Land and Resources Tribunal

REGISTRY: Brisbane
NUMBERS: AML 207/2006
ENO 208/2006
TENURE IDENTIFIER: 4761-ASA 2

Applicant: **XSTRATA COAL QUEENSLAND PTY LTD & OTHERS**

AND

Respondents: **QUEENSLAND CONSERVATION COUNCIL INC, MACKAY CONSERVATION GROUP INC**

AND

Statutory Party: **ENVIRONMENTAL PROTECTION AGENCY**

QUEENSLAND CONSERVATION COUNCIL'S SUBMISSIONS ON FURTHER DOCUMENTS RAISED BY TRIBUNAL

Introduction

1. The Tribunal has requested submissions concerning two further documents that have come to the Tribunal's attention:

   (a) *The Stern Review: A Dual Critique*, Vol 7 No 4, World Economics Journal, October-December 2006, pages 165-232.

   (b) *Climate Change 2007: The Physical Science Basis (Summary for Policymakers)*, Intergovernmental Panel on Climate Change Working Group 1 Fourth Assessment Report, Paris, February, 2007, pages 1-21.

Document 1: The Stern Review: A Dual Critique

2. The *Stern Review: A Dual Critique* is in two parts. The first part disputes the science of climate change as accepted by The Stern Review. The second part criticises the economic analysis conducted in the Stern Review. The two parts are inter-related by the fact that the second part assumes that the criticisms made in the first part of the critique are valid.

3. QCC submits that the Tribunal should not have regard to this document in relation to the scientific evidence of global warming and climate change as it is contrary to the uncontested evidence of Professor Lowe,[1] Professor Hoegh-Guldberg[2] and

[1] Professor Ian Lowe, "A brief summary of the science of global warming and climate change" (15 January 2007), pp 3-7.

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Dr Williams[3] presented during the hearing regarding these issues. Dr Saddler[4] also did not doubt the nature of greenhouse gas emissions contributing to global warming and climate change in his calculations of emissions from the mine. Similarly, Mr Keogh did not doubt the nature of global warming and climate change in his evidence regarding greenhouse offsets.[5]

4. None of QCC's witnesses were challenged in relation to these aspects of their evidence and none of the parties questioned the threat posed by global warming or climate change or the scientific certainty regarding climate change.

5. The expert witnesses for the applicant, Dr Turatti and Mr Stanford, did not dispute the science of global warming or that the greenhouse gas emissions from the mine will contribute to it. The Joint Expert Report of Dr Turatti and Dr Saddler noted:

> "Dr Turatti agrees with the description of the global greenhouse effect given on page 5 of Dr Saddler's report."[6]

6. Mr Stanford noted in his report that:

> "There is now strong evidence to suggest that the world is growing warmer, the climate is changing and that this is related, at least in part, to anthropogenic causes. The emission of greenhouse gases, particularly carbon dioxide (CO_2), has increased significantly since the beginning of the industrial revolution, and as the overwhelming majority of climate change scientists suggest, this has created an 'enhanced greenhouse effect'. There is broad agreement that the way to address the problem is to reduce net emissions of greenhouse gases so as to stabilise and later reduce carbon concentrations in the atmosphere."[7]

7. QCC submits that the Tribunal should also not have regard to this document in relation to the economic critique of the Stern Review as both Mr Stanford[8] and Mr Norling[9] accepted the Stern Review's findings and did not challenge any part of its analysis. Mr Stanford referred to the Stern Review as "the major report on the economics of climate change."[10] While Mr Norling was challenged in cross-examination as to his summary of the Stern Review, the applicant's own witness on economic issues, Mr Stanford, did not doubt the correctness of the report itself and expressed approval of it during cross-examination.

8. In the circumstances, if the Tribunal wishes to consider the economic impacts of climate change and is not satisfied with the summary provided by Mr Norling, the

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[2] Professor Ove Hoegh-Guldberg, "Likely ecological impacts of global warming and climate change on the Great Barrier Reef by 2050 and beyond" (19 January 2007), especially pp 7-10.
[3] Dr Stephen Williams, "Likely ecological impacts of global warming and climate change on the Wet Tropics World Heritage Area" (24 January 2007), especially paragraph [9].
[4] Dr Hugh Saddler, "Greenhouse gas emissions associated with the proposed Newlands Wollombi No 2 Project" (12 January 2007), pp 5 and 16.
[5] Mr Ben Keogh, "Greenhouse gas emission offset opportunities: Newlands Coal Mine Wollombi No 2 Surface Area Project" (15 January 2007).
[6] Joint Experts Report – Drs Fred Turatti and Hugh Saddler (18 January 2007), p 1.
[7] Affidavit of Jonathan Geoffrey Stanford (12 January 2007), p 3.
[8] Affidavit of Jonathan Geoffrey Stanford (12 January 2007), p 4.
[9] Mr Jon Norling, "Economic analysis of greenhouse emissions from the proposed extension of the Newlands Coal Mine, Wollombi No 2 Surface Area" (January 2007), pp 7-9.
[10] Affidavit of Jonathan Geoffrey Stanford (12 January 2007), p 4.

Tribunal may consider the Stern Review directly. An electronic copy of the Stern Review is available at <http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm>. QCC can also provide a hard copy of the printed report if requested by the Tribunal. The correctness of the Stern Review itself is not at issue.

9. If the Tribunal's question regarding the dual critique of the Stern Review relates to concerns that the Tribunal might have in relation to the scientific uncertainty of climate change in the future and the contribution that the greenhouse gas emissions from the mining, transport and use of the coal from the mine will make to global warming, the Tribunal may have regard to the Precautionary Principle. As noted at paragraphs 93-94 of QCC's outline of argument, the Precautionary Principle is the second principle of ecologically sustainable development as stated in the *National Strategy for Ecologically Sustainable Development*. It provides, "where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation."[11] The principles of ecologically sustainable development were raised in ground 4 of QCC's grounds of objection.

