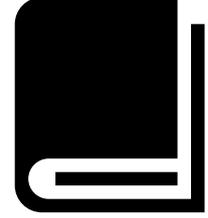




Search for or create product category rules (PCRs) that comply with ISO 14025 and are registered with a credible EPD programme operator



Conduct and verify lifecycle assessment in accordance with the PCRs



Compile EPD that conforms with the PCRs

Product transparency

As environmental product declarations become more common, **Maxine Perella** finds out whether the benefits outweigh the costs

The popularity of environmental product declarations (EPDs) has grown in recent years, as businesses, particularly in manufacturing, seek to provide greater disclosure over the claims made about the environmental impacts of the goods and services they offer.

EPDs are widely considered to be the gold standard of product transparency. These declarations provide a detailed, independently verified statement of a product's raw materials and chemicals and their origins, as well as lifecycle assessment (LCA) data, such as embodied energy and water, treatment of waste, and global warming potential.

Standard disclosure

EPDs tend to be drawn up in accordance with the international standard ISO 14025 (type III environmental declarations) and, as such, the methodology used to produce them is robust. The 14025 standard requires that certified declarations be prepared in accordance with specific product category rules (PCRs). These define broad product categories, describe the scope of the LCA to be conducted and identify the types of potential impacts that must

be evaluated. A compliant declaration must be independently verified to ensure these steps have been followed before it can be registered and published through an EPD programme operator.

The extent of data gathering required to create EPDs, particularly for companies undertaking the process for the first time, can make the exercise complex and costly. According to EPD consultant Dr Sandy Smith, UK managing director of PE International, businesses coming to this afresh should first drill down on the motivating factors. "Identifying the business case is crucial before you even start," he says, suggesting some questions that need to be asked. These include: How many customers are asking for EPDs? Are customers asking for this as a tick-box exercise or are they making decisions based on it? What is the contractual worth of sales at risk if we do not have an EPD?

"If you start with that process, based on business value, that's great," Smith says.

Robert Epsom, an approved individual EPD verifier and senior consultant in resource efficiency at Ricardo-AEA, points out that, since EPDs are product-based, most interest in them comes from manufacturing companies that operate on a business-to-business sales

The EPD process

Source: 2011 UL Environment Inc.



model. Their customers tend to buy in bulk, and thus any variations in procurement decisions can have significant impact. “Unlike consumers, they will be affected by legislation, or sustainable procurement guidelines, or non-statutory market drivers,” he explains.

The construction product sector is the fastest growth area for EPDs. Epsom explains that this is because certification schemes, such as LEED and BREEAM, award higher scores to buildings in which the products procured have LCA data or an EPD. “This is a non-regulatory driver that has almost as much effect as legislation in the UK and internationally,” he says. “There is a standard methodology – essentially an overarching PCR – for construction products, EN 15804. This standard is significantly catalysing the development of EPDs in this sector.”

Driving transparency

One company mindful of this trend is building materials supplier British Gypsum. Last year it became the first plasterboard manufacturer in the UK to introduce EPDs for some of its products – it now has eight declarations and, at the time of writing, was due to release seven more. British Gypsum’s sustainability leader, Heidi Barnard, says the company is very forward thinking, which was one of the key drivers behind choosing EPDs. “Because of the likes of BREEAM, where clients are looking for more evidence that our products will help them deliver that performance, this is one way we can help demonstrate that and give them something tangible,” she says.

Barnard believes customer demand for EPDs will only increase in the future to the point where it might become an essential element of product information. Ramon Arratia, sustainability director at carpet tile manufacturer Interface EMEAI, which first spoke to customers about EPD in 2010, agrees: “We try to be one step ahead of customer demand. We were trying to make our customers such as designers and architects aware that this was going to come.”

Arratia sees product transparency as being an important driver for the business; it can lend a

competitive edge and ultimately help customers make value judgments during the purchasing process downstream of the supply chain. “EPDs give architects a way of assessing products in a scientific way, which is what they like ... [they] can present customers with a sophisticated analysis of the impact of the product that they are suggesting,” he says.

Interface is one of the most vocal advocates of EPDs. About 99% of its products globally now have them.

EPDs can also act as a useful lever for transitional markets, particularly in the renewables sector. The wind power and renewables division at Siemens recently published four EDP brochures, each representing one of the company’s four product platforms, covering geared and direct drive wind turbines for offshore and onshore projects. Tine Joergensen, who led on the EPD process at the company, says the move will help demonstrate the level of contribution wind energy can make to the future energy mix. “EPDs help several stakeholders like customers, developers and authorities to estimate the potential of our technology,” says Joergensen. “We expect this to support the whole industry in improving acceptance of wind energy.”

She adds that EPDs are now a strategic focus across the company’s global business operations. “More than 40% of Siemens’ revenues have been generated by green products and solutions in recent years. As a consequence, these EPDs have a high strategic importance for us. EPDs have been published in several units, including Siemens’ power and gas division and healthcare business. The EPDs are an important element to underline our strength in what we call ‘product eco excellence’.”

