

# ET Summit 2024

Presented by



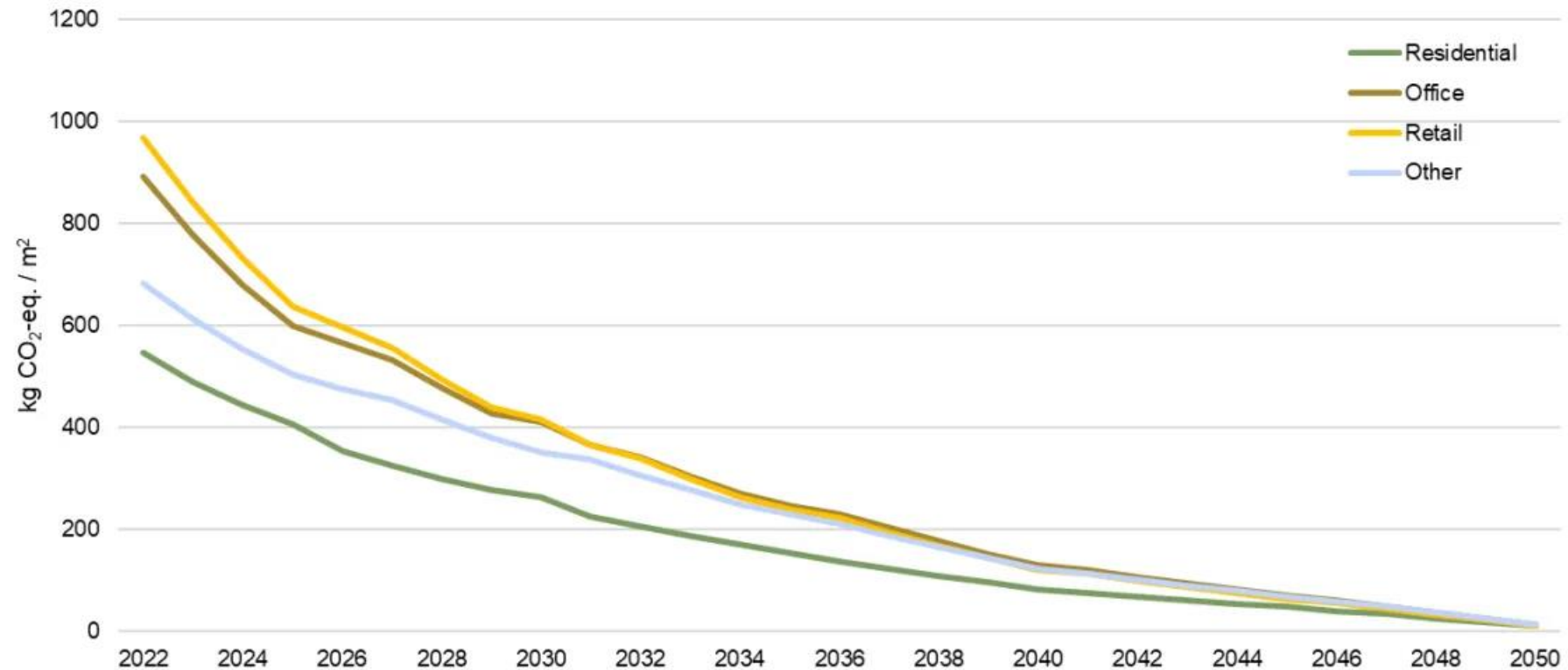
# Opportunities Beyond Procurement

for emissions reduction  
in the built environment

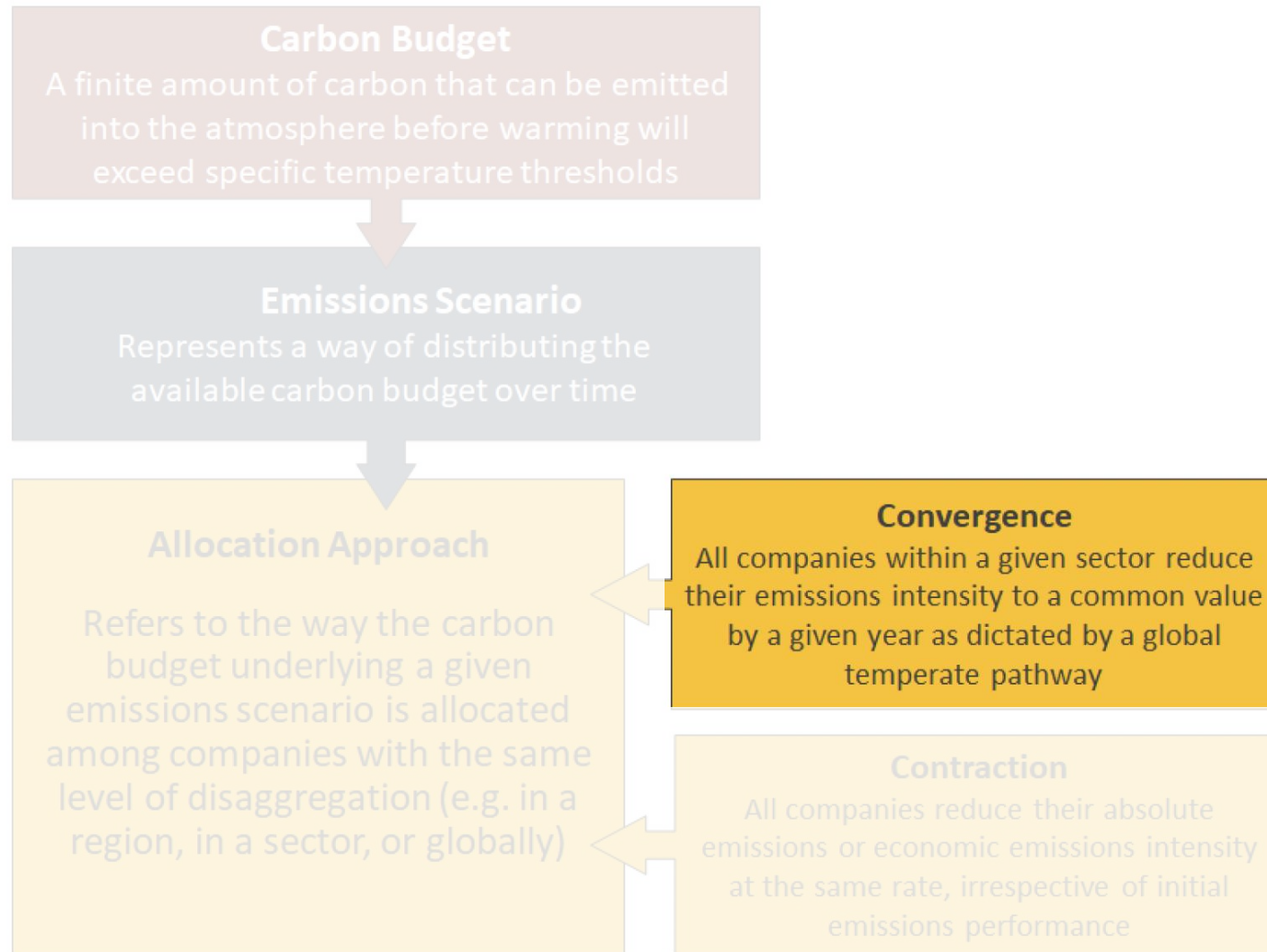
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## Science-Based Targets for Buildings

**Figure 6-1. Decarbonization pathway for upfront embodied CO<sub>2</sub> emissions in buildings: scenario AR6 IPCC C1, grandfathering, corrected for renovation**

