

THE APPLICATION OF TAXATION BENEFITS AND INCENTIVES FOR GREEN BUILDINGS

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ABSTRACT

Australia's National Strategy for Ecologically Sustainable Development endorses the establishment of taxation systems that take into account the social and environmental costs of resource use. In the context of the construction industry, the Green Building Council of Australia similarly promotes the concept of Ecologically Sustainable Development (ESD) and recognises the need to integrate economic instruments with sustainable practices.

Historically, taxation incentives for ESD are available to the developer who outlays the funds as part of the development and construction process. However, the Green Building Council of Australia observes that "developers tend to focus on initial costs, rather than costs over the lifecycle of the building".

The purpose of this paper is to undertake a textual analysis of current and proposed legislation and policy instruments at the Commonwealth level to critique the distribution and application of tax incentives available to stakeholders in a commercial building. It is argued that some of the taxation incentives are of benefit mainly to the developer, since these incentives are primarily targeted towards the initial costs of the building rather than the life cycle of the building. Therefore, it is questionable whether this focus accords with the policy and intent of Australia's ESD strategy. The research concludes with recommendations for changes in the application of taxation benefits and incentives for green buildings.

KEYWORDS: Urban sustainability, Sustainable urban development

INTRODUCTION

Sustainability generally involves the maintenance and/or specific processes to retain the original function of an item. Therefore, in the context of Ecologically Sustainable Development (ESD) the model can be divided into ecological considerations such as land, water, air and biodiversity; and secondly, human aspects encompassing economical, social, educational and political considerations. (Phillis 2001).

In Australia the evolution of sustainable buildings is commonly referred to as a green building which retains a focus on energy efficiency aspects throughout the life cycle of the building, including the design, construction, maintenance and comfort of the building. Similarly the US Environmental Protection Agency defines "green-buildings" as "the practice of creating structures and using processes that are environmentally responsible and resource-efficient throughout a building's life-cycle from the design, construction, operation, maintenance, renovation and deconstruction".

During the late 1980s environmental groups in Australia demanded "tightened environmental standards". (Beder 1999). In response the government set up a prime ministerial task force for ESD in 1989 which focused on the issues of agriculture, energy, transport and pollution controls (Green Left, Peter Boyle 1992), and in 1990 the Commonwealth Government suggested the following definition for ESD in Australia:

'...using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'. Therefore a green building will include "energy efficiency, water conservation, waste avoidance, reuse and recycling, pollution prevention such as noise, water, air, soil and light; enhanced biodiversity, reduced natural resource consumption; productive and healthier environments and flexible and adaptable spaces"

There were various milestones achieved during those years, which also included the establishment of The Green Building Council of Australia in 2002. One of the primary aims of the council was to develop a sustainable property industry for Australia and their mission included the adoption of "green-building" practices through "market-based solutions". Currently, the responsibility of sustainable management and conservation of Australia's environment is overseen by The Australian Government, Department of Sustainability, Environment, Water, Population and Communities. Australia's ESD strategy has evolved over the years through consultation with government, business, industry, academia and voluntary conservation organisations.

Australia's National Strategy for ESD endorses the establishment of taxation systems that take into account the social and environmental costs of resource use. In the context of the construction industry, the Green Building Council of Australia similarly promotes the concept of ESD and recognises the need to integrate economic instruments with sustainable practices.

Historically, taxation incentives for ESD are available to the developer who outlays the funds as part of the development and construction process. However, the Green Building Council of Australia observes that "developers tend to focus on initial costs, rather than costs over the lifecycle of the building". Developers generally sell their project either before or very soon after the completion of the project and Hood, (2004), acknowledged the challenge with this discontinuity in the development and ownership of new buildings.

The purpose of this paper is to undertake a textual analysis of current and proposed legislation and policy instruments at the Federal level to critique the distribution and application of tax incentives available to stakeholders in commercial buildings. The first part of the paper discusses the literature for developers debating over green building practices and continues with the pros and cons for environmental taxes, together with considerations affecting the market value of the property. The research then leads into the next part of the paper where Australia's environmental taxes are critiqued and various recommendations are also included in the discussion.

