GEOTHERMAL DHC
Towards Decarbonized Heating and Cooling!

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Characteristics of the Polish political model in the context of geothermal development

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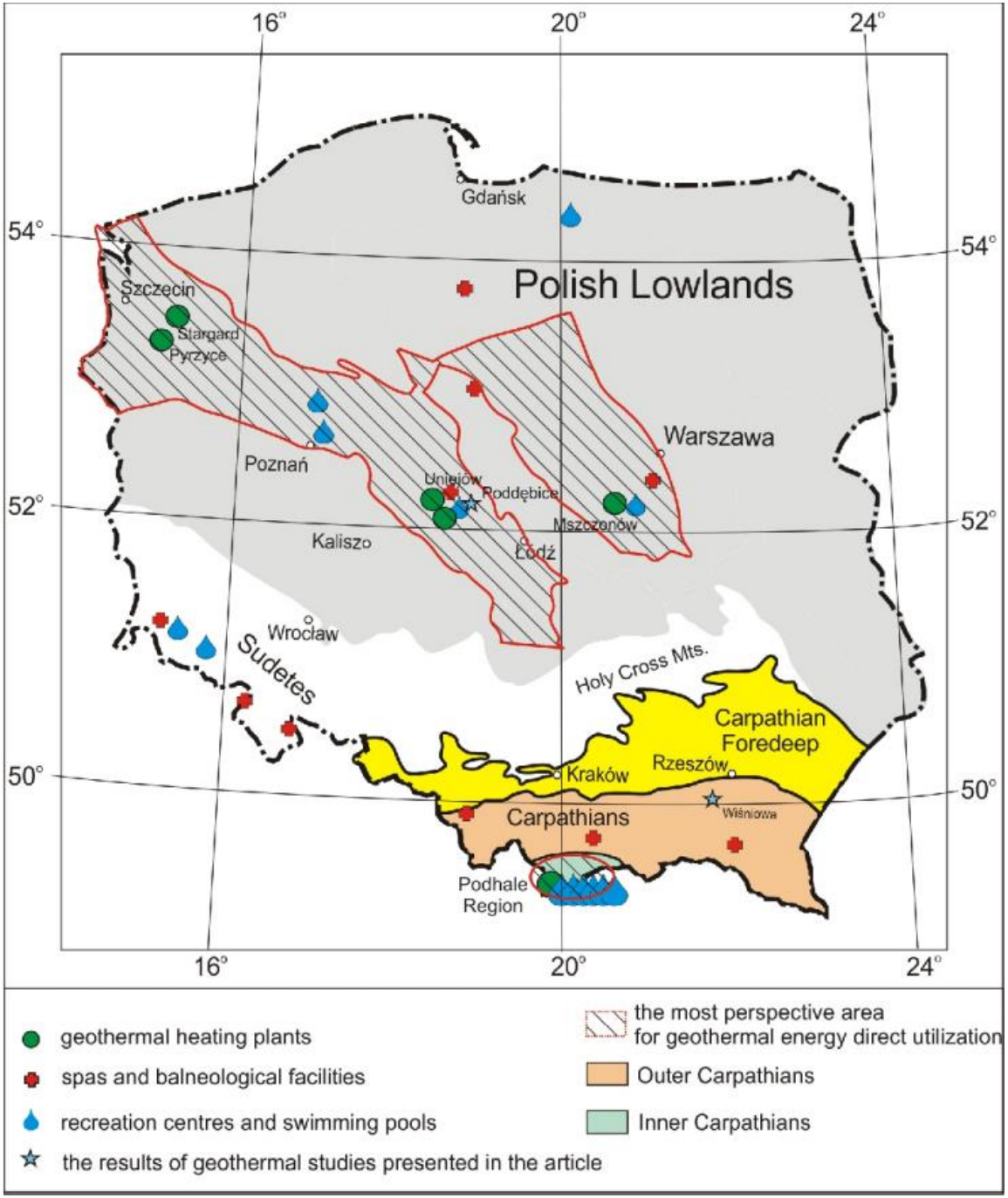
Geothermal energy in Poland

- Geothermal studies conducted in Poland since 1980s
- Areas with high potential: the Polish Lowlands, the Carpthians and the Carpathian Foredeep.
- Water temperatures at depths from 500 m to 4000 m – depending on the location – range from 20 to 100°C.
- Increasing energy prices and poor air quality in many regions of Poland is the main reasons for focus on alternative energy sources for heating.

