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<p>9 18.998</p> <p>I</p> <p>IDENTIFICATION</p>	<p>6 12.011</p> <p>F</p> <p>FORMULATION</p>	
<p>9 18.998</p> <p>I</p> <p>INVESTIGATION</p>	<p>5 10.811</p> <p>E</p> <p>EXPLANATION</p>	<p>4 9.0122</p> <p>D</p> <p>DEDICATION</p>

VERIFICATION STATEMENT

Assessment of the GHG calculation tool *ClimateCalc*

Prepared for:

THE INTERNATIONAL ASSOCIATION CLIMATECALC

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Objectives

SGS Belgium has been assigned by the International Association ClimateCalc to verify the GHG tool ClimateCalc developed by the association for the calculation of GHG emissions from graphic companies (company carbon footprint) and of printed matters (product carbon footprint).

As far as the company carbon footprint is concerned, the verification has been performed in accordance with ISO 14064-3. The verification of the product carbon footprint has been performed outside the framework of the ISO 14064 series of standard¹.

The version of the ClimateCalc calculation tool that has been assessed is version 10.7, consistent with the version available on the web site <http://www.climatecalc.eu> at the time of verification.

GHG assertion to be verified

The GHG tool *ClimateCalculator 10.7* is free from material misstatement and complies with the verification criteria listed hereunder:

- compatibility with ISO 14064-1 (*Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*), applicable to the company carbon footprint only;
- compatibility with WRI's GHG Protocol, applicable to the company carbon footprint only;
- compliance with ISO 16759 (*Quantification and communication for calculating the carbon footprint of print media products*), applicable both to the company carbon footprint and the product carbon footprint;
- compliance with Intergraph standard "*INTERGRAF recommendations on CO2 emissions calculation in the printing industry*", applicable both to the company carbon footprint and the product carbon footprint.

Roles and responsibilities

The International Association ClimateCalc is responsible for the design and the maintenance of the ClimateCalc tool. Each user of the calculation tool is in charge of his own organizational GHG information system as well as of the development and maintenance of records and reporting procedures in accordance with that system.

It is SGS' responsibility to express an independent GHG verification opinion on the calculation tool with regards to the criteria listed above. SGS has not assessed any individual results obtained by the individual users of the calculation tool ClimateCalc and hence can't express any opinion on the correctness of the individual results and their conformity with the different standards referred to in the criteria listed above.

Attention is drawn to the fact the standards referred to in the verification criteria listed above contains some requirements that have to be complied with at the organisation level (organizational GHG information system, the development and maintenance of records and reporting procedures) and hence can't be verified as part of the assessment of a GHG calculation tool.

¹ This is because the scope of the ISO 14064 series of standards is applicable to GHG emissions from an organization but not to GHG emissions from products.

Scope

The scope of work is based on the delimitations defined in the “*INTERGRAF recommendations on CO2 emissions calculation in the printing industry*”.

i) organizational boundaries

The organizational boundaries are company dependant and are not defined in the framework of this verification².

ii) physical infrastructure, activities, technologies and processes of the organization;

Emissions of Green House Gases in the life cycle of printed material excluding emissions related to capital assets, customer distribution and end of life of printed material.

iii) GHG sources, sinks and/or reservoirs:

- A. Substrate
- B. Combustion of fuels
- C. Production of purchased energy
- D. Plates, cylinders and other image carriers
- E. Transport of finished product
- F. Transport of raw materials
- G. Company vehicles
- H. Commuting
- I. Inks, varnishes, toners and cartridges
- J. Packaging materials
- K. Production of fuels (upstream)
- L. Purchased energy (transmission losses)
- M. Consumables (IPA or additives, cleaning agents)

According to the Intergraph standard, this list of emission sources is estimated to cover at least 95% of the emissions of a graphic company. Some emission sources, in particular capital assets and end of life emissions, are excluded from the Intergraph standard and the ClimateCalc tool.

iv) types of GHGs:

Six greenhouse gases (GHG) defined in the Kyoto protocol (carbon dioxide, methane, nitrous oxide, sulphur hexafluoride, hydrofluorocarbons and perfluorocarbons) are in the scope. However, some of those gases don't play any role in the inventory as they are not identified as significant sources of emissions in the Intergraph standard, as listed above.

v) time period:

ClimateCalc works with data provided by calendar year.

² The ClimateCalc and the Intergraph standard don't provide any guideline about how the boundaries should be set. Even though the ClimateCalc is generally used for operations in one single production site by one single legal entity, an appropriate consolidation approach might be needed to deal with more complex situations (multisite, subsidiaries...)

Level of assurance and materiality

The level of assurance for the verification process is reasonable. The level of materiality is 5%.

Intended use

The GHG tool is intended to be used by individual graphic companies, in several perspectives:

- for internal purpose (identification of the most significant sources, improvement of the performances),
- to allow objective comparisons of the performances between companies under a common calculation methodology,
- for planning print jobs with customers (assess the impact of technical choices on GHG performances and, if necessary compensate the emissions),
- possibly for carbon compensation and carbon neutrality purpose.

Overview of the work performed

The verification work was performed as desktop review of the excel version of the ClimateCalc tool and its web-based equivalent. The assessment also included the review of the emission factors used in the ClimateCalc. SGS' approach is risk-based, drawing on an understanding of the risks associated with modeling GHG emission information and the controls in place to mitigate these risks.

Conclusion

Based on the work performed, SGS concludes with reasonable assurance that the ClimateCalc tool is free from material misstatement.

The company carbon footprint of the ClimateCalc tool has been found to be compatible in all material respects with the applicable requirements of ISO 14064-1 and WRI's GHG Protocol. The company carbon footprint and the product carbon footprint of the ClimateCalc tool have been found to comply in all material respects with the applicable requirements of ISO 16759 and INTERGRAF recommendations on CO2 emissions calculation in the printing industry.

We note however the following limitations:

- It is an ISO 14064-1 requirement that all the emission factors are current at the time of quantification. It appears during the verification that the emission factors in the ClimateCalc tool are not kept up to date on a yearly basis, even though some updates have been done in the past. Newer versions are available for some of the emissions factors used in the current version of the calculator. Even though we recognized that the differences are usually small and hence unlikely to lead to any material misstatement, we do recommend updating the emission factors in the tool on regular basis.
- As far as emissions from natural gas are concerned, the ClimateCalc tool makes use of an emission factor per kWh net calorific value (NCV), even though in many countries natural gas is invoiced to end user in gross calorific value (GCV). We recommend the following possible corrective actions:
 - o specify in the tool that the EF refers to the NCV of natural gas (giving the user the opportunity to adjust).

- if possible include an option in the tool to specify if the reported kwh are NCV or GCV
 - when selecting the country-specific emission factor for natural gas in the tool, switch to the appropriate option (NCV or GCV) consistent with the standard way to invoice natural gas in the relevant country.
- It is understood that the use of the GHG tool by an individual graphic company will not automatically lead to a GHG inventory that is compliant with all the above listed standards. Indeed it will depend not only on the appropriate implementation of the tool, but also on the appropriate implementation, by each graphic company using the tool, of additional requirements (including organizational GHG information system, the development and maintenance of records and reporting procedures). This can be subject to an individual third party assessment on individual basis.



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