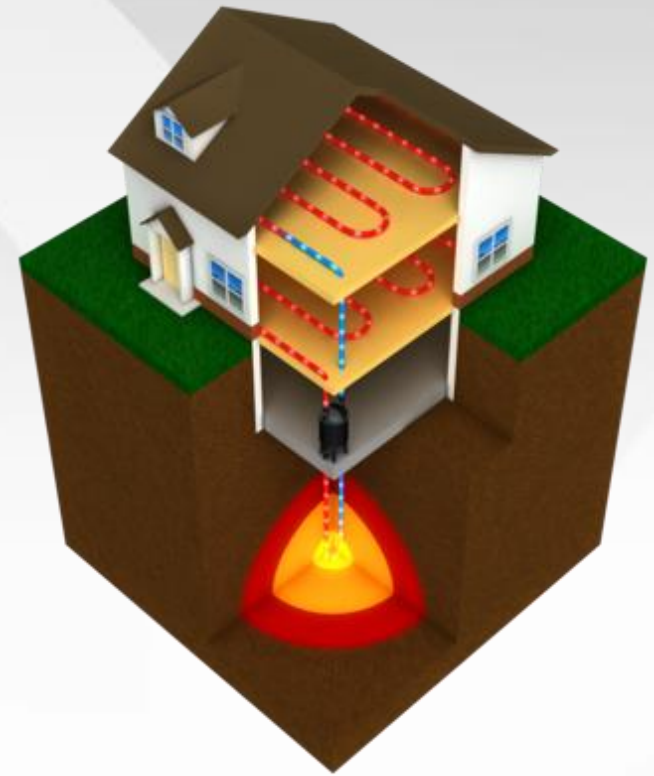


Drilling and geothermal utilization, recommendations for Poland.

Friðfinnur K. Daniélsson
National Energy Authority – Iceland.



Optimal drilling solutions,-1 Planning and preparing.

- Production drillings are costly and risks are normally involved.
- Pre-drill planning, lots of homework to do.
- Tendering documents, „the recipe“ of the entire project.
- Project supervision is vital, drilling is a highly specialized branch of the contracting industry.



Optimal drilling solutions,-2

Various methods, pros & cons.

- Drilling alluvial, & semi-hard formations are well developed.
- Drilling of hard rocks to greater depths are less developed.
- Scandinavian countries are examining various alternatives .
- The best practice in deep & hard rock drilling has not been discovered yet.
- Development project would be a great idea, does not have to be deep drillings.



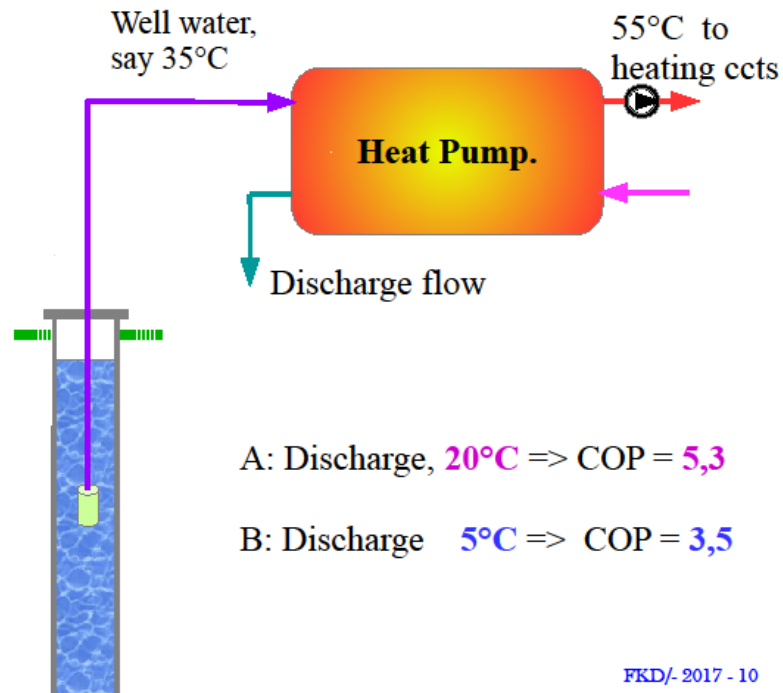
Optimal drilling solutions,-3 Heating systems & other issues.

- Hi-temp heating systems & narrow delta-t in older houses. Solutions exist to improve.
- Cooling of buildings & energy storage
- Drilling of few 500 to 1000 m wells + a heat pump versus one no. deep well.?? Worth considering.
- Think outside the box !



Optimal drilling solutions,-4 Heat pump

The effect of different discharge temperatures
on heat pump COP.
Assuming fixed “hot side” temperatures.



Optimal drilling solutions,-5 Polands own human resources !

Iceland 
Liechtenstein
Norway grants

All at MEERI PAS are doing a great job.

Initiative, motivation etc. originates from those sources.

They deserve a solid SUPPORT !



Thanks for the attention!

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