

EC3 Tool

Embodied Carbon in Construction Calculator (EC3) Tool

The **EC3 Tool**
Provides ...



Actionable information about embodied carbon in construction



A free, easy-to-use database of construction materials and their environmental impacts



Achievable targets for embodied carbon based on your geography, performance requirements and material selections



Target specifications for low or zero added material cost



Transparency in methods and material data



Client-data confidentiality

Did You Know?

The EC3 tool is part of a growing open ecosystem of interconnected tools, integrating directly with Autodesk's BIM 360, Climate Earth's EPD Generator, Microsoft's Azure, mindfulMATERIALS Library powered by Origin, Sustainable Minds, and Tally.

Taking on the Challenge of Embodied Carbon in the Built Environment

Effectively reducing embodied carbon within buildings at scale requires a fundamental starting point: if you can't measure it, you can't manage it. The EC3 tool, a free, open-access tool was created to address this dilemma. Designed to be used by building designers, contractors, owners, material suppliers and policymakers, users can now calculate upfront embodied carbon emissions associated with material production and construction processes. By enabling simple visualization of a project's potential and realized embodied carbon impacts, along with the ability to see and set reduction targets, users can accelerate the industry's efforts to address the problem of embodied carbon on a global scale.

Industry Firsts

- 1st The EC3 tool is the first free tool that allows for supply chain specific analysis of embodied carbon data, utilizing the first searchable and sortable database of all United States and Canadian Environmental Product Declarations (EPDs) for:
 - Concrete • Steel • Wood • Glass • Aluminum
 - Insulation • Gypsum • Carpet • Ceiling Tiles
- 1st First tool to create a digital EPD form, and to translate all EPDs into that form for viewing and analyzing the data.



Sign Up Today

Visit <https://buildingtransparency.org> and register to access the EC3 tool.

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EC3 Tool Highlights

- » Digital decision-making tool to inform construction material assessment and procurement decisions aligned with embodied carbon project performance goals.
- » Free, web tool allows assessment and reductions in embodied carbon, focused on the upfront emissions associated with manufacturing construction materials.
- » Utilizes materials quantities from construction estimates and/or BIM models and a robust database of construction materials products sortable by embodied carbon. Database is based on third party verified, digitized Environmental Product Declarations (EPDs).
- » Centralizes information from a multiplicity of suppliers.
- » Powered by the data, the EC3 tool can be implemented in both the design and procurement phases of a construction project to look at a project's overall embodied carbon emissions and potential savings, as well as sort and evaluate material manufacturers' embodied carbon emissions in each category, enabling the specification and procurement of low carbon options.
- » Owners, green building certification systems and policymakers can easily assess supply chain data to create EPD requirements, and set embodied carbon baselines and reductions, at the construction material and project scale.
- » The tool and its subsequent effect on the industry is driving demand for low-carbon solutions and incentivizing construction materials manufacturers and suppliers to invest in disclosure, transparency and material innovations that can reduce the carbon emissions of their products.
- » The EC3 tool is an industry tool, built by and for the entire industry. Data entered by each respective company in their individual Building Planner is secure and confidential.

EC3 Tool User Benefits



AEC Professionals

The EC3 tool enables simple sorting and visualization of materials supply chain EPD and embodied carbon, and project level embodied carbon emissions data, to inform design specifications and procurement documents.



Construction Project Owners

The EC3 tool enables simple visualization of a project's potential and realized embodied carbon impacts, with the ability to see baselines and set reductions targets.



Policymakers

The EC3 tool's data paves the way to easily inform procurement and building code level policies to be developed and supported.



Material Manufacturers and Suppliers

The EC3 tool will bring new levels of awareness to product manufacturers and suppliers, rewarding them for their investments in low carbon materials innovation and high quality data.

Learn More

For more information on the Carbon Leadership Forum, its programs and initiatives, including the EC3 tool, visit www.carbonleadershipforum.org.

Resources and links include:

- Video: Bill Gates on manufacturing emissions
- World Green Building Council report 'Bringing Embodied Carbon Upfront'
- Embodied Carbon Facts and Figures
- EC3 Tool: User Benefits
- EC3 Tool: Key Features
- EC3 Tool: FAQ
- EC3 Tool: Primer for AEC Professionals



This EC3 Tool *Product Brief* document has been brought to you by the Carbon Leadership Forum. The Carbon Leadership Forum incubated the EC3 tool project to accelerate its development and provide optimal industry collaboration.

Who We Are

- The Carbon Leadership Forum is accelerating transformation of the building sector to radically reduce and ultimately eliminate the embodied carbon in building materials and construction.
- We are pioneering research, creating resources, and incubating member-led initiatives around this shared goal.
- We are architects, engineers, contractors, material suppliers, building owners, and policymakers who care about the future: we work collaboratively taking bold steps together for greatest collective impact.