

# Guidance for Product Category Rule Program Developers

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## Preface

The use of Environmental Product Declarations (EPDs) is raising rapidly. Although EPDs are primarily used for business-to-business transactions, they are also in use for consumer facing labels. Both business and the consumer need to have trust that the EPDs on the products they buy represent the current best measurement practices, are not deceptive, and that EPDs developed by many thousands of companies can be appropriately compared.

Because the number of PCRs that must be developed is anticipated to number in the tens of thousands, no one organization has the capacity to manage the development of them all. Yet, the system must be developed in such a way that duplication is minimized and different PCRs work together seamlessly. For example, the PCR for steel must seamlessly integrate into PCRs for railroads and food containers.

This guidance was developed to assist new PCR developers in developing their programs, and to provide an audit system to assure that there is consistency in measurement and disclosure of environmental performance of goods and services. The goal is to develop the system of PCRs to be complete, kept current, avoid duplication and contradictions, and support the needs of both international trade and environmental marketing

## 1. Scope

- 1.1.** This standard practice covers the development of Product Category Rule Programs for all sectors of the economy, and for all products, whether consumer or business-to-business products. It covers PCRs for single life cycle claims such as a carbon footprint as well as practice for multiple life cycle attributes. It provides requirements for the operations and documentation needed to assure that the program is transparent, equitable and that the product category rules it develops reflect the following principles:
  - 1.1.1.** PCRs shall make the use of best available science. This implies that the science is of high quality and readily available, reproducible, and fully vetted by the appropriate authorities, e.g. a panel of distinguished scientists from the relevant field of environmental impacts.
  - 1.1.2.** Transparency and a level playing field for PCR development shall be supported. This means that the PCR Developer shall take steps to assure that interested parties have the time and opportunity to participate in development of the PCR.
  - 1.1.3.** Conflicts of interest shall be avoided. This means that those developing and validating the PCRs shall disclose any conflicts, and where they exist, individuals take steps to recuse themselves from decision-making
  - 1.1.4.** Conformity to this guidance shall be verifiable using at least one method of validation.
  - 1.1.5.** Both competition and cooperation amongst PCR developers shall be supported. This means that only a single PCR for a given functional unit is registered at any one time, but that it is possible for PCR developers to compete in developing new and revised PCRs.

- 1.2. Wherever possible, the view of the naïve consumer shall be respected: that is, the consumer expects a label to reflect the actual product being bought, not a hypothetical economy-wide average. The PCR shall take this view in designing measurement methods and models.<sup>1</sup>

## 2 Referenced Documents

This guidance incorporates by reference the following standards:

- 2.1 ISO 14020 Environmental labels and declarations – General principles
- 2.2 ISO 14021:1999 Environmental labels and declarations — Self-declared environmental claims (Type II environmental labelling)
- 2.3 ISO 14025 Environmental labels and declarations — Type III environmental declarations — Principles and procedures
- 2.4 ISO 14040-2006 Environmental management — Life cycle assessment — Principles and framework
- 2.5 ISO 14044-2006 Environmental management — Life cycle assessment — Requirements and guidelines
- 2.6 ISO 14050, Environmental management — Vocabulary
- 2.7 ISO 17024-2003 Conformity assessment — General requirements for bodies operating certification of persons
- 2.8 ISO 21930 Sustainability in building construction — Environmental declaration of building products

## 3 Terminology

### *Definitions*

- 3.1 *Background Data* — *n.* Data other than foreground data.
- 3.2 *CAS Number* — *n.* Chemical Registration numbers provided by the Chemical Abstracts System.
- 3.3 *Conflict of interest* — *n.* A conflict of interest is a situation in which individual(s) in positions of trust have divided loyalties.
- 3.4 *EPD* — *n.* Type III Environmental Product Declaration as defined by ISO 14025.
- 3.5 *EPD program developer* — *n* an organization that conducts a Type III environmental product declaration program. This may or may not be the PCR program developer.
- 3.6 *EPD Owner* — *n.* The organization developing an EPD in accordance with a published PCR. Usually the business providing the product.
- 3.7 *Foreground data* — *n.* Data directly under the operational control of and measured by the owner of the EPD. This may include technosphere flows in the manufacturing phase, transport to and from the manufacturing location, and measured emissions from the facilities under operational control.
- 3.8 *Immediate family member* — *n:* a parent, sibling, spouse, child or step-child, or life partner.
- 3.9 *Independent manufacturing representatives* — *n:* individuals representing a company whose goods are covered in the PCR in whole or in part. They shall be independent of each other,

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<sup>1</sup> In this respect, the U.S. Federal Trade Commission Part 260 -- GUIDES FOR THE USE OF ENVIRONMENTAL MARKETING CLAIMS can assist, and similar guides in other countries are also available.

which means that they are neither substantial direct customers or vendors (greater than 5 % of purchase or sales) nor partners of the other manufacturing company being represented.

