



General Program Instructions

From the EPD program of BCS Öko-Garantie GmbH
- Ecobility Experts

Version 1.1, 2017-09-05



Table of contents

| | | |
|-------|--|----|
| 1. | Introduction | 4 |
| 2. | Goal and scope..... | 5 |
| 3. | Structure | 6 |
| 3.1 | Management of environmental program | 7 |
| 3.2 | Creation of Product Category Rules | 8 |
| 3.3 | Preparation of environmental product declarations..... | 10 |
| 3.3.1 | Declaration for an average product by a manufacturer | 12 |
| 3.3.2 | Sector-EPDs | 12 |
| 3.4 | Verification of EPDs | 13 |
| 3.5 | Confidentiality of data | 15 |
| 3.6 | Advisory board (AB)..... | 15 |

Glossary

CFP – Carbon Footprint

EPD – Environment Product Declaration

LCA – Life Cycle Assessment

PCR – Product Category Rules

1. Introduction

This document forms the basis for the general environmental program of BCS Öko-Garantie GmbH - Ecobility Experts and regulates the administrative and operational processes for the preparation and publication of Type III Environmental Product Declarations (EPDs) in accordance with ISO 14025.

The general program instructions are updated every three years in order to adapt the environmental program to current developments in the field of standardization, LCA methods, etc.

Previously released versions:

2017-04-04: Version 1.0 (present document)

2. Goal and scope

The main objective of the EPD program is to help companies, associations or organizations to communicate quantifiable environmental information for products and services on a European harmonized, scientific basis. For this purpose, BCS Öko-Garantie GmbH - Ecobility Experts offers a holistic EPD program that is open to any organization, company, association etc. to publish environmental product declarations (EPDs) according to ISO 14025 and EN 15804 as well as Carbon Footprints (CFPs) according to ISO / TS 14067.

The verified environmental information can be intended for business-to-business as well as for business-to-consumer communication. They may refer to a specific or average product (e.g. EPDs of a branch of industry).

BCS Öko-Garantie GmbH - Ecobility Experts develops and publishes product category rules (PCRs) in cooperation with the Advisory Committee.

In addition, BCS Öko-Garantie GmbH - Ecobility Experts offers a uniform document template for the creation of EPDs. The BCS Öko-Garantie GmbH - Ecobility Experts also focus on the simple and practical implementation of EPDs while fulfilling all the requirements of ISO 14025.

3. Structure

The program is based on an organizational structure that involves multiple internal and external groups at different levels. Each group has its specific function and responsibility in the ongoing program operation. The organizational structure is shown in Figure 1.

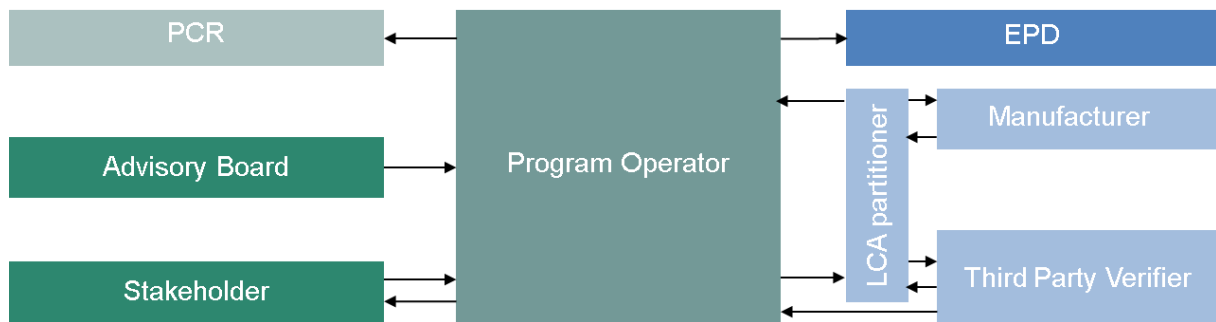


Figure 1: Presentation of the organizational structure during program operation according to ISO 14025

Basically, four main tasks are performed by the different groups:

1. managing the operation of the program
2. preparation and verification of the PCR
3. setting up EPDs
4. independent verification of EPDs

The program operator, consisting of a secretariat and a technical committee, manages and administers the environmental program.

