ARGE EPD Project

Status ARGE EPD and outlook regarding the Revision of EN 15804 for EPDs
ARGE EPD roll-out – status and tasks ahead

Status EPD production and roll-out; as reported 2018

- associations participating ✔
- products covered ✔
- availability of EPD ✔
- language versions ✔
- customizations/sub-licensees ✔
- national annexes ✔

new requirements for French annex,
(Dutch annex completed)
Roll-out process: Additional National Requirements – National Annexes

France: Additional statements regarding environmental issues required

Status 2018:
- Annex verified by IBU verifier (ARGE’s task)

- Content still under discussion between UNIQ and INIÈS 😐

- UNIQ tries to come to a valid solution for France without involvement of INIÈS 👍
Roll-out process: Additional National Requirements – National Annexes

France status 2019:

- additional characteristics to add to LCA data based on EN15804 required, done ✅
- *Declared unit* adapted from 1kg(weight)/product to 1 piece (number)/product, done ✅
- LCA data transferred to INIÉS data base and published by INIÉS, done ✅
- additional French annex to EPD revised (...by F. Werner) and accepted by INIÉS. Published by UNIQ, done ✅
ARGE EPD roll-out – status and tasks ahead

Status EPD production and roll-out; as reported 2018

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description French annex, Dutch annex

Review of EN 15804

- new indicators following PEF systems
- new modules for LCA stages
- raw materials and energy recovery included
- ILCD standard, new data bases
- required review of ARGE EPD
- recent comments on draft standard
prEN 15804+A2-2019: Additional requirements of LCA data compared to EN15804+A1-2013

From a presentation of DG Enterprise, shown at a BT/CEN TC 350 workshop.

Present. Frank Werner June 2019
prEN 15804+A2-2019: status review

➢ prEN 15804+A2 has been accepted by members in Formal Vote (FV) ending in June 2019 (22 approvals, 2 dissapprovals, 10 abstentions).

➢ Further „editorial comments“ have been made; the final publication is expected until end 2019. The standard will „come into force“ by then.

➢ As there are legislations in some of the EC member countries, which are based on EN15804+A1, a co-existition period of 36 month (dow) has been agreed on.

➢ (this might be extended to 5 years!)
prEN 15804+A2-2019: status review.
Important changes for LCA’s

- Declaration of Modules C1-C4 and D mandatory!
  
  Remark: ARGE EPD provide information on modules A1-A5 and C1-C4.

- Allocation of influences of inborn characteristics will change
- (treatment of outputs of modules A1-A3)

- New impact categories/characterization factors for existing indicators
- Optional further indicators

- More explicit definition of the functional unit
- Using ILCD format at the LCI Dataset
- Documentation of the data quality in the background report
- Declaration of Carbon content in CO$_2$-Äq. in a EPD
prEN 15804+A2-2019: status review
Detailled definition of the „functional unit“ and system boundaries

The functional unit of a construction product must cover the following:

• The use of a product or a product group, covered by the functional unit.  
  *Rem.: In case of ARGE EPD we might have to change to a functional unit of 1 piece/product. A discussion will occur on how „Industry representative EPD“ for hardware can be provided in future.*

• The reference technical unit as used to install the product to a construction work.

• The quantified essential characteristics of a functional unit, quantified quality characteristics or benchmarks required for the use of a product with regard to the functional aequivalent of the building.

• Threshold data for quality levels must be defined with regard to the reference service life of the functional unit.  
  *Rem.: This is the first step to „quality benchmarks“*

• A defined *reference service life*. If the EPD declares another service life than the reference service life of the product, the EPD must explain this in a technical remark.
prEN 15804+A2-2019: status review.

Data format

„Technical“ requirements of the data-quality
- Data of the LCA data-set and the format of documentation must use latest version of ILCD format and nominations according to the „International Reference Life Cycle Data System (ILCD) Handbook - Nomanclature and other provisions“

Rem.: Data-set list as shown under http://eplca.jrc.ec.europa.eu/LCDN/developerEF.xhtml.

Data Quality
- Necessary procedure for the evaluation of the data quality related to the generic and specific data used for EPDs.
- The data quality must be evaluated according to EN ISO 14044:2006. They shall include at least the following:
  Timerelated registration; geografic registration; technological registration;
- They must follow one of two systems as shown in annex E (...of EN ISO 14044:2006). The LCA data sets, used in an EPD must be evaluated in the same way.
- The kind of evaluation of the data quality used in an EPD must be documented in the background report.
prEN 15804+A2-2019: status review.
Additional mandatory indicators according to PEF rules

