GeothermalEnergy
Renewable Energy from the Earth

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Private & Confidential

Energy Research Strategy Submissions
Energy Planning Division
Department of Communications, Energy & Natural Resources
Adelaide Road
Dublin 2

27th June 2008

Dear Sirs,

Re: Irish Energy Research Council: An Energy Research Strategy for Ireland

Geothermal Energy Limited wishes to thank the Department for the opportunity to respond to the above paper and hereby details its comments.

Geothermal Energy believes that the requirement for a cohesive and well directed government strategy for energy research in Ireland is well overdue. Investment in energy research and development, albeit growing, has been limited and sporadic to date with an increased proportion of funding coming from the private sector.

There exists a lack of clear guidelines for research and development funding and to date Geothermal Energy has struggled to develop its deep geothermal R&D programme due to the difficulty of establishing the criteria, timetable and requirements necessary for grant funding. To date, Geothermal Energy has had to completely privately fund the development of this pioneering industry in Ireland.

Geothermal Energy believes in, and supports the Government's long-term vision for Ireland that, the effective adoption of a cohesive energy research and development policy will assist Ireland in:

> *"meeting its energy system requirements in a manner that addresses the challenges of energy security and environmental sustainability informed, underpinned and facilitated by highly motivated and strongly coordinated teams of energy researchers of world class standard operating in a stable, adequately resourced and continuous research environment."*

Geothermal Energy therefore welcomes this consultation phase with the Department and has the following specific comments in respect of The Energy Research Strategy 2008-2013.

Identifying and Mapping Ireland's Energy Resources

- Geothermal Energy concurs with the statement "Ireland's ability to plan for the future in relation to the production of indigenous gas or oil is very much constrained by the limited evidence currently available".
- Geothermal Energy believes this statement should be expanded to include deep geothermal energy. It is understood that there is potential of deep geothermal sources throughout the country of Ireland, due to the indication of such sources being available in Northern Ireland. However, there is limited evidence currently available in the Republic of Ireland to support this understanding.
- Geothermal Energy believes in the merit of identifying Ireland's oil and gas resources and is of the opinion there could be synergies and combined benefits of mapping Ireland's deep geothermal resources in conjunction with mapping Ireland's oil and gas resources.
- In addition, there is potential for cross departmental collaboration and funding on such a project.
- Geothermal Energy believes that security of supply of energy for Ireland is fundamental, as evidenced by the current soaring oil prices. For this reason, Geothermal Energy see the mapping of Ireland's Energy Resources as a priority and believe the allocation should be in excess of 5% of total public funding as indicated in section 5.3.1.

Implementation and Coordination

- Geothermal Energy is of the belief that a single body should be charged with the implementation of the Energy Research Policy and believe that Science Foundation Ireland is the body best suited to so this.
- It is imperative to adopt one strategic approach and continuity to this policy to ensure successful implementation and roll-out. The difficulty of charging a number of bodies to different policy tasks could result in bureaucratic difficulties and potential conflicts of interest which could ultimately affect the successful roll-out of the energy R&D policy.

Long-Term Vision

- Geothermal Energy reemphasises the Council's needs to focus on the long-term goal of this policy at all times. Any short-term and medium-term projects adopted under this policy need to be chosen due to their direction towards the long-term goals and should be strategic towards supporting Ireland's future energy requirements.

Key Deliverables

- Geothermal Energy is fully in agreement with the key deliverables as described in section 4.3 and the side effects and outcomes as out-lined in section 4.4. Geothermal Energy believes there is increased importance to be placed on education and employment in the energy sector to develop Ireland into a leading player in the energy market going forward.

Inclusion of Geothermal Energy as a Sector Specific Field

- Ireland has a number energy saving and changing targets to achieve at different stages up to 2020 as outlined in section 2.2.1.
- Whilst a large emphasis is being placed on the generation of electricity from renewable sources such as wind, ocean, bio-fuel CHP etc, significantly less emphasis has been placed on the generation of heating from renewable sources.

- To date in Ireland, renewable heating is predominantly from shallow form geothermal, CHP and solar. These sources are limited to predominantly single heat energy users and many have increasing constraints due to the lack of sun at certain times of the year, the large storage required for bio fuels and the difficulty of CHP plants to assist Ireland in meeting their CO_2 emissions targets.
- The achievement of a 5% renewable share in the heating sector by 2010, and 12% by 2020 could be difficult based on the current lack of emphasis on this sector.
- Geothermal Energy believes that this is a target that could be possible to achieve through the research, development and demonstration of deep geothermal energy in Ireland.
- In addition, deep geothermal energy produces almost no carbon dioxide and would result in the use of less fossil fuels for heating, thus aiding Ireland to meet its Kyoto Protocol targets.
- Although a long-term and proven technology in many nations, Geothermal Energy Ltd believe there is potential for Ireland to become a leader in specific geothermal R&D fields which would benefit both Ireland and other countries where geothermal energy is not naturally visible.
- Geothermal Energy is of the view that deep geothermal energy meets the criteria as set out in section 5.1.1 as a priority for allocating resources.
- In addition, deep geothermal energy potentially could meet the key deliverables and desired side effects as detailed in section 4.3 and 4.4.
- Geothermal Energy strongly believes that there is sufficient ground for including deep geothermal energy as a sector specific field and believe the risk of investing in R&D in this sector may not be as high as some of the sectors mentioned in the policy.
- Geothermal Energy have identified some potential research areas which it is believed would be of interest to third level institutions to develop further and we would be delighted to discuss these further with the Department.

Summary

- The current policy document has the right vision for Ireland and the need to target the long-term commitment and vision at all times throughout the roll-out of the policy needs to be reemphasised.
- The proposed allocation of mapping Ireland's resources should be increased and the mapping of deep geothermal resources should be included.
- One body should be charged with implementing the policy.
- Deep geothermal should be included as a sector specific field as it meets the specific criteria as set out in 5.1.1 and it hosts a number of other benefits as outlined above.

Geothermal Energy would like to thank you for the opportunity to contribute to this consultation process and look forward to the outcome.

Kind regards,

Padraig Hanly

Director