



East Harbour Management Services Ltd
PO Box 11-595, Wellington, New Zealand
Tel: 64-274 771 009
Fax: 64-4-385 3397
E-mail: brian.white@eastharb.co.nz
www.nzgeothermal.org.nz

NZGA Newsletter May 2007

I think we are noticing the rate at which 2007 is moving. Several board members have observed that the workloads continue to climb. International interest in geothermal energy also is on the rise and everyone seems to be busier than ever. The Geothermal Institute kicks off in July of this year and it will include field programmes to the Taupo region which will involve many NZGA members. Our previous newsletter was in October last year and the Association had an active 6 months. The following are some of the highlights.

Members Activities

It is with sadness that we note the death of several members of the geothermal community including, late last year, Stephen White and Tony Mahon. We are grateful for the excellent tributes prepared respectively by John Burnell and Mike Allen. At times like these we take stock of the tremendous contributions that individuals have made to geothermal development and society generally. While there is loss, there is more than a small measure of inspiration as well.

Chris Bromley was recently elected as President of the Geothermal Annex of the International Energy Agency while Mike Mongillo retained the position of secretary with that organisation.

Colin Harvey has recently resigned his position as Section Manager for Geothermal with GNS Science but he will continue to work with GNS in marketing and project work, as well as having some involvement with the University of Auckland.

Brian Carey is leaving Contact Energy to join GNS Science as Section Manager of the geothermal team based in Wairakei.

IGA Board Membership

After many years as IGA treasurer and board member, Kevin Brown steps down from both roles in 2007. New Zealand has a long and proud tradition of involvement in the IGA. Kevin has generously provided his time in his role as Treasurer while Jim Lawless has also been heavily involved in board affairs and specifically the formation of the Western Pacific Regional Branch. Jim Lawless and Colin Harvey have been nominated for the forthcoming election of the new IGA board. The voting papers will be circulated shortly (probably in June) and we would ask you to consider voting for both our candidates. Having two representatives on the board gives us a strong national voice for international geothermal affairs.

Membership and Subscriptions

Our membership is now standing at just over 150 members. Membership subscription invoices were emailed in early April (including some chasers for the previous year). Would everyone please make sure their subscriptions are up to date.

Sponsorship

Total sponsorship from within the Association was \$53,000 for the 2005-6 year. Sponsorship approaches for the 2006-7 year to current sponsors have not been made at this time pending approval of a sponsorship plan. It enables us to adequately fund the Executive Officer and ensures that we keep the profile of the Association at a high level.

NZGA Seminar and Workshop

The NZGA Seminar and New Zealand Geothermal Workshop were jointly held at Auckland University in November last year. As usual this was a great opportunity to meet across the industry, gain insights into areas of progress and feel the overall pulse of activity. Jeanette Fitzsimons and Doug Heffernan provided keynote talks that set a high tone for the event, showing the role that geothermal development can play in the thinking of national politicians and at the highest levels of our experienced generators. The event was also well supported by various parties with an interest in generation, including Mitsubishi, Fuji, Ormat and Geodynamics who were able to outline progress in their respective areas. It was a great programme organised by Jane Brotheridge and Stuart Simmons, and our sincere thanks go to them.

The Workshop was also regarded as the first regional conference of the newly-formed Western Pacific Regional Branch of the International Geothermal Association – more about the WPRB later.

The Seminar and Workshop was again preceded by an introductory short course, just giving people with an active interest in geothermal energy an overview of relevant issues, more confidence to pursue their interests and some useful connections.

As usual, the NZGA underwrote the Workshop/Seminar, with all sponsors of the NZGA being recognised as sponsors of the Workshop/Seminar. Additional sponsorship for drinks and for satchels was offered by PB Power and SKM respectively, and Te Puni Kokiri generously sponsored a number of attendees. The profit from last year's joint workshop/NZGA seminar with the University of Auckland was close to \$14,000 with the NZGA receiving a 50% share of just over \$7,000. It was a very well supported and enjoyable event.

The planning for the 2007 Geothermal Workshop/NZGA Seminar is underway. It will be held at the University of Auckland (19-20th Nov) and NZGA seminar (21st Nov). Please make notes in your diaries to attend this joint event. There will be an international geothermal minerals extraction meeting in Taupo from the 22nd-23rd November in Rotorua (organisers Kevin Brown and Ed Mroczek) which may attract some international visitors to attend both events. In addition there is a geomicrobiology conference in Taupo from Nov 11th-16th so – November will be a crazily busy month for those involved.