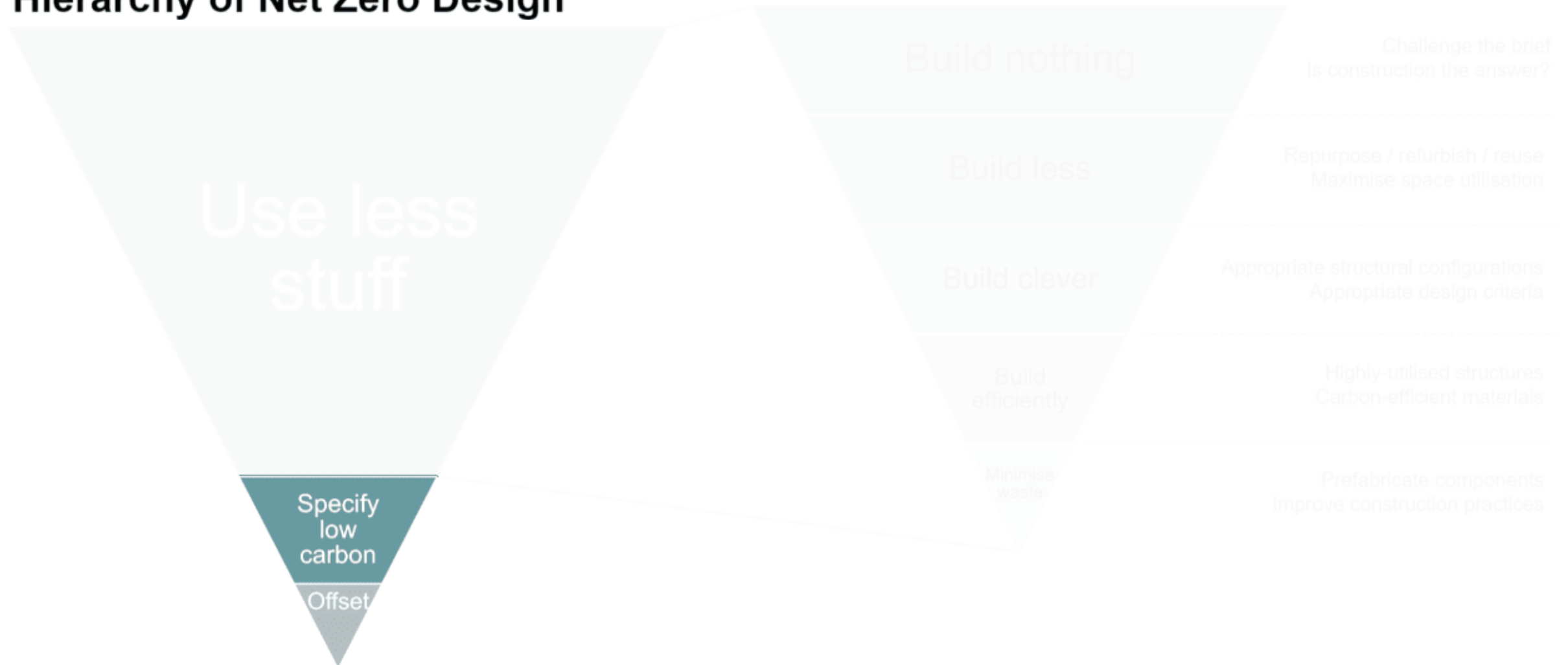


## Cross-Sectoral Convergence



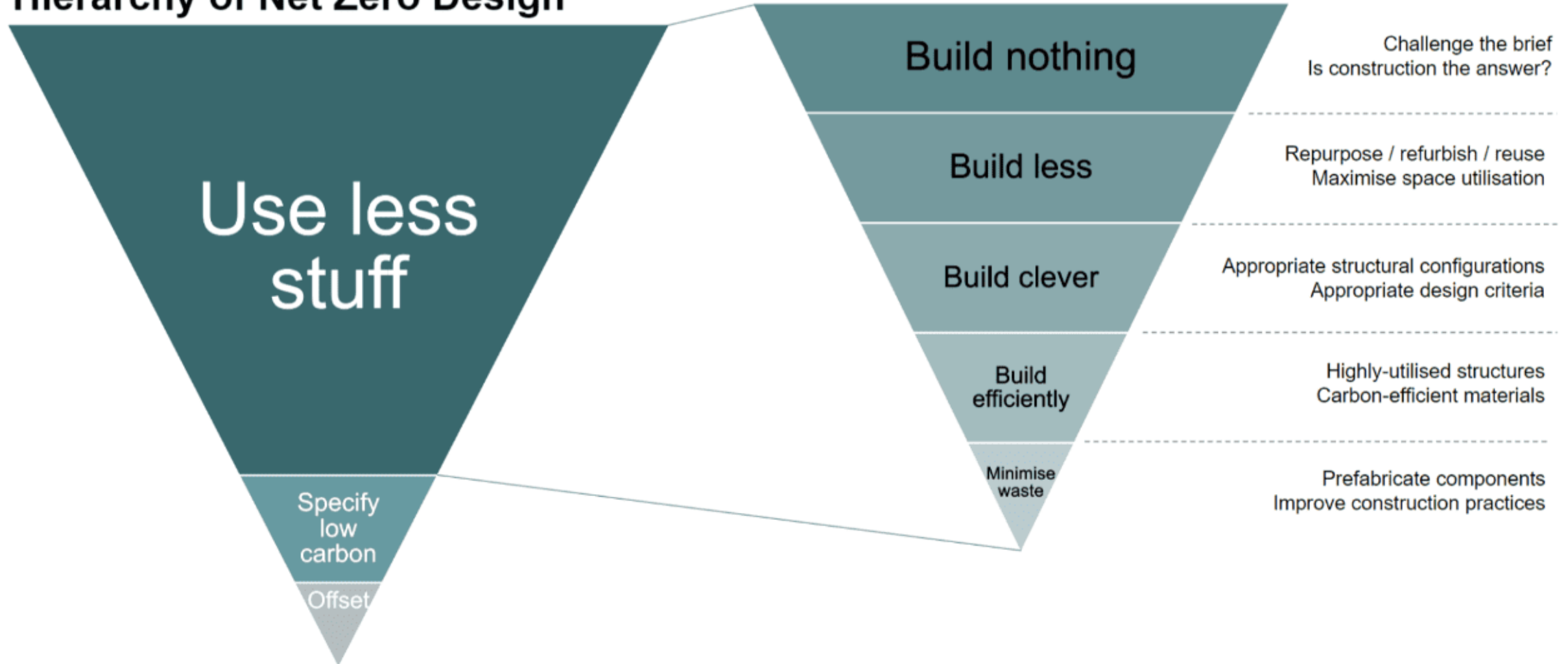
## Building Emissions Reduction Hierarchy

