

The ABCs of EPDs

Environmental Product Declarations will lead the next wave of corporate transparency

By Chris Erickson

A major tenant of corporate responsibility is transparency. Corporations are under increasing pressure to understand, report and manage social and environmental externalities – side effects of business operations that businesses have not traditionally been obligated to pay for, or even account for.

In a world of increasing demand for transparency, shouldn't every company be expected to report the environmental costs of producing their product in a fair and comparable way? Environmental Product Declarations (EPDs) are designed to do just that. EPDs are a scientifically sound and comparable way to report the environmental impacts of a product, and they just might deliver a new era of corporate transparency.

EPDs can be a key input to the design and manufacture of sustainable products. They empower customers to make sustainable product choices, paving the way for a more sustainable economy. EPDs typically include information on the environmental impact of a product, throughout its lifecycle, from raw material extraction, production and packaging to distribution, end use and disposal, including energy use and efficiency, emissions to air, soil and water and waste generation, as well as traditional product performance and company information. In many ways EPDs mimic the nutrition label on food in that they provide the facts and the transparency needed for informed purchasing decisions, while not offering any judgment as to the "greenness" of the product.

How is an EPD produced?

Step 1: Producing EPDs for any particular product category is a two-step process. The first step includes a one-time process to create a rulebook, called Product Category Rules (PCR). The PCR defines how the particular product EPD will be produced and what will be measured and reported, and it defines guidelines to ensure comparability between products in the category. To create the PCR, a program operator volunteers or is designated to manage the creation of the PCR and subsequently establishes a committee of interested and expert stakeholders to develop it. The program committee works collaboratively under the direction of the program operator to produce the PCR, and an external party verifies the final PCR. This verification is performed by a group of third-party experts who must have knowledge of both the product and of lifecycle analysis.



Figure 1: The first step of the EPD process is to develop the PCR

The International Standards Organization (ISO) has created guideline standards for how the whole process is completed. These guidelines are documented in ISO 14025 “Environmental labels and declarations —Type III environmental declarations —Principles and procedures”

http://www.iso.org/iso/catalogue_detail?csnumber=38131.

A recently produced PCR for the concrete industry where the Carbon Leadership Forum served as program operator from the College of the Built Environment at the University of Washington can be seen here: http://www.carbonleadershipforum.org/Carbon_Leadership_forum/PCR.html.

Step 2: The completed PCR signals the beginning of the second step in the process, where companies are able to produce EPDs. The EPD process is also overseen by the program operator, but multiple companies can work in parallel to complete their EPDs. During the second step, companies or designated consultants perform a lifecycle assessment (LCA) on the company product. That assessment must be compliant with ISO international standards and with the PCR.

LCA is a scientific approach for assessing the environmental impacts of a product or process. A full LCA assesses the impacts of a product from extraction of raw materials from the earth to produce the product and ends when all materials are returned to the earth. This full LCA is often called a “cradle to grave” assessment. Typical lifecycle steps are mining, manufacturing and transport. For comparability or materiality purposes, a PCR may limit the scope of the LCA. For example, the PCR for concrete mentioned above calls for a “cradle to gate” LCA. That is, the LCA stops at the point the concrete is loaded into the truck for delivery to the customer site. The use phase and the end of life are not included.

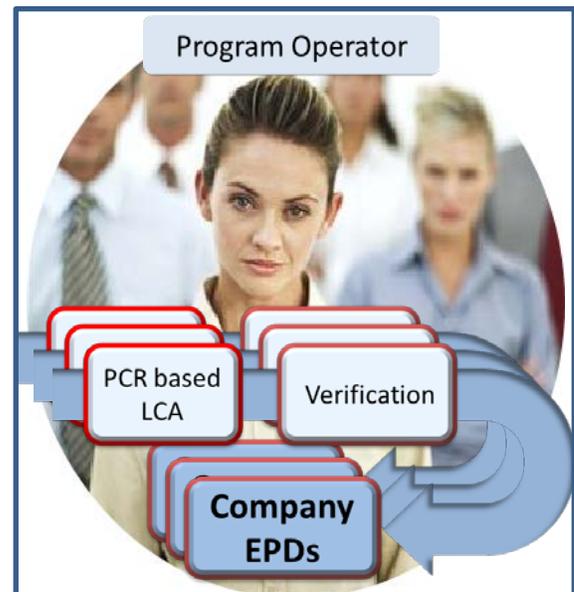


Figure 2: The second step of the EPD process is for companies to create PCR compliant EPDs

Once completed, the LCA report is verified by a third party, by either the program operator or an independent LCA consultant working on behalf of the program operator. Once verified, the EPDs are typically good for five years and are posted on the program operator web site for public access.

Challenges to mass adoption

In a sustainable economy, EPDs should be produced for every product, in the same fashion that we see nutrition labels on every food product. Today, two primary barriers exist to producing EPDs *en masse*: lack of a mandate, and lack of scalable technology. While a government mandate in the United States is

highly unlikely, some industry organizations such as the National Ready Mix Concrete Foundation, U.S. Green Building Council and Architecture 2030 are supporting or advocating EPDs in construction. In other industries such as apparel, the Sustainable Apparel Coalition has established goals <http://www.apparelcoalition.org/desired-outcomes/> that are aligned with EPDs but it has not called for members to label products.

The lack of call for labeling is in large part attributable to the lack of scalability of LCA methodology. In 2009, the U.S. Department of Agriculture estimated that France's labeling law would add 5 percent to the cost of products http://www.usda-france.fr/media/Proposed%20Carbon%20Footprint%20Labeling%20Could%20Step%20on%20Trade_Paris_France_12-22-2009.pdf. This is clearly not acceptable in the age of "big data" and nearly infinitely scalable computing. Industries in the United States are stepping up, and it's time the LCA industry also steps up to scalable implementation.



Chris Erickson is CEO and co-founder of Climate Earth, a leading provider of business intelligence systems and consulting for sustainable management. Founded in 2008, the company combines expertise in large-scale data management and lifecycle analysis to create systems that help the largest companies' measure and manage environmental impacts and risks. Previously, he was vice president and general manager at Tandem Computers, a Fortune 500 company; and CEO of Red Brick Systems, a data warehousing and business analytics company which he led to a successful IPO. Chris holds an MBA from the UC Berkeley Haas School of Business.