It is argued that some of the taxation incentives are of benefit mainly to the developer, since these incentives are primarily targeted towards the initial costs of the building rather than the life cycle of the building. Therefore, it is questionable whether this focus accords with the policy and intent of Australia's ESD strategy.

LITERATURE REVIEW

In recent years research has attempted to demonstrate savings associated with incorporating new design methods and technologies. Apart from economic factors, other considerations such as an improved building amenity and increased occupant productivity have also been listed as additional benefits. The developers will argue that “green” buildings cost more, because of the additional design costs. Overseas research indicates that an upfront investment of 2% can “yield a life cycle savings of ten times that investment” (Kats 2003 and Roper and Beard 2006). Whilst developers focus on the initial costs associated with the building design, there is little consideration given to the lifecycle of the building. To support this theory further, The Engineers Australia Building and Construction Task Force Report (2001) identified the need for the building design process to incorporate environmental impacts and costs across the life cycle of a building.

Studies undertaken by The UK Construction Industry Council indicated that buildings which were designed from the onset with ESD considerations should be higher in resale value (UK Government Consultation Paper on Sustainable Construction, 1999). However, for property developers their primary concern relates to the capital cost of the project. They will consider options such as the price variance on the capital cost of the project with or without ESD consideration. With regards to the life cycle of the building, such as optimal performance for energy, this takes a secondary consideration. Hood (2004) noted that developers cited “there is no client demand” and “green design adds too much to the project costs”. It was concluded developers traditionally focused on reducing their capital cost, with little regard given to the life cycle of the building, and perhaps also improved occupant productivity.

Similarly investors are seeking a quick return on their investment with the minimum risk. This encourages the developers to focus their project design on outcomes such as rate of return from rentals and in the longer term, the possibility of the resale of the project. If developers were assured that it was easier to sell their project with “green buildings” compliance, then perhaps developers would consider implementing the design to take the life cycle green issues of the building into consideration. Sorrell (2003) critiqued the fragmentation of the construction industry as the major cause for little energy efficiency approaches.

A study undertaken by the US Green Building Council in the US showed that there was additional value attached to a green building, with little or no extra cost to the developer. The US study showed that the building cost 0.66% higher than a conventional building. (Sustainable Building Leaders Project 2006). Similarly a preliminary study of green buildings in Australia researched the “anticipated premium” for the construction of the varying green-star buildings. The research concluded that a 4 star green building had a 0.49% premium, whilst a 5 star green building attracted a 5.84% to 11.4% premium. (Matthiessen 2006). A study undertaken by the quantity surveying firm Davis Langdon, comparing 93 non LEED buildings to 45 LEED certified buildings concluded many projects “achieve sustainable design within their initial budget, or with very small supplemental funding”. The study also acknowledged leverage over final outcomes, such as “trading off lavish granite wall finishes for energy efficient double skin facades”. (Matthiessen 2006).

Green Taxation Policy

In 2003, a study undertaken by The Warren Centre (TWC) at the University of Sydney and the Co operative Research Centre for Construction Innovation (CRC CI) identified barriers which existed throughout constructions projects. These barriers included legislative and standards frameworks, institutional and organisational structures, politics, financial and taxation treatments, and behavioural and cultural attitudes. Environmental tax is generally associated with natural resources such as energy, land, water, fuel and other materials; and setting land aside for conservation purposes. (ANEDO 2009). In the United States, revenue raised from environmental taxes is allocated to special environment projects. For instance, McElfish (2003) suggested that the American states provide tax incentives for private land owners to maintain the forests. In contrast Prum (2009) discusses the 2005 initiative in Nevada where a property tax abatement was introduced to encourage property developers to take on green buildings in this state. However, 2 years later the state had entered into a fiscal crises because of the lack of research into the impact of the financial planning relating to the tax abatement.

Some economists consider that green tax will provide a “double dividend”. For example, Oates (1995) explores the application of transferring the revenue generated from green tax, to reduce other forms of tax and concludes that revenue-neutral reforms can address equity issues. Beder (2000) discusses that equity is central to the concept of sustainable development, so certain sections of the community are not allocated more than their fair share of environmental burdens. It could be argued, therefore, that developers as instigators of the project have the leverage from the beginning to implement environmental considerations, however where should this responsibility be projected? Is it the initial responsibility of the developers or should there be some form of incentive or pay back or assistance from the government, or perhaps even a combination of these two scenarios.

