



Athena Institute

About the Institute

For more than a decade, the Athena Institute has been helping architects, engineers and others to evaluate the environmental impacts of new and existing buildings through life cycle assessment (LCA).*

A non-profit organization, Athena seeks to improve the sustainability of the built environment by meeting the building community's need for better information and tools. Through offices in Canada and the United States, the Institute furthers the use and science of LCA through groundbreaking software, world class databases and customized consulting services, and by working collaboratively with the international research community.

Athena Software Tools

Athena offers the only two software tools in North America for the life cycle assessment of whole buildings and assemblies.

At the heart of the organization is the ATHENA® *Impact Estimator for Buildings*, which is capable of modeling 95% of the building stock in North America—including industrial, institutional, office and residential designs—and simulating over 1,000 assembly combinations.

The ATHENA® *EcoCalculator for Assemblies* provides instant LCA results for common building assemblies based on detailed assessments previously conducted using the *Estimator*. It was commissioned by the Green Building Initiative™ for use with the Green Globes™ environmental assessment and rating system in order to make LCA more accessible to the mainstream design community. It is available in generic form, free of charge, from the Athena Web site (www.athenaSML.ca).

LCA Databases

The quality of the underlying data is central to any software tool, especially those like the *Estimator* and *EcoCalculator*, which are intended for use by design professionals who may not have extensive training in LCA. One of Athena's main thrusts has therefore been the development of comprehensive, comparable databases for building materials and products.

Athena's LCA databases cover 90-95% of the structural and envelope systems typically used in residential and commercial buildings. The Institute also maintains databases for energy use and related air emissions for on-site construction of a building's assemblies, for maintenance, repair and replacement effects through its operating life, and for demolition and disposal. To reassure clients that its software tools are based on solid data, Athena makes available a companion CD of its database reports.

Consulting Services

Athena offers a range of consulting services tailored to meet individual client needs:

Building Assessment

Using the *Estimator*, the Institute works independently or as part of a design team to assess a building's structural and/or envelope systems and provide an environmental profile. Work ranges from participation in charrettes at the conceptual stage of a project, to the evaluation of detailed drawings and project specifications—either later in the design process or post-construction. These services can be applied to new buildings, retrofits or major renovations.



Product and Process LCA

For companies that require LCA results for products or processes, Athena services range from advice on study objectives and design to full responsibility for the study—including sub-contracting, management, accountability and reporting.

Training

Athena offers workshops and seminars on LCA, the range of available tools and techniques, and use of the *Estimator*, as well as customized training to meet the needs of individual clients.

General Sustainability Consulting

Improving sustainability is a complex and confusing task, whether the context is a single building, multi-building project or other aspects of the built environment. In addition to a vast array of tools, procedures and rules-of-thumb, there is a long and growing list of organizations, guidelines, standards and data formats. As a result, Athena is frequently asked to provide general sustainability guidance to help organizations understand the often contradictory information available and determine the best course of action.

Support a Sustainable Built Environment

Athena's work to further develop its building assessment software and databases has been supported by members and by grants from both the public and private sectors in Canada and the United States. However, much remains to be done as we move toward a sustainable built environment. To find out how you can participate, please contact the Athena Institute at 1-866-520-6792 or through the offices below.

* Life cycle assessment is an internationally recognized approach to evaluating the impacts that a product or process has on the environment over the course of its entire life. It is widely accepted as one of the best ways to assess and compare the environmental impacts of alternate building materials.

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