- 3.10 *LCACP* — *n.* Life cycle assessment certified professional: an individual in good standing under the American Center for Life Cycle Assessment certification program, or other comparable program developed for LCA professionals under the ISO 17024 standard
- 3.11 *PCR: Product Category Rule* — *n.* The detailed description of how a life cycle assessment should be performed for a particular functional unit. A PCR also includes explicit instructions for the label itself.
- 3.12 *PCR committee* — *n.* group organized under a PCR developer to develop one or more PCRs in accordance with the PCR Developer's management system.
- 3.13 *PCR program developer* — *n.* an organization that develops or shepherds the development of one or more PCRs. PCR program developers may also be EPD program developers.
- 3.14 *Primary Data* — *n.* Data measured by the owner of the EPD or data gathered directly from other entities in the value chain.
- 3.15 *Product* — *n.* Any goods or service [from ISO 14040]
- 3.16 *Secondary Data* — *n.* Data from other sources, such as publications in the peer reviewed literature or grey literature such as government publications
- 3.17 *Substantial interest* — *n.* Earning at least five percent of one's annual income from a commercial interest that manufacturers or otherwise produces a product covered by a particular PCR or owning at least \$100,000 in stocks or bonds of such a commercial interest. Such ownership as a part of a mutual fund does not constitute substantial interest.
- 3.18 *System Function* — *n.* The social benefit provided by a product or service.
- 3.19 *Tertiary Data* — *n.* Data derived from meta-analyses such as Life Cycle databases, Economic Input-Output data, and meta-analyses in the peer reviewed literature.
- 3.20 *UNSPSC Code* — *n.* The United Nations Standard Products and Services Code (UN SPSC) an open, global multi-sector standard for efficient, accurate classification of products and services.

## 4 Summary of guidance

### 4.1 Required Activities

A PCR Program Developer develops Product Category Rules for the purpose of disclosure of environmental performance of product and services through an environmental product declaration.

The program developer shall perform the following tasks:

- Solicit participation in the PCR development through a process open to all interested parties affected by the PCR, such as product manufacturers, industry consortia, government agencies, and non-governmental organizations;
- Assure that the PCR committee is balanced and that all conflicts of interest are disclosed;
- Manage the work of the committee to make all the relevant decisions under ISO 14020, ISO 14025, ISO 14040 and ISO 14044, and any other relevant standard;
- Write and publish the PCR;
- Solicit input from interested parties and secure review by a qualified critical review panel;
- Make any necessary adjustments and publish the final PCR.
- Maintain published PCRs.

#### 4.1 *Optional Activities*

The PCR Developer may also perform the following tasks:

- Validate the Environmental Product Declarations developed in conformance with the PCR.
- Once published, solicit input from interested parties on a periodic basis, incorporating necessary updates, and publishes the updated version of the PCR.

#### 4.2 *Management System*

The PCR developer shall have a management system. This standard practice identifies the elements of the PCR Developer's management system that are necessary and sufficient to accomplish these tasks. It can be used for conformity assessment, to identify PCR programs that adequately meet the goals identified above.

## 5 **Requirements**

### 5.1 *Management System*

PCR Program developers shall have a published management system in accordance with the requirements of ISO 14025. That system shall be made available to the public via the program developer's website, and validated by a credible third party. The requirement for third party validation is not applicable to systems in place before 2006.

### 5.2 *Conflicts of Interest for the PCR Developer.*

In order to avoid conflict of interest in developing PCRs, PCR developers shall not conduct any commercial business performing LCA studies for the purposes of publication of environmental product declarations. An initial LCA/EPD effort developing a demonstration of the PCR is acceptable, but any other LCA work should be performed by either the company that owns the EPD or by one of their agents.

### 5.3 *PCR Committee Conflicts of Interest*

To assure that conflicts of interest are addressed, PCR developers shall provide forms for each PCR committee members to disclose any conflicts. Each PCR committee member shall be required to fill in the form.

