows the extraction of hot water and,
- 2) one an injection, which allows the reinjection of cold (used) water into the layer.
- The second borehole must be drilled so that its extremity is placed at an optimal distance from the first borehole, in order to avoid a too rapid drop in the temperature of the exploited water.
- The practical realization of this system consists in drilling two boreholes



The stages of the method

- STAGE I

  Two vertical drillings will be carried out to a depth of 4500-5000m until we reach the unfractured crystalline zone and the necessary temperature (over 150 degrees Celsius). The distance between the two drillings will be approximately 1300-1400m, and the borehole diameter is 10 inches. The depths and length of the borehole path depend on the properties of the rock-fluid system (thermal flux, temperature, specific heat, etc.).



The stages of the method

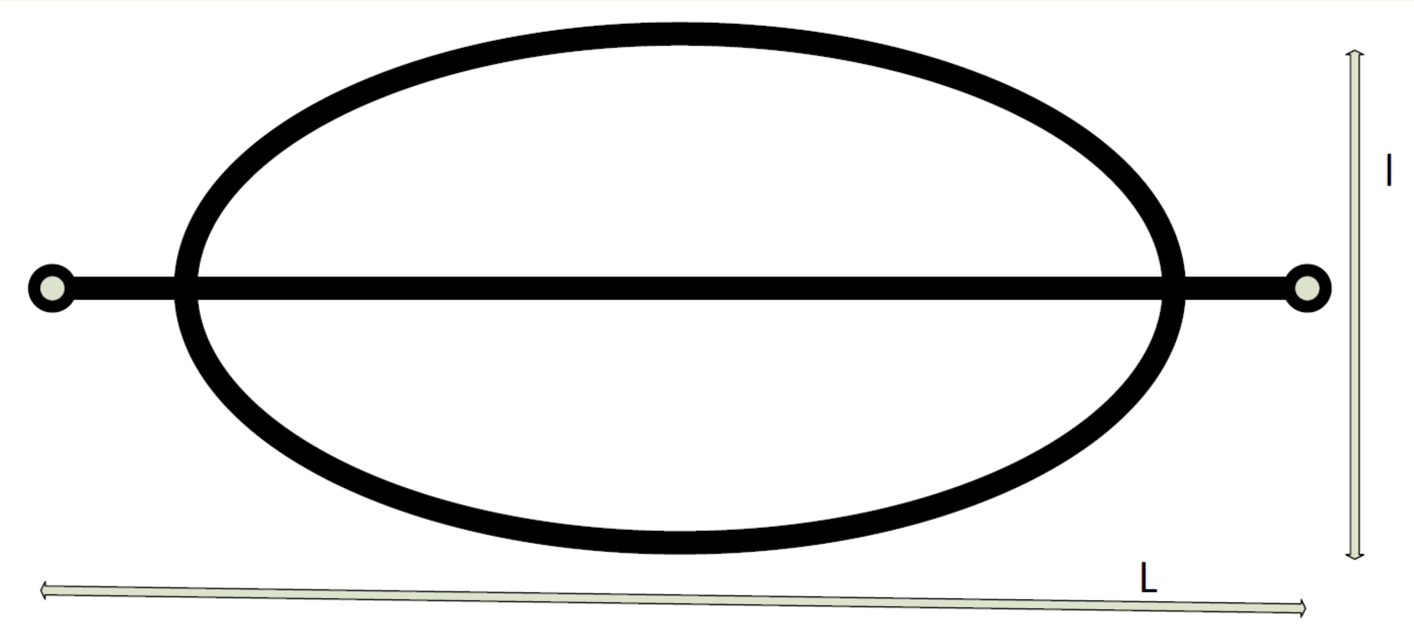
- **STAGE II**

These two vertical drillings will be connected underground in the unfractured crystalline zone (at a depth of 4500-5000m) by three horizontal directed drillings of the same diameter.

Thus, the first borehole serves as an injection well; with the help of high-power pumps, we will inject demineralized water at the necessary flow and pressure into the crystalline zone (the crystalline rocks are unfractured and dry), with the rock temperature being > 150 degrees Celsius.

The fluid flow circulating through the system is 360kg/s.

Through the second borehole, we will extract water at a high temperature, and to close the loop, we will introduce it into a system consisting of turbines and generators (ORC) which will produce electrical energy.

