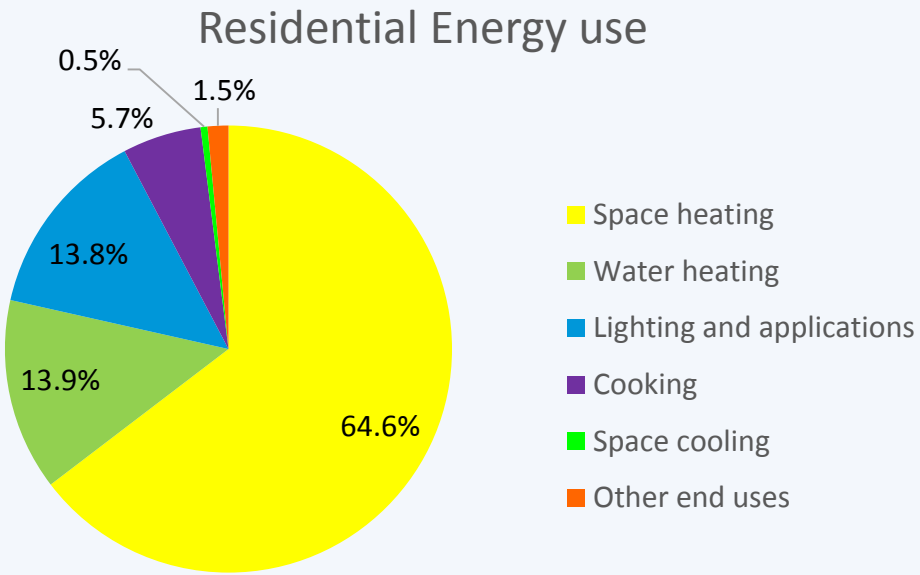
Heat Storage

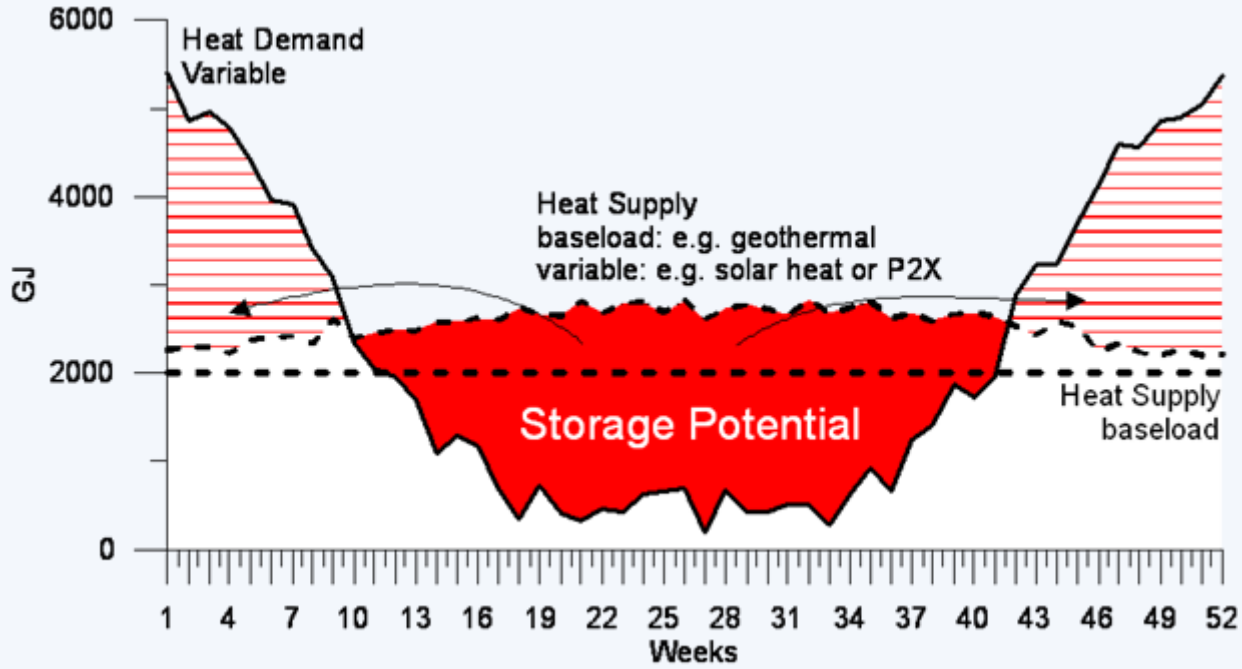
HT Heat storage is needed, aquifers can provide the solution

ir. T.I.S. van der Woude

Necessity for heat storage



Heat is needed during winter



Aquifers can provide the solution

- Subsurface is a good insulator

- Tertiary sand deposits (depths between 100 and 500 meters)