The PCRs drafted by the program operator are reviewed and approved for use by the independent advisory board. The voting process is open to discussion by all interested parties. For this purpose, the drafts of the PCR are published on the homepage of the program operator (<https://www.kiwa.com/de/de/uber-kiwa/ecobility-experts/>).

The manufacturers (companies, associations, etc.) prepare the EPDs, which are then reviewed by an independent third party and published by the program operator.

3.1 Management of environmental program

Kiwa BCS Öko-Garantie GmbH - Ecobility Experts acts as the program operator. Thus Kiwa BCS Öko-Garantie GmbH - Ecobility Experts takes over all tasks which are incumbent on the environmental program according to ISO 14025. These are listed below:

- Providing and communicating the general program instructions
- Ensure that the requirements for Type III environmental declarations are complied with
 - publication of the organisations involved in the development of the program
 - Adaptation of the environmental program to current developments in the field of standardisation, life cycle assessment methodology, etc.
- Involvement of interested parties
- Provide and maintain a process that ensures data consistency within the program
- Providing publicly accessible lists of PCRs and EPDs of the program
- Publication of PCRs and EPDs
- Selection and proposal of competent independent auditors and members for the advisory board
- the introduction of a transparent procedure for PCR testing, including the scope of the test, the details of the test and the procedure for setting up the test panel
- Develop procedures to prevent the misuse of ISO 14025 as a reference for the Type III environmental declaration program

The environmental program is open to interested parties. Interested parties are invited to publish and read EPDs or to participate in the PCRs. Stakeholders are invited to actively participate in the development of the program by:

- participate in the development of PCRs
- inform interested organisations about the environmental program itself and the preparation of EPDs and PCRs
- Provide feedback on current activities of the program in order to contribute to the continuous improvement of the program

3.2 Creation of Product Category Rules

Since product groups sometimes differ greatly in their environmental performance, specific rules must be developed for the individual product groups, so-called PCRs. Together with the General Program Guide, the PCRs form the basis for EPDs.

The PCR production process is organised by the program operator. The program operator is also responsible for ensuring that the PCRs prepared comply with the requirements of ISO 14025. Before release, an examination is carried out by the independent advisory board. It is open to interested parties to participate in the development of PCR. The PCRs are prepared and published in German.

The preparation of PCRs comprises the following tasks:

- Definition of meaningful product categories
- Research on already existing PCRs of other program operators
- Involvement of interested parties in the development of PCRs
- Setting up the PCRs and providing the final design
- Examination of the PCR by the Advisory Committee

The PCR defines the criteria according to which an EPD is to be established in a specific product category. These include the descriptive parameters (e.g. the technical characteristics), the declared or functional unit, the data quality requirements as well as for the collection of Life Cycle Inventory data and specific calculation rules. The PCR also specifies the type of information to be published in the EPD.

The PCR document should include the following points:

- Definition and description of the product category (e.g. description of function, technical characteristics and application).
- the objective and scope of the PCR (e.g. the declared or functional unit, system boundaries, Life Cycle Inventory data and description of data quality, assumptions made and cut-off criteria used, units to be used)
- Materials and substances that must be declared in the EPD
- Information on the results of the Life Cycle Inventory (e.g. data collection, calculation rules applied, allocations)
- parameters to be declared to describe potential environmental impacts
- Indication of the characterisation factors to be used to calculate the impact categories

- Description of the information provided for the downstream processes (construction, use and disposal phases and benefits and burdens outside the building life cycle).
- Guide to the content and design of the EPD
- Validity of the document

In order to promote harmonisation and to ensure comparability with EPDs of other programs, Kiwa BCS Öko-Garantie GmbH - Ecobility Experts also accepts PCRs from other program operators according to ISO 14025 if they meet the requirements of the General Program Guide. Particular mention should be made here of:

- Compliance with the relevant standards
- Definition of the functional unit
- Traceable system boundaries
- allocation rules
- impact categories
- Approach to handling secondary raw materials and fuels (recycling)
- Rules for the description of an average product

3.3 Preparation of environmental product declarations

EPDs are drawn up by product manufacturers (companies, associations, organisations, etc.) with or without the help of a Life Cycle Assessment (LCA) expert. The manufacturer acts as the declaration holder, i.e. he is responsible for the content of the EPD.