A case study of Newcastle, Australia, concluded that the Commonwealth government must increase their support to state level governments if an appropriate ESD strategy was to be implemented. (Mckay and Rauscher 2008). The disparity of tax concessions currently available for industries has been cited as an over-exploitation of tax concessions with areas such as fringe benefit tax, primary production and accelerated depreciation and various capital works mentioned. (Freebairn 2010). Federal tax incentives in the US have acted as an incentive for businesses and individuals to upgrade and remodel their homes and workplaces (Watson 2009). Additionally, Europe has made substantial progress towards energy efficiency and aims by 2020 to reduce the energy consumed by 20%. (Allard and Seppanen 2008)

Another consideration could be the approach that companies who use environmental resources should be charged, similarly to a user pays system. Pivotal to the research is the concept that the polluter of the atmosphere should be taxed as a way of correcting market failure and the introduction of pollution tax and congestion tax, on a user pay set of fees. (Fairbairn 2010). Further research by Ambec and Lanoie (2008) showed that expenses associated to reduce pollution could be offset by gains elsewhere. For example revenue could be increased by producing products for green buildings, which would provide better access to markets - i.e. most likely for firms selling to the public sector, such as construction, energy, and transportation equipment. Goolsbee (1998) researched the influence of tax incentives on investment decisions of a firm and concluded that investment tax incentives lead to immediate increases in the price of capital.

The notion of equity if green taxes were introduced is a worthy consideration. For instance, Turner et al. (1998) debated over "efficiency, fairness and effectiveness" of green taxes and concluded that various stakeholders and political interest parties would influence any policy instrument change. This is further reiterated by Beder (2000) who argues that equity is about fairness which derives from social justice. She uses the example that poorer people will bear the burden of environmental problems because the affluent people can choose where they want to live and have better access to resources. She concludes that perhaps future generations should trade their wealth for a rich environment. Similarly, Ng (2002) suggested an "eco-taxation" applying to all people equally. Another form of green tax could be considered via a levy on land. This concept was considered by Gihring (1999) who concluded that a land value tax would promote an efficient approach to land use, however, he did also warn that there could be adverse affects such as a decline in property values.

Economists examining research on economic theory revolving around the reduction of unemployment with the introduction of green tax, has resulted in conflicting conclusions. For example in 1996 a study undertaken by Koskela and Schobb (1998) concluded that unemployment would not be reduced with a revenue-neutral green tax reform if the personal tax credits of the individuals were increased. Their study emphasised that employment could only benefit if the unemployment benefits were fixed and individuals were taxed at lower rates. Whereas Richter and Schneider (2000) and Bovenberg and de Mooij (1994) held differing views that in a small open economy the country would be worse off. A further study undertaken by Koskela, Schob, and Sinn (2001) researched and concluded that green tax reform would be favourable if involuntary unemployment existed in that county. In contrast, Carraro, Galcotti, and Gallo (1996) researched the effects of a carbon tax for the European Union up to the year 2010 and concluded that "recycling carbon tax revenues" would benefit employment only in the short run. Alternatively, it has been suggested that changes in taxation policy could impact the labour market in the construction industry either way depending on financial and taxation variables. (Briscoe, Dainty, Millett 2000).

Therefore, environmental tax reforms can impact on unemployment, the labour market and welfare and can be considered an element of the "social cost of production" in a similar concept that is adopted for labour and materials. This theory is further supported by Bovenberg (1999) who argues that environmental tax reforms should be implemented purely on the grounds of improving environmental issues against the environmental benefits.

Interestingly the economic theory and unemployment research has provided conflicting and differing conclusions. However, any suggestion of a green tax policy will not necessarily influence the developer to incorporate green building concepts into the design process. Once the developer completes the project, other stakeholders take over the ownership and occupancy of the building. Therefore, the question arises if there is any market value for green buildings as a pathway to encourage the developer to incorporate green building design concepts at the onset of the project.

Is there a market value for green buildings?