- Applications exists for shallow and deep geothermal energy

Example borehole Delft

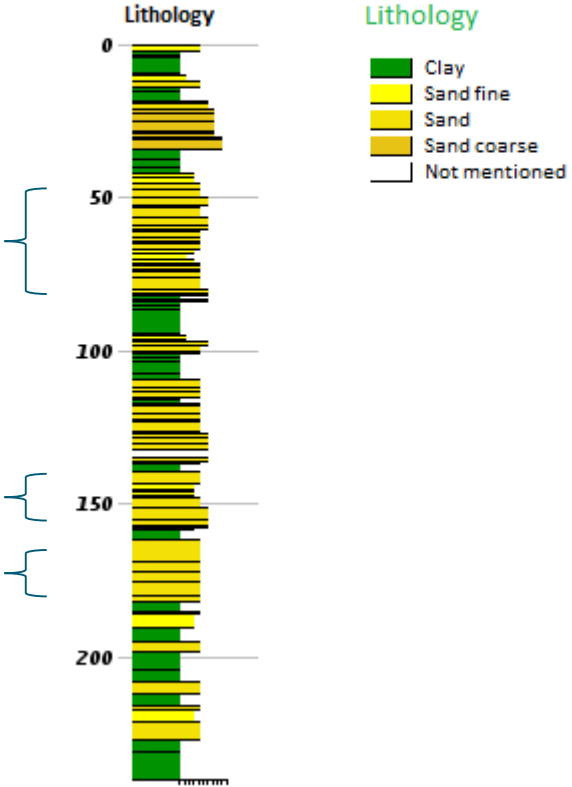
Potential Aquifer

Potential Aquifer

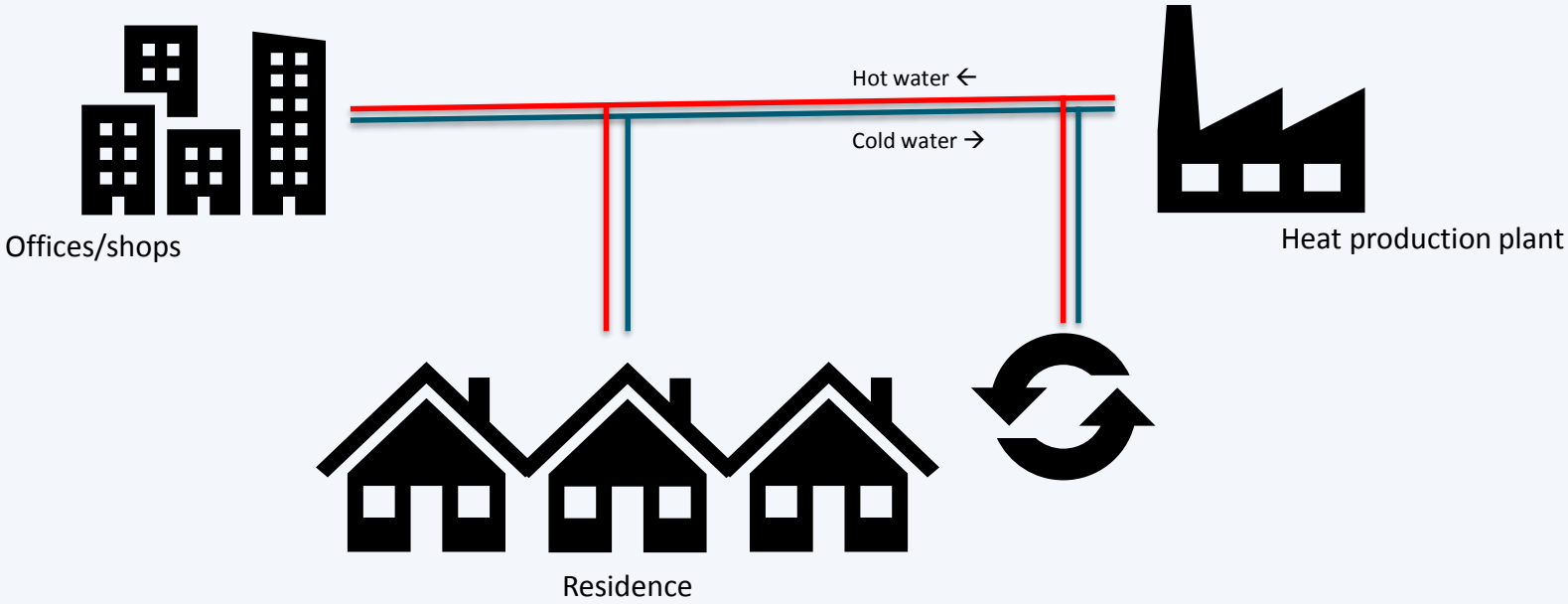
Potential Aquifer

Borehole

Identification:	B37E3410
Coordinates:	86238,444657 (RD)
Groundlevel:	-1.08 m NAP
Depth:	0 m - 240 m