The conflict of interest form shall include:

- The name of the PCR committee
- The name of the committee member
- The committee member's employer
- Anticipated or known customer/vendor/partner relationships with other PCR committee members
- Substantial interest of a committee member or member's immediate family in the subject of a PCR being developed
- The signature of the committee member

- The date of the signature

#### 5.4 *PCR Committee Makeup*

The developer shall also assure that the PCR committee is composed of enough independent members to assure that the interests of one party do not dominate the PCR or the PCR development process. The PCR Committee shall include

- 5.4.1 At least two independent manufacturing representatives. In some cases a given PCR describes a product which is dominated by one organization. In that case, the independence of the members will be assumed if the relationship does not represent more than 10% of a given company's revenue. The dominance of one company in a product category shall be documented.
- 5.4.2 At least one LCA expert (who may be an employee of the PCR developer)
- 5.4.3 At least one interested party, such as a member of a consumer or environmental organization.
- 5.4.4 No single organization or value chain shall dominate the PCR committee by holding more than 50% of the membership of a PCR committee.

#### 5.5 *Assuring Transparency and the Involvement of Interested Parties*

##### 5.5.1 Review of existing PCRs

A review of existing PCRs for the product of interest shall be performed before a PCR committee begins work on a new PCR. The use of UNSPSC codes can be a guide in this process. The review shall be performed by the PCR developer and at a minimum shall include an internet search paying especial notice to national PCR organizations. The date of the review and references to resources reviewed shall be documented (see an example in Appendix B).

##### 5.5.2 If no PCR for the product of interest is found, the committee may move forward to develop its PCR. If a PCR exists, the committee shall determine whether it can be used as is or shall be modified. Acceptable reasons to modify the PCR include:

- 5.5.2.1 The PCR is more than three years old, interested parties wish to revise the current PCR, and there are no revisions pending by the responsible PCR program developer,
- 5.5.2.2 The PCR is based on information from another region or country that is not applicable to the local situation because local standards are not equivalent, important local issues are ignored or because the impact models employed are not applicable to the local region.
- 5.5.2.3 In either case, the PCR developer shall contact the previous PCR developer and invite participation in the revision, and shall evaluate the existing PCR elements for applicability to the revision. An evaluation of this applicability review shall be documented.

#### 5.6 *Procedures for Solicitation of PCR Committee Members*

The PCR developer must conduct the following tasks to achieve balance in the PCR development committee.

- 5.6.1 Online: The PCR developer shall have a website at which the call for participants shall be prominently placed.
- 5.6.2 At other locations: The PCR developer shall seek other relevant locations such as conference announcements, industry consortia newsletters or other public locations at which to post a notice that a PCR is planned, and calling for participants. A national repository may be appropriate.
- 5.6.3 Positive outreach: PCR developers shall develop a list of potential interested parties and contact them directly by mail, email or phone. A record of this outreach and the responses received shall be kept. Records of individuals wanting to be kept informed but not participate shall be kept. A minimum of two environmental non-governmental organizations shall be invited to participate.

#### 5.7 *Timeline for Review*

In order to maintain the transparency of the PCR development process, the draft final PCR shall be posted online, with an opportunity to comment for a minimum of four weeks. All individuals who expressed the desire to be informed shall be contacted at this time. A simple mechanism for comment shall be provided. The PCR developer shall respond to all comments where the individual has provided both his/her name and the name of his/her affiliate organization. No fees shall be charged to enable comments. The PCR developer may implement validation protocols to the comment system to avoid spamming or other spurious comments.

#### 5.8 *PCR Expiration Date*

PCR documents shall have a period of validity of at least two, and not more than five years.

#### 5.9 *Definition of Product Categories*

To assure PCRs are not duplicative, the following procedures shall be followed:

##### 5.9.1 Naming convention

All PCRs shall use the UNSPSC as a naming key<sup>2</sup>. In the case where the exact product does not have a UNSPSC code, the next highest code in the system shall be used, and the PCR developer shall provide a tag identifying that only a specific subset of the Product Category is intended. PCRs may also have others name tags in addition to the UNSPSC. For example building products may follow the green format or the master format of the Construction Specifications Institute.

- 5.9.2 When possible, PCRs shall inherit applicable elements from existing PCRs for products of the same UNSPSC class, family, and segment (with a respective order of precedence for inheritance)

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<sup>2</sup> The UNSPSC is a hierarchical system of naming of product categories, each with its numerical indicator. It is integrated with economic reporting at the national and international level, and it currently contains over 40,000 products.

