



Newsletter 13th April 2010

Welcome to the April 2011 issue of the newsletter. It's set out as follows:

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President's Report

Welcome to this quarter's edition of the NZGA newsletter. On behalf of all NZGA members, we send our thoughts and condolences to all those affected by the recent tragic natural disasters in Christchurch and Japan.

Since our last newsletter in October there have been several significant events and announcements within by the New Zealand and International Geothermal Communities.

The planning for WGC 2015 (Melbourne) continues to move forward with formal agreements being signed between the three hosting organisations:

1. NZGA
2. AGEA – Australia Geothermal Energy Association
3. AGEG – Australian Geothermal Energy Group

and with the event organisers – Arinex (an Australian event management company).

It is important to remember that this is a 2000-plus delegate conference with a US\$ 1 million-plus budget, so while 2015 may seem some way off, there is a lot of work to do. Our own Brian Carey (GNS) is assisting to organise the field trips to New Zealand, so if you are contacted by Brian or have some ideas that you think showcase New Zealand Geothermal then please assist.

The New Zealand Geothermal Workshop (Part of GeoNZ 2010) in November 2010, hosted by the Auckland University, provided a good opportunity for both technical and industry interaction. NZGA held its Annual General Meeting. Brian Carey was elected Vice President and Andy Bloomer took over from Gina Rangi as Secretary. Thanks to all three for your voluntary support. The NZGA Industry Session was very well supported with standing room only.

The key messages I picked up from that Session in particular were:

- there is more that NZGA can do to **promote and educate** in geothermal;
- there is a lot of desire for the industry as a whole to **behave more collectively** and there are some actions starting to process a collective approach, and
- there is strong interest and enquiry for a **NZGA Seminar**; one was not held in 2010 due to WGC2010 in Bali.

PROMOTION AND EDUCATION - On the promotion and education front there is a lot more we as an industry can do. Options suggested include education material for schools, increasing our messaging in the media generally (especially the Energy media) and doing more to inform policy-makers and influencers on how Geothermal works, and the role it can play in assisting New Zealand to grow and prosper.

The next NZGA Board meeting is proposed for June to be hosted by Top Energy's Ngawha Geothermal business. In addition to the usual Board meeting, a field trip around the plant is proposed as well as a business strategy session. The objective of the business strategy session is to refine the purpose of the NZGA and what path we should take to most effectively progress that purpose.

COLLECTIVE OPPORTUNITY - There are three workstreams that I am currently aware of involving New Zealand Trade and Enterprise (NZTE) promoting the utilisation of either New Zealand Geothermal or New Zealand Geothermal Expertise.

- **The New Zealand Geothermal strategic review led by Dr Nick Marsh** - The objective of the project is to provide a recommended way of New Zealand Geothermal companies working together to be more competitive in providing investment and services into off-shore projects.
- **Kawerau Clean Energy and Industrial Symbiosis Project** - Investigating the opportunity to promote the unique situation that exists at Kawerau with close access to sustainable wood fibre, developed transportation infrastructure and the presence of sustainable geothermal energy (both electricity and process heat). A report is due May/June 2011.
- **Indonesian Investment and Aid in Geothermal** - A small team which visited Indonesia is developing a strategic plan specifically around Indonesia with its massive geothermal electricity generation goals. The work will extend to cover the training of Indonesian engineers and scientists.

As these projects develop we will keep you informed. Feel free to contact Chris Mulcare of New Zealand Trade and Enterprise (chris.mulcare@nzte.govt.nz) if you would like to be involved.

A FUTURE NZGA CONFERENCE? – We are keen to hear your views here. Is there merit in an NZGA Annual Conference? Please get in touch with your thoughts and suggestions. We'll update you in the next newsletter.

FINALLY.....Investment commitments in Geothermal by New Zealand companies are continuing strongly, both domestically and internationally. Since the October Newsletter, Contact Energy has announced commitment to the Te Mihi project (net 114 MW increase) and the successful consenting of Tauhara 2 (250 MW). Mighty River Power has announced an investment in Energy Source (a 50 MW plant in southern California) as well as funding for further exploration in Tolhuaca, Chile, and securing access concessions in Germany. Only last week Norske Skog announced a 20MW geothermal development at Tasman.

Thanks for taking the time to read the Newsletter. It's your newsletter and we welcome your contributions and suggestions.

Spence McClintock
April 2011

Geothermal News /Articles

Christchurch-based Members of NZGA - Update

Since the last newsletter, we have had the devastating earthquake aftershock in Christchurch on 22 February 2011. Nine of our 320 members are based in Christchurch, while two others left Christchurch just prior to the quake. They are from small consultancies, software developers, equipment suppliers, Meridian Energy and the University of Canterbury.

