



N A B E R S

NABERS Embodied Carbon

Development of Emission Factors





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Proposed emission factor methodology

Dec 2022 consultation

Consultation Proposal 6

Allowable data sources

- 3rd party verified process LCA data, e.g., EPD, carbon footprint declarations
- Climate Active PDS data
- NABERS table of emission factors
- Others will be considered

Reused elements are burden free

Proposal 6 - NABERS will encourage verified product-specific emissions data and will apply conservative defaults where no emissions data is available

A select number of emissions data sources will be allowed. Where product-specific emissions data exists (i.e. process life cycle assessment data), it should be used in preference to other emissions data. As we move down the order of material preference, emissions are likely to increase, creating an incentive to use higher order data where this is available. During the tool development phase NABERS will investigate rules which could enforce this order of preference.

The allowable data sources include, in order of preference:

- Third party verified product-specific process life cycle assessment data, such as from Environmental Product Declarations and carbon footprint declarations, which comply with internationally accepted standards.⁷
- Published emissions data from Climate Active Product Disclosure Statements associated with product Carbon Neutral certification.
- The NABERS table of emissions data, which is based on a conservative estimate from a review of available data. This will be set to ensure product manufacturers are generally better off verifying their product's carbon footprint through one of the above methods. It will preference process life cycle assessment data from EPDs where this is available (e.g. timber, concrete, steel). Hybrid data will only be considered where there is a lack of suitable process life cycle assessment data (e.g. façade assemblies, building services and some construction activities). In these cases, emissions data may be per square metre or dollar spent.

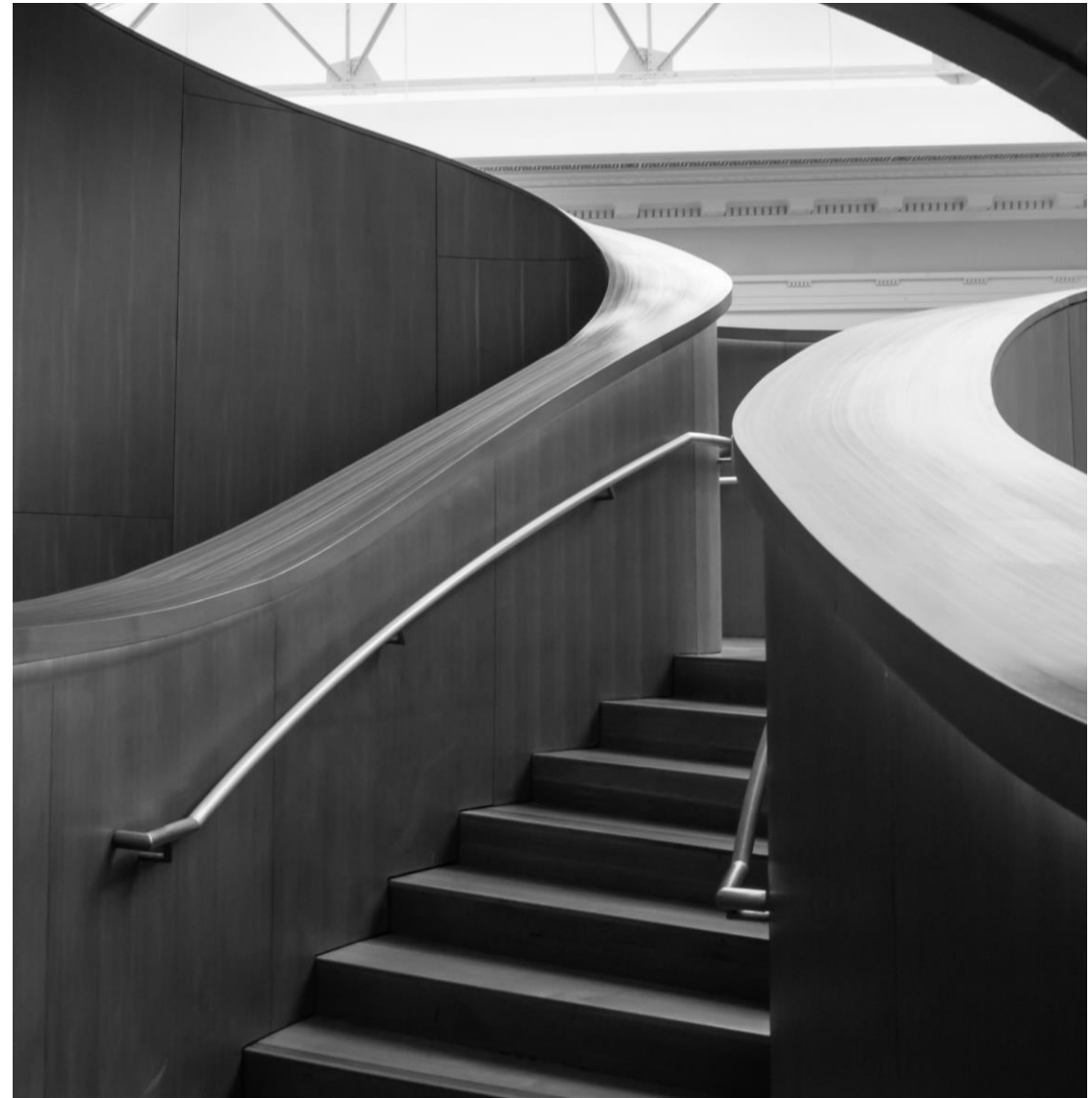
Additional data sources may be considered during tool development where they align with the intended objectives of this proposal. For example, this may include the worst-in-average calculation from industry-average EPDs.

