

Procedure for the critical review of a product-related life cycle assessment according to ISO 14040/14044.

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If you should require any further information then please do not hesitate to contact us. We will be please to help you.

Please contact us via mail to <u>info.tncert@tuev-nord.de</u> or personally from Monday to Friday between 7:30 AM and 6:00 PM at 0800 – 2457457.

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The critical review of life cycle assessments is an essential component of quality assurance in the environmental evaluation of products and services. It ensures that the life cycle assessment complies with international standards and that the results are reliable and traceable. The standards ISO 14040 and 14044 form the basis for the creation and evaluation of life cycle assessments; additionally, ISO 14071 contains supplementary requirements for the critical review and the qualifications of reviewers. For the service of critical review of life cycle assessments offered by TÜV NORD CERT Prüf- und Umweltgutachtergesellschaft mbH, the general conditions of TÜV NORD CERT GmbH (hereinafter TÜV NORD CERT) apply.

#### 1. PROCEDURE FOR THE CRITICAL REVIEW

#### 1.1. Audit Preparation

To prepare for the critical review, the client completes the checklist "Review of the LCA Report for Completeness according to ISO 14040 and ISO 14044" and returns it to TÜV NORD CERT Prüf- und Umweltgutachtergesellschaft mbH at least two weeks before the audit begins. This checklist ensures that all relevant information and documents are provided for the critical review and assists in determining whether an on-site audit is necessary. Depending on the complexity of the product and its associated production, an on-site audit may be particularly beneficial for first-time clients—the decision for an on-site visit is made by the reviewer. The following information from the checklist must be available before the audit:

- Client and, if applicable, the practitioner of the life cycle assessment
- Goal of the study
- Scope of the study
- Inventory analysis
- LCIA impact assessment

Additionally, the client provides the complete LCA report as well as the LCIA and LCI calculations at least two weeks before the audit, as these are crucial for evaluating the environmental impacts and the underlying data. The client is available for inquiries and clarifications to ensure that all information is accurate and complete.

The reviewer evaluates the submitted documents before the critical review, including the checklist, the LCA report, and the LCIA and LCI calculations. Based on this evaluation, the reviewer develops a preliminary audit plan that outlines the focus areas and the procedure of the critical review. This audit plan is sent to the client in advance to ensure transparency and to give the client the opportunity to prepare for the specific topics and questions that will be addressed during the audit.



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#### 1.2. Audit

The audit can take place either on-site at the client's location or remotely. A qualified and independent audit team is assembled, possessing the necessary expertise and experience. The methodology applied is reviewed to ensure consistency with the requirements of the relevant standards. This includes assessing the quality of the data and the modeling approaches.

The data used in the life cycle assessment is checked for completeness and accuracy to ensure compliance with the standards. The results of the life cycle assessment, including the Life Cycle Impact Assessment (LCIA) and Life Cycle Inventory (LCI), are critically analyzed. The conclusions and recommendations drawn from the life cycle assessment are evaluated. The auditor notes all findings and recommendations and forwards them to the practitioner of the life cycle assessment. The practitioner has the opportunity to correct the findings and explain their corrections. Subsequently, the auditor evaluates the corrections made and prepares an audit report with an audit statement regarding the critical review

#### 1.3. Preparation of the Audit Report

As part of the critical review according to the standards ISO 14040 and ISO 14044, a comprehensive audit report is prepared, serving as transparent documentation of the Life Cycle Assessment (LCA). The report clearly and comprehensibly presents the results of the LCA by detailing the methodology used, the data, and the assumptions. Additionally, the audit report verifies the compliance of the LCA with the requirements of the ISO standards and includes the results of the critical review. Based on the LCA results, recommendations for improving environmental performance can be provided.

#### 1.4. Revision of an existing Critical Review

If technical deficiencies in the study are identified that affect compliance with ISO 14040, ISO 14044, or this document, but were not recognized in the original critical review, a revision of the critical review may be justified. The reasons for revising the critical review must be documented and justified in the new audit statement for the critical review.

#### 2. ISSUANCE OF THE VALIDITY STATEMENT

Upon a successful audit, in addition to the audit report, a validity statement is issued by TÜV NORD CERT Prüf- und Umweltgutachtergesellschaft mbH. This statement identifies the critically reviewed product and its respective scope. The validity statement can only be issued if all findings have been addressed, meaning that the corrective actions have been accepted by the reviewer.

### 2.1. Validity of the Validity Statement (Product-Related Life Cycle Assessment

The validity statement is generally valid as long as the underlying data and assumptions in the life cycle assessment remain unchanged, the scope is not altered, and no significant changes are made to the production processes.



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## 2.2. Validity of the Validity Statement (Life Cycle Assessment Methodology for Product Groups

The validity statement confirms that an appropriate calculation methodology for and within a product group has been critically reviewed according to ISO 14040 and ISO 14044. The audit statement is only valid for the specified scope. The statement remains valid as long as (a) no significant changes are made to the calculation method and/or (b) no significant changes are made to the production processes. The validity of the statement begins on the date of certificate issuance and is valid for one year. Typically, a follow-up audit is conducted within the validity period of the statement. Upon successful completion of the follow-up audit, a new validity statement is issued for an additional year.

<sup>&</sup>lt;sup>1</sup> The follow-up review covers the same content as the initial review