One of the main barriers with green building design, is that developers focus on the up front capital cost for the development project because little incentives are afforded to further evaluate the efficiency and long term

life cycle of the building. The sale price of the building or an increase in the premium of the sale price is disregarded, without adequate studies to justify this theory for the developers. However, overseas research indicates in some instances, that green buildings have a higher occupancy, sale price and rental price in comparison to non-green buildings. In 2005–2006 McGraw Hill undertook a study in America, analysing the value of Green Buildings. It was concluded that the rate of investment for the owner improved by 6.6% with occupancy ratio increasing by 3.5% and rent ratio increasing by 3%. These findings were presented in 2006 at the Melbourne Business School. (Building Commission 2006). The table below summarises the added value for Green Buildings:

ITEM	PERCENTAGE CHANGE
Operating costs	Decreased by 8% to 9%
Building values	Increased by 7.5%
Rate of Investment	Improved by 6.6%
Occupancy ratio	Increased by 3.5%
Rent Ratio	Increased by 3%

**Source: Sustainable Building Leaders' Project Workshop. 10th February 2006
Melbourne Business School, Mt Eliza Victoria**

A similar study undertaken in Canada also concluded that green buildings had improved added value of a similar weighting to the study undertaken in America. The US and Canada have different green tax laws from Australia, and the developers overseas are provided with incentives and benefits to incorporate green building initiatives from the design stage and to provide a flow on effect into the life cycle costing of the building. However, in Australia the developer is not afforded many taxation considerations, which is discussed in detail later in this paper.

Research can also incorrectly omit another key factor as a benefit for green buildings. Apart from the obvious benefits for energy and resource efficiency, there is also the benefit for improved indoor environment quality (IEQ). This includes key indicators such as improved employee productivity – e.g. reduced absenteeism, lower staff turnover, higher concentration and energy levels and work tasks are more efficient in their completion, improved morale and loyalty to the company. This area of research provides a very good reason why occupiers of green buildings will have a more stable occupancy rate, because of these better issues for their staff. For example if a tenant was advised that their health and productivity would be enhanced from a green building this would represent an incentive for the occupier to seek green buildings. Overseas studies concluded that there was a direct correlation between improved well being in a green building. (Roper and Beard 2006)

Indirectly if there is less turnover with tenants, then the investor can enjoy the benefits of a lower vacancy factor, and effectively receive an improved rate of return on their investment. The by-product of an improvement in the internal environment, reduced absenteeism, and the well being for the employees would be an additional bonus. It has also been suggested if companies adopted the IEQ theme, these companies would have a more secure position within the global economy by approaching ESD implementation from this perspective. (Roper and Beard 2006)

In an effort to sustain the environment, America has reported a double of their green building registered projects. (Melbourne Business School, 2006). In particular their research has moved from the “focus on costs to a focus on value”. The value includes good indoor environment quality. The research provides positive outcomes with a reduction in the vacancy levels and tenancy turnover. Investors and owners are also enjoying a decrease in the lifecycle costs of the building.

A study undertaken by Fuerst and McAllister (2009) investigating the price effect on green buildings within the commercial sector, indicated that green buildings have a rental premium in accordance with their green star rating. Although the research raised concerns as to whether the premiums themselves were sustainable and also acknowledged that ongoing research was required with a larger sampling of commercial buildings. Further research for example on tenants perspectives is also required. Oluwoye, Scalise, Healy (2002) researched tenants attitudes on energy efficiency in high-rise commercial buildings. Their research concluded that 70% of the tenants had little incentive to consider green buildings; whilst 95% of the tenants agreed that there was no opportunity to participate in the decision making stages of design and construction of the building. There was also general consensus by 95% of the tenants, that the location cost of the building rated higher than consideration of the rental charged for the premises.

More recently, Eichholtz, Kok, Quigley in 2010 surveyed 11,000 tenants regarding their choice for green buildings in comparison to conventional buildings. The research concluded with empirical findings that tenants who were from firms which included mining, oil, banking, government related business and non profit organisations were major green tenant candidates

From an investors perspective, considerations such as higher rents, lower holdings costs and lower risk could be considered rewards as offsets for paying a higher price for a green building. Fuerst and McAllister (2009) concluded that higher rental sales and a rate per square foot were characteristic of green buildings in the US and acknowledged that there should be a higher supply of green buildings in response to pricing signals from real estate investors. Currently in Australia, little consideration has been given to issues such as minimising vacancy factors in commercial buildings and this has provided developers with the excuse to dismiss the notion of integrating green building design concepts as part of their projects.