The preparation of EPDs includes the following points:

- Compilation of the process-specific data and other additional information relevant to the underlying LCA and the EPD to be published in accordance with the relevant PCRs and the General Program Guidance.
- Creation of a background report
- Transfer of the compiled data into the EPD format of Kiwa BCS Öko-Garantie GmbH - Ecobility Experts
- reviewing in response of verification

The format of the EPD is specified by the program operator, the template for this is made available to the respective creator of the EPD. In principle, the content of the EPD must be presented in a comprehensible manner and meet the requirements of ISO 14025. EPDs for construction products must also take into account the requirements of EN 15804. The EPDs must not contain any evaluative or comparative statements.

Each EPD should include the following content:

- Title page (product name, short product description, illustration of the product, logo of the program operator, declaration number, publication date, indication of validity)
- Information on the EPD program (logo, indication of the underlying PCR, declaration number, date of publication, indication of validity, indication of the operating year under consideration, geographical area of application)
- Product-related information (unambiguous description of the product, manufacturer's details including address, details of the manufacturer's works or various manufacturers for which the EPD is representative, description of the application, technical description including details of technical characteristic data, details of the basic and auxiliary materials, declared or functional unit and, if

applicable, the expected reference service life of the product, brief explanation of the material balance data)

- Information on the life cycle phases under consideration (cradle-to-gate, cradle-to-gate with options or cradle-to-grave)

The results of the Life Cycle Inventory and impact assessment shall be reported as follows:

- Resource consumption as defined in PCR, but at least divided into non-renewable and renewable primary and secondary energy and material raw materials, expressed in MJ (lower calorific value) and freshwater consumption.
- potential environmental impacts as defined in PCR, but at least global warming potential (GWP 100) in CO₂ - eq. Acidification potential in SO₂ - eq. and eutrophication potential in PO₄³⁻ - eq.
- Waste generation as defined in PCR, but at least hazardous waste to landfill, non-hazardous waste disposed of and radioactive waste in kg

Further requirements for the preparation of EPDs are recorded in the corresponding PCRs. Depending on the product, it may be useful to provide further information.

According to ISO 14025, the following information must also be provided:

- Undeclared life cycle phases
- The following statement on the comparability of EPDs for non-building products: "EPDs within the same product category, but from different programs may not be comparable" and for EPDs of building products: "In principle, a comparison or evaluation of EPD data is only possible if all data sets to be compared have been compiled in accordance with EN 15804 and the building context or product-specific performance characteristics have been taken into account". for other product groups

In addition, the EPD must contain the following information for verification in the format presented

The CEN standard EN 15804 serves as core PCR (for EPDs according to EN 15804)

Verification of the EPD by an independent third party(s) according to ISO 14025

☐ internally

☐ externally

Name and signature of third and independent auditor

The validity of EPDs is defined in the respective PCRs. According to EN 15804, the validity of an EPD for construction products is five years. The EPD can be renewed after the validity period has expired; for this purpose, the verifier must carry out a new check. Should one of the environmental indicators deteriorate by more than 10 % due to production changes, irrespective of the validity, the EPD must be adjusted.

3.3.1 Declaration for an average product by a manufacturer

The EPD may also be given for an average product from one or more plants of a manufacturer. The following conditions should be met:

- Several products falling within the same product category may be declared as an average product if the indicators reported for each product differ by less than $\pm 10\%$. The EPD should be established for a representative product and the criteria for the selection of this representative product should be indicated.

