

The Life Cycle of Environmental Product Declarations



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ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs) have become increasingly important in understanding the environmental impact of producing construction materials. The process of developing general EPDs is dictated by the international organization that develops and publishes worldwide technical, industrial and commercial standards. ISO 14025 is the standard for “Environmental labels and declarations — Type III environmental declarations — Principles and procedures,” which establishes the principles and specifies the procedures for developing Type III environmental declaration programs and Type III environmental declarations. Specifically, ISO 21930 which is “sustainability in buildings and civil engineering works — Core rules for environmental product declarations of construction products and services.” This standard builds off of ISO 14025 and is more applicable to the aggregate industry.

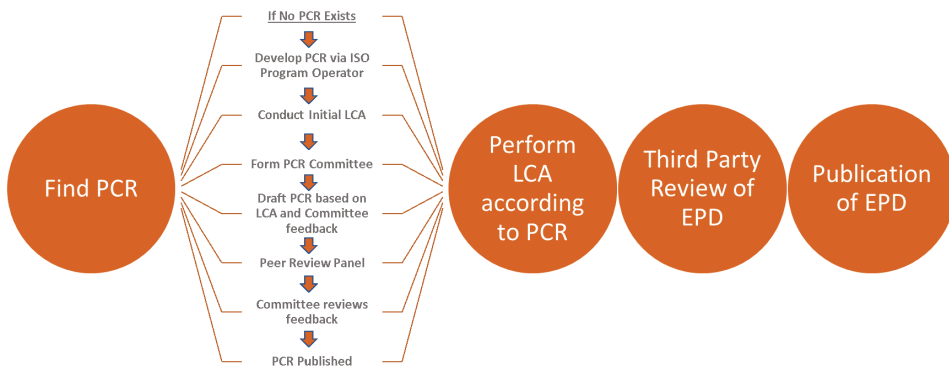
The framework for creating an EPD is defined by a Life Cycle Assessment (LCA) based on the Product Category Rules (PCR). The PCR identifies the scope and boundary of a LCA for the product category. If a PCR does not exist for a product or industry, a program operator as defined in ISO 14025 can put together a committee of experts to develop one. Like other consensus standards, PCRs are developed in an open and collaborative manner. Interested parties and stakeholders participate in a standards development process, which

allows them to review the draft PCR, provide feedback and share comments. Stakeholders may include material suppliers, manufacturers, purchasers, users, consumers, trade associations, government agencies, life-cycle assessment practitioners and certification bodies.

The technical content of the PCR is usually informed by an initial LCA. The LCA takes into consideration things such as energy use, resource use, emissions, toxicity, freshwater use and waste that go into producing a product. The committee of experts then determine the lifecycle scope, potential environmental impacts and parameters of the PCR. For products that serve as a component and may have indefinite functional uses, the life cycle scope will be limited from cradle to gate. For end-user products where functional uses are limited, the lifecycle scope may cover it from cradle to grave. PCRs among different products can vary quite a bit based on these assumptions and the availability of quality data. For each product category, PCRs typically include details of the LCA, system boundaries, data requirements, declared units and other information. The overall goal is to include processes that have significant environmental impact, as determined by the PCR committee.

A program operator functioning under the requirements of ISO 14025 maintains all comments and questions received during the development process and sends them out for a public comment period. Then the

Developing EPDs



of the lifecycle are covered in the EPD as well as the environmental impacts that are measured and reported on as specified in the PCR. As the demand for sustainable procurement grows, EPDs provide comprehensive third party verified information on environmental impacts of construction materials.

To help provide data from the aggregate industry, NSSGA has formed a committee through NSF International as the program operator to update the Aggregate PCR. The updates will better reflect the processes involved in producing aggregate products. The PCR update will support NSSGA in creating an EPD development tool to help our members produce and publish EPDs more efficiently. If you have any questions on NSSGA's current work with PCRs, EPDs or the process of EPDs with your company, please contact Rehan Ehsan at rehsan@nssga.org. ■

operator will typically submit a final version of the PCR to a review panel for approval. Once approved, it is published on operator's website. The PCR then becomes the standard for performing the LCA to develop your EPD. PCRs typically expire every three to five years and must be updated to address changes within each industry and relevant processes. However, PCRs may be updated within this window if there is a more immediate need.

Once the PCR has been published, you can perform the LCA required for your EPD. The LCA can be conducted by the manufacturer or a third party. The EPD is then submitted to an independent body to be verified against the PCR and applicable ISO standards. After verification, the program operator can then publish the EPD. The EPD report contains the environmental impact of a product over its specified life cycle. Specific stages

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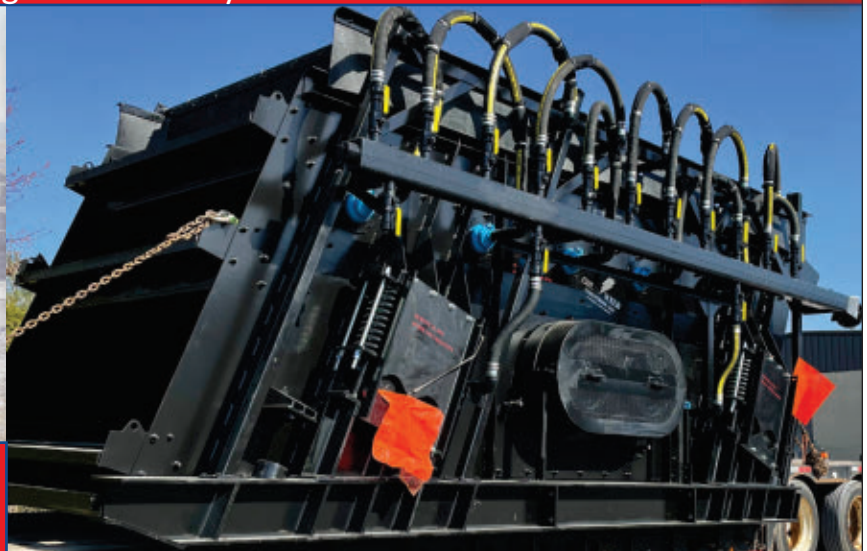
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