Roundtable on Finance



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Financing geothermal power projects

Project financing & estimating of costs

- A software to evaluate financial viability of geothermal projects
- LCOE

Risk insurance

Promote the creation of risk insurance schemes

Drilling costs & rigs

- A European database on drilling costs & performance
- Best practice drilling handbook

Guide to boost investment in the geothermal sector

Practical reference tool for banks, developers and investors







Project financing & estimating of costs

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- Site identification
- Wells

- Pump tests

- Plant construction

- (Pre-)feasibility studies
- Permitting
- Funding
- Insurance concept

equity risk

(small willingness of banks to participate in the risk at this stage, even with discovery insurance)

"gray zone"

(debt for security, e.g. letter of awareness)

debts risk

(debt available with sufficient safety for sale heat / electricity)

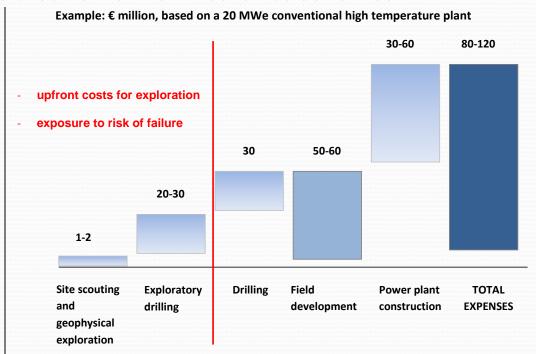






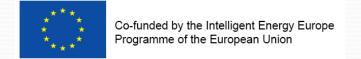
Risk insurance

Promote the creation of risk insurance schemes



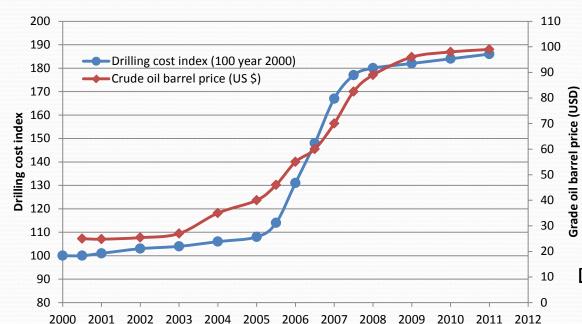
➤ Cover the geological risk: Towards an European Geothermal Risk Insurance Fund (EGRIF)





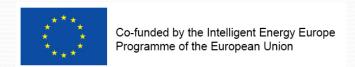
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Drilling cost vs. crude oil prices

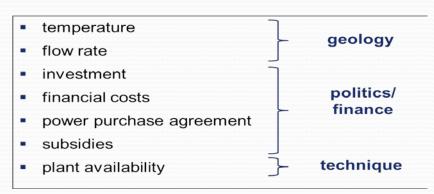




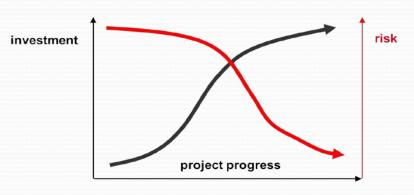


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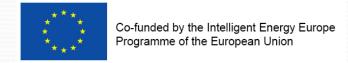
Crucial parameters for the economic success



Risk and investment during the project progress

→ Most of the investment falls into the high-risk phase!









Innovative support schemes for **Geothermal electricity**

Market Maturity	Juvenile	Intermediate	Mature	Competitive: after Horizon 2020
criteria	0-6 deep geothermal wells are existing < than 3 plants are operational	6-60 deep geothermal wells exist < than 10 plants are operational	Both geoelec & geoDH systems are developed all over the country	Costs reach grid parity with around 10 €ct/kWh
Level of risk	Very high	high	medium	Low
Costs: High temperature Low temperature & small high T° plants EGS	na 18 30	7 16 25	6 15 23	5 10 12
Support schemes	(repayable) Grants for seismic exploration, slimholes, and the 1 st well	Feed-in Tariff	Feed-in Premium	Grid premium
Flanking measures	Public Risk insurance	Public or Private Risk insurance	Public & private Risk insurance	Private Risk insurance

Thank You!

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