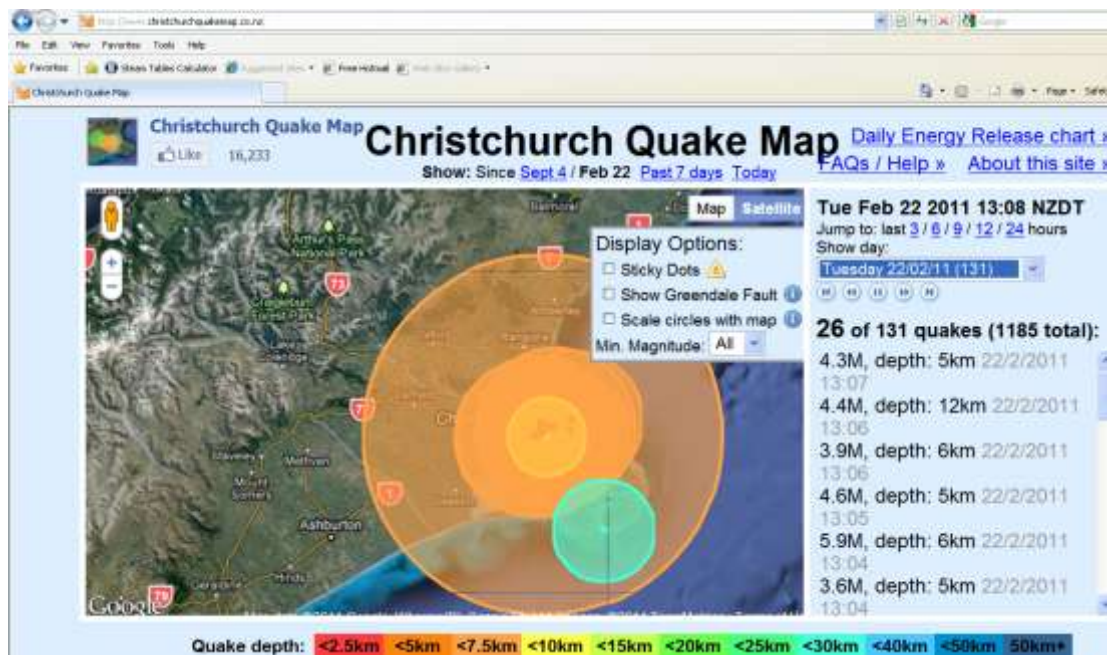


Figure 1: Access the site here - <http://www.christchurchquakemap.co.nz/> (image used with permission of Paul Nicholls @ University of Canterbury)

I am relieved to learn that most of our members and their families are safe and well, with only one injury at home reported. Most members’ homes have suffered minor damage, and possessions, stock and office equipment were thrown about in the quake. Kevin Brown clung to his desk while microscopes and other equipment toppled around him and windows shattered in his Port Hills home/office. He stepped outside to see the ‘9/11 cloud’ rise above the Christchurch CBD and knew things would be bad. His home is still liveable, he did not win the ‘best long drop’ competition, services have been progressively restored, but he has a lot of restoration work of his own to do – again. People have been shaken in many ways but are now finding ways of operating as best they can. With two degrees of separation in Christchurch, everyone knows someone who knows someone who was badly injured or killed in the quake. Communities have been disrupted with some former neighbours leaving at least temporarily.

Many are working from their own homes. ARANZ moved office after the first quake in September, but unfortunately to what is now the ‘Red Zone’, so have just moved

again into a new office on 1 April. They have proceeded with training and software development. Elliott-Scott had stock and records tossed about, but have been able to repack and re-file with minimal loss and get back to business. In Meridian's case they had two offices, though their Manchester St office is no more, so they have been shuffling staff between operating offices elsewhere and temporary offices in Christchurch, while some individuals work from home – new permanent office space will be available in May. The University of Canterbury has been damaged, including at Ilam, so lectures and research have been disrupted. Some lectures are proceeding in tents located 30km from campus, even though lecturers have not been able to access their own offices for notes until last week - some students have transferred to other universities.

I have now spoken with most of our Christchurch members, and while they all have some terrible "moment it happened" stories, there is also a certain amount of bravado mixed with real toughening and definitely a keenness to get on with things. Our thoughts are with them.

Brian White
Executive Officer

Christchurch office photos post quake– Courtesy of Meridian Energy

The following photos from Meridian give a real sense to many of us not in the area of what needs to be done to get business back to normal again. Thanks to Mark Racle from Meridian for sending them in.



