

22 January 2015

Mr [REDACTED]
[REDACTED]

Dear Mr [REDACTED]

1. I refer to your request of 25 November 2014 for access to information held by Defence Housing Australia under the *Freedom of Information Act 1982 (Cth)*.
2. I am an officer authorised under section 23 of the FOI Act to make decisions in respect of request for access to documents. My decision and the reasons for that decision are set out below.

Background

3. On 25 November 2014 you lodged a Freedom of Information (FOI) request by email, in which you have sought access to information, as below:

‘..a copy of any paper, report, survey or enquiry in relation to Deep Well Direct Exchange (DWDX) Energy Systems, or similar technology which you may have received in relation to our client or its products, together with any correspondence in relation to such report.’

4. DHA acknowledged receipt of your request on 26 November 2014. I wrote to you on 2 December 2014 extending the statutory deadline under section 15(6) of the FOI Act, and again regarding the third party opposing the release of the email. Under section 54A, the third party may request a review of my decision to grant access, however it must be made within 30 days.

Legislative background

5. The Act provides a right of access to information in the possession of Commonwealth agencies, limited only by exceptions and exemptions provided for in the Act.

Decision

6. I have identified a document as falling within the scope of your FOI request listed at Attachment A. Document 1 is partially and conditionally exempt under Section 47F of the FOI Act and disclosure would be contrary to the public interest. Those parts of the document that are not conditionally exempt are to be released.

HEAD OFFICE

Material on which my findings are based

7. I based my findings on the following material:

- The content of the identified documents;
- The relevant provisions of the FOI Act;
- The guidelines published by the Office of the Australian Information Commission under section 93A of the FOI Act (OAIC Guidelines);
- Advice from DHA staff whose duties relate more closely to the matters referred to in the document; and
- The content of your FOI request.

Section 47F – Public interest conditional exemption - Personal Privacy

Section 47F of the FOI Act relevantly provides:

- (1) A document is conditionally exempt if its disclosure under this Act would involve the unreasonable disclosure of personal information about any person (including a deceased person).
- (2) In determining whether the disclosure of the document would involve the unreasonable disclosure of personal information, an agency or Minister must have regard to the following matters:
 - (a) the extent to which the information is well known;
 - (b) whether the person to whom the information relates is known to be (or to have been) associated with the matters dealt with in the document;
 - (c) the availability of the information from publicly accessible sources;
 - (d) any other matters that the agency or Minister considers relevant.

'Personal information' is defined in section 4 of the FOI Act as:

Information or an opinion (including information forming part of a database), whether true or not, and whether recorded in a material form or not, about an individual whose identity is apparent, or can reasonably be ascertained, from the information or opinion.

Disclosure of the personal information contained in the documents would enable the identity of the individuals concerned to be reasonably ascertained.

Liability to pay charges

8. I have decided not to impose any charges.

Rights of review

9. If you do not agree with my decision in relation to the release of documents you are entitled to apply for an internal review of the decision and/or external review by the Australian Information Commissioner. Information on your review rights is at Attachment B.

FOI disclosure log

10. In accordance with the requirements of section 11C of the FOI Act, Defence Housing Australia is required to publish, on its website, information released under the FOI Act within 10 working days of the applicant being given access to documents. Defence Housing Australia will also publish the decision notice, with any personal and business information deleted. The information published does not include personal information or the business, commercial, financial or professional affairs of any person if publication of that information would be unreasonable. Other information not published also includes that which the Australian Information Commissioner determines is unreasonable to publish.

Further information

11. Please do not hesitate to contact me if you have any questions about this matter.

Yours sincerely



Pip Sackley
Executive Officer

Defence Housing Australia Freedom of information - Your review rights

If you disagree with the decision made by Defence Housing Australia (DHA) under the *Freedom of Information Act 1982* (the Act), you can ask for the decision to be reviewed. You may want to seek review if you sought certain documents and were not given full access, if you have been informed that there will be a charge for processing your request or if your application to have your personal information amended was not accepted.

Internal review

If DHA makes an FOI decision with which you disagree, you can ask DHA to review its decision. The review will be conducted by a DHA officer at a more senior level than the original decision maker. There is NO charge for internal review.

You must apply within 30 days of being notified of the decision, unless you have sought an extension from DHA.

DHA must make a review decision within 30 days. Where DHA has not met its review obligation, you may then approach the Information Commissioner.

Internal review is not available if the Minister or the principal officer of the agency made the decision personally.

