

## Introduction of Guarantee of Origin (GoO) in EPD-Norway

EPD-Norway is introducing transparent reporting of electricity in an assessment period until 31/12/2024 where both guarantees of origin (GoO) and physical electricity mix are used in EPDs published by EPD-Norway. This is due to our commitment to harmonize with current practice and work towards a European consensus in this area given in ECO Platform *Audit and Verification Guidelines for ECO EPD Programme Operators v6 2023 (ECO v6)*. This additional reporting does not necessarily mean two sets of results tables, but it must be possible for users of EPDs to calculate results for Global Warming Potential (GWP) for life-cycle stage A3 using the physical electricity mix where GoOs are used. This also includes if EPDs are used in datasets from upstream activities (A1) – which in such case has to be clearly stated in the EPD. This includes both EPDs for the Norwegian and foreign markets. Several EPD owners already purchased GoOs and these can then be used.

Consequences for existing EPD owners who have published their EPDs at EPD-Norway:  
There will be no consequences for already published EPDs, as the new requirements are not retroactive. EPD owners using EPD tools need to contact EPD-Norway with regards to implementing changes connected to GoOs in to tools.

Consequences for new EPD owners who want to publish their EPDs at EPD-Norway:  
For EPDs published during the assessment period - EPD owners can choose whether they want to use one of the two the following approaches for the results in the EPD:

- market-based approach: using GoOs and residual mix
  - For further description see EPD-checklist pt. 6.1.4 Case 3 in *ECO V6*
- location based approach: using the actual consumption mix (= national production + imports – exports) Ref. NPCR Part A section 7.4.3.1

Reporting results in the EPD: (ref. EPD-checklist pt. 6.1.6 Case 3 in *ECO V6*)

- If a double quantification is reported in the LCA report, options are:
  - to declare two result tables in the EPD for A1 to A3. The first set shall be declared in the results section based on the location based approach and the additional set in the Additional information section
  - as above, but limited to the GWP indicators and then reported in the Additional information section.
- If there is no double quantification reported in the LCA report it must be stated

If GOs are used in EPDs the EPD owner has to ensure having a valid GoO certificate during the entire validity period of the EPD, or accompanied by an agreement from a verifier to review the new GoO certificate when the current GoO validity is renewed. After the transition period of December 31<sup>st</sup> 2024, the scheme must be evaluated for continuation and/or adjustments.

#### Consequences for EPD developers/verifiers

In general, EPD-Norway refers to *chapter 4.2 section 6 and chapter 4.4 section 6.4 and 6.5* in the checklist given by ECO Platform *Audit and Verification Guidelines for ECO EPD Programme Operators v6 2023*. Checklists for EPD approval are adaptations of these checklists.

Transparent reporting in the EPD is solved by stating how much electricity with the use of GoO is included in the foreground processes modelled in A1 -A3, providing a simple way to calculate GWP values using both location based electricity mix and GO as well as consequences for the results. It shall therefore be stated in the EPD under section "Additional requirements". See example on next page. This is incorporated into the templates for EPD, LCA report and verification checklists and can be found on the download pages of EPD-Norway. Alternatively, an additional set of result tables using GOs could also be supplied in the additional requirements section.

The verifier must check if EPD owners has a valid GoO certificate at the point of verification and for how long it is valid. The EPD owner has to make an arrangement with verifiers to re-affirm the validity of GoO certificates when validity of certificates are extended or new certificates are acquired. E.g. the manufacturer has an EPD approved in 2023 while having a GoO certificate which expires in 2025. Then the manufacturer has to make sure that the verifier is noticed when purchasing a new GoO certificate in 2025.

For EPDs that are generated using EPD tools that use GoOs, the EPD owner/user of EPD tools must proactively submit to EPD-Norway documentation that all published EPDs with GoOs have valid GoOs and that the GOs have been renewed upon expiry within the EPDs lifetime.

Example application in EPDs: (Normally described in the second last page of the EPD)

**Example 1: market-based approach: using GoOs and residual mix,**

LCA results section of the EPD:

Provide results of the following impact categories given with GoOs:

- Core environmental impact indicators
- Additional environmental impact indicators
- Resource use
- End of life – Waste
- End of life – output flow
- GWP IOBC (Aka. GWP GHG)

In addition – ensure the following information about electricity in the “Additional requirements section”  
See example on how it could look in the EPD:

## Additional requirements

Approach Power Mix: Reporting done as required in prEN 15941

### Location based electricity mix from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process (foreground/core) per functional unit.

National electricity grid	Foreground / core [kWh]	GWP <sub>total</sub> [kg CO <sub>2</sub> - eq/kWh]	SUM [kg CO <sub>2</sub> -eq]

### Guarantees of origin from the use of electricity in the manufacturing phase

Where guarantees of origin is applied in stead of national production mix – the electricity for the manufacturing process (A3) shall be stated clearly in the EPD per functional unit.

Electricity source	Foreground / core [kWh]	GWP <sub>total</sub> [kg CO <sub>2</sub> - eq/kWh]	SUM [kgCO <sub>2</sub> - eq]
Amount of guarantee of origin electricity used in the foreground			
Amount of residual mix electricity used in the foreground			

The guarantee of origin utilized in this EPD is provided by [state name, validity period and information about the GO used]

The residual mix is calculated using the following methodology [describe or give reference]

## Example 2: location based approach: using the actual consumption mix

LCA results section of the EPD:

Provide results of the following impact categories given with location based electricity mix:

- Core environmental impact indicators
- Additional environmental impact indicators
- Resource use
- End of life – Waste
- End of life – output flow
- GWP IOBC (Aka. GWP GHG)

In addition – ensure the following information about electricity in the “Additional requirements section”  
 See example on how it could look in the EPD:

## Additional requirements

Approach Power Mix: Reporting done as required in prEN 15941

### Location based electricity mix from the use of electricity in the manufacturing phase

National production mix from import, low voltage (production of transmission lines, in addition to direct emissions and losses in grid) of applied electricity for the manufacturing process(A3).

National electricity grid	A3 [kWh]	Unit	Value
<national> mix (market for electricity, ecoinvent 3.8)		kg CO2 - eq/kWh	