Figure 2: Meridian Manchester Street Offices

NZ News

- Norske Skog confirms new 20 MW of geothermal at Tasman
- Continued progress in direct heat use
- World Top 10 for MRP as it boosts NZ Geothermal production and Expands Offshore
- MTL at Penola – NZ skills utilised for Australia's Geothermal Power Development
- Geothermal Power Struggle - A Taupo-Rotorua mini series

- Ngawha Geothermal Resource - Verified with a Unique Emissions Factor (UEF)
- IEA Report on New Zealand – on the right track but challenges remain
- Energy and Energy Efficiency Strategies

Norske Skog confirms new 20 MW of geothermal at Tasman

Norske Skog is planning to add an extra 20 MW of embedded generation at its Tasman paper mill at Kawerau to make better use of the local geothermal resource. The new unit will lift the direct connection at the mill to 34 MW from about 16 MW now, but it will involve reducing production from the TA3 turbine currently supplying the plant. The new turbine could be operating by the end of 2012, subject to board approvals. The Tasman mill produces about 300,000 tonnes of paper a year and is one of the country's biggest electricity users. The mill can use as much as 138 MW of electricity although its average demand is about 119 MW, part of which is supplied by the TA3 plant and production from Eastland Group's 9 MW KA24 geothermal unit. The balance is bought from the grid, although the company does have a financial contract with Mighty River Power dating back to the pair's 2005 agreement to build 100 MW Kawerau power project on the Tasman site.¹

Continued progress in direct heat use

NZGA still needs to update statistics on direct heat use over the last two years, but we note continued growth at least at the industrial scale and will report on this more fully soon. At Kawerau, the Svenska Cellulosa Aktiebolaget pulp mill replaced fossil fuel use in 2010 through the installation of two 16 MWth, 55 tonne steam generating heat exchangers, coupled with geothermal condensate stripping plant to generate high grade feed water for the heat exchangers. Geothermal steam is supplied by Ngati Tuwharetoa Geothermal Assets Ltd. The plant will use approximately 300TJ per year of clean steam.

The other major development under way is the construction of the Miraka milk drying plant at Mokai to be supplied by Tuaropaki Power. This will be the first dairy factory in the world to be supplied by geothermal steam for its process needs. This plant will use around 270TJ per year of heat and is scheduled to start operation in August this year. For photos of progress see [here](#).

World Top 10 for MRP as it boosts NZ Geothermal production and Expands Offshore

Mighty River Power's 2011 Interim Report released in March illustrated the importance of geothermal expertise in broadening the company's domestic generation portfolio and also in opening up new growth opportunities offshore.

The report notes that new geothermal capacity was a major contributor and driver of the 22% increase in the company's earnings (EBITDAF) to \$233.6 million for the six months (to 31 December 2010). MRP notes geothermal as the third-most important

¹ (Original Source: *Gavin Evans* Energy News 7-4-2011)

fuel for generation in New Zealand. Their commitment to geothermal was noted at a company level in broadening and diversifying the predominately renewable generation base – reducing exposure to the risks of weather and hydrology. And, for New Zealand Inc, geothermal was opening up new growth options offshore with a concerted commitment to taking geothermal competencies and experience offshore and investing internationally. MRP reports good progress in the US and Chile, along with an extension into Germany. Based on production MRP was one of the top 10 geothermal companies in the world. Increasingly MRP was being sought-after as a partner in international geothermal developments”. MRP’s efforts all go towards cementing New Zealand’s reputation as a geothermal leader. To view Mighty River Power's 2011 Interim Report please [click here](#). Full News Story [here](#).

MTL at Penola - NZ skills utilised for Australia’s Geothermal Power Development

Mechanical Technology Ltd (MTL) - A small but innovative New Zealand mechanical engineering company is helping Panax (a pioneering Brisbane-based exploration and development company) to achieve its vision of becoming a major participant in the geothermal industry by providing sustainable base load power with zero emissions.



Mechanical Technology Ltd (MTL) (www.mtlnz.co.nz) was selected because of its extensive history of detailed geothermal design projects. Notable previous work includes the Poihipi 55 MW Geothermal Power Project in Taupo and the Lihir 30 MW and 20 MW Geothermal Power Projects in Papua New Guinea. MTL has utilised the skills it has developed to design the pipelines, vent structure, and associated structural works for Panax’s Penola Project.

Part of Panax’s Limestone Coast Project, the Penola Geothermal Project is the first of its type in Australia to target hot sedimentary aquifers (HSAs). It is located in four troughs or sub-basins in the on-shore Otway Basin in South Australia.

HSAs are water-laden rock deposits found at depths of around 2.5 to 4.0km below the earth’s crust. They tend to be cooler than Australia’s other main projected source of geothermal energy - from heat stored in granite rocks at least 4km beneath the earth. Because HSAs are shallower, they can be accessed more easily and quickly at lower capital costs using current geothermal technology.