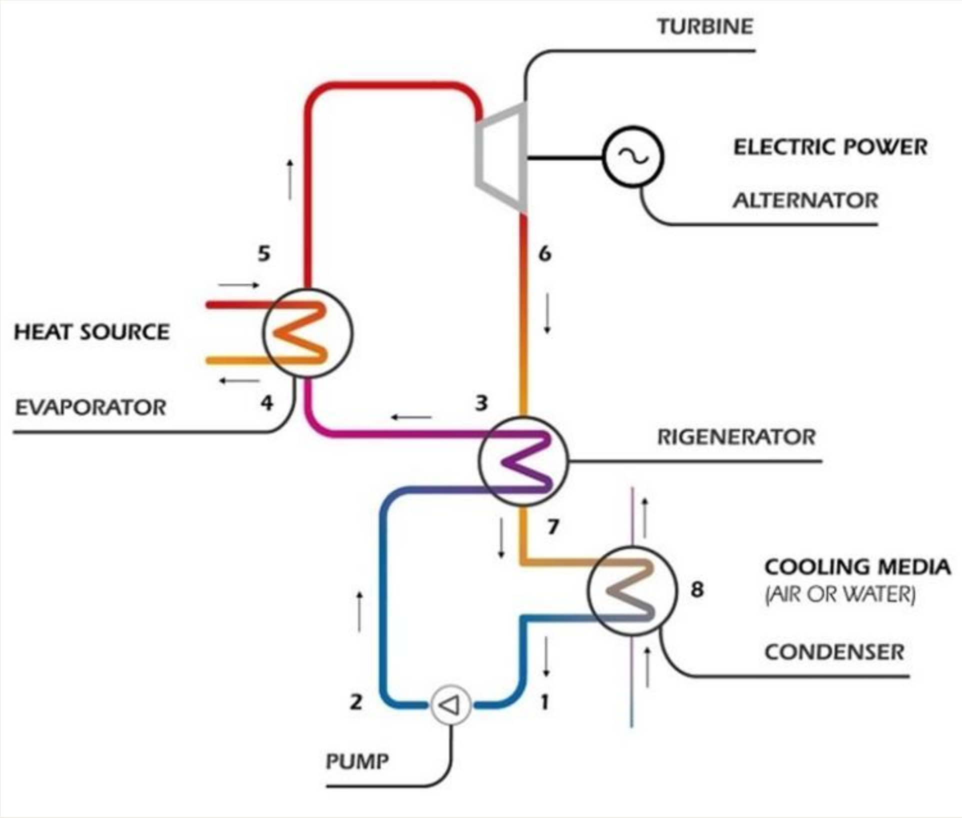


The stages of the method

- **STAGE III**

  Through the second borehole, we extract water at high temperatures and introduce it into a closed-loop ORC (Organic Rankine Cycle) system, which produces electrical energy. The ORC system uses a closed thermodynamic cycle, suitable for distributed generation of electrical and thermal energy. It can exploit renewable sources, traditional fuels, and waste heat from various industrial processes.

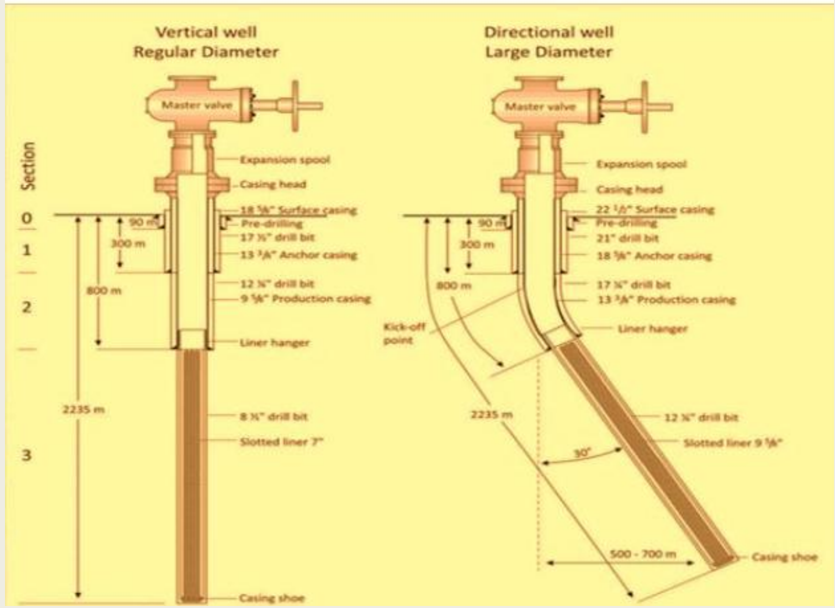
  The ORC turbogenerator uses thermal oil to vaporize an organic working fluid, which rotates the turbine connected to the electric generator, generating clean and reliable energy. The vapors are then cooled and condensed, completing the closed cycle. In our case, pressurized water enters the turbine at 180-185°C and exits at 140-145°C, with a flow rate of 360 kg/s. This system does not depend on the flow rate and pressure of the reservoir, which decrease over time, thus maintaining a constant production of electrical energy.



Drilling Program

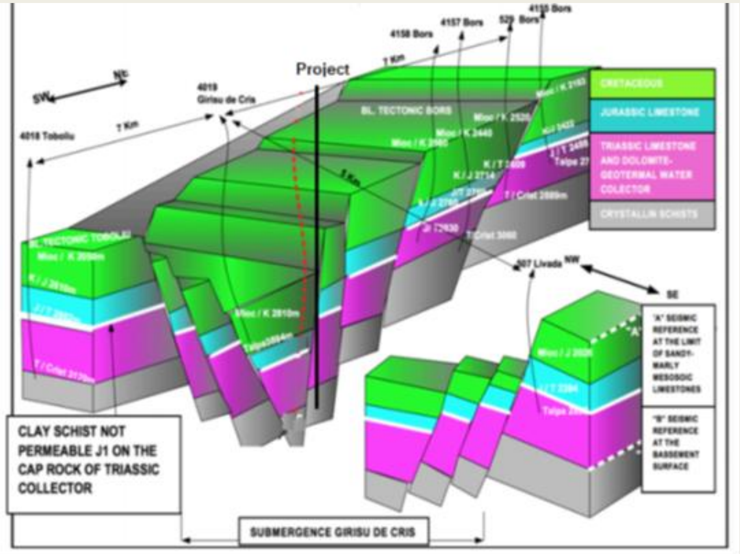
How it works:

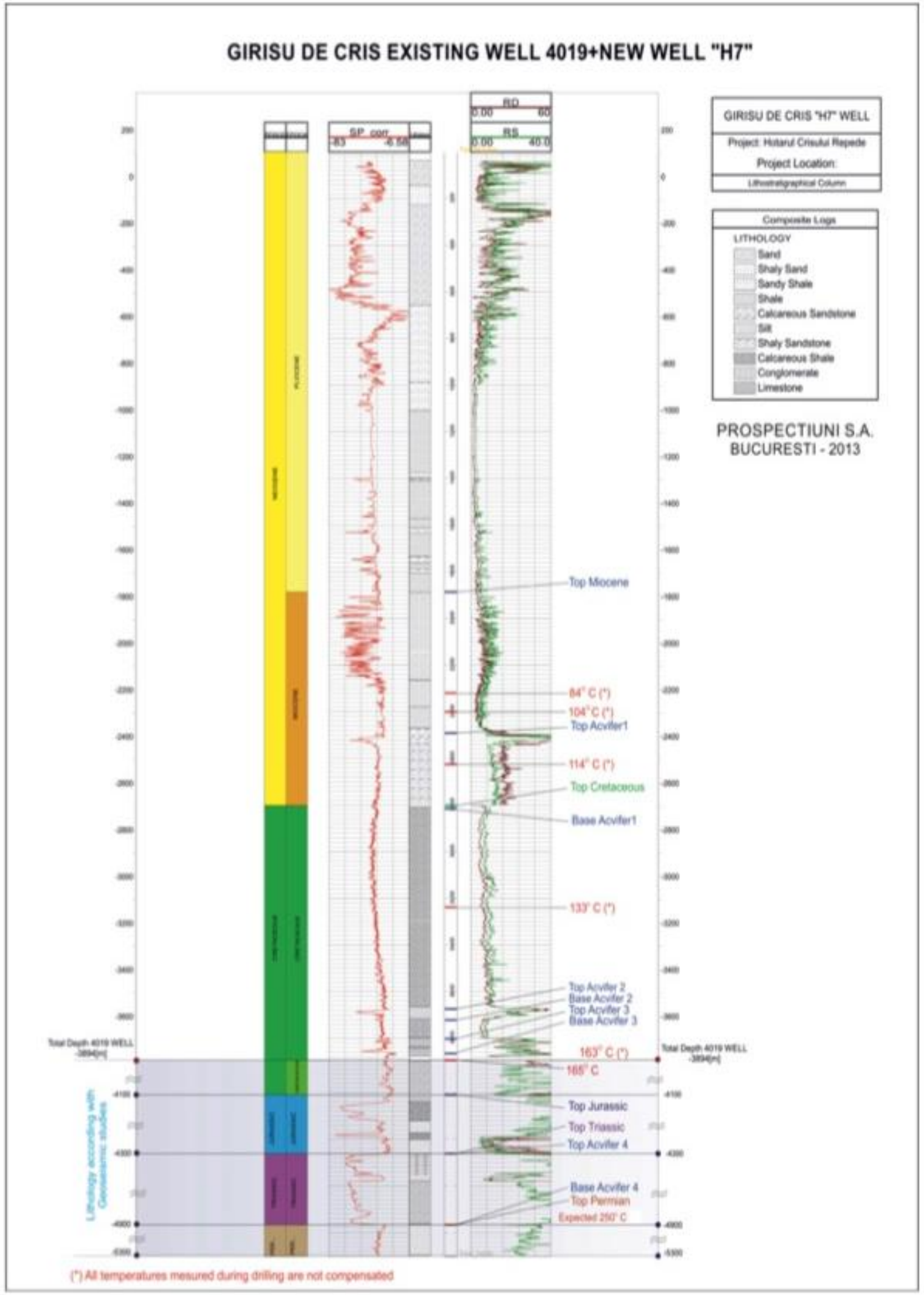
- The drilling project depends on the column of rocks to be traversed.
- Conductor, isolating surface formations and aquifers
- Anchor casing, secures the drilling and isolates the area up to 1200-1500m
- Intermediate casing 1, around 2500-3500m (TVD)
- Intermediate casing 2. In this section, the well is directed to horizontalize the wellbore. At the end of this interval, the necessary thermal depth is reached; 4000-5000 meters vertical depth.
- The horizontal section, for exploitation, has a length of 1300-1400m, cased partially or totally depending on the characteristics of the crystalline rocks that can seal or not the water circuit (injection/extraction). Also, multiple wells can be drilled from one location, in a cluster, similar to marine drilling. The dimensions of the drilling and casing diameters are determined based on the necessary flow rate, probably a minimum of 7 inches in the production casing.
- The circulation of the thermal fluid in the closed loop (only through the casing) reduces potential losses but decreases thermal exchange, requiring a longer horizontal section.



Girișu de Criș

- Girișu de Criș Area
- It intersects the crystalline basement below 4100-4200 m (TVD) at over 200 degrees C. The basement, consisting of crystalline schists, is likely dry at the depths required by the temperature.
- The rocks, mainly composed of siliceous minerals, have low solubility, which reduces the mineralization of the water (the geothermal energy transport agent), resulting in minor scale deposits at moderate temperature differences.