It has also been suggested to change the standard lease agreements of commercial office blocks to meet the requirements of ESD issues for investors and tenants. However, because of the lack of incentive and statutory requirements by government to enforce rigid ESD issues the developer is ultimately controlling the end result of the design process of the building. (Christensen and Duncan 2010)

Lack of knowledge with the differences between green buildings and sustainable buildings has been blamed for the low demand for sustainable buildings and the added confusion with the term environment protection. (Keeping 2000). In Australia there is also the complication with the disparity of rating tools, and the varying regulations and planning controls within the states and territories. This has caused issues with all the stakeholders to appropriately identify the benefits of green buildings. Benefits such as improved health, and an increase in productivity and a lower staff absenteeism for example. Therefore a common language for rating tools is needed. For example in the electrical appliance market, the energy rating stars are automatically identified and understood by all consumers who use this rating tool as a bench mark for purchasing energy efficient appliances. In America, the LEED rating tool is widely understood in the property industry by all stakeholders in property development and construction.

TAXATION CONSIDERATIONS

Currently Australia does not have a systematic approach for tax concessions on green buildings. However, the federal taxation system in Australia provides for tax concessions on environmental protection activities such as carbon sink forests, mine and site rehabilitation, carbon pollution and urban water projects which unfortunately do not assist the construction industry. This section of the paper explores proposed new green tax legislation for retrofitting existing commercial buildings and also proposes a number of recommendations for maximising energy efficiency in the design process of new buildings. Further considerations such as applying the concept of accelerated depreciation to green buildings, and research and development of green building products, and incentives to encourage the developers to incorporate green building design concepts with their projects are also discussed.

Energy efficiency taxation policy

Recently the government announced a one-off 50% deduction of the cost of "improving the energy efficiency of existing commercial buildings – from 2 stars or lower to 4 stars or higher". (CCH 2011). This incentive is aimed at the investor who will benefit with an immediate deduction of the investment in eligible assets or capital works, in the financial year that this investment was incurred. Some conditions that apply include the application only to retrofitting aimed at improving energy efficiency, restrictions with the completion dates of the project, quotas with the construction costs, and exclusion of the cost of the design and assessment for supporting the retrofit.

This initiative will also provide an incentive to the tenant who will enjoy a reduction with their energy costs however there is no benefit afforded to the developer, as this initiative does not apply to new buildings. Therefore, a consideration to encourage developers to incorporate energy efficiency with new buildings would be to provide a deduction similar to the concept discussed below in the research and development theme. The recommendation is to allow the developer to receive a 150-200% deduction of costs aimed at improving energy efficiency of new buildings.

Research and Development

In the 1980 and 1990s the evolution of computer technology was enhanced by the governments' incentive of the accelerated rate of 150% to 200% tax deduction for research and development (R & D). The

governments' aim was to promote innovative development in technological areas. Currently this area of taxation policy incorporates most industries, and provides for an accelerated rate between 100% to 175%. This rate varies according to the activity undertaken and the date when the expenditure was incurred. The activity can be classified as core e.g. experimental or as supportive e.g. market research or sales promotion.

However, local manufacturers have been slow to produce and develop green building products. In some instances they cannot compete with the price efficiency of other products on the market place whilst admittedly these other products offer no green benefits for the building. And since the developers ignore these products because of the cost issue, there is no local market and therefore production is not nurtured.

Some form of incentive should be offered to manufacturers for government subsidies for the production and distribution of the green building products. For example the production of green building materials and products can be encouraged through extended initiatives with research and development taxation incentives aimed at an 150% to 200% deduction, which would allow the manufacturer to reduce the final price of the products sold to the developer. This would have a flow-on effect to provide encouragement for the developer to maximise their use of these products from the design stage through to the completion of the building.