Figure 3: Testing at the Penola project

A pre-feasibility study found that the Penola Project has a “Measured Geothermal Resource” totalling 11.000 PJ. This is the largest of only three known “Measured Resources” in Australia, two of which are owned by Panax. Pre-feasibility study based on prevailing reservoir qualities (geothermal temperature permeability) and reservoir modelling has show the Penola Project could generate power at a total cost of A\$83/MWh (=8.3 cents/kWh) which is cheaper than wind.

Drill site selection for the first deep geothermal well was based on targeting high porosity/permeability zones in the Pretty Hill Sandstones with temperatures of 160°C at 4000m depth. This was completed with existing logs of petroleum wells, geothermal temperature modelling and extensive use of the 3D seismic database. The well was designed to convert part of the “Measured Geothermal Resources” to Geothermal Reserves and following that, function as the production well for a demonstration power plant.

When drilling took place, the downhole geothermal temperature of 171.4°C at 4000m exceeded the projected temperature by more than 10°C.

To help design a system that would cope with these water temperatures, MTL carried out a pipe stress analysis to ensure fluid from the well head would be released in a controlled manner. The steam which will generate the geothermal power in the future is initially vented through a silencer. Hot water drains back into an outlet pipe then flows through a series of carefully configured pipes to cool the water on its way to a large cooling pond.

Chris Mann, managing director of MTL is pleased with the successful completion of the well test and he is continuing discussions on further HSA projects with Panax in Australia. Further details are available [here](#) from the Panax web-site.

Geothermal Power Struggle – A Taupo-Rotorua mini series

The competition for access to geothermal resources is currently heating up in the Taupo-Rotorua region. In a three-article series, Damian Stone sets out the issues. His articles note that geothermal energy will play a key role in New Zealand's ability to reach its goal to have 90 % renewable energy by 2025. Reaching this target and indeed just working towards it means the local economy stands to reap rewards. Of course, such rewards are not without risk.

- **Part 1 of 3** - [Geothermal power struggle: What it means for us](#) – In this first installment he notes how increasingly iwi are taking a more active role in developing the resource through electricity generation.
- **Part 2 of 3** – [Geothermal power struggle - Risks and Rewards](#) - This second instalment explores the risks and rewards associated with geothermal development in particular for the local community.
- **Part 3 of 3** – Coming Soon....watch this space..... <http://www.rotorudailypost.co.nz>

Ngawha Geothermal Resource - Verified with a Unique Emissions Factor (UEF)

In Kaikohe, Northland, the Ngawha Geothermal Resource Company has received verification for a Unique Emissions Factor (UEF). The Ngawha stations were the first in the country to gain a UEF.

All power stations are now required to pay a carbon charge based on their carbon emissions under the Emissions Trading Scheme (ETS). The Ministry for the Environment set default emissions factors (DEF) for all emitters in 2009. The DEF values were calculated from data provided for each station. Some station's emissions will remain stable, and others may decline over time. Brine and steam samples collected at the Ngawha stations over a one year period confirmed that the DEF over-calculated the carbon emissions from the units. Repeated samples showed statistically robust results giving good cause to apply for the UEF. Verification of these results was required. This was carried out by an approved auditor, making several visits to the site and authenticating sampling methods, accuracy of meters, laboratory methods and statistical robustness. Ongoing testing is required to monitor emissions.

Since geothermal energy, along with other renewable energies, has a lower carbon footprint compared to fossil dependent energy sources, the carbon charge is correspondingly lower. This carbon charge therefore encourages greener energy in New Zealand.



Figure 4: The new Ngawha power station is shown centre right. Extensive bogland in the foreground is protected under QEII open space covenant and the environs are actively managed by the company.

IEA Report on New Zealand – on the right track but challenges remain

March saw the release of the IEA review of Energy Policy and Developments in New Zealand. The report is briefly introduced [here](#) and the press release relating to the report is given [here](#). Interestingly, the report very much echoes the comments made by many on the Energy and Energy Efficiency Strategy at the time of the release of the draft documents. The IEA review notes the following on the Energy Strategy and the Energy Efficiency Strategy:

“the draft proposals lack a firm commitment to actions that will contribute to achieving the energy saving goals.” The authors add: “The government needs to assign priorities for working towards goals it can realistically achieve in order to demonstrate early effectiveness and lead to confidence building. The Strategy is missing a firm set of actions to achieve its stated goals.”

The report can be purchased [here](#) or borrowed from the Energy Library [here](#).

