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## **SUBMISSION TO THE SENATE INQUIRY INTO THE SAFE CLIMATE (ENERGY EFFICIENT NON-RESIDENTIAL BUILDINGS SCHEME) BILL 2009**

### **ADDRESSING ENERGY PROBLEMS BROUGHT ABOUT BY SHORT LIFE RETRO FIT-OUT AND THE RELATED ISSUE OF “CHURN” IN COMMERCIAL BUILDINGS**

While it is clear that the scope of the senate inquiry is primarily about setting an energy emissions intensity baseline, the author would like to add a new dimension to this debate concerning energy loss in commercial buildings brought about by the short time frame between commercial retro fit-outs, and the linked issue known as “churn”. Here, the nature of commercial space leasing means that tenancies change regularly - many agree on an average of approximately 5 to 7 year intervals - and this regular change is known as “churn”.

In expanding on the above, the large open spans of commercial buildings facilitate flexible tenancy and leasing arrangements. Internal fit-outs are easy to change because of the lack of impact on structural considerations. In many ways, such projects are akin to a small building that is regularly re-built within the structure of a large building. Such projects will continue to increase because of the growing need to utilise existing buildings rather than construct new ones. For instance new buildings only constitute a very small percentage of the overall commercial building stock in Australia. At each change in tenancy the existing fit-out is typically stripped out, and a new retro fit-out commonly takes place. This has important implications if considering the stripped fit-out in terms of a whole of life cycle approach. Here, the fit-out is considered in terms of the energy required to produce it, to operate it and to end its life. Pluses and minuses can occur at each stage.

The point here is simply that even though the new fit-out may incorporate improved operating energy, the stripped fit-out must be considered as lost production energy. This

is because the fit-out has become redundant well before the end of its durable life and therefore, its payback period is much less than construction lasting a long (normal) service life. In addition to this, there is the problem of physical waste caused by the strip-out – especially where energy is entirely lost by virtue of materials going to landfill.

Given the above, it is important that the bill be aligned with greater consideration to a whole of life cycle approach. For instance, the current Bill appears to focus primarily on operation energy, but it is argued here that it should include production energy and end of life energy as well. The whole of life cycle approach should be factored into the proposed energy emissions scheme with a view to creating incentives in the scheme that encourage more innovative and critically sustainable ways of designing and making decisions about churn and retro fit-out. For example, adaptable and perhaps even leasable fit-out (built around the concept of large scale furniture instead of fixed construction, may be possible). Such an approach would require a different design mentality including features such as modularity, ease of removal, surface re-skinning of materials and re-locatability.