The economics

Is there a definite economic benefit to EPDs to go with the definite reputational one? The costs in obtaining EPDs can vary, but they generally run into thousands of pounds. “The verification of a single product will be in the order of £2,000 to £8,000 subject to its complexity,” Epsom says. “It is difficult to provide a single figure. Each product category is different and



products vary greatly in complexity. Further to this, companies will often use different LCA software, databases and lifecycle impact assessment methods.”

He points out there are significant economies of scale in that multiple verifications carried out within a particular product category will cost less than the first. “Having completed one verification within a product category, verifiers will be familiar with the supply chain, the manufacturing sites, the product lifecycle and the calculation approach taken and will therefore need less time for subsequent EPDs,” Epsom says.

Ultimately, Epsom believes a good EPD can help a company sell more products. “In many cases an EPD, or the data communicated within one, can be the differentiator when a decision is being made on whether to purchase a product,” he says. Smith at PE International agrees: “It comes back to the business value case – you need to work out how many more sales you are going to get. I think increasingly there is either an opportunity to increase your sales or an opportunity not to lose some sales based on environmental performance.”

In practice however, it would seem the level of payback is a tricky one to quantify. “It is not easy to investigate if there is a relation between sales and EPDs,” Joergensen admits. “But as customers’ requirements increase, EPDs get more important.”

Meanwhile, Barnard points out that, for there to be a tangible cost benefit, more companies need to have EPDs so that there is a level playing field on which to assess such matters. “That’s not where we are at the minute,” she says. “Direct economic benefit would be very difficult to prove. EPDs are not a standalone offering, but part of a larger business proposition when it comes to sustainable products and solutions.”

Environmental product declarations are not a standalone offering, but part of a larger business proposition when it comes to sustainable goods

Peter Howard, senior brand manager for sustainability at Akzonobel Decorative Coatings, which has five EPDs covering 67 products for its Dulux Trade paint brand, thinks new business will be won on the back of such transparency, particularly at the top end of the market it serves. “I think [EPDs] will help us win major specification in new construction and refurbishment work,” he says.

“There will also be benefits around maintaining our current customers. We have very good relationships with the largest players in construction and fit-out, and it will help us maintain those relationships and demonstrate that we are moving forward with the client.”

Howard believes secondary benefits have emerged from the EPD process. “If we dive into each EDP and the actual detail of particular products, it enables us to show and model how different choices can have a sustainability impact. We weren’t able to do that before. For example, we can now calculate for a particular specification what the impact is. That can help to drive

a real understanding that these products have a credible sustainability benefit or credentials.”

What also comes with such transparency is a greater understanding of the supply chain, notably greater certainty over where the impact hotspots are and how they can be improved. According to Barnard, this will help drive eco-innovation and product development forward. “It’s confirming a lot of the assumptions we’ve made and giving us evidence for what we thought was the case – and now we can prove it.”

Risks and opportunities?

For those that embark on it, the EPD process is generally an eye-opener – both good and bad. If the data obtained does not stack up positively, especially compared with that of competitors, there is always the option not to publish it. “If the data doesn’t show them in a good light they should make it about the journey rather than the EPD,” Epsom reflects. “The document allows you to include targets and ambitions for following years – that is, you treat the first EPD as the baseline and communicate reductions at pre-defined intervals.”

“What’s interesting is that EPDs, the results that you get, are very much determined by the PCRs and the assumptions that you make,” Howard notes. “Therefore if you change those assumptions or you change those rules, you can get a very different result.”

This, he says, makes benchmarking a challenge. “I imagine many people look at EPDs and say ‘How can I compare this manufacturer to that manufacturer?’ and at the moment, I don’t think you’re going to be able to do that in such a way that it produces a meaningful result. What it could do is positively or negatively impact on one of those manufacturers or brands – and that’s undoubtedly a risk. But you have to make a start on the journey. I believe EPDs are a very positive thing for our industry and generally in driving transparency.”

To be comparable, EPDs for a particular product category must be based on the same PCRs to ensure consistency in methodology and data quality. In practice, this means they must come from the same EPD programme. There are several EPD programme operators in the UK and Europe, however, and companies are free to choose with whom they sign up. Some are now calling for a more harmonised approach to PCR methodology and there are ongoing product environmental footprint pilots at EU level, with which EPD programme operators are involved, to ascertain whether PCRs need to be refined or streamlined.

According to Smith, the pilots are proving controversial with uncertainty over what the final outcome will be. “It has to be right that we try to provide a common framework to decide whether this product is better than that product from an environmental point of view,” he argues. “Although it is incredibly difficult to do, if we don’t try to do it how are we going to harness the consumerism and the buying power? If we move towards comparability, one reason why industry is so nervous is that there will be winners and losers. It’s a huge risk, but also a huge opportunity.”

Maxine Perella is a freelance journalist.