Action Plan

A key document for the NZGA is the Action Plan, which has been discussed at the NZGA Seminar with members in recent years. The Action Plan is currently being updated by Board members, but progress on the existing Action Plan is shown on the attached page.

Submission on NZ Energy Strategy and NZ Energy Efficiency and Conservation Strategy, and Other Submissions

During the period, the Government has been consulting on the New Zealand Energy Strategy and the New Zealand Energy Efficiency and Conservation Strategy and a number of other documents related to climate change and land use. NZGA made a specific submission on the NZES and NZEECS with several board members making valuable contributions to this. It was encouraging to see the prominent role that geothermal energy played in the draft NZES (although its profile in the NZEECS was very low). This will be loaded onto our website.

In addition to the NZES/NZEECS submission, the NZGA:

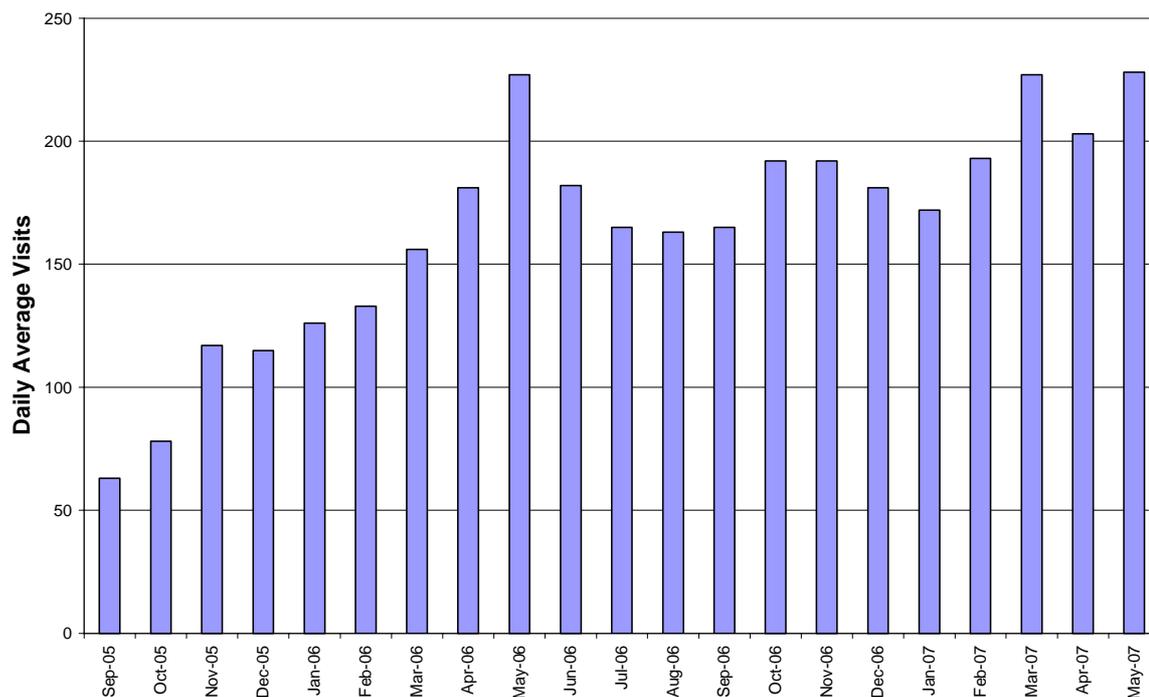
- provided answers to a questionnaire sent by the Parliamentary Commissioner for the Environment covering broad views on renewables, and
- provided input into the Transpower Annual Planning Report chapter on renewables. Our suggestions were particularly focussed around concerns that adequate attention had to be paid to transmission connection to potential geothermal developments.

NZGA Website

The NZGA website (www.nzgeothermal.org.nz) has been regularly updated. Website visits now average more than 200 visits per day in any month, being a great way to disseminate information. The most visited pages are the descriptions of fields and of generation, and the education pages provided by Contact and LEARNZ in early November. Less than half (possibly as low as 15%) of visits are from New Zealand users, with a lot of interest from commercial interests in the US. The website is generating email queries, including initial media contacts.

The NZGA remains open to further development of the site, with one suggestion being an employment section. With many companies being busy, this could be a valuable service for specialists in New Zealand and those located overseas with an interest in working in New Zealand.

Another task that we would like to do is to collect more information on the existing generation projects.



