CO2-Plume Geothermal (CPG) in Austria? Tackling the CCS dilemma – supplementary material

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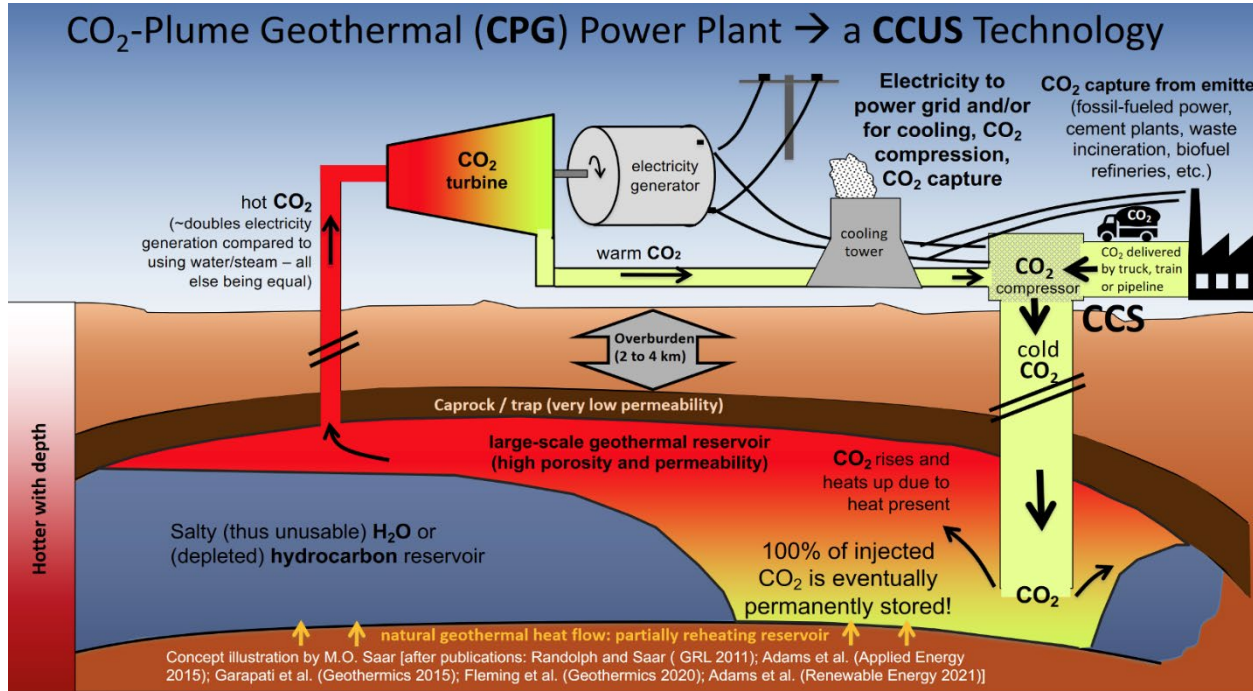
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Additional information

CO_2 emission data for Austria from UNFCCC v26

Information about CPG, see https://geg.cpg.ethz.ch/

For techno-economic-analysis considerations, see https://chemrxiv.org/engage/chemrxiv/article-details/60c75392f96a0012f62884aa

What is CPG?

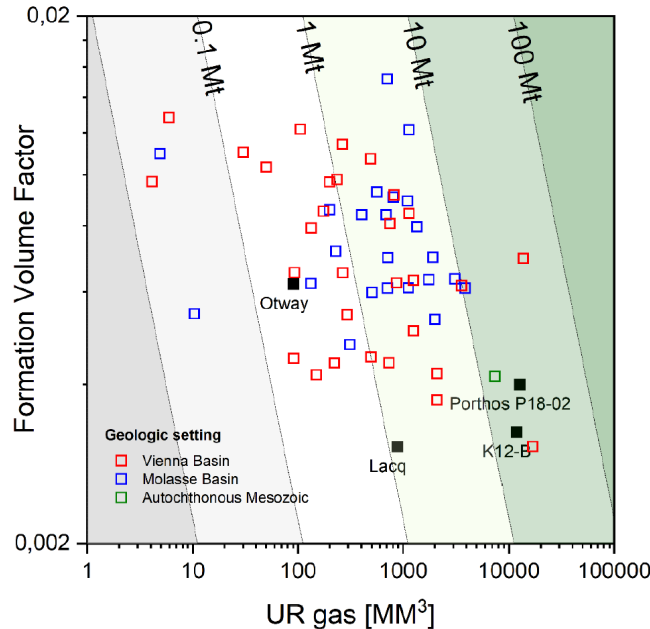CO₂-Plume Geothermal (**CPG**) Power Plant → a **CCUS** Technology

CPG uses CO_2 as the subsurface working fluid for geothermal applications

Randolph and Saar (2011), Adams et al. (2015, 2021), Garapati et al. (2015) and Fleming et al. (2020)

CCS capacity screening in Austria's gas fields

CCS capacity screening in depleted gas fields/caps

UR = Ultimate recovery

For workflow, see Bump (2022), Hoffman (2015)

Schönkirchen ÜT gas field

FloViz 2008.1

S_T_32 S_T_62

S_T_42

O_UET_1B

Depth (m)

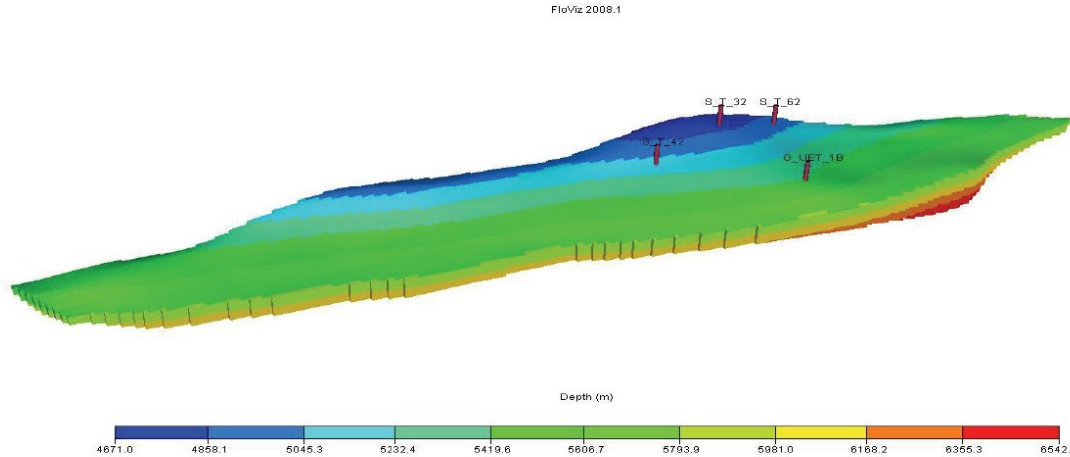| 4671.0 | 4858.1 | 5045.3 | 5232.4 | 5419.6 | 5606.7 | 5793.9 | 5981.0 | 6168.2 | 6355.3 | 6542.5 |

Fig. 6-Top structure map of Schoenkirchen Uebertief.

see, Secklehner (2010)

One of Austria's biggest gas fields.

>5000 m depth

Fractured carbonate reservoir

Up to 400 m thickness

Contains natural CO2 ~13 vol%

References

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