

Embodied Carbon 101 Playlist for Housing

This playlist provides starter resources to support housing project teams in meeting the 10% embodied carbon reduction requirement identified in the program approach. These resources introduce key concepts and explain important embodied carbon topics that will arise in using the program's pathways. The majority of the videos provided in this playlist come from the Carbon Leadership Forum (CLF), but videos from the wider embodied carbon community are also provided for additional context. Some of the videos provided are quite long, and therefore only a subset of the content is recommended, these snippets will be documented in the accompanying sections by indicating the relevant starting and stopping times (*ie. 0:00-1:00*).

*The tutorials and videos presented here are meant to provide as many resources as possible to help teams comply with the requirements of the DEQ Low-Embodied Carbon Housing Program. This playlist offers a menu of **optional content** to support housing project teams.*

Embodied Carbon 101

First, it is vital to understand the importance of embodied carbon. There are numerous videos, webinars, and presentations focused on this topic. To get started, we recommend a general primer from a trusted source followed by the CLF presentation on embodied carbon.

- [Bringing Embodied Carbon Upfront](#): This 2-minute overview from the World Green Building Institute explains how embodied carbon relates to the larger global context of emissions reductions needed for the climate crisis.
- [Embodied Carbon 101](#): CLF's 18-minute introduction provides a comprehensive overview of embodied carbon, measurement methodologies, and reduction strategies.

Life Cycle Assessment 101

After attaining a grasp on the importance of embodied carbon, the next logical question arises: how do we measure it? Here, we provide a concise overview of the methodology and vital underpinnings of Life Cycle Assessments, the main methodology for measuring embodied carbon.

- [Introduction to Life Cycle Assessment](#): CLF's 16-minute introduction into the standards, processes, and methodologies to measure embodied carbon in products and buildings. This module created by CLF reviews LCA use cases, LCA structure, and the data underpinning LCAs. *Relevant sections: 0:00-5:20*

EPD 101

Environmental Product Declarations (EPDs) offer a third party reviewed format for life cycle assessments (LCAs) that are used widely in DEQ's program. This section provides a primer for what an EPD is and how it is developed.

- [Environmental Product Declarations \(EPDs\)](#): CLF's 16-minute review of EPDs, their development, and how to compare products using EPDs. The review also goes through examples of EPDs and how to access them in different tools such as EC3.

- [ACLCA EPD 101](#): The American Center for Life Cycle Assessment's 27-minute review of EPDs focuses on EPD creation, from Product Category Rule to public release. If you want to know about how EPDs are created, this review is for you. *Relevant sections: 0:00-6:17, 8:11-12:41*

Pathways 1 & 2

For Pathways 1 & 2, housing teams must demonstrate embodied carbon reductions through the procurement of lower carbon materials. To prove this reduction, EPDs must show reductions from the baseline values provided in the Compliance Guidebook. These videos provide tips on finding EPDs for building products.

- [EC3 Tool How-to for Finding and Comparing Materials](#): A 12-minute resource by Building Transparency on how to best use the EC3 tool to find EPDs for materials in the database. We recommend watching at 0.75X speed to be able to absorb the information more easily.
- [EC3 Building Planner Tool](#): This 23-minute resource by Building Transparency explains the Building Planner portion of EC3. This is not required, but could allow you to organize your EPDs for a given project.
- [Transparency Catalog Project Builder & Library](#): Sustainable Minds' 34-minute webinar highlights its tool for finding EPDs and building out project-level material selections and provides a demo for its use.

Pathway 4

For Pathway 4, housing teams must demonstrate embodied carbon reductions by completing a Whole Building Life Cycle Assessment (WBLCA). This section provides more information about the WBLCA process as well as primers on the accepted tools for Pathway 4.

- [Whole Building Life Cycle Assessment](#): CLF's 18-minute comprehensive review of project scale life cycle assessment. It goes over the main actors performing WBLCA, the steps to creating and implementing a WBLCA, and reduction strategies. It also reviews the state of play of tools that support WBLCA modeling and best practices in reporting and comparisons.
- [BEAM](#): Builders for Climate Action created a 62-minute comprehensive review of their tool for measuring embodied carbon in housing projects: BEAM. This resource provides both an overview and a deep dive into particular functionality of the tool. *Relevant section: 12:28 - 35:35.*
- [Tally](#): TallyLCA provides a 44-minute overview of its tool, which is a plugin for Revit. This comprehensive overview details how to set up a Tally project. *Relevant section: 15:08 - 34:48.*
- [One Click LCA](#): One Click LCA does not provide a set of how-to videos for using its product. Instead, it provides a construction and building LCA bootcamp free of charge for people to sign up for.
- [Athena Impact Estimator for Buildings](#): This 21-minute resource by Athena provides a breakdown of how to use their tool for conducting a WBLCA. *Relevant section: 15:08 - 24:27.*