3.3.2 Sector-EPDs

Sector EPDs declare an average product of several manufacturers for a clearly defined sector and geographical reference area. It is possible to identify a representative product of one or more representative manufacturers. In an industry EPD, all manufacturers involved must be listed. It must also be stated that the values refer to an average product.

3.4 Verification of EPDs

Verification is the critical examination that ensures the quality and consistency of the content of an EPD. For publication, an EPD must have successfully passed the verification.

Verification can take place internally or externally. The independent verifiers for the external verification are selected by the program operator. Verification includes the examination of the submitted EPD, in particular with regard to

- the underlying data used for the life cycle assessment
- the calculation rules applied and compliance with the requirements of the PCRs
- the presentation of environmental performance in the EPD
- the documentation of the life cycle assessment in the background report

Verification is always carried out by an independent auditor. Irrespective of whether the verification takes place internally or externally, the verifier should not be involved in drawing up the life cycle assessment and the resulting EPD. In addition, there must be no conflicts of interest depending on the results of the EPD.

In order to do justice to the verification task, the verifier should have work experience in the field of product types, the corresponding industry and the relevant standards.

The minimum requirement is a engineering qualification. The recognition of the verifiers is carried out by the independent advisory board.

Verification takes place for both the formal and the content part of the documents. For the verification of the formal information, the life cycle assessment, background report and EPD must comply with the requirements of the General Program Instructions and the applicable PCRs. The content check focuses on the validity of the data and information on which the life cycle assessment and the EPD are based. The audit is carried out on a sample basis, with particular attention being paid to the processes and assumptions that have a major influence on the overall LCA result. In addition, it is checked whether the prescribed calculation rules have been observed and whether the life cycle assessment has been comprehensibly documented. For this purpose, the verifier should check whether the calculations are based on the data given in the Life Cycle Inventory and whether the specified impact factors have been applied.

With regard to the EPD, it should be checked whether

- the background information is presented in a transparent, comprehensive and understandable manner
- the presentation is credible and neutral
- the EPD has the predetermined format

The results of the internal or external audit should be presented in a transparent and concise verification report.

The verifier should be independent and meet the following requirements:

- general competences in the field of product certification (according to DIN EN ISO/IEC 17065: 2012)
- general knowledge of industry and product-related environmental issues
- good process and product knowledge including relevant standards within the product industry to be verified
- in-depth knowledge of the life cycle assessment method according to ISO 14040 and 14044
- in-depth knowledge of the relevant standards in the field of environmental declarations, including ISO 14025
- Knowledge of ISO/TS 14071: Critical Review Processes and Examiner Competencies
- Knowledge of the general context in which the concept of EPDs was introduced.
- Experience in the critical review of life cycle assessments and / or verification of EPDs

3.5 Confidentiality of data

The background report contains company-internal, company secret and not publicly accessible plant data, which are exclusively provided for the employees of the program owner as well as for the responsible independent auditor appointed by the advisory committee for verification. The background report is only available for the verification process and not for publication due to its diverse and detailed information.

3.6 Advisory board (AB)

The independent committee of experts shall consist of at least three members. The members elect a chairman from their ranks for a period of three years. New members are convened by unanimous election by the members of the AB. Essential tasks of the AB are

- monitoring the operation of the program,
- the examination and approval of PCR drafts,
- the appointment of independent verifiers,
- to pass on information to the program operator on the latest findings, research results and activities in the field of sustainability in order to ensure that the program is always up to date

ANNEX A - Guide to PCR Creation

PCR is usually carried out in five steps:

1. initiation of a PCR for a certain product category, in this phase it is also checked whether PCR of other program holders are suitable and the announcement of the PCR preparation on the website of Kiwa BCS Öko-Garantie GmbH - Ecobility Experts.
2. preparation or preparation of the PCR.
3. consultation (internet-based), where the PCR is made available for public discussion, comments can be sent directly to Kiwa BCS Öko-Garantie GmbH - Ecobility Experts.
4. review by the independent committee of experts and publication by the program operator.
5. update of the PCR after five years at the latest or in the case of significant changes or comments that require an adaptation of the PCR.