Energy and Energy Efficiency Strategies

March also saw the ‘accidental’ release of the long awaited Energy and Energy Efficiency Strategies. NZ geothermal is recognised in the document as world leading. The future importance of geothermal as a carbon price comes into being is noted. In particular it is noted that

“Government Actions will include:

Investigating ways to support the development of new applications using geothermal energy, improve access to geothermal information and improve geothermal consenting processes.”

And

“Potential to expand uses of geothermal and bioenergy

There is significant commercial potential in geothermal energy in the near future. In addition to electricity generation, there are already commercially available

technologies using stable ground temperatures to boost heating and cooling for buildings or industrial uses (for example, ground source heat pumps). Other emerging technologies aim to access deep geothermal resources and to expand the use of geothermal energy for direct heat applications."

And

"The revised target for additional use of heat and/or fuels from bioenergy and geothermal sources is based on New Zealand's Energy Outlook 2010-25 data. By 2025, we anticipate 17 PJ of additional heat or fuel from biomass and geothermal sources will be used annually. This includes an additional 5 PJ being used in the year 2015 compared to 2010."

(note - This target counts industrial use only; 16 PJ is anticipated to come from biomass direct use, and 1 PJ from geothermal energy. The 5 PJ to 2015 is solely from biomass.)

[Note – as the Strategy was mistakenly published on-line it's not available through the normal channels but a quick internet search will find it.]

International News

- Greenrock gets encouraging results in Perth Australia
- Panax expanding in Indonesia
- Tax deduction for geothermal exploration in Oz

GreenRock gets encouraging results in Perth, Australia - GreenRock Energy believes it has "encouraging" results from temperature logging at its joint venture geothermal heat project with BHP Billiton in the Collie Basin, south of Perth. GreenRock said it has completed a geophysical survey along 278 line km to help define the depth and thickness of potential geothermal heat sources in the form of thermally anomalous granites. GreenRock said temperature logging of 27 existing drill holes and water bores yielded an average geothermal gradient of 33 degrees celsius per km, "which is considered to be encouraging." The company expects to complete shallow follow-up drilling and geochemical survey to test heat anomalies this month. GreenRock also said the joint venture has commissioned an independent study by Sinclair Knight Merz of potential markets for geothermal energy in the Collie/Worsley region, due in April.

Panax Expanding in Indonesia - Panax Geothermal has expanded its interests in the growing Indonesian energy sector, announcing a new agreement to start exploration on the east coast of central Sumatra.

The Brisbane-based company has signed a memorandum of understanding with government-owned power company PT Petrogas Jambi Power on what will be Panax's third geothermal project in Indonesia. Under the terms of the agreement, Panax will hold an initial 95 percent interest in the project. Indonesia is considered a world geothermal 'hotspot', with the Government planning to increase generation by 240 percent in the next four years to more than 4,000 megawatts - equivalent to about 12 power stations.

Panax Managing Director Kerry Parker says the company and its partner will apply jointly for licences to explore and develop potential geothermal resources of up to 80 megawatts. “Jambi Power has extensive data and information about the potential geothermal resource, significantly reducing the risk on this project,” Parker says. “The relationship will also be integral for ensuring local government and community support,” he says. According to Parker, there is enormous geothermal potential in the Asia Pacific region. “Indonesia has commercially attractive tariffs, abundant geothermal resources and incentives for geothermal energy generators,” he says. “This project will be a strategic addition to our portfolio, increasing Panax’s footprint in Indonesia and strengthening our local partnerships.” Energy generated from the proposed project would be connected into the local electricity transmission grid or used for local industry. “There’s minimal generating capacity in the region and it’s insufficient to meet daily demand. This project could provide reliable power 24 hours a day, seven days a week,” Parker says.

Panax’s existing projects include signed deals to build two geothermal power stations in Sumatra and Flores with its other Indonesian partner, the Bakrie Group.

The company says it has commenced discussions with Bakrie Group to participate in another geothermal project in east Java.

Tax deduction for geothermal exploration in Oz - The Australian government has announced an immediate tax deduction for the exploration of geothermal energy sources from July 2012, as part of resource tax reforms. It was announced as part of the government’s resource tax reforms.

Resources and Energy Minister Martin Ferguson said existing income tax law provided a tax deduction for expenditure incurred when exploring or prospecting for minerals, petroleum or quarry minerals.

Updating the tax law by extending the definition of exploration, would ensure exploration for geothermal energy received the same treatment as traditional hydrocarbon energy sources. Further details [here](#).

Board and Executive Officer Update

Board Matters

Gina Rangi has passed the Secretary role to Andy Bloomer to start the Board Executive rotation. Brian Carey was elected Vice President.

