

IMPROVING THE FUTURE PERFORMANCE OF BUILDINGS

Submission to Productivity Commission Study

I understand the study to be concerned with assessing whether overall building cost considerations (including energy and waste) are adequately incorporated in decision-making processes related to commercial buildings.

My interest in this topic stems from my current PhD studies (p/time) at the University of SA. I am assessing whether incorporation of 'full community costs' or externalities (presently uncoded) in the property decision process would advantage refurbishment in comparison to new construction.

In particular, I am focusing upon the costs associated with gross excesses in the supply of new office buildings during a 'boom', the vacancies associated with the 'bust', and existing buildings 'displaced' by new construction.

For example, the Adelaide office market was oversupplied by over 200 000 sq m during the late '80s boom, and current office vacancies are still about 338 000 sq m (including withdrawn space which is omitted from PCA figures). In some areas of the CBD, the real office vacancies exceed 60%. The energy costs (and the likely waste when demolished), together with other 'community cost' (see below), associated with such "senseless, outrageous prodigality" (Daly, 1982¹) are likely to be massive. I am suggesting that the Productivity Commission Study should acknowledge these costs, in addition to operational energy costs.

For example, the Australian Tax Office (ATO) procured 2 new buildings, each of about 16 000 sq m, in Adelaide during the early '90s, and consequently the existing ATO building of 12 800 sq m - constructed in 1975 - was displaced on to a market already saturated after the late '80s property boom. This building

¹ See *Sydney Boom, Sydney Bust*

has remained vacant for 6 years, and recently sold for about \$3.5m – a fraction of its valuation of about \$23m during the boom.

I believe that the costs of this prolonged vacancy, both to the Commonwealth Government (the owner), taxpayers, and the community were not included in the decision to procure the new facilities. Community costs/externalities may include:

- Decline of city image due to vacant shopfronts, graffiti etc
- Loss of council rate revenue
- Declining population and business activity in the area, etc.

In addition, the energy expended as a result of the construction of the 2 new buildings was most likely ignored: I estimate this to be approx 265 000 GJ (assuming 8.28 GJ per sq m embodied energy). To this should be added CO2 emissions of about 26m kg (808 kg per sq m), and the costs of waste and landfill (the cost of waste disposal usually does not reflect the true cost to the community ie externalities²).

No doubt, the decision to procure new premises resulted in some efficiencies for the ATO's operations, and possibly some savings in operational energy and other running costs, but these savings need to be balanced against costs to the wider community – especially in the case of a Government Department. As you are no doubt aware, research has shown that the embodied energy associated with a large office building may equate to about 30 years or more of operational energy. Another social cost not considered is that new construction generates less employment per dollar than refurbishment.

Therefore, as I am attempting to demonstrate, the inclusion of such 'community' costs in the property decision equation may sway the balance more towards refurbishment of 'suitable' buildings.

² Bureau of Industry Economics (1993), *Waste Management and Landfill Pricing: a Scoping Study*, Occasional paper 12, AGPS, Canberra.

Much emphasis is given to savings in operational energy, without due regard to the potentially greater savings that can be achieved by more carefully considered strategic property decisions e.g. to rebuild, to refurbish, or to demolish³.

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³ Refer Ness-Chang, D and Atkinson, B (1996), 'Re-use/Upgrading of Existing Building Stock', *RAIA Environment Design Guide*, May.