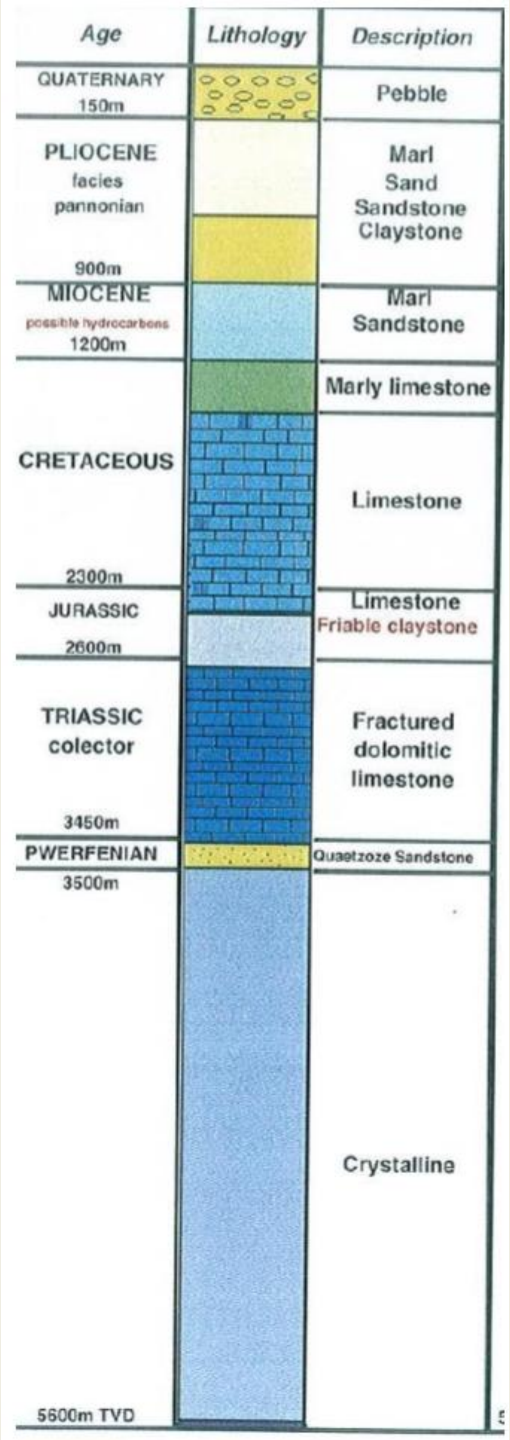


Geology

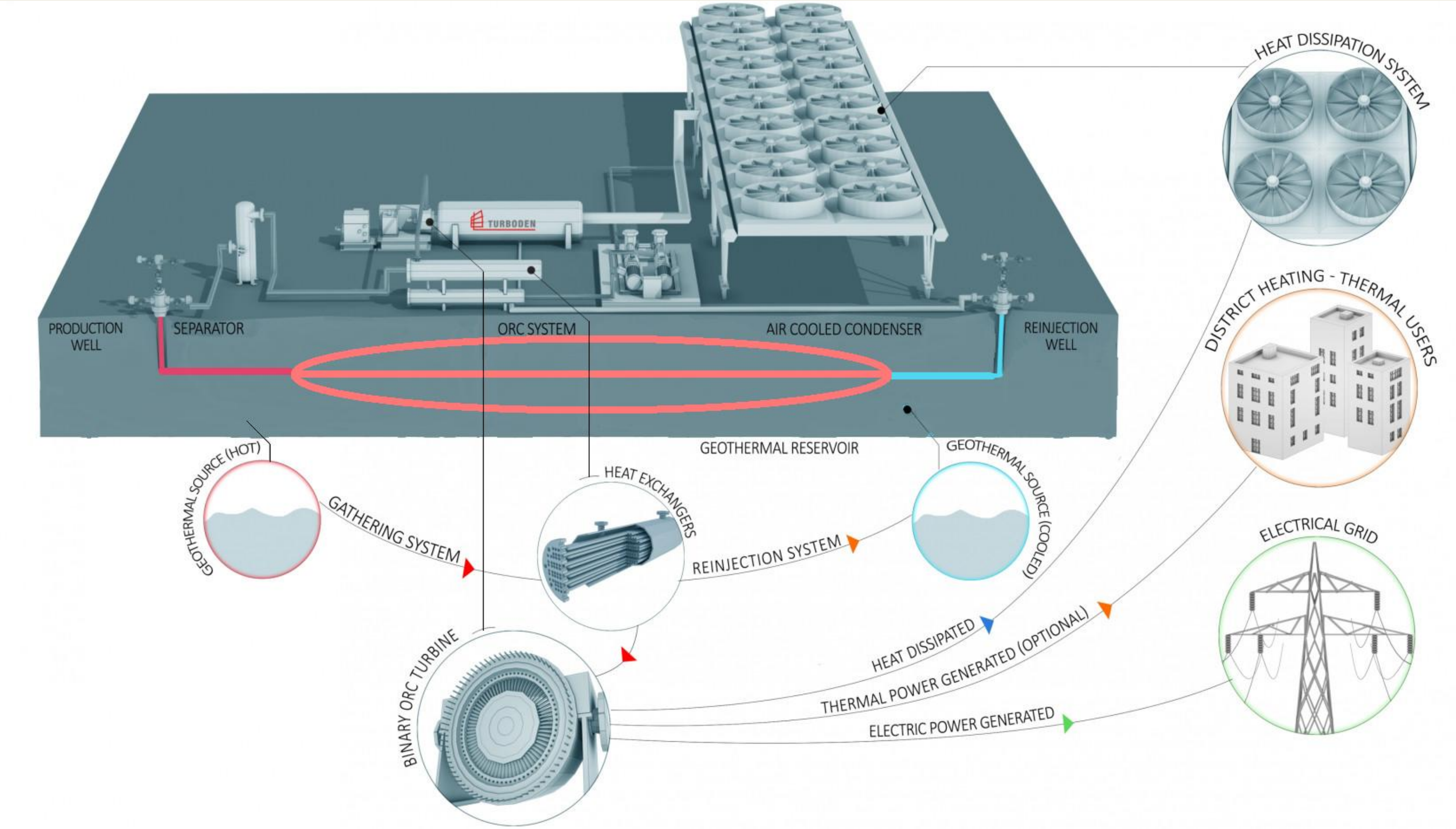
The Pannonian Basin, the most favorable area for geothermal drilling, is located on the western edge of Romania and continues into Hungary.

It includes multiple sedimentary cycles overlying the Crystalline Basement, which constitutes the main geothermal objective. The sedimentary cover presents discontinuity, and thus, although Mesozoic deposits (Triassic, Jurassic, Cretaceous) are predominantly developed in carbonate facies, followed by Neogene Formations (Miocene, Pliocene)—predominantly siliciclastic detrital—in some areas the Mesozoic is partially or entirely absent, with the Miocene directly overlying the Crystalline Basement.

From a lithological point of view, the basement, the geothermal objective, consists of epi-mesometamorphic schists with subsequent magmatism.



How it works



HEAT DISSIPATION SYSTEM
TURBODEN
PRODUCTION WELL
SEPARATOR
ORC SYSTEM
AIR COOLED CONDENSER
REINJECTION WELL
DISTRICT HEATING - THERMAL USERS
GEOTHERMAL RESERVOIR
GEOTHERMAL SOURCE (HOT)
HEAT EXCHANGERS
GEOTHERMAL SOURCE (COOLED)
GATHERING SYSTEM
REINJECTION SYSTEM
ELECTRICAL GRID
BINARY ORC TURBINE
HEAT DISSIPATED
THERMAL POWER GENERATED (OPTIONAL)
ELECTRIC POWER GENERATED

Determination of the Thermophysical Properties of Water

At a depth of 4,500 m in the Bihor area, the elevated geothermal gradient (approximately 40–45 °C/km) indicates a rock temperature of about 180–200 °C. Under these temperature conditions and the corresponding hydrostatic pressure, water exhibits the following estimated properties (based on standard tables from the International Association for the Properties of Water and Steam):

