World Business Council for Sustainable Development

WORLD RESOURCES INSTITUTE

The Greenhouse Gas Protocol

Product Life Cycle Accounting and Reporting Standard

Comment Template

We are providing this template to streamline public comment submissions. To use this template, please follow the instructions below:

- The Product draft is open for stakeholder comment from November 11, 2009 through December 21, 2009.
- To provide written comments, please use the comment template provided, instead of sending comments in a separate file or e-mail, in order to streamline the comment process.
- When using the comment template, please organize comments by chapter/section and reference page numbers and line numbers.
- If you have questions during the public comment process, please email Holly Lahd at hlahd@wri.org.
- Submit comments as an attached MS Word file by email to Holly Lahd at hlahd@wri.org no later than **Monday, December 21st, 2009**. We appreciate any effort to submit written comments before the deadline.

Feedback from (name): **Kathleen Fiehrer, Tim Higgs, Ted Reichelt**

Organization: **Intel Corporation**

Chapter/Section	Comments
The outline and overall structure of the document	•
1. Introduction	• Please make it clear that footprint calculations will not be accurate enough for complex products to allow direct product comparisons. • Any difference in use phase calculations between B2B products vs B2C consumer products? If so clarification needed.
2. Principles of Product GHG Accounting	•
3. Overview of Product GHG Accounting	• Functional units approach will be very confusing to all except seasoned LCA practioners. Either simplification or intensive training will be required. Functional unit approach is a barrier to implementation. • Section 3.1 – Broad range of options in defining functional units, consumers will make results difficult to compare

	• Sector specific tools to be developed later may be the place to provide more consistency on functional units among similar industries. Guidance needed if sector category rules are allowable – procedures, stakeholders, ratification, etc..
4. Establishing the Methodology	• Changes in production volumes will impact GHG reporting numbers. Protocol advises using consequential accounting. Consequential accounting may require significant calculations for changes in seasonal or factory loading and becomes very cumbersome and meaningless to users. Appreciate that loading is taken into consideration, but revising consequential accounting will become time consuming and expensive. More guidance is requested and an average or min/max calculations may be better. Perhaps the number should be based on some sort of annual average. Note that the electronics industry demand cycles are notoriously unpredictable.
5. Defining the Functional Unit	•
6. Boundary Setting	• Section 6.2 – When the product lifetime is unknown, using a temporal boundary of 100yrs is not reasonable. • How is the product lifetime determined – min, max, average? • How are capital goods different than raw materials or sub-components? How do capital goods differ than material goods used for production of products? • Definition of capital good should be made more clear. • For capital equipment, are emissions associated with manufacturing the product included in the cradle to grave calculation of the capital equipment or the production of the product – leads to extensive double accounting. • Capital equipment is largely fixed by manufacturing process requirements; if goal of standard is to identify opportunities for improvement including capital doesn't make sense because it's not an area where a company is likely to be able to make a change to reduce impact. • Better definition of cradle to grave vs cradle to gate needed to avoid double counting. • Including facility operations and corporate activities depends significantly on factory loadings and unit functional definition. • Figure 6.1 – figure should include several possible cycles of production for complex products or that use may be part of the production of a more complex product. • For the use stage, estimating transportation to use location and storage seem difficult to calculate. • Section 6.3.4 – intermediate products – recommend that all products not sold for end use be included in Intermediate products and then only cradle to gate assessment is required. Applies mainly to B2B products. • How are waste by products handled that are used for other applications (ie recycled)– for example, waste copper balls from one of Intel's is recycle and whoever uses it instead of mining new copper would have a different impact
7. Collecting Data	• The section emphasizes identifying and quantifying all emissions sources – that is focus is on producing a number rather than on hot spots based on primary data that can actually produce tangible reduction results. • The frequency of updating emission factors and other data should be

