

# GeoElec Basic Financial Model

for investors and banks to evaluate geothermal electricity projects  
and to estimate costs for geothermal power supplied electricity

## Calculation in 5 steps



Start

## Schritt 1/5



### Timing

Start of capital expenditure

Power station in charge

### Electric Power

MWe installed Power

kWe needed Power (Pumps, cooling)

### Geothermal Projekt

Type: Conventional / Binary / EGS

Use: cascade and hybrid uses

### Flowrate

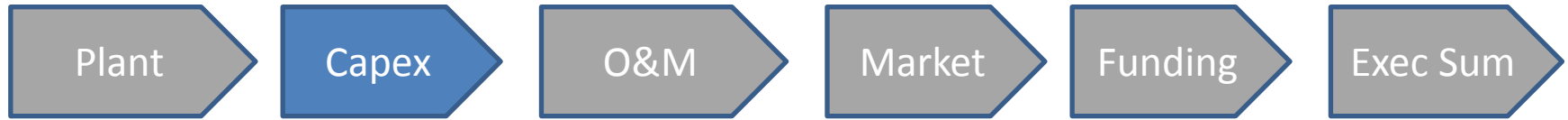
Temperature-spread

Country specific hydrogeological faktors

Plant operating hours

Weiter

## Schritt 2/5



### Feasibility (Phase 1)

Prefeasibility

Exploration  
2D-/3D seismic

Planning

Consulting

### Capital Expenditure (Phase 2 and 3)

Well  
useful life

Power Generation  
useful life

Project Management

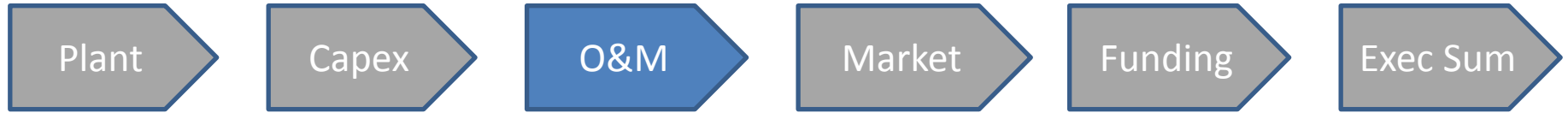
Insurance/Interest during exploration  
(optional)

**Conventional / binary / enhanced geothermal system**  
(cost estimation by Mannvit, EnBW, University of Stuttgart)

Zurück Schritt 1

Weiter

## Schritt 3/5



### Cost groups

#### Variable costs

current demand  
repair & maintenance

#### Semi fixed costs

labor costs  
travel costs  
consulting costs  
public relation

#### Fixed costs

admin costs

#### Depreciation

#### Interest

### Inflationary Rates

Zurück Schritt 2

Weiter

## Schritt 4/5



### Sales

Production  
Electricity  
Heat

Remuneration  
Feed-in tariff for power production  
Sales Price for Heat

### Purchases

Demand  
Electricity for pumps  
Electricity for cooling

Stock prices  
EEG allocation costs  
Electricity taxes

**Inflationary Rates**

Zurück Schritt 3

Weiter

## Schritt 5/5



### Equity

Financing the complete capital expenditure (until risk abolishment)

Financial Re-Structuring after risk-free investment

### Grants

**Mezzanine capital**

### Debts

Interest Rates

Principal payment

Duration of credit

### Financing the Project phases (1 to 4)

- 1 Site identification / pre feasibility / surface exploration / Feasibility of drilling exploration / resource development / economic feasibility
- 2 Drilling and exploration
- 3 Plant construction
- 4 Operating

Zurück Schritt 4

Weiter

## Results



## Executive Summary

Key Performance Indicators (KPI)

IRR, NPV, Pay Back Period

Reports

Levelized costs

Financial Results

Profit & Loss, Balance sheet, Cash Flow

Zurück Schritt 5

Berechnen