

# Sustainable Solutions Corporation

## Life Cycle Assessment and Environmental Product Declaration Services

### The Business Case for Life Cycle Assessment

There is a clear theme in the future of sustainability, and that theme is **transparency**. In today's economy, integrating sustainability into products and processes is not enough. Full transparency in manufacturing allows consumers to make educated purchasing decisions. As a result, Life Cycle Assessments (LCAs) are an emerging focus in the sustainability marketplace. An increasing number of organizations—such as Wal-Mart, 3M, Unilever, and Apple—are utilizing LCA data to evaluate products and suppliers; and there is growing demand to quantify and publish the life cycle environmental impacts of products.

There are many uses for LCA data, both internally and publicly. LCA is a core component of a sustainable product innovation program, assisting designers and engineers with improving the environmental performance of a product beginning with product inception. LCA data has been utilized by our clients to reduce environmental impacts and identify cost savings in their manufacturing plants. The holistic view of a product or service enabled by LCA empowers our clients to implement product stewardship in an impactful way; and in doing so, foster a more sustainable business model.

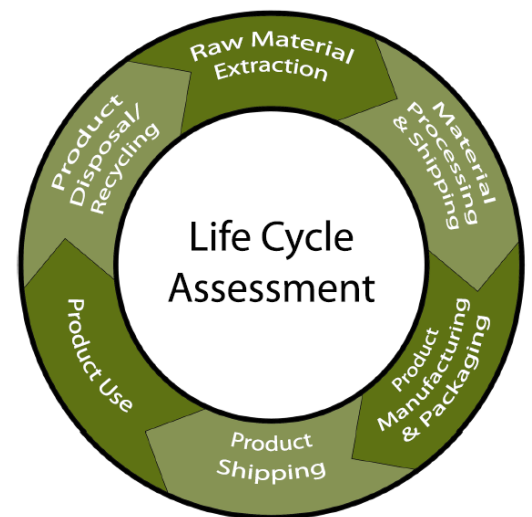
### LCA Overview

All Life Cycle Assessments are conducted per ISO-14040/44 standards and are comprised of 4 phases: goal and scope definition, life cycle inventory, life cycle impact assessment, and interpretation. LCA is an iterative process and requires an understanding of all inputs and outputs throughout the life cycle. Performing a LCA provides clients with a range of benefits:

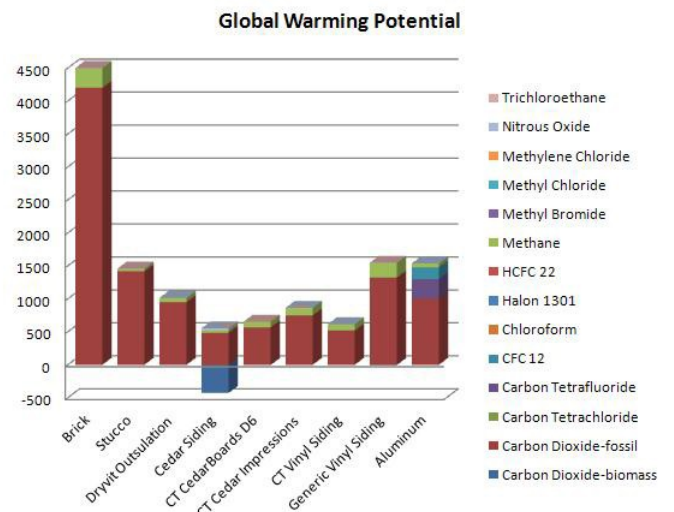
- Satisfy your clients' sustainable supply chain requirements
- Improve the environmental performance of products and services
- Evaluate your organization's risks related to raw material dependencies in the supply chain
- Satisfy green building standards (LEED, NAHB)
- Provide a foundation for developing product stewardship and sustainable product innovation programs within your company

### CertainTeed – LCA Case Study

SSC conducted detailed Life Cycle Assessments (LCA) for CertainTeed's multiple products and processes to determine the environmental impact of the products across all life cycle stages. This research examined all energy and material inputs and outputs for the product from raw material extraction, transportation, production, intended use, through to end-of-life.



Global Warming Potential (g CO<sub>2</sub> eq) \*Graph from BEES



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### About Environmental Product Declaration

An Environmental Product Declaration (EPD) is a single source of transparent, scientifically compelling information which discloses the full environmental impact of a product from cradle to grave. A qualified third party provides independent verification of quantitative data in accordance with a standardized methodology – ISO Standard 14025 – so that similar products can be compared objectively. Publishing LCA data demonstrates a commitment to transparency and sustainability. Publicly available data can provide a distinct competitive advantage by illustrating impacts from raw materials extraction to end of life, which can be used to satisfy sustainability supply chain requirements as well as contribute to earning LEED credits.

### EPD Publication Overview

SSC played an integral role in developing and publishing a series of EPDs covering 19 mineral fiber ceiling product families – the industry’s first for ceilings products. The process began with SSC conducting Life Cycle Assessments for CertainTeed Ceilings, which provided the data utilized to develop the EPDs. SSC worked with UL Environment and CertainTeed to harmonize an existing ceiling panel Product Category Rule (PCR), which served as the basis for development of the EPDs. The EPDs were then third-party verified and published by UL Environment.

For more information: <http://www.certainteed.com/BuildingResponsibly/Products/Ceilings/LiteratureBrochures>



*The Client's Perspective –*

Corroborating the significance of the LCAs and EPDs, Dawn Chittick, Director of Marketing for CertainTeed Ceilings said, “The EPDs provide transparent information about the environmental impact of our ceiling products, giving architects and designers the confidence that our products deliver on the promises we have made.”

To learn more about the value of the Life Cycle Assessments and Environmental Product Declarations, contact:  
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