### Hierarchy of Net Zero Design



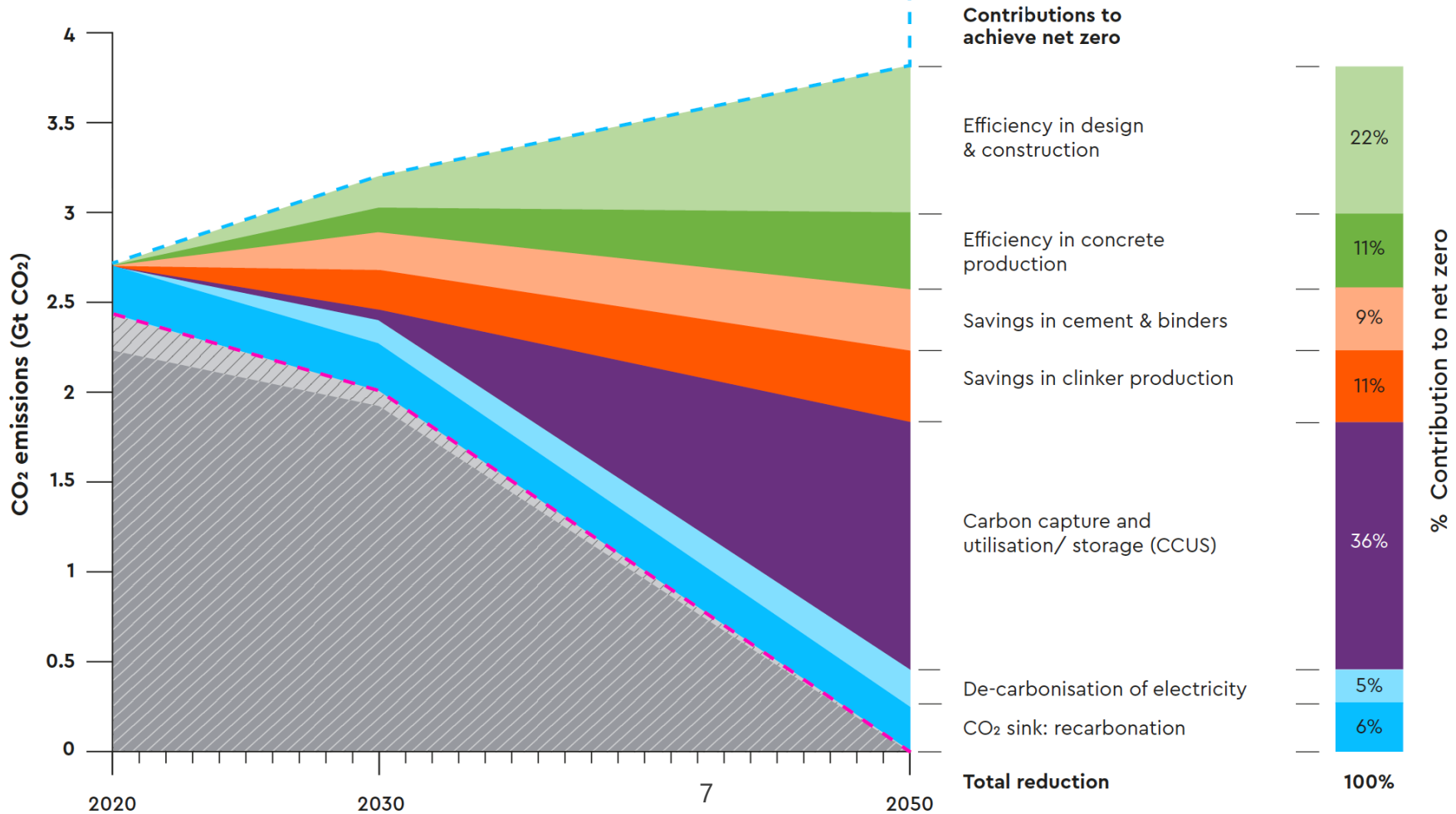
## Building Emissions Reduction Hierarchy

