

SRA for Deep Geothermal: Process and structure

Adele Manzella (CNR)



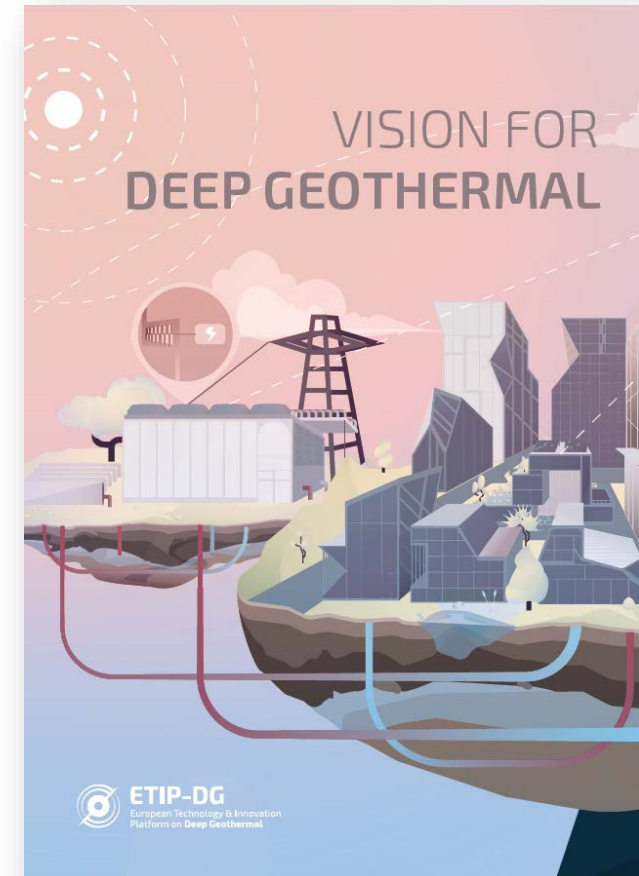
ETIP-DG

European Technology & Innovation
Platform on **Deep Geothermal**



Co-funded by the European Union's Horizon 2020 Research and Innovation Programme [GA. N. 773392]

Primary objectives of ETIP-DG



Content of the SRA document

- About 100-page document
- Present all items and their objectives, grouped by WG
- Provide the state of the art 2018-2020
- Indicate potential technological development
- Mention targets & steps 2025, 2030, ...2040,2050
- Short, medium and long term RD&I

infographs, pictures

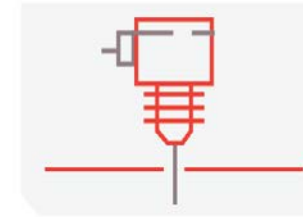
Objectives of the WGs for the SRA

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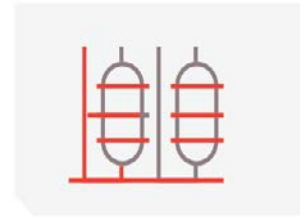
- Phase 1 (November 2017 - March 2018): Collect and discuss RD&I topics for the relevant theme of the WG, taking previous publications as a basis (especially from the RHC Platform and EERA-JPGE).
- **Phase 2 (March 2018 - August 2018): WG prepare a list of topics to be included in the SRA.**
- Phase 3 (September 2018 - December 2018). Validation of the SRA during an open consultation process and publication.



Exploration



Deep Drilling



Production technologies



Surface systems



Non-Technical

SRA: List of items

ITEM	VISION, PROBLEM, AIM, CHALLENGE ETC.	R&D PRIORITIES	RESPONSIBLE PERSON	LINKS OR SUPPORTING DOCUMENTS

SRA topics and items

Template for describing each item

State of the art, TRL and its evolution:
a search engine for retrieving documents

ITEM	VISION, PROBLEM, AIM, CHALLENGE	R&D PRIORITIES	RESPONSIBLE PERSON	LINKS OR SUPPORTING DOCUMENTS
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Objective

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State of the art

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Potential for technological development

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Target

(Link: [Declaration of Intent](#))

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Geothermal Document Search Engine (GDSE) objective

- ❑ Supporting the identification of the most relevant **research priorities** by data collection, organization and sharing in an information platform:

- ✓ describe RD&I in the deep geothermal sector also from a historical perspective
- ✓ retrieve all the necessary information for highlighting success stories and gaps
- ✓ data organization
- ✓ provide a framework for data access, retrieve and query



Geothermal project deliverables library:
EC portal, Geothermal project websites



Support the Strategic Research Agenda

GDSE Architecture

Backend:

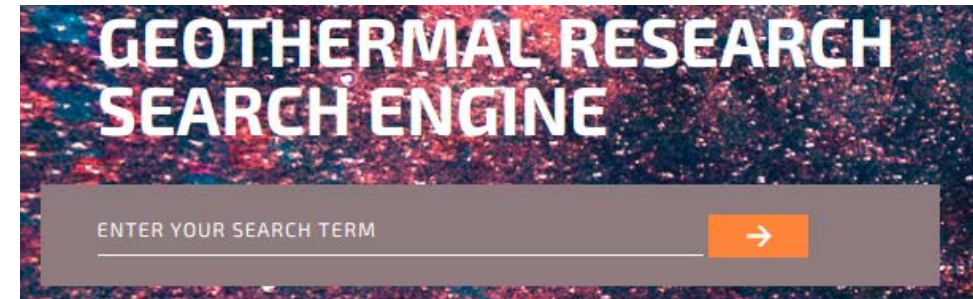
ZENODO - a repository for research outputs, created by OpenAIRE and CERN and funded by European Commission (EC)



Frontend:

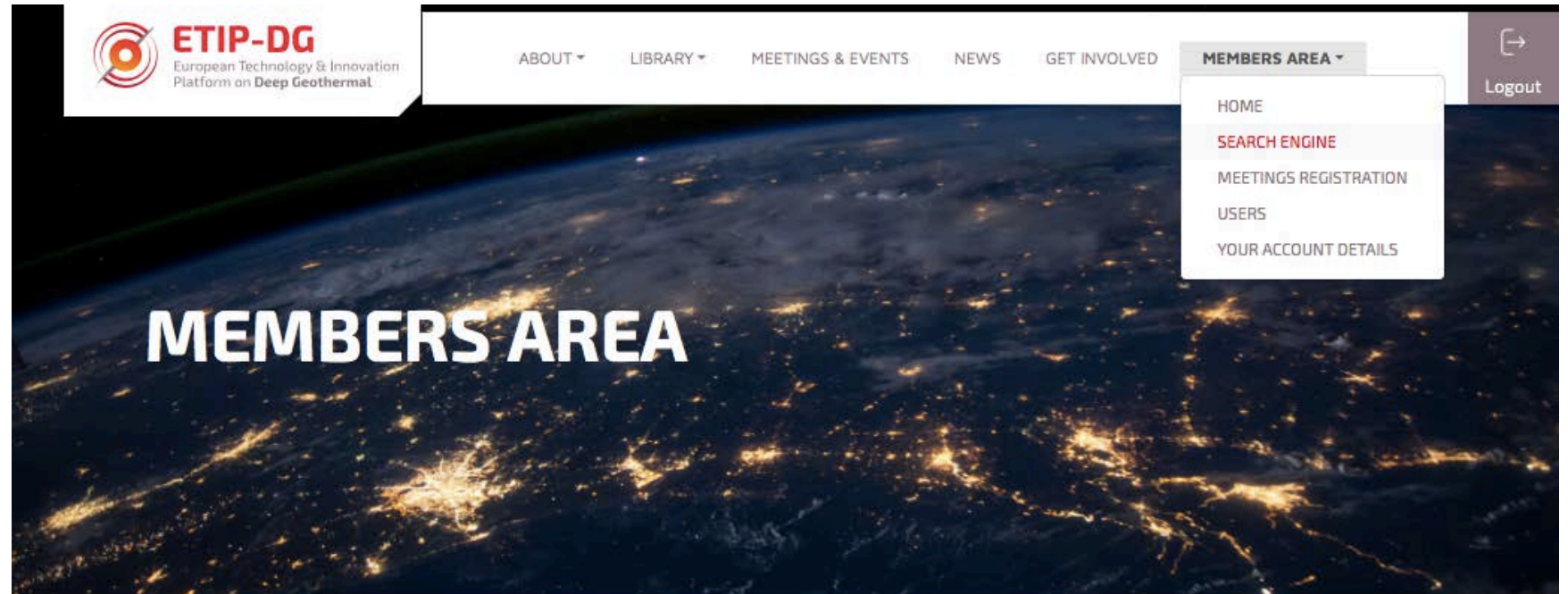
The search engine is embedded in the ETIP-DG website – (Members' Area)

www.etip-dg.eu



GDSE Search page

Available in the Members Area
(after login)



GDSE Document description

Documents have been uploaded and described with metadata (about 250)

Categories:

- Exploration
- Drilling
- Production
- Surface systems / generation
- Environmental
- Non technical