Elections to the Board – Call for Nominations

Preparations for the next round of elections to the Board are underway. Please provide your nominations to NZGA Secretary Andy Bloomer andy@geoeng.co.nz.

Note – the following five Board Members are eligible for re-election assuming they wish to stand - Claude Bannwarth, Cito Gazo, Marcel Manders, Paul Quinlivan and Spence McClintock.

If no more nominations are received then these five will be automatically be re-elected to their positions for another 3 years. However, if other valid nominations are received then we will proceed to an election.

Meetings – Recent and Planned

NZGA meeting with Minister of Foreign Affairs – March 2011

A constructive meeting was held with the Hon Murray McCully (Minister of Foreign Affairs) with Brian White and Tricia Scott representing the NZGA on Tuesday 29th March 2011.

Key issues discussed were the World Geothermal Congress (WGC) scheduled to be held in Australia and NZ in 2015 (see more under events), the value of New Zealand joining the International Partnership for Geothermal Technology, NZ Geothermal Incorporated, and the role geothermal may play in Indonesia and other developing nations in the Pacific in the next 5 to 10 years.

The key take home messages were that:

- the government recognises that geothermal energy will be increasingly important in some developing countries: Indonesia, Papua New Guinea and the Philippines and that the NZ government is providing aid to these;
- the Government is backing the Geothermal Institute to provide education in geothermal technology within New Zealand to developing countries, but greater private sector support is needed too;
- the Government will look at fellowships for the WGC closer to the time to achieve the same goals;
- some NZ companies are doing very well in NZ and in the international market place;
- the Minister will make further enquiries as to why the Government has not signed up to the IPGT, with a view to keeping New Zealand companies at the forefront of geothermal development in the international market;
- the NZGA needs to strengthen its working relationship with Ministry of Economic Development (MED) and New Zealand Trade and Enterprise (NZTE).

A meeting was subsequently held with Joseph Mayhew, Ministry of Foreign Affairs and Trade, Renewable Energy and Climate Change Advisor. The Board will incorporate all information gained into the Strategic Planning scheduled for June 2011.

Next NZGA Board Meeting and Board Strategy Session– 23–24 June 2011

The next NZGA Board Meeting will be hosted by Top Energy in Northland. The June meeting will begin with the normal quarterly Board meeting but will then include

site visits to the Ngawha power stations in Kaikohe and the Ngawha springs and lakes.

In addition there will be a professionally facilitated Strategic Planning session for the Board. This will help set priorities for the coming 5 to 10 years and ensure that the collective efforts of the members are focused and fruitful. Any specific ideas from members are welcome (please email brian.white@eastharb.co.nz). Key directives established at the meeting will be circulated to members.

NZGA Annual General Meeting (AGM) 2011

The NZGA Annual General Meeting is set for November 2011 to occur within the New Zealand Geothermal Workshop in Auckland. Further details will be made available nearer the time.

Submissions – Recent and Planned:

Recent Submissions

- [Submission on the Proposed Bay of Plenty Regional Policy Statement - February 2011](#)
- [Submission on the Proposed Environment Waikato Regional Policy Statement – February 2011](#)
- [Submission on the IPGT High Temperature Downhole Tools Paper – March 2011](#)

Forthcoming Submissions

- **NPS on Indigenous Biodiversity** - NZGA will make a submission on the proposed National Policy Statement on Indigenous Biodiversity (NPS). The Association has already made a contribution to a collective submission being developed by the Royal Society of New Zealand. The proposed NPS will provide direction to local authorities on their responsibilities for managing indigenous biodiversity under the Resource Management Act 1991. It outlines policies and decision-making frameworks for the identification and management of indigenous biodiversity found outside the public conservation estate. The proposed NPS contains a list of criteria for identifying areas of indigenous vegetation and habitats of indigenous animals that have been recognised as being rare and/or threatened at a national level. The proposed NPS requires district and relevant regional plans to identify these areas of significant biodiversity within five years of the NPS taking effect. Submissions on the proposed NPS close on 2 May 2011. See the Ministry for the Environment [here](#) for more information.

Industry Papers

- [Geothermal Perspective 2011](#) – December 2010, Brian White, NZGA – extract from Energy Perspectives annual magazine

Training Update

NZGA Skills Action Plan

The NZGA Skills Action Plan is available [here](#) on the NZGA web-site.

Short Courses in Geothermal Topics - IESE



Registrations are now open! - The Institute of Earth Science and Engineering with Dr Stuart Simmons is offering geothermal short courses in geosciences, geochemistry and a 'geothermal in action' field trip. Courses start in July 2011 and run for 3-5 days each.