<table>
<thead>
<tr>
<th>Indicators A1</th>
<th>Indicators A2</th>
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<tbody>
<tr>
<td>GWP= Global warming potential</td>
<td>GWP total</td>
</tr>
<tr>
<td>ODP= Depletion potential of the stratospheric ozone layer</td>
<td>GWP fossil</td>
</tr>
<tr>
<td>AP= Acidification potential of land and water</td>
<td>GWP biogen</td>
</tr>
<tr>
<td>EP =Eutrophication potential</td>
<td>GWP luluc = for land use and land use change</td>
</tr>
<tr>
<td>POCP= Formation potential of tropospheric ozone photochemical oxidants</td>
<td>ODP</td>
</tr>
<tr>
<td>ADPE= Abiotic depletion potential for non-fossil resources</td>
<td>AP</td>
</tr>
<tr>
<td>ADPF= Abiotic depletion potential for fossil resources</td>
<td>EP fresh water</td>
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<td></td>
<td>EP salt water</td>
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<td></td>
<td>EP land</td>
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<td></td>
<td>POCP</td>
</tr>
<tr>
<td></td>
<td>ADP non fossil = abiotic depletion non fossil</td>
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<tr>
<td></td>
<td>ADP fossil = abiotic depletion fossil</td>
</tr>
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<td></td>
<td>WDP = waste depletion potential</td>
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Review of EN 15804

new indicators following PEF systems -
new modules for LCA stages -
raw materials and energy recovery included mandate M350 PEF rules strictly adapted
ILCD standard, new data bases -
required review of ARGE EPD mandate M350 PEF rules strictly adapted
recent comments on draft standard mandate M350 strictly adapted

as stated partly respected; changes of EPDs as announced
Review EN 15804: prEN15804+A2;
- ILCD standard, new data bases necessary

• For the balancing, now, only "ILCD compliant" data sets and nomenclatures may be used, which makes it impossible to use the currently used data bases, such as ecoinvent;
• Besides the textual description, the modelling of the “End-of-life” must also be expressed in equations – which in practice is not very helpful and, moreover, hardly relevant;
• It is intended to lay down stricter requirements for the quality of data.

Cit. Frank Werner
Review EN 15804: prEN15804+A2;
- future requirements for ARGE EPDs

• What does this mean now for the EPDs by ARGE? Given the current draft, the EPDs by ARGE would have to be revised in the following items:

• The life cycle assessment must be re-calculated with “ILCD” compliant data sets and assessment methods; for the time being this means that the data base ecoinvent 3, which was used for the ARGE EPDs, can no longer be used and the life cycle assessment has to be re-calculated from scratch with another data base.

Cit. Frank Werner
Review EN 15804: prEN15804+A2;
- future requirements for ARGE EPDs

• All EPD published in Europe must be revised, a comparison over the time is no longer possible due to the evaluation methods used have changed;
• All systems of “green building labels” must adapt their indicators, benchmarks etc.;
• An EPD according to EN 15804+A2 is no longer compatible with the requirements of ISO 21930, which is the ISO-Version of EN 15804, which means that the EPD according to EN 15804+A2 cannot be used outside Europe – which constitutes a trade barrier. 😞
Review EN 15804: prEN15804+A2

Outlook for ARGE EPD:

Meanwhile there are "tools" (online evaluation and balancing programmes) on the market, which enable the manufacturer (or association) to generate his own LCA-data sets for each marketable product.

The data can then be used either for the preparation of EPDs or for the obligatory entries in the declarations of performance. They would be "automatically" verified by IBU or another programme holder. This would change the common cost calculation system for EPDs and allow much cheaper individual EPD for a product.

ARGE should discuss this approach seriously. First informal contacts have been made.
Review EN 15804: prEN15804+A2

Outlook for ARGE EPD:

➢ ARGE industry representing EPD are valid until autumn 2021!
➢ ARGE launched a CEN TG to create new Product Category Rules, PCR for builders hardware on the basis of the revised EN15804.
➢ The preparation of a draft PCR for builders hardware can be expected until end 2019.

That gives us enough time to update our EPD on the basis of the new rules until our recent EPD expire!!

Rem: If you are interested to understand the interaction between the sustainability requirements defined by the CPR (with BRCW N°7), the new EN 15804 for the creation of EPDs and LCA product data in future hENs for construction products you might have a look at a summary report presented on the member section of the ARGE webpage!
prEN 15804+A2-2019: Additional requirements of LCA data compared to EN15804+A1-2013

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Regarding BRCW N°7 in product standards
Discussion with commission services – adaption of ARGE EPD – process ongoing with GROW
Regarding BRCW N°7, „Sustainability“ in product standards

General statements:

• Discussion with EC officials about possible future changes of mandate M 101 „doors, windows and construction hardware“ regarding the introduction of BRCW 7 „sustainable use of natural resources“ is ongoing between TC33, DG GROW and ARGE.

• Tapani Mikkeli from DG GROW stated, that the introduction of BRCW 7 is mandatory and „not negotiable“. 

Regarding BRCW N°7, „Sustainability“ in product standards

• DG GROW is critical about the „private system“ of EPD‘s.
• A 1 to 1 transfer of LCA data from ARGE EPD‘s is unrealistic.
• Instead, environmental characteristics of products should be introduced according to the CPR, resp. the standardization system.
• ARGE claimed, that efforts for production of EPD‘s must not become all for nothing in future.

ARGE‘s strategy will be to keep as much of the EPD data in a product standard as possible!

No final results yet. Decision will be part of the CPR review expected until 2022.
Thank you!
And bye bye!
Lifecycle stages acc. EN15804

Figure 1 — Types of EPD with respect to life cycle stages covered and life cycle stages and modules for the building assessment