All retained building elements and other re-used products will be assigned zero emissions in their original state. They will be entered into the calculator as zero embodied emissions, plus the emissions generated in repurposing these elements for re-use. This applies regardless of the age or source of the building element. This means buildings that avoid demolition will be rewarded with a better rating, as the reused elements of the structure will be considered emissions free.

Proposal 6 Rationale

Incentivise use of product-specific emissions data

- Actual product impacts add up to actual building impacts
- Encourage measurement and disclosure for products
- Rewards preferences for lower emission products



Proposal 6 Rationale

Conservative default emissions data

- NABERS in-built dataset
- Process LCA based
- Conservative estimates from review of existing data



Proposal 6 Rationale

Avoiding demolition

- Demolition emissions not included in scope
- Retained building elements burden free
- Reused products burden free
- Emissions from repurposing are included



Consultation Proposal 7

Stored biogenic carbon and carbon neutral products

- Not in rating calculation – it includes all emissions, but not removals
- Proposed ‘Carbon Removal Indicator’
- 2 initiatives shown separately

Proposal 7 – Stored carbon and carbon neutral products will be disclosed on NABERS Rating Certificates via a Carbon Removal Indicator; they will not be recognised within the star rating on the certificate

NABERS Rating Certificates will report on building products with stored carbon and carbon neutral certification via a Carbon Removal Indicator. This indicator will sit alongside the NABERS Embodied Emissions tool's star rating.

The amount of stored carbon in products and from carbon offsets within carbon neutral certified products will be disclosed separately to the NABERS Embodied Emissions tool star rating. The star rating will include the greenhouse gas emissions from all products used but will exclude any stored carbon or carbon offsets.

An example of what the Carbon Removal Indicator could look like is illustrated below. Note that the Carbon Removal Indicator is currently an early concept, and its design, including its name, calculation methodology and visual representation of results, will be finalised later in the rating tool development phase.

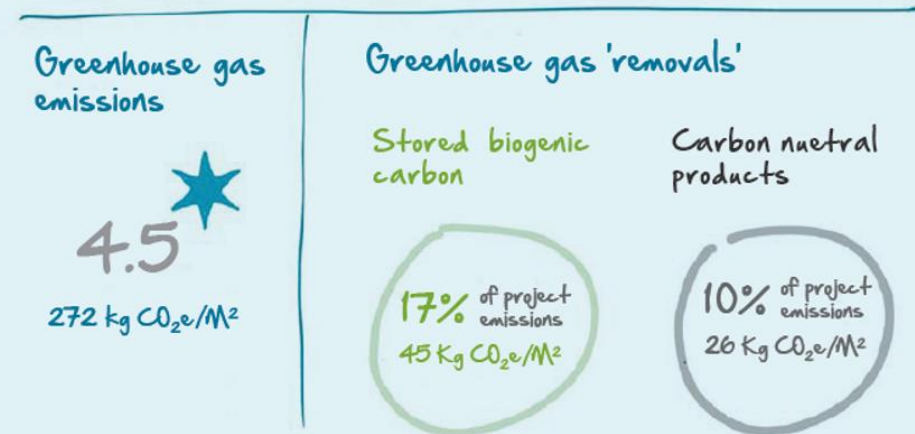


Figure 4.4.2: Example of how a Carbon Removal Indicator could look, based on the Renewable Energy Indicator



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Consultation feedback

Proposal 6 feedback summary

Proposal 6 - NABERS will encourage verified product-specific emissions data and will apply conservative defaults where no emissions data is available

- Overwhelming support for process LCA and EPDs
- Transparency needed about how default data is determined
- Default emission factors will require maintenance
- Concerns about EPD availability
 - Lack of EPDs for some products including assemblies
 - Difficulties for SMEs and start-ups

