Submission Template: Emissions Reduction Fund draft method determination

- Coal mining: draft method determination
- Coal mining explanatory document
- Landfill gas: draft determination
- Landfill gas explanatory document

Overview
This submission template should be used to provide comments on a draft Emissions Reduction Fund method determination.

Contact Details

<table>
<thead>
<tr>
<th>Name of Organisation:</th>
<th>RM Business Consulting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Author:</td>
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<td>Website:</td>
<td></td>
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<tr>
<td>Date:</td>
<td>2014-09-30</td>
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</tbody>
</table>

Confidentiality
All submissions will be treated as public documents, unless the author of the submission has requested that the submission not be published on the grounds that its publication could reasonably be expected to substantially prejudice the commercial interests of the author or another person. Public submissions will be published in full on the Department of the Environment’s website, including any personal information of authors and/or other third parties contained in the submission. If any part of the submission should be treated as confidential then please provide two versions of the submission, one with the confidential information removed for publication.

A request made under the Freedom of Information Act 1982 for access to a submission marked confidential will be determined in accordance with that Act.

Do you want this submission to be treated as confidential?  
[ ] Yes  
[ ] No

Submission Instructions
Submissions should be made by close of business on the day the public consultation period closes for the draft method determination. This date will be specified on the Department's website: www.environment.gov.au. The Department reserves the right not to consider late submissions.

Where possible, submissions should be lodged electronically, preferably in Microsoft Word or other text based formats, via the email address – EmissionsReductionSubmissions@environment.gov.au

Submissions may alternatively be sent to the postal address below to arrive by the due date.

ERF Governance, ERF Division  
Department of the Environment  
GPO Box 787  
CANBERRA ACT 2601
DESTRUCTION EFFICIENCY DRIVES EXCESSIVELY EXPENSIVE SOLUTIONS

In these documents, a requirement is set at minimum 98% destruction efficiency. This limitation is unwise, as the to date globally proven most efficient destruction method, both technically and financially, is processing by thermal oxidisers who typically have a destruction efficiency of 95+% of the processed air. See for example a 2012 presentation by US EPA (link: [http://www.smenet.org/docs/meetings/papers/MineVent2012/vent2012p62.pdf](http://www.smenet.org/docs/meetings/papers/MineVent2012/vent2012p62.pdf)).

Processing of high volume emission of low concentration VOC’s, such as methane, is very well established in industry by thermal oxidation in devices called thermal oxidisers, which can in a very energy efficient way oxidise emissions of minimum 0.2% methane concentration without the addition of supplementary gas or other oxidation energy. Since the 1970’s, tens of thousands of these devices have globally been installed in industries such as chemical, petrochemical, pharmaceutical, paper and biogas.

Thermal oxidation devices capable of achieving destruction efficiencies in the high 99’s have been successfully developed and generally applied. To achieve the last few % is, however, very costly and has therefore been reserved for processing of extremely toxic gases or of very bad odour. For more normal oxidation cases, destruction efficiencies of 95+% are globally being typically applied.

Since the purpose of reducing methane emissions is to limit the effect on greenhouse gas emissions, there is no reason to aim at the very high destruction efficiencies requiring exceptionally high costs of processing equipment. It is better to allow for more cost efficient solutions and therefore also for more emission reduction projects to be realised.

COMBUSTION STIPULATED LIMITS NEW DEVELOPMENT

To efficiently reduce large emissions of methane, especially in low concentrations, has proven to be technically very difficult. So far, only thermal oxidation or combustion has proven cost and technically efficient. But there could be other ways to be developed, such as chemical oxidation or biological processing.

In the definition section, the word “oxidation” should be added to the meaning of “combustion”.

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Name of draft method determination: [insert name of draft method determination]

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General comments

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Specific comments – please insert your specific comments below, listed against the part of the draft method determination to which they apply.

*Note: In some cases the draft Explanatory Statement may flag specific issues for consideration by stakeholders.*

<table>
<thead>
<tr>
<th>Draft method determination reference</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal mining explanatory document</td>
<td>The default methane destruction efficiency, DE, is set to 98%. This is in practice disqualifying most of the industrial oxidising equipments applied in tens of thousands of industrial installations around the world. It allows only for the most expensive solutions with the effect that the technical solutions allowed in Australia would be at unnecessarily excessive cost.</td>
</tr>
<tr>
<td>Landfill gas explanatory document</td>
<td>If a value is set as a requirement on destruction efficiency, it should not be higher than around 90%, since setting a too high value on required destruction efficiency will prevent the development of new technical solutions. This would include the globally competitive thermal oxidiser solutions (which are found at 95-97% DE) and allow some head room for development of new competitive processes.</td>
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<td></td>
<td>There is no need to set a limit for destruction efficiency at all, since a low DE value would yield poorly in the financial evaluation of a public tender. A solution with a low DE value would need to be very cost efficient indeed – in which case it could make sense to explore!</td>
</tr>
<tr>
<td>Coal mining: draft method determination</td>
<td>All references to a requirement of minimum 98% destruction efficiency should be removed completely or replaced with a required value around 90%. This in order not to force the Australian market and Government into excessive costs for unjustifiably expensive solutions.</td>
</tr>
<tr>
<td>Landfill gas: draft determination</td>
<td>The documentation stipulates that methane destruction is to be performed by combustion. This limits the potential technical solutions available to the Australian market and Government, presently and in the future.</td>
</tr>
<tr>
<td>Coal mining explanatory document</td>
<td>There is good research globally on new methods of methane destruction in the making, also in Australian research institutions.</td>
</tr>
<tr>
<td>Landfill gas explanatory document</td>
<td>The documentation of the ERF should not limit Australian access to these new potentially very interesting technologies and solutions.</td>
</tr>
</tbody>
</table>
Do you consider projects that would apply the draft method are likely to cause significant adverse environmental, economic and/or social impacts?

If so, what existing frameworks (such as regulatory frameworks or policies) are in place to address any such impacts?

Limiting acceptable solutions to destruction efficiencies of minimum 98% would only allow unnecessarily expensive emission reductions solutions, and drastically limit applicable competitive solutions. This would drive the cost for Australian methane emission reduction projects to excessive costs.

Limiting methane emission reduction technical solutions to strictly combustion will exclude the Australian market from potentially very interesting solutions, from domestic Australian or from external origin.