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Geothermal Training Programme

ICELAND'S RENEWABLE ENERGY TRANSITION – INTRODUCING THE SOLUTIONS TO ARENA –

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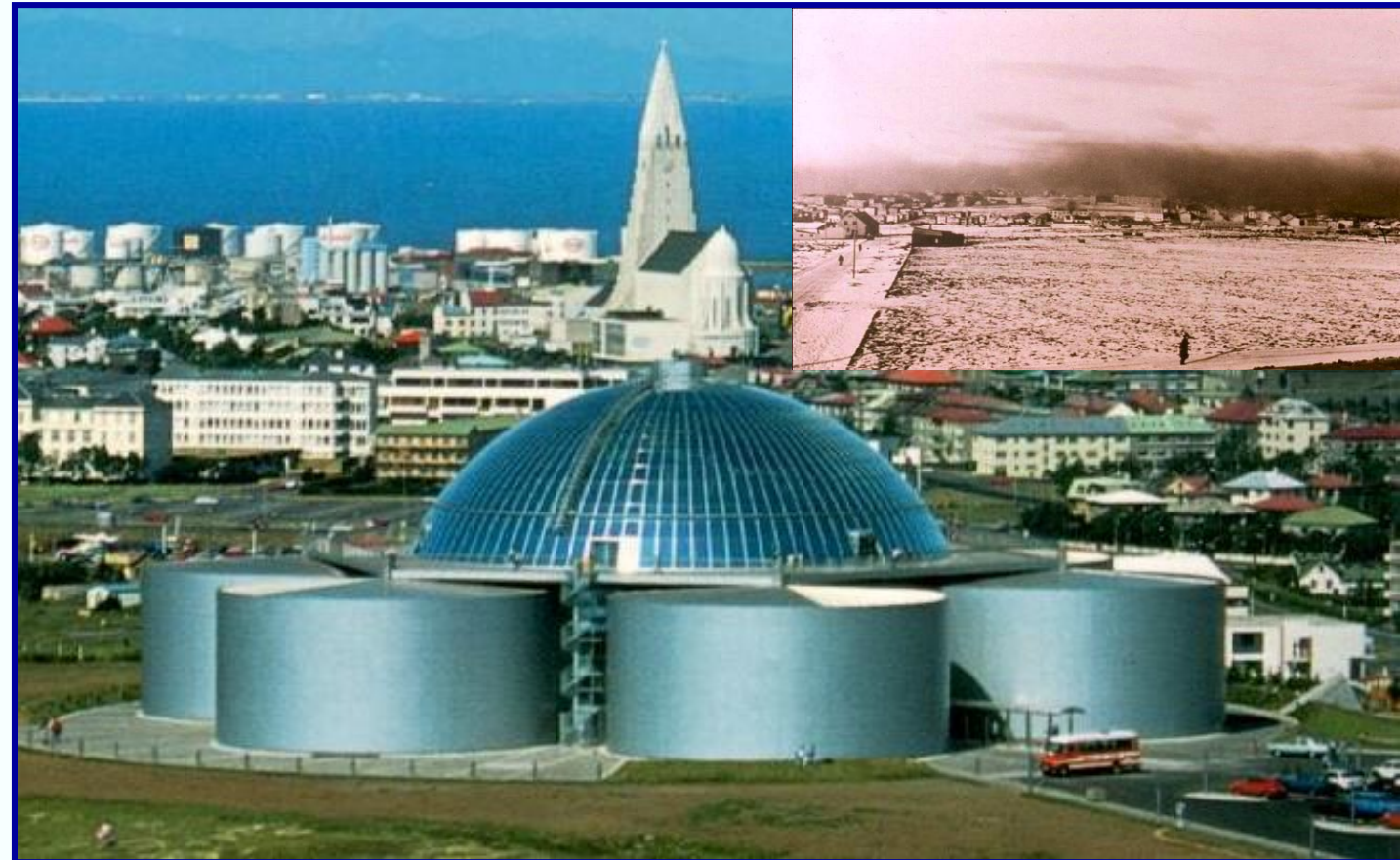
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ICELAND - SHOWCASE FOR DEVELOPMENT OF SUSTAINABLE RENEWABLE ENERGY SOURCES

- One of the poorest countries of Europe in early 20th century – using mainly peat and some coal for heating and electricity
- Now, about 87% of all primary energy use is met through renewable energy sources, geothermal and hydro – excluding only the transport sector





ICELAND - SHOWCASE FOR DEVELOPMENT OF SUSTAINABLE RENEWABLE ENERGY SOURCES

- All electricity comes from hydro (70%) and geothermal (29%)
- 90% of houses heated with geothermal, rest with electricity
- Other uses of geothermal include heating of greenhouses, fish farming, swimming pools and spas, drying of fish and seaweed, CO₂ production from steam, snow melting, etc.





UNU – GEOTHERMAL TRAINING PROGRAMME

- Operated in Iceland since 1979
- Aims at assisting developing nations with geothermal potential to build up expertise in developing their energy resources through
 - annual intensive 6-month training for professionals, on fellowships
 - offering fellowships for MSc and PhD studies in geothermal in Iceland
 - annual short course series in E-Africa and LAC focussing on UN SDGs
 - offering service of customer-designed sponsored courses
- Active in the ARENA project aiming at giving participants insight into how geothermal can play a role in the transition to a renewable energy future





ARENA Iceland On-Site November 4-11



Focusses on Iceland's successful renewable energy transition and lessons learned – including:

- Geothermal resources – exploration techniques
- Direct use of geothermal for
 - Space heating – spas/swimming pools
 - greenhouses – aquaculture – cascaded use
- Electricity generation
 - Flash plants - binary plants – co-generation
 - Developing hydro power, large scale / micro scale
- Site visits
 - Reykjavik Energy – heating a whole city
 - District heating in villages and greenhouses
 - Geysir HT field
 - Svartsengi cogeneration PP - Blue Lagoon

