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Fifteen Years of Geothermal Trend Reporting and Statistics by IEA Geothermal

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INTRODUCTION

The Geothermal Trend Report, an annual publication by the International Energy Agency Geothermal Technical Collaboration Programme (IEA Geothermal), provides an overview of geothermal energy statistics in member countries. The work for this report is accomplished within the so-called Topic "Data Collection and Information" (formerly working group 10). The main objective is to collect data on geothermal energy uses, trends and developments in member countries in a standardised way, and to publish these data in a brief report on a yearly basis.

Data collection within the IEA Geothermal covers topics from specifications on geothermal power generation and heat uses, CO_2 savings by geothermal energy uses as well as project highlights.

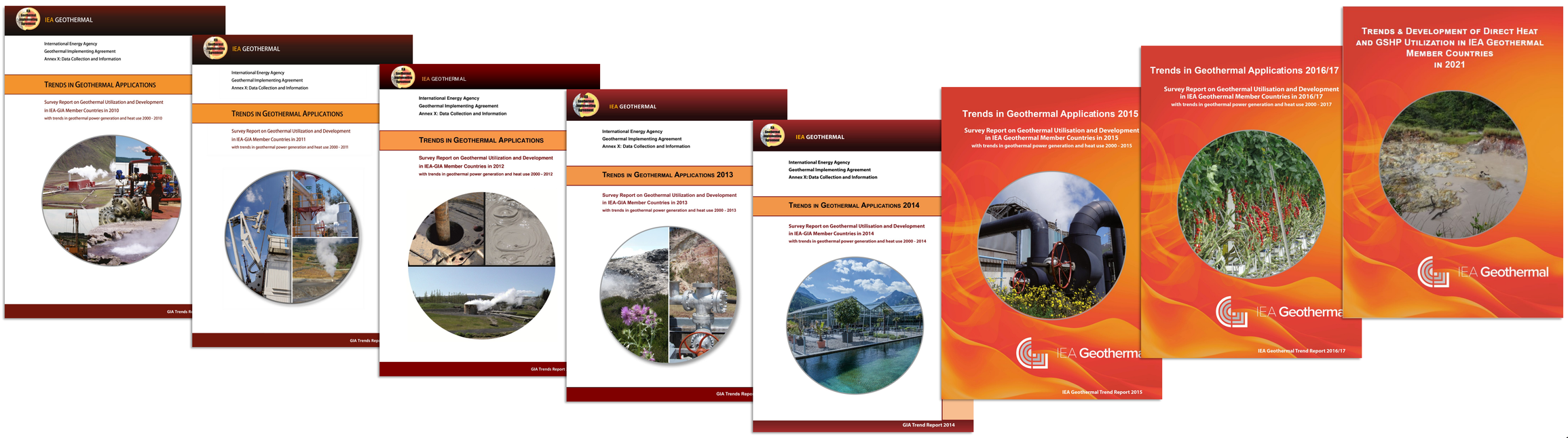
Since data on geothermal power generation is easier to access – compared to information on direct use applications and ground source heat pump data – IEA Geothermal decided to prepare a separate Power Report (IEA Geothermal Power Statistics) from the reporting year 2016 onwards and publish it earlier in the year.

DATA COLLECTION

All IEA Geothermal member countries are required to support the work on the Trend and Power Report by providing information. Additional data from sources such as publications associated with the World Geothermal Congress and the IEA Geothermal Annual Reports have been compiled and analysed to show trends in geothermal energy uses in member countries from the year 2000 on. After the first data collection for 2011, the Report "Trends in Geothermal Applications - Survey report on geothermal utilization and power development in GIA member countries in 2010 with trends in geothermal power generation and heat uses", in short the Geothermal Trend Report, was published in 2012.

