

13 July 2009

To Ministry for the Environment  
PO Box 10362  
Wellington 6143  
New Zealand

Dear Sir / Madam

**RE: Submission on the Climate Change (Stationary Energy and Industrial Processes) and (Unique Emissions Factors) Regulations 2009 (Drafts for Consultation)**

Top Energy Group welcomes the opportunity to submit on the proposed Climate Change Regulations. We offer our specific submission as detailed below. In addition we would like to record our support of the submission from the New Zealand Geothermal Association.

**1. *Geothermals should be exempt from the ETS***

Many geothermal fields across New Zealand naturally emit a level of carbon dioxide as part of their normal existence. When a power station taps into this field then the natural emissions are reduced. The net effect of this is difficult to monitor. As a result of this factor, costs of assessing and administration and also because in relative terms Geothermal produce low levels of carbon dioxide compared to fossil fired power generators Top Energy propose that geo-thermal should be excluded from the proposed climate change regulations.

**2. *If Geothermals are included then there should be a threshold with emissions measured on a project by project basis.***

In spite of our proposal above Top Energy recognises that there are emissions of carbon dioxide and methane associated with the use of geothermal energy. Generally these are very low compared to fossil fired generation but there is a wide range from site to site as can be seen in the table below.

| Field        | Gas % | CO <sub>2</sub><br>(kt/year) | CO <sub>2</sub><br>(g/kWh) |
|--------------|-------|------------------------------|----------------------------|
| Ohaaki       | 2.86  | 86                           | 249                        |
| Wairakei     | 0.59  | 44                           | 32                         |
| Poihipi Road | 0.43  | 7                            | 35                         |
| Rotokawa     | 2.00  | 22                           | 105                        |
| Mokai        | 1.30  | 28                           | 66                         |
| Kawerau      | 2.82  | 59                           | 226                        |
| Ngawha       | 1.32  | 46                           | 597                        |

Source: New Zealand Geothermal Association

Top Energy believes that any scheme that is introduced in New Zealand should fairly reflect the magnitude of the emissions on a project specific basis rather than a default emission. This recognises that such emissions are varied and are readily measured as well as constant enough with time that intermittent monitoring is sufficient.

Top Energy therefore supports the introduction of project-specific unique emissions factors, and thresholds that exempts small users from charge

Thank you for the opportunity to submit on this very important issue.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Russell Shaw', with a long, sweeping horizontal stroke extending to the right.

**Russell Shaw**  
Chief Executive  
Top Energy Group