How to apply for internal review

You must apply in writing and should include a copy of the notice of the decision provided and the points to which you are objecting and why. You can lodge your application in one of the following ways:

Post: Company Secretary
 Defence Housing Australia
 26 Brisbane Avenue
 BARTON ACT 2600

Email: foi@dha.gov.au

External review

When can I go to the Administrative Appeals Tribunal (AAT)

If eligible, you may have the option of seeking a review by the AAT. AAT application fees may apply. For information on AAT procedures you can visit www.aat.gov.au.



Making a complaint

Complaints about FOI administration by government, including DHA are handled by the Commonwealth Ombudsman. For information on Commonwealth Ombudsman procedures you can visit www.ombudsman.gov.au.

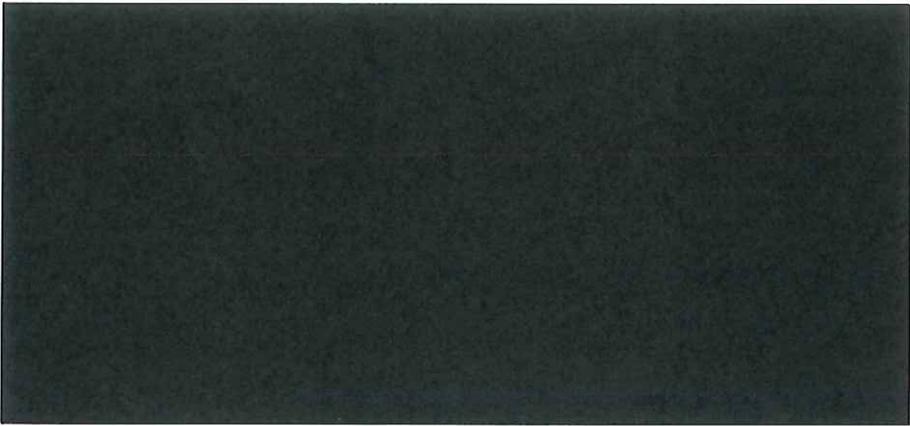
Defence Housing Australia FOI contacts

Defence Housing Australia
26 Brisbane Avenue
BARTON ACT 2600

Ph: +612 6217 8401
Email: foi@dha.gov.au
Website: www.dha.gov.au

Sackley, Pip

From: Vinning, Katische
Sent: Tuesday, 2 December 2014 11:23 AM
To: Sackley, Pip
Cc: Gallagher, Vern
Subject: FW: DHA Contribution to EdDGE Program
Attachments: AGEG-GeoexchangeInquiry.pdf



out of scope

From: Donald Payne [mailto:donald@directenergy.com.au]
Sent: Friday, 22 August 2014 2:55 PM
To: Vinning, Katische; [redacted] **Section 47F**
Cc: [redacted] Artemiou, George; Morris, Neil
Subject: RE: DHA Contribution to EdDGE Program

Hi Katische,

Find attached Australian Geothermal Energy Group (AGEG) survey of Deep Well Direct Exchange (DWDX) systems (such as [redacted] is proposing) which highlights the risk factors & instances of failure – there are a number more which this survey didn't capture but that should give you sufficient insight.

Will follow up with edDGE on monitoring for the Canberra Modular Housing project.

Best Regards,

Dr Donald Payne

Technical, Science & Policy Specialist
B.Sc (hons)/B.E (elec. Hons). PhD (physics) U.Melb

Mobile [redacted]

Section 47F



4/820 Princes Hwy
Springvale, VIC 3171

Phone: 03 9547 6603
<http://www.directenergy.com.au>

Low energy heating & cooling technologies



From: Vinning, Katische [mailto:katische.vinning@dha.gov.au]
Sent: Wednesday, 13 August 2014 5:13 PM
To: [redacted] **Section 47F**



GeoExchange Installations in Australia - Inquiry

Technical Interest Group 7: Direct Use & Geothermal Heat Pumps

The Australian Geothermal Energy Group (AGEG) is an industry group representing both hot rock & geexchange resources. In November 2005 Primary Industries and Resources South Australia (PIRSA) was invited by the geothermal sector to be the Contracting Party for Australia's membership in the International Energy Agency's Geothermal Implementing Agreement (IEA-GIA). PIRSA also acts as the Secretariat for the Australian Geothermal Energy Group (AGEG), formed in 2006 to provide financial and intellectual support for Australia's membership in the IEA-GIA. AGEG members have a common interest in sharing information to commercialize Australia's geothermal resources at maximum pace and minimum cost in Australia's competitive energy markets.

