

## BioGrace Newsletter #7 – April 2013

The project BioGrace aims at harmonising bioenergy greenhouse gas calculations (GHG) in Europe and is supported by Intelligent Energy Europe. BioGrace (I) (Contract No: IEE/09/736/SI2.558249) ran from 2010 to 2012 and dealt with liquid biofuels, BioGrace-II runs from 2012 to 2015 and deals with electricity, heating and cooling from biomass (Contract number: IEE/11/733/SI2.616371).

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### ❖ Updated version 4c released

After a year of making improvements, the updated version 4c of the BioGrace GHG calculation tool has now been released. The BioGrace GHG calculation tool version 4c is a zip file that contains (a) the BioGrace calculation rules, (b) the BioGrace Excel tool (c) the BioGrace user manual, and (d) BioGrace additional standard values.

Version 4c is bringing some key changes in the Excel tool, the calculation rules as well as the user manual. First of all there has been a modification of the numbering: all items of the zip-file are now called “version 4c”. So the counting of the calculation rules, and the user manual, has jumped from version 1b to 4c; that of the additional standard values from 1 to 4c.

The most important modification in terms of handling the Excel tool is the introduction of two modes: “for compliance” or “for testing”. In the “for compliance”- mode all operations executed in the Excel sheet are being tracked by marking the cell yellow with a red frame. By clicking the button “track changes”, the “for testing”- mode will be activated. Now operations are not being followed and calculation are meant to be unofficial. Once the track changes button is put from “on” to “off” it cannot be turned back again. The user has to close the file and restart the tool in order to make calculations “for compliance”.

Another modification made in the BioGrace Excel tool is that a user can start with previous and partial calculations, for instance by giving the emissions in g CO<sub>2,eq</sub> per kg of cultivated and dried rapeseed, which is only allowed when following some specific requirements (see below). A last modifications that was made in the Excel tool is that it contains an empty sheet “User specific calculations” which can for instance be used to convert units of input data.

Also the BioGrace calculation rules have been modified and extended. A full list of the changes made since version 4b of the BioGrace GHG calculation tool is given in the Annex of this newsletter. The most important changes are:

- 2.1.2 Actual calculations shall be audited and shall be made with the “for Compliance” version of the tool;
- 2.5 When changing a starting value into an actual value, all other starting values in that part of the biofuel production chain (either cultivation, processing or transport) shall be changed into actual values as well;
- 2.6 Results from previous and partial GHG calculations can be used when specific rules are followed, e.g. such calculations shall have been made using BioGrace and shall have been verified;
- 3.3 For agricultural management ( $e_{ec}$  and  $e_l$  in the methodology) it is allowed to use either measured or aggregate values. Detailed conditions that apply are given in the rule.
- 4.2 Emissions from using grid electricity shall be calculated from the average emission intensity for the country in which the electricity is taken from the grid. Country-average emission intensities for electricity shall be taken from the BioGrace list of additional standard values. It is not allowed to use the average emission intensity for the EU electricity mix

Along with the new elements in the BioGrace Excel tool and the new or updated calculation rules, updates have also been made to the user manual.

The tool is available at <http://biograce.net/content/ghgcalculationtools/calculationtool>.

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## Annex: Changes in BioGrace calculation rules version 4c as compared to version 1b

(Version 4c is part of the zip file "BioGrace GHG calculation tool – version 4c.

Version 1b is part of the zip file "BioGrace GHG calculation tool – version 4b Public)

	<b>Version 1b</b>	<b>Version 4c</b>
1. Introduction	<i>Calculation rules are fully in line with the methodology as given in Annex V.C of the RED and in communication</i>	<i>Calculation rules are in line with the methodology as given in Annex V.C of the RED and in communication, with one exception (see footnote 13)</i>
2.1.1	<i>BioGrace calculation rules prevail above rules in other (voluntary/national) schemes</i>	<i>BioGrace calculation rules are binding</i>
2.1.2	<i>Actual calculations shall be made using "track changes"</i>	<i>Actual calculations shall be audited and shall be made with the "for Compliance" version of the Excel tool</i>
2.1.3		<i>Actual calculations shall be made using Global Warming Potentials of 1, 25 and 298</i>
2.1.4		<i>Units of input numbers shall not be changed</i>
2.5 Use of starting values	<i>Summary: when making an actual calculation for one process step, starting values may be kept for another process step Within process step, all starting values must be changed</i>	<i>"When changing a starting value into an actual value, all other starting values in that part of the biofuel production chain (either cultivation, processing or transport) shall be changed into actual values as well, including the starting values of other steps within the same part of the biofuel production chain (either cultivation, processing or transport)." One exception, see 2.5.1</i>
2.5.1	<i>Starting values for grain losses may be kept</i>	<i>Starting values for distribution of the fuel may be kept</i>
2.5.2		<i>Starting values shall be unchanged if a disaggregated default value is chosen</i>
2.6 Using the result(s) from previous and partial GHG calculations		<i>Summary: Results from previous and partial GHG calculations can be used when specific rules are followed, e.g. such calculations shall have been made using BioGrace and shall have been verified.</i>

<p>2.7 Use of the sheet "user specific calculations"</p>		<p><i>Summary: The BioGrace Excel tool contains a sheet "User specific calculations" which allows users of to make company- or user-specific calculations, such as converting company- or user-specific data into the format in which the data can be entered into BioGrace. Specific rules apply, e.g. the entire content of the sheet shall be subject to third party auditing and calculations made on this sheet shall be company/user specific</i></p>
<p>3.3 Use of aggregated or measured values</p>	<p>Not existing in version 1b. Rules 3.3 and 3.4 from version 1b are renumbered into rules 3.4 and 3.5 in version 4c</p>	<p><i>"For agricultural management (<math>e_{ec}</math> and <math>e_l</math> in the methodology) it is allowed to use either measured or aggregate values."</i> Detailed conditions that apply are given in the rule.</p>
<p>4.1 Use of actual values</p>	<p>New rule in version 4c (not existing in 1b). Rules 4.1 to 4.5 from version 1b are renumbered into 4.2 to 4.6 in version 4c</p>	<p><i>"Actual values for emissions from processing steps (<math>e_p</math> in the methodology) in the production chain must be measured or based on technical specifications of the processing facility. When the range of emissions values for a group of processing facilities to which the facility concerned belongs is available, the most conservative number of that group shall be used."</i></p>
<p>4.2 Electricity use (rule number 4.3 in version 4c)</p>	<p><i>"Emissions calculated from grid electricity in Europe shall be an average for the EU. For a third country, the average for that country shall be used. These values can be taken from the BioGrace list of additional standard values."</i></p>	<p><i>"Emissions from using grid electricity shall be calculated from the average emission intensity for the country in which the electricity is taken from the grid. Country-average emission intensities for electricity shall be taken from the BioGrace list of additional standard values. It is not allowed to use the average emission intensity for the EU electricity mix.<sup>13</sup> "</i></p> <p><sup>13</sup>: <i>This rule therefore deviates from "Communication on the practical implementation ... [OJ C160, page 8]" which states that the most logical choice is to take the average emission intensity for the EU. The reason for deviating from "the most logical choice" from the Communication, is that under other voluntary sustainability schemes it is allowed the use the national average emission intensity also for EU countries and because BioGrace aims to avoid disharmonised calculation rules.</i></p>

5 Land use change	Footnote: "The Commission has not yet defined degraded land or heavily contaminated land (March 2011)"	Footnote: "The European Commission has not yet defined degraded land or heavily contaminated land (September 2012). The degraded land bonus can only be applied once the European Commission has finalised the definition of degraded land."
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