



21st November 2024

Assurance brief

Ardagh Glass Packaging–North America (AGP) produces its ECO Series® range of wine bottles as a more resource efficient (lighterweight) solution compared to standard wine bottles. As the containers are lightweight, they require less raw materials and less energy during production than standard bottles. This results in lower greenhouse gas (GHG) emissions. To demonstrate the benefits of using ECO Series containers, AGP has developed a MS Excel-based tool that facilitates the calculation of the carbon footprint savings achieved from selecting AGP's ECO Series wine bottles compared to the standard equivalent wine bottle manufactured at the same AGP facilities. The tool considers cradle-to-gate boundaries, encompassing Scope 1, Scope 2 and Scope 3 GHG emissions within these boundaries.

RISE has been contracted by AGP to reasonably assure that the tool generates results that are representative of the impacts and savings of the containers produced.

In particular, RISE has been contracted to verify that:

- The carbon footprint calculations are compliant with the technical requirements of the GHG Protocol Product Life Cycle Accounting and Reporting Standard.
- The data applied reflects the emissions associated with production at and with the upstream supply chain of the relevant production facilities (Madera and Port Allegany).
- The algorithms applied are mathematically correct and consistently deliver appropriate results.

Independence of the assurance provider

RISE (Research Institutes of Sweden) is a research, technology and consulting organisation consisting of five divisions: RISE Bioeconomy & Health, RISE Built Environment, RISE Digital Systems, RISE Materials Production, and RISE Safety & Transport. With nearly 3,000 staff, between them, these divisions cover a diverse range of sectors and services.

RISE has worked with AGP on previous environment and sustainability projects but confirm their independence of the organisation for the purposes of providing the contracted assurance.

Approach

AGP provided the RISE consultant with an unprotected version of the tool. In order to verify the tool, the RISE consultant undertook the following checks:

- Mapping and checking of the logic behind the calculations – i.e., following the calculations through from the base data, through data processing and assumptions, to final calculation of the results. In following this data trail, the algorithms applied were checked for accuracy and appropriateness. Where potential errors in the calculation logic were identified, feedback was provided to the AGP lead and appropriate amendments to the tool were made.
- Verification of the background datasets applied – the data considered in the calculations were checked against AGP's Scope 1, Scope 2 and Scope 3 GHG inventory. RISE has previously verified AGP's GHG inventories in a separate assurance exercise. RISE was given access to the Scope 1, Scope 2 and Scope 3 GHG inventories for the Madera and Port Allegany plants and the data applied in the tool were checked for consistency with these.
- Recalculation of case studies – a series of case studies were defined and run through the tool. In parallel, the RISE consultant calculated the anticipated results and checked that the tool results and the anticipated results tallied.
- Review of the tool against the GHG Protocol Product Life Cycle Accounting and Reporting Standard – the boundaries and approach were compared with the technical requirements of the GHG Protocol Product Standard and an opinion has been provided on alignment with these.

Assurance conclusions

The RISE consultant has evaluated the tool and concludes the following:

- The cradle-to-gate boundaries considered are appropriate considering the intended application of the results.
- All significant unit processes within the boundaries have been considered.
- Data quality is very good - the data applied is taken from the previously assured GHG inventories for Madera and Port Allegany.
- The algorithms that underpin the tool are appropriate and the results that are generated are correct and reliable.
- To claim full compliance more detailed reporting of the systems and data would be required to accompany the results, but the assurance process confirms that the methods and data applied to calculate the product carbon footprint for the standard container and the equivalent ECO Series container, and therefore the GHG emissions savings achieved through choosing ECO Series containers, are in line with the technical requirements of the GHG Protocol Life Cycle Accounting and Reporting Standard.

Subsequently, it is the opinion of the RISE consultant that product carbon footprints and GHG emissions savings calculated using the Ardagh Glass Packaging–North America ECO Series emissions savings tool are reasonably stated.

Signed and dated:

Michael Sturges, 21st November 2024
Assurance Consultant, RISE