Course details and fee information can be viewed [here](#)

For enquiries and assistance, please contact Rachel Fenton, Training and Marketing Manager, IESE on email: r.fenton@auckland.ac.nz

Forthcoming Events/Conferences

NZGA Seminar 2011 – Seeking your views

The theme or focus of the NZGA Seminar is being discussed currently - some options include 'Our collective potential – NZInc', 'Maori Trusts', 'direct heat'. The date and venue of the event are also under discussion with July/August or Oct and Taupo or Rotorua as current options. If you have strong preferences or ideas generally in relation to the event please contact the Executive Officer at Brian.White@eastharbour.co.nz

Other Events

Energy Federation Lunchtime Seminar, 12 noon 15th April 2011

"Has the Geothermal Industry reached critical mass?" - Ted Montague, Geothermal Development Manager, Contact Energy,

Ted Montague has been managing generation projects with Contact Energy for 13 years. Prior to that, he worked on natural resource and economic projects in New Zealand and overseas for Texaco, BHP, Cyprus Minerals, and Ernst & Young. He holds graduate degrees from the University of Canterbury (Geology) and the Colorado School of Mines (Mineral Economics). Further details about the event [here](#). Contact Cito here - C.Gazo@crl.co.nz or energy.fed@crl.co.nz

World Geothermal Congress 2015 Melbourne - UPDATE

As reported in our last newsletter New Zealand and Australia geothermal associations have jointly won a bid to host the next World Geothermal Congress in 2015, with the venue being in Melbourne but with field trips in New Zealand and Australia.

With the agreements between the various organisations involved now complete attention turns to the Organising Committee tasked with developing the program and budget for the event.

We can confirm the Organising Committee includes the following NZGA representatives: Brian Carey (GNS Science) (field trips), Juliet Newson (University of Auckland), Claude Bannwarth (SKM), Greg Bignall (GNS Science), Colin Harvey (GNS Science) and Jim Lawless (independent). Brian White and Spence McClintock sit on an ANGEA Committee that gives overall direction to the event. Australian Event Management Company Arinex will organise the event.

NZGA Action Plan: (last updated 17 March 2011)

The New Zealand Geothermal Association seeks to assist and promote geothermal interests through a range of means that are put forward by its members and agreed by the Board. These actions are set out in an Action Plan developed on an annual basis. Current status of this Action Plan (Sept 2010) is shown in the table following.

Action	Comments	Status
HIGH PRIORITY		
Government Lobbying and Raised Public Awareness	NZGA should meet with interested Government ministers and officials, highlighting growth opportunities across Cabinet. NZGA should continue to lobby for NZ membership in the International Partnership for Geothermal Technology to ensure NZ remains a force in geothermal science and technology	We have provided ongoing prompts on IPGT to both officials and directly to Minister Mapp. Meeting with Minister McCully held end of March. Meeting to be arranged with Acting Minister Hekia Parata
Submissions on Policy	NZGA will make relevant submissions in response to government consultation documents e.g. climate change regulations, etc	Submissions were made on geothermal aspects of RPS's for EW and BOPRC. Submission also made on IPGT High Temperature Downhole Tools paper
Review of Training Requirements	Information and Education Subcommittee should meet to set its own terms with a view to high level direction for NZGA, and to develop broad industry training strategies. Training and currency of information is critical in an expanding industry with ongoing development. This applies to electricity generation, heat supply and heat pump applications. It covers tertiary and trades development.	Juliet developing a paper
'Policy on a Page'	NZGA should review its high level messages	This will be part of a Strategy session in June
Geothermal Marketing Plan	NZGA needs to present geothermal energy in a positive manner to attract investment and personnel.	This will follow a Board strategy session
New Zealand Inc Initiatives	There are great opportunities for international growth and NZGA can facilitate some of the efforts aimed at a more integrated approach and assist with provision of useful information.	Board providing technical review for papers. EO is volunteering time and information to researchers
INTERMEDIATE PRIORITY		
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.	The site is continuously updated. Information on alternative resources added. Job vacancy section added.
Annual NZGA Seminar and the New Zealand Geothermal Workshop	These will be the premier national industry events for information dissemination and networking. NZGA should lobby for the production of proceedings or for the publishing of papers on the Stanford website	Proceedings and papers will be produced.
World Geothermal Congress 2015	NZGA should provide necessary support for the joint NZ/Aus World Geothermal Congress 2015	ANGEA/IGA agreement was signed at WGC2010, initial deposit has been made, ANGEA internal agreement has