Geexchange is catered for within AGEG's Technical Interest Group (TIG) 7 "Direct Use of Geothermal Energy (including Geothermal Heat Pumps)". It is important that performance and installation standards are developed and maintained. AGEG's code of ethics and conduct appear below and it is important that any breaches are reported.

AGEG is conducting a survey of geexchange installations throughout Australia and feedback to date has identified that Deep Well Direct Expansion (DWDX) technology is putting the Australian geexchange market and reputation at risk. Specific issues surrounding this technology's installations include:

- Discontent amongst customers, builders, HVAC contractors & engineers
- Mis-representation of product performance, capabilities & delivery timelines
- Questionable technical viability and performance verification
- Excess refrigerant charge which can exceed AS/NZS 1677.2 toxicity levels
- Lack of confidence in geexchange generally due to installer mis-application
- Compressor manufacturer dissatisfaction with their product's application

Technical concerns

1. DWDX systems exceed maximum refrigerant pipe lengths (return) in a commercial refrigeration system. An accepted maximum (modulo p-traps and design) is 150m (500ft) - the 90m (300ft) return run is already 180m (600ft) and they often have another 90m (300ft) horizontal run. Oil-return is further hampered by the systems not meeting the

- 5m/s (16ft/s) minimum velocities up risers (which the earth loops are). Compressor failure in DWDX systems is circa 10/month on circa 100 installed systems.
2. DWDX systems use excessive quantities of refrigerant: e.g. 60 kg (150 lb) for a 21 kW (6-ton) unit. Their ground loops are likely 2/3 full of liquid refrigerant. This results in likely violation of maximum allowable toxicity levels in confined spaces set by AS/NZS 1677.2 if they have a refrigerant leak in the FCU.
 3. Emerson Climate technologies refuses to sell compressors into DWDX systems as they detract from the Copeland compressor brand.
 4. Parker Hannifin have also expressed concerns about DWDX systems.

Cases of Failure

The survey indicates that almost all DWDX installations have failed or are in the process of failing within 1-2 years. An abridged list of examples serves to illustrate the substantial risks posed by this technology.

Amberley RAAF Base 21 Squadron & Super Hornets, Qld
Ongoing failures of compressors.

Randwick Barracks Swimming Pool, NSW
10 of 11 Geothermal Heat Pumps failed, 9 of which lost their refrigerant charge.

Royal Botanic Gardens, Cranbourne
All 7 systems have failed.

Commercial Office Building, Queensland
All systems have failed.

Tasmanian Public Schools (Windemere & Romaine Park Primary)
Part way through completion the project was abandoned & never completed.

Solomon Islands High Commission
Abandoned use of DWDX technology due to issues confronted.

References

There are numerous examples and an abridged list of customers, builders & engineers consulted appears below:

- [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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- [REDACTED]

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For an independent view on the different direct geothermal technologies, contact edDGE (<http://www.eddge.com.au>) Education & Demonstration of Direct Geothermal Energy a \$1.6 million Victorian State Government, Department of Primary Industries funded partnership between University of Melbourne and two industry partners.

Specifically, [REDACTED]

Section 47F

This report represents a work-in-progress but we trust that it will assist with further reviews of the geothermal industry in Australia & worldwide.

Australian Geothermal Energy Group Technical Interest Group 7

Code of Ethics Statement for the AGEG

Preamble The Australian Geothermal Energy Industry will conduct itself as an ethical, robust and resilient industry, prepared and ready to make a significant contribution to the national and international energy supply system with clean energy.

The Industry is represented in Australia by the Australia Geothermal Energy Association (AGEA) and the whole of the geothermal sector (industry, research organisations and government agencies) is represented by the Australian Geothermal Energy Group (AGEG).

AGEA and AGEG strongly support that all their own activities and the activities of their members shall be conducted with integrity, and with respect and require our members to adhere to the following Code of Conduct.

The AGEG Code of Conduct

1. In pursuit of their purpose, the advancement of geothermal energy use, members of AGEG shall only act in ways that enhance the reputation of the Industry and all its members in order to foster beneficial outcomes for people and for the environment.
2. All members will be truthful in statements about the activities of their own companies and research institutions and about the activities of the activities of other members of the Industry.
3. All members of AGEG shall treat each other and all external stakeholders with the utmost respect.

The AGEG will develop disciplinary procedures and consequences for members who breach this Code.