	specified • Some of the sections, tables, and boxes in section 7 are mislabeled • Quantifying mining/extraction inputs will be highly dependent on conditions, geography etc. Constant recalculating may be required and therefore requires constant recalculating downstream product GHG? Advice on how to handle reporting. • When considering GHG inputs from dams, does creation of the dam need to be included? • Quantifying energy use of some products, such as electronics can be complex as they draw a different amount of energy in active vs. idle vs. off states. The total annual energy consumption will be very different depending on what is assumed about use. • Technology lifecycles for electronics are typically 18 – 24 months. That is, products and technologies are revamped quickly, so practical tools and approaches are needed or the product will change before an inventory can be completed. • Use of Input-Output data should be viewed as last priority (i.e. least accurate) for certain products like electronics which have rapidly changing prices and component costs that are often driven more by R&D and intellectual property costs than by energy/CO2 intensity • Advice on working with industry sector organization and stakeholder to resolve complex/complicated products. There is potential for concerns about intellectual property protection. Competitors likely will not want to collaborate in this area. • More emphasis on the "hot spot" approach makes sense to make the inventory doable and actually produce the most results
8. Allocation	• Can a company that supplies recycled material as a co-product to another industry claim benefit for its own products? – related to open loop recycling. • Since electronics products typically have from 500 – 1000 discrete components – this is an extremely daunting task to roll up all this information with any degree of accuracy. The other options involve very high level secondary data such as LCA or I/O data that is also generic and highly variable.
9. Assessing Data Quality and Uncertainty	• Temporal representativeness – is there a recommended frequency or guidance for updating emission factors and/or GHG emissions – provided in table 9-2 • Both temporal and geographic representativeness may be difficult to assess in many situations. For many manufacturing processes, CO2 inventories may not be updated frequently; many input products may be manufactured at multiple locations by a supplier and a customer may not be able to readily determine which portion of his material came from which location.
10. Calculating GHG Emissions	• Recommend including 100yr IPCC Global Warming Potentials (GWPs) in protocol.
11. Assurance	• Cost of an assurance provider is potentially cost prohibitive to small and medium businesses. • Third party certifications should not be mandatory until standard is much more mature and proven
12. Reporting	• It is unreasonable to report general processing steps of a product due to intellectual property concerns. They should therefore not be included in the GHG report. (line 31, p 82) • If goal of reporting is to focus on improvements over time, why is it

	necessary to report findings as opposed to improvement reductions?
Appendix A: Data Management Plan	•
Appendix B: Additional Guidance on Collecting and Calculating Data	•
Appendix E: Glossary	•
Any other general comments or feedback	**Problems / Concerns with current approach:** – "Network problem requires network solution" – cant solve through modeling – "Use" phase calculations require too many assumptions with too wide a margin of error; calculations become meaningless, outdated, and not actionable – Data should not be used for comparative purposes; there's a risk that it will be used for direct comparisons – Standard is overly complex, requiring companies to hire consultants rather than be able to do it themselves; it doesn't encourage capacity building, ownership of data, and improvement over time. Furthermore, with a complex standard, it is likely that most companies will do it differently making it difficult to surmise trends across a group of suppliers. **Recommendations**: – Standard MUST make it clear footprint results are NOT to be used for product comparisons at this early stage! – Intellectual property concerns need to be addressed for information disclosure of process or materials details – Focus on sources of emissions that are under company control (i.e. Scope 1 and 2 emissions for Tier 1 suppliers -- 80% based on spend), and cascade throughout supply chain (reach out to Tier 1, and have them reach out to their Tier 1) ▪ Possibly develop industry category rule (ICR) so everyone in industry is making same assumptions about who/what to include – Eliminate "use" phase from calculations, as it's not a meaningful measurement and requires too many assumptions. Standards and eco-labels such as Energy Star, EPEAT, EuP effectively address energy efficiency for electronics – Phase in requirements over time – Adopt system for recognizing improved quantification of emissions sources over time (e.g. bronze= 60% of sources; silver=70%; gold= 80% or more – creates some incentive to improve – Raw data and results from pilots should be transparent and made available as much as possible