- Thermal conductivity: $k_f = 0.68$ W/(m·K)
- Dynamic viscosity: $\mu = 0.135$ cP
- Density: $\rho = 860$ kg/m^3
- Specific heat capacity: $c_p = 4300$ J/(kg·K)
- Volumetric flow rate: $Q = 1100$ m^3/h

Calculation of the Heat Transfer Coefficient

$$U = \frac{Nu \cdot k_f}{d} = \frac{11210.939 \cdot 0.68}{0.1778} = 42876.482 W/(m^2 \cdot K)$$

Heat Transfer Equation

Since the rock temperature remains constant, the heat transfer can be evaluated using the Log Mean Temperature Difference (LMTD) method or by direct integration.

$$T_{out} = T_{roca} - (T_{roca} - T_{in}) \cdot e^{-\frac{U \cdot A}{Q_m \cdot c_p}}$$

Calculation of the Final Temperature

$$T_{out} = 200 - (200 - 130) \cdot e^{-\frac{42876.482 \cdot 837.8}{262.7 \cdot 4300}} \simeq 200℃$$

<u>Observation</u>**:** Although the water flow rate is very high, the large contact surface and the extremely high heat transfer coefficient over a 1.5 km drainage path cause the water to reach thermal equilibrium with the surrounding rock almost instantaneously.

Advantages & Risks

- *Advantages*

There are many advantages to using geothermal energy either directly or indirectly: – Geothermal energy is renewable; it is not a fossil fuel that will be eventually used up. The Earth is continuously radiating heat out from its core, and will continue to do so for billions of years; – Some form of geothermal energy can be accessed and harvested anywhere in the world; – Using geothermal energy is relatively clean. Most systems only emit water vapor, although some emit very small amounts of sulfur dioxide, nitrous oxides, and particulates; – Geothermal power plants can last for decades and possibly centuries. If a reservoir is managed properly, the amount of extracted energy can be balanced with the rock’s rate of renewing its heat; – Unlike other renewable energy sources, geothermal systems are “baseload.” This means they can work in the summer or winter, and are not dependent on changing factors such as the presence of wind or sun. Geothermal power plants produce electricity or heat 24 hours a day, 7 days a week; – The space it takes to build a geothermal facility is much more compact than other power plants (for example, wind energy or a solar photovoltaic center); – Geothermal energy systems are adaptable to many different conditions. They can be used to heat, cool, or power individual homes, whole districts, or industrial processes;

- *Risks :*

Harvesting geothermal energy still poses many challenges: – The process of injecting high-pressure streams of water into the Earth can result in minor seismic activity, or small earthquakes; – Water that flows through underground reservoirs can pick up trace amounts of toxic elements such as arsenic, mercury, and selenium. These harmful substances can be leaked to water sources if the geothermal system is not properly insulated.

Similar Projects

- The well-known method of generating electricity through geothermal energy involves using high-temperature water extracted from fractured, wet crystalline rocks.

Projects:

- *The 3.7 MWe geothermal park in Germany, developed by E.ON Business Solutions*
- *The 17.5 MWe geothermal park in Croatia, developed by Geoen*
- *The 11 MWe geothermal park in France, developed by Fonroche Geothermie*
- *The 14 MWe geothermal park in the USA, developed by Cyrq Energy Inc*

Protected tehnology

Opportunity for Energy Hub
Carbon Negative Master Vision

- **Deep Geothermal Architecture**

Closed-loop heat harvesting • 5000m vertical wells • 1400m horizontals • 20 MWe ORC high-efficiency power block.

- **BESS Utility Backbone**

64 MW / 64 MWh grid-scale battery system providing FCR, FRR, reserve and market arbitrage – stabilizing volatile grids.

- **CO_2 Revenue Platform**

80,000 tons CO_2 avoided annually • €8.5M recurring CO_2 revenue • strong EU ETS upward trajectory to 2040.

- **Financial Alpha Model**

IRR 41% • NPV €21.9M • EBITDA margin 82% • Payback 4–5 years • €30.64M annual revenue at maturity.

Opportunity for Energy Hub
Carbon Negative Master Vision

- **Forest ESG Engine**

Equivalent to 8,000 hectares of high-value carbon-absorbing forest. Creates long-term ESG-positive balance sheets and carbon tokens

- **Institutional Fit & Taxonomy Alignment**

Full EU Taxonomy alignment • green bond ready • pension fund compatible • Innovation Fund / EIB / BERD eligible.

- **Strategic Scalability**

Replicable across Romania’s geothermal basins • enables a national carbon-negative backbone.

- **Executive Wrap-Up**

A cinematic-grade investment asset combining technological depth,geopolitical relevance and superior ESG scoring.