- 5.9.3 When possible, PCRs shall reference existing PCRs applicable for inputs into the product system of interest, and require the use of EPDs or information modules for these inputs when they exist. When EPDs or information modules for inputs do not exist, scoping of the LCA for the input product shall ascribe to any existing PCR for that input's product category.
- 5.9.4 If a referenced PCR contains elements determined by the PCR development committee to be inconsistent with elements of the PCR being drafted, and either of the conditions stated in 8.5.1 or 8.5.2 apply, only the applicable elements of the referenced PCR need be adopted

#### 5.10 *System Function and Functional Units*

The system function must be narrow enough that it is not confused with other functions. However, there is no value in having separate PCRs for each function a product has. The function should represent the primary social benefit the product provides.

- 5.10.1 Functional units for consumer goods are the combination of three values: an extent, a quality standard, and a time function. For example, a paint functional unit may be units of square meters of exterior paint for five years. Products that are not final use products but represent cradle to gate products such as fuel or raw materials may not have a time value, for example a steel PCR might be written for hot-wrought alloy steel bars, with a functional unit of one metric ton of steel meeting the quality specification found in ASTM A322.
- 5.10.2 All functional units shall have a metric unit for extent, e.g. metric tons, square meters, MJ, except where the product is a food product, where servings, as described by the US Department of Agriculture shall be used. The unit of the food item shall be the same as the serving unit that is the basis of the nutrition label.
- 5.10.3 All functional units shall have a quality parameter. Where appropriate ASTM standards exist they shall be used. If no consensus quality standards exist, the quality shall be described in terms adequate for replication by other practitioners. The PCR developer is encouraged to engage with appropriate consensus standardization.
- 5.10.4 Where appropriate, time values of functional units shall be expressed in years or fractional years.

#### 5.11 *Life Cycle Inventory and Life Cycle Impact Assessment*

- 5.11.1 The PCR developer shall develop a process to identify and name the specific unit processes to be included in the life cycle inventory.
- 5.11.2 At a minimum, in order to facilitate the inclusion of PCR requirements from modules of the PCR, the life cycle inventory shall use the UNSPSC codes for technosphere flows and CAS numbers for ecosphere flows.
- 5.11.3 For each flow of each unit process, the PCR developer shall require data quality transparency so that the reviewers can determine whether the data is
- Primary, secondary or tertiary data
  - technosphere or ecosphere flow data

- measured or calculated data
  - the temporal period specified (e.g. dates over which the data were collected)
- 5.11.4 For calculated data based on emissions factors, the PCR developer shall require disclosure of the base of the calculation, such as whether the emission factor was derived from site specific, technology specific, or biological, chemical or physical constant based.
- 5.11.5 The PCR developer shall develop a system to assure that PCRs unambiguously describe all scenarios, impact assessment modeling sources and assumptions. At a minimum, these shall describe:
- Rules for choosing background data and data sources
  - Rules for allocation, recycling and waste models
  - Rules and assumptions for electricity modeling
  - Rules and assumptions for transport modeling

#### *5.12 Other Information*

- 5.12.1 The PCR developer will identify or adopt, and describe methods for reporting and validating ancillary information to be included in the PCRs

#### *5.13 Independent Verification*

- 5.13.1 Competence of PCR verifiers
- The PCR review team shall include at a minimum, an LCACP or the equivalent, an individual with expertise in the particular industry, and another interested party.
  - The competence of the team members shall be documented.
  - The individual with expertise in the industry may document it by showing a higher degree in the field, or at least five years experience working in the industry.

5.13.2 Verification Report

The report of the PCR team shall be made available along with the PCR. Where there is more than one iteration of the PCR document review, only the final verification report need be included.

The verification report shall identify the reviewers and their affiliations.

The substance of the verification report shall be that the PCR conforms to this and related (named) standards and to the PCR Developer's management system.

## **6 Report: Elements of the PCR**

The PCR is a document that lays out in detail the measurements and the disclosure required for the EPD. It also describes the process to get to the PCR. The PCR shall include, at a minimum:

- The name and UNSPSC designation of the PCR
- The system function and functional units of the PCR, including any quality standard references
- The name and contact information for the PCR Developer
- The organization(s) paying to develop the PCR

- The members of the PCR Committee and their affiliations
- Existing PCRs (if any) and the reason for developing a superseding PCR.
- All other PCRs referenced in the creation of the new PCR
- The decisions made by the committee to conform with relevant standards.
- Life Cycle Inventory Specifications
- Life Cycle Impact Specifications
- Additional information specifications (if any)
- Disclosure and communication

## **7 Appendices: Example forms**

- A. Disclosure of conflicts of interest
- B. Existing PCRs search and review
- C. Evaluating existing PCRs

**Appendix A**  
**Disclosure of Conflicts of Interest (Name of Product) Product Category Rule Committee**  
**(Name of Program Developer)**

It is impossible for any PCR to be written without some conflict of interest. This form serves to disclose those conflicts. The final PCR document will identify the committee members and their affiliations.