Application to urban areas

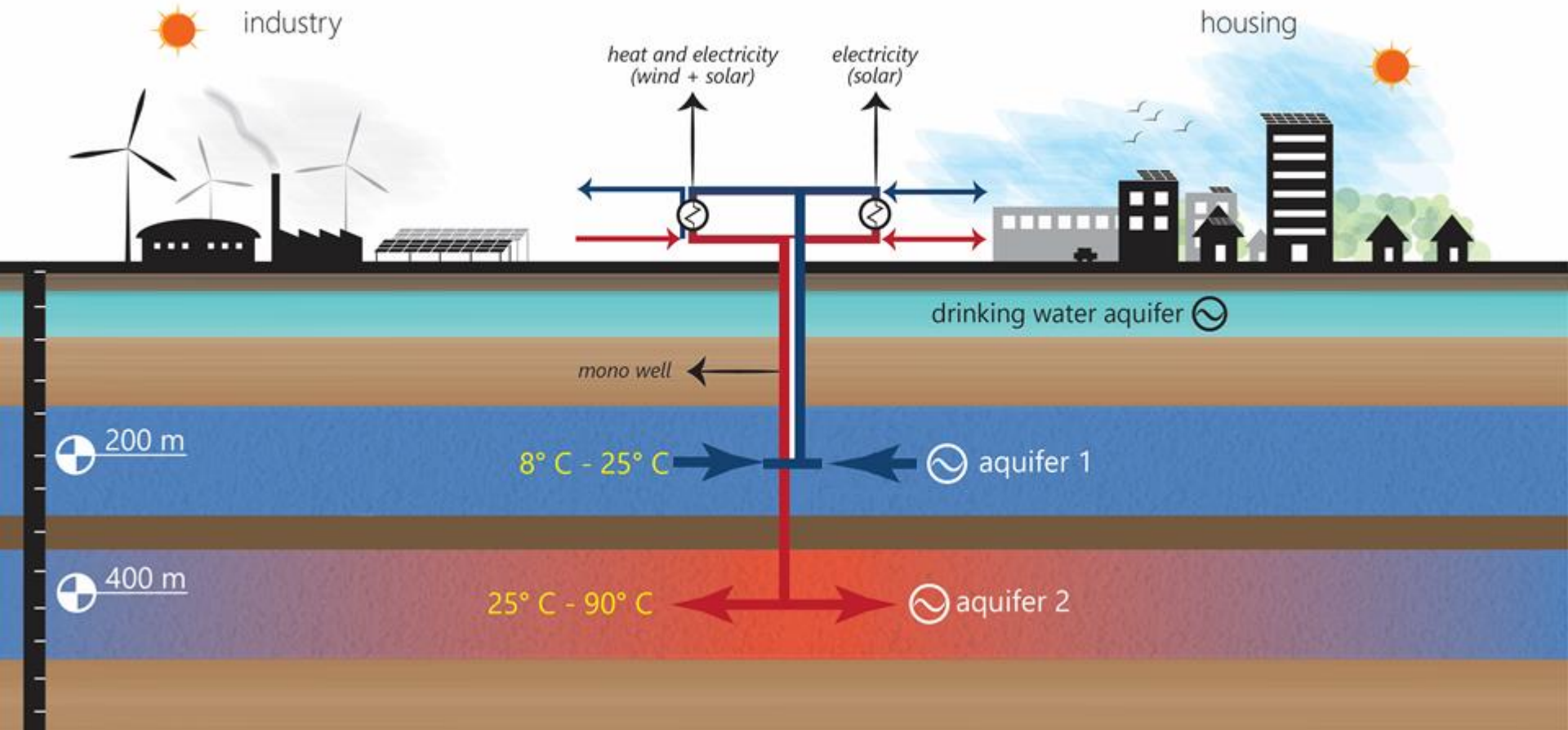


Possible solution

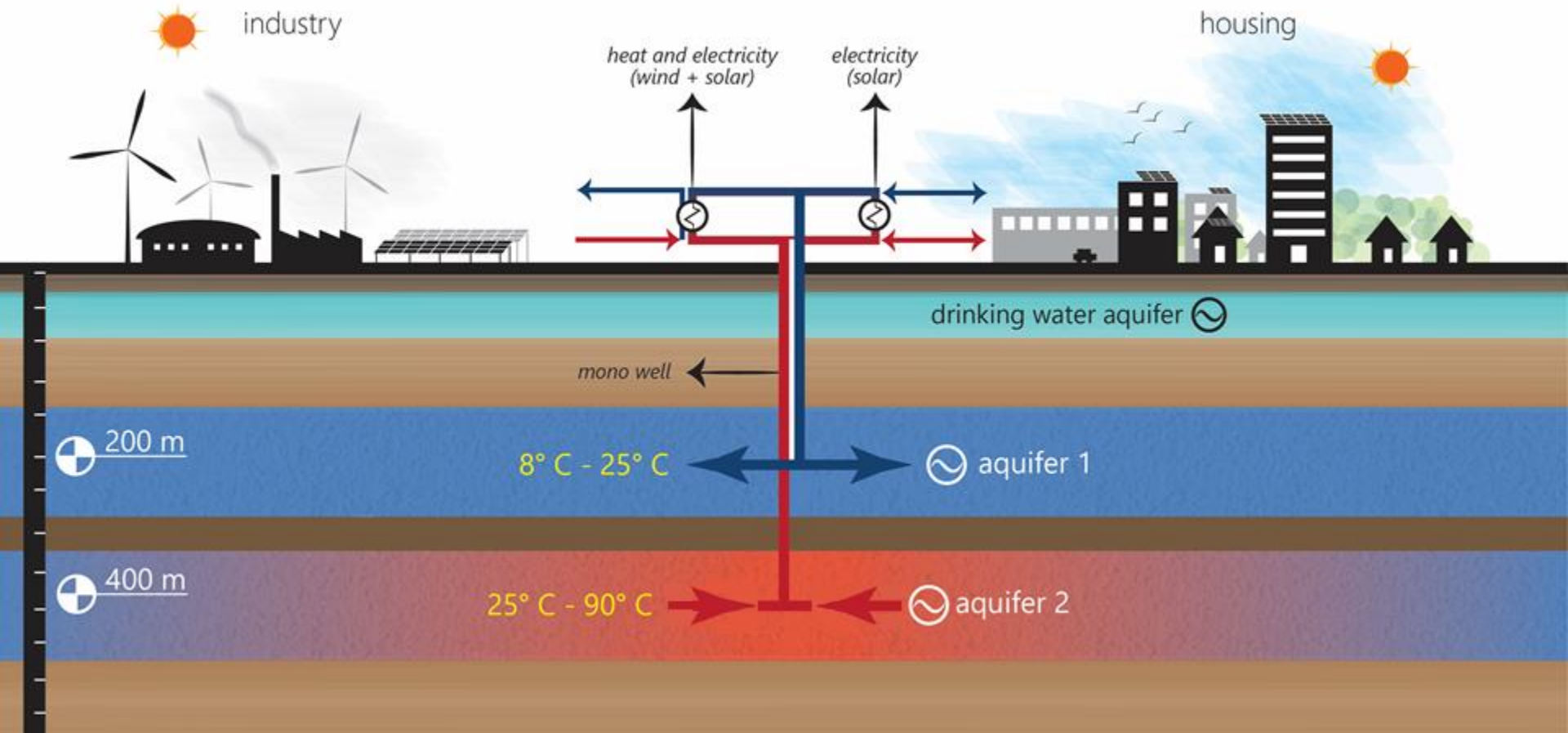
Hot Water Battery:

Storage of excess energy in the subsurface

Hot Water Battery
Summer scenario



Hot Water Battery
Winter scenario



Advantages of the Hot Water Battery

- Storage of higher temperatures
- Use of a monowell
- Buffer for drinking water
- 4 months demand, 8 months to fill buffer

Conclusion

- HT heat storage is needed
- Aquifers can provide the solution

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