CAPEX

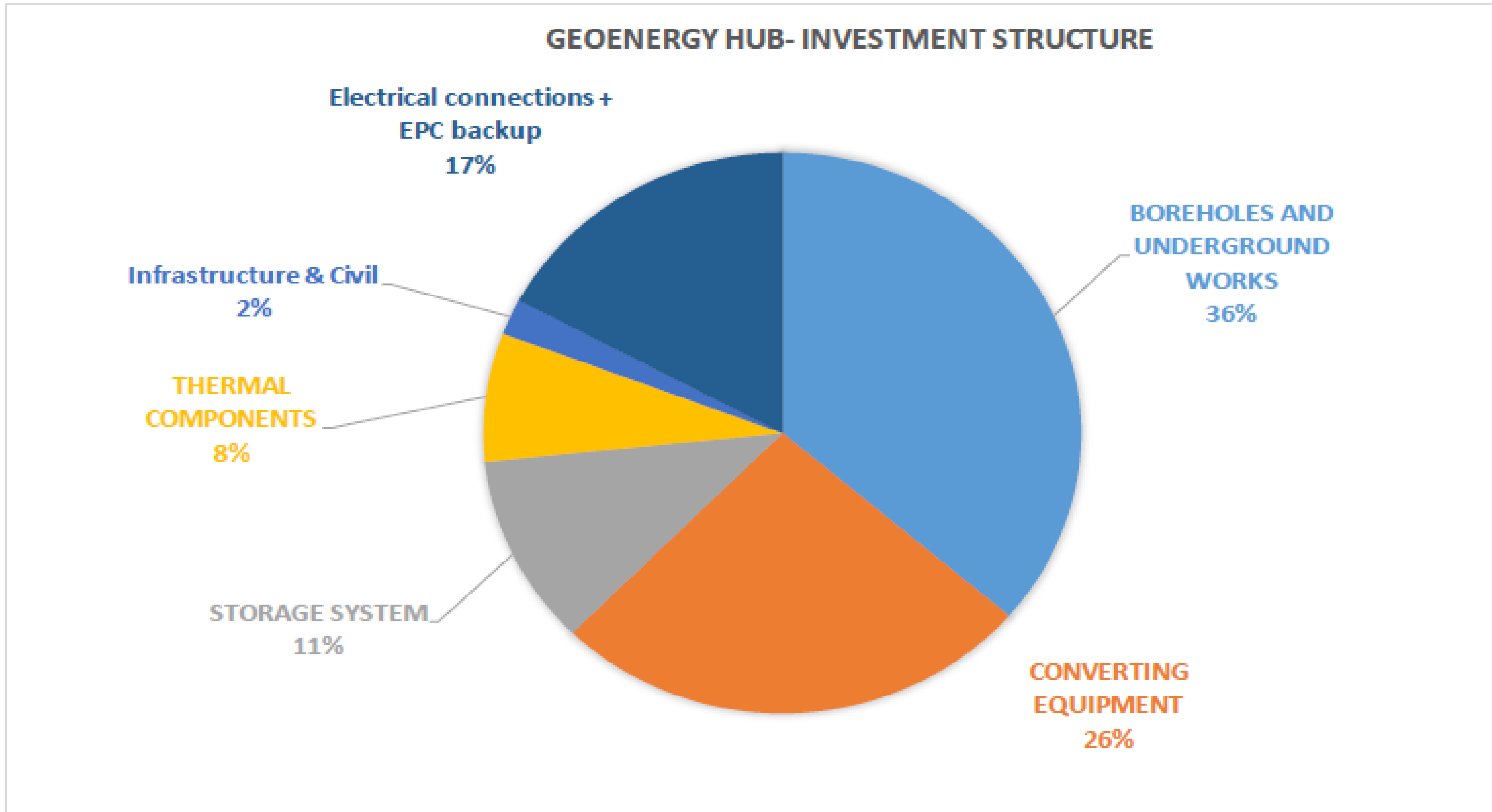
CAPEX - FUNDING SOURCES - GEOENERGY HUB

Component	Value (EUR)	% of total	Details	Y01-Inv	Y02-Inv	Y03-Inv
				70%	30%	0%
BOREHOLES AND UNDERGROUND WORKS	**52.900.000**	**36,31%**		**37.030.000**	**15.870.000**	-
Vertical Drilling (2×)	25.200.000	17,30%	5,000m × 90 days × 140,000 EUR/day	17.640.000	7.560.000	-
Horizontal Directional Drilling (3×)	25.200.000	17,30%	4,500m × 60 days × 140,000 EUR/day	17.640.000	7.560.000	-
Wellheads surface work	2.500.000	1,72%	Platforms, connection, valves	1.750.000	750.000	-
				0%	50%	50%
CONVERTING EQUIPMENT	**38.000.000**	**26,08%**		**-**	**19.000.000**	**19.000.000**
ORC Turbine 20 MWe	38.000.000	26,08%	Specific cost: 1.9 mln. EUR/MW	-	19.000.000	19.000.000
				0%	0%	100%
STORAGE SYSTEM	**16.000.000**	**10,98%**		-	-	**16.000.000**
BESS 64 MW / 64 MWh	16.000.000	10,98%	**LFP Tier-1 (CATL/BYD)**	-	-	16.000.000
				0%	70%	30%
THERMAL COMPONENTS	**10.800.000**	**7,41%**		**-**	**7.560.000**	**3.240.000**
Heating agent + reinjection 1,400m	3.800.000	2,61%	**Pipes, insulation, pumping**	-	2.660.000	1.140.000
Centralized thermal energy supply system SACET 8 MWth	7.000.000	4,80%	**Network + thermal points + exchangers**	-	4.900.000	2.100.000
				30%	40%	30%
Infrastructure & Civil	**3.000.000**	**2,06%**	**Warehouse 300sqm + offices + barracks**	**900.000**	**1.200.000**	**900.000**
				0%	30%	70%
Electrical connections + EPC backup	**25.000.000**	**17,16%**	**110kV connection + 10% reserve**	**-**	**7.500.000**	**17.500.000**
TOTAL CAPEX	**145.700.000**	**100%**		**37.930.000**	**51.130.000**	**56.640.000**

SOURCES OF FUNDING

Own capital	21.855.000	15%		5.689.500	7.669.500	8.496.000
Loans	65.565.000	45%		17.068.500	23.008.500	25.488.000
Gants & Incentives	58.280.000	40%		15.172.000	20.452.000	22.656.000
TOTAL	**145.700.000**			**37.930.000**	**51.130.000**	**56.640.000**

