International operation

Tryggvi Jonsson
Manager of Marketing and Business Development
Mannvit – Facts

- Employees approx 350
- Employees in affiliated companies 50
- Employee-owned by 130 shareholders
- Headquarters in Reykjavík
- Turnover in 2009 was 5,000 mkr.
Services

Industry
- Power intensive industry
- Mechanical
- Chemical Processes

Energy
- Geothermal energy
- Hydropower
- Power Transmission and Distribution
- Geothermal survey and research

Buildings
- Structural
- HVAC
- Electrical services
- Firesafety
- Acoustic

Construction and Research
- Project management
- Construction management
- Safety & Quality management
- Geology
- Soil Mechanics
- Laboratory

Environment and Infrastructure
- Environment
- Transportation and urban planning
- Infrastructure
- Utilities

Information Technology
- Telecommunications
- Automation and Control
- Software and System engineering
Our products

Renewable Energy and Climate

- Geothermal energy
- Small hydropower
- Waste management
- Landfill Gas
- Bio Diesel
- Bio Ethanol
- Methanol by capture of CO2 emissions
- CO2 reduction
- Composting industry
International operations
Clear benefits ...

... of geothermal district heating and power

Mannvit kft
2007
Evaluation of potential geothermal areas in Hungary

December 2007 – May 2008
Geophysical survey - AMT/MT/Gravity

End of 2008
Official opening of Mannvit’s office in Budapest

First part of 2008
Interpretation of seismic lines
The first geothermal well drilled – 2009

Results:

- The first well was successful
- Drilled depth: 1820 m
- Yield: 20 l/s
- Outflow temperature: 87°C
- Estimated heat output: 2.3 MW

Szentlőrinc, SW Hungary
Next steps

- Preparation for construction of geothermal heating system (GDH) in Szentlőrinc
- Drilling of second well in Szentlőrinc
- Drilling of first well in Miskolc
- In other areas simultaneous preparation and performance of environmental licensing, well design and planning activities
Electrical production - geothermal energy, Kosice, Slovakia

Mannvit’s Role

- Project management and EPCM
- Evaluation of geological data, well siting
- Environmental Impact Assessment and licensing
- Well design, tender documents for drilling and contracting
- Reservoir engineering
- Feasibility study
Mannvit team

Vatnaskil
Land & Water Resource Consultants
- Geothermal reservoir engineering
- Reservoir modeling
- Groundwater hydrology
- Surface runoff
- Environmental modeling

MANNVIT
- Geothermal Exploration
  - Geothermal exploration management
  - Geological, geochemical and geophysical surveys management and interpretation
  - Resource estimation
  - Cartography

Geothermal Energy
- Pre-engineering
- Cost estimation
- Drilling supervision

GTN Ingenieure & Geologen
- Geothermal development of low-enthalpy basins
- Reservoir modelling
- Well design and Drilling supervision
- CO₂ storage
- EGS technology

- Geothermal exploration and utilization of Hungary’s Pannonian basin
- Geothermal exploration in Slovakia, Romania and Greece
- Drilling supervision
Mannvit UK

- Small hydropower
- Waste management
- Landfill Gas
- Bio Diesel
- Bio Ethanol
- Methanol by capture of CO2 emissions
- CO2 reduction
- Composting industry
Mannvit USA

- Geothermal energy
- Cooperation with Technip
- Two clients
- Exploration projects
- Corporate member of CANGEA
- Registered as “Qualified Person,” under the Canadian Geothermal Code for public reporting.
- Design of a binary power plant will start this summer
Mannvit International Operation

- Turnover in 2009 was 440 mkr.
- Between 40 and 50 experts in Iceland working on projects
- Opportunities for advancement and growth
- Up to half of Mannvit’s activities in 2015 overseas in Central Europe, UK and USA