



CHPM2030 - Novel research concept of combined heat, power and metal extraction from ultradeep orebodies

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Project facts

Project title: CHPM2030 – Combined heat, power and metal extraction from ultradeep orebodies

Call: H2020-LCE-2014-2015 two-stage, Research and Innovation action

Topic: Developing the next generation technologies of renewable electricity and heating/cooling

Project ID: 654100

Implementation: 01.01.2016-30.06.2019

Budget: 4.2 million EUR

TRL: 4-5

Members of the consortium

Partner organisation	Country
University of Miskolc (UNIM), coordinator	Hungary
University of Szeged (USZ)	Hungary
European Federation of Geologists (EFG)	France
Iceland Geosurvey (ISOR)	Iceland
British Geological Survey (BGS)	UK
Laboratório Nacional de Energia e Geologia (LNEG)	Portugal
Vlaamse Instelling voor Technologisch Onderzoek (VITO)	Belgium
La Palma Research S.L. (LPRC)	Spain
Agency for International Minerals Policy (MinPol)	Austria
Geological Survey of Romania (IGR)	Romania
Katholieke Universiteit Leuven (KLeuv)	Belgium
Geological Survey of Sweden (SGU)	Sweden

The CHPM 2030 challenge and rationale

1) Increasing demand for green energy in the EU and worldwide

2) EU needs critical raw materials – limited mining

Developing a new technology for combining geothermal energy production and metal mining

Create a proof of concept of the technical and economic feasibility at laboratory scale

Concept

Identifying ultra deep metalliferous formations

Establishment of EGS

Enhance the interconnected fracture systems within the orebody

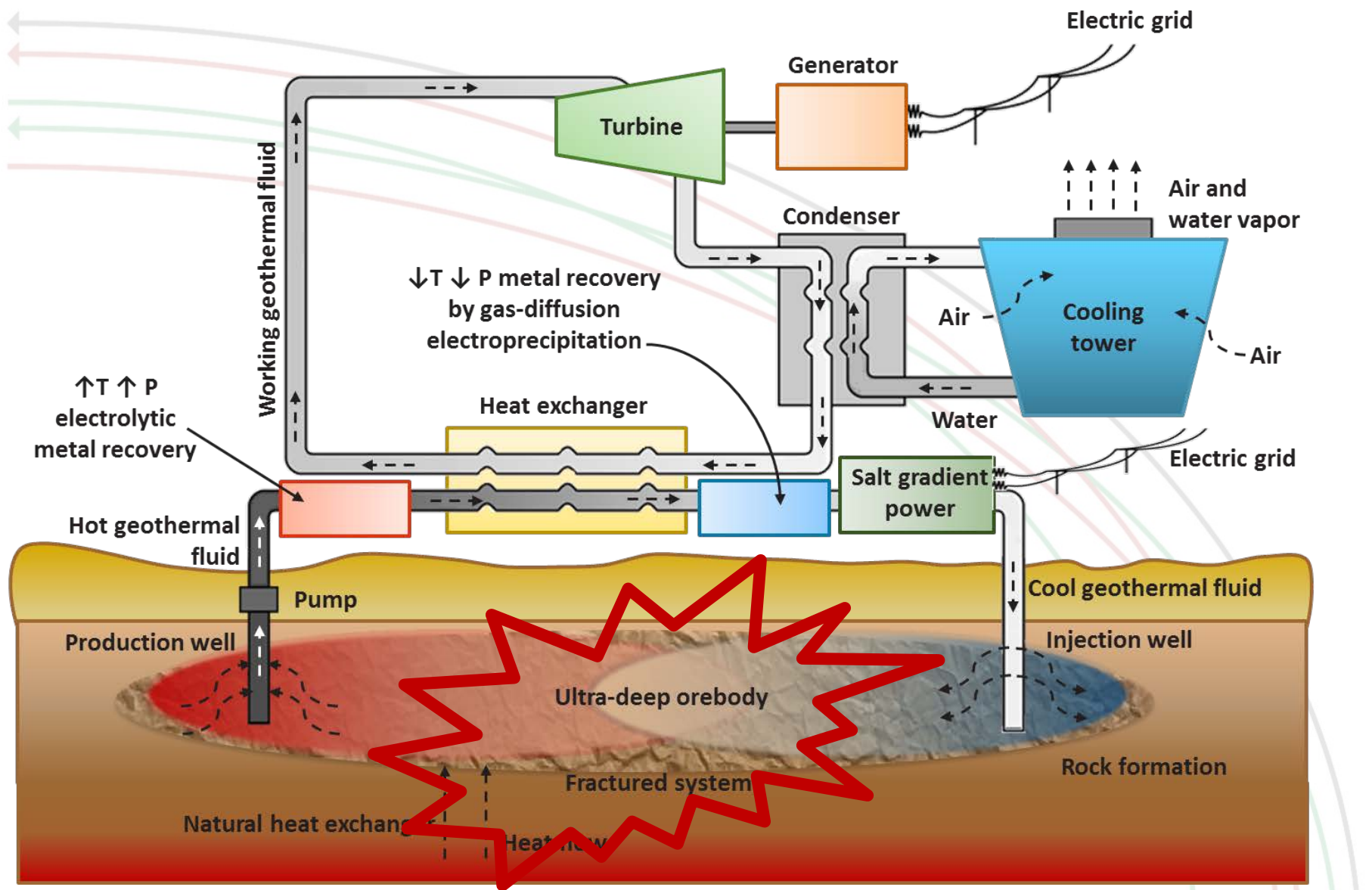
Leaching metals from the orebody

Metal extraction from the geothermal brine

Production of heat and electricity

CHPM2030





Schematic overview of the envisioned CHPM Installation

The time horizon

CHPM concept is proved and operational on industrial scale

CHPM pilot operation

CHPM project

EGS technology development

2016

2020

2030

2040

2050