GeoEnergy Hub graphic

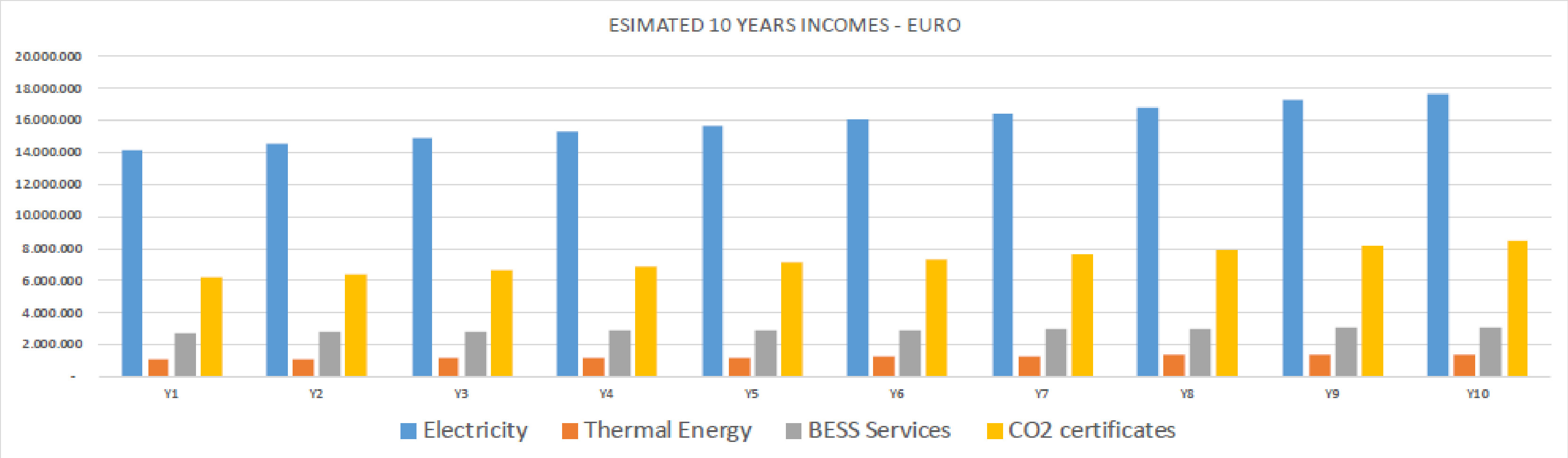


Estimated Incomes

ESTIMATED INCOMES

Euro

Detalied incomes	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	TOTAL
Electricity	14.147.400	14.501.085	14.863.612	15.235.202	15.616.082	16.006.485	16.406.647	16.816.813	17.237.233	17.668.164	**158.498.723**
Thermal Energy	1.080.000	1.112.400	1.145.772	1.180.145	1.215.550	1.252.016	1.289.576	1.328.264	1.368.112	1.409.155	**12.380.990**
BESS Services	2.715.200	2.755.928	2.797.267	2.839.226	2.881.814	2.925.042	2.968.917	3.013.451	3.058.653	3.104.532	**29.060.030**
CO2 certificates	6.206.190	6.423.407	6.648.226	6.880.914	7.121.746	7.371.007	7.628.992	7.896.007	8.172.367	8.458.400	**72.807.255**
TOTAL Revenues	**24.148.790**	**24.792.820**	**25.454.877**	**26.135.487**	**26.835.192**	**27.554.549**	**28.294.132**	**29.054.534**	**29.836.365**	**30.640.251**	**272.746.998**
Yearly % comparing with Y10 (full capacity)	*79%*	*81%*	*83%*	*85%*	*88%*	*90%*	*92%*	*95%*	*97%*	***100%***	



OPEX

OPERATIONAL EXPENDITURIE (OPEX)

Euro

ANNUAL FIXED COSTS	Value (EUR) at max. capacity	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Operational staff (18 persons)	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000
ORC Preventive Maintenance	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000
BESS Maintenance	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000
Maintenance of boreholes and pipes	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000
Thermal network maintenance	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
Insurance	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000
Utilities & Supplies	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Administrative and General (incl. land lease concession)	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500
TOTAL ANNUAL FIXED OPEX	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**	**4.412.500**
VARIABLE COSTS											
% related to estimated incomes		*79%*	*81%*	*83%*	*85%*	*88%*	*90%*	*92%*	*95%*	*97%*	*100%*
Pumping and circulation of thermal agent	450.000	354.663	364.121	373.845	383.840	394.117	404.682	415.544	426.711	438.194	450.000
Chemicalization and water treatment	250.000	197.035	202.290	207.691	213.245	218.954	224.823	230.858	237.062	243.441	250.000
Energy transport (wheeling)	350.000	275.849	283.205	290.768	298.543	306.535	314.752	323.201	331.887	340.817	350.000
TOTAL ANNUAL VARIABLE OPEX	**1.050.000**	**827.546**	**849.616**	**872.304**	**895.628**	**919.606**	**944.257**	**969.602**	**995.660**	**1.022.452**	**1.050.000**

Income Statement

INCOME STATEMENT

(Euro)

	Y01-Inv	Y02-Inv	Y03-Inv	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
REVENUES	0	0	0	24.148.790	24.792.820	25.454.877	26.135.487	26.835.192	27.554.549	28.294.132	29.054.534	29.836.365	30.640.251
Electricity				14.147.400	14.501.085	14.863.612	15.235.202	15.616.082	16.006.485	16.406.647	16.816.813	17.237.233	17.668.164
Thermal Energy				1.080.000	1.112.400	1.145.772	1.180.145	1.215.550	1.252.016	1.289.576	1.328.264	1.368.112	1.409.155
BESS Services				2.715.200	2.755.928	2.797.267	2.839.226	2.881.814	2.925.042	2.968.917	3.013.451	3.058.653	3.104.532
CO2 certificates				6.206.190	6.423.407	6.648.226	6.880.914	7.121.746	7.371.007	7.628.992	7.896.007	8.172.367	8.458.400
EXPENSES	0	0	0	5.240.046	5.262.116	5.284.804	5.308.128	5.332.106	5.356.757	5.382.102	5.408.160	5.434.952	5.462.500
Variable Expenses	0	0	0	827.546	849.616	872.304	895.628	919.606	944.257	969.602	995.660	1.022.452	1.050.000
Pumping and circulation of thermal agent				354.663	364.121	373.845	383.840	394.117	404.682	415.544	426.711	438.194	450.000
Chemicalization and water treatment				197.035	202.290	207.691	213.245	218.954	224.823	230.858	237.062	243.441	250.000
Energy transport (wheeling)				275.849	283.205	290.768	298.543	306.535	314.752	323.201	331.887	340.817	350.000
Fix Expenses	0	0	0	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500	4.412.500
Operational staff (18 persons)				1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000	1.200.000
ORC Preventive Maintenance				800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000	800.000
BESS Maintenance				400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000	400.000
Maintenance of boreholes and pipes				350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000	350.000
Thermal network maintenance				250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
Insurance				650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000	650.000
Utilities & Supplies				300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000	300.000
Administrative and General (incl. land lease concession)				462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500	462.500
EBITDA	0	0	0	18.908.744	19.530.703	20.170.073	20.827.359	21.503.086	22.197.792	22.912.031	23.646.375	24.401.413	25.177.751
Existing Equipments Depreciation													
New Investment Depreciation				9.544.333	9.544.333	9.544.333	9.544.333	9.544.333	9.544.333	9.544.333	9.544.333	9.544.333	9.544.333
EBIT				9.364.410	9.986.370	10.625.739	11.283.026	11.958.753	12.653.458	13.367.697	14.102.041	14.857.079	15.633.418
Interest	341.370	1.006.362	1.792.224	1.985.683	1.685.957	1.386.231	1.086.506	786.780	487.054	187.329	0	0	0
EBT	-341.370	-1.006.362	-1.792.224	7.378.727	8.300.413	9.239.508	10.196.520	11.171.973	12.166.404	13.180.369	14.102.041	14.857.079	15.633.418
Reported Loss	0	341.370	1.347.732	3.139.956	0	0	0	0	0	0	0	0	0
Income tax				678.203	1.328.066	1.478.321	1.631.443	1.787.516	1.946.625	2.108.859	2.256.327	2.377.133	2.501.347
NET PROFIT	-341.370	-1.006.362	-1.792.224	6.700.524	6.972.347	7.761.187	8.565.077	9.384.457	10.219.780	11.071.510	11.845.715	12.479.947	13.132.071
CUMULATED NET PROFIT	-341.370	-1.347.732	-3.139.956	3.560.568	10.532.915	18.294.101	26.859.179	36.243.636	46.463.415	57.534.925	69.380.640	81.860.587	94.992.658