Meetings and Presentations

Brian and Colin have worked together on material for a number of conferences and technical meetings to raise geothermal's profile. We currently have an invitation to present at the Hot Dry Rock conference in Adelaide in August but funding for this has yet to be defined.

Affiliation with the Royal Society

Earlier this year we were formally approved as an affiliated organisation with the Royal Society. This will bring us into closer interaction with various national energy policy organisations and energy research agencies.

WGC 2010

Following an organising committee meeting in March 2007, which involved several NZGA members, plans are now well underway for the 2010 World Geothermal Congress to be held in Bali under the leadership of the Indonesian Geothermal Association. An impressive degree of support has been shown by Indonesian Government agencies. The First Announcement has been made and the website is working at www.WGC2010.org. As in 2005, Roland Horne will be organising the technical programme.

Western Pacific Regional Branch of IGA

The Western Pacific Regional Branch of IGA is now up and running as an incorporated society. NZ is a founding member country. All NZGA members have the right (but not an obligation) to join the Regional Branch. Thanks to Kevin Brown's efforts as Treasurer we now have a bank account so can collect annual fees. Invoices for the annual fees have been sent out by Brian White to all NZGA members who have said they wish to join the Regional Branch. If anyone else wants to join the Regional Branch please contact Jim Lawless: Jlawless@skm.co.nz.

The second AGM of the Western Pacific Regional Branch was held in Manila in March in conjunction with the PNOG-EDC Annual Conference, which was designated as the 2007 IGA Regional Conference. NZ attendees included Jim Lawless, Kevin Brown, Tom Powell and Darin Stuhlmuller from Geodynamics Auckland office.

An 8-member Chinese geothermal delegation came to NZ in April, headed by Keyan Zheng (IGA Board member). WPRB arranged a presentation on the status of geothermal in China at Auckland by Dr Zheng. The group then went on to visit geothermal sites and organisations in the Rotorua-Taupo area.

The next major WPRB activity will be a one or two day seminar on reservoir management to be held consecutively in several countries. This will be led by a senior geoscientist from Philippines National Oil Co. If funds can be arranged the seminar will be held in New Zealand in the second half of 2007. This will be a unique opportunity for us to learn from the Philippines practical experience in managing 7 large geothermal projects (over 1800 MW in total), some for as long as 30 years. Issues to be addressed will include reservoir monitoring, reinjection management, silica inhibition and well acidising.

In early 2008 the WPRB will hold a geothermal seminar in Bali in conjunction with the 2008 INAGA annual conference.

New Zealand Clean Energy Centre

The New Zealand Clean Energy Centre has been established in Taupo with an interest in both geothermal and bio-energy developments. Under Barry Delany's leadership the NZCEC has secured Major Regional Initiative funding of \$2m and over \$6.5 million of private sector funding to get the New Zealand Clean Energy Centre finally under way.

Having achieved these milestones, Barry Delany has resigned as CEO of the Lake Taupo Development Company in order to devote more time to pursuing his own business interests. Barry will continue to serve as a Director of the Centre and his role as start up executive will be filled on a temporary basis by Rob McEwen who played a key role in establishing the NZCEC concept.

The first full Board meeting of the NZCEC will be held on the 24th May. The inaugural Board members of the NZCEC are: David Wright, Ian Thain, Barry Delany (LTDC); Topia Rameka, Dean Stebbing, Judy Harris (Tuwharetoa Trust Board); Mike Suggate (Energy for Industry); Peter White Robinson (Fitzroy Engineering) and Derek Fairweather (Innovation Waikato).

Two projects currently being progressed by the NZCEC are:

- A geothermal heating system to serve Taupo Hospital, Liston Heights Residential Care Hospital, and Taupo Intermediate School. This project has drawn a significant investment from Energy for Industry, and represents the first significant steps into geothermal development by a Meridian-owned company;
- An energy farming project in conjunction with Genesis Research involving the growing of Salix willow for the production of ethanol.

A number of other projects will be considered by the NZCEC Board at its next meeting.

Environment Waikato Plan and Policy Statement, Geotherm and Contact Appeals

The Environment Waikato Plan and Policy Statement appeal is now over and both are essentially finalised.

Contact's appeal proceeded and hearings are complete. The judge's decision is still awaited. TDC fought for more stringent conditions and restrictions on subsidence.

The Geotherm appeal is not finalised though all parties are agreed on consent conditions and these just need to be signed off by the Court. It is possible that decisions for Geotherm and Contact appeals may be given simultaneously.

Nominations Needed for the NZGA Board – Your Country Needs You!!