As of (date), the committee includes representatives of :

- Name
- Name
- Name
- Name

Committee Member Name \_\_\_\_\_

Committee Member Affiliation (employer) \_\_\_\_\_

My participation has been funded by (check one)

- My employer, or
- Myself, or
- One of the above organizations (name) \_\_\_\_\_

To the best of my knowledge, my organization (check one)

- Does not derive more than 10% of its income from any of the listed participating organizations.
- Does derive more than 10% of its income from any of the listed participating organizations.  
 (Names) \_\_\_\_\_

Aside from my employer, to the best of my knowledge, (check one)

- Neither I nor anyone in my immediate family (parents, spouse, siblings, children or step children, or life partner) derive more than five percent of our income from one of the participating organizations.
- There is someone in my family that derives more than five percent of their income from a participating organization.

Please provide details:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Signature

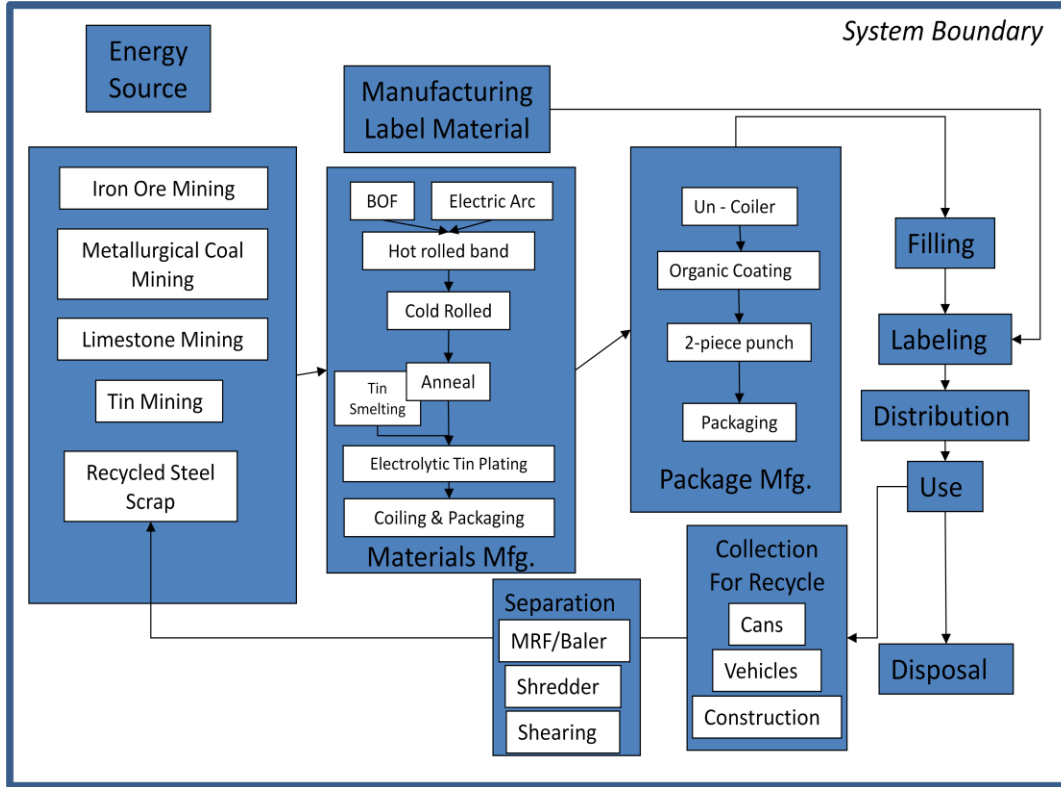
Date

**Appendix B**  
**Example PCR Search and Review Form**

Name of product category: \_\_\_\_\_

UNSPSC Code(s) \_\_\_\_\_

Example Preliminary flow chart



Potential product components and UNSPSC Code(s)

Module Name	Module UNSPSC codes

Is the product a module?

- Yes                       No



**Appendix C**  
**Example Form for Evaluation of Existing PCRs**

Name of PCR \_\_\_\_\_

UNSPSC Codes \_\_\_\_\_

Source of PCR \_\_\_\_\_

Reviewer Name \_\_\_\_\_

Review Date: \_\_\_\_\_

Is the PCR less than three years old?                       Yes                       No

Is the PCR written in your country/region  
or specifically applicable globally?                       Yes                       No

Is the PCR scheduled for revision?                       Yes                       No

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_