### Hierarchy of Net Zero Design



## Concrete Sector Decarbonization

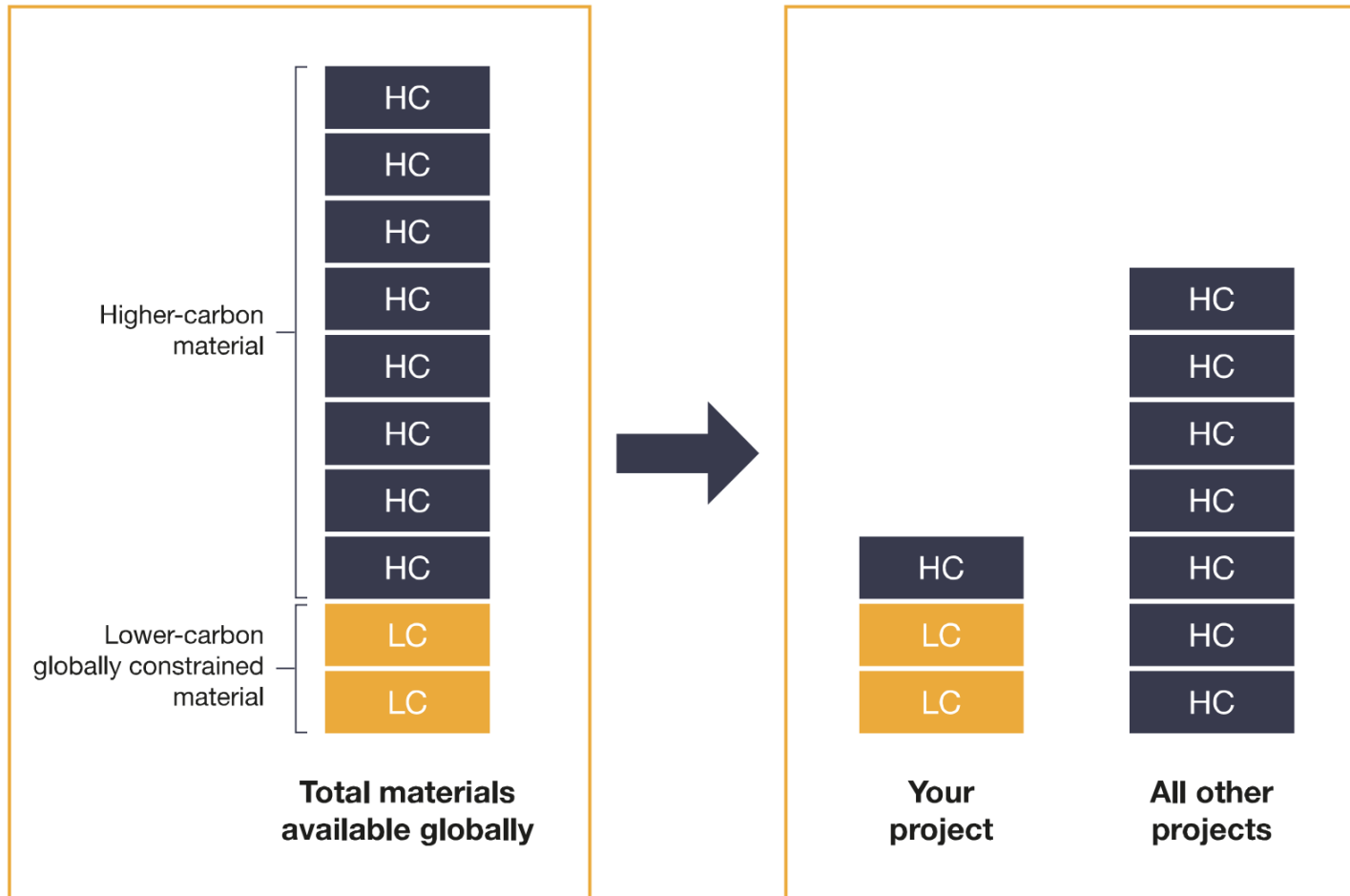
Societies need for concrete (in the absence of any action) is forecast to result in 3.8Gt CO<sub>2</sub> in 2050.



