



MANNVIT

Project example:

Hellisheiði Power Plant

Hellisheiði geothermal power plant is a flash steam, combined heat and power plant (CHP) located in SW-Iceland, on one of the largest wet geothermal systems (high-enthalpy) in Iceland. The plant's purpose is to meet increasing demand for electricity and hot water for space heating. The development plan was an incremental or phased expansion from 2006 to 2011 to an output of 303 MWe and 133 MWth, making it the largest geothermal combined heat and power plant in Iceland. The plant owner is Orkuveita Reykjavíkur.

The first phase included two high-pressure 45 MWe turbines that went online in October, 2006 and then one low pressure 33 MWe turbine went online in Fall, 2007. The next expansion phase consisted of two additional 45 MWe turbines that went online in Fall, 2008. The first stage (133 MWth) of three thermal power plants was commissioned in 2010. The final phases will put the thermal capacity at 400 MWth. Overall, 50 boreholes were drilled, from 1,000-2,200 meters. The last power expansion (phase 5) adding 2 x 45 MWe, went online in 2011, where Project Management, HVAC, mechanical design, control systems, commissioning and training was also handled by Mannvit.



Additional information:

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Hellisheiði Geothermal Power Plant details:

- Flash steam, combined cycle power plant
- Planned total output: 303MWe & 400MWth
- Phase 1: 2 x 45 MWe
- Phase 2: 33 MWe
- Phase 3: 2 x 45 MWe
- Phase 4: First stage thermal power plant
- Phase 5: 2 x 45 MWe
- 50 boreholes were drilled, from 1,000-2,200 meters

Mannvit services:

- Project management
- Overall plant design
- Environmental impact assessment
- Detailed mechanical design of the plant
- Detailed design of HVAC systems
- Bid preparation and tender evaluation
- Site supervision
- Commissioning
- Acceptance test
- Training of operators
- EIA scoping report
- Environmental modelling
- Reservoir engineering
- Design of control systems

