

Tool.development@gbca.org.au

Dear GBCA Tool Development Board

'As above / below' means in the immediate prior / following comment,

Kind regards

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BOAQ#4188

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GBCA Appropriate?

- As with energy, this should be underwritten by, or stem from a government based organisation, ie NABERS. The Productivity Council has a strong part to play in ensuring goals are implemented with government support where needed. This is an important issue of beginning to gather whole operational costs of building, encouraging all contributing parties of building life cycle. This should go to cover imported products and as such is a governmental concern. (LCA Design (D.Jones) also has government funding connection)

Australia ready?

- Australia is ready, with ample consultants eager to see benefits in built outcomes.

Main Barriers in GBCA?

-

Notice should be coordinated with a government notice to recognise embodied energy with the determined registers: ie building registers and import standards registers.

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Objectives?

- To support a government initiative that increases manufacturing & construction sectors ability to deliver effective results in this area.

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Limited initial Scope?

- All categories of possibility should be included, however every article would be a waste of time

Inc. & Exc.?

- Base build reference should inform the categories, as fully as the participants can adequately substantiate. The base build reference should be geo-referenced, taking care of Greenfield/retrofit issues. The base build reference may be any similar building with same NCC/BCA class, capacity & function from similar climatic region, prior to the scheme

introduction. This will cover structural and material options. It also means some old buildings with innovative solutions may also be identified

Others?

- As above

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6 categories?

- If you can include every thing in 6 categories, then that is fine as a starting point, that assumes the following can be met,

Method of determining?

each aspect needs to be assessed in terms of re-newable / non renewable Mega/GigaJoules over lifecycle, typically recommended as 3, 10, 30 being equipment, fitout & basebuild (ie Redland bay council MACC curve application doc(Qld)). Certain services would fit within the basebuild as part of the 'sealed and serviced' definition by GBCA, determining some equipment as base build, and recommend that should be clarified if included.

Any removed?

- Nuisance seems vague.

Most appropriate?

- As above

Aust CI impact cat.?

- Who keeps this up to date, Can LCA design assist?

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BC LCI weighting ?

-

One Score?

- This should stem from a government recognised rating, perhaps from the product stewardship / waste act and the productivity commission, and function similar to the NABERS in the energy category. These efforts need to be recognised outside Greenstar / GBCA to be effective.

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Standard reference case?

- Base build reference should inform the categories, as fully as the participants can adequately substantiate. The base build reference should be geo-referenced, taking care of Greenfield/retrofit issues. The base build reference may be any similar building with same NCC/BCA class, capacity & function from similar climatic region, prior to the scheme introduction. This will cover structural and material options. It also means some old buildings with innovative solutions may also be identified

Distinguish new – retrofit?

- As mentioned earlier, the development of building registers and import standards registers will help develop reference data.

In Practice?

- This would become value adding to the manufacturing industry, both local and via import. in example, it is currently cheaper to import pre-finished/painted wall lining, than to pay someone to paint on site. By using the approach here, the imported product would need to evidence a supply that overcomes the bunker oil consumption as well as improving processes, with potential financial impact, offering a fair / equitable and transparent situation.

Will it work without a Reference case ?

- Probably not initially, as building registers probably feed import registers as a process of qualification. But after an import register is proven, perhaps that could be considered for broad items.

2 iterations?

- Yes, but 1 on a reference case building, to determine if the reference case is appropriate (ie class, type, density of occupancy to determine life cycle.

Time for second iteration?

- Depends as above which you do first, the proposed or the 'existing'. It may be faster to do the 'existing' second, but all benefits may not be recognised. Adding incentive to do 'existing' first. may come something as small as 10% of difference in construction cost.

What is missing?

- If all renewable/ non renewable energy is identified (ie Mj /Gj), then other factors are supporting data divulged by the GBCA.

Input parameters?

- As above

ISO 14025?

- Iso 14000 identifies meeting government regulations. If this includes a factor for emissions, then an emissions equivalent metric would be part of this solution., ISO 14025 is a good companion doc. To iso 14000 in a broad sense.

Alternatives?

- Not yet

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% impact reduction

- Within green star this is appropriate

Weighting can encourage a box ticking approach, rather direct assessment. Separate credits recommended.

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Aus LCI in Greenstar

- This response assumes the necessity of building registers and import standards registers to effectively use LCA to improve manufacturing sector locally and potentially further. The assumption here is that the Aus LCI is a strong and applicable reference. Greenstar suitably bridges and aids this development.

European LCI used?

- In the interest of developing an accurate global standard – yes.

Penalties needed?

- Not recommending a 'double handed' approach

Datasource credible for LCA?

'LCA Design' can carry the LCA data from approved sources to a 3d model, and should be researched to maximise operational and construction LCA.

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Excluded fitouts?

- Recognition should probably be in the GBCA 'operational' tools. And as such \, even small tenancies with long service lives should be recognised.

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Existing / external LCA tools accom. By GBCA?

- Yes, as in questions inc. P19.1

What constitutes an LCA practitioner?

- See diagram below

Table 1. Functional skills for energy efficiency assessment and their relationship with stages of an effective energy efficiency assessment

Functional skills	Energy efficiency assessment stages						
	1. Project plan	2. Communication plan	3. Understanding energy use	4. Identifying potential opportunities	5. Detailed investigation	6. Business decisions and implementation	7. Tracking and communication
<b>Project planning and management</b> Ability to direct and guide a group in completing tasks and attaining goals of energy efficiency assessment							
<b>Communication planning and implementation</b> Ability to exchange, engage, convey, and express knowledge and ideas in an energy efficiency assessment context							
<b>Understanding energy use</b> Ability to collect and analyse energy and financial data for the purpose of identifying energy use and savings							
<b>Identifying potential opportunities</b> Ability to think strategically and creatively							
<b>Decision making</b> Ability to develop and assess business cases for the implementation of energy efficiency opportunities							
<b>Monitoring and investigation</b> Ability to assess, install and use appropriate monitoring equipment and develop analysis systems							

\* Some functional skills can also be applicable to other stages of an energy efficiency assessment that are not highlighted.

Fig. 1 Functional Skills for Energy Assessment

Source: Functional Skills for Energy Assessment (2010) (8)

Cost comparison to extg MAT category?

- Cost comparison should be tied in to industry participation, and in a means – accommodate the cost of this analysis.

Adherence to International standards?

- voluntary international bodies, such as commonwealth could be effective in imparting intentions that may develop in parallel

Software recognition?

- Calculator by GBCA and probably LCA Design & Eco specifier

Energy rating comparative test similar to LCA tool?

- This is recommended and helps external agencies understand how to work with the tool.

Other requirements for LCA modelling?

- To recap - This response assumes the necessity of building registers and import standards registers to effectively use LCA to improve manufacturing sector locally and potentially further.

