



IN THIS ISSUE

- PROMOTION & COMMUNICATION
- TRAINING & STANDARDS
- INSTALLATIONS & INSTALLERS
- MEMBERSHIP

PROMOTION & COMMUNICATION

GHANZ website goes live

The Geothermal Heat-pump Association of New Zealand has a website, hosted by the NZ Geothermal Association.

Visit www.ghanz.org.nz to find out more.

There is information about geothermal heat pumps, case studies, fact sheets and advice on choosing an installer.

We would love your feedback, and would welcome contributions and photos of GHP installations from around New Zealand.

Upcoming Regional Meetings

September/October 2012

GHANZ is planning to host a series of regional meetings in Auckland, Wellington, Christchurch and Dunedin to begin the process of growing GHANZ and in particular promoting and showcasing the geothermal heat pump technology.

These meetings will be open to heat pump installers and consultants, as well as engineers, architects, planners and other interested parties.

If you would like to help organise these event or are interested in attending, please contact us.

TRAINING & STANDARDS

AUS/NZ GHP Standard

A joint Australia New Zealand Standard is being developed for geothermal (ground-source) heat pumps.

Lyall Smith (Central Heating NZ) is the GHANZ representative on the Standards Committee. An inaugural meeting was held in May 2012.

The content in a Standard is developed by independent expert committees. Committees are made up of volunteers nominated by organisations (public and private) that have an interest in the subject covered by the Standard.

A written a draft of the new geothermal heat pump standard will be made publically available for comment, with a completed standard expected in early 2014.

GHP Introductory Guide

GNS Science and EECA are currently developing a Introductory Guide for geothermal heat pumps. This joint publication is to be circulated to GHANZ members shortly for comment.

GHANZ members will have the opportunity to review and comment on this joint publication before it is published towards the end of this year. It is great to see government agencies recognising the value of geothermal heat pumps and supporting the development of the industry in New Zealand.

EARTH ENERGY: ACCESSIBLE, RELIABLE, RENEWABLE

FACT SHEET 4 Geothermal heat pumps for heating and cooling

Free renewable energy
About half of the solar energy that reaches the Earth's surface is absorbed and stored by the land and the oceans, and heat continuously moves to the surface from the Earth's core. Geothermal heat pumps can harness this stored heat in rocks, soil, groundwater and surface water. This renewable energy is accessible today.

Year-round comfort
Heat is extracted from the ground or water source, and delivered to the building. These systems can be reversed in summer to discharge heat into the earth or water source, thus cooling the building.

Energy efficient technology
A geothermal heat pump uses one unit of electricity to move about three units of heat energy from the earth. Since the ground remains at a relatively constant temperature throughout the year, warmer than the air above it during winter and cooler in the summer, they are more energy efficient than air-sourced heat pumps. Compared to conventional electrical heating devices they can reduce energy consumption by up to 70%. They can also be designed for use with green and/or off peak electricity to maximize efficiency.

ADVANTAGES

- Whole-building conditioning solution
- High energy efficiency
- Long life span
- Low electricity use
- Low maintenance
- Year-round comfort
- Quiet operation
- Low environmental impact
- Low annual operating cost
- Reliable energy source

DISADVANTAGES

- High upfront capital cost
- May require resource consent

INSTALLATIONS & INSTALLERS

Promoting GHP Installers

One of the goals of GHANZ is to encourage quality in the New Zealand geothermal heat pump market.

With that in mind, we are promoting the design, consulting and installation services offered by GHANZ members on our website.

As excellent members, these companies are committed to quality geothermal heat pump installations and excellent customer service.

If you support these values and would like to help develop the geothermal heat pump sector in New Zealand, please join us and we would be happy to provide a link to your company website.

We would also like to profile the services offered by GHANZ members in this newsletter.

Please contact us if you would like to profile your company.

NZ GHP Installations

GHANZ are working to collate a database of geothermal heat pump installations in New Zealand – qualitative information and all the technical details. This information will be used to promote our industry, measure growth, inform regulators and consumers, and gather technical operational data. Personal contact details of system owners will not be collected.

Please contact us if you have information to add to this database or for more information.

Some case studies of New Zealand GHP installations are available for download from our website.



Under floor heating circuits being installed, Manuka Point Lodge, Methven

MEMBERSHIP

GHANZ membership has passed twenty five members! Welcome to everyone who has joined us so far.

Our members include geothermal heat pump suppliers, installers and designers, government agencies and other private organisations.

Join GHANZ!

GHANZ aims to :

- Expand the market in New Zealand for geothermal heat pump technologies and services;
- Promote geothermal heat pump technology to government / industry / consumers;
- Work closely with industry to promote top quality products and professional standards of design and installation across the industry;
- Facilitate the development of internationally recognised training and standards for installers and designers;
- Engage with equivalent organisations overseas to share information and develop knowledge that will benefit the development of the New Zealand market; Provide a forum for members to collaborate and discuss common interests;
- Serve as a point of contact for anyone seeking advice and information about geothermal heat pumps, and;
- Maintain a website for information and promotional purposes.

To join GHANZ, simply visit our website and complete the NZGA membership form, indicating in your communication that you wish to join GHANZ.

earth energy: accessible, reliable, renewable

case study **9**

Alpine hunting lodge keeps guests warm with earth's energy

By Lisa Lind (2007) Research, Simon Beckett and Jo Dal

The Manuka Point Lodge

Located deep in the Rakaiia Valley, one hour west of Methven in Canterbury, Manuka Point Lodge experiences some of the most extreme climatic conditions in New Zealand.

Water temperatures are stable at low 18°C, and temperatures above 20°C are available in the winter in February the following year.

"We set out to create a premium hunting lodge that was as warm as the environment but was to the needs of our clients."

"A big part of this is ensuring that clients are warm and comfortable in an otherwise challenging environment. This means economically and efficiently heating every room in the lodge."

Over the years, we have kept this task on our mind.

At the time, several energy based power technologies were available to us. However, in New Zealand, as it was a bit of a long time for us to release this system of heating over more conventional systems.

The Project was a geothermal assisted heating for a number of reasons.

"While limited information was available in New Zealand at that time, Europe's technology was proven in Europe and we had met with several clients. I was very confident that it would meet our needs. We also knew the heat is an incredibly efficient fuel - the hot air that is blown and we need to keep it that way. We don't need to rely on fuel or boiler for our heating."

Historically, the lodge is heated by a fully conventional underfloor system consisting of water under the floor. This is done through 22 separate "hot water" lines. Each line allowing for different temperatures to be maintained in different parts of the lodge.

Key Benefits:

- Effective and economic heating in an extreme environment
- All rooms are heated evenly
- No emissions, low noise, environmentally sensitive
- Point of difference to promote the business

Key Features:

- Dual Fluid System 20 to 30 MW supplying warm water of 55-58°C to under floor heating pipes covering 380 m²
- Heated Area: 381 m²
- Horizontal Capter Area: 510 m²