



Geothermal Drilling Program (GDP)

Supporting "proof-of-concept" projects for the geothermal industry

Aim of the GDP

GDP is a competitive grants program supporting proof-of-concept geothermal projects in Australia. The GDP aims to:

- accelerate the development of the geothermal industry;
- encourage growth and successful innovation by Australian geothermal companies by increasing the numbers and variety of proofs of concept;
- accelerate the capacity to produce electricity from a variety of sources of geothermal heat energy;
- increase investor or private sector confidence in the geothermal industry;
- firmly establish Australia as the world leader in enhanced geothermal systems; and
- generate national benefit for the Australian economy.

What does it offer?

The program provides dollar-for-dollar matching grants up to a limit of \$7 million for eligible geothermal proof-of-concept projects involving deep drilling. Payments will be made against the achievement of milestones.

The first round of applications will open in August 2008. The timing of any subsequent rounds will be determined based on availability of Program funding.

Projects involving co-ordination of drilling programs to both lower mobilisation/demobilisation costs of drilling rigs, and to maximise the employment of the specialised drilling equipment are encouraged.

Who is it for?

Eligible companies can apply for funding to support/offset the costs of drilling, reservoir development and flow testing of proof-of-concept projects.

Evidence must be provided to demonstrate, with a reasonable level of certainty using indirect methods, that a potentially commercially viable geothermal

resource exists in the project area. Projects must aim to demonstrate fluid circulation and heat extraction, which is a necessary precursor to further development and commercialisation.

Projects must be in Australia, and will preferably be spread across a diversity of geography, geology and technology. This diversity will assist to demonstrate the robustness of the technology in Australia.

Grant payments will not be claimable for expenditure incurred before the approved project commencement date.

Eligibility

To be eligible for GDP, an applicant must be:

- an Australian-resident company incorporated under the Corporations Act 2001 not exempt from paying income tax in Australia;
- the holder of the Australian geothermal exploration licence permits that the proposed project is contained within;
- able to demonstrate within a period of three months of being awarded a grant that it can fund the costs of the project not met by the GDP as they fall due;
- able to demonstrate access to, or the beneficial use of, any intellectual property necessary to carry out the project;
- prepared to provide the Commonwealth with all data gained during the project. This data will be made publicly available subject to agreed confidentiality periods and terms;
- able to demonstrate the existence of an *Inferred Geothermal Resource* as the drilling target; and
- able to commence the project in the 2008-09 financial year, for applications in the first round of the GDP.

Companies that have previously received funding from other State/Territory or Commonwealth programs for the purposes of deep drilling must declare such funding. The scope of the GDP application must differ from any previous successful applications.

Contact

The GDP is administered through the Department of Resources, Energy and Tourism.

For further information regarding the program please contact:

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Merit criteria

Eligible applications will be assessed against the following eight merit criteria:

Essential

- technical strength of the project (i.e. demonstration of the existence of an *Inferred Resource*);
- technical capability and resources available to the applicant;
- management capability of the applicant;
- financial capacity of the applicant (including submission of a credible project budget);

Desirable

- involvement in consortia to address the issue of drilling capabilities shortages;
- degree to which the project involves technical innovation;
- project contribution to a portfolio of locations funded by the GDP; and
- the additional benefit/leverage that can be obtained from the private sector and from the applicant for the Commonwealth's contribution.

Further information about the merit criteria is available in the *GDP Information Guide*.

How do I apply?

Applicants compete for limited grant funds, based on the merit of their application.

Potential applicants should complete a GDP Expression of Interest form to assist them to determine their suitability. This form is located on the Department of Resources, Energy and Tourism's (RET's) website (www.ret.gov.au).

Potential applicants can then discuss their EOI with the GDP Program Manager. Following this discussion, applicants can proceed to submit their formal application with RET.

Background

Funded through the Renewable Energy Fund, the GDP program will provide up to \$50 million over several years to eligible applicants in the form of matching grants to undertake deep drilling of geothermal proof-of-concept projects.

The GDP aims to assist companies seeking to develop geothermal energy with the cost of drilling, reservoir development and related activities.

In supporting such projects, the GDP will contribute to the development of a sustainable Australian geothermal industry by accelerating electricity production or other industrial uses of geothermal energy.

Proof-of-concept occurs at the stage of a project after a potential geothermal resource has been located. A proof-of-concept project involves drilling an initial deep well to the required depth to reach the desired temperature. If necessary, fracturing of the rock at this depth is undertaken to allow fluid passage and create an effective underground heat exchanger. A second well is then drilled to intersect the reservoir hundreds of metres away from the first hole.

Lastly, fluid flow tests are conducted to establish whether sufficient volumes of water can be circulated and heated to meet requirements for commercial operation. At completion, sufficient information should be available to demonstrate an *Identified or Measured Geothermal Resource*.

Technical Terms

An *Inferred Geothermal Resource* is an area/volume that has enough direct indicators of resource character or dimensions to provide a sound basis for assuming that a body of thermal energy exists, estimating resource temperature and with some indication of extent.

An *Identified Geothermal Resource* is a more reliably characterised volume of rock than the *Inferred Resource*, with sufficient indicators to characterise resource temperature and chemistry, but few direct measures of the extent of resource.

A *Measured Geothermal Resource* is a drilled and tested volume of rock within which well deliverability has been demonstrated, with sufficient indicators to characterise resource temperature and chemistry and with sufficient direct measurements to confirm the continuity of the reservoir.

A *Geothermal Resource* is not commercially viable but may be feasible with current or future technology and prevailing and/or more favourable market conditions.