10. As was noted at pararaph 93 of QCC's outline of argument, failing to consider the impacts of greenhouse gas emissions from the mine contributing to climate change because the impacts of climate change or the contribution of these particular emissions are uncertain, would be inconsistent with the Precautionary Principle. Pain J observed in *Gray v Minister for Planning* [2006] NSWLEC 720 at [131] that:

> "inherent in the precautionary principle … is the need for careful evaluation to avoid serious or irreversible damage to the environment and an assessment of the risk weighted consequences for various options. The role of environmental assessment is to assist in providing information to the decision-maker to enable him or her to consider that scientific uncertainty in relation to the serious, irreversible environmental threat, in this case climate change/global warming … Amongst several matters identified as necessary to include in environmental assessments to inform the precautionary approach [are] that long term, ongoing or cumulative impacts of a project including the use and disposal of associated products and by products should be assessed."

Document 2: IPCC Fourth Assessment Report

11. The second document referred to by the Tribunal is a summary released by the Intergovernmental Panel on Climate Change (IPCC) of the first of three parts of the IPCC's Fourth Assessment Report (FAR). Professor Lowe noted that the IPCC is "the leading international body on climate change science."[12] It is appropriate that the Tribunal refer to this document as a number of witnesses referred to the IPCC Third Assessment Report (TAR) in their evidence and the document updates some aspects of the TAR.

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[11] See particularly in relation to the Precautionary Principle, *Telstra v Hornsby Shire Council* [2006] NSWLEC 133; (2006) 146 LGERA 10.
[12] Lowe, n 1, page 6, paragraph [14].

12. The summary concerns a report by Working Group 1 (WG1) on the physical science basis of climate change. It was released by the IPCC on 2 February 2007 and the full WG1 report is not yet publicly available.[13]

13. The context of the summary and anticipated release of the FAR is explained on the IPCC website at <http://www.ipcc.ch/press/prwg1.htm> as follows:

> "The WGI report, 'Climate Change 2007: The Physical Science Basis', assesses the current scientific knowledge of the natural and human drivers of climate change, observed changes in climate, the ability of science to attribute changes to different causes, and projections for future climate change. ...
>
> The WGI report does not cover the impacts of climate change or options for the mitigation of climate change. These aspects will be covered in subsequent reports by Working Group II (impacts, adaptation and vulnerability), and Working Group III (mitigation options) to be finalised respectively in early April and early May this year In addition a Synthesis Report covering key findings of all three Working Groups will be released in late 2007."

14. The summary of the physical science basis of climate change provided by the IPCC broadly confirms the evidence of Professor Lowe regarding the nature of climate change. Professor Lowe relied in his evidence upon the IPCC's Third Assessment Report (TAR), released in 2001, and noted the imminent release of the FAR at the time of writing his report.[14] As Professor Lowe expected, the IPCC's assessment in the FAR broadly supports its 2001 assessment in the TAR within narrower bands of uncertainty.

15. The summary notes that the IPCC has concluded that mean global surface temperatures have increased by 0.74 ± 0.18°C in the past 100 years (1906-2005).[15] It also concluded that most of the observed increase in globally averaged temperatures since the mid-20th century is very likely[16] due to the observed increase in anthropogenic greenhouse gas concentrations.[17] Based on improved analytical methods it concluded that raising the atmospheric concentration of CO_2 to double pre-industrial levels, to 550 parts per million (ppm), is likely to result in increased mean surface temperatures in the range of 2 to 4.5°C with a best estimate of about 3°C.[18] Based on the current rate of increase in CO_2, of 1.9 ppm per year, an atmospheric concentration of CO_2 of 550 ppm and increased mean surface temperature of about 3°C will be reached by 2100.

16. Professor Hoegh-Guldberg and Dr Williams relied upon the 2001 TAR in their evidence[19] but as the latest IPCC report confirms the projections contained in the 2001 report, their evidence is materially unaffected by the new report.

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[13] IPCC, *Climate Change 2007: The Physical Science Basis – Summary for Policymakers – Contribution of Working Group I to the Fourth Assessment Report of the IPCC* (IPCC, Paris, 2007). Available at <http://www.ipcc.ch/> (viewed 6 February 2007).
[14] Lowe, n 1, page 6, paragraph [14].
[15] IPCC, n 13, page 5.
[16] "Very likely" was defined in the report as >90% probability.
[17] IPCC, n 13, page 10.
[18] IPCC, n 13, page 12. "Likely" was defined in the report as >66% probability.
[19] Hoegh-Guldberg, n 2, p 7; Williams, n 3, paragraph [9]. Note: Dr Williams refers to the 2001 TAR as "Houghton *et al*. 2001" after the lead author of the IPCC report, Sir John Houghton.

17. The IPCC summary report makes very clear statements about the probability of its conclusions being correct, using terms such as "extremely likely", "very likely", etc. The IPCC does not use the term "certainty" (meaning 100% probability of occurrence) at any stage in its summary report. This language recognises that, like any complex science, there are levels of uncertainty in relation to global warming and climate change. This should be expected in an area that Professor Lowe described as "very complex."[20] Again, if the Tribunal is concerned about the uncertainty of the climate change in the future and the contribution that the greenhouse gas emissions from the mining, transport and use of the coal from the mine will make to global warming, the Tribunal may have regard to the Precautionary Principle, noted above.

CHRIS MCGRATH
Junior counsel for QCC[21]
9 February 2007

[20] Lowe, n 1, paragraph [2].
[21] Stephen Keim SC is currently on annual leave and unable to respond within the timeframe requested by the Tribunal. Professor Lowe was also not contactable.