Source: Concrete Future, GCCA

## Differentiate Scalable Solutions from “Slosh”

Lower product or project emissions do not necessarily represent real emissions mitigation



**FIGURE 1:** Procuring higher than average proportions of a limited lower carbon supply has little to no overall benefit to global emissions.



# Connecting Industrial and Building Decarbonization

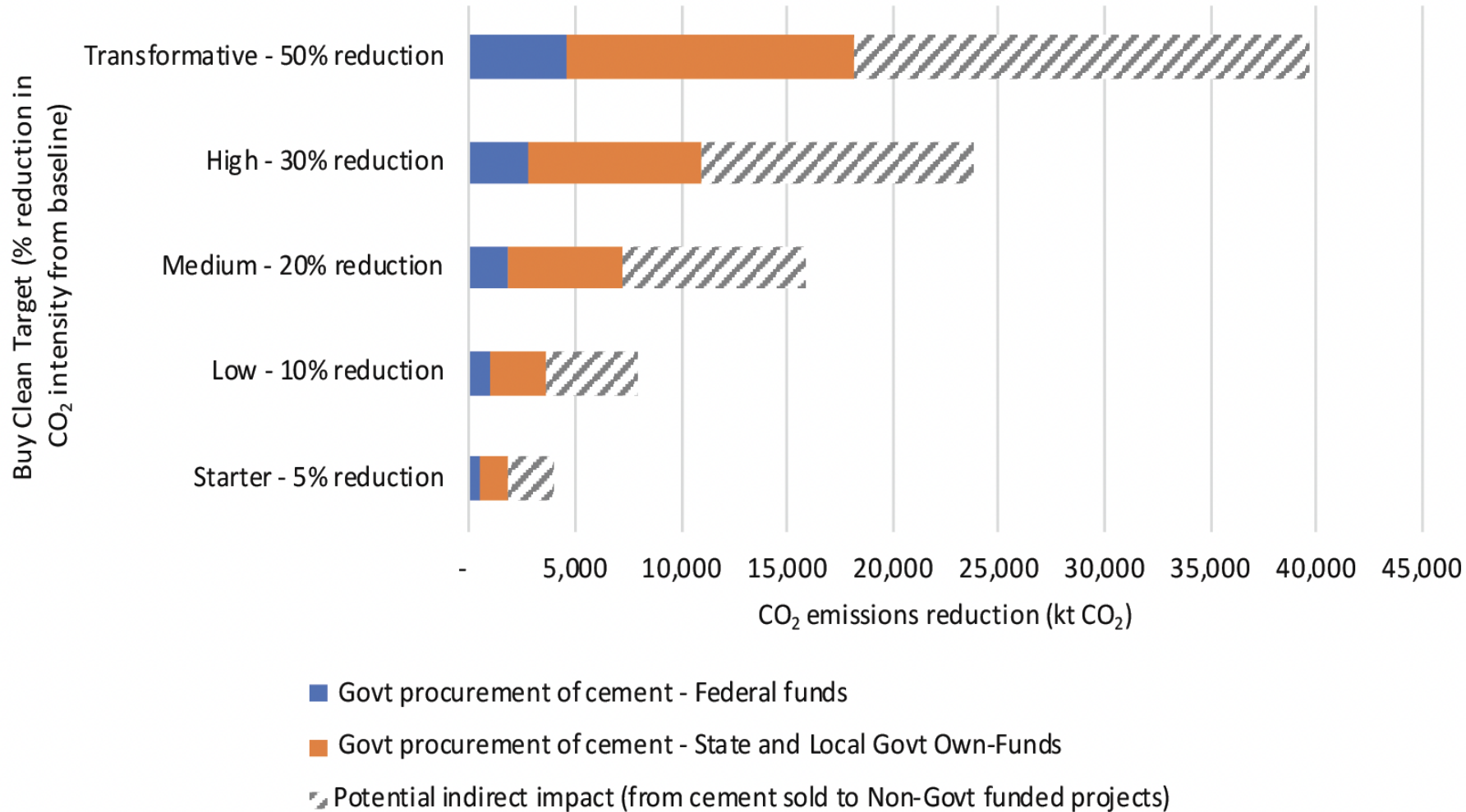
## CALGREEN EMBODIED CARBON OPTIONS

<b>Building Reuse</b> Section 5.105, Deconstruction and Reuse of Existing Structures	<b>Life Cycle Analysis</b> Section 5.409, Life Cycle Assessment	<b>Prescriptive Path</b> Section 5.409.3, Product GWP Compliance
<p><b>Components:</b> Existing primary structural elements, enclosure, (roof framing, wall framing, and exterior finishes).</p> <p><b>Exceptions:</b> Additions 2x the area or more of the existing building.</p> <p><b>Exclude:</b> Window assemblies, insulation, portions structurally unsound or hazardous, and hazardous materials that are remediated as part of the project shall not be included in the calculation.</p>	<p><b>Scope:</b> 60-year cradle-to-grave WB LCA (ISO 14044), excluding operating energy. Show GWP analysis.</p> <p><b>Components:</b> Primary and secondary structural members, glazing, insulation, exterior finishes.</p>	<p><b>Components:</b> Structural steel, rebar, flat glass, light and heavy-duty mineral wool insulation, and ready mix concrete.</p> <p><b>Exception:</b> Concrete mixes can use a weighted average for all mixes.</p>
<p><b>Mandatory</b></p> <p>45% of the structure and enclosure to be reused</p>	<p><b>Mandatory</b></p> <p>10% reduction from baseline</p>	<p><b>Mandatory</b></p> <p>175% of IW-EPD GWP Limits</p>