Generally, the developers are seeking an immediate benefit and there is no incentive for the developer to outlay a higher amount of capital to purchase green building products which offer no added value to the developers profit margin. If all the stakeholders in the industry supply chain were provided with incentives and the government was behind these steps, then a commitment to sustainability concepts with best practice for integrated building design and construction could commence. The supply chain would encompass for example, building materials, manufacturers, tenants, community advocates, subcontractors – water and electricity; the integrated design team from the development stage of the project representing as many stakeholders as possible; project owner, architect, engineers and maintenance managers.

Green buildings as an investment vehicle

Historically, developers perceive that a green building development project will have a higher cost to build in comparison to a non green building. There is currently very little research to support the theory that the developer will receive a premium on the sale price of the green building. As noted earlier in the paper, developers are more interested in the building of the project rather than the green aspects of the life cycle of the building. Perhaps if there were taxation concessions or rebates available on the GST or the sale price of the asset for the developers this would encourage and give an incentive to developers. For example, if a building complied with lower operating costs for energy efficiency, tax incentives could be provided to the developer, and the investor would have the continuing benefit of reduced overheads, and in turn this would provide the investor which a higher rate of return on their capital, reduced vacancy factors, and in turn the tenants would enjoy reduction of utilities costs and indoor environment quality.

The Commonwealth should take a lead role in providing assistance to property developers implementing green buildings – special considerations such as a higher interest claim, perhaps GST concessions on the sale price of the commercial building would assist with the sale price placed on the completion of the building. Countries such as America and in Europe have provided incentives for investments into green buildings with excellent results. Whilst Australia has vast differences between Local and State planning laws, the enforcement of national standards into the Building Code of Australia is a good step.

Accelerated Depreciation

In Australia depreciation is the rate by which an asset declines in value over the assets use-full life. Therefore accelerated depreciation is where the asset, by law, is allowed to decline in value at a faster rate than its useful life.

However, there is little incentive for developers to incorporate green building assets into their design concept. The builder currently receives a 100% deduction on all products used for the construction of the building, regardless if the product is considered to contribute to a "green" status for the completed project. Therefore, if there were bonuses for the developer to claim perhaps a 120% deduction on specific green products, this would encourage the developer to incorporate the green concept into the initial design stage. In turn, the investor would benefit from the accelerated depreciation on green products and receive a higher rate of return on their investment, as the tenants would benefit from the environment indoor quality and therefore minimise vacancy issues.

Ideally the energy efficiency system discussed earlier in this paper for retrofitting existing buildings should be extended into the accelerated depreciation regime for newly constructed buildings.. For example, assets which are invested into sustainable activities should be afforded an accelerated depreciation rate according to the star rating of the green building. This benefit should be given to the investor which would increase the demand for green buildings, and in turn the tenant would benefit from lower utility costs.

Berry and McGreal (1996) applied two case studies from Dublin and Berlin where the application of taxation incentives were modelled on a variety of accelerated depreciation outcomes, and concluded that “fiscal measures” were an “effective means to stimulate investment and property development”. This incentive can introduce long term gains from economic issues and also the ultimate environmental gains arising from the tax incentive. The United States have adopted these incentives with a positive effect, however Australia currently has complex legislation relating to the decline in value of a depreciating asset. The requirement for tax reform to simplify an existing complicated set of rules is very important.

CONCLUSION

Long-term sustainability is a key objective within Australia. There are many stakeholders who can assist the government to achieve this outcome. Developers play a pivotal role in the expansion of Australia’s urban planning and the industry is well placed to act as a conduit for the development of ESD.

Therefore with the encouragement of tax incentives, and further research into the area of premium value of green buildings, the cost savings for the life cycle of the building can be quantified and viewed as an additional benefit for the developer. If further incentives were available to occupiers of green buildings this would increase the demand for green buildings and provide a pathway for a market that is driven with a need for green buildings and thus gives enormous incentives to developers and investors to seek such green buildings. Further research comparing green buildings and conventional buildings for all stakeholders should be undertaken.

Green building products traditionally include premium prices and Australian manufacturers must be given incentives to develop their technologies further in this situation. The Australian Taxation system must undergo a corrective tax reform to improve the energy efficiency taxation policy for newly constructed buildings; research and development to be increased to assist the manufacture of green products; additional bonuses for green buildings to be considered a desirable choice as an investment vehicle and re-modelling the accelerated depreciation to include green building assets.

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