Financial Ratios

Financial Ratios

	U.M.	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Normal Value
Profitability Ratios												
Return on Equity (ROE)	(%)	23,46%	19,63%	17,93%	16,52%	15,32%	14,30%	13,42%	12,55%	11,68%	10,94%	>5
Return on Assets (ROA)	(%)	4,36%	4,82%	5,70%	6,71%	7,87%	9,22%	10,80%	11,45%	13,15%	15,20%	
Return on Invested Capital (ROIC)	(%)	9,14%	10,03%	10,88%	11,66%	12,36%	12,94%	13,39%	12,38%	11,53%	10,82%	
Gross Margin	(%)	30,56%	33,48%	36,30%	39,01%	41,63%	44,15%	46,58%	48,54%	49,80%	51,02%	
Profit margin	(%)	27,75%	28,12%	30,49%	32,77%	34,97%	37,09%	39,13%	40,77%	41,83%	42,86%	
Operation Performance Ratios												
Assets Turnover (AT)	(times)	0,16	0,17	0,19	0,20	0,22	0,25	0,28	0,28	0,31	0,35	
Fixed-Assets Turnover	(times)	0,18	0,20	0,22	0,24	0,27	0,31	0,36	0,42	0,50	0,61	
Inventory Turnover	(times)	1,35	1,32	1,30	1,27	1,24	1,22	1,19	1,17	1,15	1,13	
The Collection Period	(days)	60	60	60	60	60	60	61	61	61	61	
Day's Sales in Cash	(days)	170	172	181	189	197	205	213	336	337	338	
The Payables Period	(days)	177	176	176	176	175	175	175	175	174	174	
Financial Leverage Ratios												
Financial Leverage	(times)	5,38	4,07	3,14	2,46	1,95	1,55	1,24	1,10	0,89	0,72	
Debt-to-Assets Ratio	(%)	73%	69%	63%	57%	50%	42%	33%	29%	27%	26%	
Debt-to-Equity Ratio	(%)	394%	279%	199%	141%	98%	65%	41%	31%	24%	18%	
Liquidity Ratios												
Current Ratio	(times)	1,57	1,61	1,70	1,80	1,90	1,99	12,22	17,35	17,59	17,82	>1.2
Quick Liquidity Ratio (Acid Test)	(times)	1,39	1,43	1,52	1,61	1,70	1,79	11,02	16,14	16,36	16,58	> 0.6
Coverage Ratios												
Times Interest Earned (TIE)	(times)	4,72	5,92	7,67	10,38	15,20	25,98	71,36	n/a	n/a	n/a	
Times Burden Covered	(times)	0,71	0,78	0,85	0,92	1,00	1,09	1,18	#DIV/0!	#DIV/0!	#DIV/0!	

Project Evaluation

Project Evaluation (not influenced by financing method)

(Euro)

IRR	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
Net Cash Flow	11.237.765	11.640.199	12.563.307	13.505.227	14.466.510	15.447.721	16.449.441	26.744.287	27.537.077	28.352.232
- Credit Draw Down	-65.565.000			0	0	0	0	0	0	0
- Increasing in Capital (from Equity)	0	0	0	0	0	0	0	0	0	0
- Increasing in Capital (from Partner)	-24.994.956	0	0	0	0	0	0	0	0	0
+ Credit Rambursement	9.366.429	9.366.429	9.366.429	9.366.429	9.366.429	9.366.429	9.366.429	0	0	0
+ Interest Paid	1.985.683	1.685.957	1.386.231	1.086.506	786.780	487.054	187.329	0	0	0
- Tax Shield	-1.667.974	-1.416.204	-1.164.434	-912.665	-660.895	-409.126	-157.356	0	0	0
+ Terminal Value										354.402.904
IRR Cash Flow	**-69.638.053**	**21.276.381**	**22.151.532**	**23.045.497**	**23.958.824**	**24.892.078**	**25.845.842**	**26.744.287**	**27.537.077**	**382.755.136**

Internal Rate of Return (IRR)	**41,08%**	
Net Present Value (NPV)	**21.899.507**	**Euro**
discounted rate	*8%*	

A discounted rate for the energy production sector, also known as the cost of capital or required rate of return, is used to determine the present value of future cash flows from energy projects. This rate accounts for the risk of the investment and the time value of money, with typical ranges between 3% and 10% for renewable energy projects, though it can vary widely depending on the project, technology, and market.

THANK YOU

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