<p><b>Tier 1</b></p> <p>75% of the structure and enclosure to be reused</p>	<p><b>Tier 1</b></p> <p>15% reduction from baseline</p>	<p><b>Tier 1</b></p> <p>150% of IW-EPD GWP Limits</p>
<p><b>Tier 2</b></p> <p>75% of the structure and enclosure to be reused AND 30% of interior non-structural elements to be reused</p>	<p><b>Tier 2</b></p> <p>20% reduction from baseline</p>	<p><b>Tier 2</b></p> <p>IW-EPD GWP Limits</p>

← A long way to go!

## Connecting Industrial and Building Decarbonization

### Federal Buy Clean Policy



# Emerging Whole Life Carbon Standards

**First Full Publication Public Review Draft**

**BSR/ASHRAE/ICC Standard 240P**

**Quantification of Life Cycle Greenhouse Gas Emissions**



First Full Public Review (February 2024)

This draft has been recommended for public review by the responsible project committee. To submit a comment on this proposed standard, go to the ASHRAE website at [www.ashrae.org/standards-research-technology/public-review-drafts](http://www.ashrae.org/standards-research-technology/public-review-drafts) and access the online comment database. The draft is subject to modification until it is approved for publication by ASHRAE, ICC, and ANSI. The current edition of any standard may be purchased from the ASHRAE Online Store at [www.ashrae.org/bookstore](http://www.ashrae.org/bookstore) or by calling 404-636-8400 or 1-800-727-4723 (for orders in the U.S. or Canada).


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RICS PROFESSIONAL STANDARD



**Whole life carbon assessment for the built environment**

Global

2nd edition, September 2023

Version 3, August 2024

Effective from 1 July 2024