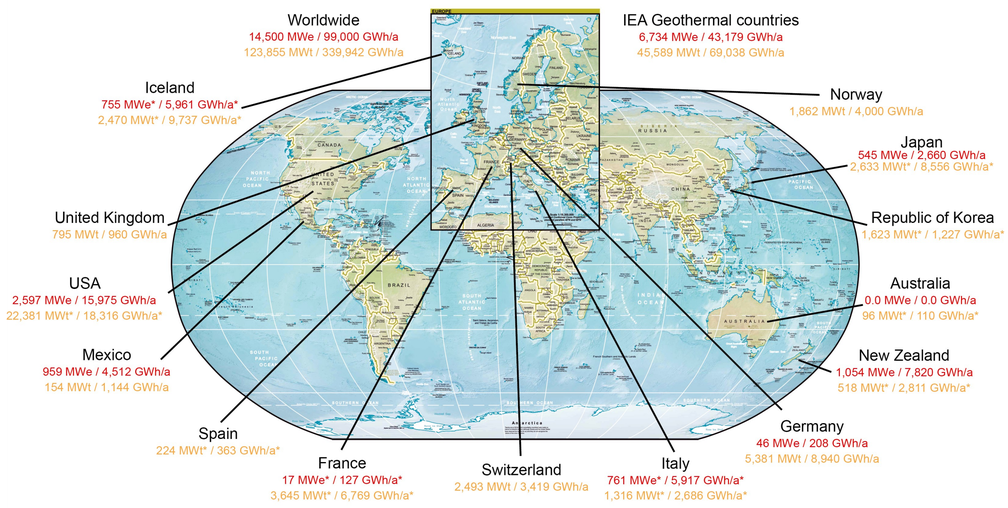
Thus, in the year of the World Geothermal Congress 2026, the work on geothermal energy statistics within IEA Geothermal has been running since 15 years. During this time there have been several changes in the approach of data collection. Among other things data collection was adapted to the one of the International Energy Agency in order to make geothermal statistics of different organisations more comparable.

IEA GEOTHERMAL TREND REPORTS 2010 - 2021

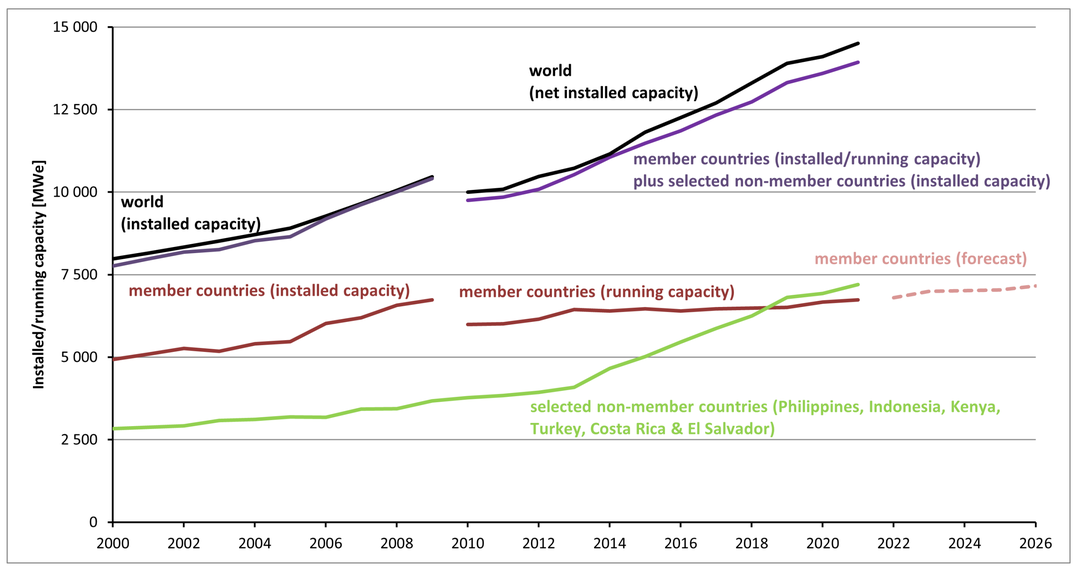


MAIN CONTENT

- Direct use of geothermal heat in different categories
- Ground source heat pump applications
- Geothermal power generation
- Trends in heat and power production 2000 - 2021
- Comparison with worldwide data
- Data on geothermal power from non-member countries (e.g. Philippines, Indonesia and Kenya)
- CO_2 savings
- Short information on new facilities



Overview of geothermal power (red) and heat (orange) utilisation in member countries and worldwide 2021. Heat related data includes direct uses as well as geothermal heat pump use. Country data: WG 10 country reports 2021 and country specific publications, electric capacities are running capacities; world data for power: REN21 (2022), electric capacities are net installed capacities; 2021 world data for heat: estimated assuming a compound annual growth rate of 7.2% for capacity and 9.5% for heat use. *includes data from previous years. Maps: The World Factbook 2013, CIA (www.cia.gov).



Installed and running capacities [MW.] in member countries, selected non-member countries and worldwide 2000 - 2021, and forecast of the development of running capacities in member countries until 2020. IEA Geothermal country data: WG 10 country reports and country specific publications (for 2010-2021), IEA Geothermal Annual Reports (for 2003-2009) and Huttrer (2001) (for 2000). World and selected non-member countries data: Huttrer (2001), Bertani (2007, 2012, 2016), REN21 (2016-2023), IRENA (2022).

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The IEA Geothermal Trend and Power Reports are available online at:
https://www.iea-gia.org/activity-reports#wg10.

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