		been finalised, management and underwriting agreement has been finalised, Organising Committee has commenced work, draft master plan has been developed, budget in preparation, arrangements have been made for Steering Committee to visit venue.
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. Policy and industry overview meetings are still required	Short courses have been arranged through the University of Auckland
Science and Innovation Fair	This is a 2012 event directed at schools in the Taupo region that could help direct young people into engineering/science, for which alignment with industry is wanted	
Broadening Geothermal Base to Tourism	Our members include landowners and varied businesses including tourism. This aspect should be more prominent	
Awards	A function of NZGA is to recognise significant achievement by members. One aspect of this is awarding of Life Memberships	Board has raised nominations and will be voting on these
Geothermal Drilling Report	Continuing a suite of geothermal reports, a report will be prepared on geothermal drilling and well design outlining current practice, costs, differences between conventional fields and EGS developments, new areas of development and issues to be addressed by industry	MB Century will be using an engineer working with Tom King to undertake this work.
Development Guideline Report	While large generators can handle their issues, there may be a large number of issues faced by small generators. This will provide a beginners guideline to geothermal development.	Have had initial discussion in East Harbour
Description of Major Geothermal Developments	This information, aimed at the public and those with a general geothermal interest, is of general interest	All major developers were approached with information requirements. Contact and MRP have committed to complete this.
Geothermal Heat Pump Studies	Heat pumps are now entering the New Zealand market. Initial indications are that, for large domestic loads (including water heating) and above, this option is competitive with other common heating options so could be a significant contributor to our national energy future. There is still a need for resource information in the top 100m around NZ. Efforts should also be directed at raising the profile to help with uptake.	GNS Science is reporting on Heat Pumps as part of their Low Enthalpy research program
Memorabilia and Industry Archive Facilitation	It is recognised that key information and equipment could be lost if an industry archive is not established. The NZGA should facilitate discussions to collect and preserve this pioneering material.	Initial discussions were held with Contact Energy on a temporary storage location. This matter will be discussed at the Strategy session.
Emissions Trading Scheme Information	Major geothermal industries will be subject to emissions trading scheme regulation and potential trading. This is a major change in the industry for which there may be little understanding. Some paragraphs are required on the NZGA website.	Brian Carey and Tricia Scott will progress this.
Review of the Australian Geothermal Industry	The Australian geothermal market is a home market for many NZGA members. Opportunities and progress need to be understood. This can be in a framework of government policy, permitting regimes, access to data, and factors leading to success.	

Membership

NZGA individual membership currently stands at 320. NZGA is grateful for the support of its Corporate and Institutional members in helping the Association’s work on behalf of the wider geothermal industry. For a list of these industry supporters see <http://www.nzgeothermal.org.nz/about.html>.

FEES REMINDER – A gentle reminder to pay your Membership invoices - Currently there are a significant number of unpaid Membership fees for the 2010 – 2011 year.

Payment as soon as possible would be very much appreciated. Please note – the Membership year ends in October 2011.

Further details on Membership can be found [here](#) on the NZGA web-site.

Individual Membership

The NZGA currently has 320 individual members with varying degrees of involvement in the geothermal sector in New Zealand.

Western Pacific Regional Branch membership

The Board encourages members to consider the voluntary membership of the WPRB of the International Geothermal Association. This can be done by contacting Jim Lawless (JLawless@clear.net.nz). Currently there is a one-off joining fee of only NZ\$7.

Life Membership

The Board acknowledges that there are many people who have made a significant contribution to the geothermal industry. One avenue of recognition that the Board can give is through the awarding of a limited number of Life (or Honorary) Memberships. The Board has received a number of nominations for Life Membership and will be making an announcement about this later this year. Under the By-laws, they can only appoint a maximum of 1 person per year as a Life Member. There are currently three potential vacancies before the By-law limit is reached.

Corporate and Institutional Membership

Memberships at this level are tiered – Platinum, Gold, Silver and Bronze - and members logo's are shown on the web-site against their membership level (see <http://www.nzgeothermal.org.nz/about.html>). Links to member's respective websites are shown and we are developing short member profiles on each of these companies. They will be available on the web-site soon. If your company is involved in the geothermal industry, and so benefits from the long term advocacy and coordination of the NZGA, then we would encourage you to contact the Executive Officer or other Board Members about your support role.

The NZGA would like to thank all of its members for their ongoing support of this industry.

Keeping in Touch

A note to all members – if your contact details change for any reason please advise us of your new contact details as soon as possible. Email the [Executive Officer](#).

Use of and contributions to this Newsletter

NZGA produces this Newsletter primarily for the benefit of its members and also for the wider public. We are happy for the material in the newsletter to be used but ask that the NZGA Newsletter be acknowledged as the source.

We are always keen to promote our members and their project activities – please contact us with your news, vacancies or useful materials.

Thank you.

Brian White
Executive Officer

Spence McClintock
President

Colin Harvey
Past President