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Mr Hannes Partl
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Dear Hannes

I write with respect to Hyder Consulting's recent submission (sub. DR147) to the Waste Generation and Resource Efficiency inquiry. Thank you for making a submission and for your agreement with some of the report's conclusions. However in your submission you say that other parts of the Commission's report are very significantly flawed and that the Commission appears intent on providing a politically derived conclusion irrespective of the environmental merits of resource recovery. I am disappointed that you have gained this impression and would like to assure you that we are using our best endeavours to deliver an accurate and valuable report to Government, and consistent with our charter, to find ways to improve economic, environmental and social outcomes for the whole community. As you say "estimation and valuation of externalities associated with the full range of environmental impacts throughout the life cycle of materials and products – and including final disposal – is very complex", nonetheless it is very important to our inquiry. Getting all this right relies on us assembling the best available information and analysing it in a sound and transparent manner. This is of course the objective behind our publication of a draft report and seeking wide public comment on our work and conclusions to date. I am writing to request that you assist us further in this regard. Your submission says that we have made some factual and analytical errors in our draft report and, if this is the case, we would greatly appreciate it if you could explain these to us in enough detail so that we can rectify any errors or omissions in our final report.

It seems to us that perhaps one of the most important of the alleged errors concerns the Commission's interpretation of Nolan-ITU's report on the benefits of AWTs compared to landfills (Nolan-ITU 2004). In our draft report we tried to estimate the costs of the various externalities that landfill disposal might cause, including from leachate, greenhouse gas emissions, non-greenhouse gas emissions and amenity loss, and referred to the Nolan-ITU (2004) study and other reports. Your suggestion that our analysis is wrong presumably relates in part to our interpretation of Nolan-ITU (2004) as to its underlying estimates of the external cost of leachate and non-greenhouse gas from a best practice landfill (that is, \$89 and \$93 per tonne of waste, respectively), as discussed between Hyder Consulting and Commission staff by phone on 19 June. The fact that these figures were not taken directly from the Nolan-ITU report, and that some assumptions were made in their derivation,

is acknowledged in the draft report (pp. 328–9). The reason we felt we had to do this is that we requested the disaggregated data from Global Renewables and, in a response prepared by Hyder Consulting, the data were not provided (sub. 116). It may be that you did not have time to compile these data, or that you regarded them as commercial-in-confidence. Whatever the reason, you did not provide this data which would have removed the need we felt to make our own estimates. If you possibly can, would you please provide the Commission with the disaggregated data — that is, fully answer question two from the original list of questions to Global Renewables?

You also suggest that our analysis comparing two Nolan-ITU reports with other reports ‘where environmental externalities feature’ is wrong. If your point is that these other reports did not address the full breadth of the externalities that might be present, all I can do is reiterate that our purpose in referring to all reports was to try and understand how substantial these different components might be. Furthermore, we are confused by your claim that the Nolan-ITU (2004) study is consistent with a report by the New South Wales EPA (EPA NSW 1996, *Regulatory Impact Statement Proposed Waste Minimisation and Management Regulation*). The EPA estimates of externality costs of landfill disposal do not include components for leachate or non-greenhouse gases. The EPA’s explanation for this was that the ‘external costs given are those which the [proposed management] guidelines [for landfills] cannot prevent’ (EPA NSW 1996, p. 59). The NSW EPA’s view that appropriate landfill regulation can prevent external costs for leachate and non-greenhouse gases appears to us to be very relevant to our inquiry. This view seems to be in stark contrast to Nolan-ITU (2004), which estimated that the external costs of leachate and non-greenhouse gases from a best practice landfill were around \$180 per tonne of waste (we have not been able to ascertain the exact figure, as discussed above). Could you please advise how the Nolan-ITU report can be ‘entirely consistent’ with the one by the New South Wales EPA, as is claimed in your submission?

You mention that it is not correct to characterise Nolan-ITU/Hyder Consulting methods as valuing ‘potential impacts’. Does this mean that you regard the values as being appropriately adjusted for risk? This raises the more general point about the use of life cycle assessment (LCA) models as an input in undertaking cost-benefit analysis. LCA is clearly a useful ‘material accounting’ tool and I take your point that there are well developed standards for undertaking LCA. You acknowledge that after the LCA stage, results can be aggregated into a single indicator, one of which you refer to as Monetisation. I take it that monetisation means that all external costs associated with material flows at all stages of the product life cycle are thus accounted for. The problem here seems to be one of translating the presence of a material at any point in the cycle with environmental externalities. It seems to be one thing to account for materials and yet another to put a value on the environmental impacts. This would seem to require some understanding of the exposure pathways by which those materials might cause damage to humans and the environment and the probability of that damage occurring. This is what we were attempting to communicate in distinguishing between potential and expected (or actual) outcomes.

From the description of your approach to estimating the externalities of landfills I am still left with the impression that you have effectively painted a worst case scenario — one in which there is a certainty that all pollutants escape from the landfill and cause environmental damage. Could you please clarify how risk has been incorporated into your analysis? And how would you respond to the proposition that leachate from a best practice landfill may not cause any significant environmental damage where there is no exposure pathway to humans or sensitive ecosystems (for example, if the leachate were confined in the landfill indefinitely, or was appropriately treated and discharged to sewers, or leaked through the landfill liner but was confined by impermeable

bedrock)? Further, it seems that another way to “reality test” the estimates that you have made about the externalities associated with leachate is to compare these costs to the potential costs of reducing the risk of escape of leachate to a very low level. Taking an extreme case, the likely cost of higher integrity membranes, impervious concrete linings etc (as might be considered in the case of a hazardous waste disposal facility) might well be lower than your estimates of the externalities.

To take my point about risk still further, I note that your submission does not directly contest our analysis of the external costs of benzene and methyl chloroform emissions to air from landfill. Our interpretation of Nolan-ITU (2004) is that your estimate of the external costs of emissions to air from landfills for these two chemicals is around \$64 and \$13 per tonne of waste respectively (the vast majority, it would seem, of your assumed non-greenhouse gas emissions damage). Given the low concentrations and exposure pathways involved, we formed the view that exposure to these chemicals from landfills would not pose a significant risk to human health or the environment and that the external costs were, therefore, close to zero. We would be most interested to receive a specific critique of our analysis on this. A specific commentary on our analysis of these matters would be very useful and more helpful than general references to internationally recognised standards. We hope that you are able to provide this to help us to eliminate any errors of fact or analysis which you are concerned that we have made.

I have concentrated here mainly on instances where your submission claims that there are errors in the draft report. However, your submission also contains several comments about the draft report that we believe are incorrect or misleading. For example, the claim that we reject established methods for externality valuations that rely on direct and indirect measures of public opinion is simply not correct. Again if you can be specific about the reasons why you have formed this opinion we will endeavour to correct any misunderstanding in our final report.

We greatly appreciate Hyder’s interest in this inquiry. I hope that we both share a common desire to ensure that policy makers in this field are informed by best practice, factual, and accurate analysis. I want to ensure that our final report contains such analysis. Since you feel that we haven’t yet got it right I hope that you will provide us with the specific information that we have requested to allow us to correct any errors or omissions. I thus hope that you will respond to this letter in time for us to make any necessary corrections and additions to our report. In the interests of transparency we would like to make your response to this letter a formal submission, however if there are some aspects which are “commercial in confidence” we would of course respect this. These issues are complex but important and for this reason would not be dealt with very effectively at the public hearings. However, I would of course encourage you, if you wish, to supplement any response to this letter by participating at the public hearings. I look forward to hearing from you.

Yours sincerely

Philip Weickhardt
Presiding Commissioner