

Negative Emissions Energy and CO₂ Levels

Aroon PARSHOTAM^a, Ian ENTING^b, Peter READ^c

^a *Mathematics Dept., Massey University, Palmerston North, NEW ZEALAND*

^b *ARC Centre of Excellence for Mathematics and Statistics of Complex Systems (MASCOS), The University of Melbourne, Melbourne, AUSTRALIA*

^c *Applied and International Economics Dept., Massey University, Palmerston North, NEW ZEALAND*
Corresponding author: "Aroon Parshotam" <A.Parshotam@massey.ac.nz>

Simulation modelling with FLAMES demonstrates BECS technology in reducing Carbon in atmosphere (C_{at}) towards pre-industrial levels under strong land use change policy e.g. motivated by Abrupt Climate Change (ACC) precursor signals [1]. An important limitation of the analysis is that the response of the carbon cycle to net emissions is represented as relaxation, with single time constant, to pre-industrial levels. This limitation was noted and it was suggested, on the basis of comparing earlier studies of emission reductions, that the differences could be significant [2]. The present paper gives a more comprehensive analysis of the issues and gives an approximate recalculation of the results in [1].

[1] Read, P., and Lermitt, 2004. Bio-Energy with Carbon Storage (BECS): a Sequential Decision Approach to the threat of Abrupt Climate Change. *Energy*. In press (www.sciencedirect.com EGY1413).

[2] Parshotam and Read, 2005. CO₂ levels under BECS (Bio-Energy with Carbon Storage) with improved C dynamics. Submitted to *Mitigation and Adaptation Strategies for Global Change*, Special Issue "Abrupt Climate Change and Greenhouse Gas Emissions: contributions to the Expert Workshop, Paris, 30.ix.04 – 1.x.04.

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