Sub-Categories - Exploration:

- Structural geology
- Geochemistry
- Geophysics
- Volcanology
- Hydrogeology
- Geochronology

Sub-Categories – Non technical:

- Social aspects
- Code & definitions
- Energy sector status
- Skills education & training
- Research roadmap
- Regulatory aspects
- Economics

GDSE Search page

Filters:

- Categories
- Funding programmes
- Project title
- Document type

Sort by:

- Publication date (ascending, descending)
- Title (ascending, descending)

Free text search

Filters

Sort by

Document preview

Document summary

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GEOHERMAL RESEARCH SEARCH ENGINE

ENTER YOUR SEARCH TERM

CATEGORIES

- Exploration (70)
- Drilling (1)
- Production (41)
- Surface systems / Generation (13)
- Environmental (31)
- Non Technical (B4)

FUNDING PROGRAM

- FP7 (57)
- ENGINE - FP6 (29)
- GEOELEC - IEE (25)
- H2020 (20)
- TRANSENERGY - Central Europe 2007 - 2013 (17)
- GeoDH - IEE (10)
- DARLINGe - Interreg - Danube Transnational Programme (9)
- Intelligent Energy GEOFAR (1)

SORT BY
publication date descending

ENGINE DSS

- Fast models are available in EXCEL and DSS

Read more
TNO Team;

Tue, Jun 5, 2018 12:00 AM | Open Access

OPTIMIZED GEOTHERMAL BINARY POWER CYCLES

Presentation: Optimized geothermal binary power cycles

Kontoleontos, E.; Mendrinou, D.; Karytsas, C.;

Fri, Jun 1, 2018 12:00 AM | Open Access

SECOND FACT SHEET

This document, prepared in the frame of WP6, provides the second Fact Sheet of the DESCRAMBLE project, organized following the format of the first Fact Sheet delivered on October 2016. The Fact Sheet summarizes the main technical details of the projects and its results.

Manzella, Adele; Bertani, Ruggiero;

GDSE Summary page

Document information:

- Title
- Authors
- Funding programmes
- Keywords
- Publication date
- Licence
- Abstract

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REPORT ON FINANCIAL SUPPORT MECHANISMS

Babócsky Miklós

FUNDING PROGRAM

DARLINGe - Interreg - Danube Transnational Programme


ABSTRACT

This report deals with the financing-related aspects of geothermal projects, focusing on the various support schemes available for geothermal. It is important to note that the subject of DARLINGe project is geothermal heat production based on conventional, deep geothermal wells. Thus, green electricity production, shallow geothermal projects (ground source heat pumps) and EGS projects (projects based on artificially created reservoirs in hot, dry rocks) are excluded. We have investigated solely the support schemes for conventional, deep geothermal projects for the production of green heat.

KEYWORDS

geothermal energy
non technical
economics
support schemes

FILES

D553.pdf 

PUBLICATION DATE

Sun, Dec 31, 2017 12:00 AM

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notspecified

Document
download

GDSE improvement and update

Help us to enhance the search engine by:

- providing other documents (e.g. deliverables that are not accessible on internet) and lists that are considered strategic for our purpose, to be uploaded in the database
- help us to improve keywords (notify mistakes, improved keywords).
- defining if we need to extract data from the documents for queries. At the moment we collected the main project info, including declared budget (Project collection is not exhaustive, due to lack of information on internet). Other data? Aim? **To be considered also for preparing the Roadmap**
- general commenting, hinting

please write to info@etip-dg.eu

with email object: ETIP-DG search engine

SRA: What next

- check item short descriptions and verify overlapping and transversal topics for optimized coordination
- define in more detail what should be described in **potential for technological development** (TRL, funding range, ...)
- proceed with item descriptions, first draft by September 2018 to be circulated among all stakeholders
- Organize the complete document: Foreword, general description for each WG before the item's details. What else? Any relation to Horizon Europe documents? to be discussed

- Final draft, editing by Fall
- Publication by the end of the year

Some recommendations for items' descriptions



- The document is based on objectives, solutions should be only generally hinted
- Good, synthetic and honest state of the art: clarify when foreseen technologies are optimization of current ones (upgrading TRL), retrieved from other sectors and adapted to geothermal or new ones are required
- be inventive, novel, brave also in objectives (short-medium- and long-term RD&I



Have all a nice work ... in the summer

THANK YOU



The sole responsibility of this publication lies with the author. The European Union is not responsible for any use that may be made of the information contained therein. This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No [773392 — DG ETIP]