Proposal 6 suggestions being considered

Proposal 6 – NABERS will encourage verified product-specific emissions data and will apply conservative defaults where no emissions data is available

- Ensure that defaults are generated with full understanding of the products used – manufacturing methods, imports, greenwash, etc
- Use of TM65 methodology for building services
- Display the proportion of default vs product-specific data used
- Make product average data available as well as conservative defaults
 - Allows an understanding of what is possible to achieve
 - Only achievable if good products are selected (not only cost driven)

Proposal 7 feedback summary

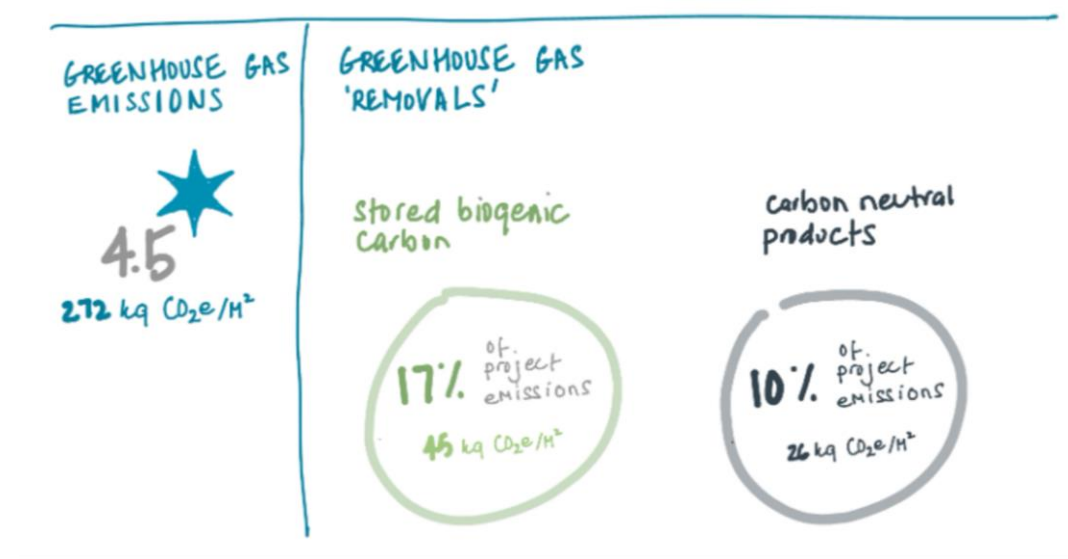
Proposal 7 - Stored carbon and carbon neutral products will be disclosed on NABERS Rating Certificates via a Carbon Removal Indicator; they will not be recognised within the star rating on the certificate

- Strongly supported, including all product sectors
- Mixed views on the value of both stored biogenic carbon and carbon neutral certification – **good to keep them separate** to allow choice
- **Fossil carbon is most important.** Do the most you can. Then do the best you can with the rest.
- Don't imply that carbon storage and offsetting are equal

Proposal 7 suggestions being considered

Proposal 7 - Stored carbon and carbon neutral products will be disclosed on NABERS Rating Certificates via a Carbon Removal Indicator; they will not be recognised within the star rating on the certificate

- Green Star and NABERS alignment
- Ensure only robust certifications allowed for carbon neutrality
- Ensure timber is certified as responsibly sourced
- Keep the indicator split in 2 parts





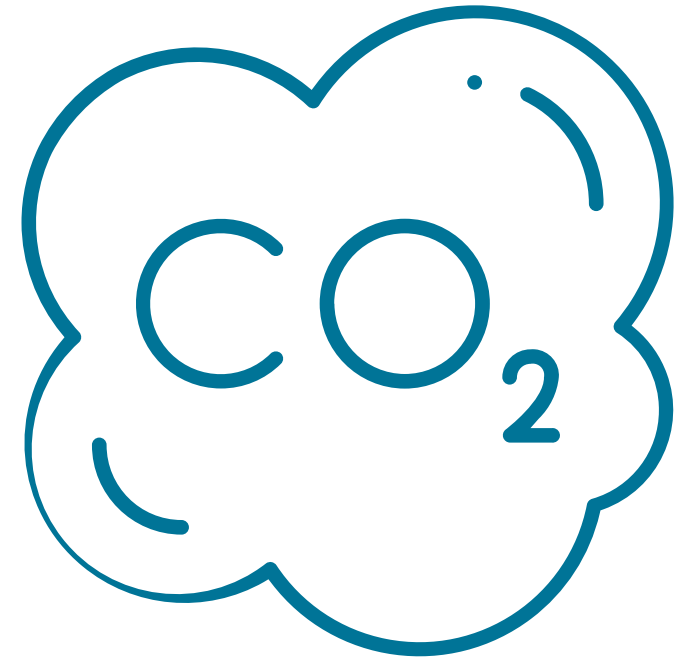
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Current position on emission factors