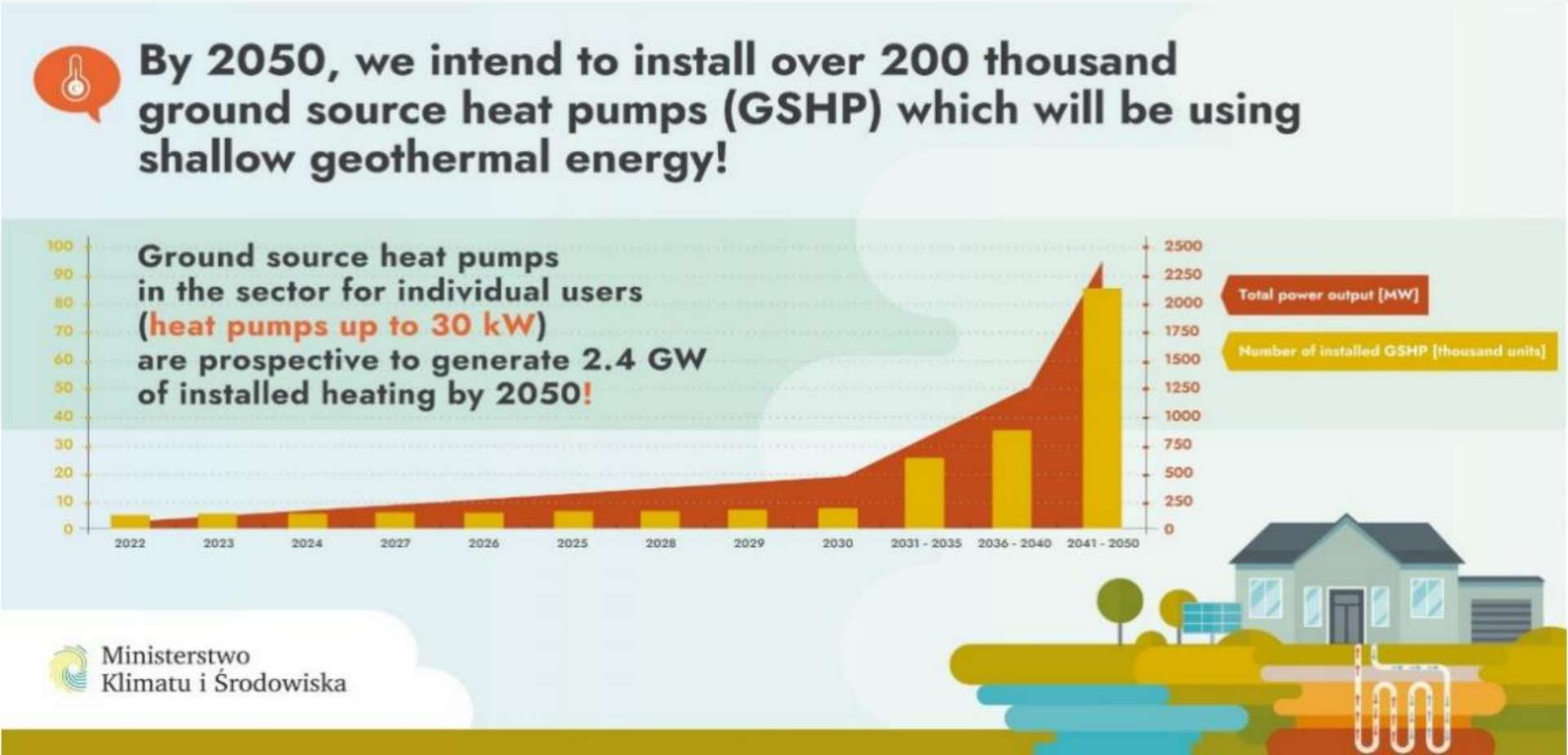
Sowiżdżał et al., 2022	Polish Lowlands	Carpathian Foredeep	Carpathians	Sudetes
Geothermal reservoir	sedimentary	sedimentary	sedimentary	crystalline, metamorphic
Temperature [°C]	30–130	20–120	20–120	max. 86.7
Discharge of wells [m^3/h]	high, locally reaching >300	usually <20, the exception being the Cenomanian aquifer – max. ~250	from low in Outer Carpathians to up to 550 (Inner Carpathians – Podhale)	from several to several tens
Water mineralization [g/L]	varied, locally high, locally exceeding 300	varied, locally high, in places exceeding 300	from several to 120	to ~10
Perspective areas	Mid-Polish Trough	central part	Podhale	Cieplice and other



