This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No [818232 — GEORISK]
### POLAND – OPERATING geoDHs and STATE SUPPORT PROGRAMS TO ENHANCE GEOTHERMAL USES (heating, CHP, electricity) INTRODUCED IN 2016-2020 (after several yrs of stagnation in geo – energy sector)

#### 1993-2013: 6 geoDHs (public grants / loans for R+D, investments, other funds), 20 yrs

#### 2014-2020: 0 geoDHs (limited public, other support by 2015), 7 yrs

#### 2016-2020: 3 state support programs for energetic uses of geothermal resources:

<table>
<thead>
<tr>
<th>Program Description</th>
<th>Total Budget</th>
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<tbody>
<tr>
<td>&quot;Geology and Mining. Part 1) Recognition of Geological Structure of the Country and Management of Mineral Deposits and Ground Waters”, 2016-2023:</td>
<td>ca. PLN 1.1 Billion (ca. €275 M) (grants up to 100%, loans /total PLN 50M)</td>
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<td>- Support drilling geothermal research wells, related works – grants up to 100% for municipalities (LAs), loans up to 50% for other entities</td>
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<td>&quot;Polish Geothermics Plus” (Polska Geotermia Plus) – since July 2019:</td>
<td>PLN 600M (ca. €150M) (grants up to 40-50%, loans up to 100%)</td>
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<td>- To continue projects initiated in the-above program</td>
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<td>- Beneficiaries: municipalities (mostly)</td>
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<td>- 2019 – beg. 2020: several applications for drilling 2nd well, geoDHs constructions approved (next under evaluation)</td>
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<td>&quot;Abstraction of geothermal waters in Poland”, 2020-2025 (since April 2020):</td>
<td>PLN 300M (ca. €75M) for ca. 10 wells (grants up to 100%)</td>
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<td>- Support the investments of high probabilities to access geothermal resources</td>
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<td>- Beneficiaries: municipalities and their unions /clusters</td>
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</table>

**Total (2016-2020)**

Ca. PLN 2 Billion (ca. €500M) (grants: PLN 1.652.000 M /€ 410M)
POLAND – SOME CURRENT RESULTS OF STATE SUPPORT PROGRAMS TO ENHANCE GEOTHERMAL USES

- Ca. 17 research / exploitation wells drilled or in progress (geoDH, some CHP)
  (including 11 wells funded by 100% public grants).
  Drillings costs: ca. PLN 265M / € 66M
  Further investments stages ongoing in some cases (funded by Polish Geothermics Plus, some other sources)

- Ca. 50 wells – drilling projects done (for ca. 5 wells support approved, further ca. 45 drillings probable (many applied for state support but rejected /some may apply again). Drilling costs (estimated): PLN 635M / € 159M

- From 2021-2022: ca. 10* next geoDHs expected – will join 6 geoDHs from 1993-2013 (* moderate assumption)

State support programs 2016-2019, 2020:

- Essential to enhance geothermal resources’ research, drilling, and investments (underground, surface infrastructure)
- Main beneficiaries: municipalities / LAs (with DH grids), grants up to 100%. Some space for other investors (loans)

Public Risk Insurance Fund for Geothermal Projects – shall be a next support / risk mitigation tool in line with the progress of geothermal market development in Poland (specially for operation stages)
Location of geoDHs: operating and expected since 2021-2022 on a diagram of support / risk mitigation tools vs geothermal market maturity:

the market tends towards the introduction of public Risk Insurance Fund / Public Insurance Scheme
SOME GEORISK ACTIVITIES AIMED AT ESTABLISHING THE RISK INSURANCE FUND FOR GEOTHERMAL PROJECTS IN POLAND

- Elaboration the Proposal to establish the Risk Insurance Fund for geothermal projects in Poland (following proven cases /eg. France; cooperation with EGEC, GEORISK partners; former proposals)

- Cooperation with key geothermal stakeholders (operators, investors, experts, R+D sector, servicing companies, geological survey, geothermal NGO) – wksp, feedbacks, reports, questionnairies, consulting the RIF proposal

- Contact, involve and update decision makers on project works and proposal to establish the Fund – Ministry of Environment / Climate, NFEP&WM, Ministry of Energy / State Assets, ...
Result – a positive approach and steps to define the financial source/s to establish the Fund

One shall take examples from the countries with an extensive experience in operating Risk Insurance Funds for geothermal projects (e.g. France) and the countries where works to establish them are well advanced (e.g. Hungary)
GEORISK INTERNATIONAL SEMINAR
The right risking mitigation schemes for different geothermal markets

Thank you for the attention!
IGSMiE PAN team

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- Geothermal market development from the juvenile towards the transition one requires adequate support / risk mitigation tools -> Public Risk Insurance Fund

- Introducing the Risk Insurance Fund will be profitable, have a leverage effect (vide: French case), will reduce public support, attract wider group of investors to geothermal sector (other than local self-governments)

- Risk Insurance Fund will also secure an effective long-term work of public support programs

- Will open the possibility of access to non-subsidy funds

- Lack of a Risk Insurance Fund – one of the barriers for wider geothermal development in Poland