Emission Factors Principles

Process LCA data used

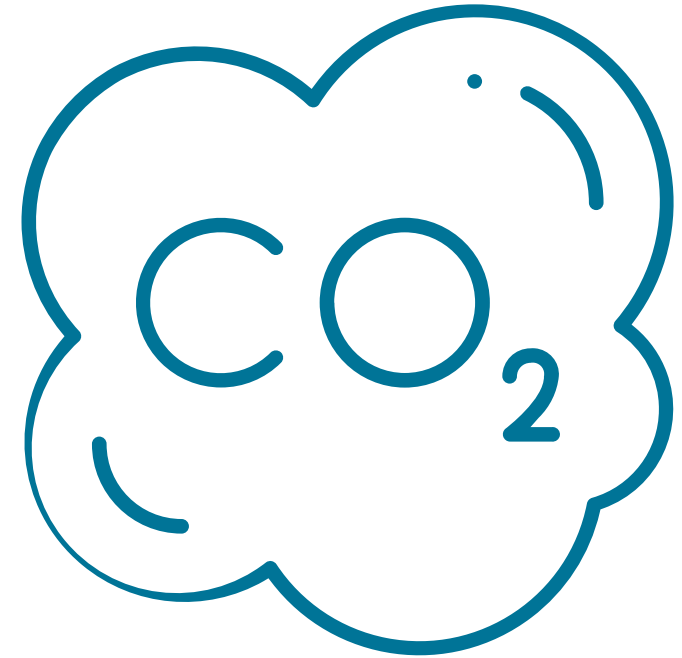
- Product-specific EPDs (EN 15804)
- *Verified* carbon footprints (ISO 14067)
- *Verified* product LCAs
- Climate Active PDS emissions data
- Worst-in-average for industry sector EPDs



Emission Factors Principles

Conservative default emissions data

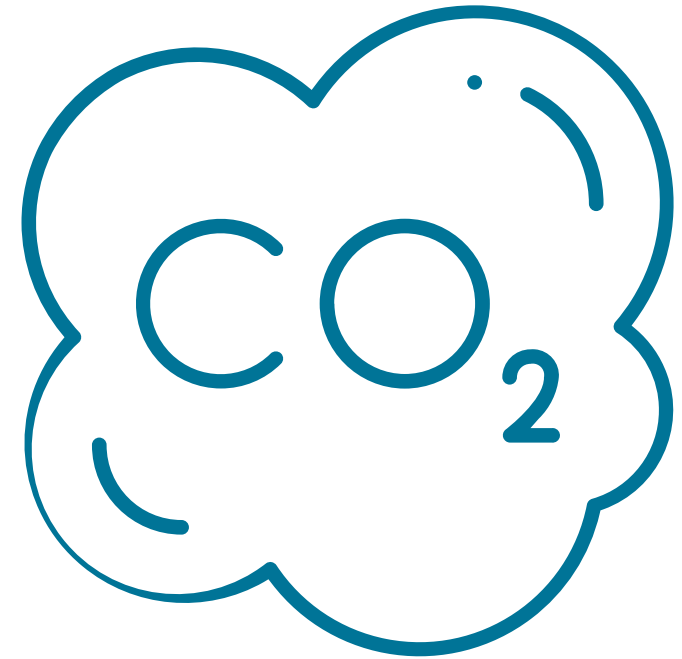
- Conservative estimate from review of existing EPD & process LCA data
- Worst case available on market in Australia
- Includes all carbon emissions – fossil, biogenic, LULUC
- Does not include carbon removals – stored biogenic, offsets



Emission Factors Principles

Calculator features

- Display the proportion of default vs product-specific data used
- Make product average/median emissions data available as well as conservative defaults
- Include the Carbon Removals Indicator





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How you can participate



**Will we get the best result
working on our own?**



We need your help!

We know a lot and we are working hard,
but do we know ...

... everything needed about your sector /
product / competitors?

... what products you need to make sure are
included in the database?

... what is needed to create fair conservative
default values

*... what matters most for you and your
industry?*



Please respond to our survey

What product types or sub-types need to have default emission factors available?

Are there any unusual products that you want to be sure are included?

Do you have sources of emission factors to point us to, to make sure that they are considered?

What do you want to make sure we are aware of?

Do you have any concerns or feedback for us?

Do you want to be involved in future supplier consultation on the final emission factors?

2 weeks to respond



Later in the project...

We will hold a series of building products industry sector workshops.

We will consult on the outcomes of our default emission factors development.

Express interest in attending through the survey.





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