Sowiżdżał et al., 2022

Thermal power from heat pumps in Poland to 2050

the Ministry of Climate and Environment of the Republic of Poland has developed the **"Multiannual Program for the Development of the Use of Geothermal Resources."** This is basically a roadmap for the development of geothermal energy in the country until 2040, with a perspective until 2050.



„Multiannual Program for the Development of the Use of Geothermal Resources.”

The aim of this programme is:

- to set the path for the development of geothermal energy by 2040
- guidelines for the regulation of laws: Geological and Mining Law, Energy Law, Water Law
- the development of medium and deep hole heat exchangers
- simplify the procedure for accesing geological data (from Central Hydrogeological Data Bank and other)
- streamlining procedures and public education (advertising campaign, demonstration tours, lessons in schools etc.)

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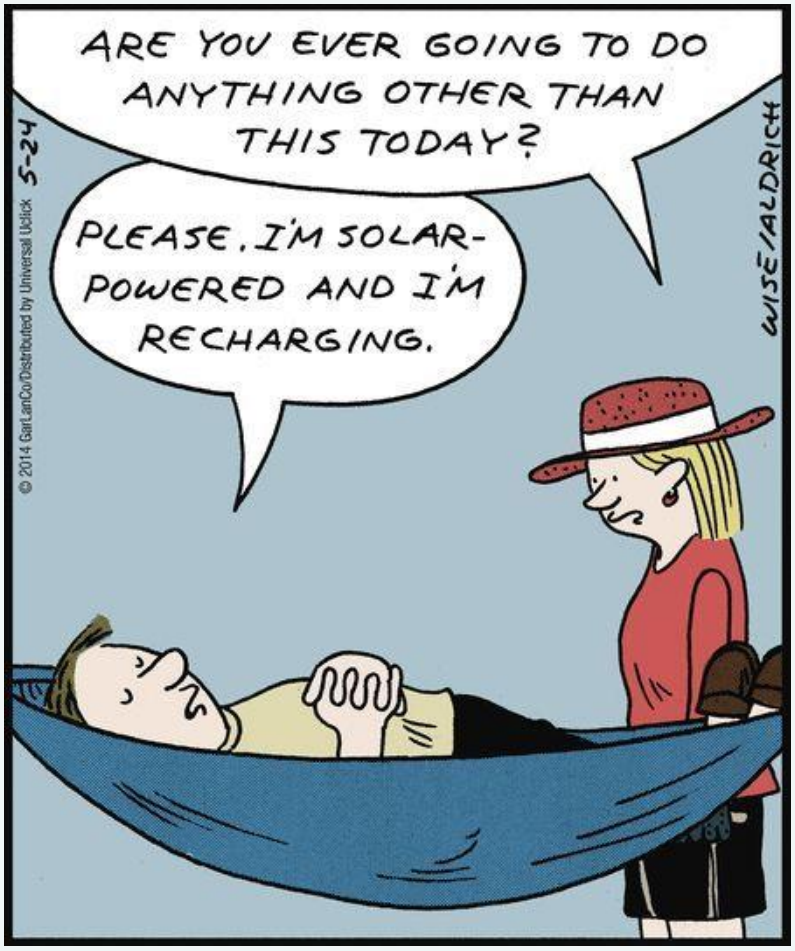
Thank you for your attention



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