You may be aware that several of the current board members will be stepping down later this year, in line with the recently adopted three year rotation policies. We are very keen to have some new blood on the board and ask you to consider joining the board. We will be canvassing for nominations in our next newsletter and would welcome your participation but if you are interested, can you please put your names forward to a board member.

Brian White and Colin Harvey

New Zealand Geothermal Association
May 2007

Action Plan Items

Action	Comments	Status
Website Update	The website will be continually updated to include latest studies and information. Some of the tasks below reflect current weaknesses in the website and NZGA's knowledge base. This is one of the principal means by which we educate the public and inform our own members.	Continuing action (several media releases to be added)
Update Field Capacity Tables	Previous draft has been reviewed by Board members.	Brian White has undertaken a recalculation based on public information.
Annual NZGA Seminar and the New Zealand Geothermal Workshop	The theme this year for the NZGA Seminar will be Generation and linking current developments to resources. The theme for the Workshop will be Pacific Rim Geothermal. The two conferences will be held in conjunction. This will be the premier industry event for information dissemination and networking.	Complete – a successful event
Assessment of Direct Heat Usage	A more careful probe of usage will both provide a reliable estimate from which baseline movement can be measured, and also give greater attention to current usage from which Case Studies can be derived. This is part of a fundamental inventory.	This report is now complete and has been put on the website. A paper on this was prepared and presented at the NZ Geothermal Workshop
Description of Major Geothermal Developments	This report, aimed at the public and those with a general geothermal interest would replace several more intrusive studies suggested previously, including the station efficiency study. It would include short (1 or 2 page) descriptions of the field and of the station including simple schematics and photos, followed by short descriptions of operational history with graphs of past discharges and generation. Some of this material could feed into sustainability discussions, assisting further development. This will effectively be a collection of case studies.	No progress. An offer of support with technical information was received from MRP at the 2006 NZGA Seminar
Manufacturing and Service Capability	This report will look at typical New Zealand components of geothermal developments e.g. drilling rigs, pipe and pressure vessel manufacture, insulation, electrical services, civil contractors. An assessment will be made of their ability to handle an upturn in geothermal work, related issues, and whether there are alternatives to their use.	This report is intended as a follow-on report from the Personnel Capability Report. Brian White and Wolfgang Scholz (HERA Director) had discussions in December and more recently. HERA in particular want to establish a geothermal capability register later in 2007 or 2008 to assist turnkey contractors or the generators to tap into local manufacturers and service providers
Cost of Geothermal Power Development	There are indications that previous estimates of geothermal development costs in New Zealand may be light. Changed factors in recent years include major exchange rate movement, escalating raw material prices and a changed drilling scene. Costs should be revisited so geothermal generation can be more accurately compared with alternative generation forms.	Some preliminary results have been published but the project has stalled and is being revitalised now
Geothermal Heat Pump Study	An installer of heat pumps has been found along with real New Zealand cases. Initial indications are that, in niche situations, this could compete with solar hot water so could be a significant contributor to our national energy future. A New Zealand report is needed on costs, practice and case studies.	No progress (Some information has been given in a recent GNS report and a separate East Harbour report currently in preparation.)
Desperate Generation (Future Must Run Auctions)	Must Run auctions are a feature of the NZ electricity market. Currently on rare occasions generators compete to offer generation that must run into the market at periods of low demand. With forecast increases in wind and geothermal energy, some hydro generation that must run because of consent requirements, inflexible gas contracts and increased call on coal and oil-fired stations whose units should not shut down overnight then daily auctions will be required. Plant that must run will not be able to run and there will be efficiency losses. This study will look at which plants are likely to stay running, whether geothermal plants can respond through load-following or venting, possible changes to consenting regimes to enable more flexible operation and likely impact on load factor. This study may be run in co-operation with NZWEA.	Incidental discussions with the Electricity Commission indicate that they are considering a study of this nature.
Geothermal Short Courses	Short courses (normally crammed into a day), can give a broad overview of geothermal energy for consenting agencies, developers and other interested parties. This assists development directly.	A short course was linked to the Workshop/Seminar and was well attended
Regional Branch of the IGA	A regional branch of IGA will improve international linkages and understanding of wider development issues.	Western Pacific Regional Branch is established and operating.
Position Paper on Overseas Treatment of Renewables	This would collate policy papers on renewable energy sources with a view to identifying further positive action that could be undertaken in New Zealand	Complete. Paper has been prepared independently by Eric Martinot and presented to a range of audiences including MPs and officials (see: http://www.martinot.info/re2005.htm)