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Preparing geothermal investments in public buildings



Hungary–Croatia cross-border cooperation

Petar Dundović
Energy Institute Hrvoje Požar

EIHP

Illustration from the methodological paper

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The project’s concrete outputs

16

technical preparations

4

additional feasibility studies

3

demonstration investments

The 3 pilot buildings are included in the 16 preparations.

A shared methodology, vOSS and training support further investments.

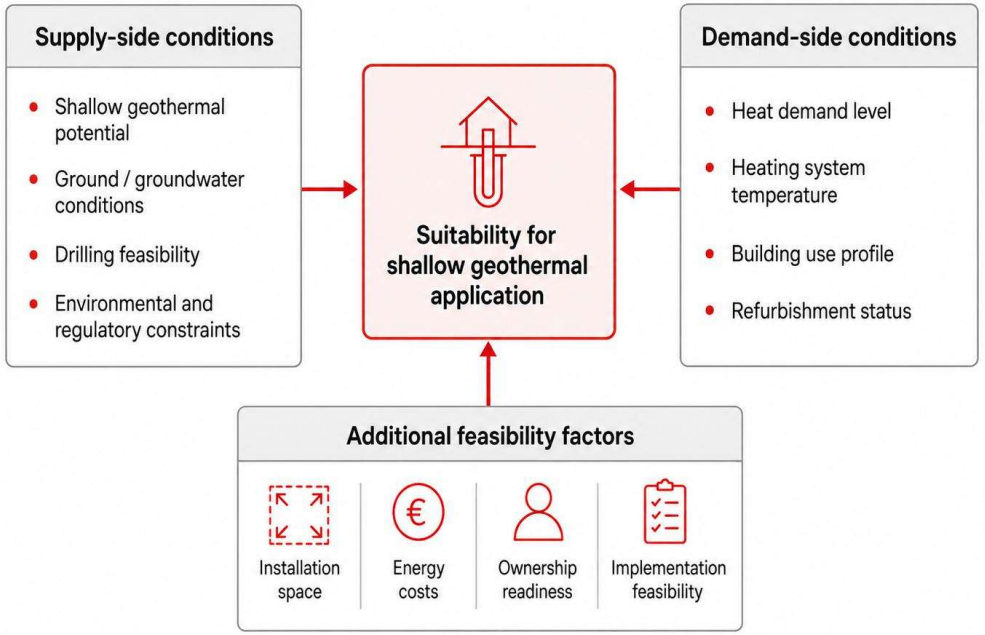
Matching the resource with the building

Resource

Ground or groundwater conditions

Building

Demand after refurbishment and system compatibility



Three resource configurations

Configuration	Heat source	Key site evidence
Closed loop	Underground heat exchanger	Ground properties and borehole-field design
Open loop	Abstracted groundwater	Yield, temperature, water quality and return
Existing thermal water	Remaining heat from existing infrastructure	Available flow, temperature and connected users

Indicative project scope: closed loops up to about 150 m; groundwater often 10–30 m.

A common method and its working tool



Methodological paper for optimizing ground source geothermal energy developments combined with energy refurbishments

Team Leader Petar Dundović
Authors:
Petar Dundović
Matija Vajdić
Dr. sc. Hrvoje Dorotić
Dr. sc. Sanja Živković
Director: Dražen Jakšić



Methodological paper

Inventory, pre-screening and automatic scoring

	B	C	D	E	F	G	H	I	J	K	L	M
1		Weight	1.5	1.0	1.0	1.0	0.5	0.5	1.2	1.0	1.2	1.2
2	ID	Building name	Specific heat demand	Total heat demand	Heating cost	Building profile	Building size (supporting)	Refurbishment / integration readiness	Supply temp	Adaptability	Geothermal potential	Space
3	TEST	Hypothetical school – suitable	1	3	4	5	3	5	5	5	4	4
4												

16 criteria, with documented inputs and assumptions

Workbook screenshot: hypothetical test case

How the screening result should be read

Weighted score

Σ(score × weight) ÷ Σ(weights)

PASS or CONDITIONAL
and all 16 valid scores

Conditions for further preparation

Overall score ≥ 3.5

Potential and space scores ≥ 3

No unresolved exclusion barriers

Sufficient ownership readiness

Priority guides the next assessment. Site-specific analysis confirms feasibility.

From a candidate to a prepared investment

Stage	Main output	What it establishes
AG3	Common methodology	Which candidates warrant further work
A4.1	Technical preparation	The site-specific intervention and design scope
A4.2	Feasibility study	The resource, concept, costs and expected benefits
AG5	Pilot implementation	Demonstration and operating experience

MENEA coordinates A4.1 and A4.2. EIHP delivers two outputs in each activity.

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Three demonstration sites

Pécs

University institute laboratory

Ground-source heat-pump system

Donji Kraljevec

Primary school

Geothermal heating refurbishment

Koprivnica

Crvenkapica kindergarten

Water-to-water heat pump and nearby PV

Planned demonstrations in the application. Current delivery status requires partner confirmation.

vOSS: knowledge and support for users

A user question

“What should my municipality check before investing?”

Reviewed source content

Technical review and testing

Initial information and next steps

REAN leads development. EIHP contributes content and technical review.

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EIHP’s next delivery stage

2 **technical preparations**

2 **Croatian feasibility studies**

Verified candidate data and clearly scoped specialist work

A transparent selection process supports better prepared investments.